The City of Delray Beach
100 NW 1st Avenue
Delray Beach, FL 33444

PURCHASING AND CONTRACT ADMINISTRATION DIVISION

REQUEST FOR QUALIFICATIONS

RFQ NO.: 2025-013
CONSTRUCTION MANAGER AT RISK
Northwest Neighborhood Improvements
Project No. 17-020

DUE DATE AND TIME February 5, 2025 @2:00 Pm., (LOCAL TIME)

INSTRUCTIONS
Sealed Proposals must be received on or before the due date and time (local time). All Proposals will be publicly opened at City Hall, unless otherwise specified.

The City will only accept electronic submittals for this Request for Qualifications (RFQ). RFQ's will be accepted through a secure mailbox at BidNet Direct www.bidnetdirect.com//cityofdelraybeach until the Due Date and Time indicated in this RFQ. Bidnet Direct does not accept electronic Proposals after the Due Date and Time. It is the sole responsibility of the Proposer to ensure its electronic RFQ submission is complete prior to the solicitation Due Date and Time. Electronic submission of Proposals will require the uploading of forms and/or attachments as designated in this RFQ. Electronic submission must include a signed original of the Solicitation Summary form. The submission of forms and attachments containing embedded documents or proprietary file extensions is prohibited.

If the Solicitation Summary form is not included, the City may deem the Proposal non-responsive. Proposals must contain all information required to be included in the submittal, as described in this Solicitation.

BROADCAST
The City of Delray Beach utilizes electronic online services for notification and distribution of its solicitation documents. The City's solicitation information can be obtained from: (a) Bidnet Direct; (b) Purchasing webpage on the City of Delray Beach website; and (c) Request via email; thompsonc@mydelraybeach.com.

Proposers who obtain solicitations from sources other than those named above are cautioned that the Request for Qualifications package may be incomplete. The City will not evaluate incomplete Proposal packages. Bidnet Direct is an independent entity and is not an agent or representative of the City. The City is not responsible for errors and omissions occurring in the transmission or downloading of any documents, addenda, plans, or specifications from these websites.

CONTACT

Any questions regarding the specifications and solicitation process must be submitted in writing through the "Question" feature on www.bidnetdirect.com//cityofdelraybeach. Requests for clarification and additional information must be received prior to the deadline for Submission of Questions on January 24, 2025 @ 5:00 PM. **(Eastern Time).**

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The City of Delray Beach
100 NW 1st Avenue
Delray Beach, FL 33444

LEGAL ADVERTISEMENT

RFQ NO.: 2025-013
CONSTRUCTION MANAGER AT RISK
Northwest Neighborhood Improvements
Project No. 17-020

The City of Delray Beach, Florida ("City") is seeking Proposals from qualified firms for professional services and construction services related to the **Northwest Neighborhood Improvements** project, in accordance with the terms, conditions, and specifications contained in this Request for Qualifications.

Request for Qualifications documents is available beginning December 18, 2025 on the Purchasing and Contract Administration Division's webpage of the City of Delray Beach website at:

https://www.delraybeachfl.gov/government/city-departments/purchasing/current-bids-solicitations

Documents may also be obtained via BidNet Direct www.bidnetdirect.com//cityofdelraybeach (, by contacting the City Purchasing and Contract Administration Division at thompsonc@mydelraybeach.com or by phone at (561) 243-7163.

Proposals will be accepted through a secure mailbox at Bidnet Direct (www.bidnetdirect.com//cityofdelraybeach) until the Deadline for Submission as indicated in this RFQ. **The Due Date and Time for submission of submittals is February 5, 2025 @ 2:00PM. (Eastern Time).** Late Proposals will not be accepted. The City will only accept electronic Proposals for this RFQ.

The City will hold a virtual Pre-Proposal Conference. Attendance is not mandatory, although highly recommended, for those firms intending to submit a proposal. The virtual Pre-Proposal Conference will be held on **January 10, 2025 @ 10:00 AM (LOCAL TIME)** online via Microsoft Team meeting via the link provided below:

Microsoft Teams Meeting

Join the meeting now

Meeting ID: 218 970 093 80
Passcode: 6g4gi2kq

The City will not conduct a site visit for this solicitation. It is the responsibility of the Proposer to ensure all pages are included in the submission. All Proposers are advised to closely examine the solicitation package.

The City of Delray Beach is exempt from Federal and State Taxes for tangible personal property tax.

The City of Delray Beach reserves the right to accept or reject any or all Proposals, in whole or in part, with or without cause, to waive any irregularities and/or technicalities, and to award the contract on such coverage and terms it deems will best serve the interests of the City.

CITY OF DELRAY BEACH

SECTION 1: PROJECT OVERVIEW

1.1. INTRODUCTION

The City of Delray Beach (City) is seeking a Construction Manager at Risk (CMAR) firm for the construction of the **Northwest Neighborhood Improvements** project. The project is generally described as improvements to roadways, alleyways, sidewalks, swales, driveways, stormwater drainage systems, potable water mains, reclaimed water mains and sanitary sewer systems, while also implementing traffic calming measures and providing decorative street lighting, landscaping, and irrigation within the project area**.** The project area is bordered by Lake Ida Road to the north, Swinton Avenue to the east, W. Atlantic Avenue to the south, and Interstate 95 to the west (refer to Exhibit C). The City of Delray Beach partnered with Baxter & Woodman, Inc. for design services and is currently soliciting for Owner's Representative services under RFQ 2025-002.

This project is being funded by the Delray Beach Community Redevelopment Agency (CRA). The City is also exploring other grant opportunities for this project which have yet to be determined.

1.2. SCOPE OF SERVICES

The purpose of this Request for Qualifications is to obtain a CMAR for a Guaranteed Maximum Price (GMP), in accordance with Chapter 255.103 of the Florida Statutes. A governmental entity may select a construction management entity, pursuant to the process provided by S.287.055 (CCNA), which is to be responsible for construction project scheduling and coordination in both pre-construction and construction phases and generally responsible for the successful, timely, and economical completion of the construction project.

The intent of this solicitation is for the City to select a firm capable of providing CMAR services as required for the **Northwest Neighborhood Improvements** project. The project has an estimated construction budget of approximately $70,000,000. The project currently consists of improvements to roadways, alleyways, sidewalks, swales, driveways, stormwater drainage systems, potable water mains, reclaimed water mains and sanitary sewer systems, while also implementing traffic calming measures and providing decorative street lighting, landscaping, and irrigation within the project area**.**

The selected firm awarded the contract will coordinate and collaborate with the City, the Architect/Engineer of Record (Baxter & Woodman, Inc.), an Owner's Representative firm (to be selected under the RFQ 2025-002 solicitation), and all applicable permitting and governmental agencies.

Agreements are subject to annual appropriation and the availability of funds.

The City intends to award two (2) separate phases for the CMAR services for the project. The first phase would be for Pre-Construction Services and is identified as Phase I. The second phase would be for Construction Services and is identified as Phase II.

At or before the completion of Phase I and following completion of cost estimating, value engineering and other services, the CMAR firm will tender to the City a written GMP for final completion of the project, based upon bid documents and specifications. The City, at its sole discretion, may decline to accept the CMAR GMP for any Construction Services and thereupon without penalty; the Contract shall terminate according to its terms at the end of the Pre-Construction Services phase of the work under contract. The CMAR firm shall have no recourse from this termination, and the City shall retain ownership of such documents without paying further remuneration. Conditions precedent to a contract amendment for Phase II for any project is the satisfactory final completion of Phase I and an agreed upon GMP. If a GMP is agreed to with the CMAR firm, a contract amendment for Phase II will be entered into between the parties.

1.3. The Method of Award for this solicitation will be to the Proposer with the highest ranking or scores with whom the City is able to negotiate an acceptable Agreement. The City will enter negotiations with the firm receiving the highest-ranking proposal score. Should negotiations fail then the City will enter negotiations with the next highest-ranking firm.

1.4. The City intends to contract with a single firm for the project listed in this procurement. The Proposer will provide the following services: (1) Phase I: Pre-Construction Services; and (2) Phase II: Construction Services as outlined in Section 3 of this solicitation.

The anticipated schedule is as follows:

ITEM	EVENT	DATE/TIME
a.	Issue RFQ	December 18, 2024
b.	Institute Cone of Silence	December 18, 2024
c.	Deadline for Delivery of Questions	**January 24, 2025 5:00 PM (LOCAL TIME)**
d.	Due Date and Time (for delivery of Proposals)	**February 5, 2025 @ 2:00 PM (LOCAL TIME)**
e.	Technical Evaluations Location: TBD	TBD @ TBD
f.	Interviews Location: TBD	TBD @ TBD
g.	Final Evaluations Location: TBD	TBD @ TBD

1.5. Meetings will be held in the City Hall Conference Room, located at 100 NW 1st Avenue, First Floor, Delray Beach, FL 33444, or the Swinton Operations Center (SOC) – Conference or Training Room – located at 434 South Swinton Avenue, Delray Beach, FL 33444.

END OF SECTION 1

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SECTION 2: SPECIAL TERMS AND CONDITIONS

2.1. PURPOSE

The purpose of this Request for Qualifications (RFQ) is to solicit Proposals from qualified firms who can provide Construction Manager at Risk (CMAR) services for the **Northwest Neighborhood Improvements** project.

The City expects each Proposer to clearly outline its best and most comprehensive resources in its response, because all services and responsibilities identified in this solicitation may be awarded to the selected Proposer.

2.2. ELIGIBILITY

To be eligible to respond to this RFQ and be considered for award, the Proposer must demonstrate to the satisfaction of the City that it or the principals assigned to the project has successfully provided services, similar in scope and complexity, to a municipality, quasi-governmental organization, or a private organization.

2.3. SEPARATION OF SERVICES

The entity(ies) performing design or owner's representative and CMAR services may not be the same entity for this Project. Vendors solely providing geotechnical and/or surveying services for the design are exempt from this provision.

2.4. RECORDS, ACCOUNTS, AND STATEMENTS

The successful Proposer shall keep on its premises, or such other place approved by the City, current true, accurate, and complete records and accounts of all services provided to the City and shall give the City or City's representative access during reasonable business hours and upon three (3) business days' notice to examine and audit such records and accounts. Such records shall be maintained at such standard to allow a certified auditor the ability to properly examine the records in order to certify a statement of the successful Proposer's business with the City.

2.5. GENERAL STANDARDS

The successful Proposer shall at all times comply with all rules, regulations, and other governmental agencies having jurisdiction. The successful proposal shall further take all precautions and extreme care to conduct its activities in a safe, professional, and prudent manner with respect to its agents, employees, members, visitors, and participants.

2.5.1. Its most recent certified business financial statements as of a date not earlier than the end of the Proposer's preceding official tax accounting period, together with a statement in writing, signed by a duly authorized representative, stating that the present financial condition is materially the same as that shown on the balance sheet and income statement submitted, or with an explanation for any material change in the financial

condition. A copy of the most recent business income tax return will be accepted if the certificate financial statements are unavailable.

2.5.2. Information concerning any prior or pending litigation, either civil or criminal, involving a governmental agency or which may affect the performance of the services to be rendered herein, in which the Proposer, or any of its employees, is or has been involved in within the last three (3) years.

2.6. DEFAULT

In the event the successful Proposer defaults in the performance of the contract, the city shall have the following options:

2.6.1. The City Manager will give the successful Proposer thirty (30) days' written notice of default. If the problem is not resolved within the thirty (30) days, the City may immediately terminate the contract upon providing written notice of the Proposer's failure to timely cure the default and obtain the services elsewhere.

2.6.2. The City may recover at law any all claims that may be due to the City from the successful Proposer.

2.6.3. The City may perform such work as it deems necessary to cure the default or subsequent default and charge the successful Proposer for the full cost of labor and materials expended, plus thirty percent (30%) of the cost for administrative overhead.

The acceptance of all or part of monies due for any period after a default shall not deemed as a waiver of any of these options, or a waiver of the default or subsequent default of the same or any other term, covenant, and condition.

The successful Proposer agrees that the City shall not be responsible or have any liability whatsoever for any alleged damages, claim of lost profits, or otherwise in the event the City declares the successful Proposer in default hereunder.

2.7. INSURANCE

The selected Proposer shall not commence any performance pursuant to the terms of this RFQ until certification or proof of insurance has been received and approved by the City's Risk Coordinator or designee.

The required insurance coverage is to be issued by an insurance company authorized, licensed, and registered to do business in the State of Florida, with the minimum rating of A- VII or better, in accordance with the latest edition of A.M. Best's Insurance Guide. This insurance shall be documented in certificates of insurance which provides that the City of Delray Beach shall be notified at least thirty (30) days in advance of cancellation, non-renewal, or adverse change. The receipt of certificates or other documentation of insurance or policies or copies of policies by the City or by any of its representatives, which indicate less coverage than is required, does not

constitute a waiver of the selected Proposer's obligation to fulfill the insurance requirements herein. Deductibles must be acceptable to the City of Delray Beach.

The selected Proposer must submit a current Certificate of Insurance prior to commencement of the Work. The City, and any other entities that may be required, shall be listed as an Additional Insured on both the comprehensive General Liability and the Automobile Liability Policies. New certificates of insurance are to be provided to the City upon expiration. All renewal or replacement certificates of insurance shall be forwarded to the City Purchasing and Contract Administration Division located at 100 NW 1st Ave., Delray Beach, FL 33444.

The selected Proposer shall provide insurance coverage as follows:

2.7.1. WORKERS COMPENSATION – With statutory limits, the City reserves the right not to accept exemptions to the Workers Compensation requirements of this solicitation.

2.7.2. EMPLOYER'S LIABILITY – With a limit of not less than One Hundred Thousand Dollars ($100,000) for each accident, One Hundred Thousand Dollars ($100,000) for each occurrence, and Five Hundred Thousand Dollars ($500,000) in the aggregate.

2.7.3. COMPREHENSIVE GENERAL LIABILITY – With limits of not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) in the aggregate for Bodily Injury and Property Damage.

NOTE – If Comprehensive General Liability limits are less than One Million Dollars ($1,000,000), the sum of Comprehensive General Liability limits and Excess Liability limits must equal no less than One Million Dollars ($1,000,000).

The Comprehensive General Liability insurance policy must include coverage that is not more restrictive than the latest edition of the Comprehensive General Liability Policy, without restrictive endorsements, as filed by the Insurance Services Offices, and the policy must include coverage's for premises and/or operations, independent contractors, products and/or completed operations for contracts, contractual liability, broad form contractual coverage, broad form property damage, products, completed operations, and personal injury. Personal injury coverage shall include coverage that has the Employee and Contractual Exclusions removed.

2.7.4. AUTOMOBILE LIABILITY – Covering all vehicles associated with Proposer's operations to include all owned, non-owned and hired vehicles. The coverage will be written on an occurrence basis with limits of liability not less than One Million Dollars ($1,000,000) combined single limit per each occurrence.

2.7.5. PROFESSIONAL LIABILITY – With limits of not less than One Million Dollars ($1,000,000) per occurrence.

NOTE: Additional insurance may be required for future grant awards that are yet to be determined.

2.8. PAYMENT AND PERFORMANCE BOND/LETTER OF CREDIT

Required bonds/ letter of credit to be requested from the selected Proposer, applicable to Phase 2 services. Bonds will be determined upon receipt of the GMP and will be included in the amendment for the Construction Phase. The CMAR firm shall, following receipt of the Notice to Proceed with Construction but prior to commencing any work, furnish the City with a Performance Bond and Payment Bond in a form reasonably acceptable to the City, each equal to the amount of the construction cost as defined in the contract.

2.9. LICENSES AND CERTIFICATIONS

Any Proposer which submits an offer in response to this solicitation shall, at the time of such offer, hold all the required licenses, permits, and certifications issued by the State or County Examining Board qualifying the Proposer to perform the services described in this solicitation.

The City may at its option, and in its best interest, allow the Proposer to supply any missing information on certification and licensing during the Proposal Evaluation period.

Proposer must have staff licensed by the Florida Department of Business & Professions Regulation. Provide a screenshot or copy of Proposer's license from the Florida Department of Business & Professions Regulation that confirms Proposer has current licenses to perform the services described in this solicitation.

2.10. METHOD OF PAYMENT – MONTHLY INVOICES

The selected Proposer shall submit an invoice to the City, each month, after the services have been performed and have been received and accepted by the City. The amount charged shall not be in excess of the rates and fees agreed to in the Agreement.

The date of the invoices shall not exceed thirty (30) calendar days from the performance of the work. Under no circumstances shall the invoice be submitted to the City in advance of the performance of the work. The invoice shall contain the following basic information: the selected Proposer's name and address, invoice number, date of invoice, description of the service performed, the contract number, purchase order number, and any discounts.

The City prides itself on paying its vendors promptly and efficiently, and as such requires that vendors accept payment via wire transfer, ACH (direct deposit), or an appropriate electronic payment method. The City is averse to issuing paper checks and seeks to discontinue this practice. All payments shall be made in accordance with the Florida Prompt Payment Act, Section 218.74, Florida Statutes, upon presentation of a proper invoice by the awarded Proposer.

2.11. SUBCONTRACTING

INTENTIONALLY OMITTED.

2.12. OTHER FORMS OR DOCUMENTS

If the City is required by the selected Proposer to complete and execute any other forms or documents in relation to this solicitation, the terms, conditions, and requirements in this solicitation shall take precedence to any and all conflicting or modifying terms, conditions or requirements of the selected Proposer's forms or documents.

2.13. MODIFICATION OF SERVICES

The City reserves the right to delete or modify any portion of the contracted services at any time without cause, and if such right is exercised by the City, the rates and fees shall be reduced at the same ratio as the estimated costs of the services deleted relates to the estimated costs of the service originally contracted. If service has already been provided on the portion of the work to be deleted, the selected Proposer will be paid for the deleted portion based on the estimated percentage of the completion of such portion.

If the selected Proposer and the City agree on modifications or revisions to the service elements, after the City has approved performance of a particular task or project, and a budget has been established for that task or project, the selected Proposer shall submit a revised budget to the City for approval prior to proceeding with the task or project.

END OF SECTION 2

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SECTION 3: SCOPE OF SERVICES

3.1 PROJECT HISTORY AND BACKGROUND

The City of Delray Beach, with funding from the Delray Beach Community Redevelopment Agency (CRA), is currently in the design phase for the Northwest Neighborhood Improvements project. The project area is bordered by Lake Ida Road to the north, Swinton Avenue to the east, W. Atlantic Avenue to the south, and Interstate 95 to the west.

The project aims to improve roadways, pervious alleyways, sidewalks, swales, driveways, stormwater drainage systems, potable water mains, reclaimed water mains and sanitary sewer systems, while also implementing traffic calming measures and providing decorative street lighting, landscaping, and irrigation within the project area.

Improvements examined in this project included:

- Roadway and Pavement Design
- Alleyway Design
- Traffic Calming Design
- Pedestrian Systems
- Signing and Pavement Markings
- Stormwater Improvements
- Potable Water Main Improvements
- Reclaimed Water Main Improvements
- Sanitary Sewer Improvements
- Street and Alleyway Lighting
- Landscaping & Irrigation

The City is also exploring other grant opportunities for this project which have yet to be determined.

3.2 SUMMARY OF WORK

The selected Proposer shall provide pre-construction and construction services to construct **the Northwest Neighborhood Improvements project**. The Proposer will provide Construction Manager at Risk (CMAR) services in accordance with City policies, procedures, standards, and requirements for improvements to roadways, pervious alleyways, sidewalks, swales, driveways, stormwater drainage systems, potable water mains, reclaimed water mains and sanitary sewer systems, while also implementing traffic calming measures and providing decorative street lighting, landscaping, and irrigation within the project area. The City is also exploring other grant opportunities for this project which have yet to be determined.

The Northwest Neighborhood Improvements project is being designed in three (3) separate phases:

<u>Phases 1 and 2</u>
These phases encompass the area west of NW 5th Avenue, divided by Martin Luther King Jr. Drive (NW 2nd Street) into Phase 1 (northwest section) and Phase 2 (southwest section). Martin Luther King Jr. Drive was previously improved, providing a travel route that will experience minimal disruption during construction.

Phase 3
This phase encompasses NW 5th Avenue and the area east of NW 5th Avenue. Martin Luther King Jr. Drive and portions of NW 5th Avenue were previously improved, providing a travel route that will experience minimal disruption during construction.

Coordination with Pompey Park Community Center & Campus Improvements Project
The roadways adjacent to the perimeter of the Pompey Park Community Center & Campus Improvements property are included in Phase 1. For Phases 1, 2 and 3, the open east-west corridors include Lake Ida Road, Atlantic Avenue and Martin Luther King Jr. Drive. Phases 1 and 2 are anticipated to be slightly larger than Phase 3, with expected construction durations of 24 months each for Phases 1 and 2, and 18 months for Phase 3.

The City may designate a person, such as City's Project Manager or Owner's Representative, who will be the CMAR coordinating contact point during both the Pre-Construction and Construction Phases. This person or contact will provide day-to-day representation for the City and will be the primary channel of communication to the City and will act as the City's liaison with the CMAR firm. The City may designate multiple representatives responsible for defined aspects of the Project and may replace or re-designate any or all representatives at the City's sole discretion.

3.3 SCOPE OF SERVICES

CMAR scope of services shall have the following sections, at a minimum, performed in two (2) phases:

3.3.1 Phase I: Pre-Construction Services

3.3.1.1 Review and coordinate the proposed work with the Architect/Engineer of Record and the City.

3.3.1.2 Perform and submit a cost and savings program (Value Engineering) to the Architect/Engineer of Record and the City for consideration.

3.3.1.3 Develop a provisional construction Critical Path Methods (CPM) schedule indicating methods and sequencing of construction.

3.3.1.4 Perform a constructability review of the Construction Documents.

3.3.1.5 Provide analysis of different construction methods in each major trade group for quality control, cost and schedule enhancements and the ability to utilize concurrent activities to expedite time of delivery.

3.3.1.6 Develop a project construction budget/cost model (independent from any similar cost estimates provided by the City) to be maintained throughout design phases and construction.

3.3.1.7 Coordinate competitive bidding and contracting for trade subcontractors.

3.3.1.8 Coordinate with homeowners and governmental agencies having jurisdiction on this project, and all utility companies servicing this area.

3.3.1.9 Calculate and provide a Guaranteed Maximum Price (GMP) for the project at completion of Pre-Construction Services for the City's consideration, review and acceptance.

3.3.1.10 The City is also exploring other grant opportunities for this project which have yet to be determined.

3.3.2 Phase II: Construction Services

3.3.2.1 Provide Performance and Payment Bonds for the full value of the Guaranteed Maximum Price (GMP) for the project, in addition to ensuring compliance with all insurance requirements.

3.3.2.2 Apply for, obtain, coordinate, and pay for all permits, construction inspections, and testing.

3.3.2.3 Be responsible for the successful, timely, and economical completion of the projects. Create, maintain, and present an overall construction schedule of activities showing CPM.

3.3.2.4 Coordinate with the City of Delray Beach Department of Public Works, the Architect/Engineer or Record (Baxter & Woodman, Inc.) and an Owner's Representative firm (to be selected under the RFQ 2025-002 solicitation), for the entire duration of the project.

3.3.2.5 Coordinate with homeowners and governmental agencies having jurisdiction on this project, and all utility companies servicing this area.

3.3.2.6 Maintain a safe and reliable MOT plan, considering corridor activities for weekend and Holidays. No more than one lane of traffic shall be closed at any given time, without prior approval from the City.

3.3.2.7 Maintain quality control and ensure conformity with the Contract Documents. Provide certified (signed and sealed) as-builts drawings (CAD & GIS) at the completion of the project.

3.3.2.8 Coordinate post-completion activities, including the assembly of guarantees, manuals, closeout documents, training, and Final acceptance, delivery and training of O&M Manuals.

3.3.2.9 Warranty Phase - Coordinate and monitor the resolution of Punch List items and warranty complaints to the satisfaction of the Owner during the warranty period.

3.3.2.10 Coordinate Construction Management Services, including but not limited to regular job site meetings, maintaining and updating schedules, overseeing quality assurances, maintaining and providing copies of all contract documents, and ensuring compliance with all safety programs.

3.3.2.11 The CMAR firm manages the construction project for the City, as an open book project. Buyout savings through the subcontractor buyout process will be split by the City and CMAR Firm with City receiving 70% and CMAR Firm receiving 30% by way of Change Order adjusting the GMP.

3.4 ITEMS TO BE FURNISHED BY THE CITY TO THE CMAR FIRM

The City, on an as needed basis, will furnish the following Contract documents for the project:

- Executed Construction Contract
- Construction Plans (developed by Architect/Engineer)
- Technical Specifications (developed by Architect/Engineer)
- Permits
- Environments Reports
- Geotechnical Reports
- City's Approved Material List (if applicable)

These documents may be provided in either paper or electronic format. The City will not provide connection to their Network. The CMAR Firm will furnish and support any needed software to perform their work.

3.5 PUBLIC OUTREACH

The CMAR firm shall provide a public engagement plan and program. CMAR firm shall engage in extensive public outreach during the duration of the Project, to maintain that residents and business owners informed of major activities on the site. The CMAR firm may provide public outreach services to include, but not be limited to:

- Involvement with residents daily to keep the residents well-informed regarding what the CMAR firm is going to do each week.

- Preparation and dissemination of information to the public, elected officials, and the media; with approval from the City's designee; regarding any upcoming events, which will affect traffic flow.

- Production and distribution of publications (letters, door hangers, mail notifications to homeowners (including postage), flyers, brochures, and news releases to the public) necessary for this construction contract. Prior to release, the City's designee will approve all responses, letters, provide drone photography, news releases, and the like.

- Coordination of public information meetings, open houses, and community meetings as directed by the City's representatives. This may also include development of a webpage, website, and/or mechanisms to quickly respond to the public.

END OF SECTION 3

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SECTION 4: RESPONSE REQUIREMENTS

4.1. SUBMITTAL REQUIREMENTS

Proposers should carefully follow the format and instructions outlined herein. All documents and information must be fully completed and signed as required. Do not password-protect electronic documents.

The Proposal shall be written in sufficient detail to permit the City to conduct a meaningful evaluation of the proposed services. However, overly elaborate responses are not requested or desired.

4.2. REQUIRED INFORMATION AND SUBMITTAL FORMAT

In addition to the information required in Section 3, Scope of Services, Proposers must submit the following information with their Proposal Submittals:

SUBMITTAL FORMAT
To facilitate and expedite review, the City asks that all Proposers follow the response format outlined below. Failure to submit your response in the format requested may result in a delay evaluating your Proposal. To assist you in preparing your response, the City's selection procedures are also described herein. Please abide by all requirements set forth to avoid any risk of disqualification.

The overall package should be no longer than 80 pages total (40 double-sided or 80 single-sided, including AIA Document A305-2020 and all Exhibits). Pages must be numbered to verify quantity. Tab dividers are excluded from the page count.

PROPOSALS SHOULD FOLLOW THE FORMAT BELOW:

4.2.1. TAB 1 – INTRODUCTION

Provide a cover letter no longer than two (2) pages in length. Provide a positive commitment to provide the required services. The table of contents should follow the cover letter.

4.2.2. TAB 2 – TABLE OF CONTENTS

Include a clear identification of the material included in the Proposal by page number.

4.2.3. TAB 3 – MINIMUM QUALIFICATIONS

Proposers must meet the following minimum qualifications; failure to meet the minimum qualifications may result in the Proposer being deemed non-responsible.

A. Proposer must provide an affirmative statement and submission of evidence must be included with the firm's response indicating that firm and all assigned key professional staff possess all licenses and certifications required to undertake and complete the project.

B. Proposer must have a Florida State General Contractor's license **Provide proof, in the form of a copy of license(s), that the Bidder meets this qualification.**

C. Proposer must have been in business, under the current vendor name, for a minimum of five (5) years prior to the Due Date and Time. **Provide supporting documentation (e.g. state, county, city business license; occupational license) that confirms Proposer has been in business for a minimum of five (5) years prior to the Due Date and Time.**

D. Proposer must have adequate bonding capacity for a single project, with each payment and performance bonding capability of at least **$70,000,000** with a surety company having a current financial rating (A.M. Best) of **AAA** or better. **Provide documentation of your firm's total and single-project bonding capacity and the name and current A.M. Best rating of the surety company utilized by your firm.**

E. Proposer has no reported conflict of interests in relation to this RFQ.

Disclose the name of any officer, director or agent who is also an employee of the City. Disclose the name of any City employee who owns, directly or indirectly, any interest in the Proposer's firm or any of its branches. If no conflicts of interests are present, Proposer must submit a statement to that affect.

F. Proposer must submit AIA Document A305-2020 and all Exhibits.

Complete and submit AIA Document A305-2020 and all Exhibits.

G. Proposer must be registered with the State of Florida Division of Corporations to do business in Florida.

No documentation is required. The City will verify registration.

H. Proposer is NOT listed on the Florida State Board of Administration, Scrutinized List of Prohibited Companies found at:

https://www.dms.myflorida.com/business_operations/state_purchasing/state_agencyresources/vendor_registration_and_vendor_lists/scrutinized_list_of_prohibited_companies

4.2.4. TAB 4 – PROPOSER'S INFORMATION

A. Legal contracting name including any dba and state of organization or incorporation.

B. Ownership structure of Proposer's company
(e.g., Sole Proprietorship, Partnership, Limited Liability Corporation, Corporation)

C. Provide, in this section, a completed and executed copy of Proposer's W-9 that includes the company federal identification number.

D. Contact information for Proposer's Corporate headquarters and any other office locations include the following:
   i. Address
   ii. City, State, Zip
   iii. Phone

E. Contact information for Proposer's primary and secondary representative during this solicitation process including the following:
   i. Name
   ii. Phone
   iii. Email
   iv. Mailing Address
   v. ity, State, Zip

F. Provide details of any ownership changes to Proposer's organization in the past three years or Changes anticipated within six months of the Due Date and Time (e.g., mergers, acquisitions, changes in executive leadership).

G. Provide the names of the persons who are officers or principals of the company.

H. Any additional organizational information that Proposer wishes to supply to augment its Proposal.

I. Provide a letter on your firm's letterhead indicating if your firm has paid liquidated damages and/or if your firm has been terminated for default or is pending legal action. Provide details of these occurrences and the associated projects. If your firm has not paid liquidated damages or been terminated for default include this in a letter on your firm's letterhead.

J. Provide prior or pending litigation, either civil or criminal, involving a governmental agency or which may affect the performance of the services to be rendered herein, in which the Proposer, and of its employees, is or has been involved within the last three (3) years.

K. Its most recent certified business financial statements as of a date not earlier than the end of the Proposer's preceding official tax accounting period, together with a statement in writing, signed by a duly authorized representative, stating that the present financial condition is materially the same as that shown on the balance sheet and income statement submitted, or with an explanation for any material change in the financial condition. A copy of the most recent business income tax return will be accepted if certified financial statements are unavailable.

4.2.5. TAB 5 – EXPERIENCE, ABILITY AND REFERENCES

A. Provide details of Proposer's years of experience in the field construction and acting as a CMAR firm. Include number of projects, construction dollar value, and years of relevant experience.
B. Provide a detailed narrative documenting the Proposer's specific experience including, but not limited to the following:

   i. At least five (5) projects of similar scope, budget, size, and complexity. Preferably, these projects will have been completed in the last five (5) years.

      Provide the following information for the five (5) qualifying projects:

      A. Name of Project Owner
      B. Contact Name
      C. Contact Email
      D. Location / Address of Project
      E. Dates of Project (start/end)
      F. Brief Description of Project
      G. Project's GMP and final construction cost. Attach an explanation for each project where total project cost exceeded GMP <u>OR</u> estimated project cost by greater than 10 percent (10%).
      H. List of the components of the project as stated above

   ii. Experience with CMAR projects that include improvements to roadways, pervious alleyways, sidewalks, swales, driveways, stormwater drainage systems, potable water mains, reclaimed water mains and sanitary sewer systems, while also implementing traffic calming measures and providing decorative street lighting, landscaping, and irrigation within the project area.

   NOTE: The City recognizes that it is unlikely that candidates for this solicitation will have all of the similar experience requested in a single project. Experience in each of the different elements is desired, however, it is not required that all types of similar project experience is included in the same project.

   iii. Experience with municipal or government agency construction projects.

   iv. Experience with projects in Florida, particularly in South Florida and in Palm Beach County.

   v. Other types of related experience or information.

C. Submit three (3) client references for whom Proposer has provided CMAR services (similar to those specified in this RFQ) in the past five (5) years and who are agreeable to respond to a request from the City regarding proposer's experience.

   Each client reference should include the following:
   i. Organization name

ii. Contact name(s)
iii. Contact email address
iv. Address
v. Telephone and fax numbers
vi. Dates of service (start/end)
vii. Scope of work (brief description)

D. Identify the primary contact person, supervisory personnel, and other key personnel who are designated to work on the City's project. Include copies of relevant licenses and certifications relevant to the project.

E. Explain Proposer's ability and commitment to maintain accessibility and availability for meetings, communications, and supervision.

F. Describe any significant or unique awards received or accomplishments in previous, similar projects received by the Team, or by individuals within the Team.

4.2.6. TAB 6 – ORGANIZATIONAL STRUCTURE AND CAPACITY

A. Submit the Team proposed to work on this City project.

B. Submit an organizational chart of the proposed Team.

C. Submit the Team's staffing resources and the location(s) at which services will be provided.

D. Provide a narrative detailing the Team's recent, current, and projected workloads at the time of submission and provide a statement of the Team's commitment of personnel and other resources for the City project.

4.2.7. TAB 7 – METHODOLOGY AND WORK PLAN

A. Provide a detailed narrative description of the proposed approach and methodology for engaging with City representatives while performing the CMAR duties in accordance with the Agreements.

B. Describe in detail Proposer's approach to the CMAR for projects including improvements to roadways, pervious alleyways, sidewalks, swales, driveways, stormwater drainage systems, potable water mains, reclaimed water mains and sanitary sewer systems, while also implementing traffic calming measures and providing decorative street lighting, landscaping, and irrigation.

C. Narrative that demonstrates working knowledge and understanding of the CAMR requirements in the Scope of Services.

D. Provide details of how Proposer intends to meet the detailed time schedule.

E. Specify the location(s), including the complete physical address, where the work for this project will be performed, including work performed by sub-Consultants, if applicable.

F. Proposer shall thoroughly explain:
   i. Its accessibility in the areas of availability for meetings, general communications, coordination, and supervision.
   ii. How the Proposer physically plans on attending pre-scheduled meetings.
   iii. How the Proposer plans on ensuring accessibility and availability during the term of the Agreement.

4.2.8. TAB 8 – ATTACHMENTS

All Attachment/Forms and Affidavits required by this solicitation shall be fully executed by the Proposer and submitted as shown in Section 8 of this solicitation.

END OF SECTION 4

(The remainder of this page is intentionally left blank)

SECTION 5: THE EVALUATION PROCESS

5.1 REVIEW OF PROPOSALS FOR RESPONSIVENESS

Each Proposal will be reviewed to determine if the Proposal is responsive to the submission requirements outlined in this solicitation. A responsive Proposal is one that follows the requirements of this solicitation, includes all documentation, is submitted in the format outlined in this solicitation, is of timely submission, and has the appropriate signatures as required on each document. Failure to comply with these requirements may result in the Proposal being deemed non-responsive.

5.2 REVIEW OF PROPOSALS FOR RESPONSIBILITY

Each Proposer will be reviewed to determine if the Proposer is a responsible Proposer. A responsible Proposer is a Proposer which the City affirmatively determines (prior to the award of a contract) has the ability, capability, and skill to perform under the terms of the contract; can provide the materials or service promptly within the time specified, without delay or interference; has a satisfactory record of integrity and business ethics; and meet the Minimum Qualification requirements in this RFQ.

5.3 EVALUATION CRITERIA

Proposals will be evaluated by a committee who will score and rank Proposals on the criteria listed below. The Evaluation Committee will be comprised of appropriate City personnel and/or members of the community, as deemed necessary, with the appropriate experience and/or knowledge. **The criteria are itemized below with their maximum scores for a maximum total of One-Hundred (100) points per proposal, per Committee member.**

CRITERIA	MAX. POINTS
Experience	**25**
➢ Example Projects and Reference Feedback	
Methodology & Work Plan	**50**
➢ Technical Approach & Methodology	
➢ Work Plan & Schedule	
Organizational Structure and Capacity	**25**
➢ Firm Qualifications	
➢ Qualifications of Key Staff	
➢ Adequacy of Staffing/Organization to Accomplish Project scope	
➢ Availability of staff	

5.4 ORAL PRESENTATIONS/INTERVIEWS

Upon initial completion of the criteria evaluation indicated above, rating and ranking, the Evaluation Committee may choose to conduct an oral presentation with the Proposers which the Evaluation Committee deems to warrant further consideration based on, among other considerations, scores in clusters and/or maintaining competition. Upon completion of the oral presentation(s), the Evaluation/ Selection Committee will perform a final evaluation, rating, and ranking of the Proposals. In such circumstances, the initial ranking of the Proposers shall be considered a preliminary ranking only.

5.5 NEGOTIATIONS

If the City and the Proposer(s) cannot reach an agreement on a contract, the City reserves the right to terminate negotiations and may, at the City Manager's or designee's discretion, begin negotiations with the next highest-ranked Proposer(s). This process may continue until a contract acceptable to the City has been executed or all Proposals are rejected. No Proposer shall have any rights against the City arising from such negotiations or termination thereof.

5.6 CONTRACT AWARD

Any contract resulting from this solicitation will be submitted to the City Manager or designee, and the City Commission for approval, as appropriate. Notice will be provided once the City makes an award recommendation. The contract award, if any, shall be made to the Proposer whose Proposal shall be deemed by the City to be in the best interest of the City. Notwithstanding the rights of protest listed herein, the City's decision of whether to make the award and to which Proposer shall be final.

END OF SECTION 5

(The remainder of this page is intentionally left blank)

SECTION 6: PROPOSAL SUBMITTALS

6.1 FORMS

The forms listed below **shall** be completed by an official having legal authorization to contractually bind the company or firm. Each signature represents a binding commitment upon the Proposer to provide the goods and/or services offered to the City if the Proposer is determined to be the most responsive and responsible Proposer. Solicitation forms should be uploaded to:

www.bidnetdirect.com//cityofdelraybeach

A. Acknowledgment of Addenda

B. Proposal Submittal Signature Page

C. Conflict of Interest Disclosure Form

D. Notification of Public Entity Crimes Law

E. Notification of Public Records Law

F. Drug-Free Workplace

G. Non-Collusion Affidavit

H. Truth-In-Negotiation Certificate

I. Scrutinized Company

J. Affidavit Regarding the use of Coercion for Labor and Services

K. Sample Performance Bond Format (not required, intentionally omitted)

L. Sample Payment Bond Format (not required, intentionally omitted)

M. Sample Letter of Credit Format (not required, intentionally omitted)

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City of Delray Beach
RFQ No. 2025-013
CONSTRUCTION MANAGER AT RISK
Northwest Neighborhood Improvements
Project No. 17-020

ACKNOWLEDGEMENT OF ADDENDA

Please complete Part I or Part II, as applicable

PART I:

List below the dates of issue for each addendum received in connection with this solicitation:

Addendum #1, Dated _____

Addendum #2, Dated _____

Addendum #3, Dated _____

Addendum #4, Dated _____

Addendum #5, Dated _____

Addendum #6, Dated _____

Addendum #7, Dated _____

Addendum #8, Dated _____

Addendum #9, Dated _____

Addendum #10, Dated _____

PART II:

☐ NO ADDENDUM WAS RECEIVED IN CONNECTION WITH THIS SOLICITATION

_____

Firm Name

_____

Signature

_____

Name and Title (Print or Type)

_____

Date

PROPOSAL SUBMITTAL SIGNATURE PAGE

By signing this Proposal, the Proposer certifies that it satisfies all legal requirements as an entity to do business with the City, including all Conflict of Interest and Code of Ethics provisions.

Firm Name:

Street Address:

Mailing Address (if different from Street Address):

Telephone Number(s): _____

Fax Number(s): _____

Email Address: _____

Federal Employer Identification Number: _____

Prompt Payment Terms: _____% _____ days' net _____days

Signature: _____
(Signature of authorized agent)

Print Name: _____

Title: _____

Date: _____

By signing this document, the Proposer agrees to all terms and conditions of this solicitation and the resulting contract/agreement.

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL, FOR NOT LESS THAN ONE HUNDRED AND TWENTY (120) DAYS, AND THE PROPOSER'S UNEQUIVOCAL OFFER TO BE BOUND BY THE TERMS AND CONDITIONS SET FORTH IN THIS SOLICITATION. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED ABOVE, BY AN AUTHORIZED REPRESENTATIVE, SHALL RENDER THE PROPOSAL NON-RESPONSIVE. THE CITY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY PROPOSALTHAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE PROPOSER TO THE TERMS OF ITS PROPOSAL.

City of Delray Beach
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CONFLICT OF INTEREST DISCLOSURE FORM

The award of this contract is subject to the provisions of Chapter 112, *Florida Statutes*. All Proposers must disclose within their Proposal: the name of any officer, director, or agent who is also an employee of the City of Delray Beach.

Furthermore, all Proposers must disclose the name of any City employee who owns, directly or indirectly, an interest of more than five percent (5%) in the Proposer's firm or any of its branches.

The purpose of this disclosure form is to give the City the information needed to identify potential conflicts of interest for evaluation team members and other key personnel involved in the award of this contract.

The term "conflict of interest" refers to situations in which financial or other personal considerations may adversely affect, or have the appearance of adversely affecting, an employee's professional judgment in exercising any City duty or responsibility in administration, management, instruction, research, or other professional activities.

Please check one of the following statements and attach additional documentation if necessary:

_____ To the best of our knowledge, the undersigned firm has no potential conflict of interest due to any other Cities, Counties, contracts, or property interest for this Proposal.

_____ The undersigned firm, by attachment to this form, submits information which may be a potential conflict of interest due to other Cities, Counties, contracts, or property interest for this Proposal.

Acknowledged by:

_____
Firm Name

_____
Signature

_____
Name and Title (Print or Type)

_____
Date

NOTIFICATION OF PUBLIC ENTITY CRIMES LAW

Pursuant to Section 287.133, *Florida Statutes*, you are hereby notified that a person or affiliate who has been placed on the convicted contractors list following a conviction for a public entity crime may not submit a Proposal on a contract to provide any goods or services to a public entity; may not submit a Proposal on a contract with a public entity for the construction or repair of a public building or public work; may not submit Proposals on leases or real property to a public entity; may not be awarded or perform work as a contractor, supplier, sub-Proposer, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 [F.S.] for Category Two [$35,000.00] for a period of thirty-six (36) months from the date of being placed on the convicted contractors list.

Acknowledged by:

_____
Firm Name

_____
Signature

_____
Name and Title (Print or Type)

_____
Date

(The remainder of this page is intentionally left blank)

NOTIFICATION OF PUBLIC RECORDS LAW PERTAINING TO PUBLIC CONTRACTS AND REQUESTS FOR CONTRACTOR RECORDS PURSUANT TO CHAPTER 119, *FLORIDA STATUTES*

Pursuant to Chapter 119, *Florida Statutes*, Contractor shall comply with the public records law by keeping and maintaining public records required by the City of Delray Beach in order to perform the service. Upon request from the City of Delray Beach' custodian of public records, contract shall provide the City of Delray Beach with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, *Florida Statutes* or as otherwise provided by law. Contractor shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract. If the Contractor does not transfer the records to the City of Delray Beach. Contractor upon completion of the contract, shall transfer, at no cost, to the City of Delray Beach all public records in possession of the Contractor or keep and maintain public records required by the City of Delray Beach in order to perform the service. If the Contractor transfers all public records to the City of Delray Beach upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City of Delray Beach, upon request from the City of Delray Beach' custodian of public records, in a format that is compatible with the information technology systems of the City of Delray Beach.

IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, *FLORIDA STATUTES*, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT OFFICE OF THE CITY CLERK LOCATED AT 100 NW 1ST AVENUE, DELRAY BEACH, FLORIDA 33444, PHONE NUMBER (561) 243-7000, EMAIL ADDRESS: JOHNSONK@MYDELRAYBEACH.COM.

Acknowledged:

Firm Name

Signature

Name and Title (Print or Type)

Date

DRUG-FREE WORKPLACE

_____is a drug-free workplace and has
(Company Name)
a substance abuse policy in accordance with and pursuant to Section 440.102, *Florida Statutes*.

Acknowledged by:

_____
Firm Name

_____
Signature

_____
Name and Title (Print or Type)

_____
Date

(The remainder of this page is intentionally left blank)

City of Delray Beach
RFQ No. 2025-013
CONSTRUCTION MANAGER AT RISK
Northwest Neighborhood Improvements
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NON-COLLUSION AFFIDAVIT

STATE OF _____
COUNTY OF _____

Before me, the undersigned authority, personally appeared _____, who, after being by me first duly sworn, deposes and says of his/her personal knowledge that:

a. He/She is _____ of _____, the Proposer that has submitted a Proposal to perform work for the following:

RFQ No.: _____ Title: _____

b. He/She is fully informed respecting the preparation and contents of the attached Request for Qualifications, and of all pertinent circumstances respecting such solicitation.

Such Proposal is genuine and is not a collusive or sham Proposal.

c. Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Proposer, firm, or person to submit a collusive or sham Proposal in connection with the solicitation and contract for which the attached Proposal has been submitted or to refrain from proposing in connection with such solicitation and contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm, or person to fix the price or prices in the attached Proposal or any other Proposer, or to fix any overhead, profit, or cost element of the Proposal price or the Proposal price of any other Proposer, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the City or any person interested in the proposed contract.

d. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

_____
Signature

Subscribed and sworn to (or affirmed) before me this _____ day of _____ 20__, by _____, who is personally known to me or who has produced _____ as identification.

SEAL

Notary Signature_____
Notary Name: _____
Notary Public (State): _____
My Commission No: _____
Expires on: _____

TRUTH – IN – NEGOTIATION CERTIFICATE

The undersigned warrants (i) that it has not employed or retained any company or person, other than bona fide employees working solely for the undersigned, to solicit or secure the Agreement and (ii) that it has not paid or agreed to pay any person, company, corporation, individual, or firm other than its bona fide employees working solely for the undersigned or agreed to pay any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of the Agreement.

The undersigned certifies that the wage rates and other factual unit costs used to determine the compensation provided for in the Agreement are accurate, complete, and current as of the date of the Agreement.

Name: _____

Title: _____

Date: _____

Signature: _____

(The remainder of this page is intentionally left blank)

City of Delray Beach
RFQ No. 2025-013
CONSTRUCTION MANAGER AT RISK
Northwest Neighborhood Improvements
Project No. 17-020

SCRUTINIZED COMPANY CERTIFICATION

This certification is required pursuant to Florida State Statute Section 287.135.

As of July 1, 2011, a company that, at the time of bidding or submitting a proposal for a new contract or renewal of an existing contract, is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List is ineligible for, and may not bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services of $1 million or more.

Companies must complete and return this form with its response.

Company: _____ FID or EIN No.: _____

Address:_____

City:_____ State: _____ Zip: _____

I, _____, as a representative of _____ certify and affirm that this company is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

_____ _____
Signature Title

_____ _____
Printed Name Date

CITY OF DELRAY BEACH

Affidavit Regarding the Use of Coercion for Labor and Services

Vendor Name: _____

Vendor FEIN: _____

Vendor's Authorized Representative Name and Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____

Email Address: _____

Florida Statute §787.06(13) requires all nongovernmental entities executing, renewing, or extending a contract with a governmental entity to provide an affidavit signed by a officer or representative of the nongovernmental entity under penalty of perjury that the nongovernmental entity does not use coercion for labor or services as defined in that statute. The City of Delray Beach, Florida is a governmental entity for the purposes of this statute.

As the officer or representative of the company, I certify that the company identified above does not:

- Use or threaten to use physical force against any person;
- Restrain, isolate, or confine or threaten to restrain, isolate, or confine any person without lawful authority and against his or her will;
- Use lending or other credit methods to establish a debt by any person when labor or services are pledged as a security for the debt, if the value of the labor or services as reasonably assessed is not applied towards the liquidation of the debt, the length and nature of the labor or services are not respectively limited and defined;
- Destroy, conceal, remove, confiscate, withhold, or possess any actual or purported passport, visa, or other immigration document, or any other actual or purported government identification, of any person;
- Cause or threaten to cause financial harm to any person;
- Entice or lure any person by fraud or deceit;

- Provide controlled substances as outlined in Schedule I or Schedule II of Florida State Statute §893.03 to any person for the purpose of exploitation of that person.

Under penalties of perjury, I declare that I have read the foregoing document and the at the facts stated in it are true.

Signature: _____
(Authorized Signature)

Print Name and Title: _____

Date: _____

(The remainder of this page is intentionally left blank)

SAMPLE PERFORMANCE BOND FORMAT

To be provided following receipt of Notice to Proceed for Construction

SAMPLE PAYMENT BOND FORMAT

To be provided following receipt of Notice to Proceed for Construction

SAMPLE LETTER OF CREDIT FORMAT

To be provided following receipt of Notice to Proceed for Construction

END OF SECTION 6

(The remainder of this page is intentionally left blank)

SECTION 7: SAMPLE AGREEMENT FORMAT

REFER TO EXHIBIT B

END OF SECTION 7

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SECTION 8: EXHIBITS

8.1 EXHIBITS

A. Exhibit A – AIA Document A305-2020 and all Exhibits

B. Exhibit B – Sample Agreement

Exhibit B-1 – Sample Agreement (redline version)
Exhibit B-2 – Sample Agreement (clean version)

C. Exhibit C – Location Map

D. Exhibit D – Preliminary Design Report

E. Exhibit E – Design Summary and Conceptual Improvements Map

F. Exhibit F – Phase 1 60% Design Plans

G. Exhibit G – Phase 2 60% Design Plans

H. Exhibit H – Phase 3 60% Design Plans

END OF SECTION 8

(The remainder of this page is intentionally left blank)

SECTION 9: GENERAL TERMS AND CONDITIONS

1. *DEFINITIONS*
   a. *Proposal: any offer(s) submitted in response to this Request for Proposal.*
   b. *Proposer: person or firm submitting a response to this Request for Proposal.*
   c. *Solicitation or Request for Proposal: this Solicitation documentation, including any and all addenda.*
   d. *Proposal Submittal forms: describes the goods or services to be purchased and must be completed and submitted with the Proposal.*
   e. *City: shall refer to the City of Delray Beach, Florida.*
   f. *Contract or Agreement: Request for Proposal, all addenda issued thereto, all affidavits, the signed agreement, and all related documents that comprise the totality of the contract or agreement between the City and the Proposer.*
   g. *Contractor: selected Proposer that is awarded a contract to provide the goods or services to the City.*
   h. *Purchasing and Contract Administration Division: Purchasing and Contract Administration Division of the City of Delray Beach, Florida.*
   i. *Responsible Proposer: Proposer that has the capability in all respects to perform in full the contract requirements, as stated in the Request for Qualifications, and the integrity and reliability that will assure good-faith performance.*
   j. *Responsive Proposer: Proposer whose Proposal conforms in all material respects to the terms and conditions included in the Request for Qualifications.*

2. *CONE OF SILENCE*
   Pursuant to Section 2-355 of the Palm Beach County Ordinance No. 2011-039, and the purchasing policies of the City of Delray Beach, all Solicitations, once advertised and until the appropriate authority has approved an award recommendation, are under the "Cone of Silence". This limits and requires documentation of communications between potential Proposers and/or Proposers on City Solicitations, the City's professional staff, and the City Council members.

3. *ADDENDUM*
   The Purchasing and Contract Administration Division may issue an addendum in response to any inquiry received, prior to the due date for Proposals, which changes, adds, or clarifies the terms, provisions, or requirements of the Solicitation. The Proposer should not rely on any representation, statement, or explanation, whether written or verbal, other than those made in the Solicitation document or in the addenda issued. Where there appears to be a conflict between the Solicitation and any addenda, the last addendum issued shall prevail. It is the Proposer's responsibility to ensure receipt of all addenda and any accompanying documentation. The Proposer is required to submit with its Proposal a signed "Acknowledgment of Addenda" form, when any addenda have been issued.

4. *LEGAL REQUIREMENTS*
   This Solicitation is subject to all legal requirements contained in the applicable City Ordinances and Resolutions, as well as all applicable City, State, and Federal Statutes. Where conflict exists between this Solicitation and these legal requirements, the authority shall prevail in the following order: Federal, State, and local.

5. *CHANGE OF PROPOSAL*
   Prior to the scheduled due date for Proposals, a Proposer may change its Proposal by submitting a new Proposal (as indicated on the cover page) with a letter on the firm's letterhead, signed by an authorized agent stating that the new Proposal replaces the original Proposal. The new submittal shall contain the letter and all information as required for submitting the original Proposal. No

changes to a Proposal will be accepted after Proposals have been opened.

6. *WITHDRAWAL OF PROPOSAL*
A Proposal shall be irrevocable unless the Proposal is withdrawn as provided herein. Only a written letter received by the Purchasing and Contract Administration Division prior to the due date for Proposals may withdraw a Proposal. A Proposal may also be withdrawn ninety (90) days after the Proposal has been opened and prior to award, by submitting a letter to the Purchasing and Contracts Director. The withdrawal letter must be on company letterhead and signed by an authorized agent of the Proposer.

7. *CONFLICTS WITHIN THE SOLICITATION*
Where there appears to be a conflict between the General Terms and Conditions, Special Conditions, the Scope of Services, and/or Description of Items, the Proposal Submittal forms, or any addendum issued, the order of precedence shall be: the last addendum issued, the Proposal Submittal forms, the Scope of Services and/or Description of Items, the Special Conditions, and then the General Terms and Conditions.

8. *PROMPT PAYMENT TERMS*
It is the policy of the City of Delray Beach that payment for all purchases by City departments shall be made in a timely manner. The City will pay the selected Proposer upon receipt and acceptance of the goods or services by a duly authorized representative of the City. In accordance with Florida Statutes, Section 218.74, the time at which payment shall be due from the City shall be forty-five (45) days from receipt of a proper invoice. The time at which payment shall be due to small businesses shall be thirty (30) days from receipt of a proper invoice. Proceedings to resolve disputes for payment of obligations shall be concluded by final written decision of the City Manager or designee, not later than sixty (60) days after the date on which the proper invoice was received by the City.

9. *DISCOUNTS (PROMPT PAYMENTS)*
The Proposer may offer cash discounts for prompt payments; however, such discounts will not be considered in determining the selected Proposer during the evaluation period. Proposers are requested to provide prompt payment terms in the space provided on the Proposal submittal forms signature page of the Solicitation.

10. *PREPARATION OF PROPOSALS*
   a. *The Proposal submittal forms define requirements of the services to be performed or the items to be purchased and must be completed and submitted with the Proposal. Use of any other forms will result in the rejection of the Proposal. The Proposal submittal forms must be legible. Proposers shall use typewriter, computer, or ink. All changes must be crossed out and initialed in ink. Failure to comply with these requirements may cause the Proposal to be rejected.*

   b. *An authorized agent of the Proposer's firm must sign the Proposal submittal forms where indicated.* ***Failure to sign the Signature Page of the Proposal shall render the Proposal non-responsive.***

   c. *The Proposer must identify any exceptions it takes to the terms and conditions of the Solicitation and contract. Exceptions will not automatically result in the Proposer being deemed non-responsive; however, such a determination is at the discretion of the City. Proposers are cautioned that they may be considered non-responsive if Proposals are conditioned to modifications, changes, or revisions to the terms and conditions of this Solicitation.*

d. *The Proposer may submit alternate Proposal(s) for the same Solicitation provided that such offer is allowable under the terms and conditions. The alternate Proposal must meet or exceed the minimum requirements and be submitted as a separate Proposal marked "Alternate Proposal".*

e. *When there is a discrepancy between the unit prices and any extended prices, the unit prices will prevail.*

f. *Late Proposals will not be accepted and will be returned to the sender unopened. It is the Proposer's responsibility to ensure timely delivery by the due date and time, and at the place stated in this Solicitation. No exceptions will be made due to weather, carrier, traffic, illness, or other issues.*

11. *CANCELLATION OF SOLICITATION*
The City of Delray Beach reserves the right to cancel, in whole or in part, any Requests for Proposals when it is in the best interest of the City.

12. *AWARD OF CONTRACT*

a. *This contract may be awarded to the responsive and responsible Proposer meeting all requirements as set forth in the Solicitation. The City reserves the right to reject any and all Proposals, to waive irregularities or technicalities, and to re-advertise for all or any part of this Solicitation as deemed in its best interest. The City shall be the sole judge of its best interest.*

b. *The City reserves the right to reject any and all Proposals if it is determined that prices are excessive, best offers are determined to be unreasonable, or it is otherwise determined to be in the City's best interest to do so.*

c. *The Proposer's prior performance as a prime contractor or subcontractor on previous City contracts shall be taken into account in evaluating the Proposal received for this Solicitation.*

d. *The City will provide a copy of the ranking and scores to all Proposers responding to this Solicitation.*

e. *Award of this Proposal may be predicated on compliance with and submittal of all required documents as stipulated in the Solicitation.*

f. *The City reserves the right to request and evaluate additional information from any Proposer after the due date for Proposals, as the City deems necessary.*

13. *CONTRACT EXTENSION*
The City reserves the right to automatically extend any agreement for a maximum period not to exceed one hundred and eighty (180) calendar days in order to provide City departments with continual service and supplies while a new agreement is being solicited, evaluated, and/or successful.

14. *WARRANTY*
All warranties express and implied shall be made available to the City for goods and services covered by this Solicitation. All goods furnished shall be fully guaranteed by the selected Proposer against factory defects and workmanship. At no expense to the City, the selected Proposer shall correct any and all apparent and latent defects that may occur within the manufacturer's standard warranty.

15. *ESTIMATED QUANTITIES*
Estimated quantities or dollars are for Proposer's guidance only: (a) estimates are based on the City's anticipated needs and/or usage; and (b) the City may use these estimates to determine the selected Proposer. No guarantee is expressed or implied as to quantities or dollars that will be used during the contract period. The City is not

obligated to place any order for the given amount subsequent to the award of this contract.

16. *NON-EXCLUSIVITY*
It is the intent of the City to enter into an agreement with the selected Proposer that will satisfy its needs as described herein. However, the City reserves the right as deemed in its best interest to perform, or cause to be performed, the work and services, or any portion thereof, herein described in any manner it sees fit, including but not limited to, award of other contracts, use of any contractor, or perform the work with its own employees.

17. *CONTINUATION OF WORK*
Any work that commences prior to and will extend beyond the expiration date of the current contract period shall, unless terminated by mutual written agreement between the City and the selected Proposer, continue until completion at the same prices, terms, and conditions.

18. *PROTEST*

a. *A recommendation for contract award or rejection of award may be protested by a Proposer. The Proposer may file a written protest with the City Clerk's office. The Proposer shall file its written protest with the City Clerk, Monday through Friday, between the hours of 8:00 a.m. and 5:00 p.m., excluding legal holidays. Protests shall contain the name, address, and phone number of the petitioner, name of the petitioner's representative (if any), and the title and Proposal number of the Solicitation. The protest shall specifically describe the subject matter, facts giving rise to the protest, and the action requested from the City.*

b. *The written protest must be received within three business days from the time of the initial posting of the intended award. Notice of Intent to Award shall be posted in Periscope S2G. Failure to file a timely formal written protest within the time period specified shall constitute a waiver by the Proposer of all rights of protest under this procedure (Purchasing Policies and Procedure Manual).*

c. *The letter of protest shall be accompanied by a non- refundable protest application fee in an amount equal to one percent (1%) of the protestor's bid or five thousand dollars ($5,000.00), whichever is less. The protest application fee must be a cashier's check, a certified check, or an attorney's trust account check made payable to the City of Delray protest application fee must be a cashier's check, a certified check, or an attorney's trust account check made payable to the City of Delray protest. Within seven (7) days (excluding Saturdays, Sundays and legal holidays) of receipt of the formal written protest, the Purchasing Director and the City Attorney shall attempt to settle or resolve the dispute, with or without a hearing at the City Attorney's sole discretion. A decision will be rendered in writing and shall: (1) state the reasons for the action taken; and (2) inform the protestor of its right to appeal as provided herein. A copy of the decision of the Purchasing Director and the City Attorney shall be mailed or otherwise furnished immediately to the protestor.*

19. *LAWS AND REGULATIONS*
The selected Proposer shall comply with all laws and regulations applicable to provide the goods or services specified in this Solicitation. The Proposer shall be familiar with all federal, state, and local laws that may affect the goods and/or services offered.

20. *LICENSES, PERMITS AND FEES*
The selected Proposer shall hold all licenses and/or certifications, obtain and pay for all permits and/or inspections, and comply with all laws,

ordinances, regulations, and building code requirements applicable to the work required herein. Damages, penalties, and/or fines imposed on the City or a selected Proposer for failure to obtain and maintain required licenses, certifications, permits, and/or inspections shall be borne by the selected Proposer.

21. SUBCONTRACTING

Unless otherwise specified in this Solicitation, the selected Proposer shall not subcontract any portion of the work without the prior written consent of the City. The ability to subcontract may be further limited by the Special Conditions. Subcontracting without the prior consent of the City shall constitute a material breach of the agreement and may result in termination of the contract for default.

22. ASSIGNMENT

The selected Proposer shall not assign, transfer, hypothecate, or otherwise dispose of this contract, including any rights, title, or interest therein, or its power to execute such contract to any person, company, or corporation without the prior written consent of the City. Assignment without the prior consent of the City may result in termination of the contract for default.

23. SHIPPING TERMS

Unless otherwise specified in the Solicitation, prices quoted shall be F.O.B. Destination. Freight shall be included in the proposed price.

24. RESPONSIBILITIES AS EMPLOYER

The employee(s) of the selected Proposer shall be considered to be at all times its employee(s), and not an employee(s) or agent(s) of the City or any of its departments. The selected Proposer shall provide physically competent employee(s) capable of performing the work as required. The City may require the selected Proposer to remove any employee it deems unacceptable. All employees of the selected Proposer shall wear proper identification.

It is the selected Proposer's responsibility to ensure that all its employees and subcontractors comply with the employment regulations required by the US Department of Homeland Security. The City shall have no responsibility to check or verify the legal immigration status of any employee of the selected Proposer.

25. INDEMNIFICATION

The selected Proposer shall indemnify and hold harmless the City and its officers, employees, agents, and instrumentalities from any and all liability, losses, or damages, including attorney's fees and costs of defense, which the City or its officers, employees, agents, or instrumentalities may incur as a result of claims, demands, suits, causes of actions, or proceedings of any kind or nature arising out of, relating to, or resulting from the performance of the agreement by the selected Proposer or its employees, agents, servants, partners, principals, or subcontractors. The selected Proposer shall pay all claims and losses in connection therewith, and shall investigate and defend all claims, suits, or actions of any kind or nature in the name of the City, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may be incurred thereon. The selected Proposer expressly understands and agrees that any insurance protection required by this contract agreement or otherwise provided by the selected Proposer shall in no way limit the responsibility to indemnify, keep and save harmless, and defend the City or its officers, employees, agents, and instrumentalities as herein provided.

26. COLLUSION

A Proposer recommended for award as the result of a competitive Solicitation for any City purchase of supplies, materials, and services (including professional services, other than

professional architectural, engineering, and other services subject to Sec. 287.055 Florida Stats.), purchase, lease, permit, concession, or management agreement shall, within five (5) business days of the filing of such recommendation, submit an affidavit under the penalty of perjury, on a form provided by the City stating either that the contractor is not related to any of the other parties proposing in the competitive Solicitation or identifying all related parties; and attesting that the Proposal is genuine and not a sham or collusive or made in the interest or on behalf of any person not therein named, and that the Proposer has not, directly or indirectly, induced or solicited any other Proposer to put in a sham Proposal, or any other person, firm, or corporation to refrain from proposing, and that the Proposer has not in any manner sought by collusion to secure to the Proposer an advantage over any other Proposer. In the event a recommended Proposer identifies related parties in the competitive Solicitation, its Proposal shall be presumed to be collusive and the recommended Proposer shall be ineligible for award unless that presumption is rebutted to the satisfaction of the City. Any person or entity that fails to submit the required affidavit shall be ineligible for contract award.

27. *MODIFICATION OF CONTRACT*
The contract may be modified by mutual consent, in writing, through the issuance of a modification to the contract, a supplemental agreement, purchase order, or change order, as appropriate.

28. *TERMINATION FOR CONVENIENCE*
The City, at its sole discretion, reserves the right to terminate any contract entered into pursuant to this Request for Qualifications (RFQ) with or without cause immediately upon providing written notice to the selected Proposer. Upon receipt of such notice, the selected Proposer shall not incur any additional costs under the contract. The City shall be liable only for reasonable costs incurred by the selected Proposer prior to the date of the notice of termination. The City shall be the sole judge of "reasonable costs."

29. *TERMINATION FOR DEFAULT*
The City reserves the right to terminate this contract, in part or in whole, or place the vendor on probation in the event the selected Proposer fails to perform in accordance with the terms and conditions stated herein by providing written notice of such failure or default and by specifying a reasonable time period within which the selected Proposer must cure any such failure to perform or default. If the selected Proposer fails to cure the default within the time specified, the City may then terminate the subject contract by providing written notice to the selected Proposer. The City further reserves the right to suspend or debar the selected Proposer in accordance with the appropriate City ordinances, resolutions, and/or policies. The vendor will be notified by letter of the City's intent to terminate. In the event of termination for default, the City may procure the required goods and/or services from any source and use any method deemed in its best interest. All re-procurement costs shall be borne by the incumbent Proposer

30. *FRAUD AND MISREPRESENTATION*
Any individual, corporation, or other entity that attempts to meet its contractual obligations with the City through fraud, misrepresentation, or material misstatement, may be debarred for up to five (5) years. The City, as a further sanction, may terminate or cancel any other contracts with such individual, corporation, or entity. Such individual or entity shall be responsible for all direct or indirect costs associated with termination or cancellation, including attorney's fees.

31. *ACCESS AND AUDIT OF RECORDS*
The City reserves the right to require the selected Proposer to submit to an audit by an auditor of the City's choosing at the selected Proposer's expense.

The selected Proposer shall provide access to all of its records, which relate directly or indirectly to this contract, at its place of business during regular business hours. The selected Proposer shall retain all records pertaining to this contract, and upon request, make them available to the City for three (3) years following expiration of the contract. The selected Proposer agrees to provide such assistance as may be necessary to facilitate the review or audit by the City to ensure compliance with applicable accounting and financial standards.

32. *OFFICE OF THE INSPECTOR GENERAL*
Palm Beach County has established the Office of the Inspector General, which is authorized and empowered to review past, present, and proposed County programs, contracts, transactions, accounts and records. The Inspector General (IG) has the power to subpoena witnesses, administer oaths, require the production of records, and monitor existing projects and programs. The Inspector General may, on a random basis, perform audits on all City contracts.

33. *PRE-AWARD INSPECTION*
The City may conduct a pre-award inspection of the Proposer's premises or hold a pre-award qualification hearing to determine if the Proposer is capable of performing the requirements of this Solicitation.

34. *PROPRIETARY/CONFIDENTIAL INFORMATION*
Proposers are hereby notified that all information submitted as part of, or in support of, Proposal submittals will be available for public inspection after the opening of Proposals in compliance with Chapter 119 of the Florida Statutes; popularly known as the "Public Record Law." The Proposer shall not submit any information in response to this Solicitation that Proposer considers a trade secret, proprietary, or confidential. The submission of any information to the City in connection with this Solicitation shall be deemed conclusively to be a waiver of any trade secret or other protection that would otherwise be available to the Proposer. In the event that the Proposer submits information to the City in violation of this restriction, either inadvertently or intentionally, and clearly identifies that information in the Proposal as protected or confidential, the City may, in its sole discretion, either (a) communicate with the Proposer in writing in an effort to obtain the Proposer's withdrawal of the confidentiality restriction, or (b) endeavor to redact and return that information to the Proposer as quickly as possible, and if appropriate, evaluate the balance of the Proposal. The redaction or return of information pursuant to this clause may render a Proposal non-responsive.

35. *HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)*
Any person or entity that performs or assists the City of Delray Beach with a function or activity involving the use or disclosure of "individually identifiable health information (IIHI) and/or Protected Health Information (PHI) shall comply with the Health Insurance Portability and Accountability Act (HIPAA) of 1996. HIPAA mandates for privacy, security, and electronic transfer standards include, but are not limited to:

a. *Use of information only for performing services required by the contract or as required by law;*

b. *Use of appropriate safeguards to prevent non-permitted disclosures;*

c. *Reporting to the City of Delray Beach any non-permitted use or disclosure;*

d. *Assurances that any agents and subcontractors agree to the same restrictions and conditions that apply to the Proposer and reasonable assurances that IIHI/PHI will be held confidential;*

e. Making Protected Health Information (PHI) available to the customer;

f. Making PHI available to the customer for review and amendment, and incorporating any amendments requested by the customer;

g. Making PHI available to the City of Delray Beach for an accounting of disclosures; and

h. Making internal practices, books, and records related to PHI available to the City of Delray Beach for compliance audits.

PHI shall maintain its protected status regardless of the form and method of transmission (paper records and/or electronic transfer of data). The selected Proposer must give its customers written notice of its privacy information practices, including specifically, a description of the types of uses and disclosures that would be made with protected health information.

36. ADDITIONAL FEES AND SURCHARGES
Unless provided for in the contract/agreement, the City will not make any additional payments such as fuel surcharges, demurrage fees, or delay-in-delivery charges.

37. COMPLIANCE WITH FEDERAL STANDARDS
All items to be purchased under this contract shall be in accordance with all governmental standards, to include, but not be limited to, those issued by the Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety Hazards (NIOSH), and the National Fire Protection Association (NFPA).

38. COMPLIANCE WITH FEDERAL REGULATIONS DUE TO USE OF FEDERAL FUNDING
If the goods or services to be acquired under this Solicitation are to be purchased, in part or in whole, with Federal funding, it is hereby agreed and understood that Section 60-250.4, Section 60-250.5, and Section 60-741.4 of Title 41 of the United States Code, which addresses Affirmative Action requirements for disabled workers, is incorporated into this Solicitation and resultant contract by reference.

39. BINDING EFFECT
All of the terms and provisions of this contract/agreement, whether so expressed or not, shall be binding upon, inure to the benefit of, and be enforceable by the parties and their respective legal representatives, successors, and permitted assigns.

40. SEVERABILITY
In the event any term or provision of any contract or agreement entered into pursuant to this Solicitation is found by a court of competent jurisdiction to be invalid, the remaining terms and provisions shall continue to be effective and shall be interpreted and given meaning to the greatest possible extent in the absence of any severed terms or provisions.

41. GOVERNING LAW AND VENUE
This contract and all transactions contemplated by this agreement shall be governed by and construed and enforced in accordance with the laws of the State of Florida without regard to any contrary conflicts of law principle. Venue of all proceedings in connection herewith shall lie exclusively in Palm Beach County, Florida, and each party hereby waives whatever its respective rights may have been in the selection of venue.

42. ATTORNEY'S FEES
It is hereby understood and agreed that in the event any lawsuit in the judicial system, federal or state, is brought to enforce compliance with this

contract or interpret same, or if any administrative proceeding is brought for the same purposes, each party shall pay their own attorney's fees and costs, including appellate fees and costs.

43. *EQUAL OPPORTUNITY AND ANTI-DISCRIMINATION*

The City of Delray Beach complies with all laws prohibiting discrimination on the basis of age, race, gender, religion, creed, political affiliation, sexual orientation, physical or mental disability, color or national origin, and therefore is committed to assuring equal opportunity in the award of contracts and encourages small, local, minority, and female-owned businesses to participate.

During the performance of this contract, the selected Proposer agrees it will not discriminate or permit discrimination in its hiring practices or in its performance of the contract. The selected Proposer shall strictly adhere to the equal employment opportunity requirements and any applicable requirements established by the State of Florida, Palm Beach County, and the federal government.

The selected Proposer further acknowledges and agrees to provide the City with all information and documentation that may be requested by the City from time to time regarding the Solicitation, selection, treatment, and payment of subcontractors, suppliers, and Proposers in connection with this contract.

44. *AVAILABILITY OF CONTRACT TO OTHER CITY DEPARTMENTS*

It is agreed and understood that any City department or agency may access this contract and purchase the goods or services successful herein. Each City department will issue a separate purchase order to the selected Proposer for the department's specific purchases.

45. *CRIMINAL HISTORY BACKGROUND CHECKS*

Prior to hiring a contract employee or contracting with a Proposer, the City may conduct a comprehensive criminal background check by accessing any Federal, State, or local law enforcement database available. The contract employee or Proposer will be required to sign an authorization for the City to access criminal background information. The costs for the background checks shall be borne by the City.

46. *LABOR, MATERIALS, AND EQUIPMENT*

Unless specified elsewhere in the Solicitation or resultant contract, all labor, materials, and equipment required for the performance of the requirements of the contract shall be supplied by the selected Proposer.

47. *MINIMUM WAGE REQUIREMENTS*

The selected Proposer shall comply with all minimum wage requirements, such as Living Wage requirements, minimum wages based on Federal Law, minimum wages based on the Davis-Bacon Act, and the provisions of any other employment laws, as may be applicable to this contract.

48. *PACKING SLIP AND DELIVERY TICKET*

A packing slip and/or delivery ticket shall accompany all items delivered to the City. The documents shall include information on the contract number or purchase order, any back-order items, and the number or quantity of items being delivered.

49. *PURCHASE OF OTHER ITEMS*

The City reserves the right to purchase other related goods or services, not listed in the Solicitation, during the contract term. When such requirements are identified, the City may request a price quote from the selected Proposer on the contract. The City, at its sole discretion, will determine if the prices offered are reasonable, and may choose to purchase the goods or services from the selected Proposer, another contract Proposer, or a non-contract Proposer.

50. PUBLIC RECORDS

Florida law provides that municipal records shall at all times be available to the public for inspection. Chapter 119, Florida Statutes, the Public Records Law, requires that all material submitted in connection with a Proposal response shall be deemed to be public record subject to public inspection upon award, recommendation for award, or thirty (30) days after Proposal opening, whichever occurs first. Certain exemptions to public disclosure are statutorily provided for in Section 119.07, Florida Statutes. If the Proposer believes any of the information contained in his/her/its Proposal is considered confidential and/or proprietary, inclusive of trade secrets as defined in Section 812.081, Florida Statutes, and is exempt from the Public Records Law, then the Proposer must, in its response, specifically identify the material which is deemed to be exempt and state the legal authority for the exemption. All materials that qualify for exemption from Chapter 119, Florida Statutes or other applicable law must be submitted in a separate envelope, clearly identified as "EXEMPT FROM PUBLIC DISCLOSURE" with the firm's name and the Proposal number clearly marked on the outside. The City will not accept Proposals when the entire Proposal is labeled as exempt from disclosure. The City's determination of whether an exemption applies shall be final, and the Proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records.

The selected Proposer(s) shall keep and maintain public records and fully comply with the requirements set forth at Section 119.0701, Florida Statues, as applicable; failure to do so shall constitute a material breach of any and all agreements awarded pursuant to this Solicitation.

51. CONFLICTS OF INTEREST

All Proposers must disclose with their Proposal the name of any officer, director, or agent who is also an employee of the City of Delray Beach. Further, all Proposers must disclose the name of any City employee who has any interest, financial or otherwise, direct or indirect, of five percent (5%) or more in the Proposers' firm or any of its branches. Failure to disclose any such affiliation will result in disqualification of the Proposer from this Solicitation and may be grounds for further disqualification from participating in any future Solicitations with the City.

52. PUBLIC ENTITY CRIMES

As provided in Section 287.133(2) (a), Florida Statutes, a person or affiliate who has been placed on the convicted Proposers list following a conviction for a public entity crime may not submit a Proposal on a contract to provide any goods or services to a public entity; may not submit a Proposal on a contract with a public entity for the construction or repair of a public building or public work; may not submit Proposals on leases of real property to a public entity; may not be successful or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity.

53. OTHER GOVERNMENTAL AGENCIES

If a Proposer is successfully awarded a contract as a result of this Solicitation, the Proposer shall allow other governmental agencies to access this contract and purchase the goods and services under the terms and conditions at the prices awarded.

54. COMPLETION OF WORK AND DELIVERY

All work shall be performed and all deliveries made in accordance with good commercial practice. The work schedule and completion dates shall be adhered to by the selected Proposer, except in such cases where the completion date will be delayed due to acts of nature, force majeure, strikes, or other causes beyond the control of the selected

Proposer. In these cases, the selected Proposer shall notify the City of the delays in advance of the original completion so that a revised delivery schedule can be appropriately considered by the City.

55. *FAILURE TO DELIVER OR COMPLETE WORK*
Should the selected Proposer fail to deliver or complete the work within the time stated in the contract, it is hereby agreed and understood that the City reserves the authority to cancel the contract with the selected Proposer and secure the services of another Proposer to purchase the items or complete the work. If the City exercises this authority, the City shall be responsible for reimbursing the selected Proposer for work that was completed and items delivered and accepted by the City in accordance with the contract specifications. The City may, at its option, demand payment from the selected Proposer, through an invoice or credit memo, for any additional costs over and beyond the original contract price that were incurred by the City as a result of having to secure the services of another Proposer.

56. *CORRECTING DEFECTS*
The selected Proposer shall be responsible for promptly correcting any deficiency, at no cost to the City, within three (3) calendar days after the City notifies the selected Proposer of such deficiency in writing. If the selected Proposer fails to correct the defect, the City may (a) place the selected Proposer in default of its contract; and/or (b) procure the products or services from another source and charge the selected Proposer for any additional costs that are incurred by the City for this work or items, either through a credit memorandum or through invoicing.

57. *ACCIDENT PREVENTION AND BARRICADES*
Precautions shall be exercised at all times for the protection of persons and property. All selected Proposers performing services or delivering goods under this contract shall conform to all relevant OSHA, State, and County regulations during the course of such effort. Any fines levied by the above-mentioned authorities for failure to comply with these requirements shall be borne solely by the selected Proposer. Barricades shall be provided by the selected Proposer when work is performed in areas traversed by persons, or when deemed necessary by the City.

58. *OMISSIONS IN SPECIFICATIONS*
The scope of services or description of items contained within this Solicitation describes the various functions and classes of work required as necessary for the completion of the project. Any omissions of inherent technical functions or classes of work within the specifications and/or statement of work shall not relieve the Proposer from furnishing, installing, or performing such work where required to the satisfactory completion of the project.

59. *MATERIALS SHALL BE NEW AND WARRANTED AGAINST DEFECTS*
The selected Proposer hereby acknowledges and agrees that all materials, except where recycled content is specifically requested, supplied by the selected Proposer in conjunction with this Solicitation and resultant contract shall be new, warranted for their merchantability, and fit for a particular purpose. In the event any of the materials supplied to the City by the selected Proposer are found to be defective or do not conform to specifications, (1) the materials may be returned to the selected Proposer at the Proposer's expense and the contract cancelled; or (2) the City may require the selected Proposer to replace the materials at the selected Proposer's expense.

60. *TOXIC SUBSTANCES/FEDERAL "RIGHT TO KNOW" REGULATIONS*
The Federal "Right to Know" Regulation implemented by the Occupational Safety and Health Administration (OSHA) requires employers

to inform their employees of any toxic substances to which they may be exposed in the workplace, and to provide training in safe handling practices and emergency procedures. It also requires notification to local fire departments of the location and characteristics of all toxic substances regularly present in the workplace.

Accordingly, the selected Proposer performing under this contract is required to provide two (2) complete sets of Material Safety Data Sheets to each City department utilizing any products that are subject to these regulations. This information shall be provided at the time when the initial delivery is made, on a department-by-department basis.

61. TAXES

The City of Delray Beach is exempt from Federal and State taxes for tangible personal property.

62. PROPOSER'S COSTS

The City shall not be liable for any costs incurred by Proposers in responding to this Request for Qualifications.

63. SUBSTITUTION OF PERSONNEL

It is the intention of the City that the selected Proposer's personnel proposed for the contract shall be available for the initial contract term. In the event the selected Proposer wishes to substitute personnel, the selected Proposer shall propose personnel of equal or higher qualifications, and all replacement personnel are subject to the City's approval. In the event the substitute personnel are not satisfactory to the City, and the matter cannot be resolved to the satisfaction of the City, the City reserves the right to cancel the contract for cause.

64. FORCE MAJEURE

The City and the selected Proposer are excused from the performance of their respective obligations under the contract when and to the extent that their performance is delayed or prevented by any circumstances beyond their control, including fire, flood, explosion, strikes or other labor disputes, natural disasters, public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance provided that:

a. The non-performing party gives the other party prompt written notice describing the particulars of the force majeure, including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the force majeure.

b. The excuse of performance is of no greater scope and of no longer duration than is required by the force majeure.

c. No obligations of either party that arose before the force majeure causing the excuse of performance are excused as a result of the force majeure.

d. The non-performing party uses its best efforts to remedy its inability to perform.

Notwithstanding the above, performance shall not be excused under this section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the selected Proposer shall not constitute a force majeure. The term of the contract shall be extended by a period equal to that during which either party's performance is suspended under this section.

65. NOTICES

Notices shall be effective when received at the addresses specified in the contract/agreement. Changes in respective addresses to which such notices are to be directed may be made from time to time by either party by written notice to the other party. Facsimile and email transmissions are acceptable notice effective when received; however, facsimile and email transmissions received after 5:00 p.m. or on weekends or holidays will be deemed received on the next business day. The original of the notice must also be mailed to the receiving party.

Nothing contained in this section shall be construed to restrict the transmission of routine communications between representatives of the selected Proposer and the City of Delray Beach.

66. *FISCAL FUNDING OUT*

The City's obligation pursuant to any contract or agreement entered into in accordance with this Solicitation is specifically contingent upon the lawful appropriation of funds. Failure to lawfully appropriate funds for any contract or agreement awarded shall result in automatic termination of the contract or agreement. A non-appropriation event shall not constitute a default or breach of said contract or agreement by the City.

END OF SECTION 9

SECTION 10: SOLICITATION SUMMARY

PURCHASING AND CONTRACT ADMINISTRATION DIVISION
The City of Delray Beach
100 NW 1st Avenue
Delray Beach, FL 33444

SOLICITATION SUMMARY

IMPORTANT NOTICE
The information you provide on this page will be read aloud at the PUBLIC OPENING for this solicitation. It is VERY IMPORTANT that the summary information you provide below is exactly the same information contained in your Proposal. If subsequent to the opening of Proposals, the City determines that the information contained in the electronic version of your Proposal is different from the information on this Solicitation Summary form, the City reserves the right to deem your Proposal NON-RESPONSIVE and remove your Proposal from further evaluation and consideration for contract award.

PROPOSAL INFORMATION

Proposal Number:	RFQ 2025-013
Title:	Construction Manager at Risk for the Northwest Neighborhood Improvements (Project No. 17-202)
Due Date and Time:	**February 5, 2025 @ 2:00PM (LOCAL TIME)**
Name of Proposer:	_____
Address:	_____
Contact Person:	_____
Authorized Signature:	_____
Date:	_____

By signing and submitting this Solicitation Summary form, the Proposer affirms that the information provided above is an exact and correct summary of the information contained in the electronic version of the Proposer's Proposal to the City of Delray Beach.

THIS SOLICITATION SUMMARY MUST BE SIGNED AND UPLOADED WITH YOUR SECURE ELECTRONIC PROPOSAL SUBMITTAL THROUGH www.bidnetdirect.com//cityofdelraybeach

END OF SECTION 10

AIA® Document A305™ – 2020

Contractor's Qualification Statement

THE PARTIES SHOULD EXECUTE A SEPARATE CONFIDENTIALITY AGREEMENT IF THEY INTEND FOR ANY OF THE INFORMATION IN THIS A305-2020 TO BE HELD CONFIDENTIAL.

SUBMITTED BY:
(Organization name and address.)

SUBMITTED TO:
(Organization name and address.)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

TYPE OF WORK TYPICALLY PERFORMED
(Indicate the type of work your organization typically performs, such as general contracting, construction manager as constructor services, HVAC contracting, electrical contracting, plumbing contracting, or other.)

THIS CONTRACTOR'S QUALIFICATION STATEMENT INCLUDES THE FOLLOWING:
(Check all that apply.)

- ☐ Exhibit A – General Information
- ☐ Exhibit B – Financial and Performance Information
- ☐ Exhibit C – Project-Specific Information
- ☐ Exhibit D – Past Project Experience
- ☐ Exhibit E – Past Project Experience (Continued)

CONTRACTOR CERTIFICATION
The undersigned certifies under oath that the information provided in this Contractor's Qualification Statement is true and sufficiently complete so as not to be misleading.

_____ _____
Organization's Authorized Representative Signature **Date**

_____
Printed Name and Title

NOTARY
State of:
County of:
Signed and sworn to before me this day of

_____
Notary Signature

My commission expires:

Sample

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AIA® Document A305™ – 2020 Exhibit A

General Information

This Exhibit is part of the Contractor's Qualification Statement, submitted by
and dated the day of in the year
(In words, indicate day, month and year.)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

§ A.1 ORGANIZATION
§ A.1.1 Name and Location
§ A.1.1.1 Identify the full legal name of your organization.

§ A.1.1.2 List all other names under which your organization currently does business and, for each name, identify jurisdictions in which it is registered to do business under that trade name.

§ A.1.1.3 List all prior names under which your organization has operated and, for each name, indicate the date range and jurisdiction in which it was used.

§ A.1.1.4 Identify the address of your organization's principal place of business and list all office locations out of which your organization conducts business. If your organization has multiple offices, you may attach an exhibit or refer to a website.

§ A.1.2 Legal Status
§ A.1.2.1 Identify the legal status under which your organization does business, such as sole proprietorship, partnership, corporation, limited liability corporation, joint venture, or other.

.1 If your organization is a corporation, identify the state in which it is incorporated, the date of incorporation, and its four highest-ranking corporate officers and their titles, as applicable.

.2 If your organization is a partnership, identify its partners and its date of organization.

.3 If your organization is individually owned, identify its owner and date of organization.

.4 If the form of your organization is other than those listed above, describe it and identify its individual leaders:

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§ A.1.2.2 Does your organization own, in whole or in part, any other construction-related businesses? If so, identify and describe those businesses and specify percentage of ownership.

§ A.1.3 Other Information

§ A.1.3.1 How many years has your organization been in business?

§ A.1.3.2 How many full-time employees work for your organization?

§ A.1.3.3 List your North American Industry Classification System (NAICS) codes and titles. Specify which is your primary NAICS code.

§ A.1.3.4 Indicate whether your organization is certified as a governmentally recognized special business class, such as a minority business enterprise, woman business enterprise, service disabled veteran owned small business, woman owned small business, small business in a HUBZone, or a small disadvantaged business in the 8(a) Business Development Program. For each, identify the certifying authority and indicate jurisdictions to which such certification applies.

§ A.2 EXPERIENCE

§ A.2.1 Complete Exhibit D to describe up to four projects, either completed or in progress, that are representative of your organization's experience and capabilities.

§ A.2.2 State your organization's total dollar value of work currently under contract.

§ A.2.3 Of the amount stated in Section A.2.2, state the dollar value of work that remains to be completed:

§ A.2.4 State your organization's average annual dollar value of construction work performed during the last five years.

§ A.3 CAPABILITIES

§ A.3.1 List the categories of work that your organization typically self-performs.

§ A.3.2 Identify qualities, accreditations, services, skills, or personnel that you believe differentiate your organization from others.

§ A.3.3 Does your organization provide design collaboration or pre-construction services? If so, describe those services.

§ A.3.4 Does your organization use building information modeling (BIM)? If so, describe how your organization uses BIM and identify BIM software that your organization regularly uses.

Sample

§ A.3.5 Does your organization use a project management information system? If so, identify that system.

§ A.4 REFERENCES

§ A.4.1 Identify three client references:
(Insert name, organization, and contact information)

§ A.4.2 Identify three architect references:
(Insert name, organization, and contact information)

§ A.4.3 Identify one bank reference:
(Insert name, organization, and contact information)

§ A.4.4 Identify three subcontractor or other trade references:
(Insert name, organization, and contact information)

Sample

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AIA® Document A305™ – 2020 Exhibit B

Financial and Performance Information

This Exhibit is part of the Contractor's Qualification Statement, submitted by
and dated the day of in the year
(In words, indicate day, month and year.)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

§ B.1 FINANCIAL

§ B.1.1 Federal tax identification number:

§ B.1.2 Attach financial statements for the last three years prepared in accordance with Generally Accepted Accounting Principles, including your organization's latest balance sheet and income statement. Also, indicate the name and contact information of the firm that prepared each financial statement.

§ B.1.3 Has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, been the subject of any bankruptcy proceeding within the last ten years?

§ B.1.4 Identify your organization's preferred credit rating agency and identification information.
(Identify rating agency, such as Dun and Bradstreet or Equifax, and insert your organization's identification number or other method of searching your organization's credit rating with such agency.)

§ B.2 DISPUTES AND DISCIPLINARY ACTIONS

§ B.2.1 Are there any pending or outstanding judgments, arbitration proceedings, bond claims, or lawsuits against your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, or any of the individuals listed in Exhibit A, Section 1.2, in which the amount in dispute is more than $75,000?
(If the answer is yes, provide an explanation.)

§ B.2.2 In the last five years, has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management:
(If the answer to any of the questions below is yes, provide an explanation.)

.1 failed to complete work awarded to it?

.2 been terminated for any reason except for an owners' convenience?

.3 had any judgments, settlements, or awards pertaining to a construction project in which your organization was responsible for more than $75,000?

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.4 filed any lawsuits or requested arbitration regarding a construction project?

§ B.2.3 In the last five years, has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management; or any of the individuals listed in Exhibit A Section 1.2:
(If the answer to any of the questions below is yes, provide an explanation.)

.1 been convicted of, or indicted for, a business-related crime?

.2 had any business or professional license subjected to disciplinary action?

.3 been penalized or fined by a state or federal environmental agency?

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AIA® Document A305™ – 2020 Exhibit C

Project Specific Information

This Exhibit is part of the Contractor's Qualification Statement, submitted by
and dated the day of in the year
(In words, indicate day, month and year.)

PROJECT:
(Name and location or address.)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

CONTRACTOR'S PROJECT OFFICE:
(Identify the office out of which the contractor proposes to perform the work for the Project.)

TYPE OF WORK SOUGHT
(Indicate the type of work you are seeking for this Project, such as general contracting, construction manager as constructor, design-build, HVAC subcontracting, electrical subcontracting, plumbing subcontracting, etc.)

CONFLICT OF INTEREST
Describe any conflict of interest your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, or any of the individuals listed in Exhibit A Section 1.2, may have regarding this Project.

§ C.1 PERFORMANCE OF THE WORK

§ C.1.1 When was the Contractor's Project Office established?

§ C.1.2 How many full-time field and office staff are respectively employed at the Contractor's Project Office?

§ C.1.3 List the business license and contractor license or registration numbers for the Contractor's Project Office that pertain to the Project.

§ C.1.4 Identify key personnel from your organization who will be meaningfully involved with work on this Project and indicate (1) their position on the Project team, (2) their office location, (3) their expertise and experience, and (4) projects similar to the Project on which they have worked.

§ C.1.5 Identify portions of work that you intend to self-perform on this Project.

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§ C.1.6 To the extent known, list the subcontractors you intend to use for major portions of work on the Project.

§ C.2 EXPERIENCE RELATED TO THE PROJECT

§ C.2.1 Complete Exhibit D to describe up to four projects performed by the Contractor's Project Office, either completed or in progress, that are relevant to this Project, such as projects in a similar geographic area or of similar project type. If you have already completed Exhibit D, but want to provide further examples of projects that are relevant to this Project, you may complete Exhibit E.

§ C.2.2 State the total dollar value of work currently under contract at the Contractor's Project Office:

§ C.2.3 Of the amount stated in Section C.2.2, state the dollar value of work that remains to be completed:

§ C.2.4 State the average annual dollar value of construction work performed by the Contractor's Project Office during the last five years.

§ C.2.5 List the total number of projects the Contractor's Project Office has completed in the last five years and state the dollar value of the largest contract the Contractor's Project Office has completed during that time.

§ C.3 SAFETY PROGRAM AND RECORD

§ C.3.1 Does the Contractor's Project Office have a written safety program?

§ C.3.2 List all safety-related citations and penalties the Contractor's Project Office has received in the last three years.

§ C.3.3 Attach the Contractor's Project Office's OSHA 300a Summary of Work-Related Injuries and Illnesses form for the last three years.

§ C.3.4 Attach a copy of your insurance agent's verification letter for your organization's current workers' compensation experience modification rate and rates for the last three years.

§ C.4 INSURANCE

§ C.4.1 Attach current certificates of insurance for your commercial general liability policy, umbrella insurance policy, and professional liability insurance policy, if any. Identify deductibles or self-insured retentions for your commercial general liability policy.

§ C.4.2 If requested, will your organization be able to provide property insurance for the Project written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis?

§ C.4.3 Does your commercial general liability policy contain any exclusions or restrictions of coverage that are prohibited in AIA Document A101-2017, Exhibit A, Insurance A.3.2.2.2? If so, identify.

Sample

§ C.5 SURETY

§ C.5.1 If requested, will your organization be able to provide a performance and payment bond for this Project?

§ C.5.2 Surety company name:

§ C.5.3 Surety agent name and contact information:

§ C.5.4 Total bonding capacity:

§ C.5.5 Available bonding capacity as of the date of this qualification statement:

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AIA® Document A305™ – 2020 Exhibit D

Contractor's Past Project Experience

	1	2	3	4
PROJECT NAME				
PROJECT LOCATION				
PROJECT TYPE				
OWNER				
ARCHITECT				
CONTRACTOR'S PROJECT EXECUTIVE				
KEY PERSONNEL (include titles)				
PROJECT DETAILS	Contract Amount Completion Date % Self-Performed Work	Contract Amount Completion Date % Self-Performed Work	Contract Amount Completion Date % Self-Performed Work	Contract Amount Completion Date % Self-Performed Work
PROJECT DELIVERY METHOD	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:
SUSTAINABILITY CERTIFICATIONS				

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AIA® Document A305™ – 2020 Exhibit E

Contractor's Past Project Experience, Continued

	1	2	3	4
PROJECT NAME				
PROJECT LOCATION				
PROJECT TYPE				
OWNER				
ARCHITECT				
CONTRACTOR'S PROJECT EXECUTIVE				
KEY PERSONNEL (include titles)				
PROJECT DETAILS	Contract Amount Completion Date % Self-Performed Work	Contract Amount Completion Date % Self-Performed Work	Contract Amount Completion Date % Self-Performed Work	Contract Amount Completion Date % Self-Performed Work
PROJECT DELIVERY METHOD	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:	☐ Design-bid-build ☐ Design-build ☐ CM constructor ☐ CM advisor ☐ Other:
SUSTAINABILITY CERTIFICATIONS				

Sample

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DRAFT

AIA® Document A201® – 2017

Modified General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

RFQ No. [insert]
CMAR GENERAL CONDITIONS TEMPLATE

THE OWNER:
(Name, legal status and address)

The City of Delray Beach
100 NW 1st Avenue
Delray Beach, FL 33444
The Construction Manager:
(Name, legal status, address, and other information)

THE A/E PROFESSIONAL:
(Name, legal status and address)

[insert]

TABLE OF ARTICLES

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4 A/E PROFESSIONAL

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7 CHANGES IN THE WORK

8 TIME

9 PAYMENTS AND COMPLETION

10 PROTECTION OF PERSONS AND PROPERTY

11 INSURANCE AND BONDS

12 UNCOVERING AND CORRECTION OF WORK

13 MISCELLANEOUS PROVISIONS

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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14 TERMINATION OR SUSPENSION OF THE CONTRACT

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the AIA A133-2019 Modified Agreement (the "Agreement") between the Owner and Contractor (referred to as Construction Manager) and consist of the Agreement and Exhibits thereto, these Modified General Conditions of the Contract, Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the A/E Professional. The Contract Documents also include the RFQ No. [insert] issued by Owner for this Project. Any of the Contract Documents not attached hereto are hereby incorporated by reference and shall be deemed to be of the same force and effect as if attached hereto. For purposes of the Agreement and these Modified General Conditions, the terms "Contractor" and "Construction Manager" shall be used interchangeably.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the A/E Professional or the A/E Professional's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the A/E Professional or the A/E Professional's consultants, or (4) between any persons or entities other than the Owner and the Contractor, it being specifically understood and agreed that none of the Contractor's Subcontractors, Sub-subcontractors, materialmen and equipment suppliers shall be deemed to be a third-party beneficiary of this Contract. The A/E Professional shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the A/E Professional's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed and includes all Work that is reasonably inferable therefrom as being necessary to accomplish the intent of the Contract Documents and fully functioning systems and a fully functioning Project, all in accordance with and as required by all applicable federal, state and local building codes, laws, ordinances, rules and regulations. The Work includes all labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the A/E Professional and the A/E Professional's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Owner's Representative as identified in the Agreement shall serve as the Initial Decision Maker. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

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§ 1.1.9 Knowledge

The terms "knowledge," "recognize," and "discover," their respective derivatives, and similar terms in the Contract Documents as used in reference to the Contractor shall be interpreted to mean that which the Contractor reasonably knows, reasonably recognizes, and reasonably discovers or should discover in exercising the reasonable care, skill, and diligence required by the Contract Documents in his capacity as a Contractor. Analogously, the expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Project and exercising the reasonable care, skill, and diligence required of the Contractor by the Contract Documents.

§ 1.1.10 Words such as "provide," "furnish," furnish and install," "supply," "include," and similar terms shall, unless otherwise noted, be directions to Contractor to provide and pay for all labor, materials and services necessary for the proper execution and completion of the relevant Contractor's Work. The term "any" shall be interpreted as any and all whenever more than one item would be applicable for completion of the Work in accordance with the Contract Documents.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. To the extent any conflict or discrepancy exists between the Contract Documents that cannot be resolved between the parties, interpretations will be based on the following priorities: (a) This Agreement; (b) the Modified General Conditions; (c) all Exhibits hereto, as modified; (d) executed Modifications, if any, with those of a later date having precedence over those of an earlier date; (e) Drawings and Specifications; and (f) any other Contract Documents. On the Drawings, given dimensions shall take precedence over scaled measurements, and large scale drawings over small scale drawings. Before ordering any materials or doing any Work, the Contractor shall verify measurements at the Project site and shall be responsible for the correctness of such measurements. The Contractor must call any such conflict or discrepancy between the Contract Documents and/or between the Contract Documents and applicable standards, codes and ordinances and/or between the Contract Documents and the existing Project it discovers to the Owner's attention, in writing, prior to proceeding with the Work. To the extent Contractor has sufficient information and access to do so, Contractor must verify all grades, elevations, dimensions, locations and quantities indicated on the Contract Drawings prior to the performance of Work. The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions, locations and quantities. In all cases of interconnection of its Work with existing or other Work, it shall verify at the site all grades, elevations, dimensions, locations and quantities relating to such existing or other Work. Any errors due to the Contractor's failure to so verify all such grades, elevations, dimensions, locations and quantities shall be promptly rectified by the Contractor without any additional cost to the Owner. Any differences found shall be submitted to the A/E Professional for resolution before proceeding with the Work and in such time so as not to delay the progress of the Work. Whenever a product to be furnished by Contractor requires it to be in accordance with a Federal Specification, an ASTM Standard, an American National Standards Institute Specification or other Association Standard, including the requirement of compliance with any local certifications for products such as a Notice of Acceptance approving the product, the Contractor shall present an affidavit from the manufacturer when provided by the manufacturer and, when requested by the A/E Professional or Owner or as set forth in the Specifications certifying that the product complies with the particular Standard or Specification. When provided by the manufacturer and requested by the A/E Professional or Owner the specified support test data shall be submitted to substantiate compliance.

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§ 1.3 Capitalization
Terms capitalized in these Modified General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of A/E Professionals.

§ 1.4 Interpretation
§ 1.4.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.4.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. Claims for additional costs or extensions of time because of the failure of Contractor to familiarize itself with conditions at the Project site will not be allowed. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in the Contract Sum or grant an extension to the Contract Time in connection with any failure by the Contractor to comply with the requirements of this Article.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service
§ 1.5.1 To the extent set forth in the agreement between the Owner and the A/E Professional, the A/E Professional and the A/E Professional's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the A/E Professional's or A/E Professional's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, A/E Professional, and the A/E Professional's consultants.

§ 1.5.3 Contractor shall maintain at the Project Site, and shall make available to Owner and A/E Professional, one record copy of the Drawings marked to indicate any deviations from the Contract Documents (the "As-Built Drawings") in good order. The As-Built Drawings shall be prepared and updated during the prosecution of the Work. The prints for As-Built Drawing use will be a set of black-line prints provided by A/E Professional to Contractor at the start of construction. Contractor shall maintain said set in good condition and shall use colored pencils to mark-up said set with "as-built information" in a legible manner to show: (i) deviations from the Drawings made during construction; (ii) details in the Work not previously shown; (iii) changes to existing conditions or existing conditions found to differ from those shown on any existing drawings; (iv) the actual installed position of equipment, piping, conduits, light switches, electric fixtures, circuiting, ducts, dampers, access panels, control valves, drains, openings and stub-outs; and (v) such other information as either Owner or A/E Professional may reasonably request. At the completion of the Work, Contractor shall deliver all As-Built Drawings to Owner. Final payment and any retention shall not be due and owing to Contractor until the final As-Built Drawings required above are delivered to Owner.

§ 1.6 Notice
§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

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§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the A/E Professional does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 Owner shall provide Contractor with a copy of the Notice of Commencement, as required by Florida law, that it will file for the Project.

§ 2.2 Omitted.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner has retained an A/E Professional lawfully licensed to practice architecture or engineering, or an entity lawfully practicing architecture or engineering, in the jurisdiction where the Project is located. That person or entity is identified as the A/E Professional in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the A/E Professional terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the A/E Professional.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been

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eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the A/E Professional and the A/E Professional may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the A/E Professional additional services of the A/E Professional and/or Owner's Representative made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the A/E Professional, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the A/E Professional in the A/E Professional's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 Prior to commencement of the Work, Contractor shall provide the Owner with copies of the above current licenses. Contractor further represents that it has read, examined and understands the pertinent Contract Documents and that it is qualified and able to perform this Work; that it has a sufficient number of qualified personnel to assure timely performance of this Work; that it has the proper tools and equipment to perform this Work; and that it is financially capable of fully performing the Work under this Contract.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the A/E Professional and Owner any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the A/E Professional may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the A/E Professional any nonconformity discovered by or made known to the Contractor as a request for information in such form as the A/E Professional may require. The Contractor shall be liable for damage, loss or expense to the Owner, including, without limitation, delays and the cost of correcting defective construction,

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resulting from the Contractor's performing any construction activity which it knows or should know involves such errors, inconsistency, omission or variation.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the A/E Professional issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall not be entitled to any increase in Contract Price or Contract Time and shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations.

§ 3.2.5 The Contractor represents and warrants that the construction means, methods, procedures and techniques necessary to perform the Work will be consistent with and conform to: (1) good and sound practices within the construction industry; (2) generally prevailing and accepted industry standards applicable to the Work; (3) requirements of any warranties applicable to the Work; and (4) applicable, laws, codes, orders and ordinances which bear upon the Contractor's performance of the Work.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and A/E Professional, and shall propose alternative means, methods, techniques, sequences, or procedures. The A/E Professional shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the A/E Professional objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.4 Contractor has the responsibility to ensure that all material and equipment suppliers, manufacturers, and Subcontractors, and their respective agents and employees adhere to the requirements of the Contract Documents, and that they order and provide all materials, equipment and supplies in a timely manner. Contractor shall coordinate its Work with that of all others under its control or Owner's control working on or supplying the Project. Contractor shall be responsible for coordination, locations, and routing of all material and equipment as designed by the Owner, A/E Professional, Engineers, and other consultants of the Owner. In areas and locations where the proper and most effective location and routing cannot be made as indicated or coordinated, Contractor shall contact Owner and A/E Professional in writing and meet with all others involved before proceeding with installations, to plan the most effective and efficient method of overall installation. Contractor shall pay all monthly utilities charges for construction until Substantial Completion.

§ 3.3.5 Contractor's Compliance with Contract Documents.

The Contractor shall give all notices, and warrants and represents that the Work when completed will be constructed in compliance with the Contract Documents and all applicable federal, state and local laws, codes, regulations, permits, decisions, orders, professional licenses, ordinances, and other legal requirements of the authorities have jurisdiction over the Project. Contractor shall bear responsibility for and bear all costs necessary to insure full compliance with the Contract Documents and all applicable laws, codes and ordinances, including the cost of removing existing Work, the cost of replacing any Work with Work conforming to the applicable requirements and any attorney's fees or other expenses incurred by Owner in responding to any complaints, citations, court orders, administrative orders or similar governmental edicts or process. The provisions of this Section shall survive the completion and final payment or termination of this Contract.

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§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the A/E Professional in accordance with Section 3.12.8 or ordered by the A/E Professional in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the A/E Professional and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and A/E Professional that the Work and materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. If required by the A/E Professional, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.5.3 Warranty Forms.

The Contractor shall obtain warranties, for a minimum period of one (1) year from Final Completion, from all subcontractors in the form attached as Exhibit ___ to the Agreement. Contractor agrees that it shall secure Extended Warranties for all items having Extended Warranties from the applicable subcontractors, or equipment or material manufacturers, as set forth in the Exhibits to Agreement. Any warranties obtained by the Contractor which deviate from the forms attached hereto must be approved by Owner.

§ 3.5.4 Contractor shall provide to the Owner one (1) electronic copy of the following information:

.1 All Subcontractor warranties fully executed in the form approved by the Owner;

.2 All Extended Warranties required by the Contract Documents;

.3 The Contractor's warranty;

.4 A list of all Subcontractors, Sub-subcontractors and suppliers who performed work on the Project or who furnished materials for use in the Project, such list to include the name, address, telephone number and responsible person at all such entities;

The delivery, endorsement or assignment of such warranties shall not release the Contractor from obligations pursuant to the Contract Documents.

§ 3.5.5 If the Contractor fails to commence to correct defective or nonconforming Work within three (3) business days from written notice to Contractor, the Owner may correct such defective or nonconforming Work. If the Contractor commences to correct such defective or nonconforming Work but fails to diligently and continuously work on such correction, the Owner may upon an additional three (3) business days' notice to Contractor, correct such item at Contractor's sole cost and expense. Owner may deduct such costs from any monies due Contractor. If the defective or nonconforming Work is discovered after final payment, then Contractor shall pay such cost and expense, including attorney's fees incurred. The Contractor shall bear all costs of correcting such defective Work.

§ 3.5.6 The warranty obligations of this Article shall survive completion and final payment or termination of this

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Contract for the Work performed to the date of termination.

§ 3.5.7 In the case of an emergency, Contractor, within twenty four (24) hours of written notice by Owner and/or A/E Professional, shall diligently and continuously pursue any necessary repairs or replacements of defects until corrected and will restore the Work to the condition required by the Contract Documents. Contractor shall restore surface, subsurface, collateral and primary conditions disturbed during warranty work to their prior condition. Contractor agrees that if Contractor fails to diligently pursue correction of any deficiency in a continuous and expeditious manner until completion, Owner may, in its sole discretion, correct such deficiencies at Contractor's sole and exclusive expense and that such action shall not invalidate any conditions of the Contract Documents. Contractor shall indemnify and hold Owner harmless from any claims, loss, damage or expense due to defects in the Work.

§ 3.5.8 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents without reimbursement from the Owner.

§ 3.5.9 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so in writing instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

§ 3.5.10 Prior to Substantial Completion, Contractor shall obtain all required inspections or other required documentation by the suppliers and Manufacturers' representatives for equipment and supplies during the course of performing the Work and during the warranty period, in order to ensure that all Manufacturer warranties will be honored thorough out the Manufacturer's entire warranty period.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the A/E Professional before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The A/E Professional will promptly investigate such conditions and, if the A/E Professional determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the A/E Professional determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the A/E Professional shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the A/E Professional's determination or recommendation, that party may submit a Claim as provided in Article 15.

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§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and A/E Professional. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances or if they are deleted, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 Contractor shall assign to the Project team the key employees ("Key Employees") including without limitation engineers, a superintendent, and a project manager, a list of which is attached as Exhibit ___ to the Agreement, who shall not be replaced without the Owner's prior written consent, which shall not be unreasonably withheld. Unauthorized replacement of the Key Employees by the Contractor may be deemed to be a material breach of this Agreement. If it is necessary to replace the Key Employee(s), the Contractor shall so advise the Owner in writing and the replacement individual shall likewise be subject to the Owner's approval. The Owner may reply within fourteen A/E Professional(14) days of receipt of the information, stating whether the Owner or the A/E Professional (1) has reasonable objection to the proposed superintendent or Key Employees or (2) requires additional time for review. Failure of the Owner to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent or Key Employees to whom the Owner or A/E Professional has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and A/E Professional's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the A/E Professional's approval. The A/E Professional's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the

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Contractor's construction schedule, and (2) allow the A/E Professional reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in strict accordance with the original schedules submitted to the Owner and A/E Professional unless a revision to the schedule is approved in writing by the Owner.

§ 3.10.4 The original construction schedule and all subsequently submitted updated construction schedules shall be in a detailed precedence-style, resource loaded critical path method (CPM) type format satisfactory to the Owner and the A/E Professional which shall also: (1) provide a graphic representation of all activities and events that will occur during performance of the Work; (2) identify each phase of construction and occupancy; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates"). Contractor shall provide Owner will the original/planned, resource loaded schedule electronic files in P6 native electronic files (.xer format). Upon review and acceptance by the Owner and the A/E Professional of the Milestone Dates, the construction schedule shall be deemed part of the Contract Documents and attached to the Agreement as a Exhibit ___ to be incorporated in the Contract Documents. The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. The accepted construction schedule shall be updated one time each month to reflect actual conditions and Contractor shall provide Owner with a copy of the updated resource loaded schedule, the electronic files in P6 native electronic files (.xer format), and a list of all changes made to the schedule, at the time Contractor submits its monthly Payment Application. In the event any progress report or schedule update indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including resequencing of the Work, overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time, Milestone Dates, or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to properly executed written Change Order. Contractor shall maintain such progress schedule on a current basis in accordance with the provisions of this Section and shall keep proper records available to inspection by Owner to substantiate actual activity, duration and completion dates.

§ 3.10.5 In the event the Owner determines that the performance of the Work, as of a Milestone Date, has not progressed or reached the level of completion required by the Contract Documents, the Owner shall have the right to order the Contractor, in writing, to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, and facilities, (3) re-sequencing the Work to avoid the effects of the potential delay; and (4) other similar measures utilizing the most cost effective and reasonable acceleration methods possible to avoid delays and liquidated damages. All such measures required to keep the Project on schedule and to avoid delays shall be a Cost of the Work but shall not be a basis to increase the Contract Sum.

§ 3.10.6 All time limits and obligations are of the essence in the Contract Documents.

§ 3.10.7 The Owner may exercise the rights furnished the Owner under or pursuant to this Section as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with any Milestone Date and/or the Substantial Completion Date set forth in the Contract Documents. Alternatively, Owner may exercise termination rights as provided for in the Contract Documents.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the A/E Professional and Owner, and delivered to the A/E Professional for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

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§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the A/E Professional is subject to the limitations of Section 4.2.7. Informational submittals upon which the A/E Professional is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the A/E Professional without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the A/E Professional, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the A/E Professional or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and A/E Professional that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the A/E Professional.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the A/E Professional's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the A/E Professional of such deviation at the time of submittal and (1) the A/E Professional has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the A/E Professional's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the A/E Professional on previous submittals. In the absence of such notice, the A/E Professional's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of A/E Professionalure or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the A/E Professional will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and

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other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the A/E Professional. The Owner and the A/E Professional shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and A/E Professional have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the A/E Professional will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the A/E Professional at the time and in the form specified by the A/E Professional.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. If the Work requires the use of sidewalks, public ways or other areas outside of the Owner's Project site, the Contractor shall be responsible for obtaining all necessary approvals for such work, and Contractor shall pay for and obtain all necessary permits, including but not limited to road closure permits. The Contractor shall also arrange and pay for all local police and fire officers and personnel required to be present at or adjacent to the Project site in connection with the work. The Contractor must secure all materials and equipment that are stored on the Project site and shall take all safety precautions necessary to protect such materials and equipment. The Contractor shall be responsible, as a Cost of the Work included as part of the Contract Sum, for all measures to protect the Project site and property adjacent to the Project, from the Contractor's Work.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up and Repair

§ 3.15.1 The Contractor shall at all times keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall, at its sole cost and expense, remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor or Owner may deduct the cost of cleanup from any amounts due Contractor.

§ 3.15.3 Contractor agrees to immediately repair at its sole cost and expense all damages to the Property, including, but not limited to, any damages to real or personal property arising from or relating to Contractor's performance of the Work to the reasonable satisfaction of the Owner.

§ 3.16 Access to Work

The Contractor shall provide the Owner and A/E Professional with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and A/E Professional harmless from loss on account thereof,

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but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or A/E Professional. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the A/E Professional.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the Owner, A/E Professional, A/E Professional's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees (at the trial and appellate levels), arising out of or resulting from performance of the Work, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In any and all claims against the Indemnified Parties by any employee of the Contractor, or anyone for whose acts any of them may be liable, the indemnification obligation under this provision of this Contract shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or on behalf of the Contractor or any Subcontractor under Workers Compensation Acts, Disability Benefit Acts or other employee benefit acts.

§ 3.18.3 The Parties hereto acknowledge and agree that, to the extent any portion of the indemnification provisions contained herein is deemed void or unenforceable in any action or proceeding, then such portion shall be considered severed such that it will not affect the remaining portions of these indemnification provisions.

§ 3.18.4 The Indemnitors' indemnity obligations under this Section shall also specifically include, without limitation, all claims, fines, penalties, damages, liability, costs, fees, expenses (including, without limitation, reasonable attorneys' fees and expenses), and punitive and consequential damages (if any) arising out of, or in connection with or attributable to, any claims made against the Indemnified Parties for (i) bodily injury, sickness, disease, death, or destruction of tangible property caused by Contractor and/or any of its Subcontractors and/or Sub-subcontractors, (ii) violation of or failure to comply with any law, statute, ordinance, rule, regulation, code or requirement of a public authority that bears upon the performance of the Work by the Contractor, and/or any of the Indemnitors, or any person or entity for whom they are responsible, (iii) Contractor's failure to comply with any provision of the Contract Documents including Warranty obligations, and obligations to correct damaged and defective work, (iv) means, methods, procedures, techniques, or sequences of execution or performance of the Work, and/or (v) failure to secure and pay for permits, fees, approvals, licenses, and inspections as required under this Contract and/or the other the Contract Documents, or any violation of any permit or other approval of a public authority applicable to the Work, by the Contractor, a Subcontractor, or any person or entity for whom either is responsible. Moreover, and without limiting the foregoing, the Indemnitor's indemnity obligations under this Section include any and all claims by third parties against Indemnified Parties for consequential damages arising from and/or in connection with this Contract and/or the performance and/or failure of the Work.

§ 3.18.5 The Contractor shall indemnify and hold harmless all of the Indemnified Parties from and against any costs and expenses (including reasonable attorneys' fees for all trial and appellate levels) incurred by any of the Indemnified Parties in enforcing any of the Contractor's defense, indemnity and hold-harmless obligations under this Contract.

§ 3.18.6 The Contractor shall include in all Subcontracts provisions by which each Subcontractor agrees to defend, indemnify and hold harmless Contractor and the Indemnified Parties from and against liability, damages, losses and costs, including, but not limited to, reasonable attorneys' fees for all trial and appellate levels, arising out of, in connection with, or resulting from the performance of the Work or any Subcontractor's obligations under the Contract Documents to the same extent and in the same manner as the Contractor is liable to Owner pursuant to this provision.

§ 3.18.7 The provisions of this Section shall survive final completion and final payment or termination of this Contract.

ARTICLE 4 A/E PROFESSIONAL

§ 4.1 General

§ 4.1.1 The A/E Professional is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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§ 4.1.2 Duties, responsibilities, and limitations of authority of the A/E Professional as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and A/E Professional. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The A/E Professional will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative with the authorities described herein during construction until the date the A/E Professional issues the final Certificate for Payment. The A/E Professional will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The A/E Professional will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the A/E Professional will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The A/E Professional will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the A/E Professional will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The A/E Professional will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The A/E Professional will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the A/E Professional in all communications that relate to or affect the A/E Professional's services or professional responsibilities. The Owner shall promptly notify the A/E Professional of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the A/E Professional's consultants shall be through the A/E Professional. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols. Contractor hereby authorizes and consents to direct communications, at any time and in any fashion, between Owner and any Subcontractors and Sub-subcontractors on the Project, regarding the Work performed on the Project and the status of payments to said persons or entities for said Work.

§ 4.2.5 Based on the A/E Professional's evaluations of the Contractor's Applications for Payment, the A/E Professional will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Owner, Owner's Representative, and A/E Professional have authority to reject Work that does not conform to the Contract Documents. Whenever the A/E Professional considers it necessary or advisable, the A/E Professional will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the A/E Professional nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the A/E Professional to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The A/E Professional will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The A/E Professional's action will be taken in accordance with the submittal schedule approved by the A/E Professional or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the A/E Professional's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for

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substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The A/E Professional's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The A/E Professional's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The A/E Professional's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The A/E Professional may prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The A/E Professional will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The A/E Professional will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and A/E Professional agree, the A/E Professional will provide one or more Project representatives to assist in carrying out the A/E Professional's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The A/E Professional will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The A/E Professional's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the A/E Professional will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the A/E Professional will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The A/E Professional's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The A/E Professional will review and respond to requests for information about the Contract Documents. The A/E Professional's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the A/E Professional will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

§ 4.2.15 Should the Contractor request information, interpretations of Contract Documents, use of alternates, approval of samples (but not Shop Drawings) or make other similar requests (hereinafter "RFI" or "RFIs"), it shall do so in good faith, in writing, and in a reasonable time and fashion. The A/E Professional's response to RFIs will be made in writing and within five (5) business days except for emergencies which shall be within three (3) business days**.** The period shall be extended if the A/E Professional is not able to respond due to the failure of Contractor to provide adequate and accurate information to the A/E Professional. Furthermore, should the A/E Professional require compensation to review any Contractor requests which are abusive or unreasonable in number or timing, the A/E Professional shall expedite its review of the RFIs provided Contractor agrees in writing to reimburse Owner for any architectural or engineering fees necessitated in responding to such RFIs. Contractor agrees that Owner may deduct any such architectural or engineering fees from any sums otherwise due Contractor.

§ 4.2.16 With regard to the submission and approval of Shop Drawings or other submittals, the period of time for response is as soon as reasonably possible, but no longer than ten (10) business days, except for emergencies which shall be reviewed by A/E Professional in three (3) business days. It is Contractor's responsibility to determine in advance the amount of time A/E Professional will take to review Shop Drawings or submittals and what information will be required for adequate review. Contractor is further responsible for submitting thorough and complete requests for review or approval in sufficient time so as not to cause any delay to the Contractor's Work. Contractor shall submit Shop Drawings in accordance with the submittal schedule. Contractor will not be entitled to an extension of the Contact Time or increase to the Contract Sum due to any delay on the part of A/E Professional, unless Contractor can

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demonstrate by clear and convincing documentation that Contractor properly submitted the request in accordance with the approved submittal schedule and A/E Professional failed, due to no fault of Contractor, to respond in accordance with the approved submittal schedule, and was in fact delayed, which delay could not have otherwise been avoided by Contractor.

§ 4.2.17 Notwithstanding any other provision to the Contract, the A/E Professional or its consultant(s) does not have authority to authorize changes to the Contract Documents. Only Owner shall be authorized to execute Change Orders, or otherwise modify these Contract Documents. Should Contractor desire to change any materials, or equipment required by Construction Change Directives, Contractor must first notify the Owner and A/E Professional of its intent to deviate from the Contract Documents by preparing a Construction Change Directive and obtain written approval for performance of any Work which changes or deviates from the Contract Documents. Failure to obtain said approval in writing will bar Contractor from any claim for additional compensation, delays or arguing that the A/E Professional or its consultants directed the work.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and A/E Professional of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the A/E Professional may notify the Contractor whether the Owner or the A/E Professional (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the A/E Professional to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or A/E Professional has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or A/E Professional has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or A/E Professional has no reasonable objection.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or A/E Professional makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and A/E Professional. Each subcontract agreement shall preserve and protect the rights of the Owner and A/E Professional under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents.

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Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.3.1 Subcontract Agreements. Contractor hereby agrees that each subcontract agreement shall contain provisions granting the Contractor the right to terminate the subcontract at any time for the Contractor's convenience and without cause. Each subcontract agreement shall preserve and protect the rights of the Owner under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar written agreements with Sub-Subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-Subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 The Contractor hereby assigns to the Owner an option to accept assignment of all of Contractor's contract rights with respect to Subcontractors and material and equipment suppliers that contracted to provide Work, materials and equipment to the Project in accordance with the Contract Documents, provided that Owner may elect in writing to exercise that option only after proper termination of the Contactor for Contractor's default. For those subcontract agreements which the Owner accepts by notifying the Subcontractors and Contractor in writing, the option shall include, but not be limited to, all Contractor's rights to make claims regarding quality of the Work and warranty claims. It is further agreed that all Subcontracts and material and equipment purchase contracts entered into by Contractor or its Subcontractors or material suppliers, shall contain a provision stating that, if after termination of Contractor for Contractor's default or completion of the Work, the Owner may bring any claim directly against any Subcontractor of Contractor, including any surety bond furnished for or on behalf of such Subcontractor, for breach of contract, warranty rights, quality of workmanship, and create third party beneficiary rights of Owner in said agreements. It is further agreed and understood that such assignment(s) and third party beneficiary rights are part of the consideration to Owner for entering into this Agreement with Contractor and may not be withdrawn. Subcontractor or equipment and material suppliers shall be notified of Owner's rights. Additionally, nothing contained in this Agreement shall constitute an assignment of Contractor's rights against the Owner or create any third party beneficiary rights in any Subcontractors or material and equipment suppliers of Contractor. The purpose of this provision is to allow the Owner, in addition to Contractor, to make claim for damage or indemnification directly against any Subcontractors or material and equipment suppliers that may be ultimately responsible for defects or deficiencies in the Work or materials and equipment. Additionally, this assignment is for the purpose of permitting Owner to require any such Subcontractor or materials and equipment suppliers to complete the unperformed obligations under such Subcontract, should the Contractor be in default or be terminated by Owner.

§ 5.4.2 Nothing in this Article or Agreement shall be deemed to create any contractual relationship between the Owner and any Subcontractor, material provider or supplier or to create any rights of any Subcontractor against the Owner for any actions, debts, obligations, responsibilities or liabilities occurring prior to any assignment executed pursuant to this Article.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Contractor shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor. The Contractor shall participate with any Separate Contractors and the

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Owner in reviewing their construction schedules. The parties acknowledge that the Contractor's schedule has included time for all known separate Owner contractors to perform their work, based on Contractor's experience and knowledge. The Contractor shall review those portions of the Contract Documents to be performed by the Owner's separate contractors, if any, that may impact Contractor's performance of its Work, and that may be interrelated with the Work to be performed by the Contractor, and shall schedule those separate contractors' work so as to cause no delay to the Work.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.1.5 If any part of the Work depends upon proper execution of work performed by Owner or Owner's separate contractors, the Contractor, its Subcontractors, and their respective Sub-subcontractors shall, prior to proceeding with the Work, inspect such Work and promptly report to Owner any apparent discrepancies or defects in such other Work. Failure of the Contractor, its Subcontractors, or their respective Sub-subcontractors to comply with these requirements shall bar any claims thereafter that defects in Contractor's Work, or delays in the schedule, are due to defects in the Work performed by others. Similarly, if any part of the work performed by Owner or Owner's separate contractors depends upon proper execution of Work performed by Contractor, its Subcontractors, and their respective Sub-subcontractors, Owner's separate contractors shall, prior to proceeding with the work, inspect such Work and promptly report to Contractor any apparent discrepancies or defects in such Work. Failure of Owner's separate contractors or utility contractors to comply with these requirements shall bar any claims thereafter that defects in Owner's separate contractors' work are due to defects in the Work performed by Contractor.

§ 6.1.6 Contractor shall provide Owner's separate contractors with a reasonable opportunity for the introduction and storage of their materials, equipment and execution of their work.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the A/E Professional of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the A/E Professional of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the A/E Professional will allocate the cost among those responsible.

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ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and A/E Professional. A Construction Change Directive requires agreement by the Owner and A/E Professional and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the A/E Professional alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the A/E Professional and signed by the Owner, Contractor, and A/E Professional stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 All Claims arising out of or relating to a Change Order shall be deemed waived unless expressly reserved in such Change Order. Contractor is specifically prohibited from unilaterally preserving Claims, including Claims for extension of the Contract Time. Notwithstanding any other provision to the Contract, the A/E Professional or its consultant will not have authority to authorize changes to the Contract Documents.

§ 7.2.3 Agreement on any Change Order shall constitute a final settlement of all matters which the Contractor knew or should have known relating to the change in the Work that is the subject of the Change Order, including but not limited to all direct and indirect costs associated with such change and all adjustments to the Contract Sum and Contract Time.

§ 7.2.4 Change Order requests shall not be considered unless and until submitted in writing to the Owner and the A/E Professional together with documentation detailing the change and supporting the requested increase or decrease in the Contract Sum and/or Contract Time. Such documentation must show: (i) all materials by quantity and price, (ii) all labor by unit price, (iii) insurance, (iv) permits, (v) payroll taxes and employee benefits, (vi) equipment by quantity and rate, (vii) Subcontractor markup, (viii) Contractor's Fee; (ix) a clear and concise statement of the basis for the claim, including dates and names of parties and people involved, with back up information, Contract Documents relied upon, including reference to sections of the Drawings and Specifications, daily reports, weather reports, meeting minutes, correspondence and the like; and (x) an updated schedule meeting the requirements of the Contract Documents, showing the impact of the Change to the agreed upon Project Schedule. Any requested increase to Contract Sum for the Contractor's General Condition costs shall be limited to actual on-site cost increases for General Conditions items incurred as a direct result of the change.

§ 7.2.5 Under no circumstances shall increase in the cost of materials or labor be considered the basis for a Claims by the Contractor for additional compensation, no matter how severe the increase of the cost of the materials or labor to the Contractor.

§ 7.2.6 In the event of any dispute between Owner and Contractor arising out or relating to the requirements of the Contract, any modification, or the terms of a pending Change Order, the Contractor shall continue to perform the Work, including any Work required by pending Change Orders, and Construction Change Directives and Owner shall continue to make payments of undisputed sums in accordance with the Contract Documents, pending final resolution of such dispute.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the A/E Professional and signed by the Owner and A/E Professional, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

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§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 Unit prices stated in the Contract Documents or subsequently agreed upon;

.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the A/E Professional shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the A/E Professional may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the A/E Professional;

.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and

.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the A/E Professional of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the A/E Professional. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The A/E Professional will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the A/E Professional determines, in the A/E Professional's professional judgment, to be reasonably justified. The A/E Professional's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the A/E Professional concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such

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agreement shall be effective immediately and the A/E Professional will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The A/E Professional may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The A/E Professional's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the A/E Professional and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the A/E Professional's order for a minor change without prior notice to the A/E Professional that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the A/E Professional in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries impacting the South Florida construction industry, unavoidable casualties, or adverse weather conditions documented in accordance with Section 15.1.6.2, that the Contractor asserts, and the A/E Professional determines, justify delay, then the Contract Time shall be extended for such reasonable time as the A/E Professional may determine.

§ 8.3.2 Adjustments in the Contract Time will be permitted for a delay only to the extent such delay (1) is not caused, in whole or in part, by the Contractor, or its Subcontractors and material suppliers; (2) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay; (3) is of a duration not less than one (1) Business day; (4) impacts the critical path of the Project and (5) was mitigated by the Contractor to the maximum extent practicable. All requests for extensions of time other than those associated with changes in the Work, must be submitted in writing to the Owner within five (5) calendar days of the event giving rise to the delay. Failure to so request an extension will constitute a waiver of any right for an extension of time.

§ 8.3.3 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.4 In entering into the Contract, the Contractor represents and warrants that it has considered all impacts and potential impacts associated with the following: (1) COVID-19 and any other worldwide pandemics known at the time of execution of the Agreement ("Pandemics") and (2) the current military conflicts involving Russia and the Ukraine and Israel and Hamas ("Military Conflicts"). Contractor further represents and warrants that in entering into this Contract, it has accounted for any and all labor or material shortages, delivery lead time, or price increases that may be caused by local and or national conditions, including but not limited to impacts from the Pandemics and the Military

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Conflicts. Contractor also represents and warrants that in determining time requirements for procurement, installation, and construction completion, Contractor has taken into account the impacts of the Pandemics and the Military Conflicts, and has included all of those factors in the Construction Schedule and Contract Sum.

§ 8.3.4.1 Contractor will not seek any price increases or time extensions relating to or arising from any impacts of the Pandemics or the Military Conflicts.

§ 8.3.4.2 The Owner shall not be required to make any adjustment in the Contract Sum or grant an extension to the Contract Time in connection with any failure by the Contractor to comply with the requirements of this Section 8.3.4.

§ 8.3.5 No Damage for Delays. Except for delays due to the gross negligence of the Owner or active interference by the Owner, Contractor's sole and exclusive remedy for delays shall be an increase to the Contract Time. Contractor shall not be entitled to an increase in the Contract Price or to payment of any other additional monies from Owner for costs incurred as a result of such delay, including additional or extended General Conditions costs or General Requirements costs. Owner's exercise of its rights under this Contract shall in no way be considered active interference.

§ 8.3.6 All schedule float is the property of Owner and may not be used by Contractor.

§ 8.4 Owner's Delay and Entitlement to Liquidated Damages

§ 8.4.1 The Contractor acknowledges that the Contract Time for the Substantial Completion of the Work requires that the Substantial Completion of the entire Work occur on or before specified date(s) as provided in the Agreement, subject to any extensions of the Contract Time. The Contractor acknowledges and agrees that the Owner will suffer severe financial loss in the event of delay and Owner shall be entitled to liquidated damages as provided in the Contract Documents. Liquidated damages are set forth in the Agreement.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Owner's Representative before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Owner's Representative. This schedule, unless objected to by the Owner's Representative, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Owner's Representative and supported by such data to substantiate its accuracy as the Owner's Representative may require, and unless objected to by the Owner's Representative, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least twenty (20) days before the date established for each progress payment, the Contractor shall submit to the Owner's Representative an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Owner's Representative require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 Along with the Contractor's Application for Payment, Contractor shall submit to Owner and Owner's Representative the following;

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.1 a sworn and certified progress payment affidavit which recites that all laborers, material suppliers and subcontractors dealing with the Contractor have been paid in full up through the date of the affidavit;

.2 partial releases of lien from Contractor, material suppliers and subcontractors and any lienors serving a Notice to Owner as required by this section 9.3, and evidence of proof of payment of any indebtedness incurred with respect to the Work of Contractor as may be required by Owner;

.3 evidence that all Work has been fully performed as required pursuant to the Contract Documents up to the time of the request for payment, and the Work has been inspected and accepted by the Owner's Representative and any governmental authorities required to inspect the Work, and such other evidence that the Owner may reasonably require;

.4 an updated construction schedules; and

.5 Any other document or information required elsewhere in the Contract Documents as a condition precedent to payment.

§ 9.3.1.2 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Owner's Representative, but not yet included in Change Orders.

§ 9.3.1.3 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Owner's Representative will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Owner's Representative determines is properly due, and notify the Contractor and Owner of the Owner's Representative's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Owner's Representative's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Owner's Representative to the Owner, based on the Owner's Representative's evaluation of the Work and the data in the Application for Payment, that, to the best of the Owner's Representative's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Owner's Representative. However, the issuance of a Certificate for Payment will not be a representation that the Owner's Representative has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner

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to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Owner's Representative or Owner may withhold or reject a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Owner's or Owner's Representative's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Owner's Representative is unable to certify payment in the amount of the Application, the Owner's Representative will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Owner's Representative cannot agree on a revised amount, the Owner's Representative will promptly issue a Certificate for Payment for the amount for which the Owner's Representative is able to make such representations to the Owner. The Owner's Representative may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Owner's Representative's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- **.7** failure to carry out the Work in accordance with the Contract Documents;
- **.8** failure to provide releases of lien for each Application for Payment in accordance with the Contract Documents; or
- **.9** failure of the Work to progress satisfactorily or according to schedule; or
- **.10** any other failure to perform a material obligation contained in the Contract Documents.

§ 9.5.2 When either party disputes the Owner's Representative's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Owner's Representative withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Owner's Representative and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Owner's Representative has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Owner's Representative.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Owner's Representative will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner's Representative and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

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to ascertain whether they have been properly paid. Neither the Owner nor Owner's Representative shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner.

§ 9.6.8 Owner may, in its discretion, make all or any portion of any progress payment by check payable jointly to the order of Contractor and any lienor giving timely notice, and deduct said sum from the balance then due Contractor. However, such payment, if made, shall not create any third party beneficiary or other rights in such lienor. In making such payments to lienors/subcontractors, the Owner shall require such lienor to execute the waiver of lien form in accordance with §713.06, Fla. Stat.

§ 9.6.9 Payments to Subcontractors by the Owner.

§ 9.6.9.1 If the Owner fails to approve an application for payment for a cause which is the fault of the Contractor and not the fault of a particular subcontractor, or if the Contractor fails to make a payment which is properly due to a particular subcontractor, the Owner may after ten (10) calendar days' written notice to Contractor, pay such subcontractor and Contractor jointly, less the amount to be retained under his subcontract.

§ 9.6.9.2 The Owner shall have no obligation to pay, or to see to the payment of, any monies to any subcontractor. Nothing contained in herein shall be deemed to create any contractual relationship between the Owner and any subcontractor or to create any rights in any subcontractor against the Owner.

§ 9.6.10 No payments made under this Contract shall be evidence of performance of this Contract, either wholly or in part, and no payment including final payment shall be construed to be an acceptance of defective Work or improper materials, nor shall use of the Work by the Owner constitute acceptance of the Work hereunder or any part thereof or a waiver of any of the Owner's claims..

§ 9.6.11 If the Owner is entitled to reimbursement or payment from the Contractor or Surety under or pursuant to the Contract Documents, such payment shall be made promptly upon written demand by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary, if the Contractor or Surety fail to promptly make any undisputed payment due the Owner after such written notice, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's reasonable discretion, elect either to: (1) deduct an amount equal to that which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner; or (2) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that which the Owner is entitled. Nothing contained herein shall be deemed an admission of liability by Contractor nor limit Contractor's right to contest same. Nothing contained in this Section requires consent of Surety or notice to surety of Owner's intent to take such action.

§ 9.6.12 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Owner's Representative does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor all undisputed amounts within twenty-one (21) days after the date established in the Contract Documents, the amount certified by the Owner's Representative or awarded by binding dispute resolution, then the Contractor may, upon

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seven additional days' notice to the Owner and Owner's Representative, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use and obtain all permits, licenses, and certificates required for such use. Specifically, and in addition to the foregoing, in order to achieve Substantial Completion for the Work, Contractor must achieve the following additional, minimum requirements:

1. Site cleanup and restoration of all exterior elements including roof surfaces, ledges, gutters, windows, exterior facades (including without limitation removal of all excess materials, debris, supplies, equipment, temporary structures, ladders, scaffolding, staging and/or trailers) has been completed;

2. All parking areas, all landscaping, all exterior building finishes, all interior building finishes, all interior spaces, all structural, mechanical, and technical systems required by the Contract Documents, all fire and life safety systems, are completed and ready for use or occupancy;

3. The Work is ready for occupancy, completed in accordance with the Drawings and Specifications and the Contract Documents including, but not limited to: (1) low voltage system, if any; (2) MEP trim out, if any; (3) security systems, if any; (4) finish painting, if any; (5) designated flooring, if any; (6) millwork, if any; and (7) cabinets, if any; all as applicable, are complete.

4. The Work is ready for occupancy, completed in accordance with the Plans and Specifications and the Contract Documents and, to the extent it is within the Contractor's scope of Work, all persons or entities having jurisdiction over the Project have issued the appropriate permits, and authorizations for the construction and use of the Work and the Work has received a temporary or final Certificate of Occupancy; and

5. Contractor has complied with the turnover obligations set forth in **§ 9.9** (including subparts) below.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the A/E Professional a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the A/E Professional will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the A/E Professional's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the A/E Professional. In such case, the Contractor shall then submit a request for another inspection by the A/E Professional to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the A/E Professional will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any,

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the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use or Turnover

§ 9.9.1 The Contractor shall be responsible for operating and maintaining the Work and all systems and equipment that are part of the Work until Substantial Completion as defined in AIA A201 Modified General Conditions above or until a mutually agreed upon earlier Turnover as set forth herein.

§ 9.9.2 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use or turnover is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the A/E Professional as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the A/E Professional.

§ 9.9.2 Immediately prior to such partial occupancy or use or turnover, the Owner, Contractor, and A/E Professional shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use or turnover of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.9.4 Prior to the time of Substantial Completion, Turnover or any partial occupancy or use may occur from Contractor to Owner, the following minimum requirements must be met by Contractor and submitted to Owner:

1. Contractor's installers and operation and regular maintenance personnel have met with Owner's representative and the property manager(s) for the Project or other individuals as may be designated by Owner, at the Project site, to provide complete instructions and training needed for proper start-up, operation, shut-down and maintenance of that part of Work. Instructions by manufacturer's representatives are required where installers are not experts in operating/maintenance procedures, or as specified in the Construction Documents. For operational equipment, installers shall demonstrate startup, shut-down, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, and other applicable operations, and shall review maintenance and operating instructions which are required to be performed in order to maintain in force applicable warranties, guaranties and bonds;

2. Contractor has provided Owner with Three (3) heavy duty, bound, hard-cover books and one (1) electronic copy of same, properly identified on both the front and the spine of each binder and indexed, in suitable sets of manageable size, containing the following information related to all equipment and systems on the Project:

1. Training, maintenance and operating manual information;
2. emergency instructions;
3. spare part listings;
4. wiring diagrams;
5. recommended "turn around" cycles;
6. inspections procedures;
7. shop drawings, product data, and any other applicable information;
8. detailed information and records for maintenance performed on all equipment and systems on the Project, operated and maintained by Contractor prior to Substantial Completion

3. Contractor has provided Owner with Three (3) heavy duty, bound, hard-cover books and one (1)

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electronic copy of same, properly identified on both the front and the spine of each binder and indexed, in suitable sets of manageable size, containing the following information:

1. All Subcontractor warranties fully executed in the form approved by the Owner;
2. All Extended Warranties required by the Contract Documents;
3. The Contractor's warranty; and
4. A list of all Subcontractors, Sub-subcontractors and suppliers who performed Work on the Project or who furnished equipment or materials for use in the Project, such list to include the name, address, email address, and telephone number of the responsible person at all such entities.

4. Contractor has provided Owner the Red Line drawings as required by the Contract Documents.

§ 9.9.5 The delivery, endorsement or assignment of such warranties shall not release the Contractor from obligations pursuant to the Contract Documents.

§ 9.10 Final Completion and Final Payment
§ 9.10.1 Statutory Requirements for Final Payment:
§ 9.10.1.1 Upon receipt of written notice from Contractor that the Work is ready for final inspection and acceptance, the Owner and A/E Professional, will promptly make the Final Inspection and shall prepare a Final Punch List as required by the Florida Statutes. To the extent this Project involves more than one building or structure, or will proceed in multiple phases, the Owner will provide a Final Punch List for each building, structure, or phase of the Project within the time limitations set forth in this Article.

§ 9.10.1.2 The Owner shall work with the Owner's Representative and/or A/E Professional to prepare the Final Punch List, which shall include a list of items and the estimated cost to complete each such item, which is required to render complete, satisfactory, and acceptable the Work of the Contractor.

§ 9.10.1.3 To the extent this Project has an estimated cost of less than $10 million, the Owner shall develop the Final Punch List no later than thirty (30) calendar days after the Project has achieved Substantial Completion. The Owner shall deliver the Final Punch List to Contractor within five (5) calendar days of its development.

§ 9.10.1.4 All items in the Final Punch List shall be completed by the Contractor within thirty (30) calendar days after Contractor's receipt of the Final Punch List. If the Final Punch List is not provided to the Contractor by the agreed upon date for delivery of the Final Punch List, the Contract Time for completion shall be extended by the number of days that the Owner exceeded the delivery date.

§ 9.10.1.5 Notwithstanding anything to the contrary contained in any Contract Documents or any attachment thereto, the Owner may withhold from payments to Contractor a sum equal to one hundred and fifty percent (150%) of the cost of the items on the Final Punch List (the "Final Punch List Balance").

§ 9.10.1.6 Within twenty (20) business days after the Final Punch List is created, the Owner shall pay the Contractor any remaining contract balance, including all retainage previously withheld, excluding an amount equal to the Final Punch List Balance as set forth in Section 9.10.1.5.

§ 9.10.1.7 The failure to include any corrective work or pending items not yet completed on the Final Punch List does not alter the responsibility of the Contractor to complete all the construction services purchased pursuant to the Agreement. All items that require correction under the Contract Documents, which are identified after the preparation and delivery of the Final Punch List remain the obligation of the Contractor as defined by the Contract Documents.

§ 9.10.1.8 Upon Contractor's completion of the Final Punch List, Contractor may submit to the Owner a final Application for Payment requesting the Final Punch List Balance set forth in Section 9.10.1.5.

§ 9.10.1.9 If Owner finds the Work acceptable, the requisite documents have been submitted and the requirements of the Contract Documents fully satisfied, and all conditions of the permits and regulatory agencies have been met, a Final Certificate of Payment shall be issued, stating that the requirements of the Contract Documents have been performed and the Work is ready for acceptance under the terms and conditions thereof.

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§ 9.10.1.10 If a good faith dispute exists as to whether one or more items identified on the Final Punch List have been completed in accordance with the Contract Documents, Owner may continue to withhold up to 150% of the total cost to complete such item.

§ 9.10.1.11 Owner is not required to pay or release any amounts to Contractor that are the subject of a good faith dispute made in writing pursuant to the Agreement.

§ 9.10.1.12 Retainage. Five percent (5%) of all monies earned by Contractor shall be retained by Owner until twenty (20) business days after creation of the Final Punch List as set forth this section. Within twenty (20) business days after the Final Punch List is created, the Owner shall pay the Contractor any remaining contract balance, including all retainage previously withheld, with the exception of an amount equal to 150% of the estimated cost to complete the items identified on the Final Punch List, as set forth herein.

§ 9.10.1.13 This Agreement is intended to comply with the requirements of Sections 218.735 and 255.073-079, Florida Statutes, as applicable. If this Article or Agreement contains any provision found to be unlawful under Sections 218.735 and 255.073-079, Florida Statutes, the same shall be deemed to be of no effect and shall be deemed stricken from this Agreement without affecting the binding force of this Agreement as it shall remain after omitting such provision.

§ 9.10.2 Final payment, including any remaining retention shall not become due until the Contractor satisfies the requirements of the Contract Documents. As used in the Contract Documents, "Final Completion" shall mean such time after Substantial Completion and the following express conditions precedent to Final Payment have been met:

.1 the A/E Professional has issued a Certificate of Final Completion;

.2 all "punch list" items have been fully completed to the reasonable satisfaction of Owner and A/E Professional, unless the failure of the same to issue is not due to the failure of Contractor to complete its scope of Work;

.3 the final certificate of occupancy and all final governmental and utility authority permits have been issued, unless the final certificate of occupancy is delayed for reasons that are beyond the control of the Contractor and those for whom the Contractor is responsible;

.4 Contractor has fully cleaned and restored the site with respect to all of the final punch list work; and

.5 all temporary utilities are disconnected;

§ 9.10.3 In addition to the above, Contractor shall have performed and or submitted (as applicable) to the A/E Professional and/or Owner's Representative and Owner the following:

.1 an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, or shall be paid out of Contractor's final payment;

.2 consent of surety, if any, to final payment;

.3 documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties;

.4 all previously undelivered manufacturer and Subcontractor guarantees, warranties and manuals and documents;

.5 final and or conditional releases of lien, waivers of claim, satisfactions of liens or claims, and such other affidavits as may be reasonably required by the Owner to assure a lien-free and

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claim-free completion of the Work; Where Contractor is in a dispute with a Subcontractor and or supplier, consent of surety to Final Payment is acceptable.

.6 To the extent A/E Professional in missing any shop drawings and or submittals, Contractor will provide any such items requested in writing;

.7 evidence that all temporary utilities have been disconnected;

.8 the Contractor has fully cleaned and restored the site, including removal of all rubbish and construction debris;

.9 all final governmental permits for which Contract is responsible under the Contract Documents have been issued and all permits have been closed out,

.10 Contractor has complied with all partial occupancy or Turnover obligations set forth in the AIA A201 Modified General Conditions above; and

.11 Contractor has complied with all other requirements of the Contract Documents.

§ 9.10.4 The Contractor's obligation to complete all Work in accordance with the Contract Documents shall not be deemed waived, excused, or otherwise satisfied by any failure of any person or entity to include, discover, or identify any incomplete or defective Work in any punch list, completion list, or inspection report, including without limitation the Substantial Completion Punch List, or any further punch lists.

§ 9.10.5 Final payment may be withheld on account of (1) defective Work not remedied, (2) claims or liens filed, (3) failure of the Contractor to make payments properly to subcontractors or for labor, materials, or equipment, (4) failure to provide waivers of lien for all lienors giving notices, (5) damage to the Owner's property caused by Contractor, its subcontractors or anyone working for Contractor, in which case a reasonable estimated amount of such damages shall be withheld from Contractor's payment until such damages are satisfactorily corrected, (6) failure to carry out the Work in accordance with the Contract Documents.

§ 9.10.6 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the A/E Professional and/or Owner's Representative so confirms, the Owner shall, upon application by the Contractor and certification by the A/E Professional and/or Owner's Representative, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the A/E Professional and/or Owner's Representative prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.7 The making of final payment shall not constitute a waiver of Claims by the Owner.

§ 9.10.8 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

§ 9.10.9 Prior to final payment, Contractor shall (1) organize maintenance and operating manual information into suitable sets of manageable size, and bind into individual binders properly identified and indexed; (2) include as applicable emergency instructions, spare part listing, warranties, guarantees or wiring diagrams, recommended "turn around" cycles, inspections procedures, shop drawings, product data, and any other applicable information; (3) Bind each manual of each set in heavy-duty, three-ring vinyl cover binders, and include pocket folders for folded sheet information; and (4) mark identification on both the front and the spine of each binder.

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ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- **.1** employees on the Work and other persons who may be affected thereby;
- **.2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- **.3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under the Contract Documents. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable in whole or in part to the grossly negligent acts or omissions of the Owner or A/E Professional or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable in whole or in part to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under the Agreement.

§ 10.2.6 Any damage to adjacent property or improvements shall be promptly repaired by the Contractor, if caused in whole or in part by Contractor or its Subcontractors, any Sub-subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The foregoing is not intended to prevent the Contractor from making claim against any insurance that may provide coverage to the Contractor.

§ 10.2.7 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents and theft. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and A/E Professional.

§ 10.2.8 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.9 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not

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addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and A/E Professional of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and A/E Professional the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the A/E Professional will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or A/E Professional has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the A/E Professional have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 The Owner shall indemnify and hold harmless the Contractor, Subcontractors, A/E Professional, A/E Professional's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7. Within ten (10) days of executing the Agreement, the Contractor shall furnish a hurricane preparedness plan to secure the site and prevent damage to the Project, which shall be attached as an exhibit to the Agreement as Exhibit ___.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the RFQ No. [insert] and reflected in the Insurance Exhibit _____ to the Agreement. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located and having an A.M. BEST's rating of "A-X" or better. The Owner, A/E Professional, and A/E Professional's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The insurance required by Section 11.1 shall be the primary insurance and shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater and shall name Owner, A/E Professional and A/E Professional's Consultants as additional and named insureds covering bodily injury, death, property damage and personal injury and Owner as an additional insured for claims to the extent caused by the Contractor's negligent acts or omissions during the Contractor's completed operations. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of

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commencement of the Work until the date of final payment except for completed operations coverage, which shall be maintained for two (2) years after the completion of the Project.

§ 11.1.3 The Contractor shall not commence any portion of the Work under the Contract until it has obtained all insurance required under this Article 11 or the Agreement and, except for completed operations insurance or except as otherwise provided herein.

§ 11.1.4 The deductible on all insurance required of Contractor under this Article 11 or the Agreement shall not exceed [insert] dollars and shall in all events be paid by the Contractor.

§ 11.1.5 Certificates of insurance, Additional and Named Insured Endorsements, and actual copies of the Insurance Policies in accordance with this Article shall be delivered to the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance, and the certificates of insurance and endorsements are attached hereto as an exhibit to be incorporated in the Contract Documents. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 60 days' prior written notice has been given to the Owner. Contractor shall not commence Work and shall not be entitled to any payments under the Contract Documents until the required policies have been delivered to Owner and reviewed by Owner's insurance professional and found to be in compliance with the Contract Documents.

§ 11.1.6 An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Article 9 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.7 Contractor's failure to provide and maintain the insurance required by this Contract shall be grounds for termination, and Contractor shall be liable for all losses, damages, costs and expenses associated with the failure to maintain the required insurance.

§ 11.1.8 Except to the extent covered by and paid by insurance, the Contractor shall be responsible for all loss or damage Contractor or its Subcontractors cause to the Work, including the Contractor's materials delivered to site for incorporation therein and all property issued to the Contractor by the Owner for use or incorporation in the Work.

§ 11.1.9 The Contractor shall secure, pay for, and maintain whatever insurance they may deem necessary for protection against loss of owned or rented capital equipment and tools, including any tools owned by mechanic, any tools, equipment, stagings, towers and forms owned or rented by its subcontractors or agents under this Contract. Failure of the Contractor to secure such insurance or to maintain adequate levels of coverage shall not obligate the Owner or its agents and employees for any losses of owned or rented equipment or for any Work damaged. If the Contractor secures such insurance, the insurance policy shall include a waiver of subrogation as follows: "It is agreed that in no event shall this insurance company have any right of recovery against the Owner." The Contractor agrees to cooperate fully with the insurance company or companies in carrying out the provisions and conditions of all policies applicable to Work to be done, as well as all rules and recommendations of such company or companies in regard to accident prevention, reports and audits. The Contractor further agrees that notice of every accident will not only be reported immediately to the Owner, and also to such insurance company or companies.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall be responsible for maintaining the Owner's usual liability insurance and Builder's Risk coverage. The parties agree and acknowledge that, should any insurance maintained by the Owner not provide coverage for losses and/or damages arising from any acts, errors, omissions, or negligence on the part of the Contractor and/or its subcontractors, the Contractor and all applicable Subcontractors shall bear the risk and pay for such losses regardless of whether the Contractor should be covered for such losses by the Contractor's general liability or other insurance policies.

§ 11.2.2 The Owner's Builder's Risk insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until completion of the Project.

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.1 Deductibles: The Owner's Builder's Risk insurance shall have a reasonable deductible, with such deductible amount to be determined at the sole discretion of the Owner. The Contractor shall pay for any deductibles on the Owner's insurance policies for claims to the extent they arise in whole or in part as a result of the Contractor's, or third parties for which Contractor is responsible, acts, errors, or omissions under this Agreement.

.2 Any Owner's Builder's Risk insurance policy shall extend only to materials actually installed in the Project or at the premises ready for installation (unless otherwise agreed by the insurer). Any plant, materials, equipment, tools or fixtures forming a part of the capital assets of the Contractor or belonging to any of its employees shall not be covered by the builders risk insurance maintained by Owner. Any such Builder's Risk insurance policy shall be subject to the usual limitations and exclusions normally contained in such policies of insurance, including, without limitation, a reasonable deductible at the discretion of the Owner. In the event of any loss or damage paid by the Builder's Risk policy, such proceeds shall be accepted and used by Owner at Owner's sole discretion.

.3 Unless otherwise provided in the Contract Documents, the Builder's Risk insurance shall cover portions of the Work stored off the Site after written approval of the Owner at the value established in the approval, and also portions of the Work in transit.

§ 11.3 Waivers of Subrogation

§ 11.3.1 Except for losses due to the negligence or breach of contract of a, subcontractor, sub-subcontractor or persons they are responsible for, the Owner and Contractor waive all rights against each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other for compensation for damages caused by fire or other perils to the extent paid for by the Owner's Builder's Risk insurance, Owner's property insurance, or by the Contractor's liability insurance obtained pursuant to this Article, except such rights as they have to proceeds of such insurance held by the Owner and the Contractor. This shall not act as a waiver of any other rights or remedies under the Contract Documents.

§ 11.3.2 A loss insured under the property or Builder's Risk insurance for the Property shall be adjusted by the Owner, using reasonable discretion and not as a fiduciary for Contractor or any other interested party, and made payable to the Owner for the insureds, as their interest may appear, subject to requirements of any applicable mortgagee clause. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate written agreements where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.3 The Owner shall not be required to give bond for performance of the Owner's duties. The Owner may deposit in a separate account insurance proceeds so received, which the Owner shall distribute in accordance with the terms of any settlement reached with the Builder's Risk insurer. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor in accordance with this Agreement and paid for by Owner.

§ 11.4 Performance of Bond and Payment of Bond

§ 11.4.1 If required by the terms of RFQ No. ___, Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in RFQ No. ___.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.4.3 To the extent required by RFQ No. ___, Contractor shall provide the Owner with a 100% performance bond in the amount of the Contract Sum utilizing the form provided with these Contract Documents which shall incorporate the obligation of Surety referenced in this Contract and an unconditional payment bond in accordance with Fla. Stat. § 713.23 in the amount of the Contract Sum covering the faithful performance of the Contract and payment of all obligations thereunder. The bonds shall be executed by a surety that is licensed in Florida and shall remain in effect as required by law and the Contract Documents. The bonds shall be effective as of the Commencement Date as defined in the Contract and shall cover all Work and obligations under the Contract Documents.

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§ 11.4.4 The Contractor shall, upon approval of the bonds by the Owner, record the bonds with the County Clerk's Office of the county in which the work is to be performed and promptly furnish the Owner with a certified copy of the recorded bonds.

§ 11.4.5 Both the payment bond and the performance bond under this Article shall display the Surety's bond number, and attach a rider containing the following provisions:

.1 Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change, or other modification of the Contract Documents. Any other addition, alteration, change, extension of time, backcharge, or other modification of the Contract Documents, or forbearance on the part of either Owner or Contractor to the other, shall not release Surety of its obligations hereunder, and notice to the surety of such matters is hereby waived.

.2 Surety hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed or any moneys due or to become due thereunder. Surety expressly consents to the payment provisions as provided in this Contract. In any event, even if the Surety fails to include such language in its bond, by incorporating this Contract into the Payment and Performance Bonds furnished for this Project, Surety agrees to the provisions of this Article and the provisions of § 11.4.4.

.3 Surety hereby agrees that if, after the 14 day Notice to the Contractor and Surety, the Contractor and Surety do not cure the default as provided in this Section, then the Surety, in addition to the Contractor, without the need to terminate the Contractor, shall be liable to Owner for any damages the Owner may sustain and be entitled to pursuant to the Contract and the bonds. No further Notices shall be required by Owner.

§ 11.4.6 Should Contractor fail to perform any of its obligations under this Contract, the Owner shall give the Contractor and Surety a fourteen day (14) Notice of Default. After receipt of the 14 day Notice provided herein, the Contractor and Surety shall have the right and opportunity to cure the default(s). If, after the 14 day Notice, the Contractor and Surety do not cure the default as provided in this Section, then the Surety, in addition to the Contractor, without the need to terminate the Contractor, shall be liable to Owner for any damages the Owner may sustain and be entitled to pursuant to this Contract and the bonds. No further Notices shall be required by Owner.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the A/E Professional's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the A/E Professional, be uncovered for the A/E Professional's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the A/E Professional has not specifically requested to examine prior to its being covered, the A/E Professional may request to see such Work and it shall be uncovered by the Contractor. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the A/E Professional or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the A/E Professional's services and expenses made necessary thereby (including attorneys' fees), shall be at the Contractor's expense. The obligations of this Section shall survive completion and final payment or termination of the Agreement.

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§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under the Agreement, if, within one (1) year after the date of Final Completion of all the Work or any longer period provided in an Extended Warranty, is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so. The Owner shall give such notice promptly after discovery of the condition. If the Contractor fails to commence correction of nonconforming Work within five (5) business days after receipt of prior reasonable notice by the Owner, the Owner may correct the nonconforming Work in accordance with the Agreement. Contractor is obligated to reimburse Owner for all corrective costs and damages incurred as a result of Contractor's failure to correct nonconforming Work. This obligation shall survive completion and final payment or termination of the Contract.

§ 12.2.2.2 The one-year period for correction of Work or any longer period provided in an Extended Warranty shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work or any longer period provided in an Extended Warranty shall be extended for corrected Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made. If payments due to the Contractor are insufficient to cover the adjustment, Contractor shall pay the difference to the Owner.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Agreement and the Contract Documents shall be governed by the law of the State of Florida without regard to conflicts of law provisions.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, A/E Professional, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing. The invalidity of any part or provisions

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of the Contract Documents shall not affect the validity or enforceability of any other part of the Contract Documents. Any waiver by the Owner of any breach of the Contract Documents shall not be held to be a waiver of any other or subsequent breach, and any waiver by the Owner of any right to terminate the Contract shall not be held to be a waiver of any breach of the Contract Documents, but the Owner retains all its rights to recover damages therefor.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the A/E Professional timely notice of when and where tests and inspections are to be made so that the A/E Professional may be present for such procedures.

§ 13.4.2 If the A/E Professional, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the A/E Professional will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the A/E Professional of when and where tests and inspections are to be made so that the A/E Professional may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures, additional testing, and compensation for the services and expenses of the A/E Professional, A/E Professional's consultants, Owner's consultants, including special and threshold inspectors or other engineers, shall be at the Contractor's expense. Owner may deduct such amounts from the balance due the Contractor.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the A/E Professional.

§ 13.4.5 If the A/E Professional is to observe tests, inspections, or approvals required by the Contract Documents, the A/E Professional will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest as provided in the Agreement.

§ 13.6 Time Limits on Claims

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract within the time period specified by applicable law.

§ 13.7 It shall be incumbent upon the Contractor to have permit revisions issued and executed by the Building Department in a timely manner so as not to delay the construction process, and the Contractor shall bear the cost of such revisions.

§ 13.8 The Construction work Saturdays, Sundays or after normal hours, if approved, shall be at no additional cost to the Owner.

§ 13.9 Maintenance

Various materials and finishes of materials exposed to the Florida environment will begin to deteriorate over time. Materials such as rooftop equipment, piping, conduits, etc., as well as finishes for stainless steel, wood, aluminum, etc. are all subject to deterioration. The Contractor is to provide the Owner a maintenance program for various products on the project. All maintenance required prior to Substantial Completion or partial occupancy or Turnover

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will be performed by Contractor as part of the Work. Contractor shall not be responsible for maintenance following Substantial Completion or partial occupancy or Turnover.

§ 13.10 Maintenance Records

After Substantial Completion (but before Final Payment) or upon occupancy, the Contractor shall meet with and arrange for each installer of parts of Work requiring regular maintenance to meet with Owner's representative and the property manager(s) for the Project or other individuals as may be designated by Owner, at the Project site, to provide basic instructions needed for proper operation and maintenance of that part of Work. Instructions by manufacturer's representatives are required where installers are not experts in operating/maintenance procedures, or as specified in the Construction Documents. For operational equipment, installers shall demonstrate startup, shut-down, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, and other applicable operations, and shall review maintenance and operating instructions which are required to be performed in order to maintain in force applicable warranties, guaranties and bonds. Completion of all training is an express condition precedent to Final Payment.

§ 13.11 No Agency Relationship

It is understood that Contractor is not herein appointed the agent of Owner but is and shall remain an independent contractor. Accordingly, all aspects of Contractor's performance of the Agreement, except as specifically provided in the Agreement, shall be under the direction and control of Contractor.

§ 13.12 Third Parties

No provision in the Agreement shall create or give to third parties any claim or right of action against Owner.

§ 13.13 Place of Work

Contractor, under regulations prescribed by Owner, shall use only established roadways, and such temporary roadways as may be approved by Owner. When materials or equipment are transported in performance of the Work, vehicles shall not be loaded beyond the load limit as established by federal, state or local law regulations. When it is necessary to cross curbing and/or sidewalks, protection against damage shall be provided by Contractor, and any damage caused will be immediately repaired by Contractor, at Contractor's cost, and if not repaired by Contractor within five days after notice in writing, Owner may make such repairs and charge the amount of such repairs to the Contractor. All existing sidewalks, curbs and pavements disturbed, broken, removed, or otherwise damaged by Contractor, during the performance of the Work under the Agreement, shall be replaced by the Contractor at its sole expense. Replaced or repaired sidewalks, curbs, and pavements shall be constructed of similar materials and by similar methods to the original construction. Replaced or repaired sidewalks, curbs and payment shall be smoothly blended into the existing Work and shall not present depressions or humps and shall be acceptable to Owner.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Owner for Cause

§ 14.1.1 The Owner may terminate the Contract if the Contractor

- **.1** refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- **.3** disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
- **.4** otherwise is guilty of substantial breach of a provision of the Contract Documents;
- **.5** admits in writing its inability to pay its debts generally as they become due, or if the Contractor makes a general assignment for the benefit of its creditors, or if a receiver, liquidator, trustee or assignee is appointed on account of its bankruptcy or insolvency;
- **.6** submits an Application for Payment, sworn statement, waiver of lien, affidavit or document that is intentionally falsely filed; or
- **.7** has a construction lien filed against any part of the Work or the site of the project for work performed under the Agreement for which the Contractor has been paid by thee Owner and not promptly bonded or insured over by the Contractor in accordance with Florida Statutes after five (5) days written notice to the Contractor.

§ 14.1.2 When any of the reasons described in Section 14.1.1 exist, the Owner, may, without prejudice to any other remedy it may have and after giving the Contractor seven (7) day's written notice, terminate the Agreement and take

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possession of the site and all materials, tools, equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. A/E Professional

§ 14.1.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.1.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.1.4 The Owner's right to terminate the Contract, pursuant to this Section, shall be in addition to and not in limitation of any rights or remedies existing hereunder or pursuant thereto or at law or in equity.

§ 14.1.5 Should Owner Terminate for Cause and should a court of competent jurisdiction subsequently determine that the Termination for Cause was improper, then in that event, the Termination shall be considered a Termination for Convenience as set forth in Paragraph 14.3 below.

§ 14.2 Suspension by the Owner for Convenience

§ 14.2.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.2.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.2.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- **.1** that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- **.2** that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.3 Termination by the Owner for Convenience

§ 14.3.1 The Owner may, within seven (7) calendar day's prior written notice, terminate the Contract for the Owner's convenience and without cause.

§ 14.3.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- **.1** cease operations as directed by the Owner in the notice;
- **.2** take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- **.3** except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.3.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement. In the event of Termination for Convenience, the Owner shall not be liable to the Contractor for lost profits on any Work not performed, home office overhead, or any other type of consequential, special or indirect damages and Contractor hereby waives same. All costs of performance claimed by Contractor must be fully supported by the Contractor's invoices and other documentation acceptable to the Owner, and shall be subject to the Owner's audit. The Contractor shall make its records available at reasonable times and places for the Owner's audit. Payments to the Contractor shall be reduced by any setoffs, damages, claims to which the Owner is entitled under this Contract.

§ 14.3.4 The Owner's right to terminate the Contract shall be in addition to and not in limitation of any rights or remedies existing hereunder or pursuant thereto or at law or in equity.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents. Submittal of a request for Change Order shall not be considered notice of a Claim required by this Article.

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§ 15.1.2 Time Limits on Claims
The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims
§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the A/E Professional, if the A/E Professional is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance
§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The A/E Professional will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost
If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time
§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If exceptional or unusual adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Contractor's Waiver of Claims for Consequential Damages
The Contractor waives Claims against Owner for consequential damages arising out of or relating to this Contract. This waiver includes damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This waiver is applicable, without limitation, to all consequential damages due to Owner's termination of Contractor in accordance with the Contract Documents. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision
§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Owner's Representative will serve as the Initial Decision Maker. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition

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precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner. Contractor must continue with its Work when a Claim is pending before the Initial Decision Maker.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the A/E Professional, if the A/E Professional is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision is not binding on the parties and is subject to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 In the event that the parties agree in writing to mediation, such mediation shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. The written agreement to mediate shall be filed with the person or entity administering the mediation. If the mediation process is initiated concurrently with the filing of binding dispute resolution, including litigation, proceedings, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

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§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.3.5 Litigation

Litigation of Claims, disputes or other matters in question between the Owner and Contractor arising out of or relating to this Contract or breach thereof, which are not resolved by mediation, shall be subject to and decided by litigation exclusively in the state courts of Palm Beach County, Florida. Contractor and Owner consent to the venue of the State Courts of Palm Beach County, Florida and specifically recognize and acknowledge the waiver of any right to remove any action to federal court on the basis of diversity jurisdiction or on any other basis.

§ 15.3.6 In the event of any litigation arising out of or relating to this Agreement or the Contract Documents, the prevailing party shall recover from the non prevailing party, all reasonable attorney's fees, paralegal fees and Court costs incurred by the prevailing party.

§16 Miscellaneous

§ 16.1 Modification

No change or modification of the Contract shall be valid unless in writing and signed by all parties hereto, excluding Construction Change Directives which do not require the signature of the Contractor. No waiver of any of the provisions of this Contract shall be valid unless in writing and signed by the party against whom it is sought to be enforced.

§ 16.2 Rights and Remedies

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not in limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. All indemnities, representations, and waivers made by Contractor in favor of Owner shall survive completion of the Work, the making of final payment, and any termination of the Agreement.

§ 16.4 Severability and Waiver

The partial or complete invalidity of any one or more provisions of this Contract or any portion of the Contract Documents shall not affect the validity or continuing force and effect of any other provision. The failure of either party hereto to insist, in any one or more instances, upon the performance of any of the terms, covenants or conditions the Contract, or to exercise any right herein, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right as respects further performance.

[SIGNATURE PAGE TO FOLLOW]

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IN WITNESS WHEREOF, the Owner and the Construction Manager executed this Agreement as of the day and year first above written.

ATTEST:

OWNER/CITY OF DELRAY BEACH

By: _____

Katerri Johnson, City Clerk

Thomas F. Carney, Jr., Mayor

Approved as to form and legal sufficiency:

_____

Lynn Gelin, City Attorney

Construction Manager

By: _____

Print Name: _____

Title: _____

(SEAL)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this ____ day of _____, 20____ by _____ (name of person), as _____ (type of authority) for _____ _____ (name of party on behalf of whom instrument was executed).

Personally known ___ OR Produced Identification
Type of Identification Produced _____

_____

Notary Public – State of _____

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AIA® Document A133® – 2019

Modified Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price

AGREEMENT made as of the « » day of March in the year 2024
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address, and other information)

The City of Delray Beach, Florida
A municipal corporation and a political subdivision of the State of Florida, its successors and assigns
100 NW 1st Avenue
Delray Beach, FL 33444
and the Construction Manager:
(Name, legal status, address, and other information)

[insert]

for the following Project:
(Name, location, and detailed description)

RFQ No. [insert]
CMAR AGREEMENT TEMPLATE
The Architect/Engineer (the "A/E Professional"):
(Name, legal status, address, and other information)

[insert]

The Owner and Construction Manager agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201™–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth in this Section 1.1.
(For each item in this section, insert the information or a statement such as "not applicable" or "unknown at time of execution.")

§ 1.1.1 The Owner's program for the Project, as described in Section 4.1.1:
(Insert the Owner's program, identify documentation that establishes the Owner's program, or state the manner in which the program will be developed.)

See the information provided in RFQ NO [insert], which is attached as Exhibit ___.

§ 1.1.2 The Project's physical characteristics:
(Identify or describe pertinent information about the Project's physical characteristics, such as size; location; dimensions; geotechnical reports; site boundaries; topographic surveys; traffic and utility studies; availability of public and private utilities and services; legal description of the site, etc.)

See the information provided in RFQ NO [insert], which is attached as Exhibit ___.

§ 1.1.3 The Owner's budget for the Guaranteed Maximum Price, as defined in Article 6:
(Provide total and, if known, a line item breakdown.)

The Owner's GMP is to be determined.

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§ 1.1.4 The Owner's anticipated design and construction milestone dates:

.1 Design phase milestone dates, if any:

[insert, if applicable]

.2 Construction commencement date:

Date to be established after approval of the GMP and addendum to this Agreement.

.3 Substantial Completion date or dates:

« »The Project shall have a duration of [insert] calendar days to Substantial Completion of the Project from Construction commencement date

.4 Other milestone dates:

N/A

§ 1.1.5 The Owner's requirements for accelerated or fast-track scheduling, or phased construction, are set forth below:
(Identify any requirements for fast-track scheduling or phased construction.)

N/A [insert, if applicable]

§ 1.1.6 The Owner's anticipated Sustainable Objective for the Project:
(Identify and describe the Owner's Sustainable Objective for the Project, if any.)

N/A [insert, if applicable]t]

§ 1.1.6.1 If the Owner identifies a Sustainable Objective, the Owner and Construction Manager shall complete and incorporate AIA Document E234™–2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, into this Agreement to define the terms, conditions and services related to the Owner's Sustainable Objective. If E234–2019 is incorporated into this agreement, the Owner and Construction Manager shall incorporate the completed E234–2019 into the agreements with the consultants and contractors performing services or Work in any way associated with the Sustainable Objective.

§ 1.1.7 Other Project information:
(Identify special characteristics or needs of the Project not provided elsewhere.)

See the information provided in RFQ NO [insert], which is attached as Exhibit ___.

§ 1.1.8 The Owner identifies the following representative in accordance with Section 4.2:
(List name, address, and other contact information.)

[Insert]

§ 1.1.9 The persons or entities, in addition to the Owner's representative, who are required to review the Construction Manager's submittals to the Owner are as follows:
(List name, address and other contact information.)

A/E Professional, or as applicable, the A/E Professional's consultants

§ 1.1.10 The Owner shall retain the following consultants and contractors:
(List name, legal status, address, and other contact information.)

.1 Geotechnical Engineer:

[insert, as applicable]« »
« »

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« »
« »

.2 Civil Engineer:

[Included as part of A/E Professional]]

.3 Other, if any:
(List any other consultants retained by the Owner, such as a Project or Program Manager.)

[N/A]

§ 1.1.11 The A/E Professional's representative:
(List name, address, and other contact information.)

[insert]

§ 1.1.12 The Construction Manager identifies the following representative in accordance with Article 3:
(List name, address, and other contact information.)

[insert]

§ 1.1.13 The Owner's requirements for the Construction Manager's staffing plan for Preconstruction Services, as required under Section 3.1.9:
(List any Owner-specific requirements to be included in the staffing plan.)

See the information provided in RFQ NO [insert], which is attached as Exhibit ___

§ 1.1.14 The Owner's requirements for subcontractor procurement for the performance of the Work:
(List any Owner-specific requirements for subcontractor procurement.)

[See the information provided in RFQ NO [insert], which is attached as Exhibit ___

§ 1.1.15 Other Initial Information on which this Agreement is based:

[N/A]

§ 1.2 The Owner and Construction Manager may generally rely on the Initial Information, but Construction Manager shall promptly notify Owner of any conflicts or discrepancies Construction Manager discovers or should discover (in its capacity and experience as a general contractor) with respect to the Initial Information. Both parties, however, recognize that such information may materially change and, in that event, the Owner and the Construction Manager shall appropriately adjust the Project schedule, the Construction Manager's services, and the Construction Manager's compensation. The Owner shall adjust the Owner's budget for the Guaranteed Maximum Price and the Owner's anticipated design and construction milestones, as necessary, to accommodate material changes in the Initial Information.

§ 1.3 Neither the Owner's nor the Construction Manager's representative shall be changed without ten (10) days' prior written notice to the other party.

ARTICLE 2 GENERAL PROVISIONS

§ 2.1 The Contract Documents

§ 2.1.1 The Contract Documents consist of this Agreement, the AIA A201-2017 General Conditions of the Contract as modified (the "Modified General Conditions"), Drawings, Specifications, Addenda issued prior to execution of this Agreement, Exhibits to this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract and are as fully a part of the Contract as if attached to this Agreement or repeated herein (the "Contract Documents"). Upon the Owner's acceptance of the Construction Manager's Guaranteed Maximum Price proposal, the Contract Documents will also include the documents described in Section 3.2.3 and identified in the Guaranteed Maximum Price Amendment and revisions prepared by the A/E Professional and furnished by the Owner as described in Section 3.2.8. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. To the extent

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any conflict exists between the Contract Documents that cannot be resolved between the parties, interpretations will be based on the following priorities: (a) This Agreement; (b) the Modified General Conditions; (c) all Exhibits hereto, as modified; (d) executed Modifications, if any, with those of a later date having precedence over those of an earlier date; (e) Drawings and Specifications; and (f) any other Contract Documents. An enumeration of the Contract Documents, other than a Modification, appears in Article 15.

§ 2.1.2 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. On the Drawings, given dimensions shall take precedence over scaled measurements and large-scale drawings over small-scale drawings.

§ 2.1.3 Any of the Contract Documents not attached hereto but expressly identified in this Agreement are hereby incorporated by reference and shall be deemed to be of the same force and effect as if actually attached hereto.

§ 2.1.4 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Construction Manager. Performance by the Construction Manager shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 2.1.5 If the Construction Manager discovers any inconsistency, ambiguity, discrepancy or error in the Contract Documents, the Construction Manager shall promptly seek clarification in writing from the Owner.

§ 2.2 Relationship of the Parties

The Construction Manager accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the A/E Professional and Owner's Representative and exercise the Construction Manager's skill and judgment in furthering the interests of the Owner to furnish efficient construction administration, management services, and supervision; to furnish at all times an adequate supply of workers, materials, and equipment; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish or approve, in a timely manner, information required by the Construction Manager and to make payments to the Construction Manager in accordance with the requirements of the Contract Documents.

§ 2.3 General Conditions

§ 2.3.1 For the Preconstruction Phase, AIA Document A201™–2017, Modified General Conditions, shall apply as follows: Section 1.5, Ownership and Use of Documents; Section 1.7, Digital Data Use and Transmission; Section 1.8, Building Information Model Use and Reliance; Section 2.2.4, Confidential Information; Section 3.12.10, Professional Services; Section 10.3, Hazardous Materials; Section 13.1, Governing Law. The term "Contractor" as used in A201–2017 shall mean the Construction Manager.

§ 2.3.2 For the Construction Phase, the general conditions of the contract shall be as set forth in A201–2017, Modified General Conditions, which document is incorporated herein by reference. The term "Contractor" as used in A201–2017, Modified General Conditions shall mean the Construction Manager.

ARTICLE 3 CONSTRUCTION MANAGER'S RESPONSIBILITIES

The Construction Manager's Preconstruction Phase responsibilities are set forth in Sections 3.1 and 3.2, and in the applicable provisions of A201-2017, Modified General Conditions, referenced in Section 2.3.1. The Construction Manager's Construction Phase responsibilities are set forth in Section 3.3. The Owner and Construction Manager may agree, in consultation with the A/E Professional and Owner's Representative, for the Construction Phase to commence prior to completion of the Preconstruction Phase, in which case, both phases will proceed concurrently. The Construction Manager shall identify a representative authorized to act on behalf of the Construction Manager with respect to the Project.

§ 3.1 Phase 1: Pre-construction Services

§ 3.1.1 General. During the Preconstruction Phase of the Project, the Construction Manager will provide preconstruction services where necessary or appropriate to further the interests of the Owner and the Project. Construction Manager shall render Services which support the services to be rendered by A/E Professional, including design review, Project planning, and the specific Services described in this Article 3. Construction Manager shall perform Phase 1 Pre-construction Services per the Scope of Services, which is attached as Exhibit ___, and in accordance with the General Conditions.

§ 3.1.2 Review Project Requirements and Site Data. Construction Manager shall review and study all background data, specifications and other related materials made available by Owner as to requirements, criteria, priorities, feasibility, and

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physical and financial limitations with regard to the Project and shall review with Owner's Representative and A/E Professional site data (such as access, location of services and utilities, security, surveys, and soils information) and other relevant information.

§ 3.1.3 Verify Site and Working Conditions. Construction Manager shall visit the Project site, review all information related to the site and to the conditions under which the Work will be performed. Construction Manager shall notify Owner's Representative in writing of any conditions of which the Construction Manager becomes aware or should have become aware in the exercise of reasonable care, that would adversely affect the progress, quality, or cost of the Work. Construction Manager will recommend means of addressing such conditions, and suggest additional testing or services reasonably required in connection therewith.

§ 3.1.4 Consultation of Design

The Construction Manager shall attend all meetings with the A/E Professional and Owner, as scheduled by the Owner, to discuss such matters as procedures, progress, coordination, and scheduling of the Work. The Construction Manager shall advise the Owner and the A/E Professional on proposed site use and improvements, selection of materials, and building systems and equipment. The Construction Manager shall also provide recommendations consistent with the Project requirements to the Owner and A/E Professional on constructability; availability of materials and labor; time requirements for procurement, installation and construction; and factors related to construction cost including, but not limited to, costs of alternative designs or materials, preliminary budgets, and possible cost reductions. The Construction Manager agrees to be reasonably available to perform the following facets related to the Preconstruction Phase:

1. reviewing all drawings, permits, approvals, documents, and reports for the Project including, without limitation, the Plans and Specifications;

2. review all permit applications and accompanying documentation;

3. review projected work schedule, timeline and benchmark dates;

4. offer alternatives to plans and proposals, including cost-saving measures and value engineering;

5. interface with subcontractors and vendors that fit specifically to the nature of this project and to the specific scopes of work;

6. develop bid packages and obtain written bids from subcontractors, vendors and or suppliers;

7. provide monthly summaries;

8. provide such other services reasonably agreed to between Owner and Construction Manager and as necessary to the successful development of the Project.

§ 3.1.5 Review of A/E Professional's Schedule. Construction Manager shall review and study all schedules and updates thereof submitted by A/E Professional concerning the schedule for performance of A/E Professional's services. Within ten (10) days after receipt of any such schedule or update, Construction Manager shall submit to Owner's Representative a written analysis of same describing any anticipated problems or delays to the Project related to A/E Professional's schedule.

When Project requirements for Construction Phase Services have been sufficiently identified, the Construction Manager shall prepare and periodically update a Project schedule for the A/E Professional's review and the Owner's acceptance. The Construction Manager shall obtain the A/E Professional's approval for the portion of the Project schedule relating to the performance of the A/E Professional's services. The Project schedule shall coordinate and integrate the Construction Manager's services, the A/E Professional's services, other Owner consultants' services, and the Owner's responsibilities and identify items that could affect the Project's timely completion. The updated Project schedule shall include the following: submission of the Guaranteed Maximum Price proposal; components of the Work; times of commencement and completion required of each subcontractor; ordering and delivery of products, including those that must be ordered well in advance of construction; and the occupancy requirements of the Owner.

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§ 3.1.6 Phased Construction

The Construction Manager shall provide recommendations with regard to accelerated or fast-track scheduling, procurement, or phased construction. The Construction Manager shall take into consideration cost reductions, cost information, constructability, provisions for temporary facilities and procurement and construction scheduling issues.

§ 3.1.7 Procurement Guidelines and Plan. Construction Manager shall prepare and submit, for the Owner's approval, procurement guidelines and a procurement plan for the Project. The Construction Manager shall prepare, for the Owner's acceptance, a procurement schedule for long-lead items that must be ordered well in advance of construction. The Construction Manager shall expedite and coordinate the ordering and delivery of materials that must be ordered well in advance of construction. If the Owner agrees to procure any items prior to the establishment of the Guaranteed Maximum Price, the Owner shall procure the items on terms and conditions acceptable to the Construction Manager. Upon the establishment of the Guaranteed Maximum Price, the Owner shall assign all contracts for these items to the Construction Manager and the Owner shall thereafter accept responsibility for them.

§ 3.1.8 Utilities, Communications and Other Infrastructure Issues. Construction Manager shall advise and assist A/E Professional and represent Owner, if requested, in coordinating appropriately with local utilities, communications, and other related infrastructure issues.

§ 3.1.9 Review Design Documents. Construction Manager shall review and study, on a continuing basis through the Design and Construction Phases, all design and construction documents prepared by A/E Professional and shall notify Owner's Representative and A/E Professional in writing of any errors, omissions, conflicts, inconsistencies, or ambiguities discovered, identify potential value engineering options before the bidding cycle and Construction Phase begin, and recommend alternatives when design details affect construction feasibility, constructability, quality, or the Project schedule.

§ 3.1.10 Constructability Analyses. When requested by Owner's Representative, Construction Manager shall provide written constructability analyses of the Project, including items to be addressed with A/E Professional such as accessibility, construction methods, assembly, installation, materials handling, expandability, phasing and other Construction Phase-related activities. The analysis of constructability issues shall be performed on an ongoing basis during the Design Phase.

§ 3.1.11 Presentations. When requested by Owner's Representative, Construction Manager shall assist Owner and A/E Professional in making one or more presentations of design concepts, cost studies, site evaluation, and other data developed in relation to the Project.

§ 3.1.12 Value Engineering. Construction Manager shall perform Value Engineering studies and propose to the Owner design, construction and systems alternatives for reducing the cost of the Project, or elements thereof. Construction Manager shall provide Owner with an estimate of the cost of, and the savings that will result from, implementing such Value Engineering alternatives. Construction Manager shall implement any Value Engineering alternatives approved by Owner, and the GMP shall be adjusted prior to issuance of the purchase order, or if the purchase order has been issued then by deductive Change Order to reflect the savings to be achieved by implementing such Value Engineering alternatives.

§ 3.1.16 Estimating and Monitoring Costs

§ 3.1.16.1 Construction Cost Estimate. Within thirty (30) days after the A/E Professional's completion of the [Insert first design stage] Design Stage, the Construction Manager shall prepare an estimate (the "Construction Cost Estimate") of the cost of constructing the Project in accordance with the requirements of the [insert] Design Stage and shall provide same to Owner's Representative. The Construction Cost Estimate shall be broken down in such detail as Owner's Representative may require and shall include a recommended contingency for the Work. Construction Manager shall revise the Construction Cost Estimate monthly until the GMP is established and shall provide such revised estimates to Owner's Representative on a monthly basis. As the A/E Professional progresses through the design stages, Construction Manager shall prepare estimates of the Cost of the Work with increasing detail and refinement until such time as the Owner and Construction Manager agree on a Guaranteed Maximum Price for the Work. Such estimates shall be provided for the Owner's review and approval. The Construction Manager shall inform the Owner and A/E Professional when estimates of the Cost of the Work exceed the latest approved Project budget and make recommendations for corrective action.

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§ 3.1.16.2 Monitoring Construction Costs. Throughout the duration of the Project, Construction Manager shall regularly monitor conditions in the construction market to identify factors that will or may affect costs for completing the Project and furnish a written analysis.

§ 3.1.16.3 Cash Flow Forecasts. Construction Manager shall prepare a written forecast of projected accumulation of cash payments against the Project. Cash flow projections shall be generated for anticipated monthly payments as well as cumulative payments. On a monthly basis, Construction Manager shall provide Owner's Representative with an updated forecast of such projected monthly payments.

§ 3.1.17 Bid Solicitation and Award

§ 3.1.17.1 Construction Manager shall provide all necessary services related to the bidding of subcontracts for the construction of the Project, including but not limited to: (a) preparing appropriate bid documents, including proposed forms of contract and purchase orders; (b) establishing bid schedules; (c) active program of developing bidder interest; (c) furnishing information concerning the Project to prospective bidders; (d) conducting pre-bid conferences; (e) receiving and analyzing bids and making recommendations to Owner regarding bid awards; (f) investigating the acceptability and responsibility of sub- subcontractors or suppliers proposed by any Subcontractor and advising Owner of such evaluations; (g) negotiating with Subcontractors concerning any matter related to the Project; (h) such other services required by Owner with respect to the bidding process; and (i) Subcontractor is required to prepare, for approval, coordination drawings prior to installation of work if required by Owner and/or A/E Professional. These costs shall be considered part of the GMP.

§ 3.1.17.2 Nothing in the Agreement shall be interpreted to relieve the Construction Manager of its responsibilities for the Project including but limited to: preparation and accuracy of subcontract solicitations, selection of qualified subcontractors, subcontract performance, payments to subcontractors and the safety of personnel and property.

§ 3.1.17.3 In the event that the Construction Manager performs a portion of the Work on the Project, other than construction management, then for that portion of the Work the Construction Manager shall be treated as any other Subcontractor and shall abide by all the Subcontractor requirements identified in this Agreement.

§ 3.1.17.4 Approval of Subcontractors. Construction Manager shall not subcontract for any part of the Services or Work with any Subcontractor or consultant who is not properly licensed. or against whom Owner has a reasonable objection. As soon as practicable after the bidding process and during development of the Guaranteed Maximum Price, Construction Manager shall furnish in writing to the Owner's Representative the names of persons or entities (including those who are to furnish materials or equipment) proposed for each portion of the Work, the portion of the Work which each such Subcontractor is to perform, and the place of business of such Subcontractor.

The Construction Manager shall not contract with a proposed person or entity which the Owner has made a reasonable objection or that is not in good standing with the Owner. The Owner shall have the right to require the Construction Manager not to award any subcontract to a person, firm or corporation reasonably objected to by the Owner. If the Owner has a reasonable objection to a person or entity proposed by the Construction Manager, the Construction Manager shall propose another with whom the Owner has no objection.

The Construction Manager shall not change a Subcontractor, person or entity previously selected if the Owner makes objection to such change.

The Construction Manager shall be responsible and liable to the Owner for all work performed by the Subcontractors or their employees, agents or contractors, pursuant to this Agreement.

§ 3.1.18 Extent of Responsibility

The Construction Manager shall exercise reasonable care in performing its Preconstruction Services. The Owner, Owner's Representative, and A/E Professional shall be entitled to rely on, and shall not be responsible for, the accuracy, completeness, and timeliness of services and information furnished by the Construction Manager. The Construction Manager, however, does not warrant or guarantee estimates and schedules except as may be included as part of the Guaranteed Maximum Price. The Construction Manager is not required to ascertain that the Drawings and Specifications are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Construction Manager shall promptly report to the A/E Professional and Owner in writing any

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nonconformity and/or conflicts discovered by or made known to the Construction Manager as a request for information in such form as the A/E Professional may require.

§ 3.1.9 Compliance with Laws

The Construction Manager shall comply with applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to its performance under this Contract, and with equal employment opportunity programs, and other programs as may be required by governmental and quasi-governmental authorities for inclusion in the Contract Documents.

§ 3.1.19 Other Preconstruction Services

Insert a description of any other Preconstruction Phase services to be provided by the Construction Manager, or reference an exhibit attached to this document

(Describe any other Preconstruction Phase services, such as providing cash flow projections, development of a project information management system, early selection or procurement of subcontractors, etc.)

[insert, if any]

§ 3.2 Phase 2: Construction Services, Guaranteed Maximum Price Proposal, and Contract Time

§ 3.2.1 At a time to be mutually agreed upon by the Owner and the Construction Manager, the Construction Manager, in consultation with the A/E Professional and Owner's Representative, shall prepare a Guaranteed Maximum Price proposal, supported by all subcontractor and material supplier costing documentation with quantities, for the Owner's and A/E Professional's review and the Owner's acceptance. The Guaranteed Maximum Price in the proposal shall be the sum of the Construction Manager's estimate of the Cost of the Work, including the Construction Manager's Fee, and General Conditions, and the Construction Manager's contingency described in Section 3.2.4.

§ 3.2.2 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes, or equipment, all of which, if required, shall be incorporated by Change Order.

§ 3.2.3 The Construction Manager shall include with the Guaranteed Maximum Price proposal a written statement of its basis, which shall include the following:

.1 A list of the Drawings and Specifications, including all Addenda thereto, and the Conditions of the Contract;

.2 A list of the clarifications and assumptions made by the Construction Manager in the preparation of the Guaranteed Maximum Price proposal, to supplement the information provided by the Owner and contained in the Drawings and Specifications;

.3 A statement of the proposed Guaranteed Maximum Price, including a statement of the estimated Cost of the Work organized by trade categories or systems, including allowances; the Construction Manager's contingency set forth in Section 3.2.4; and the Construction Manager's Fee and General Conditions;

.4 The anticipated date of Substantial Completion upon which the proposed Guaranteed Maximum Price is based;

.5 A date by which the Owner must accept the Guaranteed Maximum Price; and

.6 A list of the major Subcontracts and purchasing agreements that will be entered into within the first twenty-five (25) days following the Notice to Proceed. A list of all other Subcontracts and purchasing agreements within sixty (60) days thereafter

§ 3.2.4 Construction Manager shall keep and submit to Owner full and detailed records substantiating the Guaranteed Maximum Price proposal, including but not limited to, complete documentation supporting budgeted line items, proposals from Subcontractors and materials suppliers, Subcontracts and contracts with materials suppliers and related parties (as defined herein) and other back up documents, and shall make such records available to Owner, Owner's Representative, A/E Professional and any cost control consultants hired by Owner for inspection, audit and copying during regular business hours and upon reasonable notice.

§ 3.2.5 To the extent Owner determines in its sole discretion that this Project will provide for a contingency, in preparing the Construction Manager's Guaranteed Maximum Price proposal, the Construction Manager shall include a contingency for the Construction Manager's exclusive use to cover those costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order.

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§ 3.2.6 The Construction Manager shall meet with the Owner and A/E Professional to review the Guaranteed Maximum Price proposal. In the event that the Owner or A/E Professional discover any inconsistencies or inaccuracies in the information presented, they shall promptly notify the Construction Manager, who shall make appropriate adjustments to the Guaranteed Maximum Price proposal, its basis, or both.

§ 3.2.7 If the Owner notifies the Construction Manager that the Owner has accepted the Guaranteed Maximum Price proposal in writing before the date specified in the Guaranteed Maximum Price proposal, the Guaranteed Maximum Price proposal shall be deemed effective without further acceptance from the Construction Manager. Following acceptance of a Guaranteed Maximum Price, the Owner and Construction Manager shall execute the Guaranteed Maximum Price Amendment amending this Agreement, a copy of which the Owner shall provide to the A/E Professional and a copy of which shall be attached hereto as Exhibit A. The Guaranteed Maximum Price Amendment shall set forth the agreed upon Guaranteed Maximum Price with the information and assumptions upon which it is based.

§ 3.2.8 The Construction Manager shall not incur any cost to be reimbursed as part of the Cost of the Work prior to the execution of the Guaranteed Maximum Price Amendment, unless the Owner provides prior written authorization for such costs.

§ 3.2.9 The Owner shall authorize the A/E Professional to provide revisions, if necessary, to the Drawings and Specifications to incorporate those agreed-upon assumptions and clarifications contained in the Guaranteed Maximum Price Amendment that differ from the requirements of the Drawings and Specifications. The Owner shall timely furnish those revised Drawings and Specifications, if any, to the Construction Manager as they are revised.

§ 3.2.10 The Construction Manager shall include in the Guaranteed Maximum Price all sales, consumer, use and similar taxes for the Work provided by the Construction Manager that are legally enacted, whether or not yet effective, at the time the Guaranteed Maximum Price Amendment is executed.

§ 3.3 Construction Phase

§ 3.3.1 General

§ 3.3.1.1 For purposes of Section 8.1.2 of A201–2017, Modified General Conditions, the date of commencement of the Work shall mean the date of commencement of the Construction Phase.

§ 3.3.1.2 The Construction Phase shall commence upon the Owner's issuance of a Notice to Proceed ("Commencement Date") and the Contract Time shall be measured starting from the Commencement Date. The Construction Manager shall achieve Substantial Completion of the entire Work not later than _____ (_____) calendar days after the Commencement Date (the "Contract Time"). Final Completion shall be achieved no later than _____(_____) calendar days after Substantial Completion.

§ 3.3.2 Administration

§ 3.3.2.1 The Construction Manager shall schedule and conduct meetings to discuss such matters as procedures, progress, coordination, scheduling, and status of the Work. The Construction Manager shall prepare and promptly distribute minutes of the meetings to the Owner, Owner's Representative, and A/E Professional.

§ 3.3.2.2 Upon the execution of the Guaranteed Maximum Price Amendment, the Construction Manager shall prepare and submit to the Owner and A/E Professional a construction schedule for the Work and a submittal schedule in accordance with Section 3.10 of A201–2017, Modified General Conditions.

§ 3.3.2.3 Monthly Report

The Construction Manager shall record the progress of the Project. On a monthly basis, or otherwise as agreed to by the Owner, the Construction Manager shall submit written progress reports to the Owner, Owner's Representative, and A/E Professional, showing percentages of completion and other information required by the Owner. Along with the monthly progress reports, Construction Manager shall provide updated project Schedules (which will include schedules distributed during the month and for the two weeks following the date of the current monthly progress report), a log of and copies of all lien releases obtained during the month from Subcontractors and suppliers and others required to provide lien releases pursuant to the Contract Documents, a listing of any Change Orders and Construction Change Directives issued during the month, copies of the minutes for the weekly Project team (Owner, A/E Professional, Owner's Representative, and Construction Manager) meetings that month, a report of all Requests for Information and responses thereto, a report of

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all submittals, a copy of all completed Daily Logs for the month, all invoices and back up for all costs and expenses that correspond to the monthly payment application, project cost control measures and status of contingency, and copies of field and aerial photographs of the Project.

§ 3.3.2.4 Daily Logs
The Construction Manager shall keep, and make available to the Owner, Owner's Representative, and A/E Professional, a daily log containing a record for each day of weather, record of deliveries, portions of the Work in progress, number of workers on site, identification of equipment on site, problems that might affect progress of the work, accidents, injuries, and other information required by the Owner. All report formats will be in a form approved by Owner.

§ 3.3.2.5 Cost Control
The Construction Manager shall develop a system of cost control for the Work, including regular monitoring of actual costs for activities in progress and estimates for uncompleted tasks and proposed changes. The Construction Manager shall identify variances between actual and estimated costs and report the variances to the Owner and A/E Professional, and shall provide this information in its monthly reports to the Owner and A/E Professional, in accordance with Section 3.3.2.3 above. In the event the Construction Manager fails to report a variance in its most current monthly report and fails to otherwise promptly notify Owner of such variance, and such failure by Construction Manager results in Owner incurring damages or increases in cost, Owner may assert a Claim pursuant to the General Conditions to seek reimbursement for such costs. In such instances, the Initial Decision Maker shall evaluate the Claim.

ARTICLE 4 OWNER'S RESPONSIBILITIES

§ 4.1 Information and Services Required of the Owner

§ 4.1.1 The Owner shall provide information with reasonable promptness, regarding requirements for and limitations on the Project, including a written program which shall set forth the Owner's objectives, constraints, and criteria, including schedule, space requirements and relationships, flexibility and expandability, special equipment, systems, sustainability and site requirements.

§ 4.1.2 Omitted.

§ 4.1.3 The Owner shall establish and periodically update the Owner's budget for the Project, including (1) the budget for the Cost of the Work as defined in Article 7, (2) the Owner's other costs, and (3) reasonable contingencies related to all of these costs. If the Owner significantly increases or decreases the Owner's budget for the Cost of the Work, the Owner shall notify the Construction Manager and A/E Professional. The Owner and the A/E Professional, in consultation with the Construction Manager, shall thereafter agree to a corresponding change in the Project's scope and quality.

§ 4.1.4 Structural and Environmental Tests, Surveys and Reports. During the Preconstruction Phase, the Owner shall furnish the following information or services with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Construction Manager's performance of the Work with reasonable promptness after receiving the Construction Manager's written request for such information or services. The Construction Manager shall be entitled to generally rely on the accuracy of information and services furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work, including the careful review and field verification of such information, and shall promptly notify Owner of any conflicts or discrepancies Construction Manager discovers or should discover (in its capacity and experience as a general contractor).

§ 4.1.4.1 The Owner shall furnish tests, inspections, and reports, required by law and as otherwise agreed to by the parties, such as structural, mechanical, and chemical tests, tests for air and water pollution, and tests for hazardous materials.

§ 4.1.4.2 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; designated wetlands; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions and other necessary data with respect to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a Project benchmark.

§ 4.1.4.3 The Owner, upon Construction Manager's reasonable request, shall furnish services of geotechnical engineers, which may include test borings, test pits, determinations of soil bearing values, percolation tests, evaluations of hazardous

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materials, seismic evaluation, ground corrosion tests and resistivity tests, including necessary operations for anticipating subsoil conditions, with written reports and appropriate recommendations.

§ 4.1.5 During the Construction Phase, the Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Construction Manager's performance of the Work with reasonable promptness after receiving the Construction Manager's written request for such information or services.

§ 4.1.6 If the Owner identified a Sustainable Objective in Article 1, the Owner shall fulfill its responsibilities as required in AIA Document E234™–2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, attached to this Agreement.

§ 4.2 Owner's Designated Representative

The Owner shall identify a representative authorized to act on behalf of the Owner with respect to the Project. The Owner's representative shall render decisions promptly and furnish information expeditiously, so as to avoid unreasonable delay in the services or Work of the Construction Manager. Except as otherwise provided in Article 4 of A201–2017, Modified General Conditions, the A/E Professional does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 4.2.1 Legal Requirements. The Owner shall furnish all legal, insurance and accounting services, including auditing services, that may be reasonably necessary at any time for the Project to meet the Owner's needs and interests.

§ 4.3 A/E Professional

The Owner shall retain an A/E Professional to provide services, duties and responsibilities as described in AIA Document B133™–2019, Standard Form of Agreement Between Owner and A/E Professional, Construction Manager as Constructor Edition, including any additional services requested by the Construction Manager that are necessary for the Preconstruction and Construction Phase services under this Agreement. The Owner shall provide the Construction Manager with a copy of the scope of services in the executed agreement between the Owner and the A/E Professional, and any further modifications to the A/E Professional's scope of services in the agreement.

ARTICLE 5 COMPENSATION AND PAYMENTS FOR PRECONSTRUCTION PHASE SERVICES

§ 5.1 Compensation

§ 5.1.1 For the Construction Manager's Preconstruction Phase services described in Sections 3.1 and 3.2, the Owner shall compensate the Construction Manager as follows:
(Insert amount of, or basis for, compensation and include a list of reimbursable cost items, as applicable.)

[insert]

§ 5.1.2 The hourly billing rates for Preconstruction Phase services of the Construction Manager and the Construction Manager's Consultants and Subcontractors, if any, are set forth below.
(If applicable, attach an exhibit of hourly billing rates or insert them below.)

[insert]

§ 5.1.2.1 Hourly billing rates for Preconstruction Phase services include all costs to be paid or incurred by the Construction Manager, as required by law or collective bargaining agreements, for taxes, insurance, contributions, assessments and benefits and, for personnel not covered by collective bargaining agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, and shall remain unchanged unless the parties execute a Modification.

§ 5.2 Payments

§ 5.2.1 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed.

§ 5.2.2 Payments are due and payable upon presentation of the Construction Manager's invoice. Amounts unpaid twenty-one (21) days after the invoice date shall bear interest at the rate entered below:

[insert]

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ARTICLE 6 COMPENSATION FOR CONSTRUCTION PHASE SERVICES

§ 6.1 Contract Sum

§ 6.1.1 The Owner shall pay the Construction Manager the Contract Sum in current funds for the Construction Manager's performance of the Contract after execution of the Guaranteed Maximum Price Amendment. The Contract Sum is the Cost of the Work as defined in Article 7 plus the Construction Manager's Fee.

§ 6.1.2 The Construction Manager's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Construction Manager's Fee.)

[insert %] of the Cost of the Work.

§ 6.1.3 The method of adjustment of the Construction Manager's Fee for changes in the Work:

For approved changes in the Work, the rate of the Construction Manager's Fee shall not be adjusted and shall remain equal to [insert %] of the Cost of the Work directly attributable to any such change that is incurred or paid by the Construction Manager during performance of the Work, plus increases in insurance costs and bond costs (if any) based on the stipulated rates set forth in Article 7, below. Consequently, the total amount earned by the Construction Manager as the Construction Manager's Fee may increase, but the basis of the Construction Manager's Fee shall always remain [insert %] of the Cost of the Work that is actually incurred by the Construction Manager. A deductive Change Order shall reduce the GMP by the Cost of the Work for the Change in the Work.

§ 6.1.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

In the event Owner approves and executes a Change Order or Construction Change Directive pursuant to the terms and conditions of the Contract Documents, the maximum cumulative mark-up for overhead and profit to all Subcontractors, if any, for such change Work shall in no event exceed [insert %] of the actual Cost of the Work associated with such Change Order or Construction Change Directive, as the case may be.

§ 6.1.5 Rental rates for Construction Manager-owned equipment shall not exceed [insert] percent (« » %) of the standard rental rate paid at the place of the Project.

§ 6.1.6 Liquidated damages, if any:

§ 6.1.6.1 Time is of the essence regarding this Agreement and the work contemplated hereunder, and the Owner may suffer financial loss and/or inconvenience if the work is not completed to the satisfaction of the Owner by the time stipulated in the Contract Documents. Therefore, failure to timely complete the work shall result in the Construction Manager being subject to liquidated damages, but not as penalty, in the amount of amount of _____% of the Guaranteed Maximum Price or $_____ for each and every calendar day the work remains incomplete or the items remain undelivered. As compensation due the Owner for loss of use and for additional costs incurred by the Owner due to such non-completion of the work, the Owner shall have the right to deduct the liquidated damages from any amount due, or that may become due to the Construction Manager under the Contract Documents, or to invoice the Construction Manager for such damages if the costs incurred exceed the amount due to the Construction Manager. The Construction Manager and the Owner agree that the amount for liquidated damages is not punitive and is intended to compensate the Owner for difficult to quantify losses.

§ 6.1.6.2 Construction Manager hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted liquidated damages as a penalty, which the parties agree represents a fair and reasonable estimate of Owner's actual damages at the time of contracting if Construction Manager fails to substantially complete the Work in a timely manner.

§ 6.1.6.3 The amount of Liquidated Damages, if any, shall be deducted by the Owner from Final Payment otherwise due the Contractor. In the event the amount of total Liquidated Damages exceeds the Final Payment, the Owner shall withhold Final Payment and Contractor shall promptly pay to Owner the balance owed.

§ 6.1.6.4 The aforesaid provisions shall not affect the Owner's right to terminate this Agreement as provided in the Contract Documents nor limit any of the other remedies available to the Owner as hereinabove provided, and as provided in the Contract Documents. The Owner's exercise of its right to terminate this Agreement shall not release the Construction Manager from its obligation to pay liquidated damages as set forth herein nor shall it release Construction Manager of its obligations to diligently pursue the appropriate claim against its culpable Subcontractors, suppliers, manufacturers or Subcontractor Default Insurance (if applicable), for the benefit of Owner.

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§ 6.1.7 Other:
(Insert provisions for bonus, cost savings or other incentives, if any, that might result in a change to the Contract Sum.)

§ 6.1.7.1 Buyout Savings. Construction Manager may be able to generate buyout savings through the subcontractor buyout process (the "Buyout Savings"). As each portion of the Work is procured by the Construction Manager, the Construction Manager shall determine whether Buyout Savings, if any, exist, which shall be evaluated on a line-item basis for each line item on account of which the Construction Manager procures the Work for more or less than the amount carried on the Schedule of Values therefor. Buyout Savings shall be evaluated on an aggregate basis, meaning that savings from the favorable buy-out of one line item can be used to offset buy-out losses on another line item before the overall calculation of Buyout Savings is performed. Construction Manager shall include in its Schedule of Values, a line item for Buyout Savings which will show all net Buyout Savings. Upon completion of ninety percent (90%) of the Work by count of the Subcontractor buyouts, Construction Manager shall prepare and submit a Subcontractor Buyout Report for Owner's review and approval that lists and summarizes all Subcontractor buyouts to date. For each subcontract awarded, the report shall include a list of all trade line items included in the award and compare the total GMP amount for those line items to the actual award value for the subcontract to calculate the "buyout variance" for each subcontract and then tally these to determine if there is an overall net buyout "savings" or "overrun" at that point. Construction Manager shall continue to buyout the balance of the Project and maintain the aggregate balance of Buyout Savings during the entire Project. When the Project achieves Final Completion, any Buyout Savings achieved, as demonstrated in the Subcontractor Buyout Report, will be split by Owner and Contractor with Owner receiving seventy percent (70%) and Construction Manager receiving thirty percent (30%) by way of Change Order adjusting the GMP.

§ 6.2 Guaranteed Maximum Price

§ 6.2.1 The Construction Manager guarantees that the Contract Sum (including Construction Manager's Fee, Construction Manager's General Conditions, and Contingency) shall not exceed the Guaranteed Maximum Price set forth in the Guaranteed Maximum Price Amendment, subject to additions and deductions by Change Order as provided in the Contract Documents. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Construction Manager without reimbursement by the Owner.

§ 6.2.2 Allowances, if any, which will be included in the Guaranteed Maximum Price shall be identified on an exhibit attached to the Guaranteed Maximum Price Amendment. Once an allowance item is fully purchased by Construction Manager, including all associated Subcontractor Work, and approved by Owner as set forth in the Contract Documents, the price will be included within the GMP and the former allowance Work will then be removed from the Allowance list. Change Orders concluding the full Allowance scope in this Agreement shall recite that the affected Allowance is closed as an Allowance and included in the GMP.

§ 6.2.4 By submitting the GMP Amendment, Construction Manager represents to Owner that Construction Manager and its subcontractors, material and equipment suppliers have compared and reviewed all general and specific details on the Drawings and Specifications and that conflicts, discrepancies, errors and omissions, which are within the commonly accepted knowledge base of a licensed general contractor, subcontractor, trades persons, manufacturers or other parties required to carry out the work involved in the GMP Amendment have been corrected or clarified prior to execution of the GMP Amendment, and therefore Construction Manager warrants that 1) the GMP includes, without limitation, the cost of correcting all conflicts, discrepancies, errors, or omissions which Construction Manager identified, or should have identified through the exercise of reasonable skill and care of a general contractor, during the pre-construction phase of this Agreement; 2) that Construction Manager's review and comparison of all drawings and specifications has taken into consideration the total and complete functioning of all systems and therefore the Construction Manager represents that the Guaranteed Maximum Price Amendment represents the total cost for complete and functional systems; and 3) that Construction Manager can complete the Project in the time set forth in the GMP Amendment and the approved Project Schedule.

§ 6.2.5 If Owner and Construction Manager are unable to reach an agreement on a Final GMP Amendment, Owner shall be permitted to terminate this Agreement for Convenience, in accordance with the provision set forth in Article 14 of the Modified General Conditions.

§ 6.3 Changes in the Work

§ 6.3.1 The Owner may, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions. The Owner shall issue such changes in writing. The

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Construction Manager may be entitled to an equitable adjustment in the Contract Time as a result of changes in the Work, provided same are approved by a written Change Order signed by Owner.

§ 6.3.1.1 The A/E Professional may order minor changes in the Work as provided in Article 7 of AIA Document A201–2017, Modified General Conditions.

§ 6.3.2 Adjustments to the Guaranteed Maximum Price on account of changes in the Work subsequent to the execution of the Guaranteed Maximum Price Amendment may be determined by any of the methods listed in Article 7 of AIA Document A201–2017, Modified General Conditions.

§ 6.3.3 Adjustments to subcontracts awarded on the basis of a stipulated sum shall be determined in accordance with Article 7 of A201–2017, Modified General Conditions, as they refer to "cost" and "fee," and not by Articles 6 and 7 of this Agreement. Adjustments to subcontracts awarded with the Owner's prior written consent on the basis of cost plus a fee (if any) shall be calculated in accordance with the terms of those subcontracts.

§ 6.3.4 In calculating adjustments to the Guaranteed Maximum Price, the terms "cost" and "costs" as used in Article 7 of AIA Document A201–2017, Modified General Conditions, shall mean the Cost of the Work as defined in Article 7 of this Agreement and the term "fee" shall mean the Construction Manager's Fee as defined in Section 6.1.2 of this Agreement.

ARTICLE 7 COST OF THE WORK FOR CONSTRUCTION PHASE

§ 7.1 Costs to Be Reimbursed

§ 7.1.1 The term Cost of the Work shall mean costs necessarily incurred by the Construction Manager in the proper performance of the Work. The Cost of the Work shall include only the items set forth in Sections 7.1 through 7.7.

§ 7.1.2 Where, pursuant to the Contract Documents, any cost is subject to the Owner's prior approval, the Construction Manager shall obtain such approval in writing prior to incurring the cost.

§ 7.1.3 Costs shall be at rates not higher than the standard rates paid at the place of the Project, except with prior approval of the Owner.

§ 7.1.4 The Construction Manager shall use reasonable efforts to provide a minimum of three (3) bids/proposals for all Work included in Cost of the Work for the Owner's review and consideration, prior to the Construction Manager procuring the Work for same. The Construction Manager shall consult with the Owner before awarding the subcontract and shall provide the Owner with a copy of each Subcontractor bid and proposed subcontract for the Owner's review. The recommendation of the bids, proposals, and Subcontractors for the Work included in the Cost of the Work shall be made solely by the Construction Manager, with the Owner providing final approval of the Construction Manager's recommendations in accordance with this Agreement. Upon Owner's request, the Construction Manager shall provide Owner with a complete copy of each subcontract agreement.

§ 7.1.5 There shall be zero ($00.00) mark-up on any reimbursable expenses or Cost of the Work as all mark-up is captured in either Construction Manager's Fee or Construction Manager's General Conditions as set forth in this Agreement.

§ 7.2 Labor Costs

§ 7.2.1 Wages or salaries of construction workers directly employed by the Construction Manager to perform the construction of the Work at the site or, with the Owner's prior approval, at off-site workshops.

§ 7.2.2 Wages or salaries of the Construction Manager's supervisory and administrative personnel when stationed at the site and performing Work, with the Owner's prior approval.

§ 7.2.3 Wages and salaries of the Construction Manager's supervisory or administrative personnel engaged at factories, workshops or while traveling, in expediting the production or transportation of materials or equipment required for the Work, but only for that portion of their time required for the Work.

§ 7.2.4 Costs paid or incurred by the Construction Manager, as required by law or collective bargaining agreements, for taxes, insurance, contributions, assessments and benefits and, for personnel not covered by collective bargaining

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agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, provided such costs are based on wages and salaries included in the Cost of the Work under Sections 7.2.1 through 7.2.3.

§ 7.2.5 The above agreed burden rates for labor costs, in lieu of actual costs, shall remain unchanged throughout the duration of this Agreement.

§ 7.2.6 Construction Manager shall provide a Manpower Staffing Plan showing all anticipated salaried and hourly staff positions as part of the Key Personnel.

§ 7.3 Subcontract Costs

§ 7.3.1 Payments made by the Construction Manager to Subcontractors in accordance with the requirements of the subcontracts and this Agreement.

§ 7.3.2 Timely and valid claims made by Subcontractors to Construction Manager may only be considered legitimate Subcontractor costs under this Article 7 to the extent that the entitlement and quantum of each Subcontractor claim have been researched and validated as to amount and that the claim is consistent with this Agreement, the cost are reimbursable pursuant to the Agreement, and the Construction Manager concurs in writing with the Subcontractor's position based upon the Subcontractor's documented representations.

§ 7.4 Costs of Materials and Equipment Incorporated in the Completed Construction

§ 7.4.1 Costs, including transportation and storage at the site, of materials and equipment incorporated, or to be incorporated, in the completed construction. Owner must approve in writing all advance payments for Subcontractors deposits and advances for Work deemed "long lead items," or "special order items" or other selected items pertaining to the Work. If the storage of materials or equipment to be incorporated into the Project is required due, in whole or in part, to the failure of Construction Manager to have the applicable portion of the Project ready for incorporation of such materials or equipment in accordance with the Construction Schedule, then such transportation and storage costs shall not be included in the Cost of Work but, instead, shall be at the sole cost of the Construction Manager.

§ 7.4.2 Costs of materials described in the preceding Section 7.4.1 in excess of those actually installed to allow for reasonable waste and spoilage. Unused excess materials, if any, shall become the Owner's property at the completion of the Work or, at the Owner's option, shall be sold by the Construction Manager. Any amounts realized from such sales shall be credited to the Owner as a deduction from the Cost of the Work.

§ 7.5\ Costs of Other Materials and Equipment, Temporary Facilities and Related Items

§ 7.5.1 Costs of transportation, storage, installation, dismantling, maintenance, and removal of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by construction workers that are provided by the Construction Manager at the site and fully consumed in the performance of the Work. Costs of materials, supplies, temporary facilities, machinery, equipment, and tools, that are not fully consumed, shall be based on the cost or value of the item at the time it is first used on the Project site less the value of the item when it is no longer used at the Project site. Costs for items not fully consumed by the Construction Manager shall mean fair market value.

§ 7.5.2 Rental charges for temporary facilities, machinery, equipment, and hand tools not customarily owned by construction workers that are provided by the Construction Manager at the site, and the costs of transportation, installation, dismantling, minor repairs, and removal of such temporary facilities, machinery, equipment, and hand tools. Rates and quantities of equipment owned by the Construction Manager, or a related party as defined in Section 7.8, shall be subject to the Owner's prior approval. The total rental cost of any such equipment may not exceed the purchase price of any comparable item.

§ 7.5.3 Costs of removal of debris from the site of the Work and its proper and legal disposal.

§ 7.5.4 Costs of the Construction Manager's site office, including general office equipment and supplies.

§ 7.5.5 Costs of materials and equipment suitably stored off the site at a mutually acceptable location, subject to the Owner's prior approval.

§ 7.6 Miscellaneous Costs

§ 7.6.1 The cost of Subcontractor bonds are not a Cost of the Work unless agreed to in writing by the Owner.

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§ 7.6.2 Sales, use, or similar taxes, imposed by a governmental authority, that are related to the Work and for which the Construction Manager is liable.

§ 7.6.3 Fees and assessments for the building permit, and for other permits, licenses, and inspections, for which the Construction Manager is required by the Contract Documents to pay.

§ 7.6.4 Fees of laboratories for tests required by the Contract Documents; except those related to defective or nonconforming Work for which reimbursement is excluded under Article 13 of AIA Document A201–2017, Modified General Conditions or by other provisions of the Contract Documents, and which do not fall within the scope of Section 7.7.3.

§ 7.6.5 Royalties and license fees paid for the use of a particular design, process, or product, required by the Contract Documents.

§ 7.6.5.1 The cost of defending suits or claims for infringement of patent rights arising from requirements of the Contract Documents, payments made in accordance with legal judgments against the Construction Manager resulting from such suits or claims, and payments of settlements made with the Owner's consent, unless the Construction Manager had reason to believe that the required design, process, or product was an infringement of a copyright or a patent, and the Construction Manager failed to promptly furnish such information to the A/E Professional as required by Article 3 of AIA Document A201–2017, Modified General Conditions. The costs of legal defenses, judgments, and settlements shall not be included in the Cost of the Work used to calculate the Construction Manager's Fee or subject to the Guaranteed Maximum Price.

§ 7.6.6 Costs for communications services, electronic equipment, and software, directly related to the Work and located at the site, with the Owner's prior approval.

§ 7.6.7 Costs of document reproductions and delivery charges.

§ 7.6.8 Deposits lost for causes other than the Construction Manager's negligence or failure to fulfill a specific responsibility in the Contract Documents.

§ 7.6.9 Legal, mediation and arbitration costs, including attorneys' fees, other than those arising from disputes between the Owner and Construction Manager, reasonably incurred by the Construction Manager after the execution of this Agreement in the performance of the Work and with the Owner's prior approval, which shall not be unreasonably withheld.

§ 7.6.10 Expenses incurred in accordance with the Construction Manager's standard written personnel policy for relocation and temporary living allowances of the Construction Manager's personnel required for the Work, with the Owner's prior approval.

§ 7.6.11 That portion of the reasonable expenses of the Construction Manager's supervisory or administrative personnel incurred while traveling in discharge of duties connected with the Work.

§ 7.7 Other Costs and Emergencies

§ 7.7.1 Other costs incurred in the performance of the Work, if and to the extent approved in advance by the Owner.

§ 7.7.2 Costs incurred in taking action to prevent threatened damage, injury, or loss, in case of an emergency affecting the safety of persons and property, as provided in Article 10 of AIA Document A201–2017, Modified General Conditions.

§ 7.7.3 Costs of repairing or correcting damaged or nonconforming Work executed by the Construction Manager, Subcontractors, or suppliers, provided that such damaged or nonconforming Work was not caused by the negligence of, or failure to fulfill a specific responsibility by, the Construction Manager, and only to the extent that the cost of repair or correction is not recovered by the Construction Manager from insurance, sureties, Subcontractors, suppliers, or others.

§ 7.8 Related Party Transactions

§ 7.8.1 For purposes of this Section 7.8, the term "related party" shall mean (1) a parent, subsidiary, affiliate, or other entity having common ownership of, or sharing common management with, the Construction Manager; (2) any entity in which any stockholder in, or management employee of, the Construction Manager holds an equity interest in excess of ten percent in the aggregate; (3) any entity which has the right to control the business or affairs of the Construction

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Manager; or (4) any person, or any member of the immediate family of any person, who has the right to control the business or affairs of the Construction Manager.

§ 7.8.2 If any of the costs to be reimbursed arise from a transaction between the Construction Manager and a related party, the Construction Manager shall notify the Owner in writing of the specific nature of the contemplated transaction, including the identity of the related party and the anticipated cost to be incurred, before any such transaction is consummated or cost incurred. If the Owner, after such notification, authorizes the proposed transaction in writing, then the cost incurred shall be included as a cost to be reimbursed, and the Construction Manager shall procure the Work, equipment, goods, or service, from the related party, as a Subcontractor, according to the terms of Article 9. If the Owner fails to authorize the transaction in writing, the Construction Manager shall procure the Work, equipment, goods, or service from some person or entity other than a related party according to the terms of Article 9.

§ 7.9 Costs Not To Be Reimbursed

§ 7.9.1 The Cost of the Work shall not include the items listed below:

- **.1** Salaries and other compensation of the Construction Manager's personnel stationed at the Construction Manager's principal office or offices other than the site office , except while providing Preconstruction Phase services and except as specifically provided in Section 7.2, or as may be provided in Article 14;
- **.2** Bonuses, profit sharing, incentive compensation, and any other discretionary payments, paid to anyone hired by the Construction Manager or paid to any Subcontractor or vendor, unless the Owner has provided prior approval;
- **.3** Expenses of the Construction Manager's principal office and offices other than the site office;
- **.4** Overhead and general expenses, except as may be expressly included in Sections 7.1 to 7.7;
- **.5** The Construction Manager's capital expenses, including interest on the Construction Manager's capital employed for the Work;
- **.6** Costs of the Work due to the fault or negligence of the Construction Manager, its Subcontractors, or any other person or entity employed by the Construction Manager or Subcontractors, or under contract with them or performing work on the Project on behalf of them or under their supervision, or for whose acts the Construction Manager or its Subcontractors may be liable, including, but not limited to the costs of correcting damaged, defective or non-conforming work, disposal and replacement of materials and equipment incorrectly ordered or supplied, and repairing damage to property not forming party of the Work. The Construction Manager specifically agrees that it shall receive no compensation, and the Cost of Work shall not include, any costs incurred by the Construction Manager in repairing or correcting, or supervising the correction or repair of, defective or non-conforming Work performed or supplied by any Subcontractor, material supplier, or any other person or entity employed by the Construction Manager, under contract with the Construction Manager, or performing Work on the Project on behalf of or under the supervision of the Construction Manager or Construction Manager's personnel and that the Construction Manager's sole remedy with respect to the recovery of such costs shall be whatever remedies are contained in the Construction Manager's subcontract agreements with its Subcontractors, suppliers and other persons or entities providing Work on the Project;
- **.7** Any cost not specifically and expressly described in Sections 7.1 to 7.7;
- **.8** Costs, other than costs included in Change Orders approved by the Owner, that would cause the Guaranteed Maximum Price to be exceeded; and
- **.9** Costs for services incurred during the Preconstruction Phase.

ARTICLE 8 DISCOUNTS, REBATES, AND REFUNDS

§ 8.1 Cash discounts obtained on payments made by the Construction Manager shall accrue to the Owner if (1) before making the payment, the Construction Manager included the amount to be paid, less such discount, in an Application for Payment and received payment from the Owner, or (2) the Owner has deposited funds with the Construction Manager with which to make payments; otherwise, cash discounts shall accrue to the Construction Manager. Trade discounts, rebates, refunds, and amounts received from sales of surplus materials and equipment shall accrue to the Owner, and the Construction Manager shall make provisions so that they can be obtained.

§ 8.2 Amounts that accrue to the Owner in accordance with the provisions of Section 8.1 shall be credited to the Owner as a deduction from the Cost of the Work.

ARTICLE 9 SUBCONTRACTS AND OTHER AGREEMENTS

§ 9.1 Those portions of the Work that the Construction Manager does not customarily perform with the Construction Manager's own personnel shall be performed under subcontracts or other appropriate agreements with the Construction

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Manager as set forth in Section 3.1.17 of this Agreement. The Owner may designate specific persons from whom, or entities from which, the Construction Manager shall obtain bids. The Construction Manager shall obtain bids from Subcontractors, and from suppliers of materials or equipment fabricated especially for the Work, who are qualified to perform that portion of the Work in accordance with the requirements of the Contract Documents. Any advice of the A/E Professional or Owner's Representative, or approval or objection by the Owner, shall not relieve the Construction Manager of its responsibility to perform the Work in accordance with the Contract Documents. The Construction Manager shall not be required to contract with anyone to whom the Construction Manager has reasonable objection.

§ 9.1.1 When a specific subcontractor or supplier (1) is recommended to the Owner by the Construction Manager; (2) is qualified to perform that portion of the Work; and (3) has submitted a bid that conforms to the requirements of the Contract Documents without reservations or exceptions, but the Owner requires that another bid be accepted, then the Construction Manager may require that a Change Order be issued to adjust the Guaranteed Maximum Price by the difference between the bid of the person or entity recommended to the Owner by the Construction Manager and the amount of the subcontract or other agreement actually signed with the person or entity designated by the Owner.

§ 9.2 Subcontracts or other agreements shall conform to the applicable payment provisions of this Agreement, and shall not be awarded on the basis of cost plus a fee without the Owner's prior written approval. If a subcontract is awarded on the basis of cost plus a fee, the Construction Manager shall provide in the subcontract for the Owner to receive the same audit rights with regard to the Subcontractor as the Owner receives with regard to the Construction Manager in Article 10.

ARTICLE 10 ACCOUNTING RECORDS

The Construction Manager shall keep full and detailed records and accounts related to the Cost of the Work, and exercise such controls, as may be necessary for proper financial management under this Contract and to substantiate all costs incurred. The accounting and control systems shall be satisfactory to the Owner. The Owner and the Owner's auditors shall, during regular business hours and upon reasonable notice, be afforded access to, and shall be permitted to audit and copy, the Construction Manager's records and accounts, including complete documentation supporting accounting entries, books, job cost reports, correspondence, instructions, drawings, receipts, subcontracts, Subcontractor's proposals, Subcontractor's invoices, purchase orders, vouchers, memoranda, and other data relating to this Contract. The Construction Manager shall preserve these records for a period of four (4) years after Final Payment, or for such longer period as may be required by law. Such right of access may be exercised during the Work or after Substantial Completion of the Work, with respect to records pertaining to contract performance, change orders, Claims, or payment audits including a final payment audit. Such right of access may also be exercised post termination if the Contract is terminated for default or convenience. This Section is applicable to all Change Orders or Claims by or against the Construction Manager and or a Subcontractor of any tier whether or not they affect the GMP. The Construction Manager agrees to include the provisions of this Section in all its contracts and all tier subcontracts with regard to any audits of payments received by the Construction Manager to verify that such payments were made and that such payments were made for the use required by the Project. Audits conducted under this Section shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing audit agency. The Construction Manager agrees to the disclosure of all information and reports resulting from access to records under this Section to the Owner, provided that the Construction Manager is afforded the opportunity for an audit exit conference. If the Owner audits the Construction Manager's books and records and discovers actual costs or an error in the Construction Manager's favor by more than one percent (1%) of the Cost of the Work to date, the Construction Manager shall reimburse the Owner for the cost of such audit and the Construction Manager shall promptly refund the amount overpaid to the Owner.

ARTICLE 11 PAYMENTS FOR CONSTRUCTION PHASE SERVICES

§ 11.1 Progress Payments

§ 11.1.1 Based upon Applications for Payment submitted to the Owner's Representative by the Construction Manager, and Certificates for Payment issued by the Owner's Representative, the Owner shall make progress payments on account of the Contract Sum, to the Construction Manager, as provided below and elsewhere in the Contract Documents.

§ 11.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

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§ 11.1.3 Owner/Owner's Representative, Construction Manager and A/E Professional shall meet at the Project site between the 25th and 28th day of each month to review Construction Manager's "Pencil Draw" for that month's Application

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for Payment (which shall include all amounts through the end of the month), which shall be a preliminary draft of the Application for Payment prepared by Construction Manager. After that meeting, Construction Manager shall revise the Pencil Draw in accordance with any reasonable objection or recommendation of the Owner/Owner's Representative or A/E Professional that is consistent with the requirements of the Contract Documents. Such revised Pencil Draw shall be resubmitted by Construction Manager as the Application for Payment on or by the first (1st) day of a month. The Owner and Owner's Representative shall approve, if correct, and the Owner's Representative shall certify, if correct, the Application for Payment by the seventh (7th) of the month and the Owner shall make payment of the certified amount to the Construction Manager not later than the twenty-first (21st) day of the same month, provided the revised Pencil Draw is accurate. If errors are found in the revised Pencil Draw, it shall be revised and resubmitted for review in accordance with this Section.

§ 11.1.4 With each Application for Payment, the Construction Manager shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner or Owner's Representative to demonstrate that payments already made by the Construction Manager on account of the Cost of the Work equal or exceed progress payments already received by the Construction Manager, plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Construction Manager's Fee plus payrolls for the period covered by the present Application for Payment, as evidenced by copies of Construction Manager's payroll register certified by Construction Manager as to its accuracy as support for the fringe benefits and labor burden (any deviation in the payroll register from the Check Activity with Detail previously submitted to the Owner for the prior period must be agreed to by Owner in writing). In addition, as a further condition to payment of each progress payment, Construction Manager shall submit to Owner: (i) a sworn and certified Progress Payment Affidavit, which recites that all laborers, material suppliers and Subcontractors dealing with the Construction Manager have been paid in full through the date of the prior application for payment which has been received by Construction Manager from Owner, with the exception of disputed payments; (ii) a partial release of lien conditioned upon payment from Construction Manager for the current Application for Payment, (iii) partial releases of lien from all lienors providing Work on the applicable Application for Payment through the date of the last payment made, (iv) partial releases of lien conditioned only upon payment from all lienors providing Work on the applicable Application for Payment, through the date of the current Application for Payment, (v) any evidence of payment of any indebtedness incurred with respect to the Work of Construction Manager, as may be required by Owner and/or Owner's Representative and such other evidence that they may reasonably require substantiating that all Work which is the subject of each such Application for Payment has been performed, and (vi) where required by any manufacturers for extended warranties, inspection certificates or other acceptable documentation confirming the acceptable completion of any and all required inspections for the Work performed for which payment is being made.

§ 11.1.5 Each Application for Payment shall be based on the most recent schedule of values submitted by the Construction Manager with the Final GMP Amendment unless subsequently amended by Change Order in accordance with the Contract Documents. If the Schedule of Values is subsequently amended by Change Order in accordance with the Contract Documents, then each subsequent Application for Payment shall be based on the Amended Schedule of Values. The schedule of values shall allocate the entire Guaranteed Maximum Price among: (1) the various portions of the Work; (2) any contingency for costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order; and (3) the Construction Manager's Fee.

§ 11.1.5.1 The Construction Manager's General Conditions shall be shown as separate items. As individual subcontracts are executed, the actual subcontract value will be identified separately in the Schedule of Values in place of the estimates that made up the original Final GMP, with any remaining portion of the line item carried in the same scope of Work, to complete the Work in any particular division, as long as the Final GMP is not increased. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Owner's Representative may require. The schedule of values shall be used as a basis for reviewing the Construction Manager's Applications for Payment.

§ 11.1.5.2 The allocation of the Guaranteed Maximum Price under this Section 11.1.5 shall not constitute a separate guaranteed maximum price for the Cost of the Work of each individual line item in the schedule of values.

§ 11.1.5.3 When the Construction Manager allocates costs from a contingency to another line item in the schedule of values, the Construction Manager shall submit supporting documentation to the Owner's Representative.

§ 11.1.6 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage of completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed, or (2) the percentage obtained by dividing (a) the expense

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that has actually been incurred by the Construction Manager on account of that portion of the Work and for which the Construction Manager has made payment or intends to make payment prior to the next Application for Payment, by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values.

§ 11.1.7 In accordance with AIA Document A201–2017, Modified General Conditions, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§\ 11.1.7.1 The amount of each progress payment shall first include:

.1 That portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the most recent schedule of values;

.2 That portion of the Guaranteed Maximum Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction or, if approved in writing in advance by the Owner, suitably stored off the site at a location agreed upon in writing;

.3 That portion of Construction Change Directives that the Owner's Representative determines, in the Owner's Representative's professional judgment, to be reasonably justified; and

.4 The Construction Manager's Fee, computed upon the Cost of the Work described in the preceding Sections 11.1.7.1.1 and 11.1.7.1.2 at the rate stated in Section 6.1.2 or, if the Construction Manager's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum fee as the Cost of the Work included in Sections 11.1.7.1.1 and 11.1.7.1.2 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

§ 11.1.7.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Owner's Representative has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017, Modified General Conditions;

.3 Any amount for which the Construction Manager does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Construction Manager intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Owner's Representative may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017, Modified General Conditions;

.5 The shortfall, if any, indicated by the Construction Manager in the documentation required by Section 11.1.4 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 11.1.8.

§ 11.1.8 Retainage

§ 11.1.8.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Owner shall withhold Five Percent (5%) retainage on all amounts due Construction Manager for each Application.

§ 11.1.8.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

NA

§ 11.1.8.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 11.1.8.1 is to be modified prior to Substantial Completion of the entire Work, insert provisions for such modification.)

NA

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§ 11.1.8.3 Except as set forth in this Section 11.1.8.3, upon Substantial Completion of the Work, the Construction Manager may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 11.1.8. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage, such as upon completion of the Owner's audit and reconciliation, upon Substantial Completion.)

NA

§ 11.1.9 The Owner and the Construction Manager shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors, and the percentage of retainage held on Subcontracts, and the Construction Manager shall execute subcontracts in accordance with those agreements.

§ 11.1.9.1 Except with the Owner's prior written approval, the Construction Manager shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 11.1.10 In taking action on the Construction Manager's Applications for Payment the Owner's Representative shall be entitled to rely on the accuracy and completeness of the information furnished by the Construction Manager, and such action shall not be deemed to be a representation that (1) the Owner's Representative has made a detailed examination, audit, or arithmetic verification, of the documentation submitted in accordance with Section 11.1.4 or other supporting data; (2) that the Owner's Representative has made exhaustive or continuous on-site inspections; or (3) that the Owner's Representative has made examinations to ascertain how or for what purposes the Construction Manager has used amounts previously paid on account of the Contract. Such examinations, audits, and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ 11.1.11 In the event of any breach or default by the Construction Manager under the Contract Documents, Owner may withhold any payment or part of any payment in the amount of the costs and damages incurred by Owner to correct, remedy and/or mitigate any Construction Manager defaults or the amount costs of damages, including actual delay damages, reasonably estimated to be incurred to correct, remedy and/or mitigate any Construction Manager defaults including, but not limited to: (1) defective Work not remedied; (2) claims or liens filed, unless bonded off; (3) failure of the Construction Manager to make payments properly to Subcontractors or for labor, materials, or equipment; (4) failure to provide waivers of lien for all lienors giving notices; (5) damage to the Owner's property caused by Contactor, its Subcontractors or anyone working for Construction Manager; (6) failure of the Work to progress satisfactorily or according to schedule; and (7) failure to carry out the Work in accordance with the Contract Documents.

§ 11.1.12 It is understood that each Application for Payment shall constitute a certification and representation by the Construction Manager to the Owner that: (i) the construction has progressed to the point indicated; (ii) the quality of the Work covered by the application is in accordance with the Contract Documents; (iii) there are no liens or claims outstanding or known to exist at the date of the application; (iv) all due and payable bills with respect to the Work have been paid to date or included in the amount requested in the previous application, and there is no known basis for the filing of any construction liens or claims or any other lien or claim on the Work; (v) duly executed waivers and releases have been obtained from all Subcontractors for work done and materials furnished through the date of payment; (vi) the Construction Manager is entitled to payment in the amount requested; (vii) such Application for Payment represents a just estimate of cost reimbursable to Construction Manager under the terms of the Contract Documents, (viii) such Application for Payment has not been front-end-loaded either by Construction Manager or by any of its Subcontractors and (ix) that Construction Manager has not adjusted line items in the Schedule of Values without Owner's prior written consent.

§ 11.2 Final Payment

§ 11.2.1 Subject to the requirements of Section 9.10 of the Modified General Conditions, final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Construction Manager when

- **.1** the Construction Manager has fully performed the Contract, except for the Construction Manager's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, Modified General Conditions, and to satisfy other requirements, if any, which extend beyond final payment;
- **.2** the Construction Manager has submitted a final accounting for the Cost of the Work and a final Application for Payment; and
- **.3** a final Certificate for Payment has been issued by the Owner's Representative in accordance with Section 11.2.2.2.

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Construction Manager understands and agrees that its final application for Final Payment will constitute a further representation that the conditions precedent to Construction Manager's being entitled to Final Payment have been fulfilled.

§ 11.2.2 Within 30 days of the Owner's receipt of the Construction Manager's final accounting for the Cost of the Work, the Owner shall conduct an audit of the Cost of the Work or notify the Owner's Representative that it will not conduct an audit.

§ 11.2.2.1 If the Owner conducts an audit of the Cost of the Work, the Owner shall, within 10 days after completion of the audit, submit a written report based upon the auditors' findings to the Owner's Representative.

§ 11.2.2.2 Within seven days after receipt of the written report described in Section 11.2.2.1, or receipt of notice that the Owner will not conduct an audit, and provided that the other conditions of Section 11.2.1 have been met, the Owner's Representative will either issue to the Owner a final Certificate for Payment with a copy to the Construction Manager, or notify the Construction Manager and Owner in writing of the Owner's Representative's reasons for withholding a certificate as provided in Article 9 of AIA Document A201–2017, Modified General Conditions. The Owner's Representative is not responsible for verifying the accuracy of the Construction Manager's final accounting.

§ 11.2.2.3 If the Owner's auditors' report concludes that the Cost of the Work, as substantiated by the Construction Manager's final accounting, is less than claimed by the Construction Manager, the Construction Manager shall be entitled to request mediation of the disputed amount without seeking an initial decision pursuant to Article 15 of AIA Document A201–2017, Modified General Conditions. A request for mediation shall be made by the Construction Manager within 30 days after the Construction Manager's receipt of a copy of the Owner's Representative's final Certificate for Payment. Failure to request mediation within this 30-day period shall result in the substantiated amount reported by the Owner's auditors becoming binding on the Construction Manager. Pending a final resolution of the disputed amount, the Owner shall pay the Construction Manager the amount certified in the Owner's Representative's final Certificate for Payment.

§ 11.2.3 The Owner's final payment to the Construction Manager shall be made no later than 30 days after the issuance of the Owner's Representative's final Certificate for Payment and Construction Manager's strict and full compliance with all conditions precedent to final payment contained throughout Section 9.10 of the Modified General Conditions and throughout the Contract Documents.

§ 11.3 Interest

Undisputed payments which are due under the Contract Documents and unpaid for a period of twenty-one (21) additional days shall bear interest from the date payment is due at the rate stated below.
(Insert rate of interest agreed upon, if any.)

[insert] % « »

ARTICLE 12 DISPUTE RESOLUTION

§ 12.1 Initial Decision Maker

§ 12.1.1 Any Claim between the Owner and Construction Manager shall be resolved in accordance with the provisions set forth in this Article 12 and Article 15 of A201–2017, Modified General Conditions. However, for Claims arising from or relating to the Construction Manager's Preconstruction Phase services, no decision by the Initial Decision Maker shall be required as a condition precedent to mediation or binding dispute resolution, and Section 12.1.2 of this Agreement shall not apply.

§ 12.1.2 The Owner's Representative will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, Modified General Conditions, for Claims arising from or relating to the Construction Manager's Construction Phase services.

§ 12.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by mediation pursuant to Article 15 of AIA Document A201–2017, Modified General Conditions, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[« »] Arbitration pursuant to Article 15 of AIA Document A201–2017

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[X] Litigation in a court of competent jurisdiction

[« »] Other: *(Specify)*

« »

§ 12.3 WAIVER OF TRIAL BY JURY

IN THE EVENT OF LITIGATION, BOTH PARTIES HEREBY KNOWINGLY, IRREVOCABLY, VOLUNTARILY, AND INTENTIONALLY WAIVE ANY RIGHT EITHER PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY ACTION, PROCEEDING, CLAIM, OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT, OR THE BREACH THEREOF, OR IN CONNECTION WITH THE WORK OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER VERBAL OR WRITTEN), OR ANY ACTIONS OR INACTIONS OF EITHER PARTY.

ARTICLE 13 TERMINATION OR SUSPENSION

§ 13.1 Termination Prior to Execution of the Guaranteed Maximum Price Amendment

§ 13.1.1 If the Owner and the Construction Manager do not reach an agreement on the Guaranteed Maximum Price, the Owner may terminate this Agreement upon not less than seven (7) days' written notice to the Construction Manager.

§ 13.1.2 In the event of termination of this Agreement pursuant to Section 13.1.1, the Construction Manager shall be compensated for Preconstruction Phase services and Work performed prior to receipt of a notice of termination, in accordance with the terms of this Agreement. In no event shall the Construction Manager's compensation under this Section exceed the compensation set forth in Section 5.1.

§ 13.2 Termination or Suspension Following Execution of the Guaranteed Maximum Price Amendment

§ 13.2.1 Termination

The Contract may be terminated or suspended by the Owner or the Construction Manager only as provided in Article 14 of AIA Document A201–2017, Modified General Conditions.

ARTICLE 14 MISCELLANEOUS PROVISIONS

§ 14.1 Terms in this Agreement shall have the same meaning as those in A201–2017, Modified General Conditions. Where reference is made in this Agreement to a provision of AIA Document A201–2017, Modified General Conditions, or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 14.2 Successors and Assigns

§ 14.2.1 The Owner and Construction Manager, respectively, bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 14.2.2 of this Agreement, and in Section 13.2.2 of A201–2017, Modified General Conditions, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 14.3 Insurance and Bonds

For all phases of the Project, the Construction Manager and the Owner shall purchase and maintain insurance as set forth in Article 11 of the Modified General Conditions.

§ 14.4 Other provisions:

§ 14.4.1 Attorneys' Fees/Prevailing Party.

In the event that any litigation arises out of or under this Agreement, then the prevailing party in such litigation shall be entitled to recover from the non-prevailing party, all reasonable costs of such action, including but not limited to reasonable expert fees, attorneys' fees and paralegal fees for all trial and appellate levels. In any suit, action, or other proceeding, including bankruptcy, arising out of or in any manner relating to the Contract Documents, including without

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limitation, (i) the enforcement or interpretation of a party's rights or obligations under the Contract Documents (whether in contract, tort, or both), or (ii) the declaration of any rights or obligations under the Contract Documents, the successful or prevailing party, as determined by the court, shall be entitled to recover from the losing party, as determined by the court, reasonable attorneys' fees, paralegal fees, and disbursements (including disbursements which would not otherwise be taxable as cost in the proceeding) and expert witness fees. All references in the Contract Documents to attorneys' fees shall be deemed to include all attorney and paralegal fees and costs incurred pre-litigation as well as through all post-judgment and appellate levels and in connection with collection, and bankruptcy proceedings. In addition to the above, the prevailing party shall be entitled to recover from the non-prevailing party, all litigation costs associated with discovery and production of Electronically Stored Information (ESI).

§ 14.4.2 Severability.
If any term or provision of the Contract, or the application thereof to any person or circumstances, shall be invalid or unenforceable to any extent, the remainder of the Contract or the application of the Contract to persons or circumstances other than those against whom or which such term or provision is invalid or unenforceable, shall not be affected thereby, and each term and provision of the Contract shall be valid and enforceable to the fullest extent permissible by law.

§ 14.4.3 Signatures.
The Contract may be executed in multiple counterparts, each of which will be deemed an original agreement and all of which together will constitute one agreement.

§ 14.4.4 Time.
Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work. The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined. Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Construction Manager confirms that the Contract Time is a reasonable period for performing the Work.

§ 14.4.5 Headings.
The headings contained in the Contract are inserted only for convenience and reference are not meant to define, limit or describe the scope or intent of the Contract Documents or in any way to affect the terms and provisions set forth herein.

§ 14.4.6 No Third Party Beneficiaries.
Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Owner or Construction Manager.

§ 14.4.7 Flow Down.
Construction Manager shall cause this Contract to be incorporated by reference in all agreements entered into between it and its Subcontractors, such that the terms and conditions of the Contract flow down to and bind all Subcontractors, whether specifically required or not by any provision of the Contract Documents. Notwithstanding the foregoing, any terms of this Contract with respect to the Construction Manager's Fee are specifically excluded from the flow down provisions of this Contract. Notwithstanding the foregoing, no provisions of the Subcontracts shall flow up or apply to Owner.

§ 14.4.8 Materials Procurement.
Construction Manager, in accordance with its fiduciary duties to Owner, shall use its (and shall cause its Subcontractors to use their) best efforts to limit Owner's exposure to increases in the cost of materials for the Work by locking in prices for same with applicable suppliers and venders in a timely and prudent manner and to avoid increased and unnecessary costs to the Owner. However, to the extent that a price has been locked in with a supplier for materials and the market for such materials later decreases prior to the time such materials are delivered and installed at the Project site, Construction Manager shall use its (and shall cause its Subcontractors to use their) best efforts to reduce the price of such materials.

§ 14.4.9 Excess Materials.
Unused excess materials, if any, shall become the Owner's property at the completion of the Work or, at the Owner's option, shall be sold by the Construction Manager. Any amounts realized from such sales shall be credited to the Owner as a deduction from the Cost of the Work. Any materials provided to Owner in accordance with this Section shall be specifically listed by Construction Manager in a written inventory provided to the Owner detailing the material, material source, and location of the Project for which the material was originally obtained.

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§ 14.4.10 Scrutinized Companies

§ 14.4.10.1 Construction Manager certifies that it and its subconsultants are not on the Scrutinized Companies that Boycott Israel List. Pursuant to Section 287.135, F.S., the Owner may immediately terminate this Agreement at its sole option if the Construction Manager or its subconsultants are found to have submitted a false certification; or if Construction Manager, or its subconsultants are placed on the Scrutinized Companies that Boycott Israel List or is engaged in the boycott of Israel during the term of the Agreement.

§ 14.4.10.2 If this Agreement is for more than one million dollars, Construction Manager certifies that it and its subconsultants are also not on the Scrutinized Companies with Activities in Sudan, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria as identified in Section 287.135, F.S. Pursuant to Section 287.135, F.S., the Owner may immediately terminate this Agreement at its sole option if Construction Manager, its affiliates, or its subconsultants are found to have submitted a false certification; or if Construction Manager, its affiliates, or its subconsultants are placed on the Scrutinized Companies with Activities in Sudan List, or Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria during the term of the Agreement.

§ 14.4.10.3 Construction Manager agrees to observe the above requirements for applicable subcontracts entered into for the performance of work under this Agreement.

§ 14.4.10.4 As provided in Subsection 287.135(8), F.S., if federal law ceases to authorize the above-stated contracting prohibitions then they shall become inoperative.

§ 14.4.11 Sovereign Immunity.

Nothing in this Agreement shall be construed as a waiver of the Owner's sovereign immunity. This Agreement shall not constitute or be construed as a waiver of any of the privileges, rights, defenses, remedies, or immunities available to the Owner. The failure to enforce, or any delay in the enforcement of, any privileges, rights, defenses, remedies, or immunities available to the Owner under the Agreement or under applicable law shall not constitute a waiver of such privileges, rights, defenses, remedies, or immunities or be considered as a basis for estoppel. Owner does not waive any privileges, rights, defenses, or immunities available to Owner by entering into the Agreement or by its conduct prior to or subsequent to entering into the Agreement.

§ 14.4.12 Public Records.

Owner is a public agency subject to Chapter 119, Florida Statutes. To the extent that Construction Manager is acting on behalf of Owner pursuant to Section 119.0701, Florida Statutes, Construction Manager shall:

(i) Keep and maintain public records required by the Owner to perform the Services.

(ii) Upon request from the Owner's custodian of public records, provide the Owner with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Florida Statute or as otherwise provided by law.

(iii) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the Construction Manager does not transfer the records to the Owner.

(iv) Upon completion of the Agreement, transfer, at no cost, to the Owner all public records in possession of the Construction Manager or keep and maintain public records required by the Owner to perform the Services. If the Construction Manager transfers all public records to the Owner upon completion of the Agreement, the Construction Manager shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Construction Manager keeps and maintains public records upon completion of the Agreement, the Construction Manager shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Owner, upon request from the Owner's custodian of public records, in a format that is compatible with the information technology systems of the Owner.

(v) If the Construction Manager does not comply with this section, the Owner shall enforce the Contract provisions in accordance with the Contract Documents and may unilaterally cancel this Contract in accordance with state law.

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IF THE CONSTRUCTION MANAGER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSTRUCTION MANAGER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY OF DELRAY BEACH, CITY CLERK, 100 N.W. 1ST AVE., DELRAY BEACH FLORIDA. THE CITY CLERK'S OFFICE MAY BE CONTACTED BY PHONE AT 561-243-7050 OR VIA EMAIL AT CITYCLERK@MYDELRAYBEACH.COM.

§ 14.4.13 Inspector General.
Construction Manager is aware that the Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this Contract and may demand and obtain records and testimony from Construction Manager and its subcontractors and lower tier subcontractors. Construction Manager understands and agrees that in addition to all other remedies and consequences provided by law, the failure of Construction Manager or its subcontractors and lower tier subcontractors to fully cooperate with the Inspector General when requested may be deemed by the Owner to be a material breach of this Agreement justifying its termination.

§ 14.4.14 E-Verify.
By entering into this Agreement Construction Manager acknowledges its obligation to comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility." Construction Manager affirms and represents it is registered with the E-Verify system, utilizing same, and will continue to utilize same as required by law. Compliance with this section includes, but is not limited to, utilization of the E-Verify System to verify the work authorization status of all newly hired employees and requiring all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply with this section will result in the termination of this Agreement, or if your subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than 20 calendar days after the date of termination. If terminated for a violation of the statute by Construction Manager, the Construction Manager may be prohibited from conducting future business with the Owner or awarded a solicitation or contract for a period of 1 year after the date of termination. All costs incurred to initiate and sustain the aforementioned programs shall be the responsibility of the Construction Manager.

ARTICLE 15 SCOPE OF THE AGREEMENT

§ 15.1 This Agreement represents the entire and integrated agreement between the Owner and the Construction Manager and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner and Construction Manager.

§ 15.2 The following documents comprise the Agreement:

- **.1** AIA Document A133™–2019, Modified Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price
- **.2** AIA Document A133™-2019, Exhibit A, Guaranteed Maximum Price Amendment, if executed
- **.3** AIA Document A133™–2019, Exhibit B, Insurance and Bonds
- **.4** AIA Document A201™–2017, Modified General Conditions of the Contract for Construction
- **.5** AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below, if applicable

- **.6** Other Exhibits:
  (Check all boxes that apply.)

  [« »] AIA Document E234™–2019, Sustainable Projects Exhibit, Construction Manager as Constructor Edition, dated as indicated below:
  (Insert the date of the E234-2019 incorporated into this Agreement.)

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« »

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.7 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Construction Manager's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Exhibit ___ – Initial Construction Schedule
Exhibit ___ – Initial Schedule of Values (To be agreed upon in the GMP Amendment)
Exhibit ___ – Construction Manager's Key Personnel
Exhibit ___ – Warranty Forms
Exhibit ___ – Hurricane Preparedness Plan
Exhibit ___ – RFQ No. ___
Exhibit ____ Phase 1 Scope of Services

DRAFT

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IN WITNESS WHEREOF, the Owner and the Construction Manager executed this Agreement as of the day and year first above written.

ATTEST:

OWNER/CITY OF DELRAY BEACH

_____
Katerri Johnson, City Clerk

By: _____
Thomas F. Carney, Jr., Mayor

Approved as to form and legal sufficiency:

_____
Lynn Gelin, City Attorney

Construction Manager

By: _____

Print Name: _____

Title: _____

(SEAL)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _ day of _____, 20____ by _____ _____ (name of person), as _____ (type of authority) for _____ _____ (name of party on behalf of whom instrument was executed).

Personally known ___ OR Produced Identification
Type of Identification Produced _____

_____
Notary Public – State of _____

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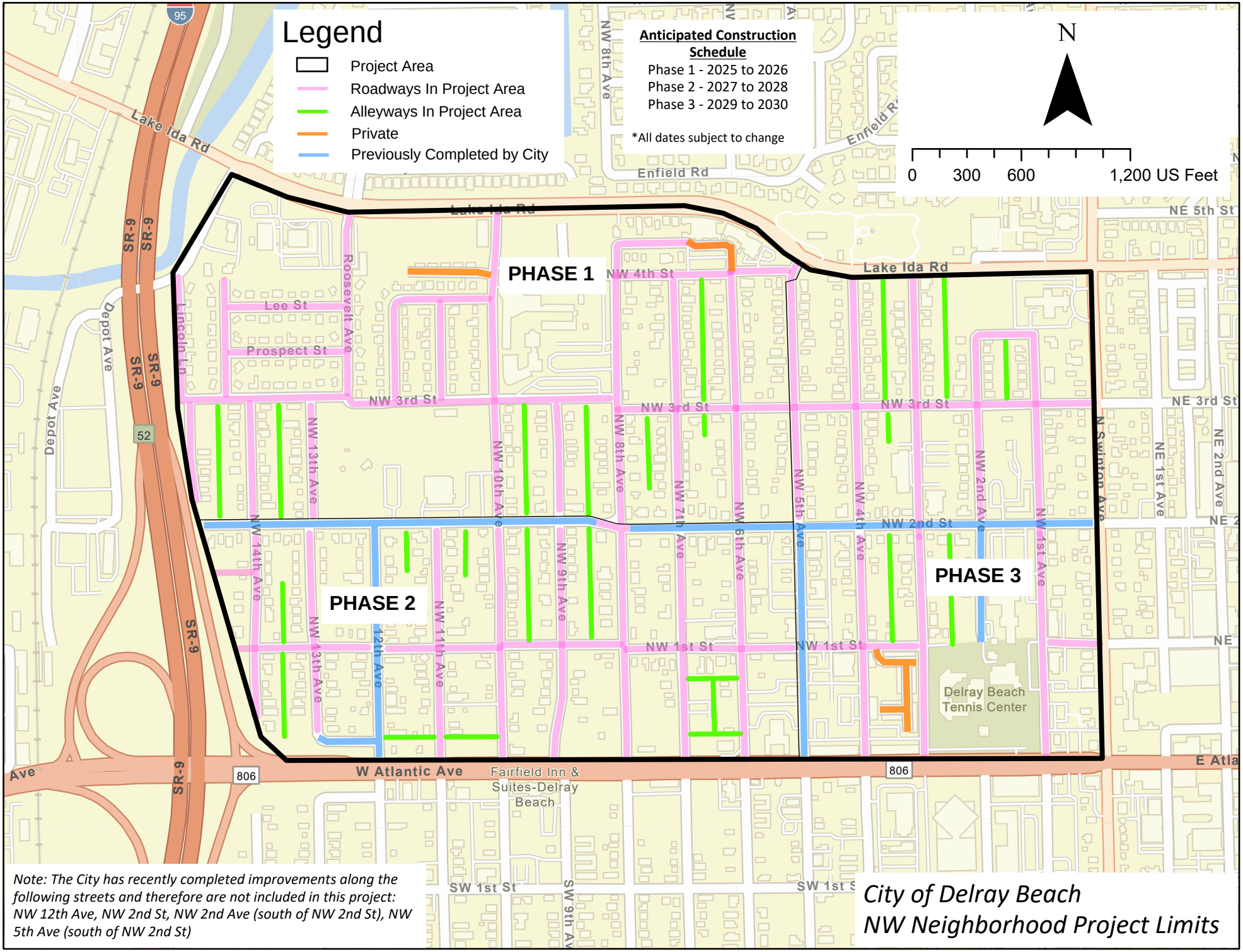
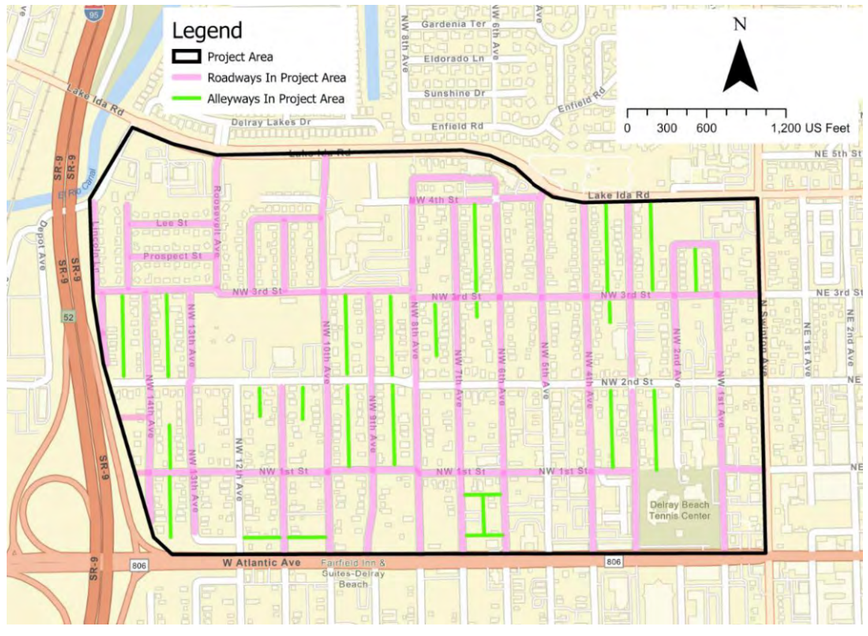


Note: The City has recently completed improvements along the following streets and therefore are not included in this project: NW 12th Ave, NW 2nd St, NW 2nd Ave (south of NW 2nd St), NW 5th Ave (south of NW 2nd St)

City of Delray Beach
NW Neighborhood Project Limits

PRELIMINARY DESIGN REPORT

NW Neighborhood Improvements



October 2022

FINAL

Prepared by:

BAXTER & WOODMAN Consulting Engineers

FINAL
Preliminary Design Report
NW Neighborhood Improvements

for

City of Delray Beach

October 2022

PREPARED BY
BAXTER & WOODMAN, INC.
477 S. ROSEMARY AVE., SUITE 330
WEST PALM BEACH, FL 33401
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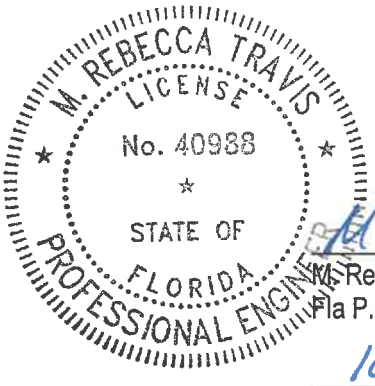

M. Rebecca Travis, P.E.
Fla P.E. #40988

10/3/2022
Date

B&W Project #210336.00

City of Delray Beach

NW Neighborhood Improvements Preliminary Design Report

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Section 1

Introduction

1 Introduction

1.1 Project Background

The City of Delray Beach desires to improve the roadways (approx. 8.4 miles), alleyways (approx. 2.0 miles), traffic calming, sidewalks, swales, driveways, stormwater system, water mains, reclaimed water mains, sanitary sewer system, provide decorative street lighting, landscaping, and associated irrigation within the project area. The project includes the following streets in the N.W. Neighborhood (refer to ***Figure 1-1*** provided by the City for project location map):

Roadway Improvements:

- Lee Street from Washington Avenue to Roosevelt Avenue
- Prospect Street from Washington Avenue to Roosevelt Avenue
- N.W. 3rd Terrace from N.W. 12th Avenue to N.W. 10th Avenue
- N.W. 4th Street from N.W. 8th Avenue to N.W. 5th Avenue
- N.W. 3rd Court from N.W. 2nd Avenue to N.W. 1st Avenue
- N.W. 3rd Street from Lincoln Lane to Swinton Avenue
- Orange Street from dead-end to N.W. 14th Avenue
- N.W. 1st Street from N.W. 14th Avenue to N.W. 3rd Avenue
- N.W. 1st Street from N.W. 1st Avenue to Swinton Avenue
- Lincoln Lane from Depot Avenue to N.W. 3rd Street
- N.W. 15th Avenue from N.W. 3rd Terrace to dead-end
- Washington Avenue from dead-end to N.W. 3rd Street
- N.W. 14th Avenue from N.W. 3rd Street to dead-end
- N.W. 13th Avenue from N.W. 3rd Street to dead-end
- N.W. 12th Avenue from N.W. 3rd Terrace to N.W. 3rd Street
- N.W. 11th Avenue from N.W. 3rd Terrace to N.W. 3rd Street
- N.W. 11th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to Atlantic Avenue
- N.W. 10th Avenue from Lake Ida Road to Atlantic Avenue
- N.W. 9th Avenue from N.W. 3rd Street to Atlantic Avenue
- N.W. 8th Avenue from N.W. 6th Avenue to Atlantic Avenue
- N.W. 7th Avenue from N.W. 4th Street to Atlantic Avenue
- N.W. 6th Avenue from N.W. 8th Avenue to Atlantic Avenue
- N.W. 5th Avenue from Lake Ida Road to N.W. 2nd Street / Martin Luther King Jr. Drive
- N.W. 4th Avenue from Lake Ida Road to Atlantic Avenue
- N.W. 3rd Avenue from Lake Ida Road to Atlantic Avenue
- N.W. 2nd Avenue from N.W. 3rd Court to N.W. 2nd Street / Martin Luther King Jr. Drive
- N.W. 1st Avenue from N.W. 3rd Court to Atlantic Avenue

Alley-Way Paving (Permeable Paving) – Survey Completed Previously:

- Alleyway No. 1 between N.W. 15th Avenue and N.W. 14th Avenue from N.W. 3rd St. to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 2 between N.W. 14th Avenue and N.W. 13th Avenue from N.W. 3rd Street to N.W. 2nd Street / Martin Luther King Jr. Drive

- Alleyway No. 3 between N.W. 14th Avenue and N.W. 13th Avenue from dead-end to N.W. 1st Street
- Alleyway No. 4 between N.W. 14th Avenue and N.W. 13th Avenue from N.W. 1st Street to dead-end
- Alleyway No. 5 between N.W. 12th Avenue and N.W. 11th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to dead-end
- Alleyway No. 6 between N.W. 1st Street and Atlantic Avenue from N.W. 12th Avenue and N.W. 11th Avenue
- Alleyway No. 7 between N.W. 11th Avenue and N.W. 10th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to dead-end
- Alleyway No. 8 between N.W. 10th Avenue and N.W. 9th Avenue from N.W. 3rd Street to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 9 between N.W. 10th Avenue and N.W. 9th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to N.W. 1st Street
- Alleyway No. 10 between N.W. 9th Avenue and N.W. 8th Avenue from N.W. 3rd Street to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 11 between N.W. 9th Avenue and N.W. 8th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to N.W. 1st Street
- Alleyway No. 12 between N.W. 8th Avenue and N.W. 7th Avenue from N.W. 3rd Street to dead-end
- Alleyway No. 13 between N.W. 7th Avenue and N.W. 6th Avenue from N.W. 4th Street to N.W. 3rd Street
- Alleyway No. 14 between N.W. 7th Avenue and N.W. 6th Avenue from N.W. 3rd Street to dead-end
- Alleyway No. 15 between N.W. 4th Avenue and N.W. 3rd Avenue from Lake Ida Road to N.W. 3rd Street
- Alleyway No. 16 between N.W. 4th Avenue and N.W. 3rd Avenue from N.W. 3rd Street to dead-end
- Alleyway No. 17 between N.W. 4th Avenue and N.W. 3rd Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to N.W. 1st Street
- Alleyway No. 18 between N.W. 3rd Avenue and N.W. 2nd Avenue from Lake Ida Road to N.W. 3rd Street
- Alleyway No. 19 between N.W. 3rd Avenue and N.W. 2nd Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to dead-end
- Alleyway No. 20 between N.W. 2nd Avenue and N.W. 1st Avenue from N.W. 3rd Court to N.W. 3rd Street

<u>Alley-Way Paving (Permeable Paving):</u>

- Alleyway No. 21 between N.W. 1st Street and Atlantic Avenue from N.W. 7th Avenue to N.W. 6th Avenue
- Alleyway No. 22 between N.W. 7th Avenue and N.W. 6th Avenue from Alleyway No. 21 to Alleyway No. 23
- Alleyway No. 23 between N.W. 1st Street and Atlantic Avenue from N.W. 7th Avenue to N.W. 6th Avenue
- Alleyway No. 25 between N.W. 1st Street to Atlantic Avenue from N.W. 11th Avenue to N.W. 10th Avenue

The City previously contracted with Craig A. Smith & Associates (CAS) under the City's Request for Qualifications Solicitation #2018-054. Survey, geotechnical report, subsurface utility locates, and preliminary design report was previously completed under this solicitation.

Subsequently, the City selected Baxter & Woodman to provide the following services on this project through the Request for Qualification Solicitation #2021-022.

1.2 Project Components

The following data collection project components were reviewed or completed as part of this preliminary design report:

- Review of Existing Data – Under Request for Solicitation #2018-054, a topographic survey, geotechnical report, title searches, subsurface utility investigations, closed circuit television (CCTV) inspections of gravity sewer and drainage pipes, traffic study, and a preliminary design report were completed. The City provided this information to Baxter & Woodman for review and assessment.
- Topographic Survey – CAS previously completed a topographic survey under Request for Solicitation #2018-054. As part of this project, Baxter & Woodman utilized Dennis J. Leavy & Associates (DJLA) to provide surveying services for Alleyways No. 21, 22, 23, and 25 which have been added to the project at the City's request. Additionally, DJLA addressed missing survey data as noted by the field reconnaissance completed by Baxter & Woodman during review of the previously completed survey. DJLA obtained property addresses, existing tree diameter labels, top of nut (TON) elevations for all existing valves, and sanitary sewer manhole inverts which were globally missing from the previously completed survey data. The final survey inclusive of the data collected by both CAS and DJLA is included in ***Appendix A***.
- Title Searches – Under Request for Solicitation #2018-054, title searches to confirm City rights-of-way / ownership within the project area were completed. This information was provided to Baxter & Woodman and has been reviewed by DJLA for completeness. As part of this project, Baxter & Woodman utilized Statewide Land Title, Inc. to complete title searches for the five (5) alleyways (Alleyways No. 21, 22, 23, 24, and 25) that were not previously included in the project and were added at the City's request. The completed title searches for the five (5) alleyways (Alleyways No. 21, 22, 23, 24, and 25) are included in ***Appendix B***. It should be noted that based on the findings of this titlework, the City abandoned their rights-of-way in Alleyway No. 24 in 2003. The City currently only maintains a general utility easement in this alleyway; however, there is no existing roadway, sidewalk, or existing City-owned utilities in this alleyway. Based on these findings Alleyway No. 24 was deleted from this project. No additional survey work was completed for Alleyway No. 24.
- Geotechnical Report – Under Request for Solicitation #2018-054, CAS contracted with Radise International, LC to perform geotechnical engineering services for this project. The geotechnical report completed by Radise International, LC is included in ***Appendix C***.
- Sanitary Sewer & Drainage Pipe CCTV Inspection - Under Request for Solicitation #2018-054, CAS contracted with Shenandoah Construction to perform CCTV inspection on the existing gravity sanitary sewer mains and drainage pipe in the project area.

This Preliminary Design Report provides the above findings and presents infrastructure improvement recommendations for the project area, along with a preliminary Engineer's estimate of probable construction cost and phasing plan. The improvements examined in this project included:

- Roadway and Pavement Design
- Alleyway Design
- Traffic Calming Design
- Pedestrian Systems
- Signing and Pavement Markings
- Stormwater Improvements
- Potable Water Main Improvements
- Reclaimed Water Main Improvements
- Sanitary Sewer Improvements
- Street and Alleyway Lighting
- Landscaping & Irrigation

To facilitate review, the Preliminary Design Report has been divided into seven (7) main sections. The content of each section is briefly summarized below:

- Section 1 – Introduction: discusses the project background and scope of the project.
- Section 2 – Transportation Planning and Roadway Analysis: discusses the transportation planning and proposed traffic calming; roadway, side street parking and alleyway improvements; pedestrian system improvements; signing and pavement marking improvements. This section also discussed the unifying street name sign package proposed along with the neighborhood enclave identification signs to be provided.
- Section 3 – Stormwater Analysis: discusses the review of the existing stormwater system and the approaches used to determine where replacement or additional drainage infrastructure improvements are needed.
- Section 4 – Utility Analysis: discusses the review of the existing sanitary sewer system condition reports and the approaches used to determine where sanitary infrastructure improvements (replacement or rehabilitation) are needed; potable water main and fire hydrant coverage upgrades; and reclaimed water main improvements for the project area as outlined in the City's Reclaimed Water Master Plan.
- Section 5 – Lighting Analysis: discusses the existing street lighting conditions along the roadways in the project area and recommends lighting improvements based on the FP&L (LED) Street Lighting Program. Lighting of the alleyways is also discussed.
- Section 6 – Landscaping & Irrigation Analysis: discusses the proposed landscaping plant palette and strategic placement of landscaping features and irrigation to provide a unified identity to the neighborhood.
- Section 7 – Conclusions and Recommendations: summarizes and describes the recommended infrastructure and pavement improvements, the Engineer's estimate of probable construction costs and phasing plan for the project.

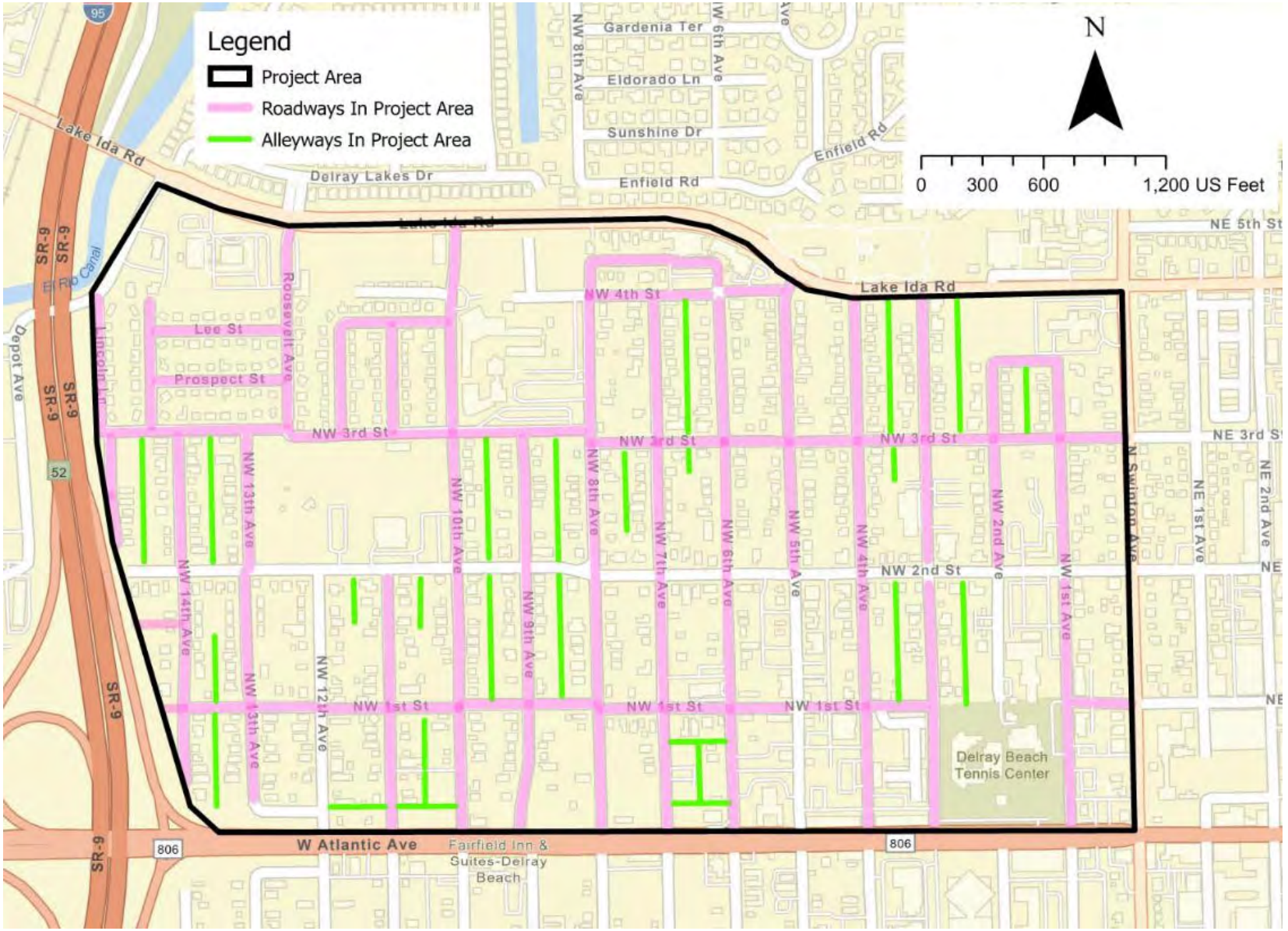


Figure 1-1: N.W. Neighborhood Project Location

Section 2

Transportation Planning & Roadway Analysis

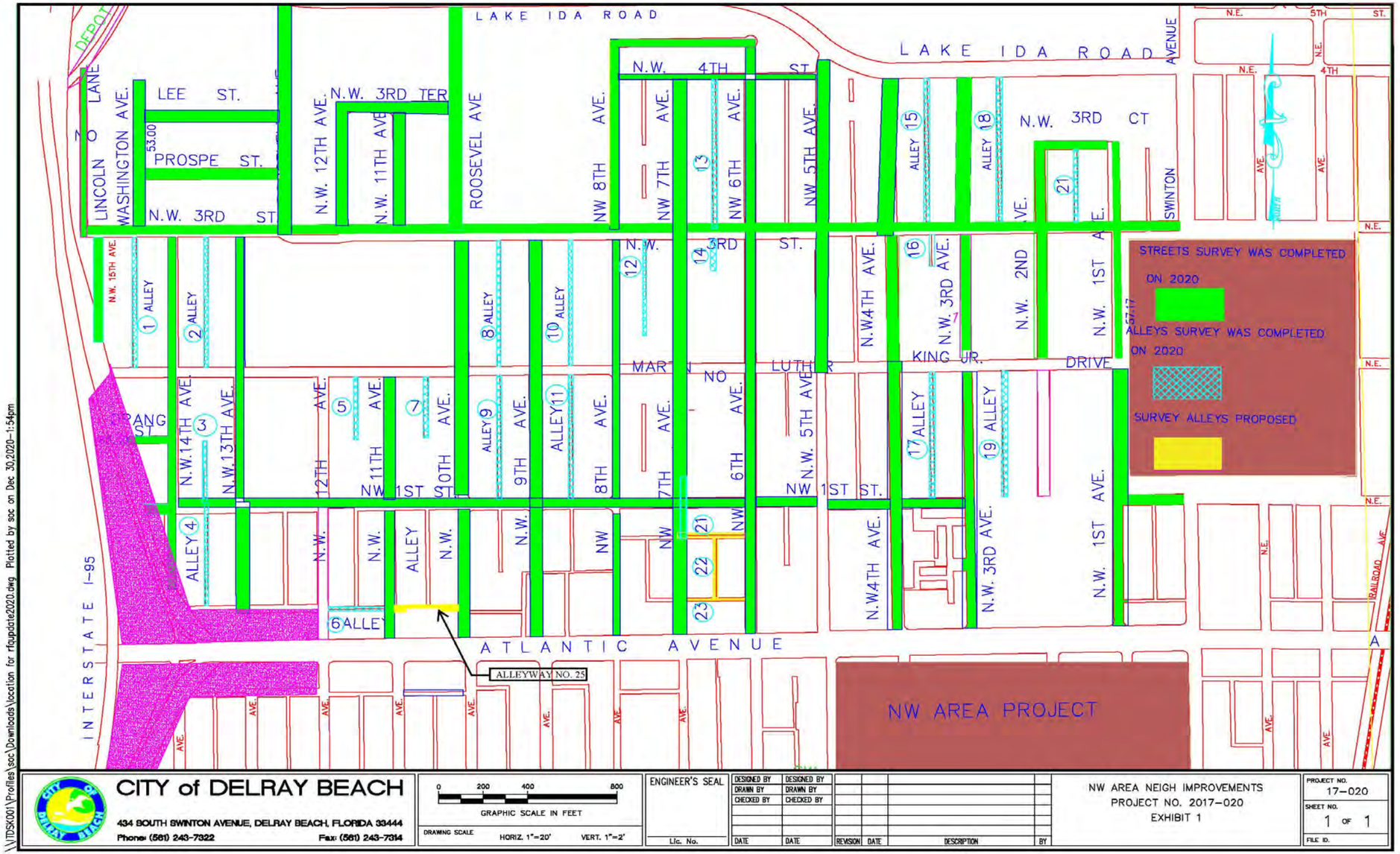
2 Transportation Planning & Roadway Analysis

2.1 Introduction

The City of Delray Beach desires to improve the roadways (approx. 8.4 miles), pave selected unimproved alleyways (approx. 2.0 miles with permeable paving), provide traffic calming, signing and pavement markings, sidewalks, new driveway aprons, and pedestrian systems in the N.W. Neighborhood. The project includes the following roadways and alleyways in the N.W. Neighborhood and as shown on *Figure 2-1*:

Roadway Improvements:

- Lee Street from Washington Avenue to Roosevelt Avenue
- Prospect Street from Washington Avenue to Roosevelt Avenue
- N.W. 3rd Terrace from N.W. 12th Avenue to N.W. 10th Avenue
- N.W. 4th Street from N.W. 8th Avenue to N.W. 5th Avenue
- N.W. 3rd Court from N.W. 2nd Avenue to N.W. 1st Avenue
- N.W. 3rd Street from Lincoln Lane to Swinton Avenue
- Orange Street from dead-end to N.W. 14th Avenue
- N.W. 1st Street from N.W. 14th Avenue to N.W. 3rd Avenue
- N.W. 1st Street from N.W. 1st Avenue to Swinton Avenue
- Lincoln Lane from Depot Avenue to N.W. 3rd Street
- N.W. 15th Avenue from N.W. 3rd Terrace to dead-end
- Washington Avenue from dead-end to N.W. 3rd Street
- N.W. 14th Avenue from N.W. 3rd Street to dead-end
- N.W. 13th Avenue from N.W. 3rd Street to dead-end
- N.W. 12th Avenue from N.W. 3rd Terrace to N.W. 3rd Street
- N.W. 11th Avenue from N.W. 3rd Terrace to N.W. 3rd Street
- N.W. 11th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to Atlantic Avenue
- N.W. 10th Avenue from Lake Ida Road to Atlantic Avenue
- N.W. 9th Avenue from N.W. 3rd Street to Atlantic Avenue
- N.W. 8th Avenue from N.W. 6th Avenue to Atlantic Avenue
- N.W. 7th Avenue from N.W. 4th Street to Atlantic Avenue
- N.W. 6th Avenue from N.W. 8th Avenue to Atlantic Avenue
- N.W. 5th Avenue from Lake Ida Road to N.W. 2nd Street / Martin Luther King Jr. Drive N.W. 4th Avenue from Lake Ida Road to Atlantic Avenue
- N.W. 3rd Avenue from Lake Ida Road to Atlantic Avenue
- N.W. 2nd Avenue from N.W. 3rd Court to N.W. 2nd Street / Martin Luther King Jr. Drive
- N.W. 1st Avenue from N.W. 3rd Court to Atlantic Avenue



CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7322 Fax: (561) 243-7314

0 200 400 800
GRAPHIC SCALE IN FEET
DRAWING SCALE HORIZ. 1"=20' VERT. 1"=2'

ENGINEER'S SEAL
Lic. No.

DESIGNED BY	DESIGNED BY
DRAWN BY	DRAWN BY
CHECKED BY	CHECKED BY
DATE	DATE

REVISION	DATE	DESCRIPTION	BY

NW AREA NEIGH IMPROVEMENTS
PROJECT NO. 2017-020
EXHIBIT 1

PROJECT NO. 17-020
SHEET NO. 1 OF 1
FILE ID.

Figure 2-1: Streets & Alleyways for Improvement

Alleyway Paving (Permeable Paving):

- Alleyway No. 1 between N.W. 15th Avenue and N.W. 14th Avenue from N.W. 3rd St. to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 2 between N.W. 14th Avenue and N.W. 13th Avenue from N.W. 3rd Street to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 3 between N.W. 14th Avenue and N.W. 13th Avenue from dead-end to N.W. 1st Street
- Alleyway No. 4 between N.W. 14th Avenue and N.W. 13th Avenue from N.W. 1st Street to dead-end
- Alleyway No. 5 between N.W. 12th Avenue and N.W. 11th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to dead-end
- Alleyway No. 6 between N.W. 1st Street and Atlantic Avenue from N.W. 12th Avenue and N.W. 11th Avenue
- Alleyway No. 7 between N.W. 11th Avenue and N.W. 10th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to dead-end
- Alleyway No. 8 between N.W. 10th Avenue and N.W. 9th Avenue from N.W. 3rd Street to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 9 between N.W. 10th Avenue and N.W. 9th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to N.W. 1st Street
- Alleyway No. 10 between N.W. 9th Avenue and N.W. 8th Avenue from N.W. 3rd Street to N.W. 2nd Street / Martin Luther King Jr. Drive
- Alleyway No. 11 between N.W. 9th Avenue and N.W. 8th Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to N.W. 1st Street
- Alleyway No. 12 between N.W. 8th Avenue and N.W. 7th Avenue from N.W. 3rd Street to dead-end
- Alleyway No. 13 between N.W. 7th Avenue and N.W. 6th Avenue from N.W. 4th Street to N.W. 3rd Street
- Alleyway No. 14 between N.W. 7th Avenue and N.W. 6th Avenue from N.W. 3rd Street to dead-end
- Alleyway No. 15 between N.W. 4th Avenue and N.W. 3rd Avenue from Lake Ida Road to N.W. 3rd Street
- Alleyway No. 16 between N.W. 4th Avenue and N.W. 3rd Avenue from N.W. 3rd Street to dead-end
- Alleyway No. 17 between N.W. 4th Avenue and N.W. 3rd Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to N.W. 1st Street
- Alleyway No. 18 between N.W. 3rd Avenue and N.W. 2nd Avenue from Lake Ida Road to N.W. 3rd Street
- Alleyway No. 19 between N.W. 3rd Avenue and N.W. 2nd Avenue from N.W. 2nd Street / Martin Luther King Jr. Drive to dead-end
- Alleyway No. 20 between N.W. 2nd Avenue and N.W. 1st Avenue from N.W. 3rd Court to N.W. 3rd Street
- Alleyway No. 21 between N.W. 1st Street and Atlantic Avenue from N.W. 7th Avenue to N.W. 6th Avenue
- Alleyway No. 22 between N.W. 7th Avenue and N.W. 6th Avenue from Alleyway No. 21 to Alleyway No. 23

- Alleyway No. 23 between N.W. 1st Street and Atlantic Avenue from N.W. 7th Avenue to N.W. 6th Avenue
- Alleyway No. 25 between N.W. 1st Street to Atlantic Avenue from N.W. 11th Avenue to N.W. 10th Avenue

Under the City's Request for Qualifications Solicitation #2018-054, a preliminary design report was completed previously by another consultant. As outlined in the scope of work for this project, this Preliminary Design Report will review specified sections of the previously completed report and provide recommendations. Some sections of the previously completed report will be accepted as presented and referenced as such in this report.

2.2 Right-of-Way Agreements

A right-of-way disposition map was created (by others) for the project area based on the title searches performed under the previous consultant's contract. As stated in Section 1, this information was provided to Baxter & Woodman (B&W) and has been reviewed by Dennis J. Leavy & Associates (DJLA) for completeness. As part of this project, B&W utilized Statewide Land Title, Inc. to complete title searches for the five (5) alleyways (Alleyways No. 21, 22, 23, 24, and 25) that were not previously surveyed as part of this project. The completed title searches for the five alleyways (Alleyways No. 21, 22, 23, 24, and 25) are included in ***Appendix B***. Note that subsequently Alleyway 24 was deleted from this project since land along this alley was acquired by a private owner and a building constructed on the site.

The City maintains roads, sidewalks, and utilities in the N.W. Neighborhood. In the distant past, some of these existing roads, sidewalks and/or utilities were inadvertently constructed on private property, rather than in public rights-of-way (ROW). The City owns these improvements, and over the years has maintained these roads, sidewalks and utility systems. As part of this project, B&W shall utilize the completed title search information and right-of-way disposition map to assist the City with obtaining right-of-way agreements in these areas. The project improvements will be designed so that the proposed roadway, sidewalk and utility improvements will be within the City's current rights-of-way or within the rights-of-way obtained under these new right-of-way agreements with the private property owners.

A right-of-way request letter, which shows an example of the existing improvements having been constructed outside of public ROW, and explains the City's reasons for the ROW request, is included in ***Appendix D***. The right-of-way agreement template is also included in ***Appendix D***. The right-of-way agreement will include a legal sketch and description as an attachment which describes the property to be deeded by the property owner, over to the City under the right-of-way agreement. This agreement, the sketch and description and the letter describing the request for right-of-way will be mailed to the impacted property owners requesting that the property owner contact the City. Baxter & Woodman, along with a representative of the City shall arrange to meet with the affected land owner to inform them of the proposed improvements, solicit their concerns, interest, and willingness to meet with the City for the purposes of entering into the Right-of-Way Agreement with the City. No rights-of-way taking will be performed as part of this project, however the City will require these rights-of-way in order to proceed with the construction of these new improvements.

2.3 Transportation Planning

The City of Delray Beach/CRA West Atlantic Development Plan Update, October 2019, identified traffic corridors for the neighborhood. Refer to ***Figure 2-2***. North/south routes connecting Lake Ida Road with Atlantic Avenue include the existing corridor of N.W. 5th Avenue, plus the N.W. 4th Avenue, N.W. 8th Avenue and N.W. 10th Avenue as additional corridors. Roosevelt Avenue between Lake Ida Road and Pompey Park is recommended for improvements to increase the access and visibility of Pompey Park. Martin Luther King Jr. Drive (aka N.W. 2nd Street) is the primary east/west corridor. The City has completed the improvements for Martin Luther King Jr. Drive and for N.W. 5th Avenue. Another project in the area previously completed by the City includes N.W. 12th Avenue Streetscape project between Atlantic Avenue and Martin Luther King Jr. Drive. Based on the need for traffic calming within the neighborhood, additional traffic calming will be added to this project at locations along N.W. 12th Avenue and at selected intersections along N.W. 2nd Street.

The City's Development Plan Update also identified primary Neighborhood gateway or entry points from the north boundary road of Lake Ida, and from the south boundary road of Atlantic Avenue. The gateway entry points from Lake Ida Road are located at Roosevelt Avenue; at N.W. 10th Avenue; and at N.W. 5th Avenue. Additional neighborhood gateway points off Atlantic Avenue are located at N.W. 10th Avenue; N.W. 8th Avenue; and N.W. 4th Avenue.

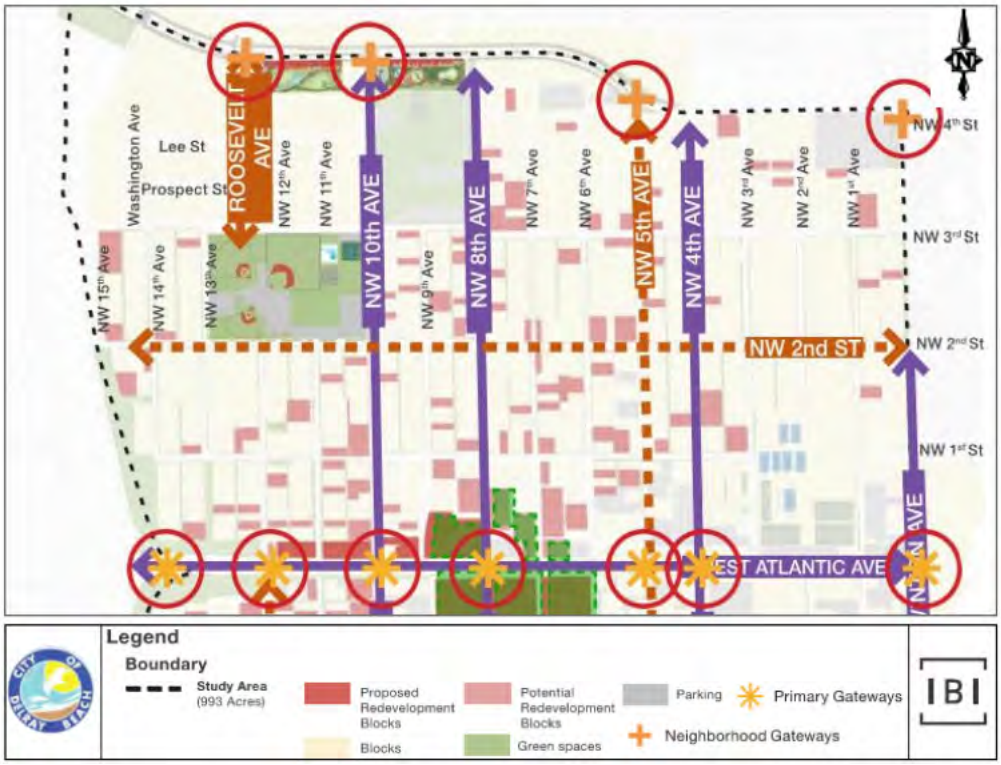


Figure 2-2: Neighborhood Corridors and Entry Gateways

Transportation planning goals for this project apply the concepts of Complete Streets. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make the transportation network safer and more efficient.

Access to public transit is an important element of complete streets planning. The N.W. Neighborhood is served by Palm Tran, Downtown Connect, and FreeBee bus services. The Palm Beach County School District, along with other charter and magnet schools have bus routes in the neighborhood as well. Refer to *Section 2.8* for transit routes and stops serving the neighborhood.

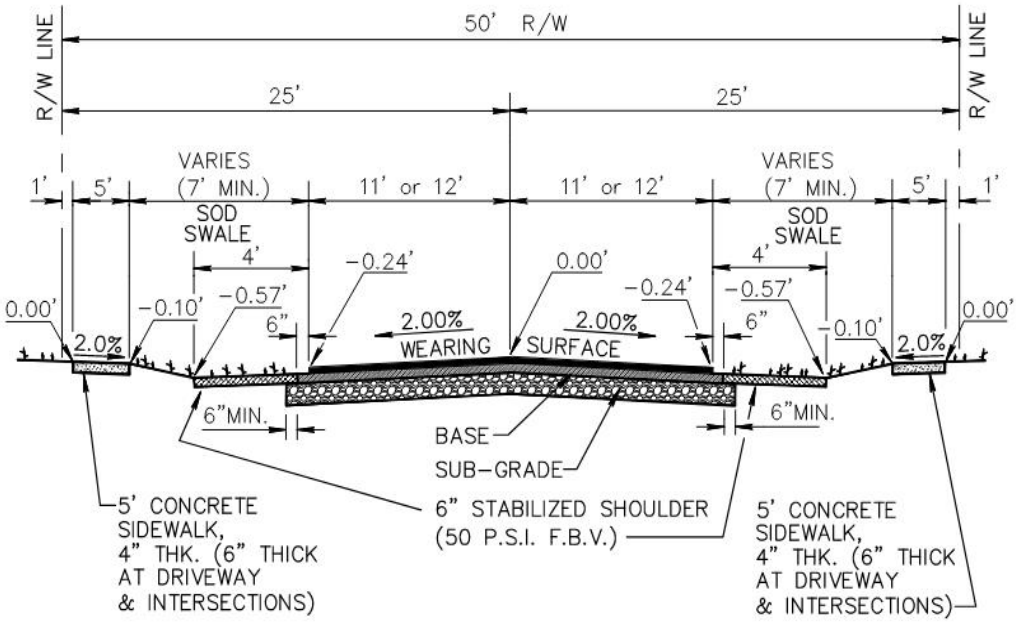
Pedestrian routing and access is key for providing safe routes to schools, parks, businesses and other meeting places in the area. The majority of the sidewalk network in the neighborhood is incomplete. One goal of Complete Streets planning includes the provision of sidewalks, preferably on both sides of the roadway right-of-way. The sidewalks proposed for this project will be compliant with the Americans with Disability Act (ADA) regulations. Additional pedestrian and bicycle access will also be provided by the proposed plan to pave selected unimproved alleyways throughout the project area. Refer to *Section 2.6*.

2.4 Roadway Improvements

The previous preliminary design report completed by another consultant provided recommendations for roadway improvements. Refer to ***Figure 2.5***. After reviewing the findings from the previous preliminary design report, the following additional exceptions / modifications are taken:

N.W. 2nd Avenue from N.W. 1st Street to N.W. 2nd Street – Recommendations for this roadway segment are included in the previous preliminary design report; however, improvements to this roadway segment were not included in the scope of this project.

1. Roosevelt Avenue from N.W. 3rd Street to Lake Ida Road – Rather than seal coating this road segment as previously recommended, this roadway segment will be realigned and improved with traffic calming elements.
2. Full Depth Pavement Reclamation was proposed in the prior report for a number of streets in the project. This pavement replacement method is typically only feasible with larger volume projects and for longer, straight-line roadways with few intersections. Therefore, this option is not proposed.
3. A review of the locations proposed under the prior report for mill and overlay will be reviewed relative to the amount and width of proposed open trench construction along the alignment. If much of the existing pavement is to be disturbed for the installation of utilities and drainage, then roadway reconstruction will be proposed.
4. Asphalt Pavement Section Design – Our recommendation is to modify the proposed pavement design section from the prior report. The previous preliminary design report utilized the City's Standard Detail at the time, which included a pavement section design of 1.5-inches Type S-III (two lifts) asphalt (see ***Figure 2-3***).



PAVEMENT SPECIFICATIONS	
WEARING SURFACE	1 1/2" TYPE S-III (2 LIFTS) SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

NOTE:

1. VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
2. 2ND LIFT SHALL NOT TO BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.
3. STABILIZE SHOULDER TO 50 P.S.I. F.B.V.

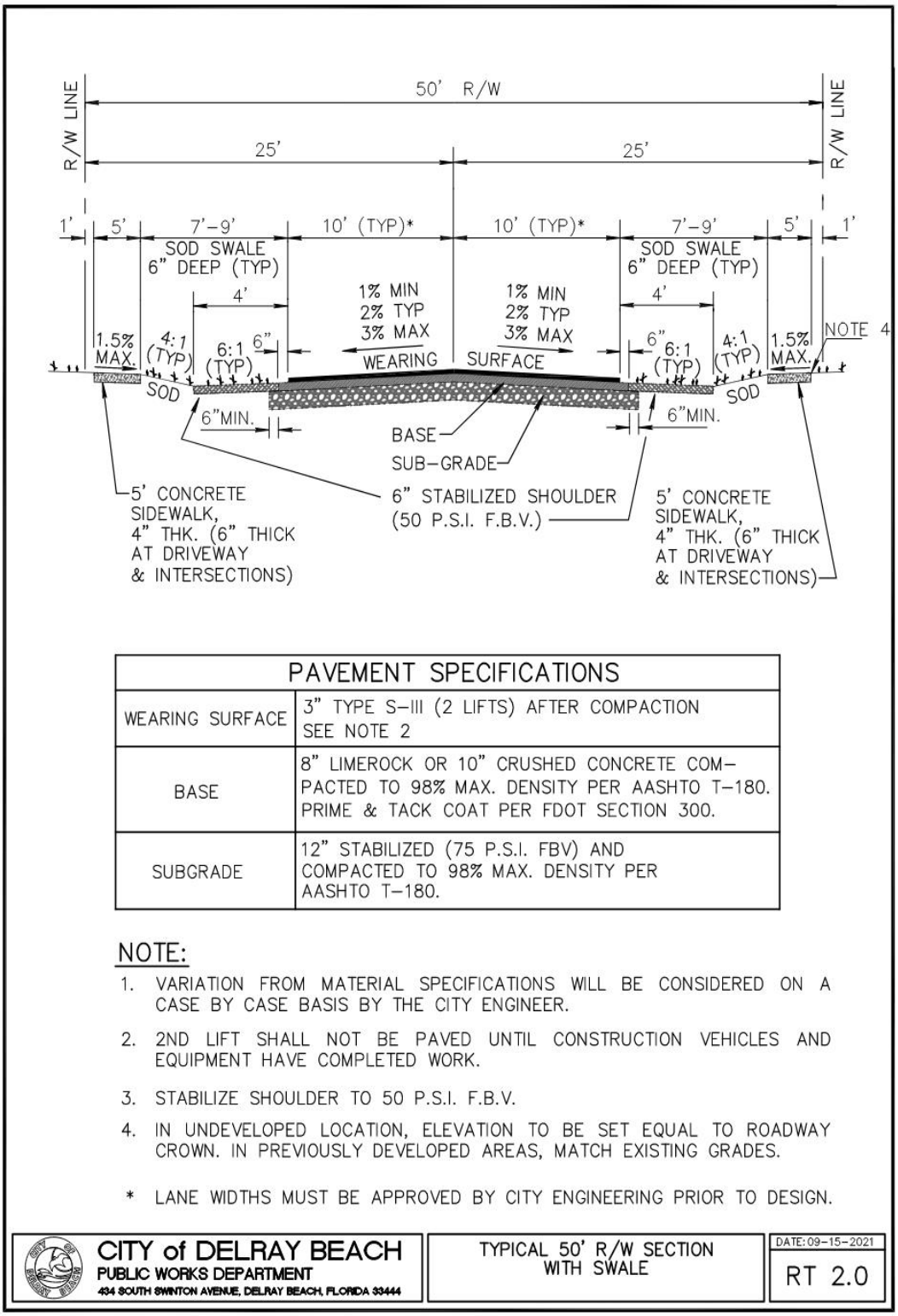
CITY of DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL 50' R/W SECTION WITH SWALE

DATE: 07-01-2014
RT 1.1b

Figure 2-3: City's Previous Pavement Design Section

In December 2021, the City updated their Standard Details and the updated City Standard Detail specifies 3-inches Type S-III (two lifts) asphalt (see ***Figure 2-4***).



PAVEMENT SPECIFICATIONS	
WEARING SURFACE	3" TYPE S-III (2 LIFTS) AFTER COMPACTION SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

NOTE:

1. VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
2. 2ND LIFT SHALL NOT BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.
3. STABILIZE SHOULDER TO 50 P.S.I. F.B.V.
4. IN UNDEVELOPED LOCATION, ELEVATION TO BE SET EQUAL TO ROADWAY CROWN. IN PREVIOUSLY DEVELOPED AREAS, MATCH EXISTING GRADES.

* LANE WIDTHS MUST BE APPROVED BY CITY ENGINEERING PRIOR TO DESIGN.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL 50' R/W SECTION WITH SWALE

DATE: 09-15-2021
RT 2.0

Figure 2-4: City's Current Pavement Design Section

The requirement of two lifts of asphalt (rather than a single lift) is to allow a paving project to proceed with trench excavation and trench repair as the project work progresses, and then finish the paving with a final overall asphalt lift that is not marred by ongoing construction traffic. Based on the fact that these roadways are residential in use, with relatively low multi-axle truck traffic, Baxter & Woodman reviewed the pavement structural number relative to the prior City standard pavement design, and to that of Palm Beach County's standard pavement design for residential/local roadways. We also considered the industry shift from Type S asphalt mix to SuperPave (SP) asphalt mix and specification of compacted baserock by Optional Basegroups per the Florida Department of Transportation's Flexible Pavement Design Manual.

Baxter & Woodman performed a review of the pavement design options, comparing the original City's Standard, the current City's Standard and Palm Beach County's Standard for Residential/Local roads as a benchmark. The FDOT Flexible Pavement Design Manual recommendations for flexible pavement design is referenced (See *Table 2-1*), with the installation of asphalt in two (2) lifts assumed.

Table 2-1: FDOT Flexible Pavement Design Manual

TABLE 5.11

LAYER THICKNESS FOR ASPHALTIC CONCRETE STRUCTURAL COURSES

(Layers Are Listed In Sequence Of Construction)

Course Thickness (in)	LAYER THICKNESS (inches)																		
	SP-19.0 with SP-12.5 Top Layer			SP-19.0 with SP-9.5 Top Layer			SP-12.5			SP-12.5 with SP-9.5 Top Layer			SP-9.5		SP-19.0 1st Layer with SP-12.5 2nd Layer and Top Layer			SP-12.5 1st Layer with SP-9.5 2nd Layer and Top Layer		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	1	2	3	1	2	3
1													1							
1 1/2							1 1/2						1 1/2							
2							2						1	1						
2 1/2							2 1/2			1 1/2	1		1 1/2	1						
3				2	1		1 1/2	1 1/2		2	1		1 1/2	1 1/2						
3 1/2	2	1 1/2		2 1/2	1		2	1 1/2		2	1 1/2									
										2 1/2	1									
4	2 1/2	1 1/2		3	1		2	2		2 1/2	1 1/2									
	2	2		2 1/2	1 1/2		2 1/2	1 1/2												
4 1/2	2 1/2	2		3	1 1/2		2 1/2	2							1 1/2	1 1/2	1 1/2	2	1 1/2	1
	2	2 1/2					1 1/2	1 1/2	1 1/2											
5	3	2		2	2	1	2 1/2	2 1/2		2	1 1/2	1 1/2			2	1 1/2	1 1/2	2	1 1/2	1 1/2
	2 1/2	2 1/2					2	1 1/2	1 1/2	2	2	1						2 1/2	1 1/2	1
5 1/2	2	2	1 1/2	2 1/2	2	1	2 1/2	1 1/2	1 1/2	2	2	1 1/2			2 1/2	1 1/2	1 1/2	2 1/2	1 1/2	1 1/2
							2	2	1 1/2	2 1/2	2	1			2	2	1 1/2			
6	2 1/2	2	1 1/2	2 1/2	2 1/2	1	2	2	2	2 1/2	2 1/2	1			2 1/2	2	1 1/2			
	2	2	2	3	2	1	2 1/2	2	1 1/2	2 1/2	2	1 1/2			2	2	2			

RECOMMENDED

Notes: SP-9.5 not allowed on Traffic Level D or E applications.
SP-9.5 limited to the top two structural layers, two layers maximum.
SP-19.0 not allowed in the final (top) structural layer below FC-5 mixtures.
SP-19.0 allowed in the layer directly below FC-9.5 and FC-12.5 mixtures.

A comparison of the calculated Structural Number was completed between the City's two Standards, the Palm Beach County Standard and the proposed pavement design for this project. Referring to *Table 2-2*, the calculated Structural Number for the City's former standard section with 1.5-inches Type S-III asphalt, 8-inches baserock and 12-inches stabilized subgrade is 2.82. The calculated Structural Number for the City's current standard section with 3-inches of Type S-III asphalt, 8-inches baserock and 12-inches stabilized subgrade is 3.48.

Palm Beach County (PBC) Land Development design standards for residential roads was used as a comparison standard for roadways of similar type and traffic usage. The County requires a total thickness of 1.5-inches SuperPave asphalt structural course (Traffic Level A) for Residential Access and Local Streets. This is comparable to the residential street type for N.W. Neighborhood but does not call for the installation of asphalt in two lifts. The Structural Number for this single asphalt lift pavement section is 2.31.

The proposed pavement design section is comparable to the City's previous design section however utilizes SuperPave asphalt while still providing a second lift of asphalt. Note that the minimum recommended application thickness for SuperPave asphalt is 1-inch, therefore the proposal of two 1-inch SuperPave asphalt lifts.

The following pavement design is recommended for the roadways within this project, with a calculated Structural Number of 3.04:

Two (2) 1-inch lifts of SP9.5
Optional Basegroup 6, 8-inch compacted baserock (LBR 100)
12-inch stabilized subgrade (LBR 40)

For mill and overlay roadway segments, a 1-inch SP-9.5 asphalt overlay is proposed.

The Structural Number of the proposed pavement design section exceeds the City's prior standard section structural number and the Palm Beach County pavement section structural number for residential roadways. The proposed pavement design does have a lower structural number than the City new pavement design section, however the proposed pavement section is recommended as a design typical to residential roadways with the type of traffic anticipated for the neighborhood

Table 2-2: Pavement Design Section Options –Structural Number Comparison

City of Delray Beach

NW Neighborhood Improvements

Pavement Design Section Structural Number Comparison

Thickness	Material	Coeff	SN
Delray Beach Former Standard & As Per Previous PDR			
1.5	Type S-III (2 lifts)	0.44	0.66
8	Limerock	0.18	1.44
12	Stabilized Subgrade	0.06	0.72
		TOTAL	2.82
Delray Beach New Standard			
3	Type S-III (2 lifts)	0.44	1.32
8	Limerock	0.18	1.44
12	Stabilized Subgrade	0.06	0.72
		TOTAL	3.48
Palm Beach Co Residential Access & Local Streets			
1.5	SP9.5 (1 lift)	0.44	0.66
9.5	Optional Basegroup 8	0.18	1.65
12	Compacted Subgrade	0	0
		TOTAL	2.31
Proposed for NW Neighborhood			
2	SP9.5 (2 lifts)	0.44	0.88
8	Optional Basegroup 6 (Baserock LBR 100)	0.18	1.44
12	Stabilized Subgrade (LBR 40)	0.06	0.72
		TOTAL	3.04

Additionally, the City provided records of repetitive patching of potholes within the project area as shown in *Table 2-3*. The need for repeated repairs due to potholes is an indication of poor pavement structure condition. The type of roadway improvement may change during design, based on the following information, along with the condition assessment and depending upon the amount of trenching required for installation of below ground improvements along the roadway alignment.

Table 2-3: City Records of Repetitive Patching of Potholes – Provided by the City on 2/17/2022

Date of Pot Hole Repair	Location
8/12/2019	N.W. 3rd Avenue in front of Daughter of Zion School
8/13/2019	Intersection of N.W. 8th Avenue & N.W. 1st Street – Northbound to N.W. 2nd Street
10/23/2019	555 N.W. 4th Street
12/27/2019	240 N.W. 13th Avenue
5/28/2020	N.W. 2nd Street & N. Swinton Avenue
5/14/2021	N.W. 5th Avenue & W. Atlantic Avenue

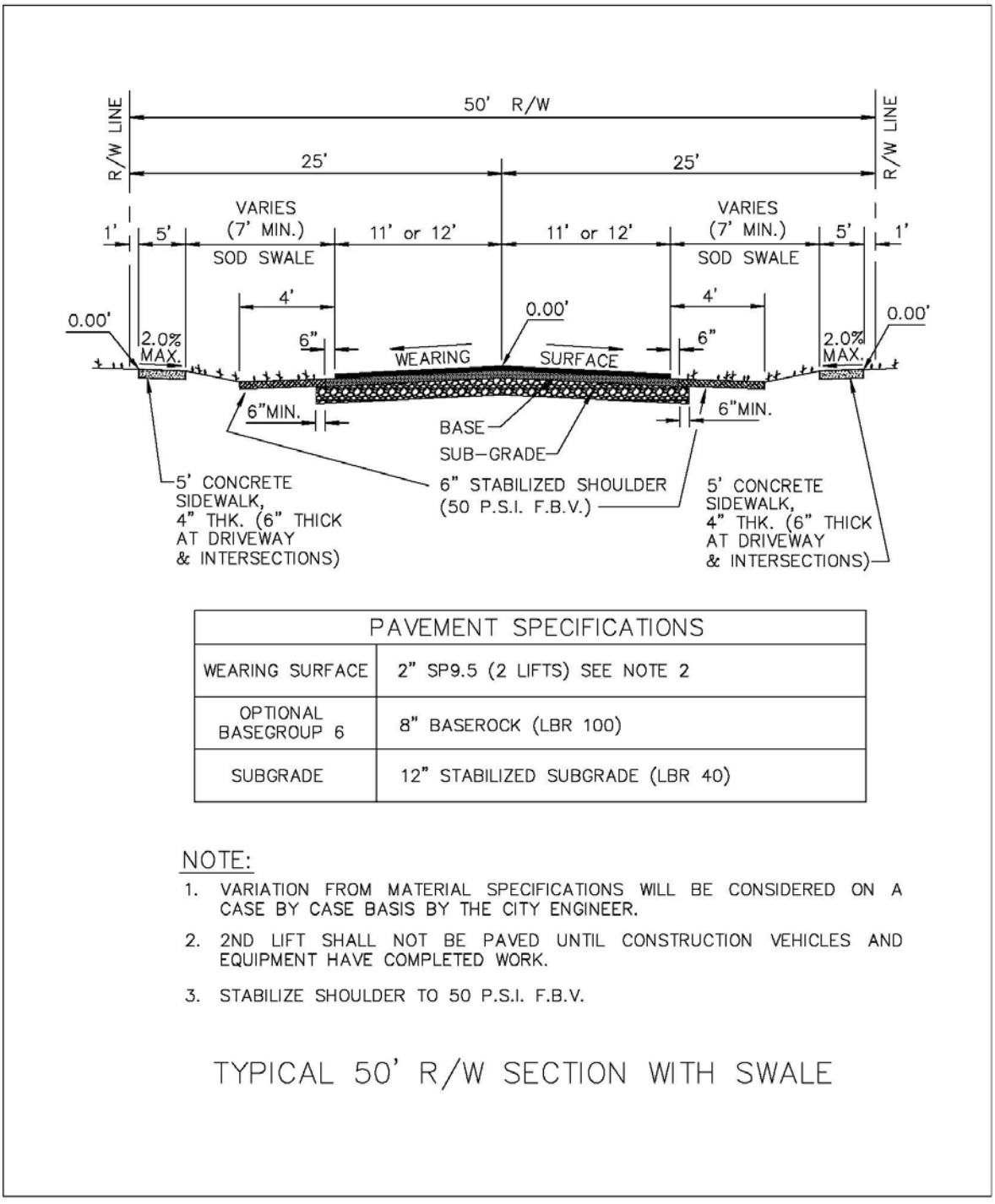
The City also noted the following roadway segments are in poor condition:

- N.W. 3rd Street & Lincoln Lane
- N.W. 10th Avenue between West Atlantic Avenue & N.W. 1st Street
- Intersection of N.W. 3rd Avenue & N.W. 1st Street

These roadway segments have been noted by the City as in poor condition / requiring repetitive pothole repairs and are proposed for total roadway reconstruction as part of this project.

The Typical Roadway section for a 50-foot right-of-way is shown in ***Figure 2-5***. The City's minimum standard right-of-way width is 50 feet. During the research of the existing plats and deeds for City-owned rights-of-way, it was discovered that there are a number of existing roadways that are recorded for a sub-standard width of 40 feet. Rather than the City trying to obtain an additional 10 feet of right-of-way along these roadways that are historically 40 feet, the City decided that a standard design section be developed for this project that would include sidewalk and FDOT Type F curb and gutter at the edge of pavement. The proposed Typical Roadway Section for a 40-foot right-of-way, to be used specific to this project, is shown in ***Figure 2-6***.

The proposed roadway improvements are depicted graphically in ***Figure 2-7***.



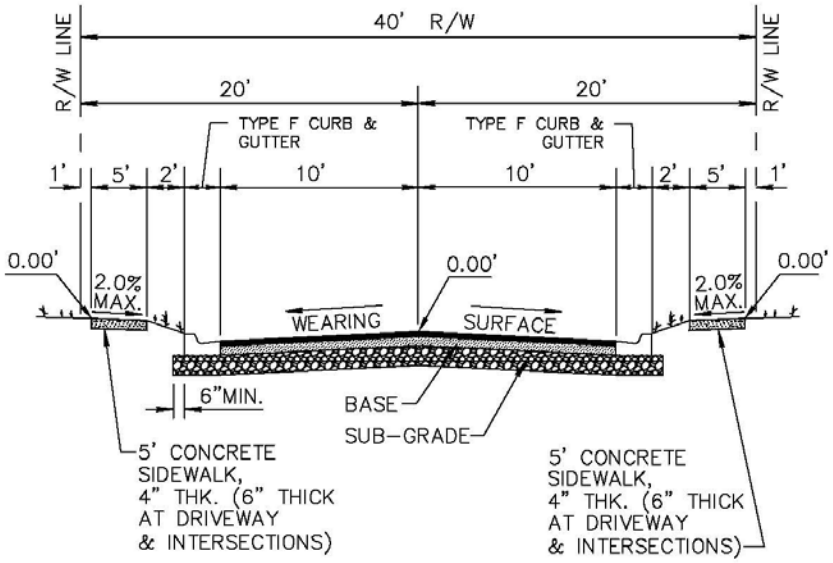
PAVEMENT SPECIFICATIONS	
WEARING SURFACE	2" SP9.5 (2 LIFTS) SEE NOTE 2
OPTIONAL BASEGROUP 6	8" BASEROCK (LBR 100)
SUBGRADE	12" STABILIZED SUBGRADE (LBR 40)

NOTE:

1. VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
2. 2ND LIFT SHALL NOT BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.
3. STABILIZE SHOULDER TO 50 P.S.I. F.B.V.

TYPICAL 50' R/W SECTION WITH SWALE

Figure 2-5 Proposed Typical 50' RW Section with Swale



PAVEMENT SPECIFICATIONS	
WEARING SURFACE	2" SP9.5 (2 LIFTS) SEE NOTE 2
OPTIONAL BASEGROUP 6	8" BASEROCK (LBR 100)
SUBGRADE	12" STABILIZED SUBGRADE (LBR 40)

NOTE:

1. VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
2. 2ND LIFT SHALL NOT BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.

TYPICAL 40' R/W SECTION WITH GUTTER

Figure 2-6 Proposed Typical 40' R/W Section with Gutter

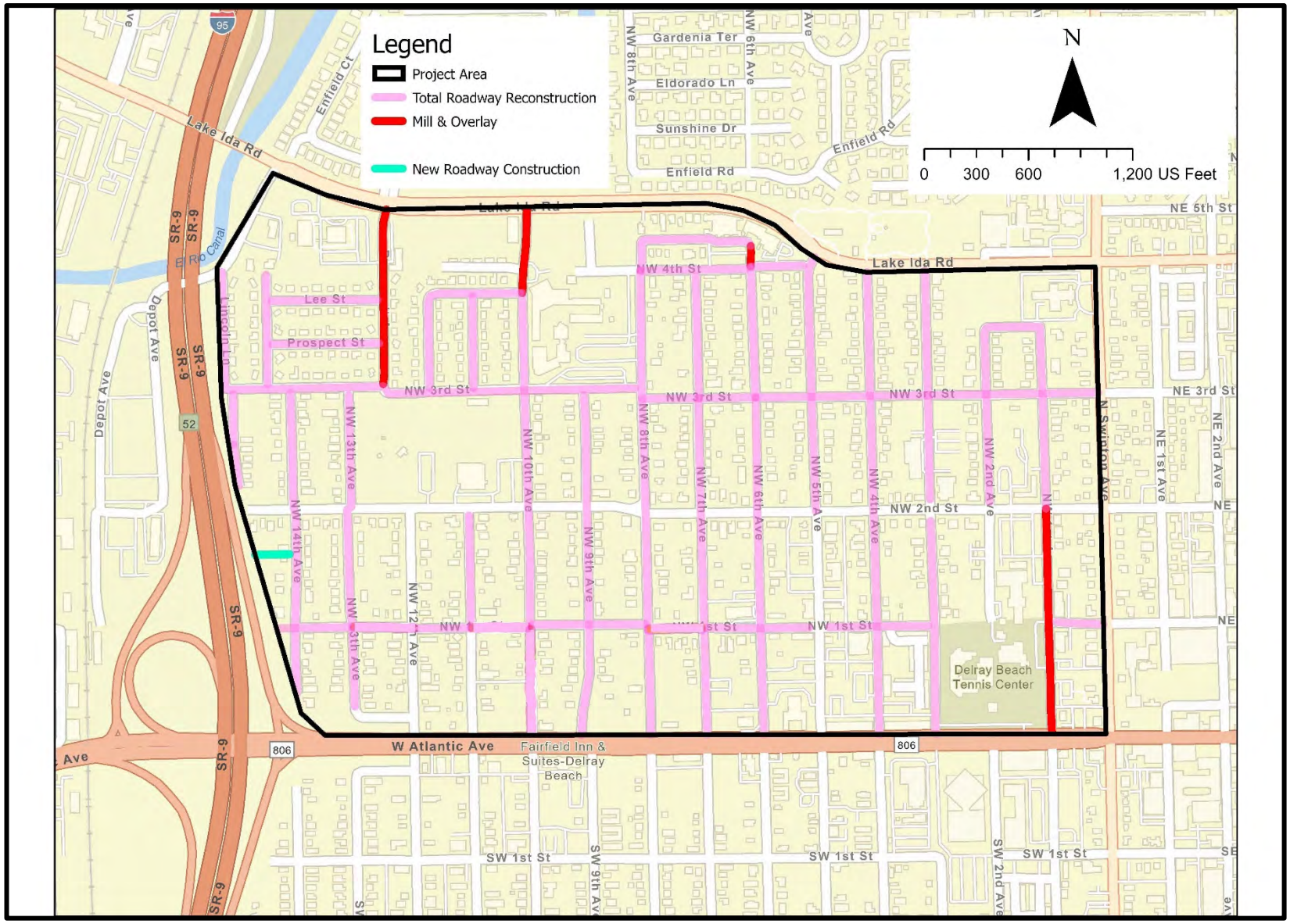


Figure 2-7: Proposed Roadway Improvements

2.5 Engineering Traffic Analysis

An engineering traffic analysis is completed to identify the specific roadway improvements and traffic calming elements required to provide the necessary accommodations for vehicles, pedestrians, and other modes of transportation throughout the neighborhood project area while meeting the goals and objectives of the City's Development Plan and the Complete Streets design.

Data was collected and a traffic analysis prepared by T.Y. Lin International, under the previous Preliminary Design Report. Problems observed included speeding, incomplete sidewalk systems, traffic congestion around S.D. Spady Elementary School, and issues with cut-through traffic with vehicles trying to avoid traffic on Swinton Boulevard and on Atlantic Avenue or to access the Interstate 95 interchange at Atlantic Avenue. The posted speed limit in the neighborhood is 25 mph, except in school zones where it is posted at 20 mph.

The analysis reviewed the following collected information:

- Daily and peak hour traffic volumes
- Speeds
- Crash occurrences
- Cut through traffic
- Proximity to schools and parks

An assessment was performed on the data and the criteria established to identify and prioritize the implementation of traffic safety measures along roadway segment locations and at intersections. Specifically, if a specific location met two (2) or more of the following criteria, the location was considered for installation of a traffic calming option. The below list is a summary of the selection criteria used to evaluate the locations:

Traffic Calming Criteria

1. 85th percentile speed higher than 5 mph over the posted speed limit (for speed humps)
2. More than 50% of vehicles traveling above the posted speed limit (for speed humps)
3. or
4. 85th percentile speed higher than 10 mph over the posted speed limit (for speed humps)
5. Total traffic volume (ADT) > 1,500 vehicles for residential streets
6. Total traffic volume (ADT) > 3,000 vehicles for residential collectors
7. Peak hour traffic volume > 10% of ADT
8. Crash data – two (2) or more crashes in the previous three (3) year period
9. Cut through traffic as demonstrated by > 10% of ADT *(determined based on input from City staff and internal stakeholders)*
10. The proximity to schools or parks where an increased number of pedestrians can be expected.

The information regarding the Traffic Calming Criteria, such as crash and speed data, proximity to schools, etc. was mapped. The traffic calming improvements were prioritized into Complete Streets Concept Designs for the following corridors due to the fact that they met a majority of the Traffic Calming Criteria listed.

- N.W. 3rd Avenue
- N.W. 4th Avenue
- N.W. 8th Avenue
- N.W. 10th Avenue

These streets were deemed a "high priority" for traffic calming. Then, the assignment was made along these corridors for the best use of the various traffic calming measures depending upon the problems identified. The next section includes a discussion of the various types of traffic calming considered for this project. Other considerations in selection of these streets include the goals of the City's Development Plan regarding traffic corridors and neighborhood gateway entry improvements, pedestrian access, and neighborhood beautification. The results of this engineering analysis and recommendations were presented to the community at the public outreach meetings. The final design decision on the type and location of the traffic calming took a consensus of the residents' comments and preferences into consideration.

2.5.1 Types of Traffic Calming

Various types of traffic calming measures were reviewed with respect to effectiveness in reducing speeds, improving pedestrian safety, and reducing the tendency of neighborhood cut-through traffic.

- *Speed humps* – these are a low cost alternative and one that is in use within the City. Refer to the City's Standard Speed Hump / Table Detail as shown in ***Figure 2-8*** and in ***Photo 1*** below. More abrupt speed bumps are discouraged by emergency responders as they increase their response time and create a difficult ride for ambulance passengers.

***Photo 1**: Speed Hump*

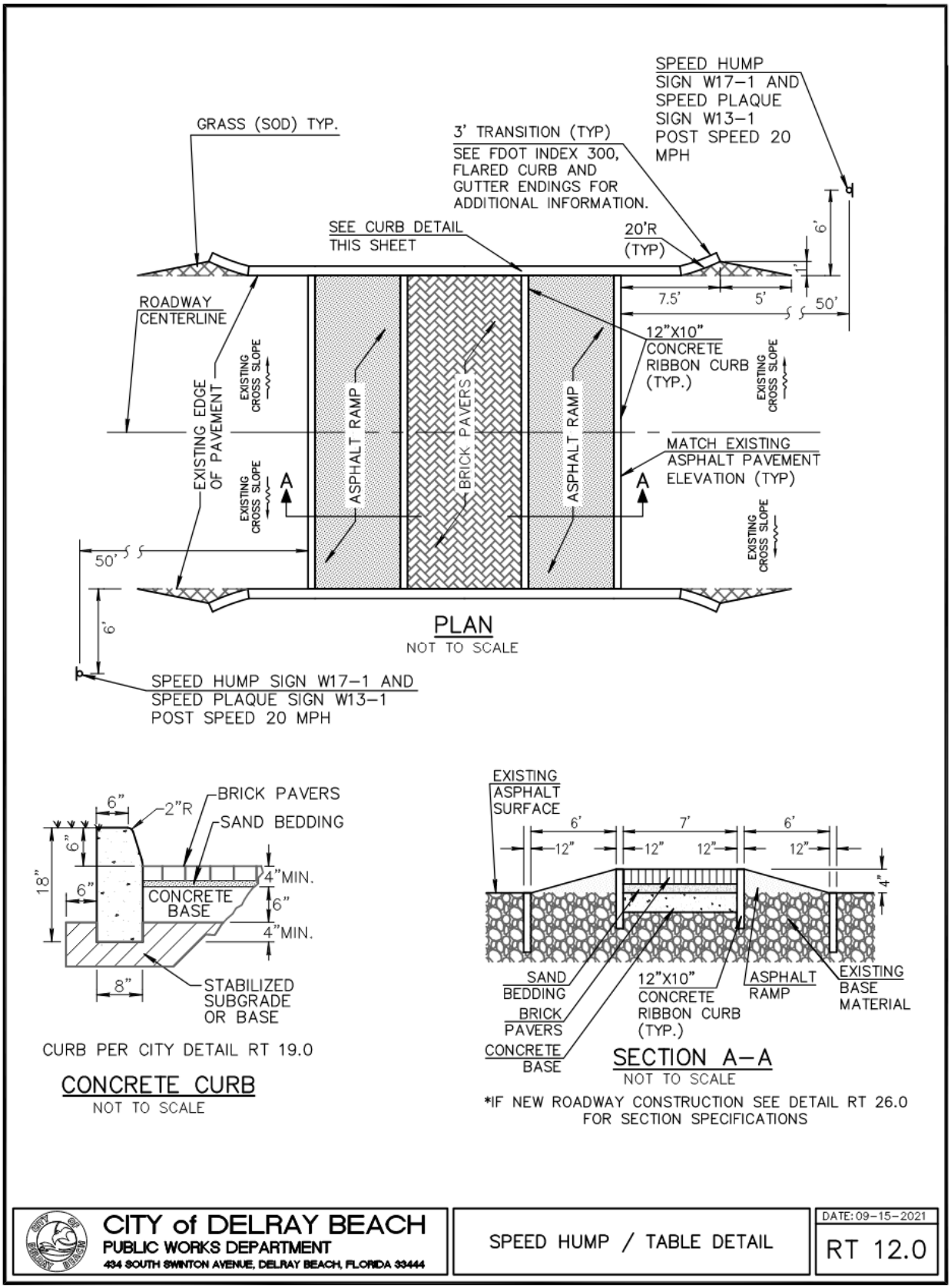


Figure 2-8: City's Standard Speed Hump / Table Detail

- *Chicanes* – a lower cost improvement used to reduce speeds with the addition of curves to the roadway alignment. See ***Figure 2-9*** below for a chicane example.

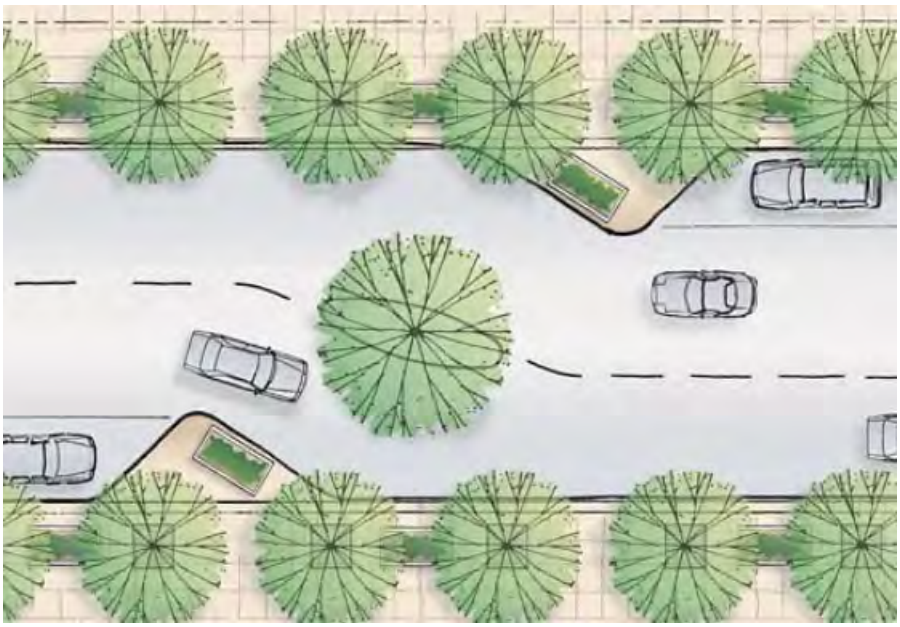


Figure 2-9: Chicane Example

- *Raised intersections* – brings attention to the pedestrian crossing and slows vehicles. An effective measure in areas with high pedestrian volumes. See ***Photo 2*** for raised intersection example.

Photo 2: Raised Intersection Example

- *Decorative pavement* – the introduction of textured, patterned, and/or colored asphalt or concrete is an effective visual notification of upcoming intersections, cross-walks, etc. This treatment reduces vehicle speeds and is a visually pleasing option. Decorative pavement is also proposed for this project, to be used a notification of a gateway entrance to the neighborhood. The pavement pattern and color does wear due to vehicle traffic, creating a need for addition maintenance and therefore costs. See *Photo 3* for decorative pavement examples.

Photo 3: Decorative Pavement Examples

- *Bulb-outs* -– visual and physical narrowing of the drive lane, that can include landscaping and/or decorative pavement. This option improves speed reduction. See *Photo 4* for bulb-out examples.

Photo 4: Bulb-Out Examples

- *Traffic circles* – Traffic circles are considered in area with a high number of crashes as they are effective in slowing the vehicles. Typically, these installations require room in the right-of-way and/or right-of-way corner clips to fit the traffic circle improvements. A review is required to insure the design layout of the circles can provide minimum turning movements for larger trucks and buses. See ***Photo 5*** for traffic circle example. Residents during the public meetings indicated that they did not want this form of traffic calming as they may be confusing to navigate for many drivers and pedestrians, and drivers thought it was difficult to see past the landscaping in the center and at the entry points to the circle. Therefore, traffic circles will not be considered for this project.

Photo 5: Traffic Circle Example

- *On-street parallel parking* – parking is located on the sides of the street as an option for speed reduction, with the added benefit of providing for additional parking. The drawback is that the parking may only be placed in areas where it does not conflict with driveway access or intersections. This traffic calming option does not reduce the occurrence of crashes but does provide the opportunity for landscape islands. See ***Photo 6***.

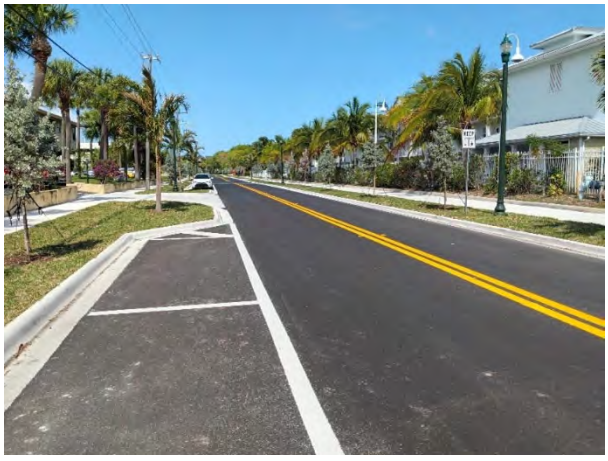


Photo 6: Parallel Parking Example

- *Regulatory Signs* – Stop signs may only be used when traffic engineering studies demonstrate that they are warranted. Stop signs are not effective in reducing speed; the occurrence of crashes; nor do they deter cut through traffic. The use of stop signs with flashers may be used to call attention to an existing stop sign installation. Speed regulation signs are also an option and are proposed at a number of locations to regulate speed within school zones. Examples of regulatory signs are shown below in *Photo 7*.

Photo 7: Regulatory Sign Examples

- *Pavement Markings* – placement of edge or centerline striping to provide a visual effect that the drive lane is narrower. This is an effective and relatively inexpensive method for speed reduction. A benefit to this method is that the pavement is not actually reduced in width, so emergency responders' response time is not affected. Edge lane striping is shown in *Photo 8*.

Photo 8: White Lane Edge Striping

- *Street Closure* – Roadway closure can be an effective method of prohibiting cut-through traffic into the neighborhood. However, the closure of one neighborhood entrance results in the redistribution of these trips to other adjacent entrances. If road closure is being considered, it is recommended that a temporary closure be installed and the effectiveness studied prior to the permanent closure. Coordination is required with existing public transit routes and with emergency responders. Street closures can be expensive to construct and an inconvenience to the residents of the neighborhood who now will be restricted in their own travel patterns. Although no street closures are proposed for this project, a directional median and additional signing and pavement markings are proposed at the intersection of Lincoln Lane with Depot Avenue. Reports from residents indicated that although Lincoln Lane is northbound only, drivers are using Lincoln Lane as a southbound route through the neighborhood from Lake Ida Road and Depot Avenue. The intersection will be reconfigured by providing a directional median to prohibit northbound and southbound turns into Lincoln Lane from Depot Avenue. Traffic signage will also be added.

2.5.2 Complete Streets Concept Designs

As previously discussed, the concept of Complete Streets design is to provide a transportation network that is safer and more efficient. Based on the engineering traffic study completed by the previous consultant, Complete Streets Concept Designs are recommended for N.W. 3rd Avenue, N.W. 4th Avenue, N.W. 8th Avenue, and N.W. 10th Avenue road segments based upon the number of traffic calming criteria met and their identification as a neighborhood corridor and as a gateway entry location. The design highlights are generally described below and include corridor-wide improvements such as roadway, sidewalk, and traffic calming improvements, selected intersection enhancements, and on-street parking.

N.W. 3rd Avenue Complete Streets Concept Design (see ***Figure 2-10***):

- *N.W. 3rd Avenue (Martin Luther King Jr. Drive/N.W 2nd Street to N.W. 3rd Street)* – improvements generally include sidewalk, upgraded school signage and school zone posted speed reduction regulatory signs at both N.W. 2nd Street and N.W. 3rd Street, pavement markings, raised cross walks at the school, and a speed hump between N.W. 3rd Street and Lake Ida Road.
- *Intersection of N.W. 3rd Avenue and N.W. 3rd Street* – emphasized cross-walk striping and sidewalk improvements at this location where the school bus stops and children congregate.
- *N.W. 3rd Avenue (N.W. 3rd Street to Lake Ida Road)* – installation of ADA compliant sidewalk and pavement markings at the Lake Ida Road intersection.

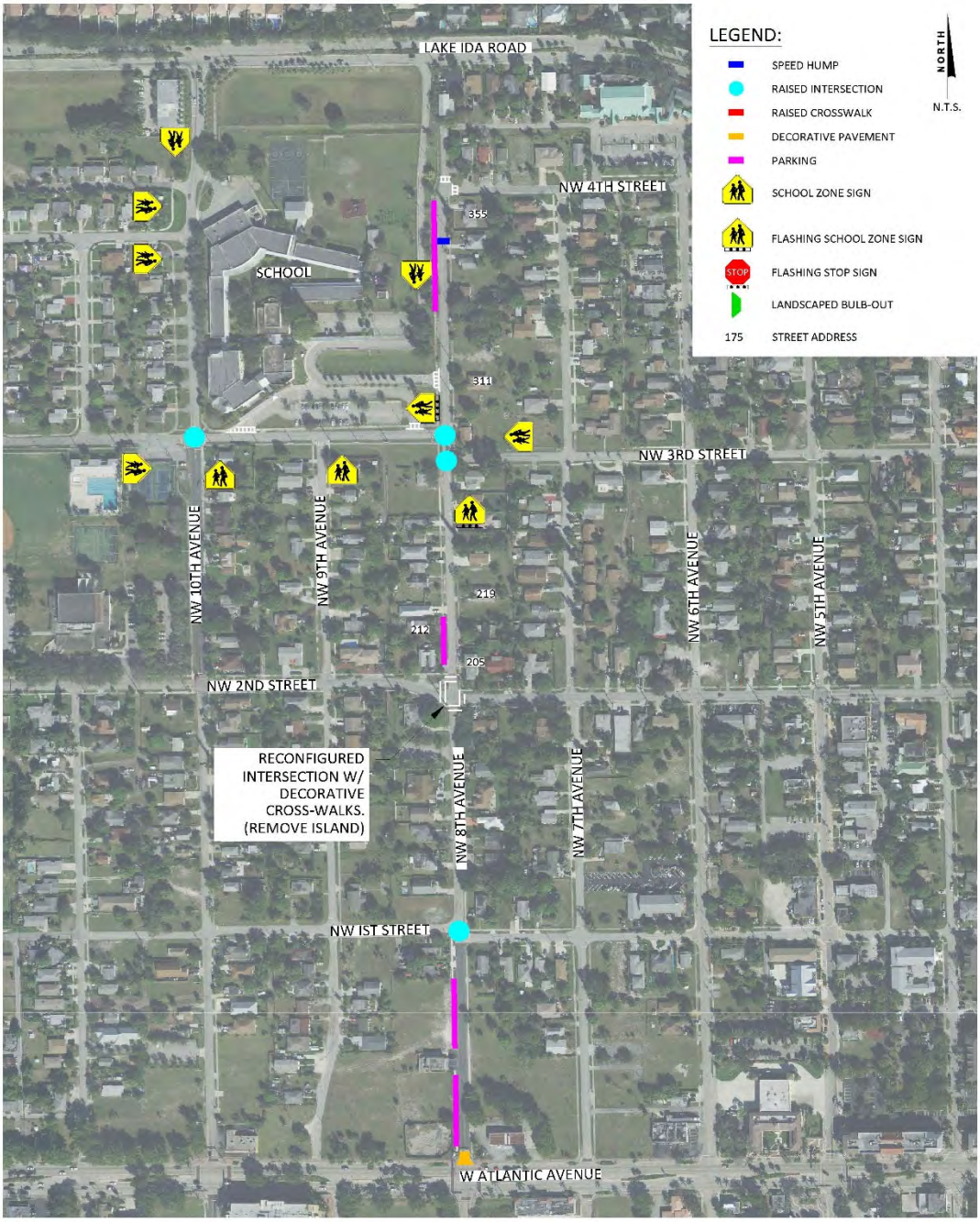


Figure 2-10

Figure 2-10: N.W. 3rd Avenue Complete Streets Concept Design

N.W. 4th Avenue Complete Streets Concept Design & N.W. 5th Avenue Gateway Entrance at Lake Ida Road (see ***Figure 2-11***):

- *N.W. 4th Avenue (Atlantic Avenue to north of N.W. 1st Street)* - installation of school signage, speed regulation signage and special emphasis cross-walk striping at N.W. 1st Street. Speed hump at mid-block.
- *N.W. 4th Avenue (N.W. 1st Street to N.W. 2nd Street)* – installation of school signage, speed regulation signage and speed hump at mid-block.
- *Intersection N.W. 4th Avenue and Martin Luther King Jr. Drive* – new pavement markings and sidewalk improvements along N.W. 4th Avenue at the intersection.
- *N.W. 4th Avenue (Martin Luther King Jr. Drive to N.W. 3rd Street)* – on-street parallel parking with landscaping, landscape bulb-out traffic calming features are proposed along this roadway segment. Speed hump mid-block. Cross-walk striping on the north and south sides of the intersection with Martin Luther King Jt. Drive.
- *Intersection N.W. 4th Avenue and N.E. 3rd Street* – upgrades to the sidewalk connections at all four quadrants, new cross-walk striping.
- *N.W. 4th Avenue (N.W. 3rd Street to Lake Ida Road)* – installation of speed humps, landscaping in conjunction with on-street parallel parking and traffic calming bulb-outs, and sidewalk improvements.
- *N.W. 5th Avenue at Lake Ida Road*– Decorative pavement treatment is proposed extending from Lake Ida Road to approximately N.W. 4th Street, as a form of neighborhood gateway entrance improvement.

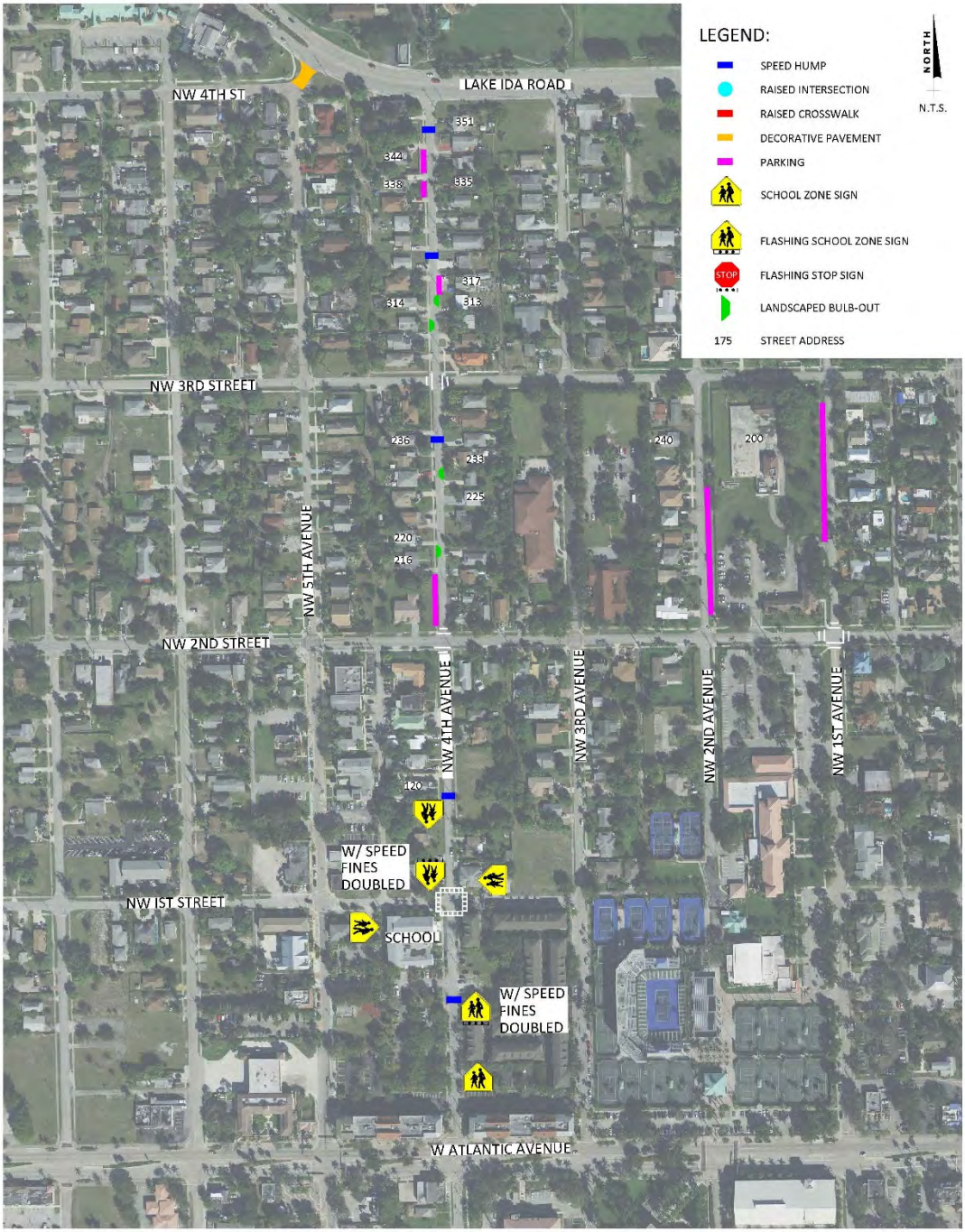


Figure 2-9 (NW 4th Avenue)

Figure 2-11: N.W. 4th Avenue Complete Streets Concept Design & N.W. 5th Avenue at Lake Ida Road

N.W. 8th Avenue Complete Streets Concept Design (see ***Figure 2-12***):

- *N.W. 8th Avenue (Atlantic Avenue to N.W. 1st Street)* – Decorative pavement treatment is proposed extending from Atlantic Avenue to approximately 150 feet north, as a form of neighborhood gateway entrance improvement. On-street parking on the west side of N.W. 8th Avenue with landscape islands. Roadway narrowing to 10-foot lanes utilizing edge striping as a traffic calming measure.
- *N.W. 8th Avenue and N.W. 1st Street intersection* – Due to the high number of crashes at this location and the offset intersection alignment, a raised intersection is proposed.
- *N.W. 8th Avenue and N.W. 2nd Street intersection* – reconfigure the intersection to delete the island at the northwest corner and remove the southbound right turn lane. Locate and restripe all the crosswalks at the 4-way intersection. The City to acquire property at the southwest corner of the intersection to maintain the current east-west roadway alignment in its current configuration.
- *N.W. 8th Avenue (N.W. 2nd Street to N.W. 3rd Street)* – On-street parking with landscape islands.
- *N.W. 8th Avenue and N.W. 3rd Street intersection* – Provide a raised intersection with decorative pavement for improved pedestrian safety in the vicinity of S.D. Spady Elementary School. Upgrades to school signage and pavement markings to be provided. Reduced speed limit school zone flashing signs will be installed at all intersection approaches to call attention to the reduced school zone speed limit of 20 mph.
- *N.W. 8th Avenue (N.W. 3rd Street to N.W. 4th Street)* – On-street parking with landscape island edge striping to narrow the lanes and enhanced pedestrian crosswalk markings at the school exit. A speed hump is proposed to be located just south of N.W. 4th Street.
- *N.W. 8th Avenue and N.W. 4th Street intersection* – Enhanced crosswalks are proposed on the east and north legs of the intersection along with sidewalk improvements.

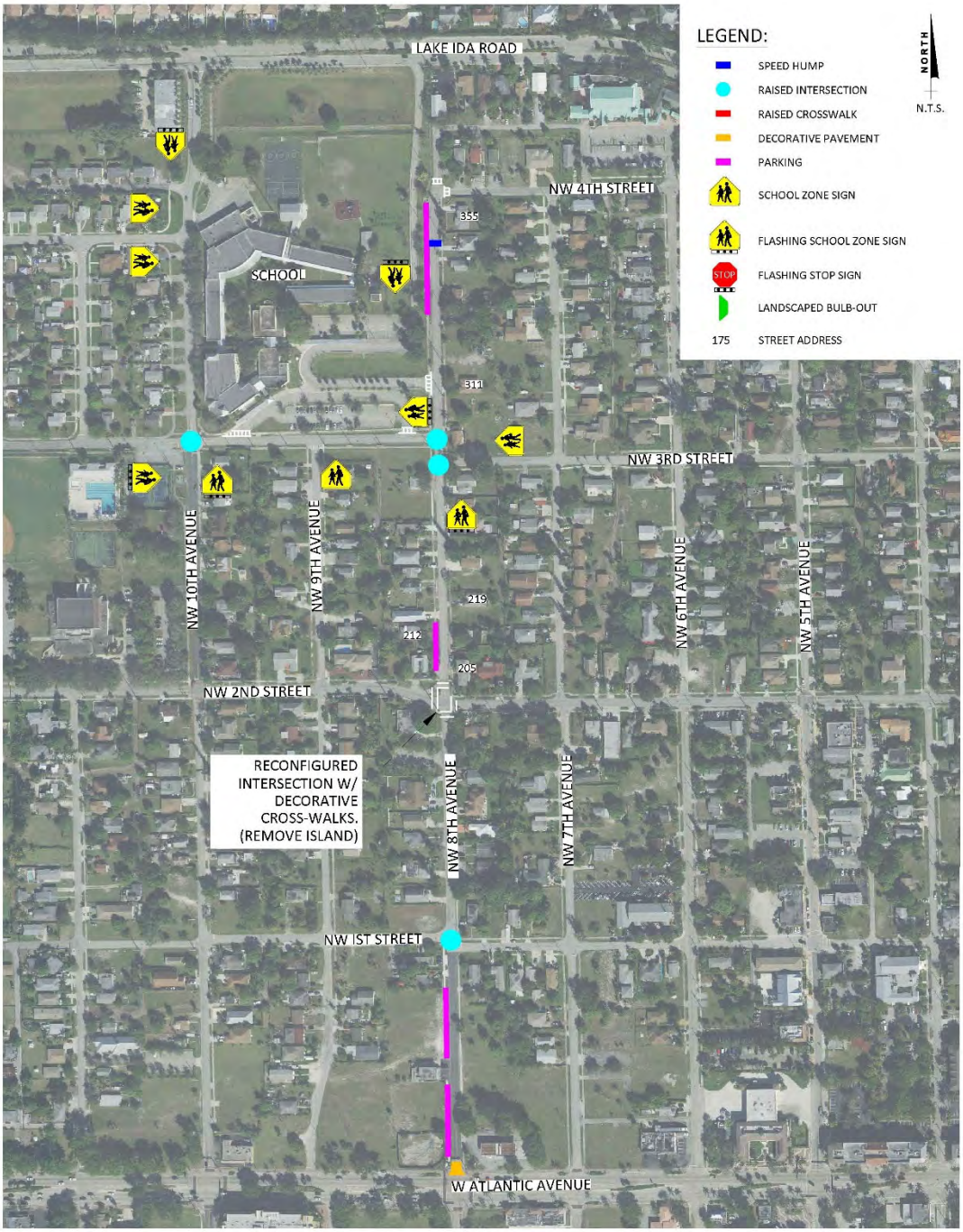


Figure 2-10

Figure 2-12: N.W. 8th Avenue Complete Streets Concept Design

N.W. 10th Avenue Complete Streets Concept Design (see ***Figure 2-13*** and ***Figure 2-12***):

- *N.W. 10th Avenue (Atlantic Avenue to N.W. 1st Street)* – Decorative pavement for the first 150 feet provide enhancements to this gateway entrance to the neighborhood. Lane narrowing utilizing striping for traffic calming. At a location along the west side of the right-of-way a bulb-out traffic calming feature. The limited right-of-way in this area will require a slight pavement shift will provide additional traffic calming.
- *N.W. 10th Avenue and N.W. 1st Street intersection* – New crosswalks at the east and west legs of the intersection.
- *N.W. 10th Avenue (N.W. 1st Street to N.W. 2nd Street)* – Upgrade the two existing speed humps. Provide side-street parking. Landscaped bulb-outs and narrowing of the lanes to 10-feet wide with edge striping.
- *N.W. 10th Avenue (Martin Luther King Jr. Drive to N.W. 3rd Street)* – Coordinate improvements with those proposed at Pompey Park.
- *N.W. 10th Avenue and N.W. 3rd Street intersection* – Provide an elevated intersection with decorative pavement to reduce speeds and provide additional pedestrian safety in the area of S.D. Spady Elementary School. Provide upgraded school zone crossing signs. Refer to ***Figure 2-12***. Provide flashing school zone speed limit signs. Install new stop bars and new double yellow centerline striping on the eastbound and westbound approaches. Provide on-street angled parking west of N.W. 10th Avenue along N.W. 3rd Street in conjunction with the Pompey Park improvements.
- *N.W. 10th Avenue (N.W. 3rd Street to Lake Ida Road)* – Narrow the lanes utilizing edge striping. Enhance the landscaping on the west side of N.W. 10th Avenue north of N.W. 3rd Terrance. Install decorative pavement to enhance this neighborhood gateway entrance for the 150 feet south of Lake Ida Road.
- *N.W. 10th Avenue at N.W. 3rd Terrace* – provide a raised intersection with decorative pavement to enhance pedestrian safety at this location near the S.D. Spady school.
- *N.W. 10th Avenue at N.W. 4th Street* – provide enhanced striped crosswalk.

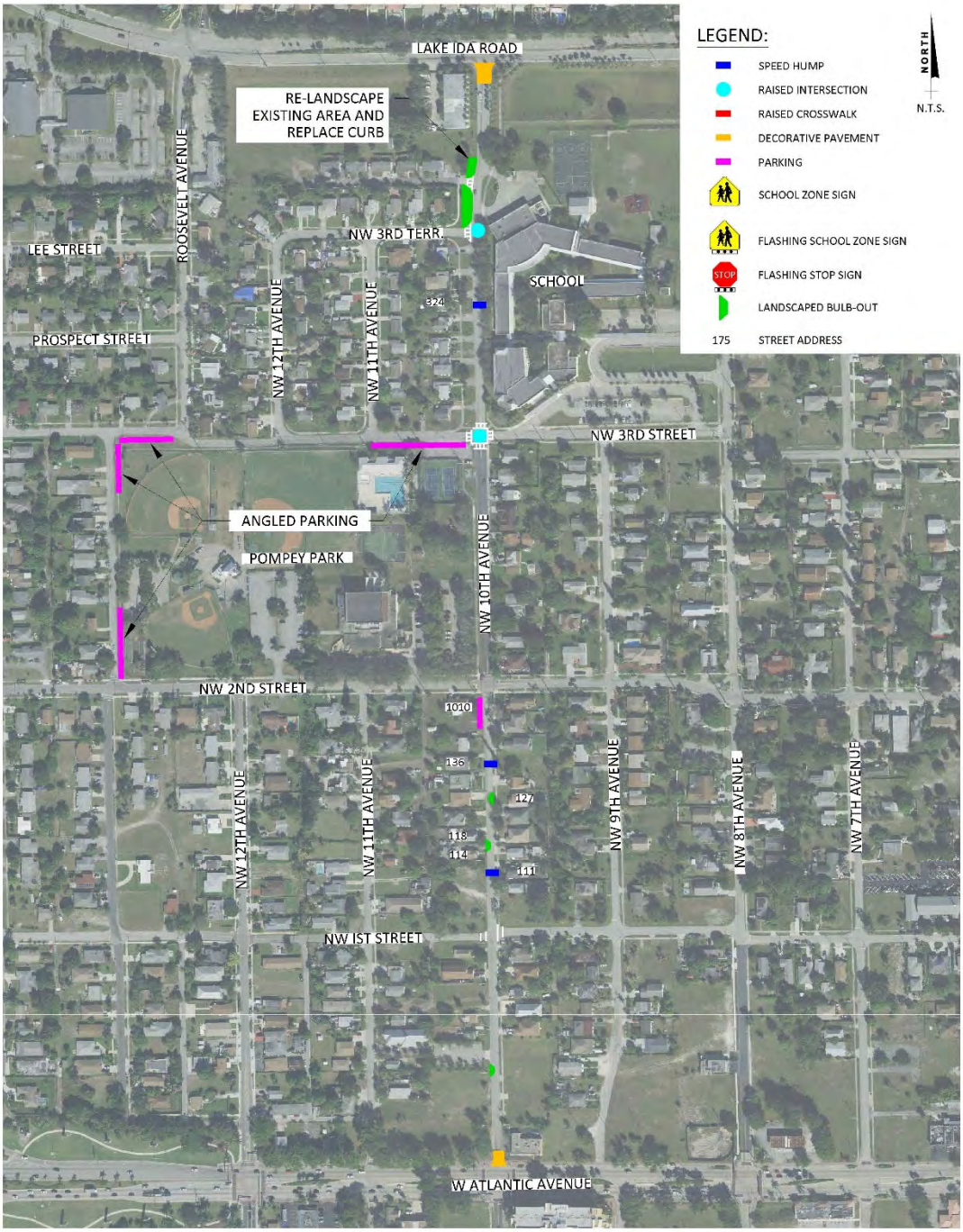


Figure 2-13

Figure 2-13: N.W. 10th Avenue Complete Streets Concept Design

2.5.3 Spot Improvement Recommendations

In addition, and to respond to the need for traffic calming measures at locations outside the four Complete Street corridors identified above, Spot Improvements were recommended. These improvements might include raised intersections and crosswalks, decorative pavement, speed humps and/or landscaped bulb-outs. These locations are described as follows:

Roosevelt Avenue Spot Improvements (see ***Figure 2-14***):

- Installation of two (2) speed humps south of Lee Street and a chicane or "S" curve roadway configuration between Lee Street and Lake Ida Road to reduce speeds. Landscaping within the road right-of-way. Decorative pavement at the 150 feet of roadway south of Lake Ida Road.
- At the Roosevelt Avenue intersection with N.W. 3rd Street, installation of a three-way stop condition with flashing stop signs and crosswalks.

N.W. 3rd Street and N.W. 13th Avenue Intersection) Spot Improvements (see ***Figure 2-14***):

- At the N.W. 13th Avenue intersection install a crosswalk on the south leg of the intersection and double yellow centerline striping.

N.W. 3rd Street (N.W. 13th Avenue to N.W. 10th Avenue) Spot Improvements (see ***Figure 2-14***):

- Coordinate the provision of angled parking at the northwest corner of Pompey Park, along N.W. 3rd Street and along N.W. 13th Avenue. Also install angled parking along N.W. 3rd Street, west of the N.W. 10th Avenue intersection.
- Install two speed humps between Roosevelt Avenue and N.W. 11th Avenue.
- Provide crosswalks on the north side of N.W. 3rd Street and N.W. 12th Avenue and N.W. 11th Avenue.

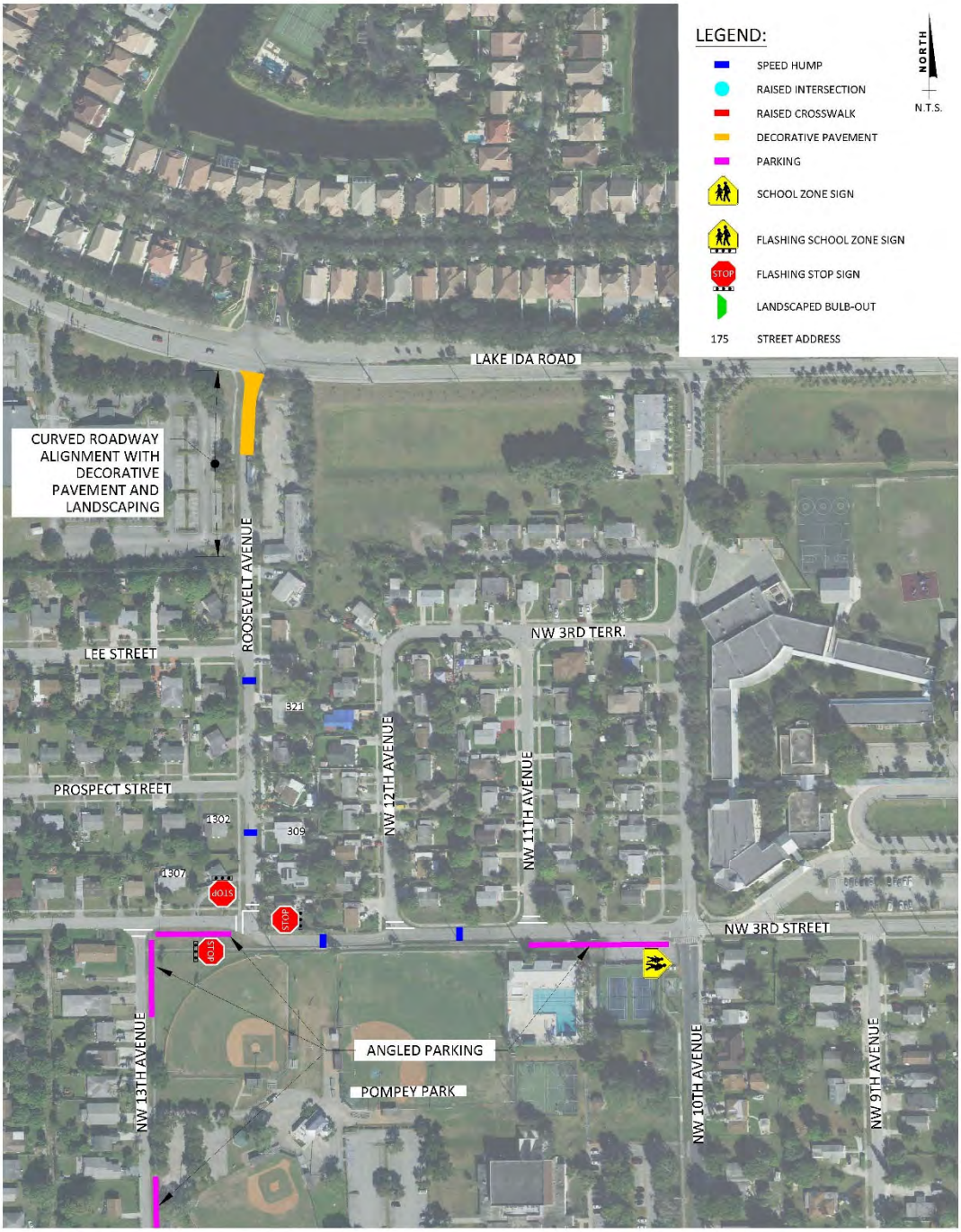


Figure 2-14 (Roosevelt Avenue/NW 3rd Street)

Figure 2-14: Roosevelt Avenue and N.W. 3rd Street Spot Improvements

N.W. 3rd Street (N.W. 3rd Avenue to N.W. 2nd Avenue) Spot Improvements (see Figure 2-15):

- At the N.W. 3rd Avenue intersection install special emphasis crosswalks on all legs of the intersection and double yellow centerline striping.
- Provide landscaped bulb-outs on both sides of N.W. 3rd Street between N.W. 2nd Avenue and N.W. 3rd Avenue.
- Install a speed hump on N.W. 2nd Avenue, south of N.W. 3rd Street.

Figure 2-12 (NW 3rd Street)

Figure 2-15: N.W. 3rd Street Spot Improvements

N.W. 12th Avenue (Atlantic Avenue to N.W. 2nd Street) Spot Improvements (see ***Figure 2-16***):

- Improvements along this road section were previously completed by the City several years ago. Based upon feedback received from residents at the public meetings, unfortunately N.W. 12th Avenue is used as a cut through route for drivers wishing to access or exit the Interstate 95/Atlantic Avenue interchange. Therefore four (4) speed humps are proposed along this alignment.
- Decorative pavement will be provided approximately 150' from the intersection of Atlantic Avenue as this has been identified as one of the neighborhood gateway entrances.

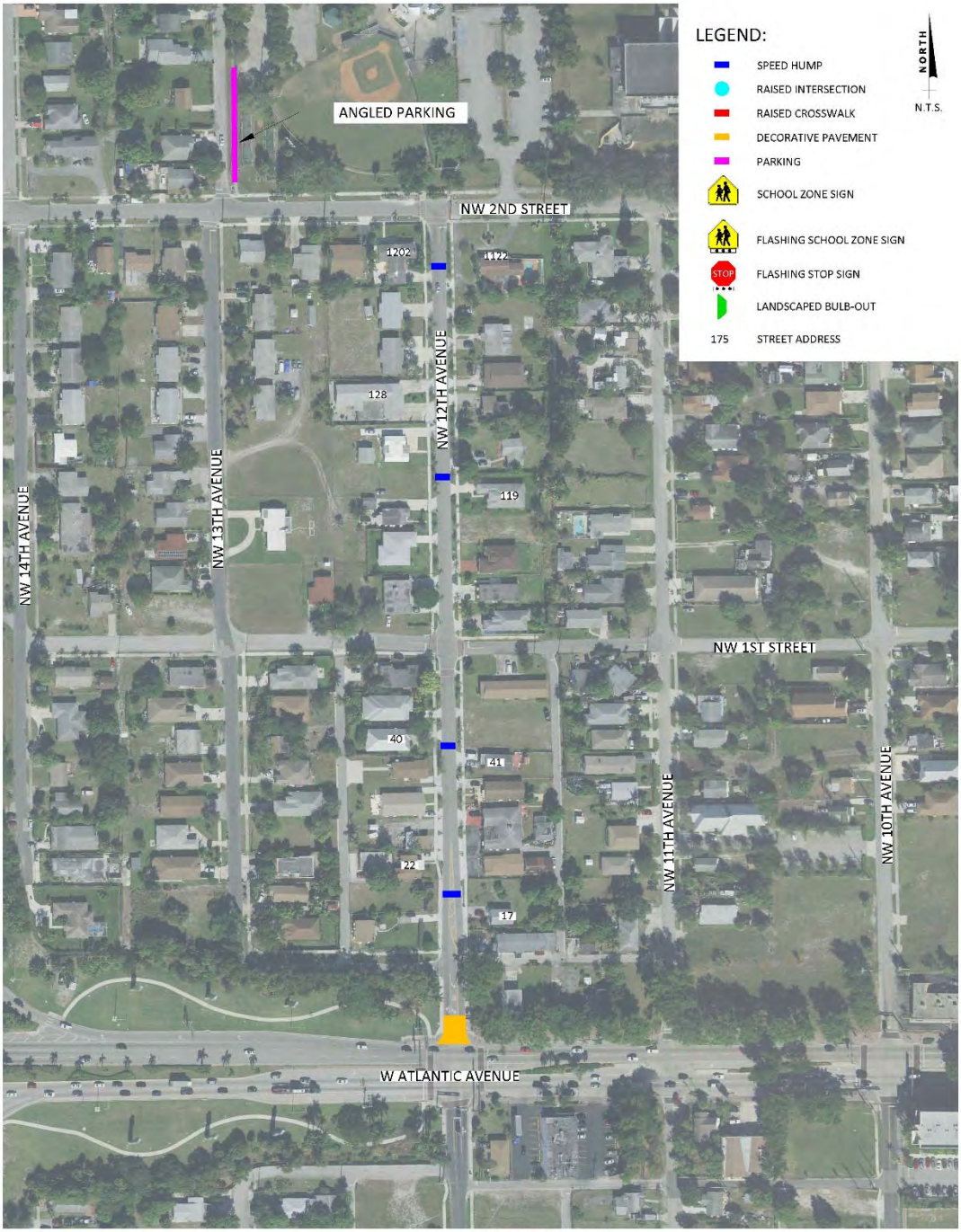


Figure 2-12 (NW 12th Avenue)

Figure 2-16: N.W. 12th Avenue Spot Improvements

Lincoln Lane and Depot Avenue Spot Improvements (see ***Figure 2-17***):

- To further efforts in discouraging cut through traffic to access the Interstate 95/Atlantic Avenue interchange, restricting of the turning movement to go southbound on Lincoln Lane from Depot Avenue is proposed. This will consist of a directional median on Lincoln Lane to allow a northbound right turn only from Lincoln Lane onto Depot Avenue. Regulatory signage will also be added to prohibit southbound entry from Depot Avenue.

Figure 2-17: Lincoln Lane and Depot Avenue Spot Improvements

2.5.4 Project-wide Improvement Recommendations

Project-wide improvements, such as regulatory control, lane narrowing utilizing edge striping, and the evaluation of the provision of on-street parking are recommended for the locations which are shown in *Figure 2-18*.

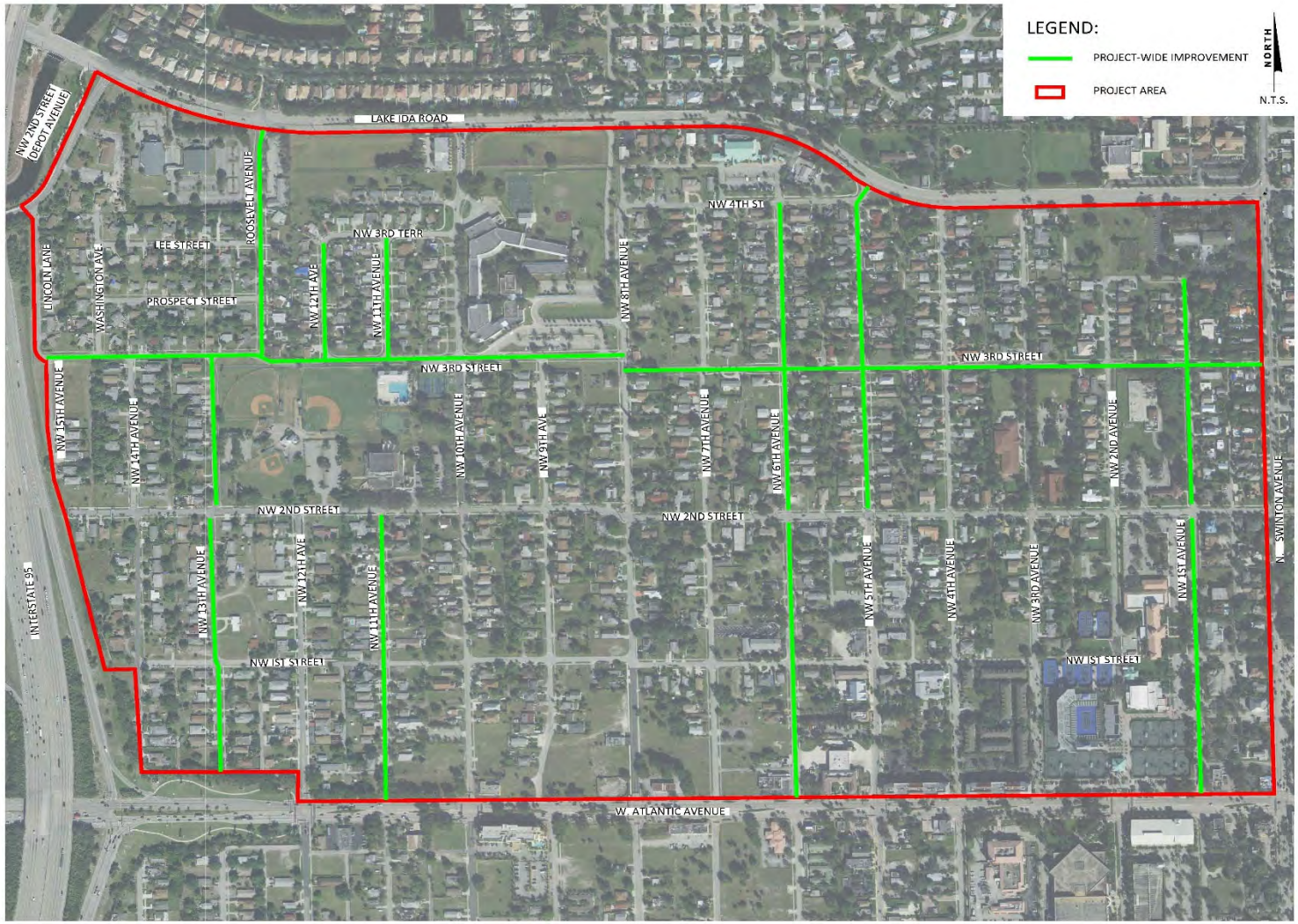


Figure 2-18

Figure 2-18: Project-Wide Improvement Locations

2.6 Speed Limit / School Zones

The N.W. Neighborhood is a predominantly residential area with a posted speed limit of 25 mph. Additional speed limit signs with 200-feet of intersections will be added as needed. School speed reduction zones are located within the neighborhood and are posted at 20 mph between specified hours on school days as shown in Figure 2-19. S.D. Spady Elementary School and Mount Olive Christian School are both located within the speed reduction zones. The day care facilities noted on Figure 2-19 are not within the speed reduction zones and drivers must adhere to the posted neighborhood speed limit of 25 mph. A review has been conducted of the current school zone signage and upgrades and supplemental signage and pavement markings are proposed.

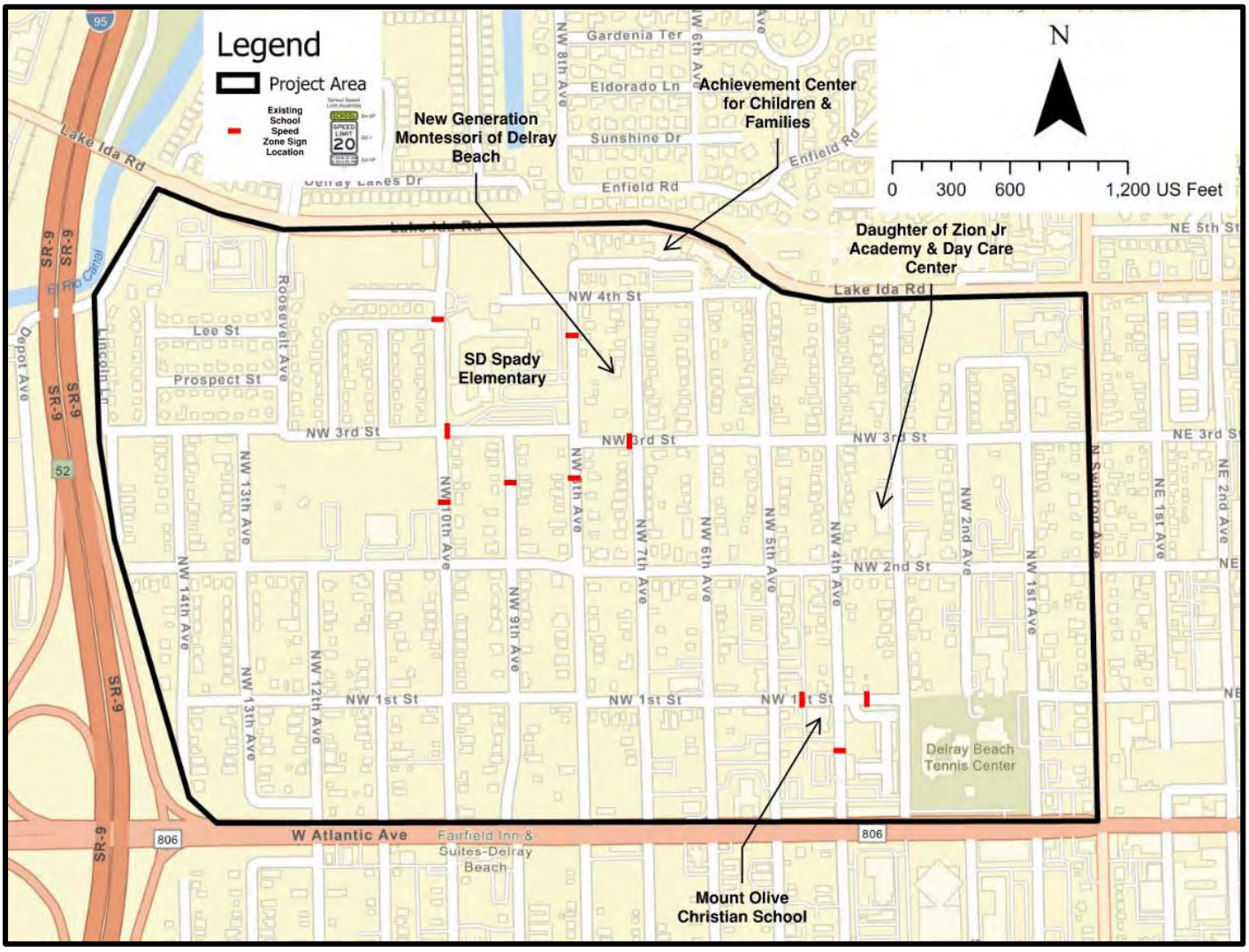


Figure 2-19: School Speed Zone Reduction Areas

2.7 Sidewalks and Driveway Improvements

The City's Typical Roadway Section requires a 5-foot wide concrete sidewalk on both sides of the roadway, located at the ROW line. As part of this project, all existing sidewalk and driveway aprons within the City's ROW will be replaced in accordance the Proposed Typical R/W Sections details (see Figure 2-5 and Figure 2-6) and per the City's Sidewalk Construction and Concrete Driveway Apron Standard Details. See Figure 20 and Figure 21 respectively. Sidewalk and crosswalks will be designed to be compliant with the Americans with Disabilities Act (ADA) and Florida Department of Transportation pedestrian facility standards. ADA-compliant domed mats and ramps will be provided at all street intersections. Existing paver driveway aprons will be removed and reinstalled to the new grade.

All existing public sidewalks that are currently outside the City's ROW and easements will be removed/relocated and installed new within the City's rights-of-way or easements.

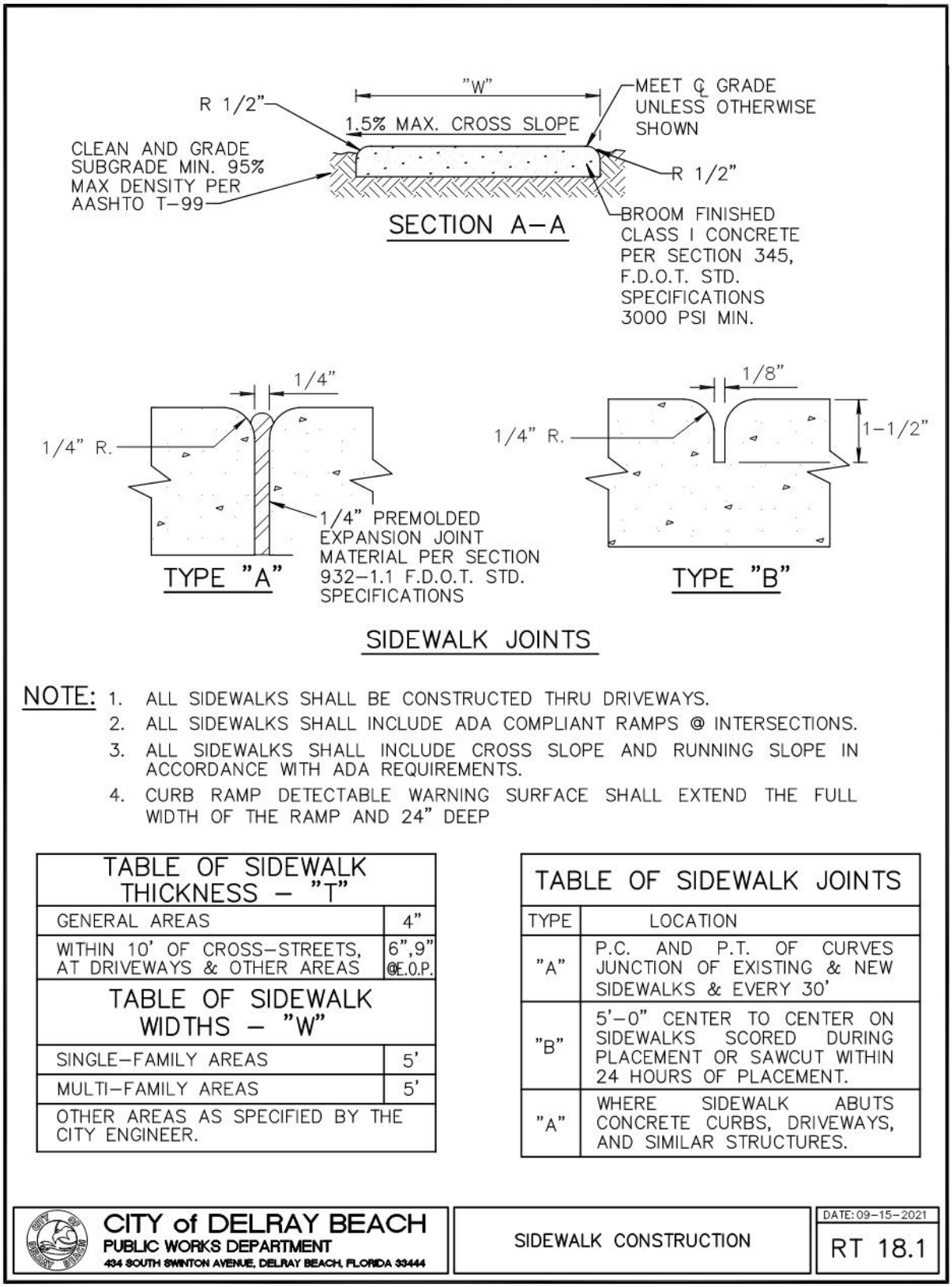


Figure 2-20: City's Sidewalk Construction Standard Detail

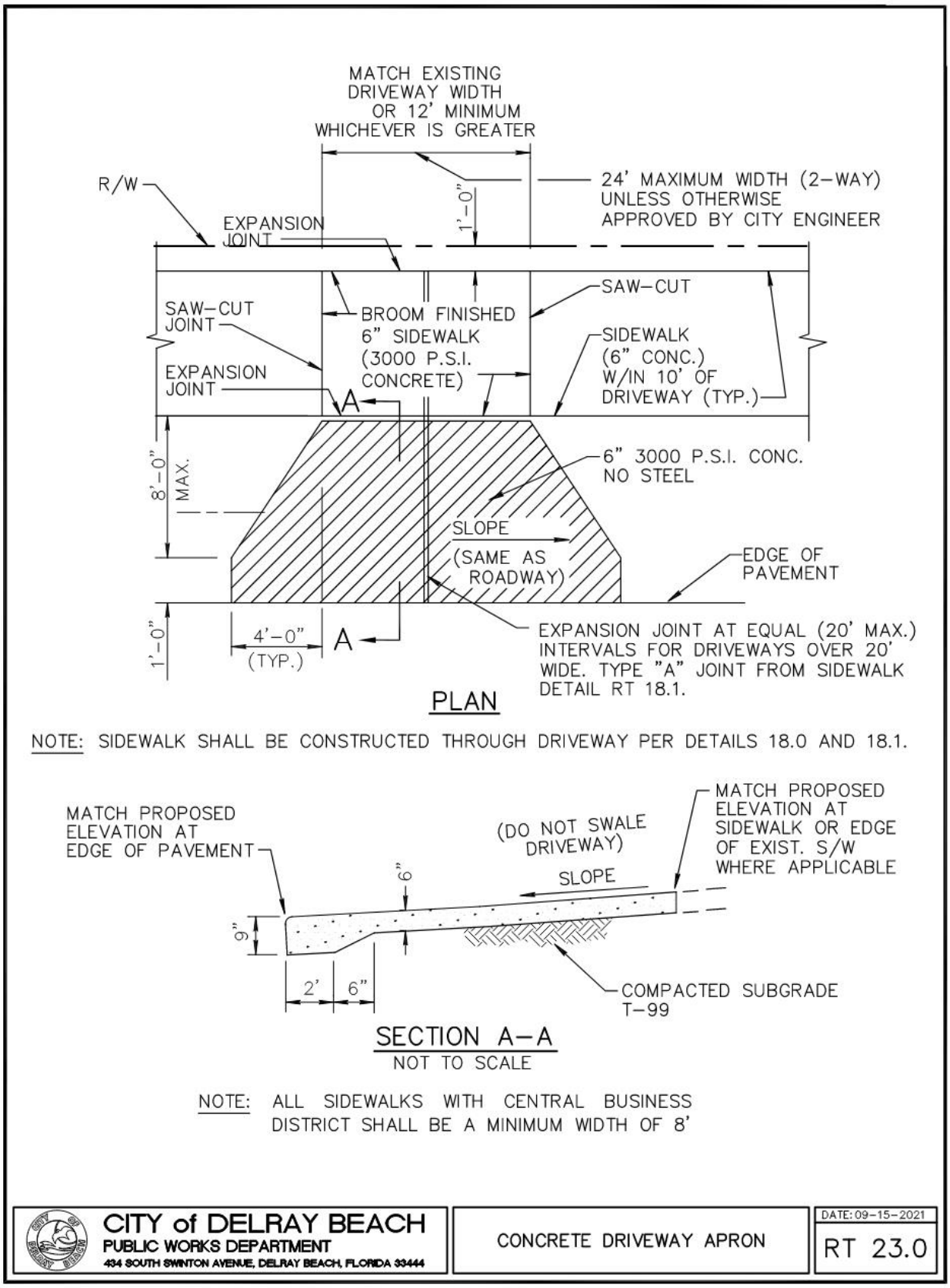


Figure 2-21: City's Concrete Driveway Apron Standard Detail

2.8 On-Street Parking

The City is currently working on a separate project to upgrade Pompey Park, which is located in the N.W. Neighborhood project area (see Figure 2-22) below. Pompey Park is named after long-time City of Delray Beach resident C. Spencer Pompey and covers 17.5 acres of land. The park is a central feature to the neighborhood that has provided recreational resources, senior programs, after-school programs, summer camp, holiday camp, and other school-age programming for the surrounding neighborhood since its construction in the 1950s. As part of the City's West Atlantic Redevelopment Plan, October 2019, it is a goal to improve the visibility and access to Pompey Park.

Figure 2-22: City of Delray Beach Pompey Park

The design of the N.W. Neighborhood Project improvements will be coordinated with the City's Pompey Park renovations project specifically at the interface of the utility connections and along the roadways surrounding the park. B&W will coordinate with the Pompey Park project, in regard to perimeter work around the site for on-street parking, sidewalk, grading, utility connections and the associated drainage improvements.

2.9 Bus & Shuttle Routes / Stops

In addition to the daily residential vehicular traffic, there are several public transit routes which traverse throughout the N.W. Neighborhood. The following entities are identified as providing public transportation within the project area:

- Palm Tran
- School District of Palm Beach County Bus
- Delray Beach Freebee

2.9.1 Palm Tran

Palm Tran is the public transit bus system operated by Palm Beach County and provides services from Jupiter to Boca Raton and from Palm Beach to South Bay. As shown in Figure 2-23, the Palm Tran Route 80 runs through the N.W. Neighborhood with nine (9) stops located within the project area.

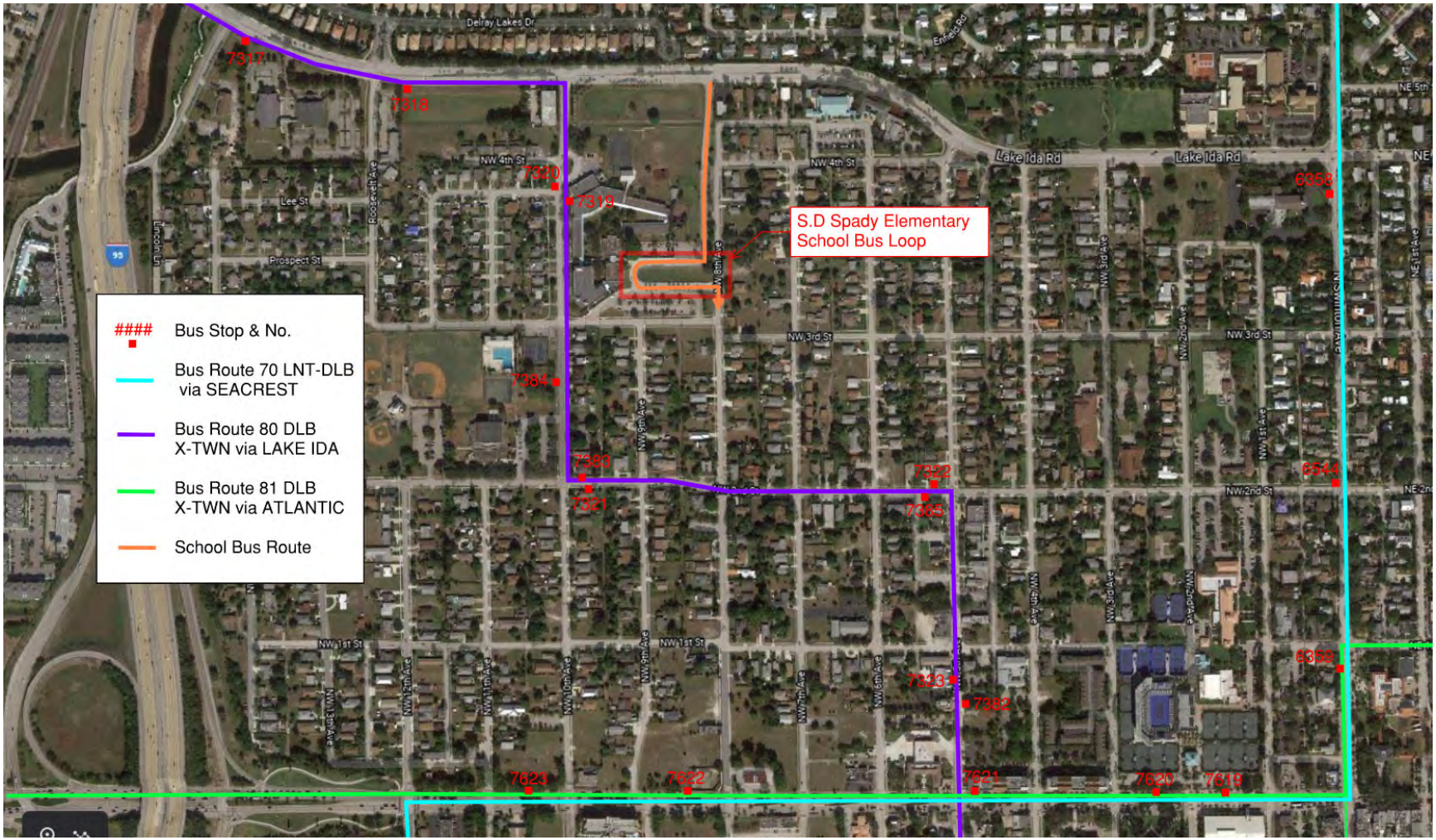


Figure 2-23: Palm Tran Bus Routes

The Palm Tran bus stops within the neighborhood consist of signage only on N.W. 10th Avenue and N.W. 5th Avenue. The bus stops on Martin Luther King Jr. Blvd (N.W. 2nd Street) include signage and bus pads with the exception of Bus Stop #7322 at the northwest corner of the intersection with N.W. 5th Avenue which only has signage.

These bus stops are part of the Palm Tran Route 80 that are maintained by Palm Beach County. B&W will coordinate with Palm Tran to discuss upcoming improvements that Palm Tran may have for the bus stops in the area. As this is a County bus route, no bus stop improvements for the Palm Tran route are included in this City project.

2.9.2 School District of Palm Beach County Bus

Within the project area, the only school governed by the School District of Palm Beach County is S.D. Spady Elementary School. S.D. Spady Elementary currently does not have an attendance area as admission is by choice application, thus the School District of Palm Beach County does not have bus routes within the N.W. Neighborhood assigned to this school. School buses do bring students to the S.D. Spady school from outside of the neighborhood. These buses turn south into the school site bus loop from Lake Ida Road, and then exit the school site onto N.W. 8th Avenue. No other public school bus routes have been identified in the project area.

2.9.3 Delray Beach Downtown Connect / Freebee

The City of Delray Beach Community Redevelopment Agency (CRA) offers an on demand free transportation service through the Downtown Connection / Freebee service. Freebee utilizes electric vehicles and is available for pick-up and drop-off within the identified service area boundary and serves the downtown core area as shown in ***Figure 2-24***. There are no physical designated stops for the Freebee transit, so no infrastructure improvements are proposed as part of this project.

Figure 2-24: Delray Beach Downtown Connect / Freebee Service Area

2.10 Bike Lanes

Currently, no bicycle lanes exist within the N.W. Neighborhood project area. Per the previous Traffic and Transportation Analysis section completed by the prior consultant, there were bicycle-related crashes at two (2) locations between 2017-2019. The previous report also stated that there was no bicycle activity during traffic observations and that there is insufficient road right-of-way for the provision of dedicated bike lanes. As part of this project, no dedicated bicycle lanes will be provided but paving of the alleyways will offer a additional routes for bicyclists.

2.11 Alleyway Improvements

The existing alleyways in the project area are currently unimproved, and the City desires to improve and pave the alleyways in order to provide for additional safe pedestrian routes in the neighborhood. Refer to ***Figure 2-25*** for alleyways within the project area. All alleyways within the project area are 16-foot right-of-way sections, except for the following alleyways:

- Alleyway No. 12 between N.W. 8th Avenue and N.W. 7th Avenue from N.W. 3rd Street to dead-end – City to obtain maintenance easement
- Alleyway No. 14 between N.W. 7th Avenue and N.W. 6th Avenue from N.W. 3rd Street to dead-end – City to obtain maintenance easement
- Alleyway No. 15 between N.W. 4th Avenue and N.W. 3rd Avenue from Lake Ida Road to N.W. 3rd Street – City to obtain maintenance easement
- Alleyway No. 16 between N.W. 4th Avenue and N.W. 3rd Avenue from N.W. 3rd Street to dead-end – City to obtain maintenance easement
- Alleyway No. 23 between N.W. 1st Street and Atlantic Avenue from N.W. 7th Avenue to N.W. 6th Avenue - 20-foot right-of-way section

A pervious concrete pavement section (rather than pervious pavers as proposed in the previous preliminary design report) will be recommended for the alleyways. This recommendation is based on resident feedback, City direction and the success of this paving option on other projects within the City. Therefore, a permeable concrete pavement section similar to the one installed on the Osceola Park Neighborhood Improvements project will be proposed for the alleyways in this project.

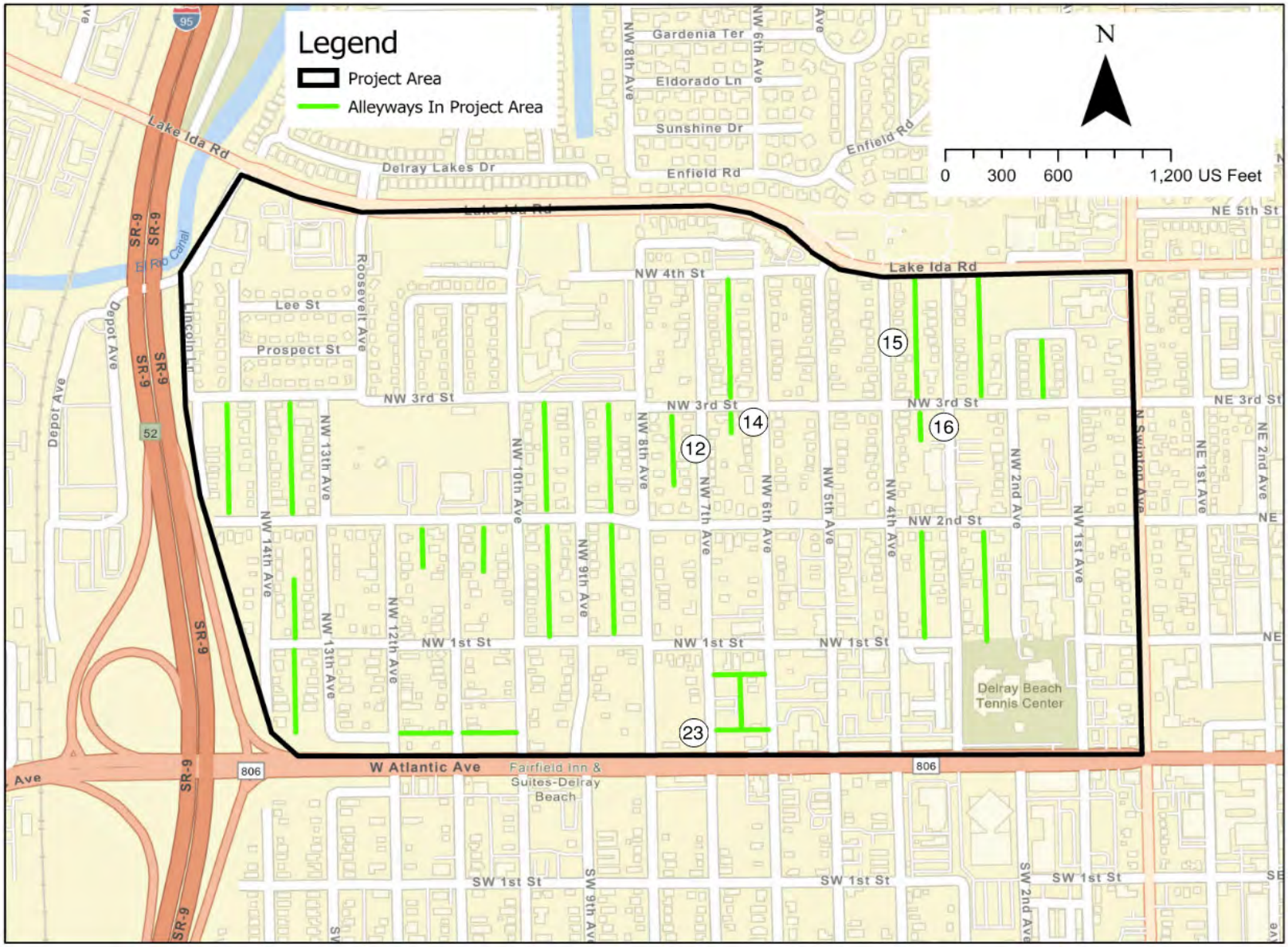


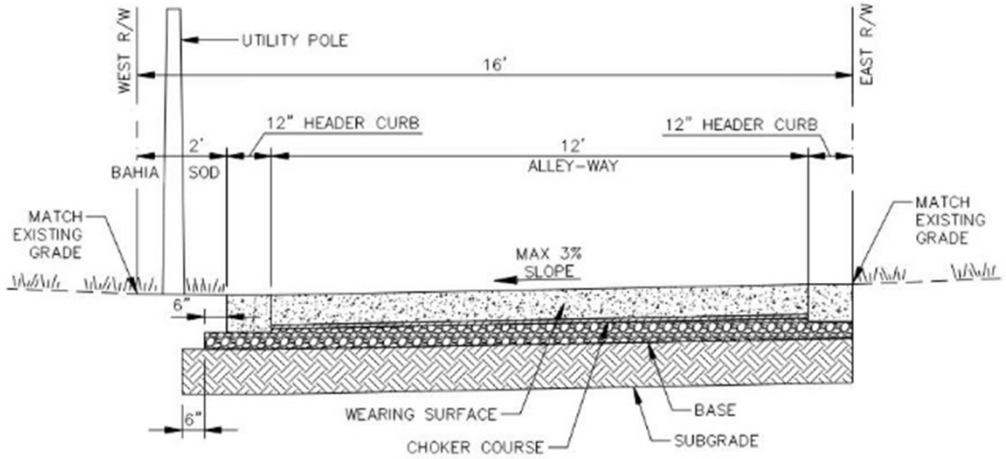
Figure 2-25: Proposed Alleyway Improvement Locations

2.11.1 Permeable Concrete

Permeable pavement systems are generally used in areas with low-speed travel and light to medium traffic loads, such as alleys, parking lots, driveways, bike paths, etc. These surfaces are effective at reducing runoff, delaying runoff onset, and improving water quality. Permeable paving surfaces periodic cleaning (i.e. street sweeping, vacuuming, or pressure washing) in order to prevent reduction of the pavement permeability.

Typically, permeable concrete is installed over the following base from the bottom up (see ***Figure 2-26***):

- *Subgrade* – Provides high permeability to allow rainfall runoff infiltration
- *Base* – Large, single-size, crushed stone with voids for stormwater infiltration
- *Choker Course* – Single-size crushed aggregated, which stabilizes the surface for the previous concrete installation
- *Permeable Concrete* – Porous concrete mix, which allows stormwater to flow through into the base for groundwater recharge



PAVEMENT SPECIFICATIONS	
WEARING SURFACE	8" PERVIOUS CONCRETE (CONSTRUCTED PER ACI 522.1-B)
CHOKER COURSE	1" AASHTO NO. 57 STONE
BASE	6" UNIFORMLY GRADED **FDOT NO. 4 WASHED STONE**
SUBGRADE	12" INSITU OR SUITABLE LEVEL SOIL COMPACTED TO MIN. 95% MAX DRY DENSITY IN ACCORDANCE WITH MODIFIED PROCTOR ASTM D1557

Figure 2-26: Permeable Concrete Pavement Section

The alleyways will have a maximum 3% cross-slope with proposed 12-inch header curb along both sides that will run the extent of the alleyway. The typical sections also include a 2-foot strip to accommodate the utility poles and drainage facilities along the alleyways.

Permeable concrete mix uses the same materials as conventional concrete, excluding the fine aggregates. The grading of the coarse aggregate is narrowed, which prevents particle packing and creates porous voids. Extra precaution should be taken during installation, due to the high porosity and minimal water content of the permeable concrete mix.
If properly installed and maintained, permeable concrete typically has a life expectancy equal to conventional concrete (20-40 years). The most common maintenance problem associated with

permeable concrete is surface clogging caused by organic matter and sediment. It is recommended that maintenance be performed to vacuum the permeable concrete surfaces on a regular basis. All landscaping in the surrounding areas should be properly maintained in order to prevent soils and organics from being washed onto the permeable concrete pavement. Residents should also refrain from dumping trash, lawn clippings, etc. onto the alleyway pavement.

Visually, the aggregate in the permeable concrete is more prevalent due to the narrow grading of the coarse aggregate (see *Photo 9*). The material and installation cost of the permeable concrete is greater than conventional concrete; however, permeable concrete is a less expensive option compared to the installation of a piped stormwater system and/or retention area. See *Photos 10* and *11* for examples of previously installed permeable concrete.

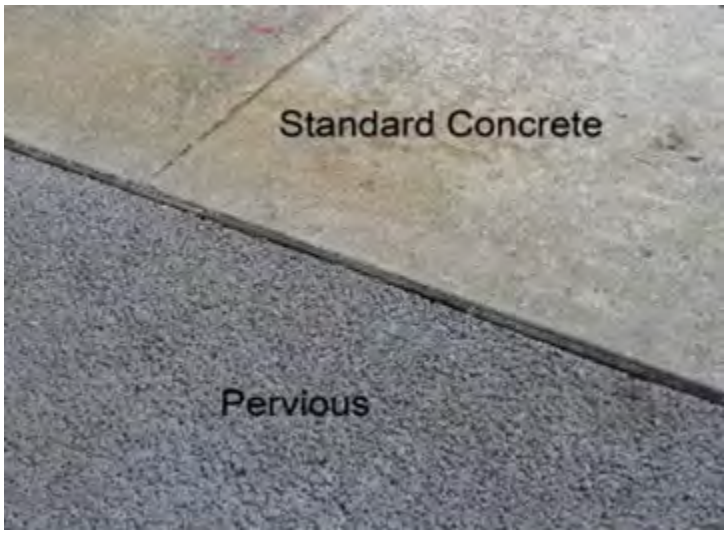


Photo 9: Visual appearance of Standard Concrete vs. Permeable Concrete

Photo 10: Installation of Permeable Concrete Alleyway Paving

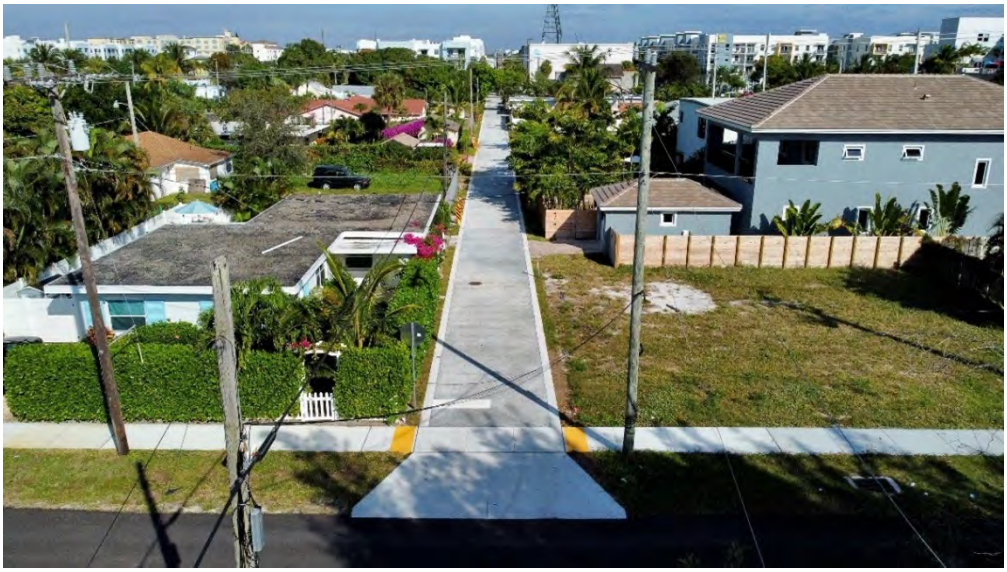


Photo 11: Permeable Concrete Alleyway in Osceola Park Neighborhood

2.12 Traffic Signage & Pavement Markings

All existing pavement markings will be replaced following the proposed roadway improvements and additional striping will be proposed as needed. Thermoplastic pavement markings will be used in all locations except at the locations of the proposed permeable concrete alleyways and on-street parking, which will have traffic paint proposed for any required striping as shown in Photo 12. Additionally, existing traffic signs in the project area will be replaced if they are found to be in poor condition. Special emphasis crosswalks will be proposed near schools. School signs will be replaced with new Manual on Uniform Traffic Control Devices (MUTCD)-compliant standard "fluorescent yellow-green" background color as shown in Figure 2-27.

Photo 12: Traffic Paint at Concrete Parking & Alleyway Examples

Figure 2-27: MUTCD-Compliant School Sign Examples

It is the intent to install consistent signage throughout the N.W. Neighborhood project. Ways to provide this is to have unique street name signs and to provide decorative pavement at the gateway entrances to the neighborhood. On Martin Luther King Jr. Drive, there are currently blue street signs with the "Preserve America" logo as shown in Photo 13 below.

Photo 13: Existing Street Signs on Martin Luther King Jr. Drive

The proposed street signs for the project will match the blue color of the existing street sign styles located on Martin Luther King Jr. Drive. The new signs will not include the logo, but will include the neighborhood name. Figure 2-28 shows the proposed street sign for the N.W. Neighborhood which will include the name of the individual neighborhood enclave on the sign.

Figure 2-28: Street Sign Example

2.13 Neighborhood Enclave Signage

As part of this project, individual neighborhood enclave public meetings were held following completion of the Draft Preliminary Design Report in order to obtain feedback on a number of topics in regards to the project. At these meetings, residents in each neighborhood were asked to select between Design Options 2, 3, 4; or a fourth option which is to replace the existing neighborhood wood sign design with the same design, but with a composite material. The Design Options 2, 3, and 4 presented in 2019 by the CRA's architect, are shown in Figure 2-29, 2-30, and 2-31 below.

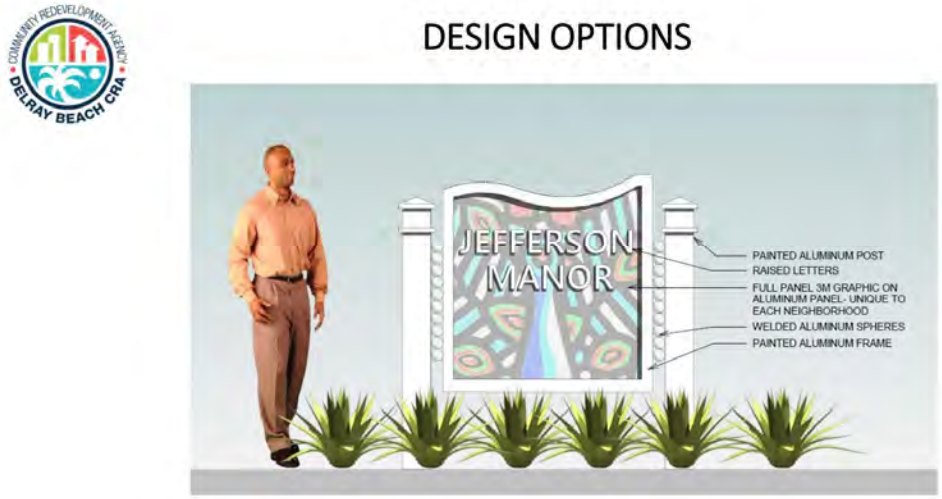


Figure 2-29: CRA Neighborhood Sign – Design Option 2

Figure 2-30: CRA Neighborhood Sign – Design Option 3

Figure 2-31: CRA Neighborhood Sign – Design Option 4

As per the resident feedback received at the public outreach meetings in 2022, the current neighborhood sign designs for the N.W. Neighborhood will be replaced with a composite material sign with the current design. Photos 14-20 show the current design for the neighborhood signs.

Photo 14: Jefferson Manor Neighborhood Sign

Photo 15: Carver Memorial Park Neighborhood Sign

Photo 16: Poinciana Heights Neighborhood Sign

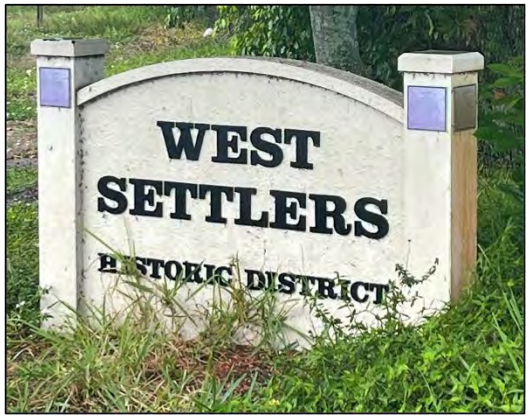


Photo 17: West Settlers Neighborhood Sign

Photo 18: Gateway Neighborhood Sign

Photo 19: Paradise Heights Neighborhood Sign

Photo 20: Westside Heights Neighborhood Sign

2.14 Transportation & Roadway Analysis Recommendations

An Engineer's Opinion of Probable Construction cost estimate in *Section 7* includes costs for the transportation and roadway analysis improvements presented in this Section.

The following permits are anticipated to be obtained for the proposed transportation and roadway improvements:

- Florida Department of Transportation (FDOT) Driveway / Connection Permit for improvements if they encroach into the right-of-way of Atlantic Avenue which is an FDOT roadway.
- Palm Beach County Right-of-Way Permit for improvements if they encroach into the right-of-way of Lake Ida Road which is a Palm Beach County roadway.

Section 3

Stormwater Analysis

3 Stormwater Analysis

3.1 Introduction

The Northwest Neighborhood Improvement Project is bounded by Atlantic Avenue to the south, Swinton Avenue to the east, Lake Ida Road to the north, and I-95 to the west. This is an estimated 315-acre area consisting of primarily residential development with schools, a park, churches, small commercial developments, the Delray Beach Tennis Center, and City Hall.

The goal of this task is to assess the existing drainage system and identify locations where stormwater improvements are recommended. This was accomplished in three different ways. Closed-circuit television (CCTV) inspection reports of the existing infrastructure were reviewed to determine where cleaning or pipe replacements are needed. A ponding assessment was performed using high resolution Light Detection and Ranging (LiDAR) data to locate low-lying trapped areas that are not currently served by inlets and pipes. And, finally, a stormwater model was created of the existing system to dynamically assess the capacity of the system and determine locations of flooding based on theoretical storm events. Modeling scenarios of infrastructure improvements were then created and compared to the existing conditions model to assess the benefits.

Regarding the previous work performed by another consultant; as successor engineer, Baxter & Woodman has created an entirely new stormwater model and utilized Palm Beach County's LiDAR data. The GIS ponding assessment is also new. Most of the information utilized in this task, however, (including survey, CCTV reports and photographs) were utilized from the work efforts of the previous consultant after review.

3.2 Background

3.2.1 Permitting

A significant portion of the project area, from I-95 to N.W. 3rd Avenue was planned and permitted to have stormwater improvements. The permitting history associated with this is described below.

In June of 1992, the South Florida Water Management District (SFWMD) issued Permit No. 50-02892-S for Conceptual Approval of a Surface Water Management (SWM) system to serve 252 acres of existing residential area located in the northwest quadrant of the City of Delray Beach referred to as the Northwest Area Drainage Improvements. Authorization was also granted for construction and operation of Phase I (10.68 acres) which included construction of the trunk collection line along N.W. 2nd Street, the control structure located at the intersection of N.W. 3rd Street and Lincoln Lane and the outfall culvert to the Lake Worth Drainage District (LWDD) E-4 Canal. Conceptual approval was granted for the remainder of the improvements which included a dry detention area, a collection system, and over 16,000 linear feet of exfiltration trenches. Figure 3-1 shows the original extent of the conceptual permit.

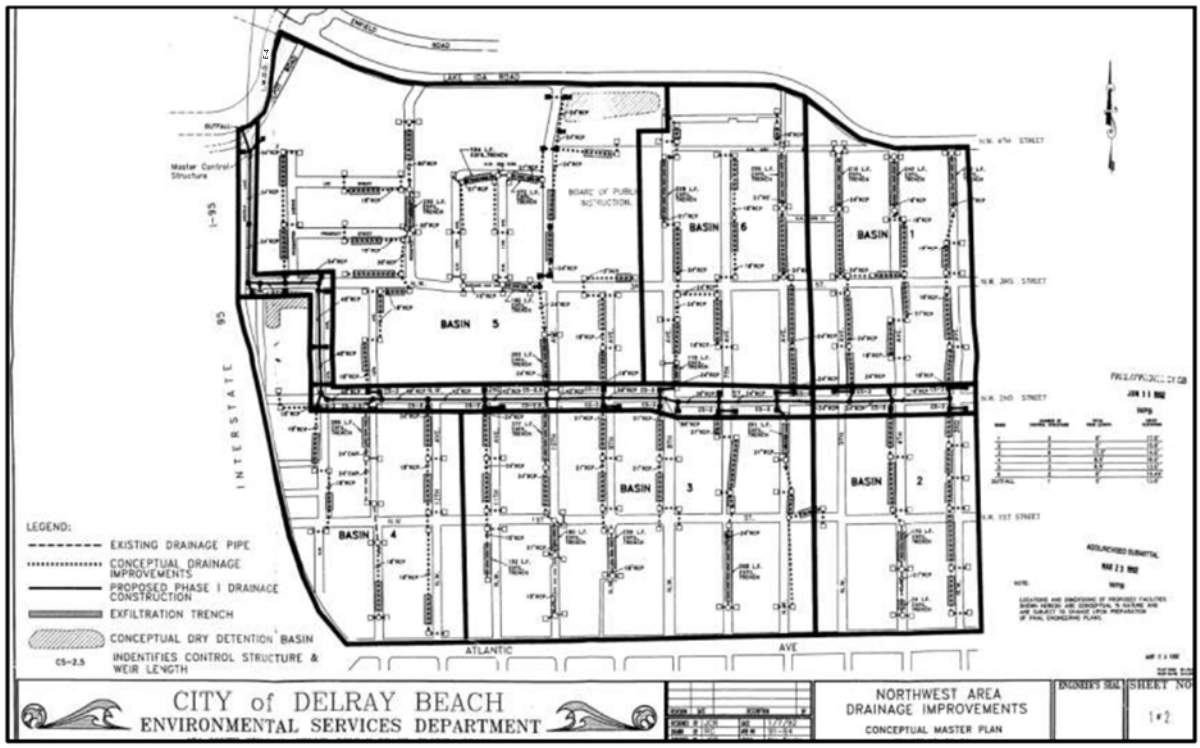


Figure 3-1: Original 1992 Conceptual Design

In December of 1992, the SFWMD issued a permit modification (Phase lA, 10.50 acres) to include the construction and operation of 790 linear feet of exfiltration trench along N.W. 3rd Avenue, south of N.W. 2nd Street. This trench was then connected into the previously constructed trunk collection line along N.W. 2nd Street.

In February of 1993, the SFWMD issued permit modification (Phase lB, 44.25 acres) to include the construction and operation of 310 linear feet of exfiltration trench along N.W. 6th Avenue (south of N.W. 2nd Street), a dry detention basin at N.W. 10th Avenue and Lake Ida Road, and connection of 989 linear feet of existing exfiltration trench to the overall SWM system.

In May of 1999, SFWMD issued a modification of the permit to include construction and operation of a surface water management system to serve 66.3 acres of existing residential development and roadways known as Basins 1 and 6 of the Northwest Area Drainage Improvements - Phase II consisting of inlets, culverts, swales, and 1,273 linear feet of exfiltration trench which discharge to the previously permitted 10th Avenue dry detention area, south of Lake Ida Road.

In August of 2015, SFWMD approved a roadway improvement project on N.W. 12th Avenue, south of N.W. 2nd Street. The project included drainage systems in the adjacent alleyways including 150 linear feet of exfiltration trench.

Approximately 2,600 linear feet of exfiltration existed in the project area prior to permitting. Most of these were connected to subsequent improvements and an additional 2,400 linear feet of exfiltration was permitted for construction from 1992 to present, leaving approximately 11,000 linear feet of conceptually

approved trenches remaining to be built. Figure 3-2 shows the progression of the permitting from 1992 to 2015 that has occurred as related to the master system.

Other third-party permits have been issued within the project area including private developers and the Palm Beach County School Board. Other improvements may also have been made that are not reflected in SFWMD's permit files. There are three dry detention areas in the northwest portion of the project area. One, located north of the S.D. Spady Elementary School, was permitted as part of the 1993 modification. There are no permit records for the other two detention areas. One is located along Lake Ida Road between Roosevelt Avenue and N.W. 10th Avenue. The other is located in the southeast corner of the intersection at N.W. 15th Avenue and N.W. 3rd Street.

3.2.2 Observed Flooding

Only three stormwater related complaints were found in the City's complaint log for the project area. Only one appears to be associated with flooding and is located on N.W. 8th Avenue. Several photos taken of roadway ponding issues by the previous consultant are presented below. The three complaint locations are shown on Figure 3-2. Photos 1 through 10 show ponding issues within the neighborhood. Photo 8 shows an area of more severe flooding on N.W. 3rd Avenue which occurred on June 24, 2022 when a tropical storm passed through. There are no drainage facilities at that location and the road is depressed between N.W. 2nd Street and N.W. 3rd Street.

A common complaint in older urban areas is street flooding due to poor grading. Many older streets were not built with sufficient grading or have settled over time, leaving many areas that frequently flood. Such flooding may not be the result of heavy rains. Trapped areas with little or no pervious area will exhibit such a problem, even during minor rain events. These areas will be addressed by changing the road grades and/or extending drainage infrastructure to the affected areas.

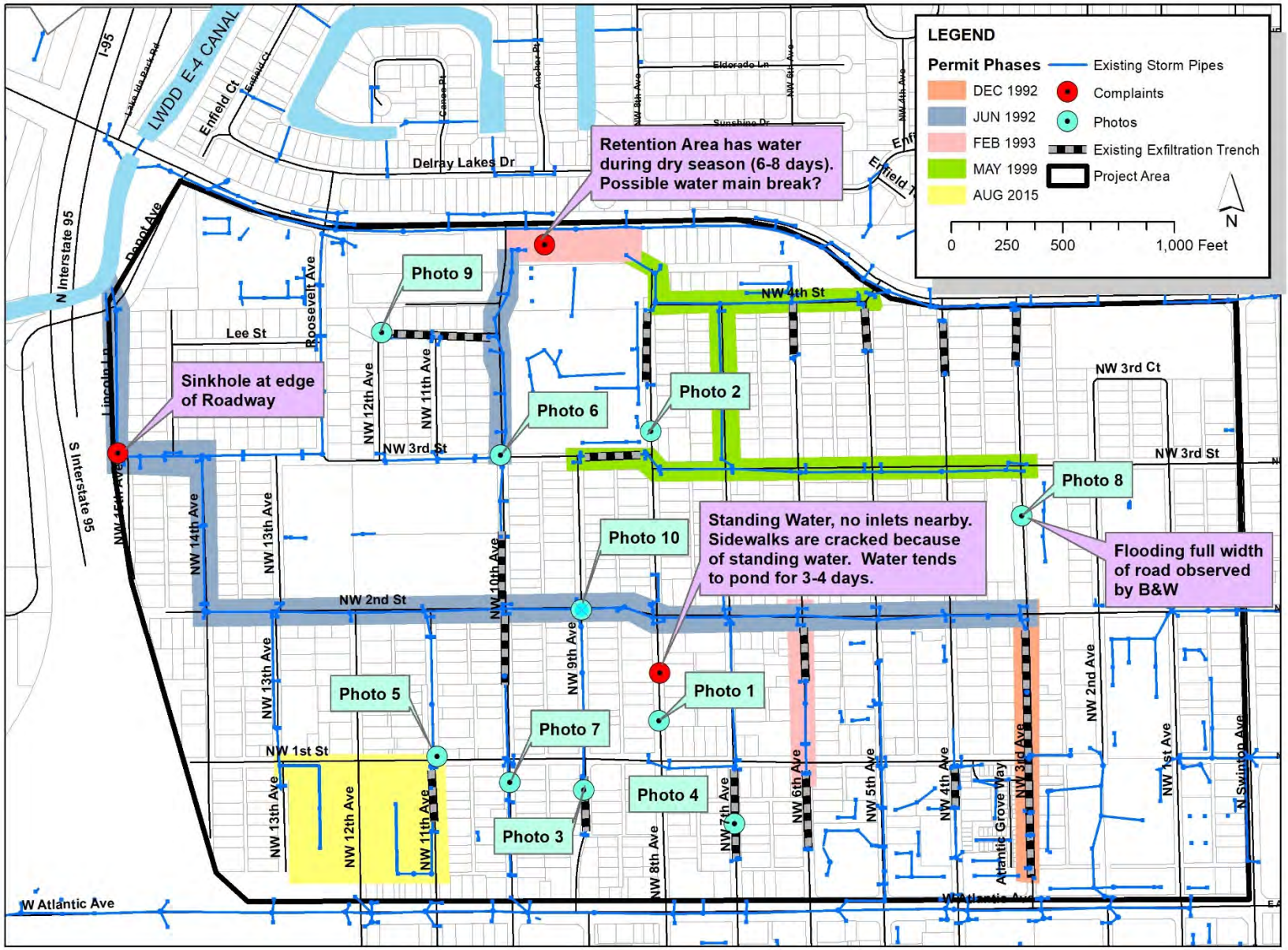


Figure 3-2: Permitting Phases, Complaints, and Ponding Photo Locations

Photo 1: N.W. 8th Ave. N of 1st St.

Photo 2: N.W. 8th Ave. N of 3rd St.

Photo 3: N.W. 9th Ave. S of 1st St.

Photo 4: N.W. 7th Ave. 157' N of Atlantic Ave.

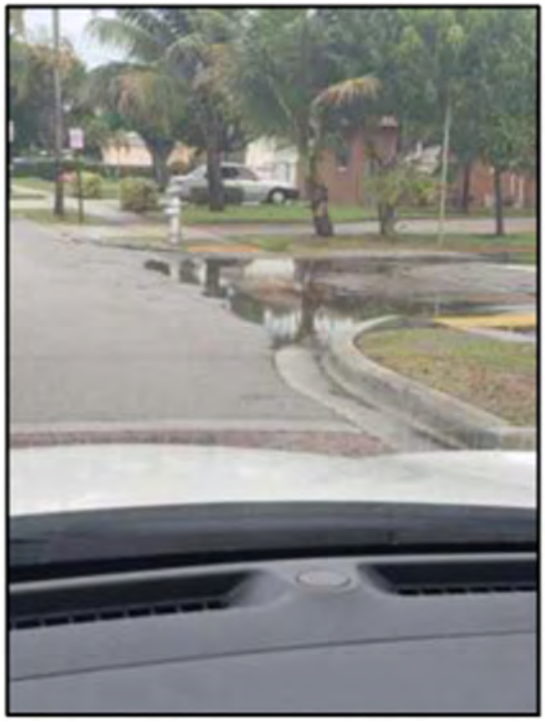


Photo 5: N.W. 12th Ave. & 1st St.

Photo 6: N.W. 10th Ave. & N.W. 3rd St.

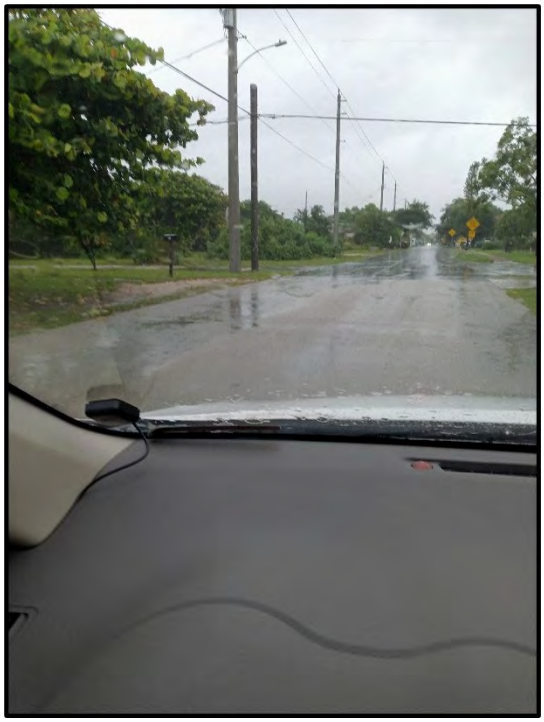


Photo 7: N.W. 10th Ave. S of N.W. 1st St.

Photo 8: N.W. 3rd Ave. S of N.W. 3rd St.

Photo 9: N.W. 12 Ave. & N.W. 3rd Ter.

Photo 10: N.W. 9 Ave. & N.W. 2nd St.

3.3 Regulatory Requirements

The South Florida Water Management District (SFWMD) is the controlling agency in regard to regulation and enforcement of construction related activities that effect Waters of the State. SFWMD imposes a pre versus post requirement for peak discharge rates associated with a 25-year, 3-day storm and also requires water quality treatment of a determined volume of runoff based on the amount of new impervious area. Treatment is usually accomplished via lakes or dry detention/retention areas.

As previously stated, most of the project area received a SFWMD permit in 1992 to construct a main stem drainage system with various subsequent phases of secondary drainage systems including exfiltration trenches and dry detention areas for water quality and flood control. It appears that the design of the permitted system was attempting to meet rules that were normally applied to new development despite the fact that the project area had been developed before these rules existed. SFWMD has since developed a new rule that eases the burdens for retrofitting older existing developments. The new rule even allows for discharges to exceed existing rates if other improvements are made that improve water quality.

However, the project area was permitted for a rate of discharge based on a basin discharge formula for the C-15 Basin and was also permitted by the Lake Worth Drainage District (LWDD) which controls the E-4 Canal where most of the runoff from the N.W. Neighborhood is discharged. While there may be some easing of water quality requirements, the allowable discharge rate (permitted at 64 cfs for the 25-year, 3-day storm) will be enforced.

Since the roads are not to be widened, the only new impervious areas will be from paving of the alleyways. SFWMD will require treatment for up to 2.5 inches of runoff over the new impervious area. Permeable pavement is being provided for the alleyways. The University of Central Florida has performed extensive studies of permeable pavement with results showing that such systems can be considered up to 50 percent pervious. Unfortunately, SFWMD does not provide a direct credit for its use. It can, however, be considered as a "good faith" measure if water quality treatment cannot be completely met due to a demonstrated hardship. However, the amount of exfiltration trenches that are anticipated with this project should be sufficient to meet the water quality requirement.

3.4 Inventory Assessment

The existing drainage pipes and structures were televised and the resulting reports reviewed to determine the condition of the system. Based on the assessment, the facilities were ranked from good to poor. Generally, the ratings, based on the notes taken, were used in the following manner:

Good – No Action
Fair – Recommend cleaning/root removal and possible lining
Poor – Recommend replacement

As a result of the stormwater review, there are some existing stormwater lines with damage sufficient enough to warrant replacement. The predominant concern of damage to the existing stormwater infrastructure is root intrusion. Table 3-1 provides a breakdown of the fair and poor pipeline conditions for both solid pipes and exfiltration trench (slotted) pipe. Figure 3-3 shows the locations of the existing pipes and the condition. Pipes listed as "Fair" include minor to moderate root intrusion and totals 4,553 linear feet. Pipes listed as "Poor" were subdivided into two categories, Structural and Roots, for which there are a total of 455 linear feet of pipes with structural issues and 1,725 linear feet of pipes with severe root intrusion. The structurally compromised pipes include corrugated metal material, some located within exfiltration trenches, and vary in size from 18-inch to 24-inch. Some of these pipe segments are crushed by 50 percent or greater of the diameter of the pipe.

The company that performed the CCTV assessments, Shenandoah Construction, recommended the use of RootX, a foaming action solution. RootX is an Environmental Protection Agency registered herbicide that kills roots on contact. After initial treatment, the solution leaves behind a residual that inhibits new growth for up to 12-months. For minor or moderate root intrusion (pipes in "Fair" condition), it is recommended that RootX be applied. However, for solid pipes that are in "Fair" condition, impacts at the pipe joints that the roots may have caused, should be addressed. Lining was considered, however, the cost to line stormwater pipes of 15-inch to 30-inch diameter can exceed the cost of replacing the pipes with new pipes, especially considering that the majority of roads are being reconstructed with this project. Therefore, it is recommended that these pipes be replaced, and that RootX only be used for exfiltration trenches that are in "Fair" condition.

For areas of structural damage or severe root intrusion, replacement is recommended. These occur in both solid pipes and exfiltration trench pipe. Most of the occurrences in exfiltration trench pipe, correspond to trenches which predate the permitting conducted in the 1990s. Therefore, they are considered to be beyond their useful life.

Table 3-1: Pipeline Condition Summary and Recommendations

Condition	Type	Length (ft)	Recommendation
Fair	Solid Pipe	2795	Replace
Fair	Exfiltration Trench	1758	Treat Roots
Poor (Structural)	Solid Pipe	246	Replace
Poor (Structural)	Exfiltration Trench	209	Replace
Poor (Roots)	Solid Pipe	1139	Replace
Poor (Roots)	Exfiltration Trench	586	Replace
	Total	6733	

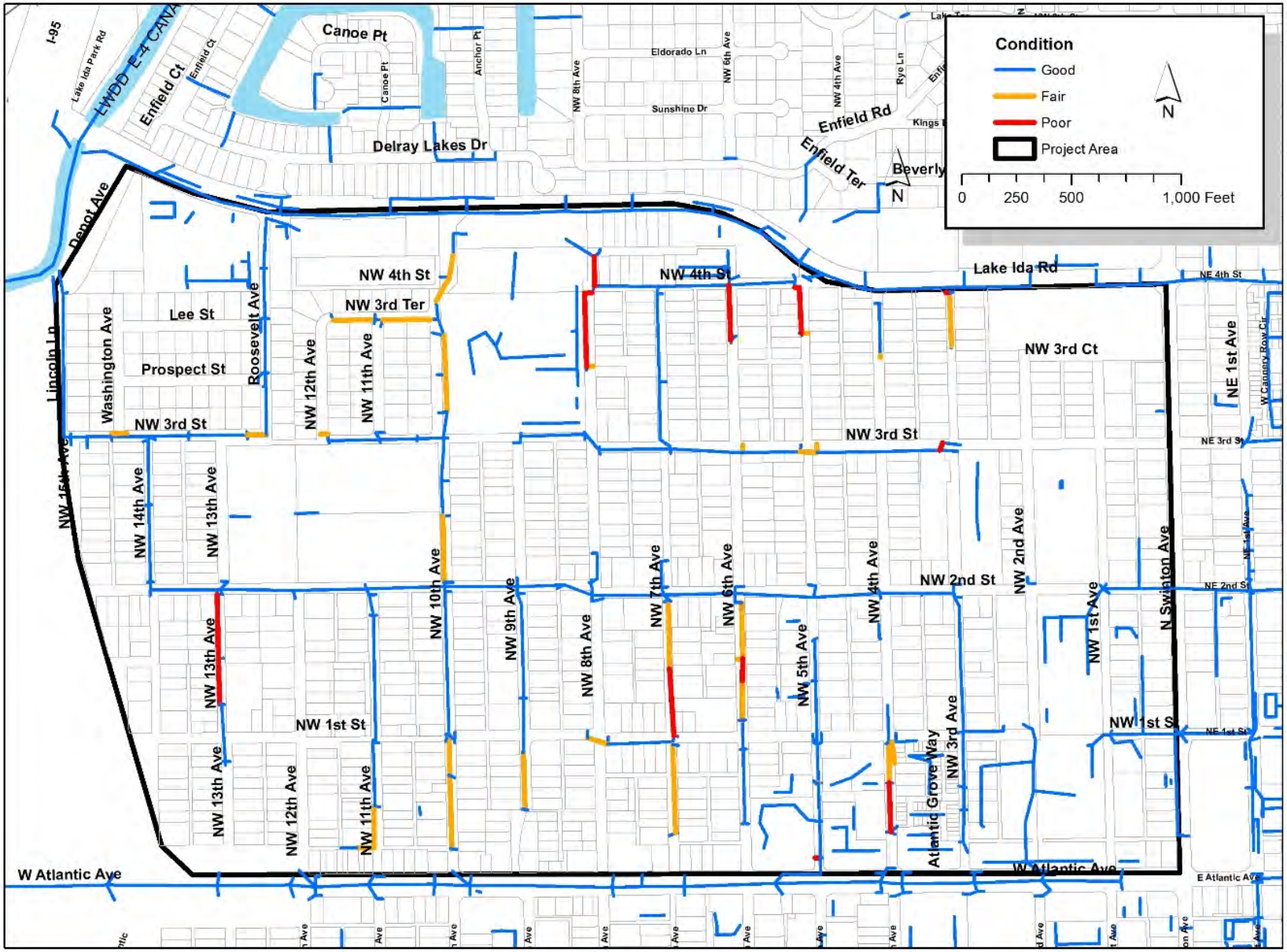


Figure 3-3: Existing Drainage Pipe Condition

3.5 Ponding Assessment

Although the drainage system collects stormwater and conveys it to the northwest into the LWDD E-4 Canal, the natural gradients within the project area slope in many different directions. One north-south street may slope to the north, whereas the street next to it may slope to the south. The flow patterns are inconsistent but partially reflect ridges that span in a southwest to northeast direction. A fortunate aspect of this is that the project area is not flat and does have relief for water to flow and collect naturally. It also has the potential for ponding where water runoff collects in low trapped areas.

A ponding assessment was performed using Light Detection and Ranging (LiDAR) data, available from Palm Beach County with elevations on grid cells every 2.5 feet apart. The analysis used ArcGISTM tools intended for fixing raster surfaces by filling sinks within the surface. Subtracting the original topography raster from the filled raster yields the locations and depths of the sinks where water would be likely to pond. The depressed areas were converted to polygons and spatially overlaid with the roads to assess the areas within the rights-of-way of the roads and alleys. The dataset was further assessed to determine if the depressions are currently served by existing drainage inlets. The results of the analysis are shown in Figure 3-4 and were used as part of the decision process of where to add new infrastructure along with the assessments that were performed.

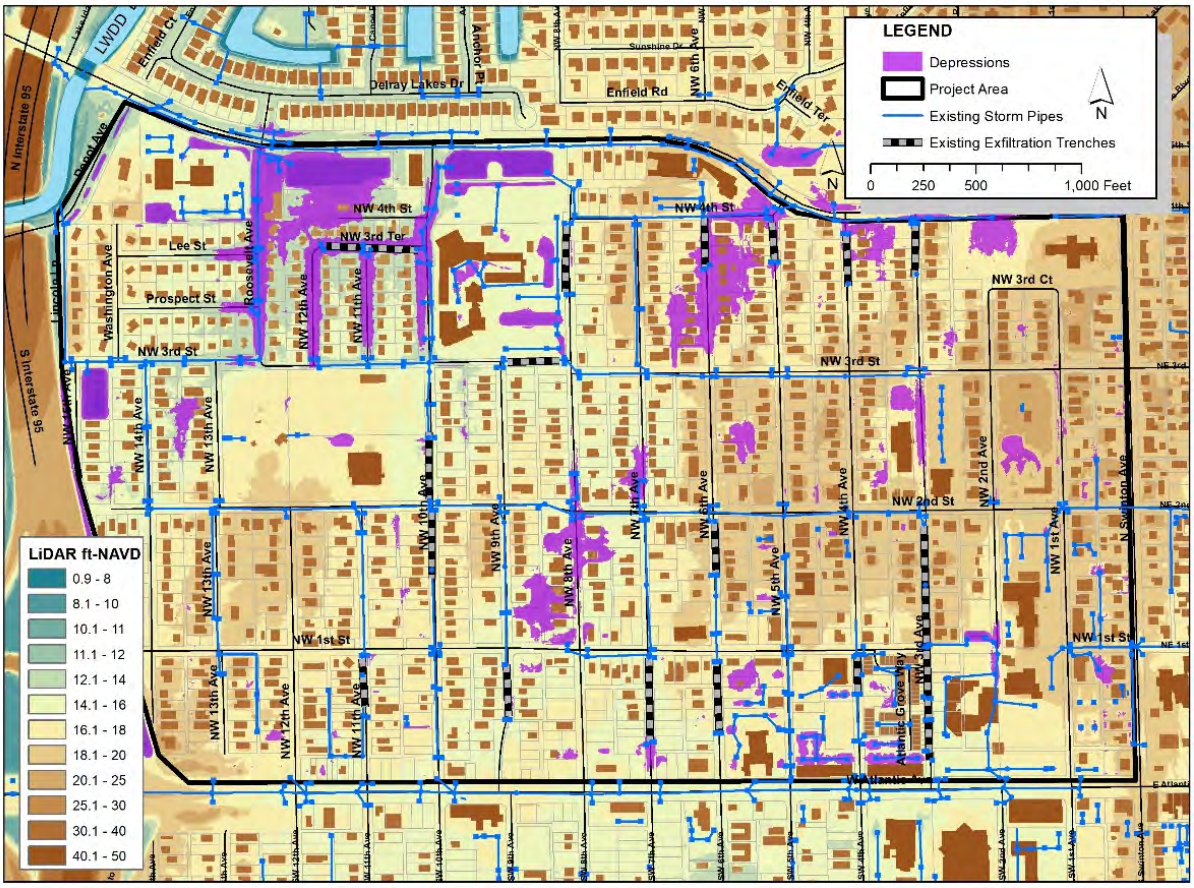


Figure 3-4: GIS Ponding Assessment

3.6 Stormwater Modeling

A flood routing model was set up to simulate the existing drainage systems using Inter-connected Pond Routing ver. 4 (ICPR4) software. The model developed by the previous consultant was available as PDF files, not in the native ICPR format. The PDF files were reviewed to determine if the information should be re-entered. Since the previous model did not appear to use the County's LiDAR data, it was decided to create the model from the start. Reliable topography, beyond the surveyed rights-of-way is crucial for developing the hydrology and for assessing the flood impacts spatially.

Some challenges had to be overcome that are typical for older urban areas. The project area does not match the drainage area for which it is associated. Some areas along the eastern portion of the project, which were not in the original SFWMD permit, connect to offsite drainage systems which flow to the east. Likewise, there is a substantial amount of area along the southern portion of the project that drains south into Atlantic Avenue. These areas also can sheet flow into the master system depending on the magnitude of the storm event. The model was developed to account for these circumstances.

3.6.1 Hydrology

Subbasins were delineated to define individual catchment areas that collect runoff and discharge it at determined locations. LiDAR data was used extensively by creating topographic profiles along the roads and alleys in north-south and east-west directions. High points on the profiles were identified as indicators of break lines for surface water flow. Existing drainage infrastructure was also considered. In all, 40 subbasins were delineated as shown in Figure 3-5.

Most of the soils within the project area are classified as St. Lucie, defined as very well drained with relatively high percolation rates. Palmello is considered moderately well drained. Basinger, Immokalee, and Myakka are considered poorly drained. Urban Land is unknown. But considering its vicinity to St. Lucie soils, it is likely similar and very well drained. Land use within the area is predominately single family residential with some institutional and educational land use as well. Soils and land uses are shown in Figures 3-6 and 3-7, respectively.

The average percentage of impervious area within the subbasins is approximately 50 percent. The depth to the wet season water table exceeds 4 feet. According to SFWMD, the maximum soil storage is 8.18 inches which corresponds to a Curve Number (CN) of 55. This value was used for the very well drained soils. A value of 60 was used for moderately drained soils and 66 was used for poorly drained soils. These values are adjusted internally in the model based on the impervious values associated with the land uses.

Time of Concentration (Tc) values were also calculated for each subbasin based on travel distances, slopes, and types of surfaces. Some of the values were less than 10 minutes, which is typically the minimum value used for modeling. For those subbasins, a value of 10 minutes was used.

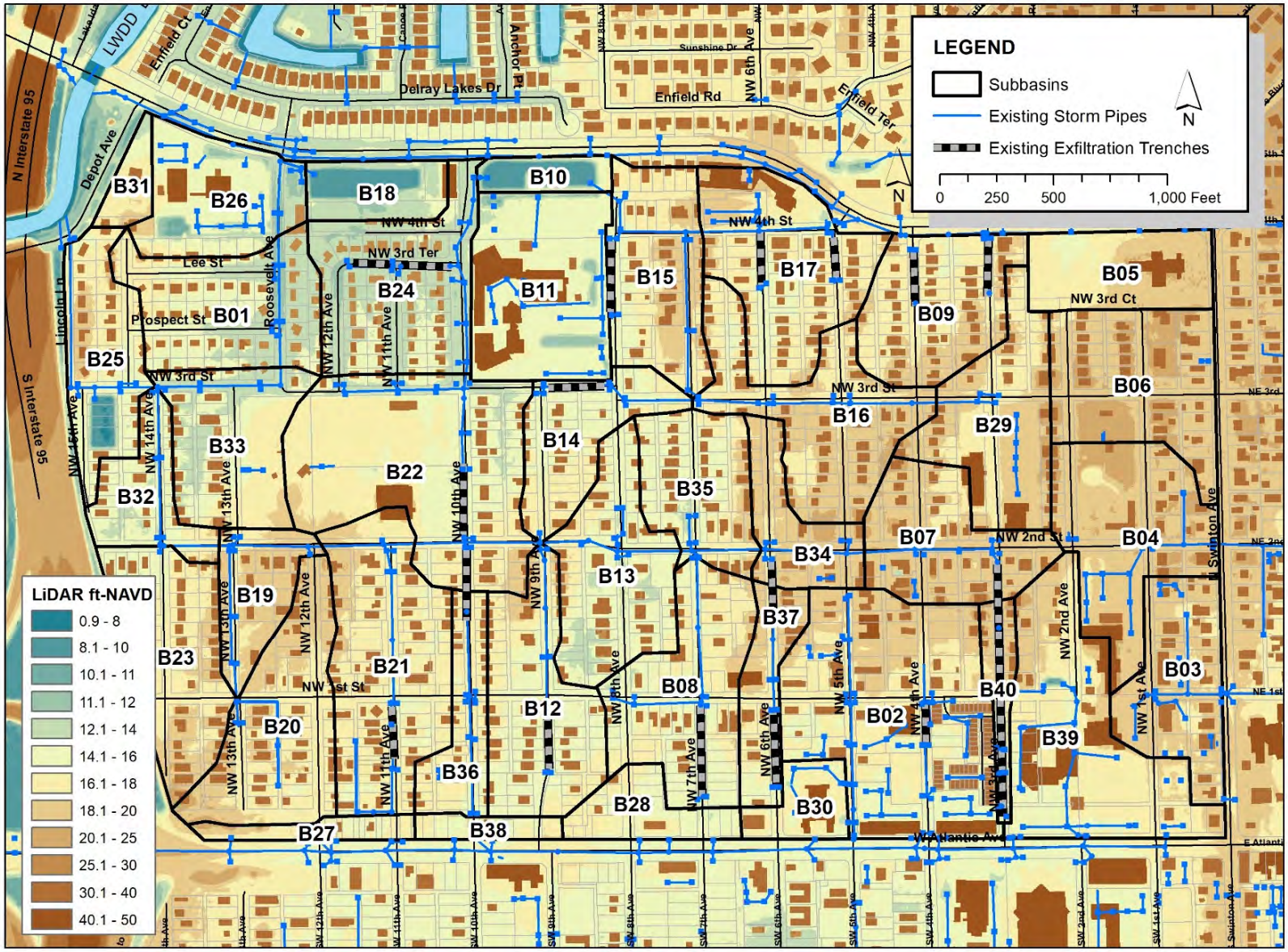


Figure 3-5: Stormwater Subbasins

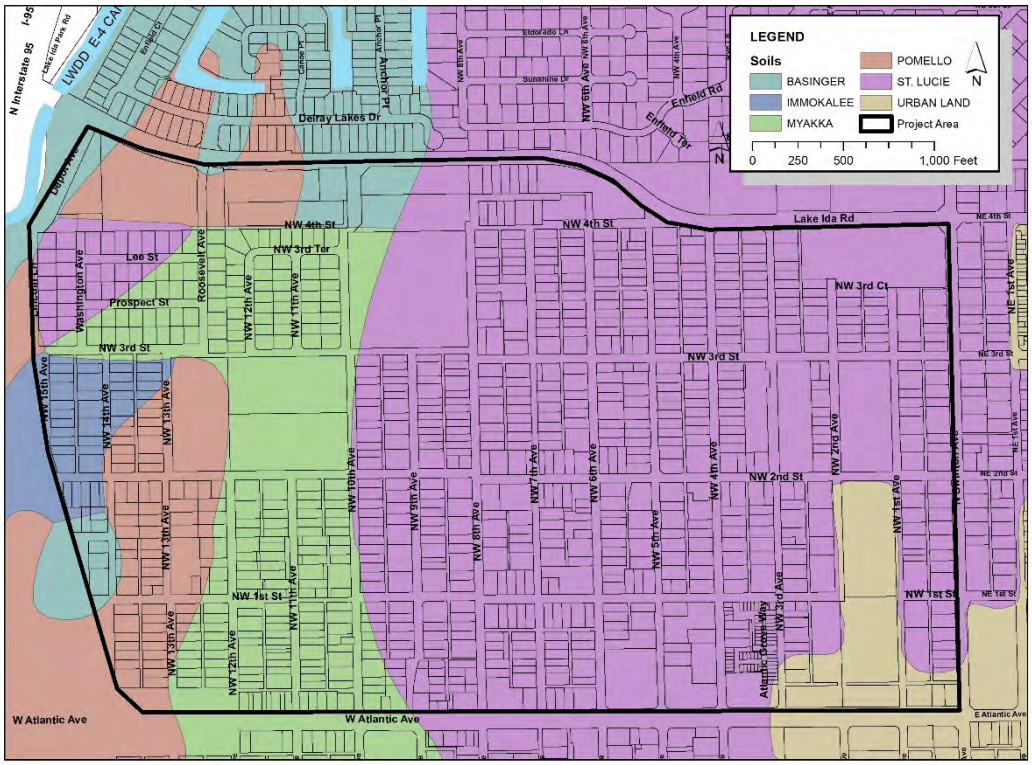


Figure 3-6: Soil Types

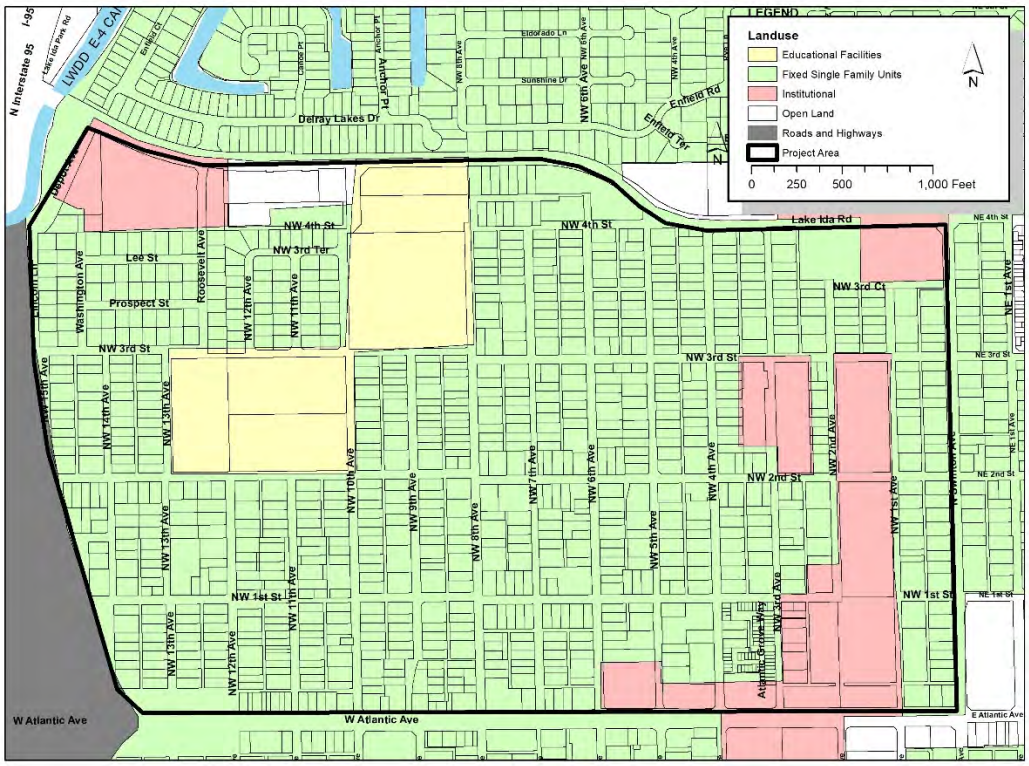


Figure 3-7: Land Uses

The Level of Service (LOS) storm used by the City for new roads is a 10-year, 1-day storm event which has an associated rainfall amount of 8.0 inches distributed over a 24-hour statistical hydrograph, per SFWMD. A 3-year, 1-day storm event is often used for older roads that were constructed before higher standards were established, which includes 6.5 inches of rain. Rainfall amounts for the 25-year and 100-year 3-day events are 15 inches and 19 inches respectively. The 25-year, 3-day storm is the design storm used to verify peak discharge rates for comparison to the rate allowed by SFWMD.

3.6.2 Hydraulics

The project area includes several phases of drainage infrastructure constructed primarily in the 1990s including the main stem of the drainage system located on N.W. 2nd Street (Martin Luther King Jr. Drive) starting at 3rd Avenue and extending west. The main stem turns north onto N.W. 14th Avenue and Lincoln Lane before discharging to LWDD E-4 Canal. This and other existing drainage pipes were entered into the model as links including pipe sizes, lengths, elevations, and friction coefficients.

Control structures were added including the structure discharging to the LWDD E-4 Canal which consists of a triangular bleeder and a weir. The topology of the subbasins suggests that a significant amount of sheet flow between subbasins can occur. Each subbasin boundary was examined to determine low areas where such flows could occur. Profiles of the LiDAR data were produced at those locations and used as irregular weirs cross-sections in the model to simulate sheet flow between subbasins and from subbasins to off-site areas.

Boundary conditions were entered to simulate anticipated tailwater effects at discharge locations. Recorded monitoring data in Lake Ida, which is directly connected to the LWDD E-4 Canal was examined to determine peak elevations for different storm frequencies. Those peaks were then applied to a unit hydrograph to create a time series of stages for the LWDD E-4 Canal. Other discharge locations to the east and to Atlantic Avenue do not have monitoring data to rely upon. For those discharge locations, it was assumed that the downstream peak stages are one foot below the inlet or manhole that the discharge pipe is connected into.

The above-described hydraulic features are shown as model elements in Figure 3-8 which was produced from the ICPR4 interface.

3.6.3 Model Results for Existing Conditions

The model was run for the 3-year, 1-day, 10-year, 1-day and 25-year, 3-day storm events to assess locations where flooding may occur. This differs from the ponding assessment which only determined locations where surface water may be trapped and unable to runoff or enter the existing infrastructure. Figure 3-9 shows the spatial extent and depths of flooding based on the modeling results for the 10-year, 1-day LOS and 25-year, 3-day storms using the existing conditions. In most cases, both analyses showed flooding at the same locations. This suggests that, in addition to fixing trapped areas, storage and conveyance will also need to be improved to reduce the flood stages in those areas.

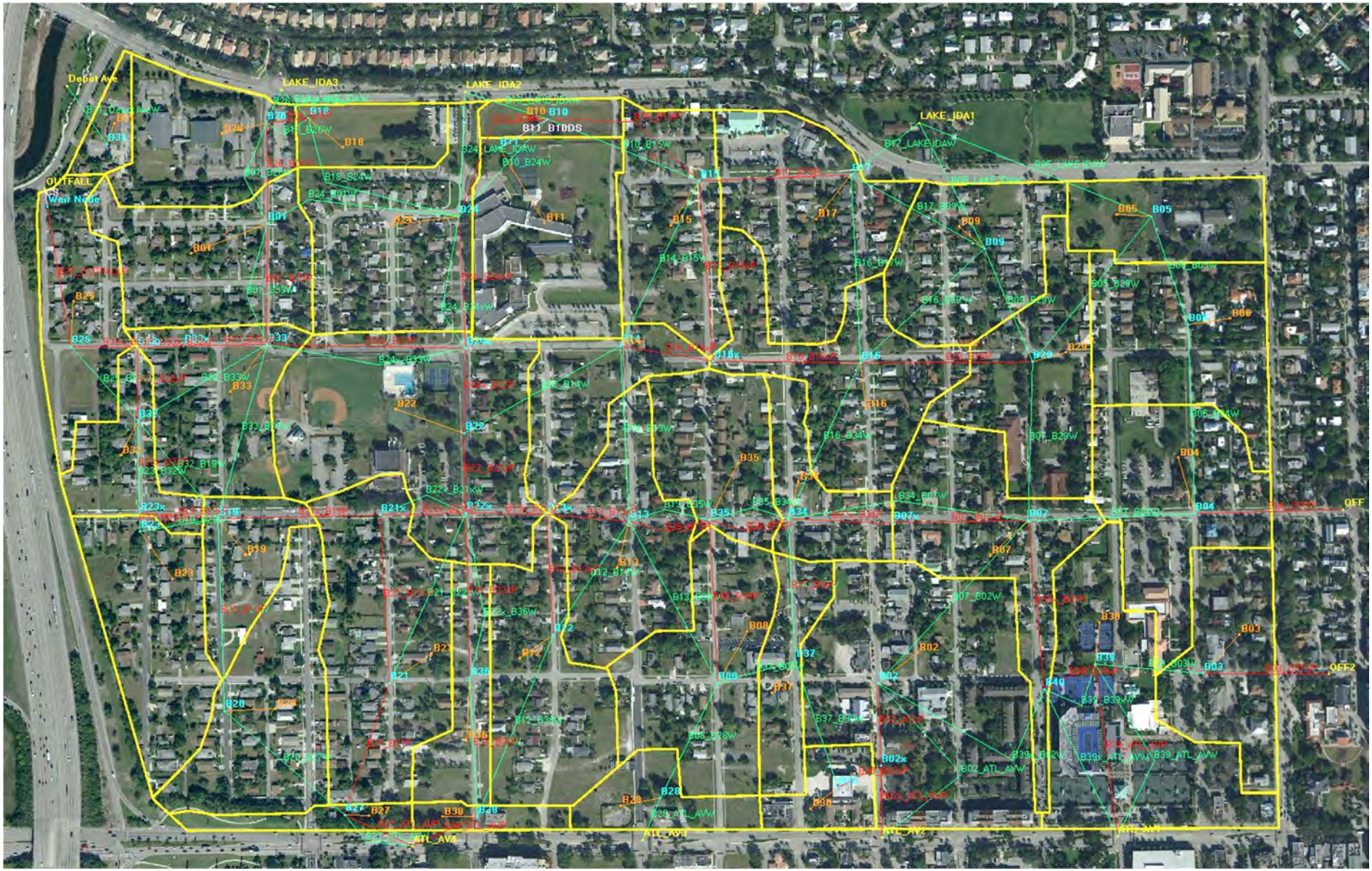


Figure 3-8: ICPR4 Model Network (Nodes = blue, Pipe Links = red, Overland Flow Weirs = Green)

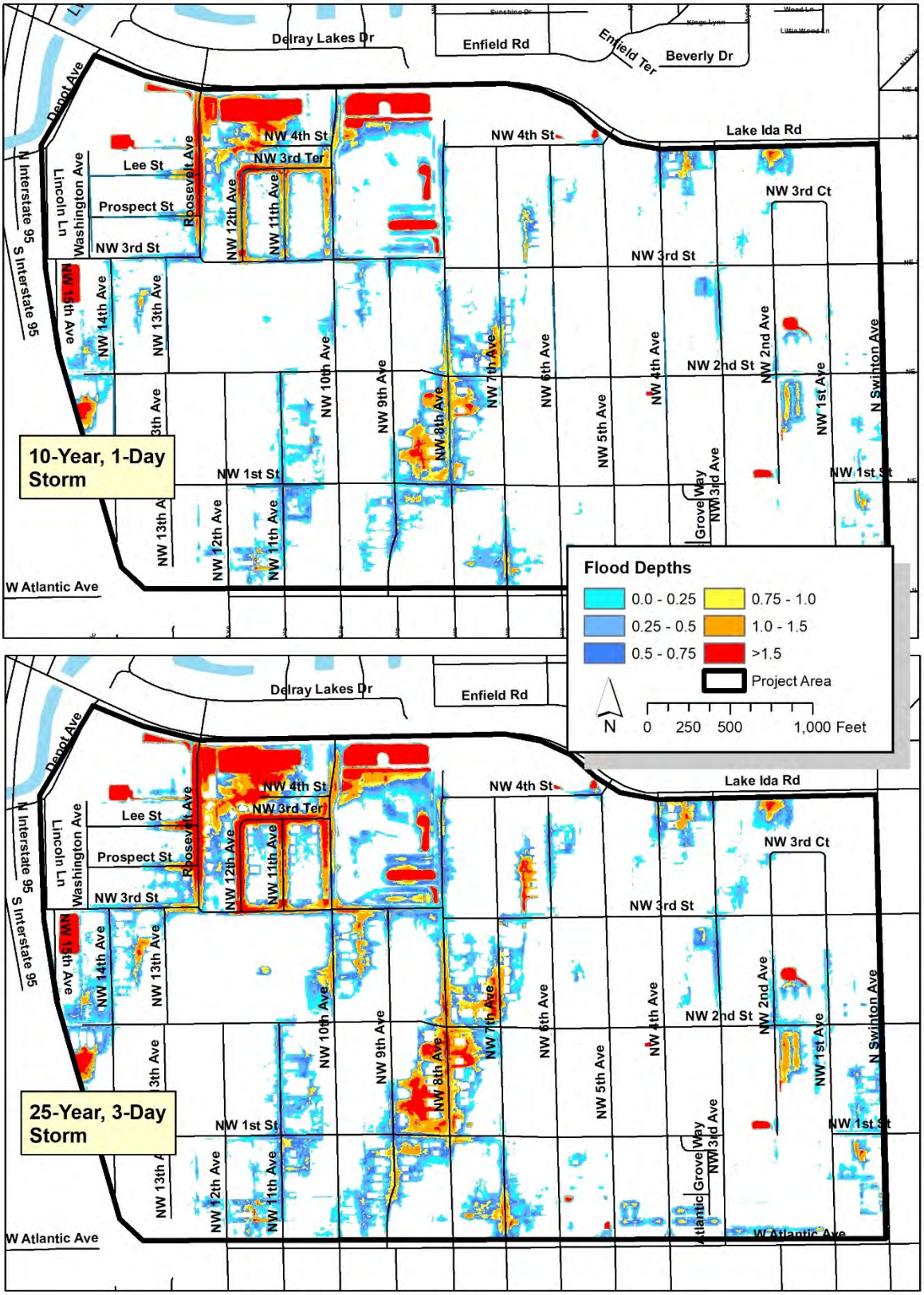


Figure 3-9: Flood Routing Model Results for Existing Conditions

The model takes into account the storage that the existing exfiltration trenches provide. There various methods of accounting for this storage including adding pumps or adding storage to subbasin stage storage tables. The former method can over-estimate the percolation because the groundwater soon begins to surcharge around the trenches limiting the discharge. A more appropriate method, as accepted by SFWMD, is to use SFWMD's exfiltration trench formula to calculate the volume of storage. This method was used and the storage was added to the model. The hydraulic conductivity (k) that was used in the formula was based on an average k value of previous values submitted to and accepted by SFWMD associated with the existing permit.

The results of the model show that there are generally three areas where flooding is occurring – Roosevelt Avenue, N.W. 14th Avenue/N.W. 3rd Terrace, and N.W. 8th Avenue (between N.W. 1st Street and N.W. 2nd Street). The flooding on N.W. 8th Avenue correlates with one of the complaints. However, there were no complaints received from the other two locations where the flooding appears to be more severe. This is unusual and warrants researching more files for past complaints and/or speaking to some of the residents in those areas.

3.7 Stormwater Improvement Recommendations

The decision of where to replace or construct new drainage infrastructure depends on the condition of the existing drainage pipes, severity of flooding as well as other factors such as persistent ponding. In response to flooding, exfiltration trenches were added to the model at locations that would provide the benefit where it is needed. Several model iterations were run to determine the optimal usage of the trenches. Additional pipes and inlets can provide connectivity to trapped areas where potential ponding was determined as well as observed ponding. The neighborhood also appears to be conducive for the use of swales. Swales provide additional water quality and can assist in draining water from paved surfaces. Swales are recommended in all areas where they can be accommodated, especially in areas where no drainage infrastructure is recommended.

It was further noted in the model that the peak discharge rate into the LWDD E-4 Canal for the 25-year design storm is 59 cfs which is below the permitted allowable discharge rate of 64 cfs. Model iterations were performed of lowering the control structure weir (in conjunction with the other improvements) until the discharge equaled 64 cfs. This resulted in lowering the weir from 11.5 feet, NAVD to 10.9 feet, NAVD. The model also suggested that flows are backing up into the flood prone areas from the west and from the south. Recommendations include adding inline check valve at two locations to prevent this from occurring.

Lowering the weir and adding the check valves provided as much benefit to the flood prone areas as the additional exfiltration trenches. However, even with these combined improvements (lower weir, valves, and exfiltration trenches) the model still indicates that flooding, though reduced, can still occur. Any additional attempts to reduce the flooding further would likely involve adding more dry detention storage. Changes in flood depths for the existing system versus a system with the proposed improvements are shown in Figure 3-10. The 3-year, 1-day storm was utilized for this comparison because very little change was observed for the 10-year, 1-day LOS storm. The recommended drainage improvements including new infrastructure and maintenance recommendations are presented in Figure 3-11.

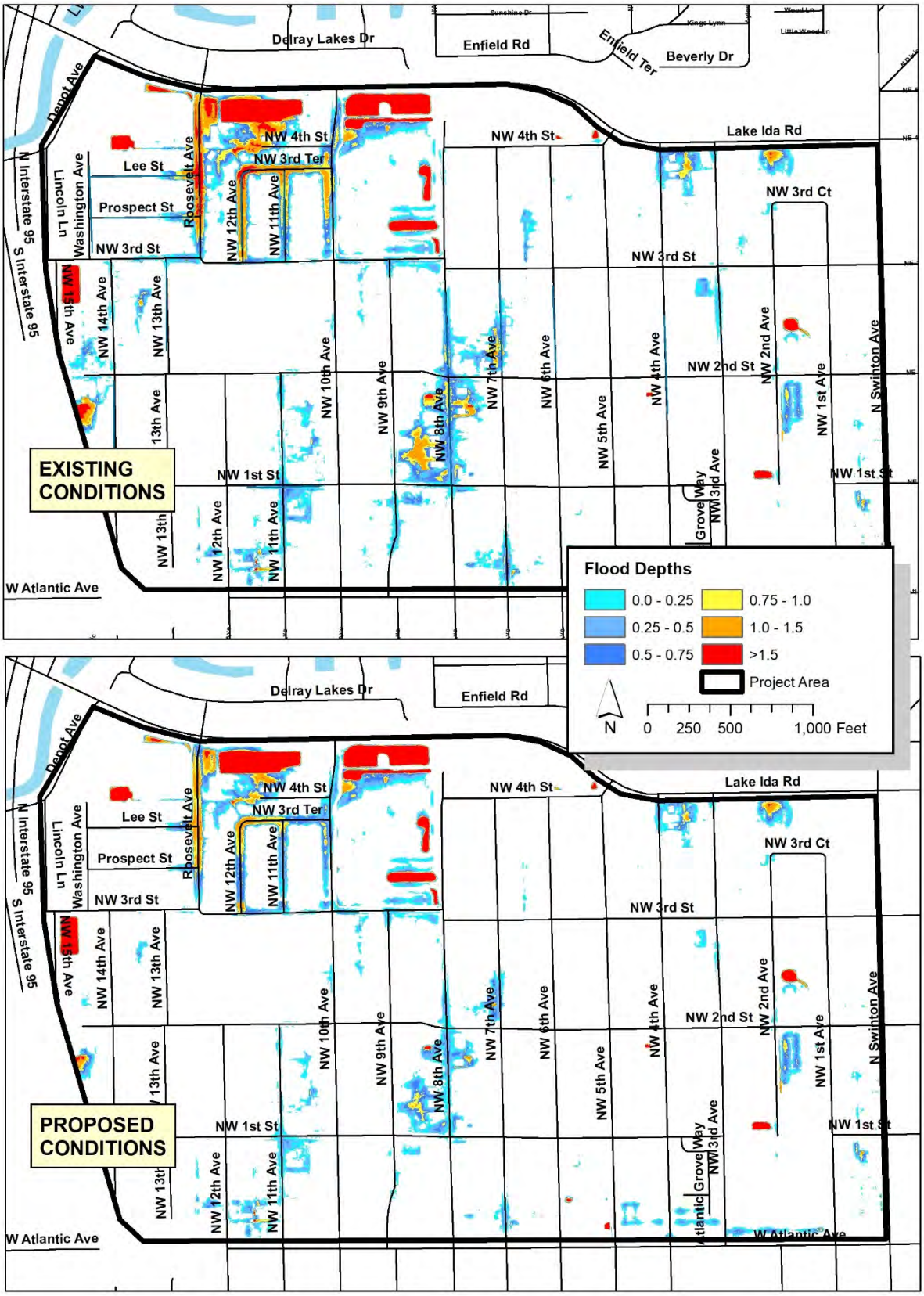


Figure 3-10: Existing vs Proposed Conditions for 3-Year, 1-Day Storm Event

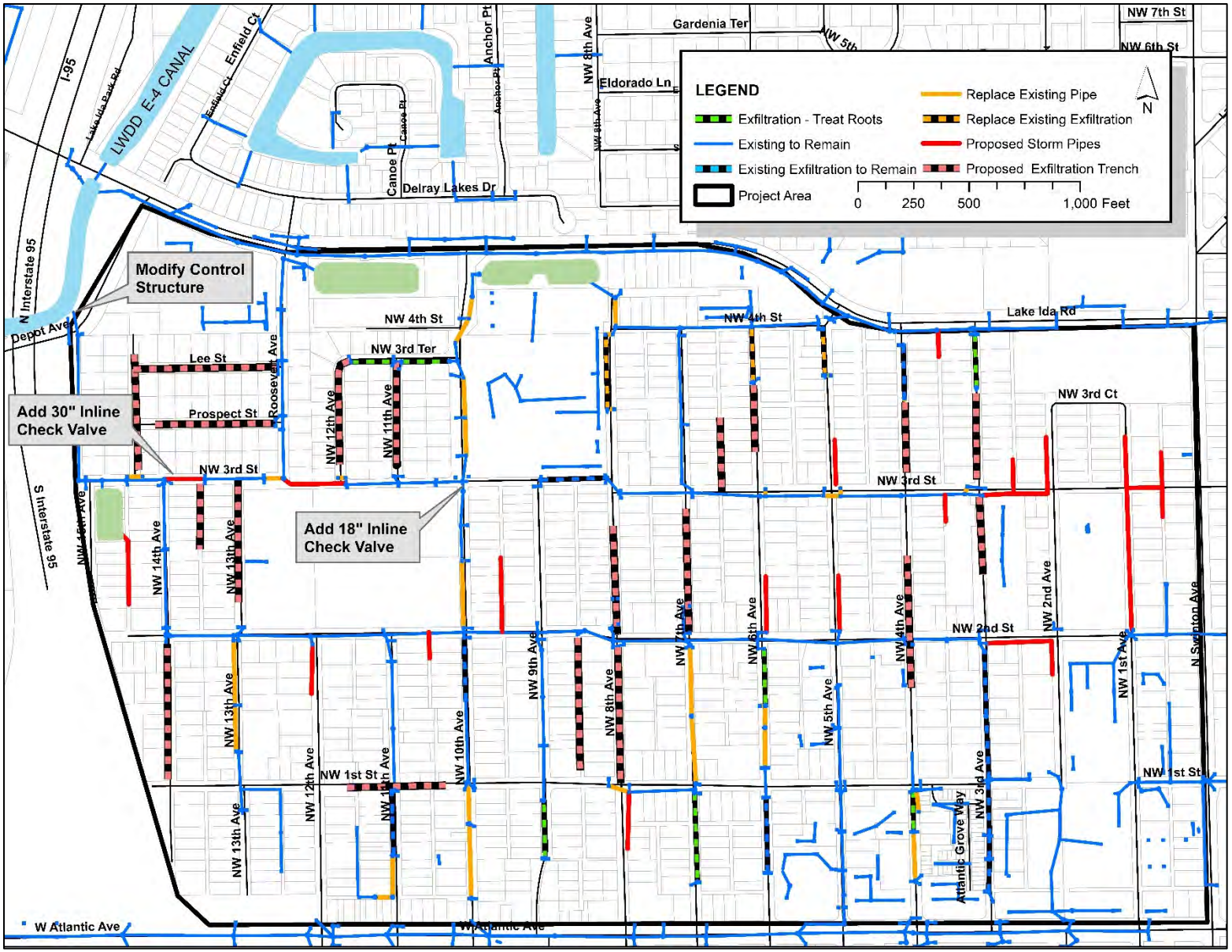


Figure 3-11: Locations of Recommended Stormwater Improvements

Section 4

Utility Analysis

4 Utility Analysis

4.1 Introduction

The City plans to perform roadway and alley improvements at specific locations within the project area. Before improving the surface, it is important to determine the subsurface conditions so that subsurface improvements can be made at the same time for cost effectiveness. Assessments of the roadway base and underlying utilities were performed in order for the City to make informed decisions in that regard. Under the City's Request for Qualifications Solicitation #2018-054, a preliminary design report was completed previously by others. This report reviewed specified sections of the previously completed report and provides Baxter & Woodman's recommendations.

4.2 Sanitary Sewer Assessment

The sanitary system is a critical utility that must be properly maintained to avoid disruptions in service and costly repairs as well as create environmental and health concerns. The existing sanitary sewer infrastructure within the project area is divided into four (4) systems served separately by Lift Station (LS) Nos. 006, 011, 013, and 100 (see Figure 4-1). The northwestern portion of the project area is serviced by LS No. 013, the northeastern portion of the project area is serviced by LS No. 011, the southern portion of the project area is serviced by LS No. 006, and the eastern portion of the project area is serviced by LS No. 100. The service areas of LS Nos 006, 011, and 100 extend beyond the project limits of Atlantic Avenue, N Swinton Avenue, and Lake Ida Road. Only those segments of the gravity sewer systems that are located within the project limits will be rehabilitated.

Per the previous preliminary design report completed under the City's Request for Qualifications Solicitation #2018-054, Shenandoah Construction was utilized to clean and televise 40,583 LF of 8-inch and 525 LF of 10-inch gravity sanitary sewer pipe between January and May, 2019. The previous recommendation for the sanitary sewer improvements in the project area is graphically depicted in Figure 4-2 and listed below:

20,200 LF of gravity sanitary sewer pipe be rehabilitated via cured in-place pipe (CIPP) lining

9,900 LF of gravity sanitary sewer pipe is recommended for mechanical root removal and/or root removal application

860 LF of gravity sewer main replacement

Remaining 10,148 LF of gravity sewer main is not proposed for improvement

The previous preliminary design report also states that groundwater infiltration was observed within the following five (5) main segments and these areas should be investigated further: MH033-MH032, MH069-MH065, MH021-MH020, MH019-MH018, and MH088-MH087.

No lift station or force main improvements were proposed as part of the previous preliminary design report recommendations.

Figure 4-1: Existing Sanitary Sewer Systems

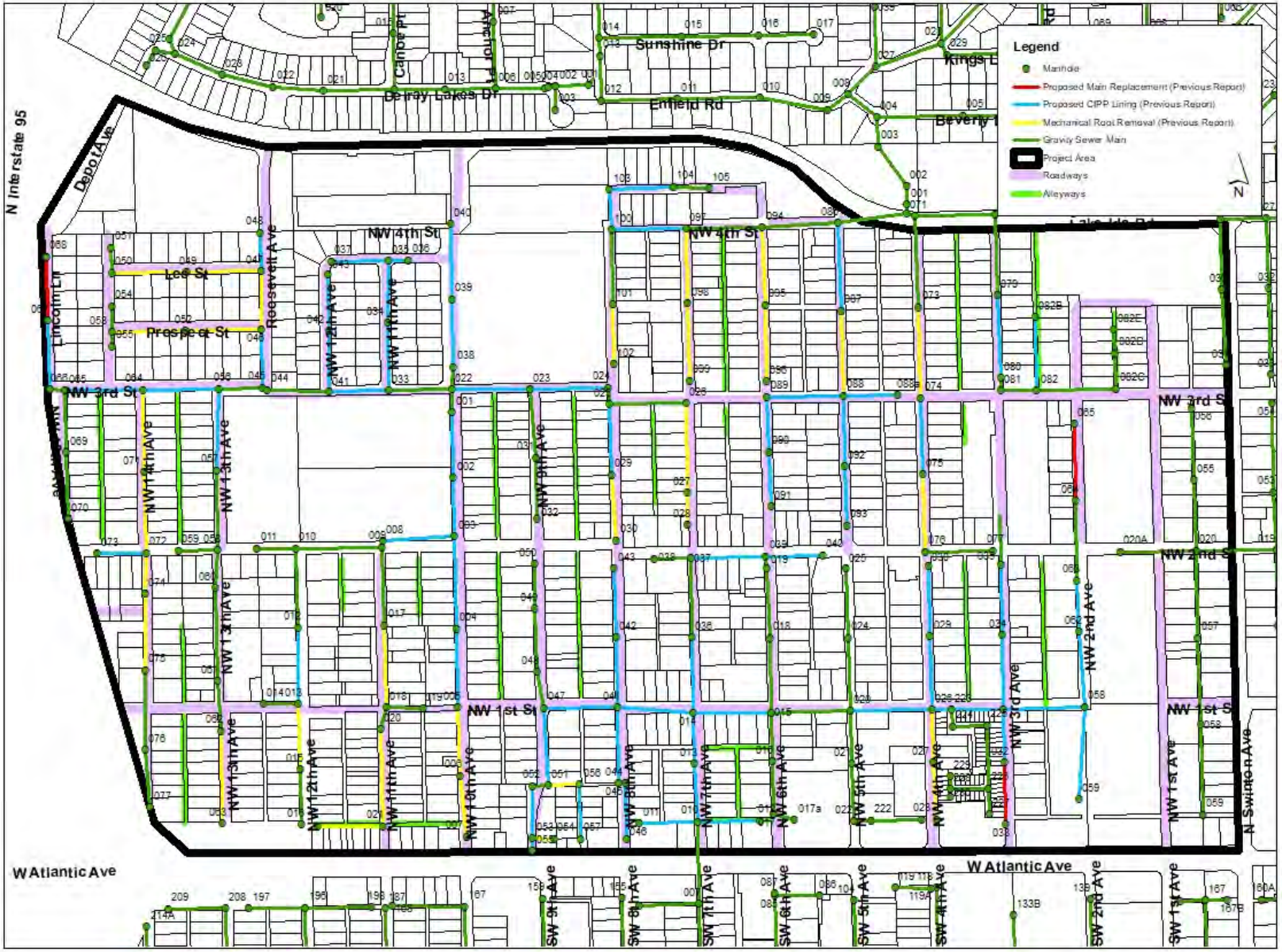


Figure 4-2: Previous Preliminary Design Report Sanitary Sewer Recommendations

Baxter & Woodman reviewed multiple files of sanitary sewer main CCTV provided by the City on July 1, 2021 and December 3, 2021. The segments of sanitary sewer that the CCTV footage covered are identified in yellow on Figure 4-3. The CCTV files provided encompassed approximately 30% of the sanitary sewer mains within the project area. Several of the CCTV files provided by the City were for sanitary sewer mains outside of the project area. During progress meeting #1, held on December 8, 2021, B&W notified the City of the discrepancy in the CCTV files. The City elected to coordinate with Shenandoah Construction directly to perform additional sanitary sewer main CCTV within the project area. The City directed Shenandoah to perform sanitary sewer main CCTV throughout the project area, including sanitary sewer mains that were previously inspected.

Shenandoah performed the additional sanitary sewer main CCTV work from December 23, 2021 to January 26, 2022. A review of the new sanitary sewer main CCTV files was conducted. Figure 4-4 depicts the segments of sanitary sewer main captured by Shenandoah during the second effort. Figure 4-5 combines all the CCTV files reviewed to date highlighted in red. The following is a list of sanitary sewer segments that were not reviewed due to CCTV footage not being provided by the City:

LS No. 013 Service Area

MH068 to MH067
MH067 to MH066
MH066 to MH065
MH065 to MH069
MH069 to MH070
MH065 to MH064
MH064 to MH056
MH056 to MH045
MH045 to MH046
MH046 to MH047
MH047 to MH048
MH045 to MH044
MH044 to MH041
MH041 to MH042
MH042 to MH043
MH041 to MH033
MH033 to MH034
MH034 to MH 035
MH035 to MH036
MH035 to MH037
MH033 to MH022
MH022 to MH038
MH038 to MH039
MH039 to MH040
MH022 to MH001
MH001 to MH002
MH002 to MH003
MH003 to MH008
MH003 to MH004
MH004 to MH005
MH005 to MH006
MH006 to MH007
MH011 to MH010
MH010 to MH012
MH012 to MH013
MH013 to MH014
MH013 to MH015
MH015 to MH016
MH009 to MH017
MH017 to MH018
MH018 to MH020
MH020 to MH021
MH021 to MH021a
MH022 to MH023
MH023 to MH024
Mh024 to MH025
MH025 to MH026
MH025 to MH030

LS No. 011 Service Area
MH081 to MH082
MH082 to MH082C
MH087 to MH086
LS No. 006 Service Area
MH038 to MH037
MH044 to MH045
MH045 to MH046
MH013 to MH010
MH010 to MH011
MH010 to MH012
MH015 to MH018
MH043 to MH042

The sanitary sewer main segments listed that were not inspected by CCTV will follow the recommendations for improvements per the previously completed preliminary design report as shown in Figure 4-2.

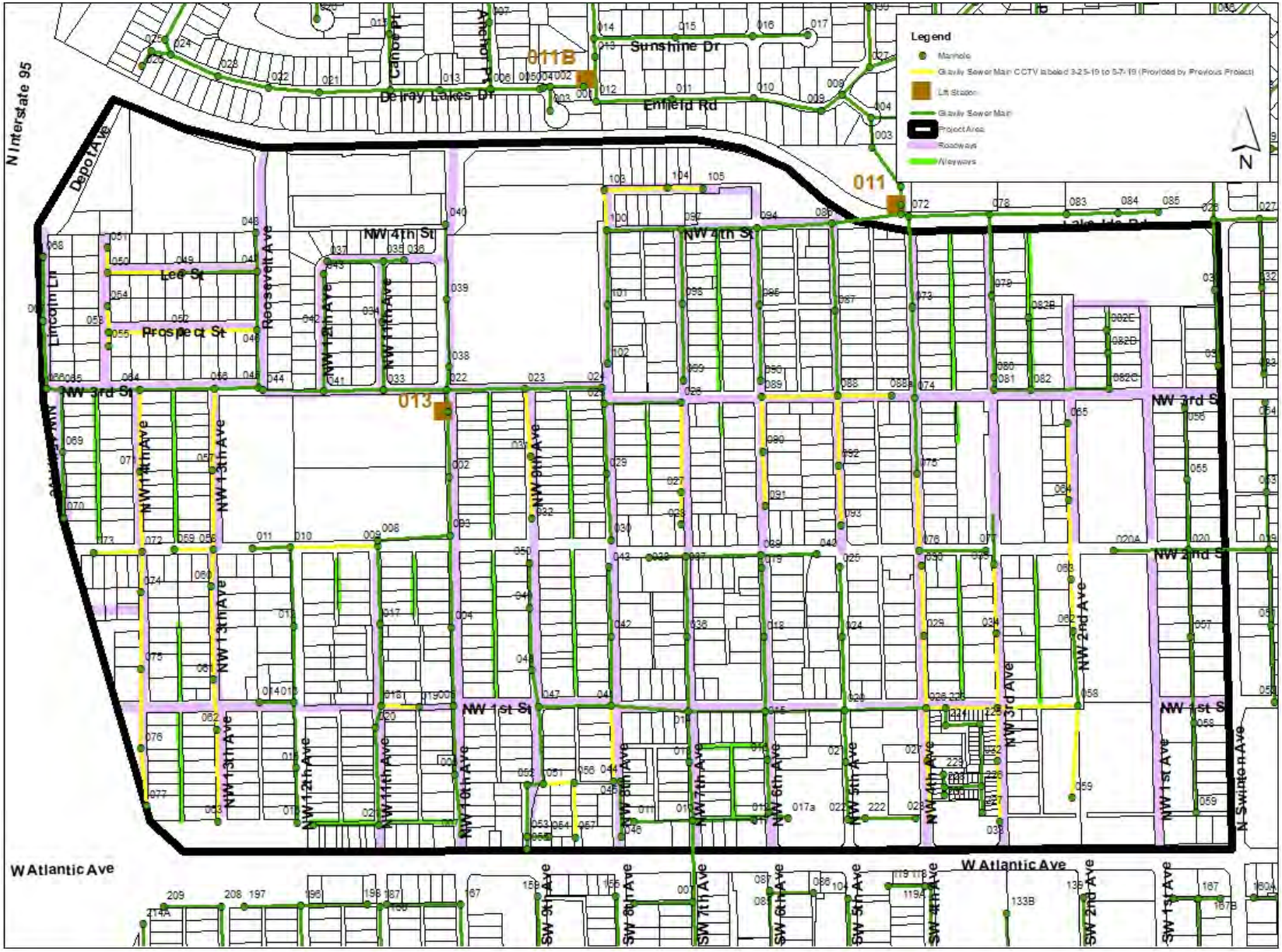


Figure 4-3: Previous Preliminary Design Report Sanitary Sewer CCTV Footage Provided (Dated 3-25-19 to 5-7-19)

Figure 4-4: Sanitary Sewer CCTV Footage Provided Subsequently by the City (Dated 12-23-21 to 2-25-22)

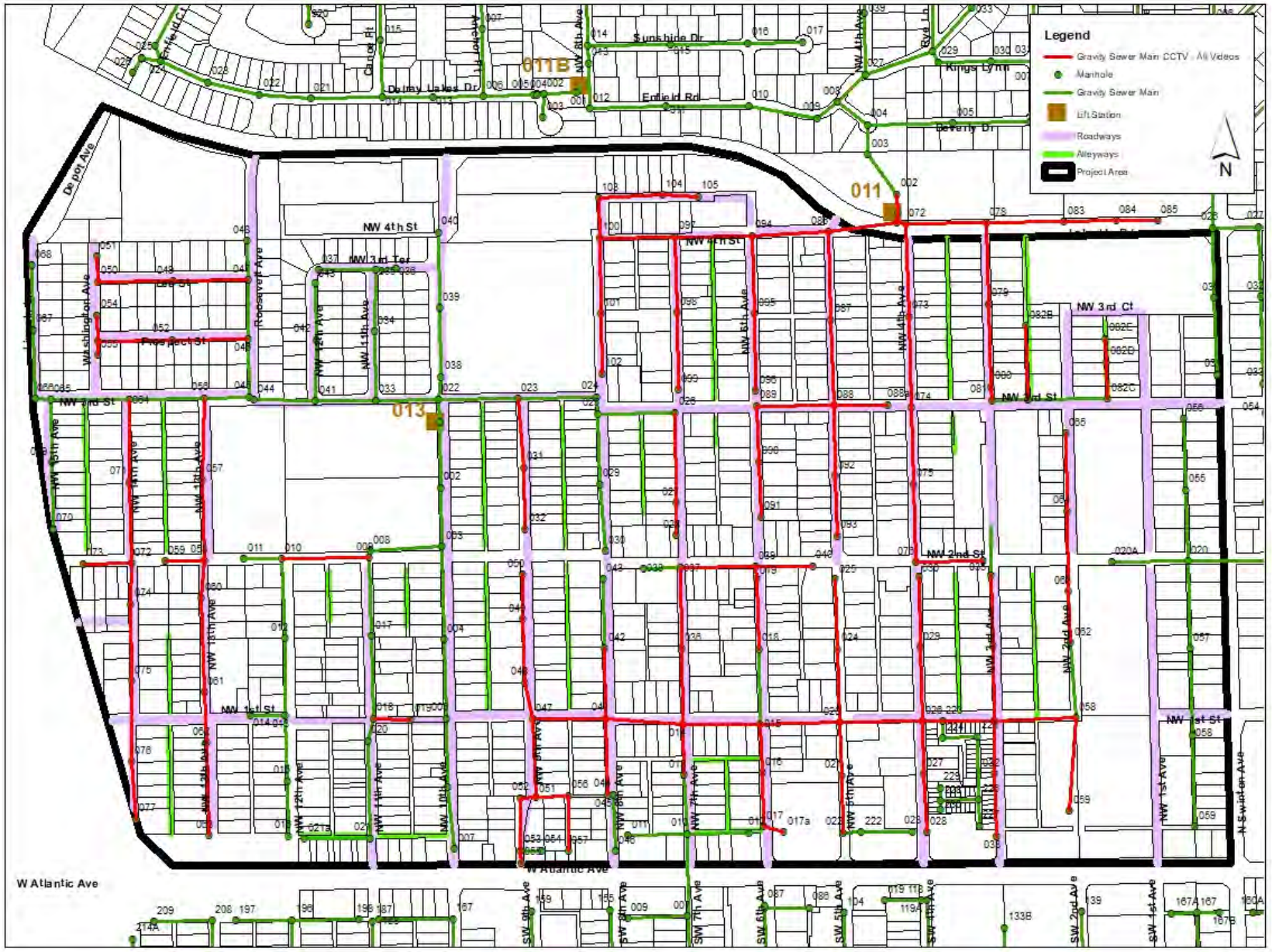


Figure 4-5: Overall Sanitary Sewer CCTV Footage Provided to Date & Reviewed by B&W

Based on the CCTV footage provided by the City, Table 4-1 documents the observations and recommendations.

Table 4-1: B&W Existing Sanitary Sewer Pipe Assessment based on the CCTV Footage Provided

Televised Date	TV Input Manhole No.:	TV Output Manhole No.:	Street:	Dia (in):	Material:	Total Pipe Length (feet):	Laterals	Fault Observations/Locations (feet from input MH):	Recommendation:	Condition
3/25/2019	62	61	NW 13th Ave	8	VCP	213.5	5	Joint cracks: 85.0, 89.1; Misalignment: 170.6, 175.0	Line pipe	Fair
3/25/2019	62	63	NW 13th Ave	8	VCP	363.7	13	Debris/root blockage: 363.7	Line pipe	Fair
3/25/2019	71	64	NW 14th Ave	8	VCP	348.4	10	Spiral crack (2' long): 2.0; Chippin at joint: 37.8, Roots at joint: 132.8, 138.4, 149.1, 154.8, 160.0, 165.7, 201.0, 206.3, 279.4; Roots in lateral: 230.3, 231.8, 280.8; Infiltration dripper: 211.9. 223.2	Line pipe	Fair
3/25/2019	72	71	NW 14th Ave	8	VCP	348.1	8	Cracks: 2.2, 23.3, 55.2, 92.0, 216.2, 239.0, 343.4; Misalignment: 2.2, 2.7; Roots in joint: 156.5, 178.1, 181.1, 193.4, 198.8, 204.3, 209.8, 237.3, 239.5, 255.0, 260.2, 313.0, 318.6	Line pipe	Fair
3/25/2019	73	72	NW 2nd St	8	VCP	207.4	5	Debris in lateral: 8.1; Crack: 39.5, 114.1, 127.8, 145.7, 186.3, 190.0, 195.7, 200.1	Line pipe	Fair
3/25/2019	74	72	NW 14th Ave	8	VCP	170.3	3	Roots at joint: 4.4, 9.7, 21.0, 34.3, 39.7, 45.6, 56.6, 67.7, 79.0; Roots in lateral: 28.3, 91.5; Crack: 15.8, 103.9, 122.8, 161.5, 167.6, Wall scarring: 0.0-59.6	Line pipe	Fair
3/25/2019	75	74	NW 14th Ave	8	VCP	327.3	11	Roots in lateral: 54.3, Cracks: 181.3, 261.2, 301.6; Roots at joint: 217.5, 223.4, 228.6, 235.0, 283.5, 286.3, 297.5, 308.6, 310.2	Line pipe	Fair
3/25/2019	76	75	NW 14th Ave	8	VCP	342.1	4	Fracture: 44.9; Crack: 45.8, 79.6	Line pipe	Fair
3/25/2019	76	77	NW 14th Ave	8	VCP	244.5	5	Debris in lateral: 106.9	Line pipe	Fair
3/26/2019	34	31	NW 3rd Ave	8	VCP	311.5	8	Crack: 10.3, 34.5, 59.0, 106.3, 150.8, 153.9, 160.9, 165.9, 180.9, 195.7, 199.7, 230.5, 255.0, 260.3, 275.0; Fracture: 16.6; Roots in joint: 48.7, 115.5, 120.8, 125.7, 130.6, 239.6, 255.0	Line pipe	Fair
3/26/2019	35	34	NW 3rd Ave	8	VCP	299.2	7	Crack: 7.8, 17.4, 44.5, 82.1, 96.3, 101.9, 103.3, 114.0, 114.7, 119.6, 133.2, 135.3, 140.8, 146.4, 156.1, 161.3, 178.4, 211.1, 215.2, 269.8; Broken pipe: 230.2; Roots in joint: 114.0	Repair pipe at 230.2, line pipe	Fair
3/26/2019	57	56	NW 13th Ave	8	VCP	347.7	6	Crack: 29.1; Fracture: 166.9, 183.2, 210.7; Infiltration dripper: 223.6, 229.0, 240.4; Infiltration weeper: 234.8, 264.5, 275.6, 281.5, 286.7, 325.8; Infiltration runner: 258.9, 270.1, 309.1, 320.2, 331.1, 346.4; Infiltration gusher: 342.2; Infiltration stain: 292.3, 297.9, 314.6	Line pipe	Fair
3/26/2019	58	57	NW 2nd St & NW 13th Ave	8	VCP	344.0	6	Screw driver in joint: 140.5; Survey ends due to blockage	Remove screw driver, line pipe	Fair
3/26/2019	58	60	NW 2nd St	8	VCP	141.4	1	Fracture: 2.3, 10.0, 10.7; Pipe offset: 2.3, 6.4; Crack: 7.8, 163.2; Debris in lateral: 34.2	Line pipe	Fair
3/26/2019	59	58	NW 2nd Ave	8	VCP	164.8	6	Screw driver in joint: 20.7; Survey ends due to blockage	Remove screw driver, line pipe	Fair
3/26/2019	61	60	NW 2nd St	8	VCP	342.1	10	Fracture: 50.5, 55.6; Crack: 167.0, 248.3, 250.6, 299.5; Pipe offset: 173.2	Line pipe	Fair
3/26/2019	63	62	NW 13th Ave	8	VCP	224.3	7	Roots/debris in lateral: 25.1, 135.6; Roots in joint: 25.1, 118.2, 127.3; Fracture: 68.4; Crack: 73.6, 98.4, 112.7, 118.2, 123.5, 127.3, 145.9, 155.7, 186.6; Pipe offset: 50.1, 54.3, 131.7, 138.4, 190.0	Line pipe	Fair
3/26/2019	63	64	NW 2nd Ave	8	VCP	149.6	1	Pipe cave in: 149.6; Survey ends due to blockage	Repair pipe at 149.6, line pipe	Fair
3/26/2019	64	63	NW 2nd Ave	8	VCP	183.2	2	Pipe cave in: 183.2	Repair pipe at 183.2, line pipe	Fair
3/26/2019	64	65	NW 2nd Ave	8	VCP	170.9	3	N/A	Line pipe	Good
3/27/2019	26	27	NW 4th Ave	8	VCP	101.2	1	Crack: 4.7, 9.4, 14.1, 80.8; Roots: 61.3; Survey ends due to root blockage	Line pipe	Fair
3/27/2019	27	26	NW 4th Ave	8	VCP	106.1	2	Crack: 20.6, 31.9, 37.8, 80.4; Roots in joint: 28.1, 37.8, 45.6, 70.3, 80.4; Roots in lateral: 106.1; Survey ends due to root blockage	Line pipe	Fair
3/27/2019	27	28	NW 4th Ave	8	VCP	83.1	3	Roots at joint: 2.3; Crack: 15.7, 68.9; Survey ends due to root blockage	Line pipe	Fair
3/27/2019	29	26	NW 4th Ave	8	VCP	311.7	7	Crack: 3.6, 16.5, 26.9, 51.1, 54.6, 73.6, 83.8, 103.3, 118.1, 130.6, 139.2, 145.9, 157.1, 186.2, 188.7, 193.2, 217.3, 222.2, 227.3, 229.6, 233.7, 246.0, 259.0, 269.3, 273.8, 283.9, 289.5; Roots/debris in lateral: 10.0, 50.1, 67.1; Fracture/broken void: 233.7	Line pipe	Fair

Table 4-1 (Cont'd): B&W Existing Sanitary Sewer Pipe Assessment based on the CCTV Footage Provided

Televised Date	TV Input Manhole No.:	TV Output Manhole No.:	Street:	Dia (in):	Material:	Total Pipe Length (feet):	Laterals	Fault Observations/Locations (feet from input MH):	Recommendation:	Condition
3/27/2019	29	30	NW 3rd Ave	8	VCP	300.1	9	Crack: 14.6, 19.6, 41.7, 93.9, 122.8, 128.8, 208.6, 218.0, 238.4, 243.4	Line pipe	Fair
3/27/2019	31	31A	NW 3rd Ave	8	VCP	220.3	6	Roots in joint: 12.1; Crack: 12.1, 21.3, 37.5, 47.8, 48.6, 54.9, 70.1, 84.9, 110.0, 113.5, 119.2, 142.3, 162.6, 163.4, 164.0; Fracture: 90.0, 120.1	Line pipe	Fair
3/27/2019	31	32	NW 3rd Ave	8	VCP	112.2	4	Crack: 25.7, 45.7, 60.9, 70.6, 76.0, 77.6, 83.0, 90.3, 97.8	Line pipe	Fair
3/27/2019	31	58	NW 3rd Ave	8	VCP	326.5	7	Roots in joint: 12.4, 17.9, 57.7, 74.8, 87.1, 102.3, 117.1, 122.1, 144.5, 149.6; Cracks: 32.1, 106.9, 210.2; Roots in lateral: 77.1; Fracture: 249.4; Broken pipe: 254.5	Repair pipe at 254.5, line pipe	Fair
3/27/2019	31A	26	NW 3rd Ave	8	VCP	82.2	2	Roots in lateral: 6.9; Cracks: 30.4, 64.5	Line pipe	Fair
3/27/2019	32	31	NW 3rd Ave	8	VCP	121.4	5	Crack: 55.6, 95.7, 104.6	Line pipe	Fair
3/27/2019	33	32	NW 3rd Ave	8	VCP	274.2	8	Fracture: 16.4; Crack: 59.4, 90.6, 111.6, 133.1, 170.2, 189.9, 204.9, 214.7, 244.4, 265.3; Roots/debris in lateral: 71.9, 139.2, 215.8, 228.0	Line pipe	Fair
5/1/2019	9	8	NW 2nd St & NW 11th Ave	8	VCP	24.5	0	Infiltration stain: 20.2	Line pipe	Good
5/1/2019	52	46	Washington Ave & Prospect St	8	VCP	355.4	6	Roots in joint; 29.0, 34.6, 39.4, 45.7, 50.8, 56.8, 196.0, 323.9; Roots in lateral: 69.0, 76.6, 227.5; Crack: 266.7	Line pipe	Fair
5/1/2019	10	9	NW 2nd St & NW 11th Ave	8	VCP	371.3	1	Fracture: 29.5, 51.3; Crack: 205.8, 367.3	Line pipe	Fair
5/1/2019	50	49	Washington Ave & Lee St	8	VCP	319.0	8	Roots in joint: 21.1, 86.2, 91.4; Roots in lateral: 83.3, 85.5, 305.1	Line pipe	Fair
5/1/2019	53	52	Washington Ave & Prospect St	8	VCP	315.8	8	Roots in joint: 9.6; Roots in lateral: 89.8, 91.8, 242.7	Line pipe	Fair
5/1/2019	55	53	Washington Ave & Prospect St	8	VCP	62.0	1	N/A	Line pipe	Good
5/1/2019	49	47	Washington Ave & Lee St	8	VCP	319.6	6	Roots in lateral: 65.4, 133.4, 140.9; Fracture: 317.6	Line pipe	Fair
5/1/2019	54	53	Washington Ave & Prospect St	8	VCP	109.0	2	N/A	Line pipe	Good
5/2/2019	99	98	NW 7th Ave	8	VCP	327.6	9	Sludge in lateral: 120.9; Crack: 276.9; Fracture: 311.8	Line pipe	Fair
5/2/2019	98	97	NW 7th Ave	8	VCP	316.4	8	Debris in lateral: 97.0, 246.9	Line pipe	Fair
5/2/2019	27	26	NW 7th Ave	8	VCP	380.5	10	Cracks: 57.2; Roots in joint: 123.3, 128.8, 139.5, 147.5; Roots in lateral: 165.3	Line pipe	Fair
5/2/2019	28	27	NW 7th Ave	8	VCP	134.4	6	Cracks: 3.4; Fracture: 20.7; PVC offset: 28.2, 31.4	Line pipe	Fair
5/2/2019	31	23	NW 9th Ave	8	VCP	279.9	9	Roots/debris in lateral: 109.3, 146.2, 250.8; Fracture: 256.4	Line pipe	Fair
5/2/2019	32	31	NW 9th Ave	8	VCP	256.8	9	Roots in lateral: 50.6, 92.6, 213.3; Roots in all joints	Line pipe	Fair
5/3/2019	91	90	NW 6th Ave	8	VCP	233.7	9	Roots in lateral: 68.3, Fracture: 134.0, 211.4	Line pipe	Fair
5/3/2019	19	18	NW 11th Ave	8	VCP	154.0	4	Roots/debris in lateral: 61.3, 113.0; Fracture: 134.0; Rocks: 153.0	Remove rocks, line pipe	Fair
5/3/2019	44	41	NW 8th Ave	8	VCP	322.1	9		Line pipe	Fair
5/6/2019	81	80	NW 3rd Ave	8	VCP	52.9	0	Roots in joint: 27.6, Fracture: 51.7	Line pipe	Fair
5/6/2019	80	79	NW 3rd Ave	8	VCP	355.4	12	Fracture: 79.5, 316.6; Roots in joint: 46.7, 79.5, 162.8, 172.3, 188.1, 195.1, 250.9; Crack: 131.7, 235.6, 250.9, 304.5, 336.8; Broken pipe: 351.3	Repair pipe at 351.3, line pipe	Fair
5/6/2019	79	78	NW 3rd Ave	8	VCP	348.1	7	Crack: 188.7	Line pipe	Fair
5/6/2019	82D	82C	NW 3rd Ave	8	VCP	200.3	8	Scarring: 16.0, Surface spalling: 25.8, 30.4, 76.2, 83.7, 126.1, 132.4, 170.1, 178.0	Line pipe	Fair
5/6/2019	82E	82D	NW 3rd Ave	8	VCP	102.4	7	Surface spalling in lateral: 22.5, 29.2, 76.6, 83.2, 96.0, 99.2, 102.4	Line pipe	Fair
5/6/2019	82	82C	NW 3rd Ave	8	VCP	234.1	1	N/A	Line pipe	Good
5/6/2019	81	82	NW 3rd St	8	VCP	154.3	1	Roots injoint: 6.1, 11.3, 121.6	Line pipe	Fair
5/6/2019	82	82B	NW 3rd Ave	8	VCP	321.8	6	Roots in joint: 15.2, 36.9, 50.5, 180.8, 236.6; Roots in lateral: 95.2, 132.7, 180.1, 265.2; Crack: 90.2; Broken pipe: 296.8	Repair pipe at 296.8, line pipe	Fair
5/6/2019	76	75	NW 4th Ave	8	VCP	332.1	8	Fracture: 92.2; Crack: 179.1; Roots in joint: 251.9, 258.4	Line pipe	Fair
5/6/2019	75	74	NW 4th Ave	8	VCP	326.9	12	Crack: 121.6, 245.0, 313.6, 319.7, 324.8; Roots in joint: 151.8, 161.8, 189.4, 214.6, 282.6, 291.9, 300.0	Line pipe	Fair
5/6/2019	74	73	NW 2nd St & NW 4th Ave	8	VCP	388.2	14	Crack: 45.5, 139.2, Roots in lateral: 126.7, 129.4	Line pipe	Fair

Table 4-1 (Cont'd): B&W Existing Sanitary Sewer Pipe Assessment based on the CCTV Footage Provided

Televised Date	TV Input Manhole No.:	TV Output Manhole No.:	Street:	Dia (in):	Material:	Total Pipe Length (feet):	Laterals	Fault Observations/Locations (feet from input MH):	Recommendation:	Condition
5/7/2019	56	51	NW 9th Ave	8	VCP	52.3	1	Roots in joint: 8.6, 14.0, 49.9; Roots in lateral: 51.8, Fracture: 10.2, 13.7	Line pipe	Fair
5/7/2019	93	92	NW 5th Ave	8	VCP	254.5	9	Roots/Debris in lateral: 143.7	Line pipe	Fair
5/7/2019	57	56	NW 9th Ave	8	VCP	227.7	10	Debris in lateral: 9.0, 48.5, 120.5, 160.1, 172.4, 211.7; Fracture: 74.1, 79.3, 128.0, 173.9; Crack: 99.1, 114.1, 134.1	Line pipe	Fair
5/7/2019	92	88	NW 5th Ave	8	VCP	301.3	6	Debris in lateral: 30.8, 68.5, 118.5	Line pipe	Fair
5/7/2019	19	18	NW 11th Ave	8	VCP	160.7	5	Roots in joint: 5.0; Debris in lateral: 6.0, 48.6, 100.0; Fracture: 158.8	Line pipe	Fair
5/7/2019	88	88A	NW 5th Ave	8	VCP	231.2	1	DIP surface reinforcement corroded: 218.6	Line pipe	Fair
5/7/2019	56	51	NW 9th Ave	8	VCP	85.0	2	Fracture: 40.0; Roots in lateral: 76.3, 83.5; Crack 64.9; Roots in joint: 84.4	Line pipe	Fair
5/7/2019	89	88	NW 5th Ave & NW 3rd St	8	VCP	323.1	6	Fracture: 25.0, 44.7; Debris in lateral: 231.4	Line pipe	Fair
5/7/2019	104	103	NW 8th Ave & NW 4th Terr	8	VCP	410.3	8	Roots in lateral: 11.0, 115.2, 241.1; Roots in joint: 88.1, 93.4, 103.6; Fracture: 129.5	Line pipe	Fair
5/7/2019	103	100	NW 8th Ave	8	VCP	144.0	0	Roots in joint: 65.5, 82.2, 87.6, 93.2, 98.8, 104.4; Survey abandoned due to offset joint	Line pipe	Fair
5/7/2019	90	89	NW 6th Ave	8	VCP	200.1	8	Root/derbis in lateral: 74.8, 114.5; Survey abandoned	Line pipe	Fair
5/7/2019	89	90	NW 6th Ave	8	VCP	14.5	0	Roots in joint: 11.6; Survey abandoned	Line pipe	Fair
5/7/2019	26	25	NW 6th Ave	8	VCP	328.6	4	Roots in joint: 96.0, 101.6, 107.2, 112.5, 117.6, 123.7, 128.4, 134.0, 139.5, 145.1, 152.7, 158.1, 174.4, 179.7, 190.6, 195.9, 214.3; Cracks: 58.7, 170.0	Line pipe	Fair
5/7/2019	44	41	NW 8th Ave	8	VCP	319.1	9	Roots/debris in lateral: 42.9, 104.6, 191.0; Fractures: 137.8, 202.0, 226.5, 243.9, 297.9; Crack: 231.9, 239.1	Line pipe	Fair
12/23/2021	102	101	NW 8th Ave	9	VCP	252.0	5	Roots at joint: 167.1, 174.9, 179.7, 189.6, 194.4, 199.2, 204.0, 209.1, 213.9, 219.0, and 225.6; Crack Spiral: 180.7	Line pipe	Fair
12/23/2021	101	100	NW 8th Ave	8	VCP	319.5	4	Roots at joint: 257.6; Debris: 5.5, 100.8-229.5, 307.5-MH; Crack Multiple: 317.1; Debris in laterals: 6.9, 93.3, 100.8, and 182.1	Line pipe	Fair
12/23/2021	100	97	NW 8th Ave	8	VCP	321.6	7	Debris: 31.5-47.4, 57.0-229.0, 307.5-319.5; Debris in lateral: 93.3, 100.2, 182.1; Roots: 122.4, 141.9, 159.3, 169.2; Crack (Spiral): 286.5; Crack (long.): 318.6	Line pipe	Fair
12/23/2021	97	94	NW 4th St	8	VCP	322.5	7	Debris: 10.8-30.9, 77.4-85.2, 96.0-103.2, 142.2-155.4, 167.7-175.5, 180.9- 187.8, 209.1-215.4, 266.4-322.5; Roots in Lateral: 112.2; Roots in Joint: 148.5, 153.6; Cracks: 246.9 (M), 262.2 (L), 292.8 (L)	Line pipe	Fair
1/3/2022	77	76	NW 2nd St & NW 4th Ave	8	VCP	290.0	5	Crack (L): 63.5, 63.9, 159.5, 159.6, 201.0; Debris: 254.0-258.7; Light debris and roots in lateral: 5.7; Roots in joint: 12.0, 17.1, 22.1, 32.1	Line pipe	Fair
1/3/2022	75	74	NW 2nd St & NW 4th Ave	8	VCP	335.0	12	Crack (L): 122.5, 294.6, 294.6, 313.2, 313.4, 319.3, 319.4	Line pipe	Fair
1/3/2022	74	73	NW 2nd St & NW 4th Ave	8	VCP	390.0	14	Infiltration Stain: 45.4, 349.6, 354.7, 359.8, 364.9, 374.5; Roots at joint: 70.9, 120.7, 215.2, 230.2, 235.5, 369.5; Debris and roots in laterals: 54.7, 129.4, 164.2, 191.9, 246.3, 378.4	Line pipe	Fair
1/3/2022	73	72	NW 3rd St & NW 4th Ave	8	VCP	200?	6	~45%-100% Filled: 150-200; Infiltration stain: 52.2, 80.3, 85.0, 100.2; Roots in joints: 74.8, 135.3, 145.2; Joint offset (2"): 150.3; Survey ends due to offset joint: 200.0	Line pipe	Fair
1/3/2022	82	81	NW 3rd St & NW 3rd Ave	8	VCP	156.0	0	Water/Debris: 90.2-106.2; Roots in joints: 6.4, 11.4, 47.3, 106.2, 111.9, 121.7, 126.6, 131.6, 136.8, 141.5;	Line pipe	Fair
1/3/2022	96	95	NW 6th Ave	8	VCP	325.2	14	Crack (M): 116.7, 216.9, 261.3, 271.8; Crack (L): 123.0, 149.4	Line pipe	Fair
1/3/2022	95	94	NW 6th Ave	8	VCP	326.7	9	Roots in lateral: 144.0; Heavy sand in lateral: 116.4; Crack (L): 103.8; Crack (M): 215.1	Line pipe	Fair
1/4/2022	88	87	NW 5th Ave	8	VCP	360.9	13	Roots: 7.2, 11.7, 16.8, 31.8, 33.6, 36.9, 72.6, 97.2, 185.4, 195.6, 243.3, 304.2, 326.4, 344.1, 346.5; Debris is laterals: 58.5, 71.1, 242.4; Roots in laterals: 98.7, 242.4, 297.9, 305.4, 345.9	Line pipe	Fair
1/4/2022	87	86	NW 5th Ave	8	VCP	369.0	10	Roots: 7.5, 39.6, 55.5; Crack (Spiral): 40.5; Crack (Multiple): 66.3, 292.8; Fracture: 277.5	Line pipe	Fair

Table 4-1 (Cont'd): B&W Existing Sanitary Sewer Pipe Assessment based on the CCTV Footage Provided

Televised Date	TV Input Manhole No.:	TV Output Manhole No.:	Street:	Dia (in):	Material:	Total Pipe Length (feet):	Laterals	Fault Observations/Locations (feet from input MH):	Recommendation:	Condition
1/4/2022	94	86	NW 4th St	8	VCP	318.9	4	Crack (Multiple) & Infiltration stain: 3.9	Line pipe	Fair
1/4/2022	39	37	NW 7th Ave	8	VCP	318.3	9	Crack (Long.): 6.6, 6.9, 13.8, 42.9, 45.6, 189.0, 209.1, 216.6, 273.6, 282.9, 288.9, 307.8, 314.1; Crack (Mulitple): 54.6; Debris in lateral: 243.3	Line pipe	Fair
1/4/2022	40	39	NW 7th Ave	8	VCP	238.5	6	Crack (Multiple): 31.5, 41.1, 55.8, 88.5, 113.7, 127.2, 142.5, 181.2, 186.0, 194.1; Crack (Long.): 60.6, 99.0, 149.7, 173.7; Debris in lateral: 54.6	Line pipe	Fair
1/4/2022	37	36	NW 7th Ave	8	VCP	337.8	9	Crack (Long.): 23.4, 43.2, 83.1, 102.6, 117.3, 135.0, 221.4, 252.0, 286.2; Crack (Multiple): 33.9, 54.0, 141.3, 162.6, 182.1, 209.4, 226.5, 230.7, 246.6, 258.9, 268.8; Roots: 120.0; Debris in lateral: 119.1; Broken: 201.6; Fracture: 211.8; Hole: 334.8	Point repair at 201.6 and 334.8; line pipe	Fair
1/4/2022	43	42	NW 8th Ave	8	VCP	298.7	12	Fracture (Long.): 34.0, 51.8, 52.0, 66.8, 92.4, 97.4, 183.2; Crack (Long.): 217.4; Roots in latetal: 267.6; Roots in joints: 224.7, 267.8, 295.4	Line pipe	Fair
1/4/2022	42	41	NW 8th Ave	8	VCP	303.0	8	Fracture (Long.): 9.9; Roots in lateral: 176.8; Infiltration Stains: 122.7, 128.0, 150.9	Line pipe	Fair
1/5/2022	47	41	NW 1st St	8	VCP	307.0	6	Fracture (Multiple): 107.9, 129.8; Fracture (Long.): 122.2, 160.5, 182.1, 221.4, 244.9, 302.8; Roots in joints: 150.4, 154.6, 165.4, 175.0, 207.0, 277.7, 302.8; Roots in lateral: 176.2	Line pipe	Fair
1/5/2022	46	45	NW 8th Ave	8	VCP	240.0	7	Roots in joints: 18.1; Fracture (Long.): 25.5, 140.5, 165.6, 191.1, 230.9; Fracture (Multiple): 65.2, 145.9; Broken tap cap: 23.7; Multiple fractures in lateral: 66.8; Roots in lateral: 89.0, 116.5, 124.2; Debris in lateral: 124.2, 181.6	Line pipe	Fair
1/6/2022	36	14	NW 7th Ave	8	VCP	318.0	7	Crack (Multiple): 33.9, 307.2, 216.5; Crack (Long.): 309.9; Roots in lateral: 27.9; Crack in lateral: 211.8	Line pipe	Fair
1/6/2022	41	14	NW 1st St	8	VCP	325.8	7	Crack (Multiple): 6.6, 64.8, 84.9, 123.0	Line pipe	Fair
1/7/2022	26	20	NW 1st St	8	VCP	355.0	8	Fracture (Long.): 59.4; Crack (Long.): 93.9, 94.5, 108.9, 109.2, 129.3, 134.4, 139.5, 161.7, 166.8, 186.6, 216.6, 241.2, 270.9, 308.4, 333.0, 338.1, 339.3; Roots in joints: 171.6, 175.8, 180.9, 185.7, 195.9, 206.1, 211.2, 216.0; Debris in lateral: 217.2, 242.1, 249.9	Line pipe	Fair
1/7/2022	21	22	NW 5th Ave	8	PVC	225.0	5	Debris in lateral: 7.5	Line pipe	Good
1/7/2022	19	18	NW 6th Ave	8	VCP	300.0	9	Fracture (Circ.): 59.1, 293.8; Fracture (Long.): 63.4, 83.9, 109.1; Crack (Long.): 184.3; Joint Offset: 228.1; Fracture in lateral: 85.0	Line pipe	Fair
1/4/2022	85	84	NW 3rd St & NW 4th Ave	8	VCP	177.0	2	Roots at joint: 65.7; Crack (Long.): 158.3	Line pipe	Fair
1/4/2022	84	83	NW 3rd St & NW 4th Ave	8	VCP	218.0	2	Roots at joint: 24.2; Crack (Long.): 38.9, 113.3, 183.2, 183.7, 188.1	Line pipe	Fair
1/4/2022	83	78	NW 3rd St & NW 4th Ave	8	VCP	333.0	1	Crack (Long.): 5.4, 5.6, Debris in lateral: 166.2	Line pipe	Fair
1/4/2022	78	72	NW 4th St & NW 4th Ave	8	VCP	345.0	1	Debris in lateral: 173.0	Line pipe	Fair
1/4/2022	55	53	NW 4th St & NW 4th Ave	8	VCP	55.0	1	Crack (Long.): 18.8, 19.1, 28.4, 28.7, 38.2, 38.6	Line pipe	Fair
1/4/2022	53	52	Atlantic Ave & NW 9th Ave	8	VCP	226.0	7	Crack (Long.): 23.2, 24.0, 25.7, 33.1, 50.3, 50.9, 65.2, 66.8, 112.9, 132.7, 137.4, 182.5; Debris in lateral: 84.2, 166.2	Line pipe	Fair
1/4/2022	52	51	Atlantic Ave & NW 9th Ave	8	VCP	25.8	0	Survey ends at 25.8 due to offset joint wheel	Finish televising	Good
1/4/2022	56	51	Atlantic Ave & NW 9th Ave	8	VCP	137.0	2	Crack (Long.): 10.6, 15.7; Roots in joints: 15.1, 16.3, 50.7; Roots and debris in lateral: 52.4	Line pipe	Fair
1/4/2022	51	47	Atlantic Ave & NW 9th Ave	8	VCP	330.0	11	Roots in joints: 8.0, 13.0, 35.4; Crack (Long.): 52.7, 52.8, 166.9, 223.8, 261.4, 261.7; Roots and Debris in lateral: 33.9, 90.8	Line pipe	Fair
1/4/2022	50	49	NW 2nd St & NW 9th Ave	8	VCP	193.0	7	N/A	Line pipe	Good
1/4/2022	52	48	NW 2nd St & NW 9th Ave	8	VCP	270.0	5	Roots in joint: 195.8	Line pipe	Good
1/4/2022	48	47	NW 2nd St & NW 9th Ave	8	VCP	76.7	1	Roots in joint: 7.6, 13.4, 18.6, 40.6, 51.4, 62.6, 68.4	Line pipe	Good

Table 4-1 (Cont'd): B&W Existing Sanitary Sewer Pipe Assessment based on the CCTV Footage Provided

Televised Date	TV Input Manhole No.:	TV Output Manhole No.:	Street:	Dia (in):	Material:	Total Pipe Length (feet):	Laterals	Fault Observations/Locations (feet from input MH):	Recommendation:	Condition
1/4/2022	86	71	NW 4th Terr & NW 8th Ave	8	VCP	301.0	3	Roots in joints: 7.3, 12.3, 17.4, 22.7, 28.0, 55.7, 65.8, 220.6; Debris in lateral: 38.9, 127.7	Line pipe	Good
1/26/2022	72	71	NW 4th Terr & NW 8th Ave	18	VCP	76.0	0	N/A	Line pipe	Fair
1/26/2022	3	72	NW 4th Terr & NW 8th Ave	18	VCP	302.2	1	Survey ends due to offset joint wheel	Line pipe	Fair
1/26/2022	72	1	NW 4th Terr & NW 8th Ave	18	VCP	40.0	0	Infiltration Stain: 5.6, 11.7, 16.5, 21.0, 26.7, 31.4	Line pipe	Good
1/26/2022	1	LS 11	NW 4th Terr & NW 8th Ave	18	VCP	6.0	0	N/A	Line pipe	Fair
2/24/2022	13	15	NW 6th Ave	8	VCP	107.3	5	Fracture: 18.4, 50.7, 51.6, 78.9, 79.2, 81.4, 90.7, 95.9; Roots in joint: 38.9, 81.4; Survey ends due to roots	Line pipe	Fair
2/24/2022	13	15	NW 6th Ave	8	VCP	189.6	2	Fracture: 106.5, 155.1, 165.0, 183.0, 183.5; Survey ends at point reversal	Line pipe	Fair
2/24/2022	17	16	NW 6th Ave	8	VCP	230.0	9	Roots at Joint: 29.3, 36.1, 226.0; Fracture: 36.1, 36.5, 79.2, 136.7, 161.7, 173.8, 183.8, 214.0; Debris/roots in lateral: 29.6, 122.5, 162.5	Line pipe	Fair
2/24/2022	17A	17	NW 6th Ave	8	VCP	91.8	2	N/A	Line pipe	Good
2/24/2022	16	15	NW 6th Ave	8	VCP	210.0	5	Fracture: 11.2, 14.0, 24.0, 29.0, 33.7, 66.9, 71.8, 71.9, 81.5, 87.6, 101.5, 103.6, 107.0, 109.5, 120.6, 147.9, 150.3, 181.2, 190.8, 195.6, 196.2; Roots in joint: 86.7, 207.4; Broken pipe: 14.0, 101.5; Broken lateral: 149.8; Roots in lateral: 35.2	Point repair at 14.0, 35.2, and 101.5; line pipe	Fair
2/25/2022	20	15	NW 1st St	8	PVC	347.0	8	Fracture: 9.10, 9.20, 9.40, 19.3, 24.3, 54.5, 66.9, 67.3, 84.8, 89.4, 102.7, 201.8, 269.8; Roots in joint: 201.9	Line pipe	Fair
2/25/2022	24	20	NW 5th Ave	8	PVC	313.0	7	N/A	Line pipe	Good
2/25/2022	25	24	NW 5th Ave	8	PVC	300.0	8	N/A	Line pipe	Good

4.3 Sanitary Sewer Recommendations

The combined recommendations of the previous preliminary design report and this review of the CCTV footage provided are shown in Figure 4-6. Additionally, it is recommended that CIPP lining be provided for all segments of sewer main identified for mechanical root removal in the previous report. These main segments would be lined following mechanical root removal, which would be an added cost in comparison to the previous preliminary design report but would provide a seal to the main segment once the roots are removed.

The City confirmed on January 19, 2022, via email that there are no recorded issues with lift stations in the project area. Additionally, the City confirmed on January 27, 2022, via email that there have not been any reported sanitary sewer overflows (SSOs) in the project area in the last six (6) years. Based on this historical information provided by the City, the recommended improvements will consist of improvements to the gravity sanitary sewer mains only.

In alignment with the City's directed improvements for the sanitary sewer laterals on the Osceola Park Neighborhood Improvements project, sanitary sewer laterals will be rehabilitated as follows:

Sanitary Sewer Mains to be Lined – sanitary sewer laterals along main segment will remain and new clean-outs will be installed at the City's R/W line.

Sanitary Sewer Mains to be Replaced in Kind – sanitary sewer laterals along main segment will be replaced in their entirety and new clean-outs will be installed at the City's R/W line.

Construction costs for the proposed sanitary sewer lateral improvements do not appear to be included in the previous preliminary design report, thus these improvements will result in a cost increase as compared to the previous report.

In accordance with FAC 62-604.600 Procedure to Obtain Construction Permits a permit is not required per subsection (2), "Replacement of any facilities with new facilities of the same capacity at the same location as the facilities being replaced;"

An Engineer's Opinion of Probable Construction cost estimate in Section 7 includes cost for proposed sanitary sewer improvements.

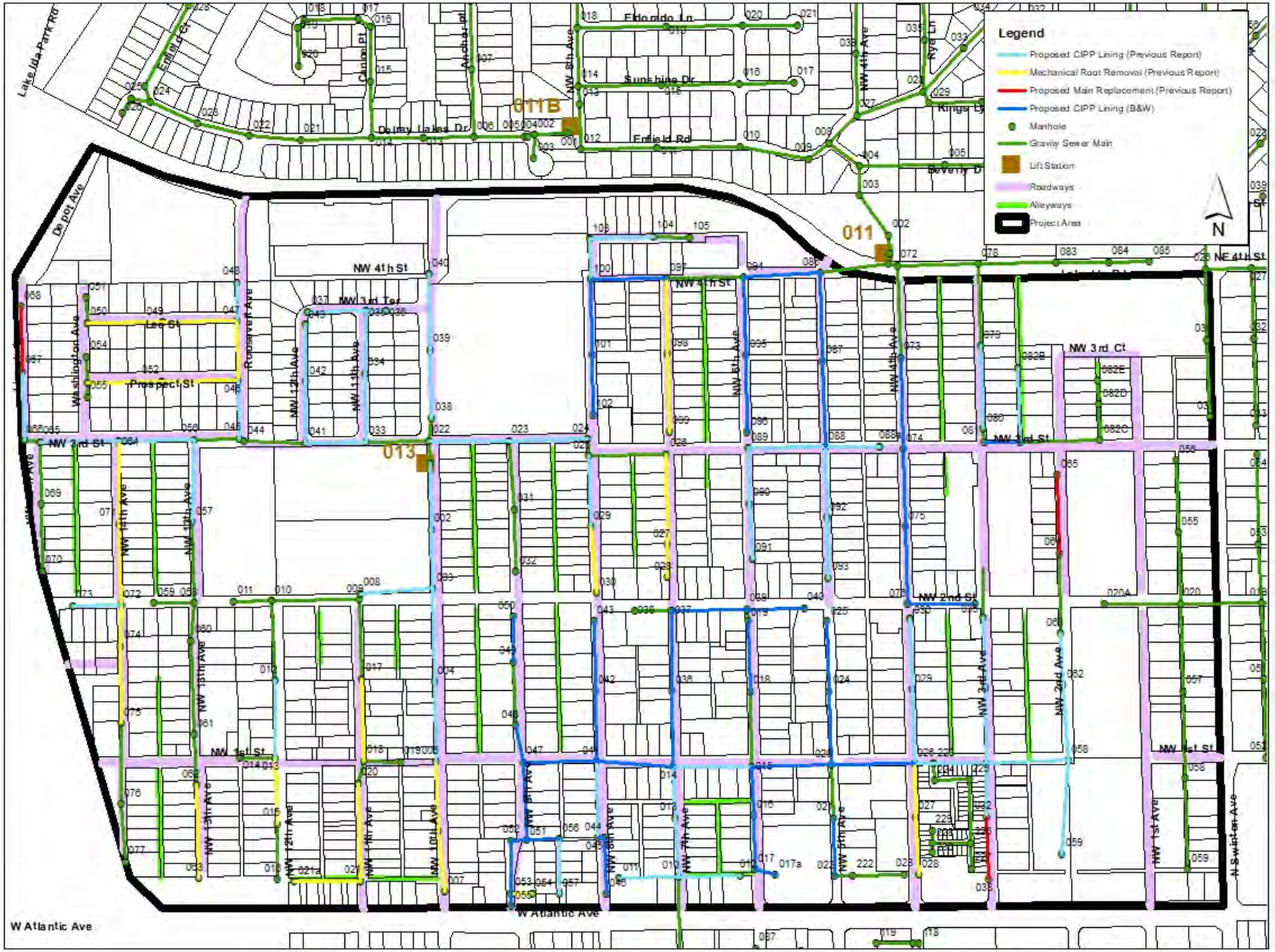


Figure 4-6: Overall Sanitary Sewer Recommendations

4.4 Potable Water Distribution Main Assessment

The project area consists of potable water distribution mains (2-inch to 8-inch diameter), potable water transmission mains (16-inch to 24-inch diameter), and raw water transmission mains (8-inch to 18-inch diameter) which are shown in blue, yellow, and orange respectively in Figure 4-7 which is based on the City's GIS information.

The previous preliminary design report recommended the replacement of all existing potable water distribution mains (approximately 18,750 LF) within the project area less than 8-inches in diameter in order to meet fire flow standards. The City's Potable Water By Size map dated October 2, 2020, was utilized to identify these mains and provide an independent count separate from the previous preliminary design report.

The previous preliminary design report also stated that the City has two (2) potable water distribution main upgrade projects designed in 2018 but have not been constructed. These projects will be incorporated into the N.W. Neighborhood project. These projects are:

Eastern Water Main Improvements (Area 1) – upsizing existing 2-inch water main to a 6-inch water main on N.W. 1st Avenue (approximately 250 LF), N.W. 3rd Court (approximately 350 LF), and N.W. 2nd Avenue (approximately 250 LF).

Western Water Main Improvements (Area 3) – upsizing existing 4-inch water main to 8-inch water main on Prospect Street (approximately 700 LF) and adding an 8" water main on Washington Avenue from Prospect Street to Lee Street (approximately 300 LF). This project would have abandoned a portion of the existing water main in the alleyway between Lincoln Lane and Washington Avenue from Lee Street to Prospect Street.

In accordance with the City's initiative to have all potable water distribution mains a minimum of 8–inch in diameter to facilitate fire flow requirements, the Eastern Water Main Improvements (Area 1) project will be revised to increase the existing 2-inch and 6-inch pipes on N.W. 1st Avenue (approximately 390 LF), N.W. 2nd Avenue (approximately 390 LF), and N.W. 3rd Court (approximately 350 LF) to 8-inch.

For the Western Water Main Improvements (Area 3) project, the remaining water main located within the alleyway between Lincoln Lane and Washington Avenue from Prospect Street to N.W. 3rd Street will be abandoned. A new 8-inch water main will be proposed on Washington Avenue from Prospect Street to N.W. 3rd Street. To accommodate the properties that front Lincoln Lane, an 8-inch water main will be provided on Lincoln Lane from N.W. 3rd Street to Depot Avenue.

The preliminary design report identified 700 LF of water main to be upsized on N.W. 15th Avenue. However, there is no water main located on N.W. 15th Avenue. There is an existing 2-inch water main in the alleyway between N.W. 15th Avenue and N.W. 14th Avenue that serves the properties on N.W. 15th Avenue that will be abandoned. A new 8-inch water main will be located along N.W. 15th Avenue, extend into the FDOT Right-of-Way of Interstate 95 and connect to the existing 8-inch water main on N.W. 2nd Street.

Approximately 20,190 LF of 8-inch water main will be proposed based on the analysis of the previous preliminary design report and the review of the existing potable water distribution system with respect to relocating water services out of alleyways and upsizing water mains to a minimum diameter of 8-inches. A comparison of the total length of new 8-inch water main by roadway segment between the previous preliminary design report and this report is provided in Table 4-2.

Table 4-2: Comparison of Proposed Potable Water Distribution Main (LF) to be Upsized with Previous Preliminary Design Report

Street Name	Length of New 8" WM per Previous PDR	Length of New 8" WM per City's GIS
N.W. 1st Avenue	1,400 LF	1,690 LF
N.W. 2nd Avenue	-	390 LF
N.W. 5th Avenue	2,000 LF	2,000 LF
N.W. 6th Avenue	500 LF	400 LF
N.W. 8th Avenue	3,400 LF	3,300 LF
N.W. 9th Avenue	1,400 LF	1,400 LF
N.W. 11th Avenue	600 LF	550 LF
N.W. 12th Avenue	2,000 LF	1,900 LF
N.W. 13th Avenue	700 LF	700 LF
N.W. 14th Avenue	400 LF	350 LF
N.W. 15th Avenue	700 LF	775 LF
Roosevelt Avenue	500 LF	510 LF
Washington Avenue	300 LF	575 LF
Lincoln Lane	650 LF	700 LF
N.W. 1st Street	1,350 LF	1,800 LF
N.W. 3rd Street	1,500 LF	1,500 LF
N.W. 3rd Terrace	500 LF	575 LF
Lee Street	850 LF	725 LF
N.W. 3rd Court	-	350 LF
TOTAL =	18,750 LF	20,190 LF

New water mains connecting to the existing water mains on N.W. 2nd Street and Atlantic Avenue will include a new 8-inch gate valve with an 8-inch by 6-inch reducer where there is an existing 6-inch gate valve to connect to the existing water main. Existing water mains will be tapped if an existing connection is less than 6-inches or if there is no existing connection available for a new water main extension.

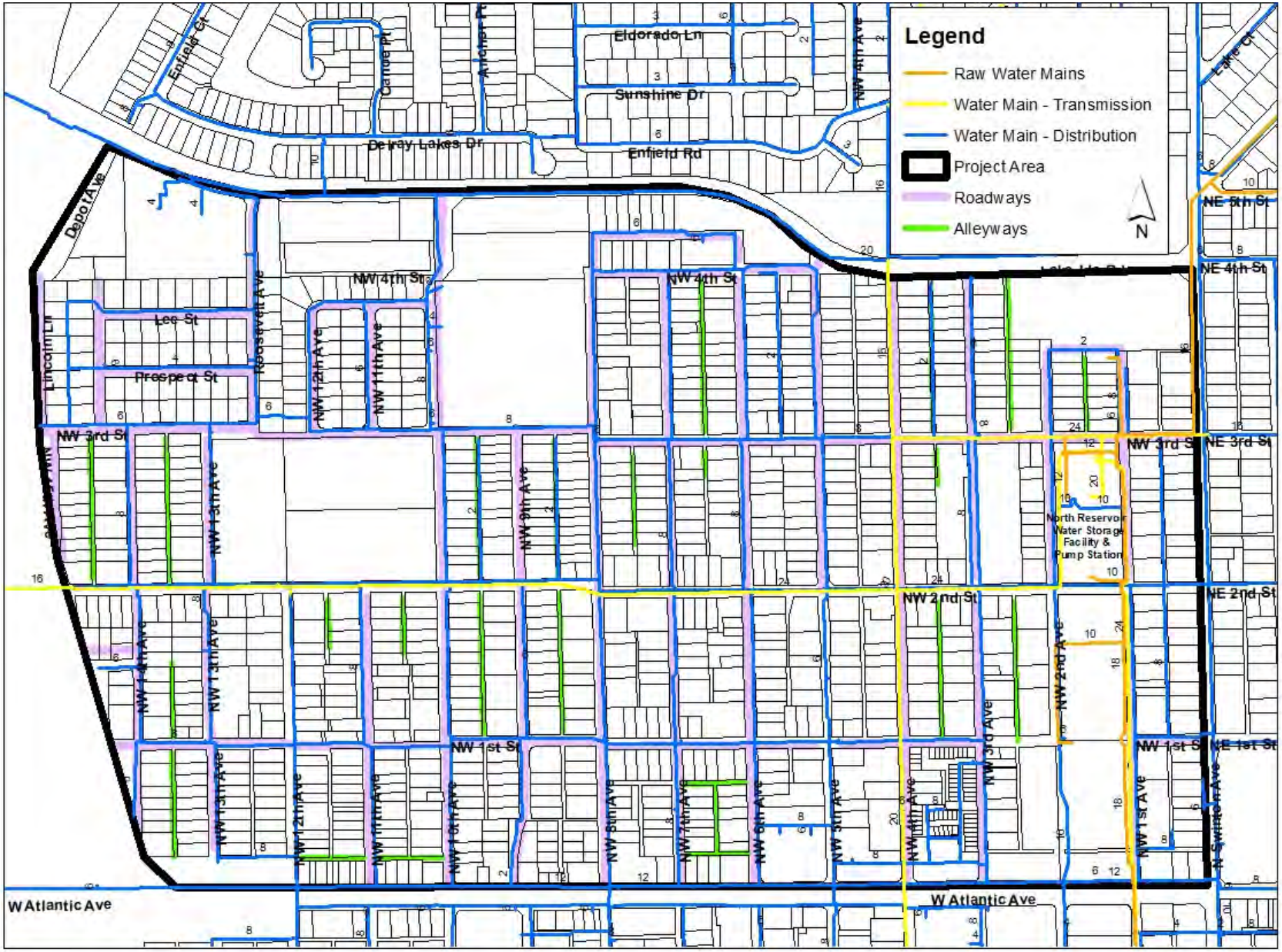


Figure 4-7: Existing Potable Water Main System

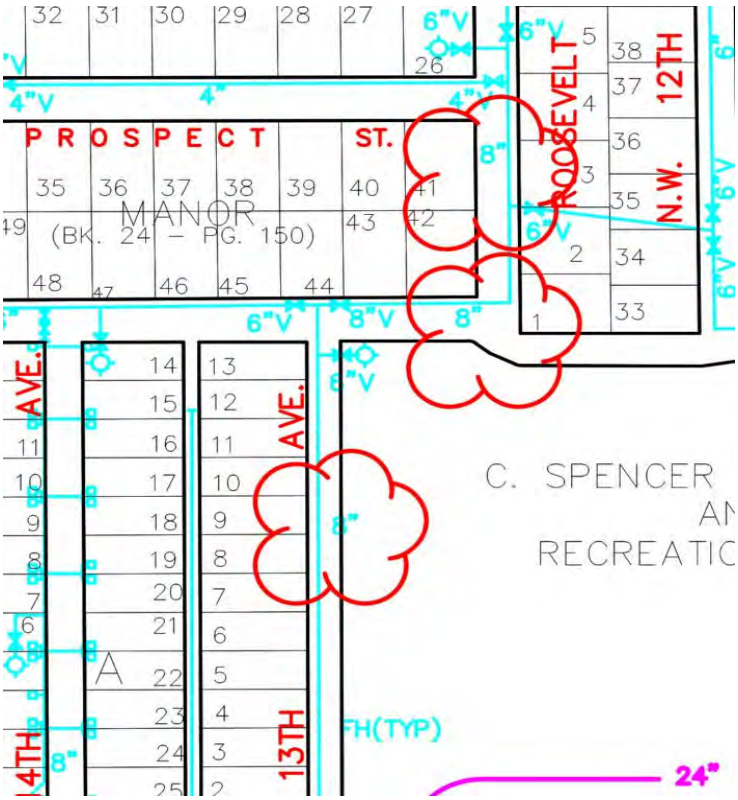
Some notable discrepancies in existing pipe sizes were seen in the City's Water Atlas Published March 23, 2018, and the Potable Water By Size map dated October 2, 2020 as listed in Table 4-3 and seen in Figure 4-8. For the purpose of this preliminary design report, the pipes were assumed to be per the Potable Water By Size Map. During final design, further analysis will be performed and the work will be included or removed depending on field confirmation.

Table 4-3: Summary of Discrepancies Between Water Atlas and Potable Water By Size Map

Street Name	Water Atlas	Potable Water By Size Map
Intersection of N.W. 3rd Street and Roosevelt Avenue	8"	6"
N.W. 13th Avenue between N.W. 2nd Street and N.W. 3rd Street	8"	6"
N.W. 1st Street between N.W. 5th Avenue and N.W. 6th Avenue	8"	6"
N.W. 3rd Court	6"	2"
N.W. 1st Avenue	8"	6"
N.W. 5th Avenue between Atlantic Boulevard and N.W. 2nd Street	8"	6"

Figure 4-8: Water Atlas Water Main Size Discrepancies

Figure 4-8 (Cont'd): Water Atlas Water Main Size Discrepancies



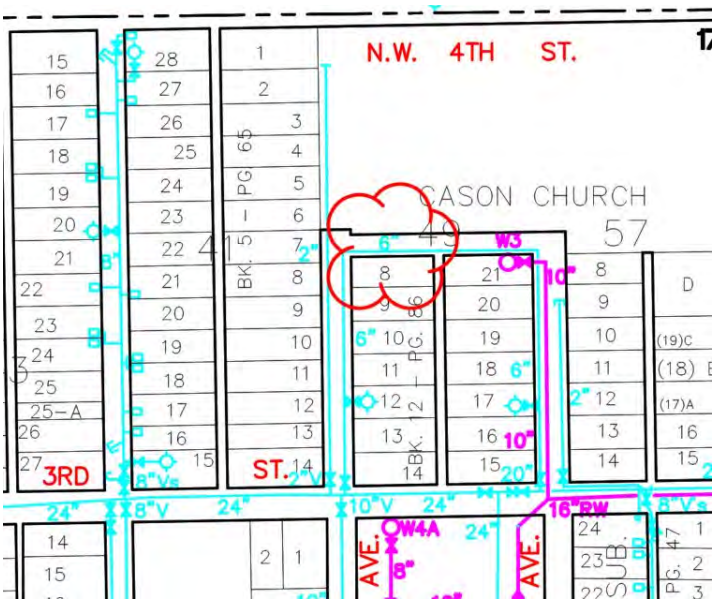
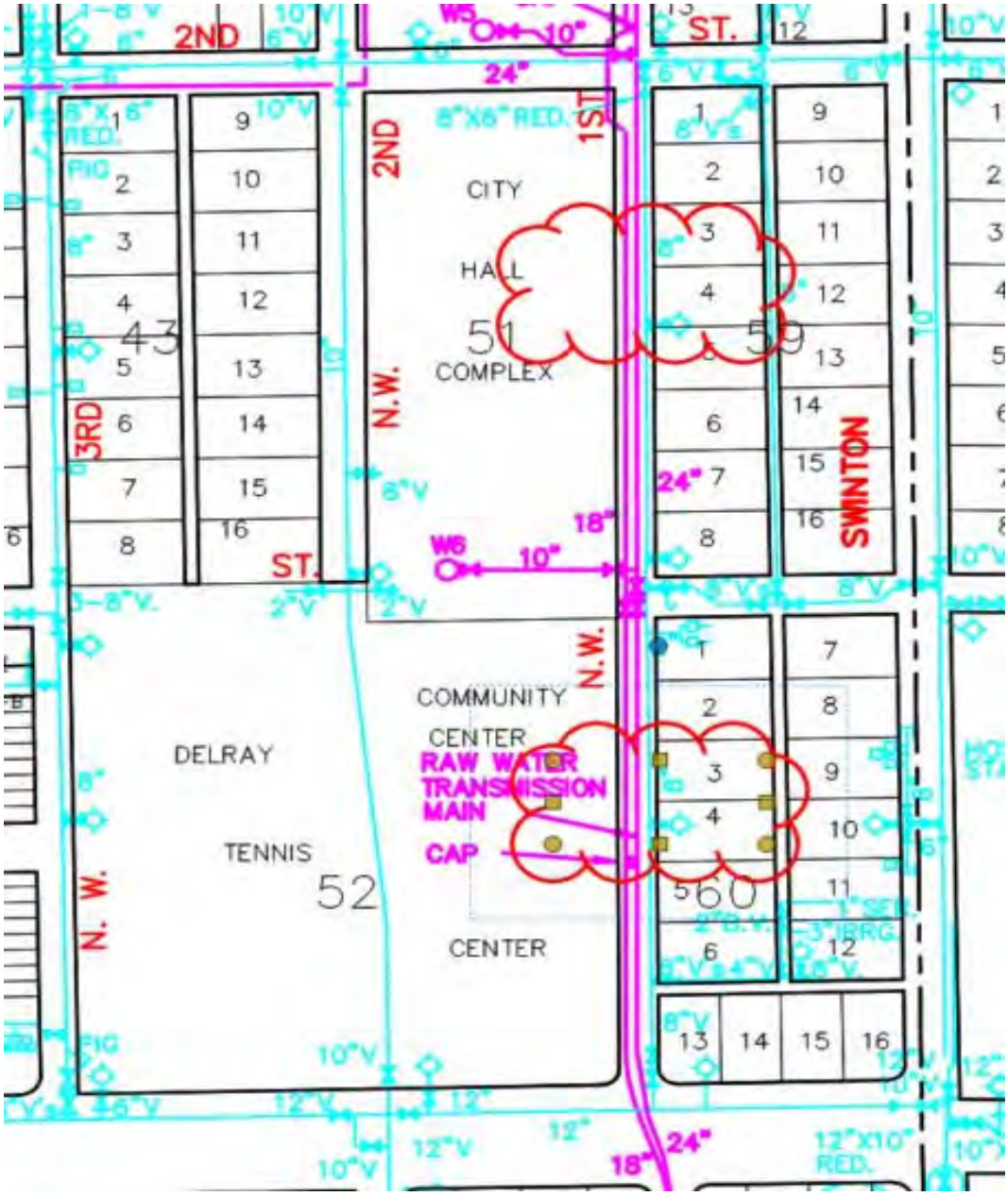


Figure 4-8 (Cont'd): Water Atlas Water Main Size Discrepancies



B&W reviewed the following aspects of the distribution system:

Service records of water main breaks, inoperable valves or fire hydrants within the project area

Alignment in terms of maintenance and accessibility

Fire hydrant coverage

Per the City, there are no records of water main breaks, inoperable valves, or fire hydrants within the project limits, therefore the focus for the potable water distribution system is on the alignment and fire hydrant coverage.

The distribution mains within the project area range in size from 2-inches to 8-inches in diameter. All distribution mains within the project area are located within roadways with the exception of the following locations (see Figure 4-9):

2-inch main in Alleyway No. 1 between N.W. 15th Avenue and N.W. 14th Avenue from N.W. 2nd Street to N.W. 3rd Street (existing pipe material and size to be confirmed during design)

2-inch main in Alleyway No. 2 between N.W. 14th Avenue and N.W. 13th Avenue from N.W. 2nd Street to N.W. 3rd Street (existing pipe material and size to be confirmed during design)

2-inch main in Alleyway No. 8 between N.W. 10th Avenue and N.W. 9th Avenue from N.W. 2nd Street to N.W. 3rd Street

2-inch main in Alleyway No. 10 between N.W. 9th Avenue and N.W. 8th Avenue from N.W. 2nd Street to N.W. 3rd Street

2-inch main in Alleyway No. 15 between N.W. 4th Avenue and N.W. 3rd Avenue from N.W. 3rd Street to Lake Ida Road

2-inch main in alleyway between N.W. 6th Avenue and N.W. 5th Avenue from 3rd Street to N.W. 4th Street

6-inch main in alleyway between Lincoln Lane and Washington Avenue from Lee Street to N.W. 3rd Street

6-inch main in alleyway between Roosevelt Avenue and N.W. 12th Avenue just north of N.W. 3rd Street

8-inch main in alleyway between N.W. 13th Avenue and N.W. 12th Avenue just north of W. Atlantic Avenue

8-inch main in alleyway between N.W. 6th Avenue and N.W. 3rd Avenue just north of W. Atlantic Avenue

8-inch main in alleyway between N.W. 1st Avenue and N.W. 2nd Avenue from N.W. 3rd Street to N.W. 1st Street

There are six (6) 2-inch mains in the alleyways, five (5) of these alleyways (Alleyway No. 1, 2, 8, 10, and 15) will be improved as part of this project and the sixth alleyway between N.W. 6th Avenue and N.W 5th Avenue from N.W. 3rd Street to N.W. 4th Street will not be improved. Based on the latest City GIS Atlas Map, the homes on the sixth alleyway are currently served from existing potable water distribution mains within the adjacent roadways. These six (6) 2-inch water mains will be abandoned in-place as part of this project.

The two (2) 6-inch mains located in the alleyways will be upsized for 8-inch mains as per the previous preliminary design report and relocated to the roadway for ease of accessibility and maintenance by the City. The mains in the alleyways will be abandoned in-place and any rear-yard services will be transferred to the front-yard. Refer to Figure 4-10 for these proposed water main alignment improvements.

The three (3) 8-inch mains located in the alleyways will remain as-is as they appear to provide looping to the potable water distribution system.

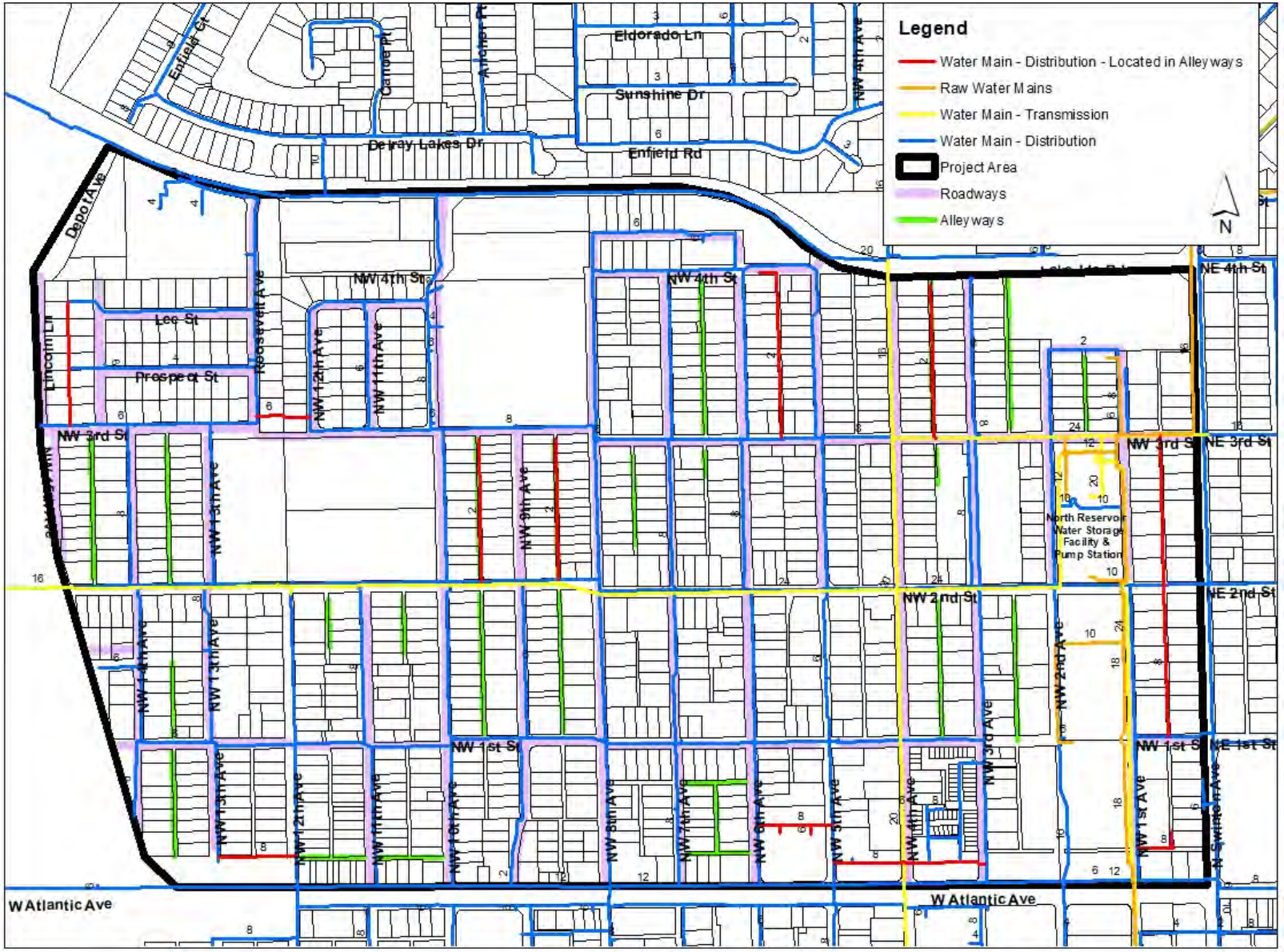


Figure 4-9: Existing Potable Water Distribution Main Located in Alleyway

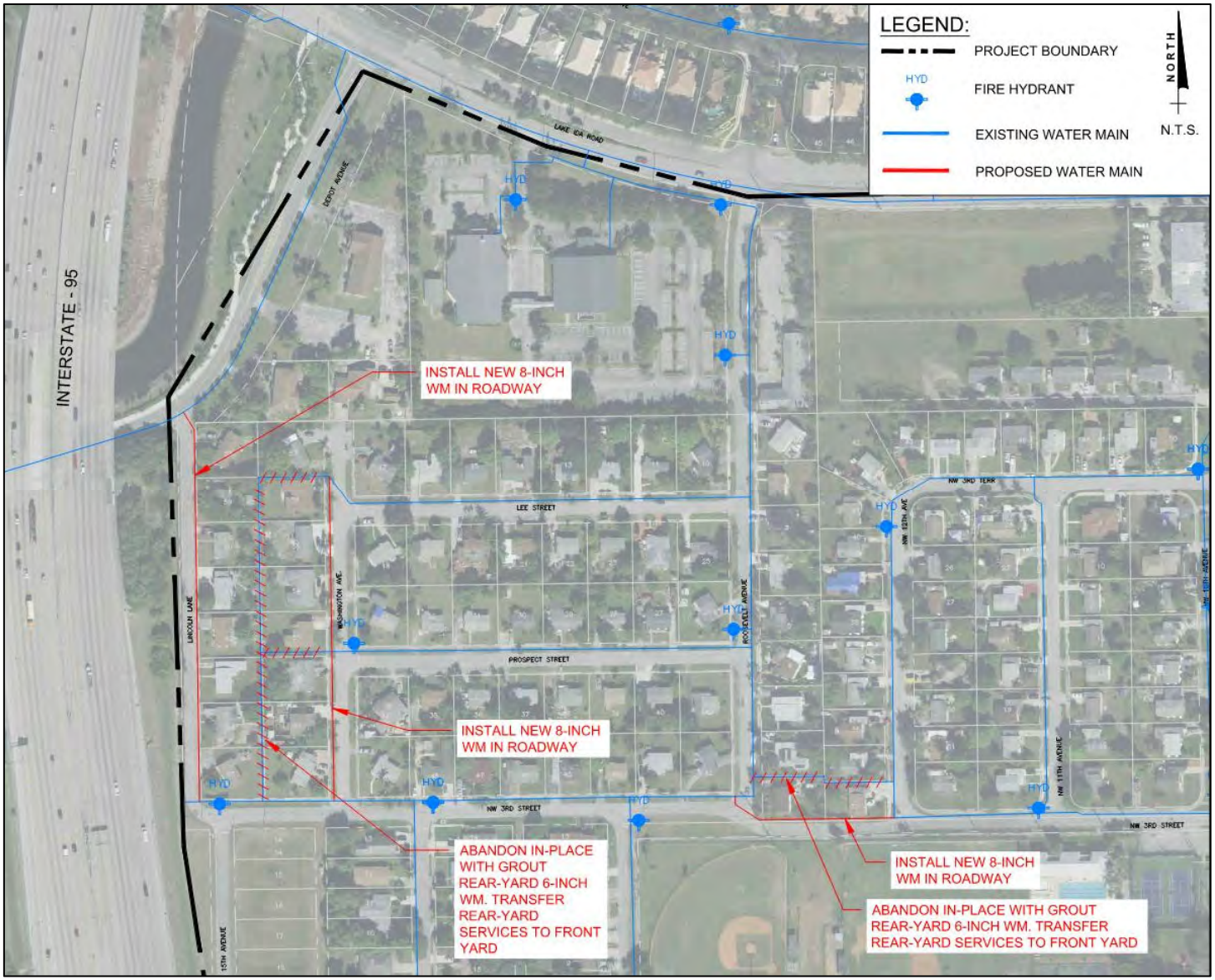


Figure 4-10: Proposed Water Main Alignment Improvements

Per the City's Code of Ordinances, Chapter 96 – Fire Safety and Emergency Services, Section 96.05 – Fire Hydrants (B), Fire hydrant spacing shall be in accordance with the following:

In single-family and duplex residential districts, not more than five hundred (500) feet between hydrants.

In multifamily residential districts (townhouses, garden apartments, cluster developments and the like, and similar buildings two (2) stories or less in height), not more than four hundred (400) feet between hydrants.

In multifamily residential districts with buildings more than two (2) stories in height, all commercial districts, all business districts, all industrial districts, and special hazard applications, not more than three hundred (300) feet between hydrants.

Areas with divided or multilane road systems should have hydrant distribution on both sides of the highway, with curb and median cuts considered, utilizing spacing criteria listed above when existing and proposed parallel mains will support this criteria.

Measurement of spacing shall be by way of road travel.

Per the City's Official Zoning Map, a majority of the N.W. Neighborhood project area is zoned Single-Family Residential with the areas just north of Atlantic Avenue zoned as Mixed-Use. See Figure 4-11 for clip from City's Official Zoning Map showing the N.W. Neighborhood project area. Figure 4-12 shows the existing fire hydrant spacing within the project area and associated coverage per the City's Zoning Map.

Additional fire hydrants are proposed as shown in Figure 4-13 in areas where the appropriate fire hydrant coverage is not met as per the City's Code of Ordinances. Any existing fire hydrants on distribution mains noted for replacement will also be replaced.

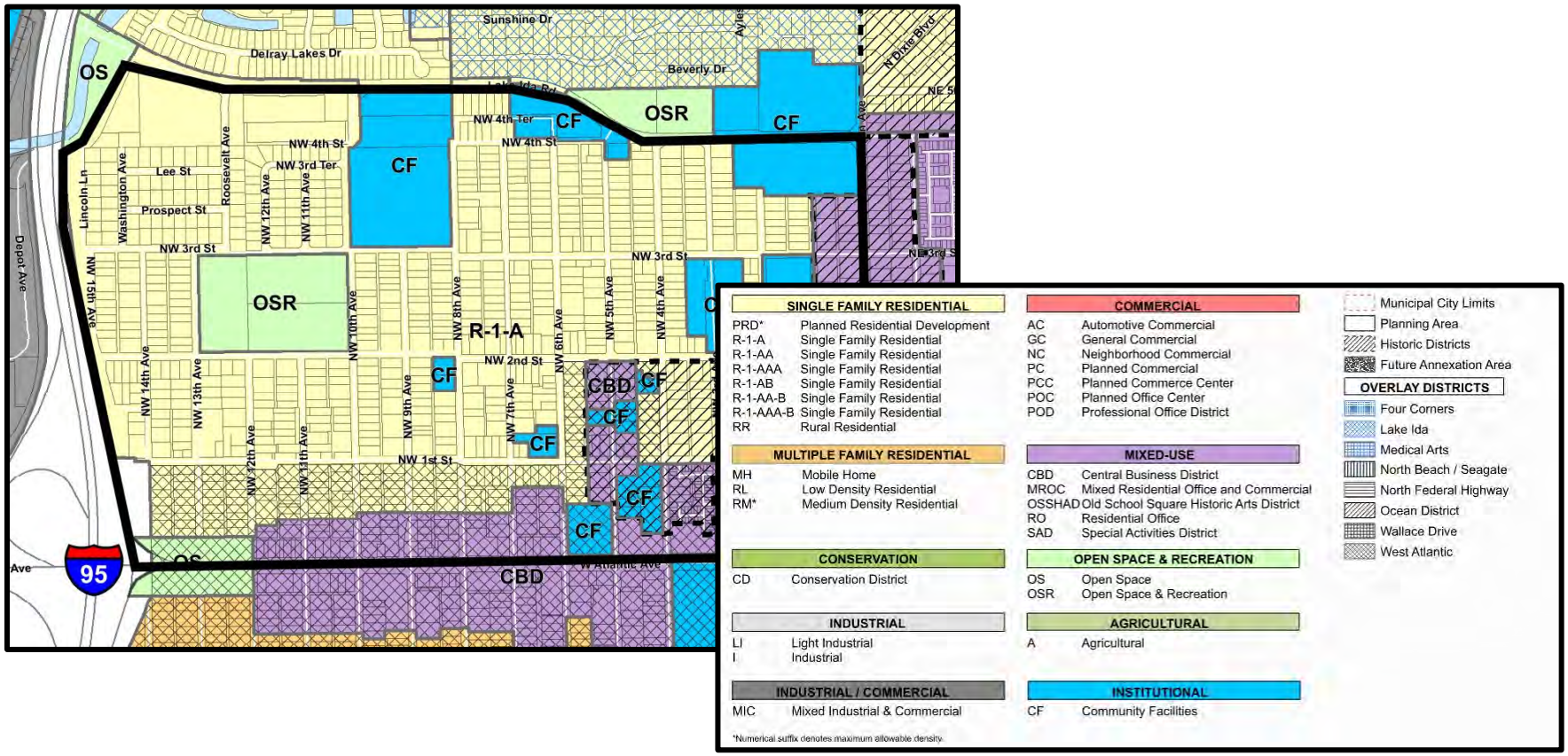


Figure 4-11: City's Official Zoning Map – N.W. Neighborhood Project Area

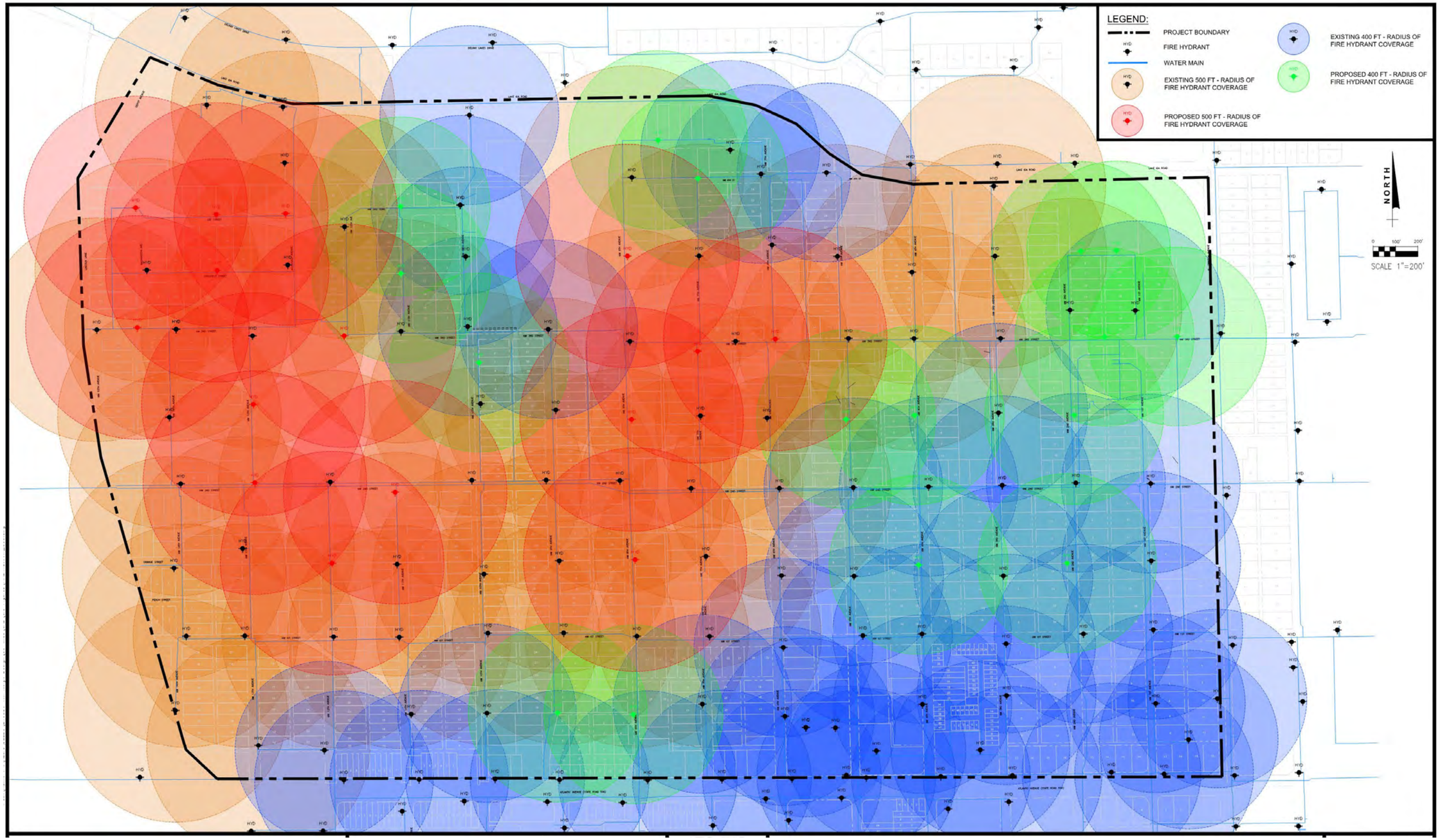


Figure 4-12: Project Area Fire Hydrant Coverage

4.5 Potable Water Main Recommendations

The combined recommendations of the previous preliminary design report and this review of the water main alignment in terms of maintenance and accessibility and fire hydrant coverage provided are shown in Figure 4-12. New potable water mains will be designed to meet Florida Administrative Code, Chapter 62-555, Permitting, Construction, Operation, and Maintenance of Public Water Systems and the City's design requirements per the City's standard details. The proposed potable water mains will include horizontal and vertical separation from storm, sanitary sewer, and force main crossings in accordance with the City's standard detail PW 2.0, "Water Main & Sewer Conflicts". Crossings with reclaimed water shall be made in accordance the City's Comprehensive Plan: Reclaimed Water.

The following permits are anticipated to be obtained for the proposed water main improvements:

Florida Department of Health Palm Beach County (PBCHD) NOI to Use General Permit for Construction of Water Main Extensions for PWSs

Florida Department of Transportation (FDOT) Utility ROW Permit (tie-in work at W. Atlantic Avenue)

An Engineer's Opinion of Probable Construction cost estimate in Section 7 includes cost for proposed distribution water main improvements.

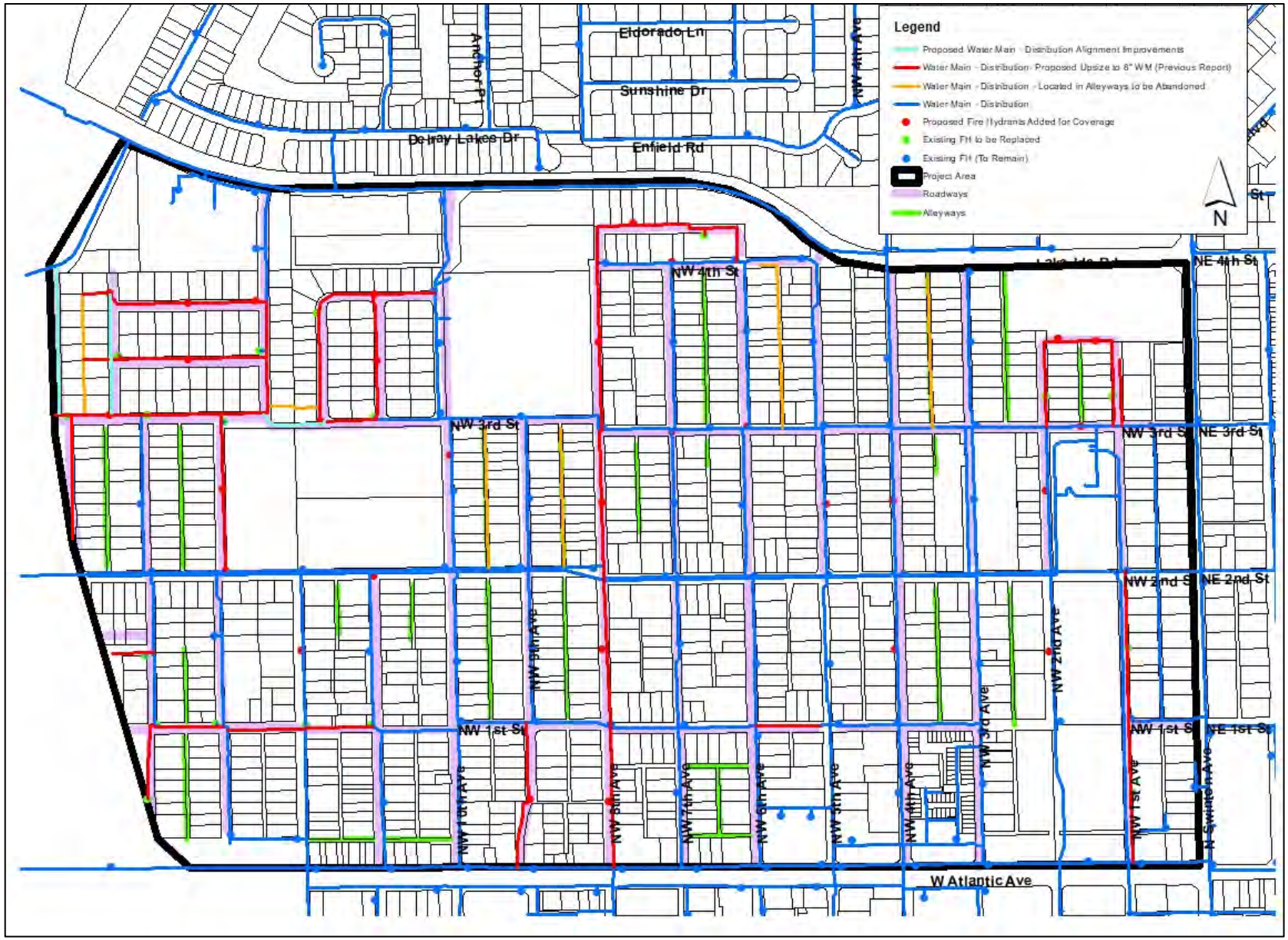


Figure 4-13: Proposed Potable Water Distribution Main Improvements

4.6 Reclaimed Water Main Assessment

Per the City's Reclaimed Water Master Plan Update performed by Mathews Consulting in 2016, Reclaimed Water Project Area 9 and 10 were identified as regions that can add a substantial number of reclaimed water users to the system (see Figure 4-14 below from the Master Plan). The primary transmission main located on N.W. 2nd Street (Martin Luther King Jr. Boulevard) was previously installed per the 2016 Reclaimed Water Master Plan recommendations. The reclaimed water main improvements will consist of installation of the reclaimed water services to serve the major users only as identified in the Master Plan Report and the following additional major users as requested by the City.

Schools / educational properties
Vacant City-Owned Lands
Places of Worship
Grass Area adjacent to the east-side of I-95 located south and north Atlantic Avenue

Table 4-4 identifies the proposed reclaimed water users to be served under this scope of work.

Table 4-4: N.W. Neighborhood Improvements Reclaimed Water Major Users

The City of Delray Beach Reclaimed Water Future Users					
Item No.	**Future Users**	**Total Acres**	**Irrigable Acres**	**Annual Average Daily Flow (AADF)(GPD)**	**Delivery Rate (GPM)**
1	Lake Ida Church of Christ	5.17	2.45	14,257	46.2
2	New Jerusalem Church of God	0.73	0.33	1,920	6.2
3	City Owned No.1 Lake Ida Road	2.11	2.11	12,278	39.8
4	City Owned No.2 Lake Ida Road	2.70	2.05	11,929	38.7
5	City Owned No.3 NW 15th Ave	0.72	0.72	4,190	13.6
6	Jordan Missionary Baptist Chruch	0.28	0.19	1,106	3.6
7	Morton Downey Family Research Center & Achievement Centers Foundation	2.79	0.95	5,528	17.9
8	Daughter of Zion Jr Academy & Day Care Cente	1.44	0.95	5,528	17.9
9	Daughter of Zion Seventh Day Adentist Church	2.59	1.50	8,729	28.3
10	Spady Museum	0.33	0.23	1,338	4.3
11	St. Paul Ame Church	0.40	0.17	989	3.2
12	St. John Primitive Baptist Church	1.02	0.49	2,851	9.2
13	Delray Beach Housing Authority	0.30	0.12	698	2.3
14	Mt. Olive Baptist Church	0.97	0.17	989	3.2
15	Cason United Methodist Church	5.89	3.35	19,494	63.2
16	S.D. Spady Elementary	14.60	9.10	52,954	171.6
17	Fire Station No.111	1.64	0.61	3,550	11.5
18	I-95 and Atlantic Avenue Interchange	61.20	24.40	141,987	460.2

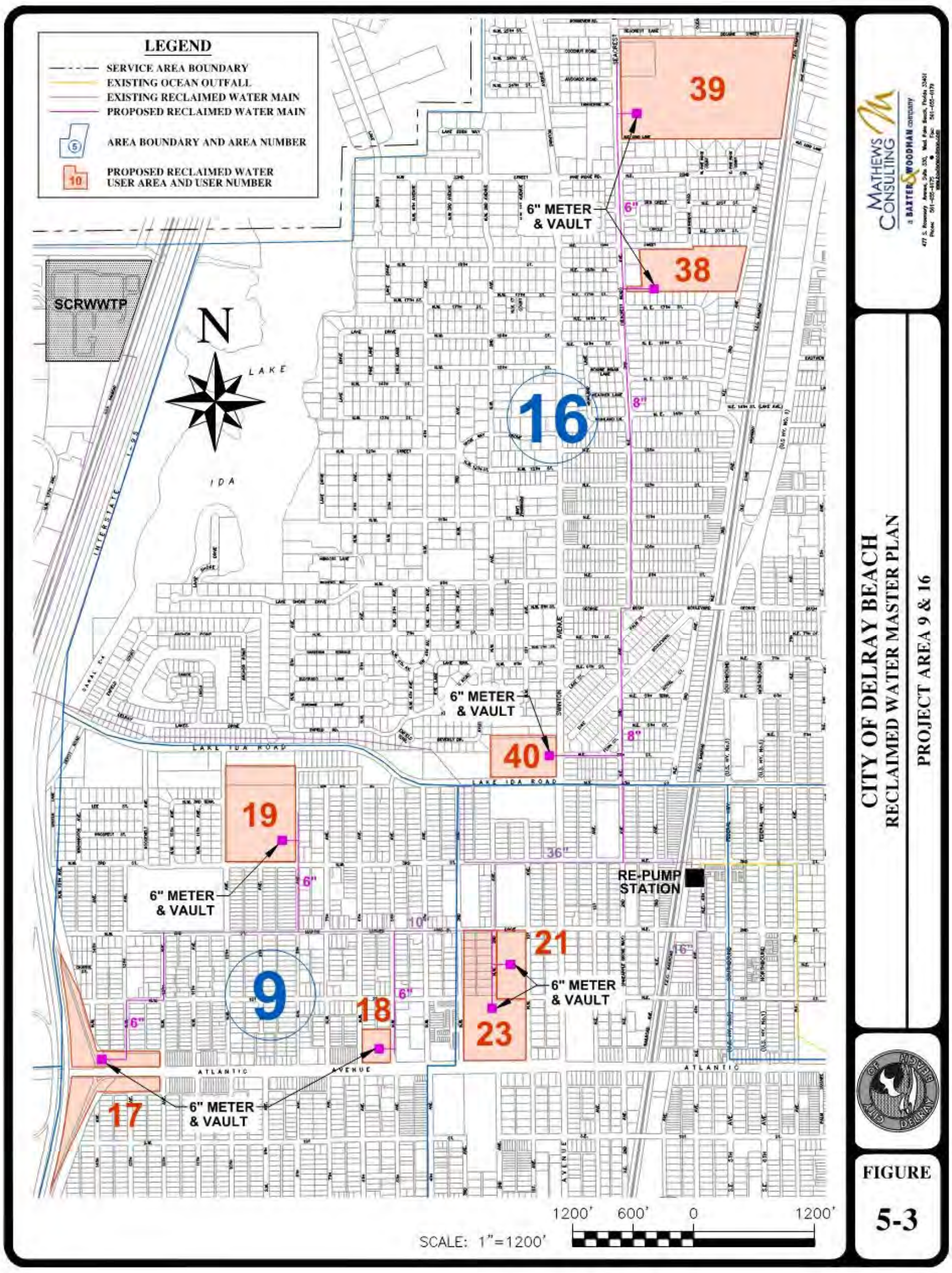


Figure 4-14: Area 9 from 2016 Reclaimed Water Master Plan Update

B&W updated the 2016 WaterCAD hydraulic model based on the reclaimed water main improvements constructed since 2016, which include the following:

Area 5 Improvements (Old Germantown Road)
Area 10 Improvements (SE 1st Avenue) – currently under construction
Area 12 B & C Improvements (Barrier Island)
Area 14 Improvements (SW Neighborhood Improvements Project)

The following assumptions were made for this hydraulic modeling effort:

The Area 10 Improvements currently under construction will be installed per existing construction plans.

Pompey Park is already serviced by the reclaimed water system at the intersection of N.W. 12th Avenue and N.W. 2nd Street. No reclaimed water service is proposed for Pompey Park as part of this project.

The three (3) City-owned properties shall be connected to the reclaimed water system as part of this project.

The previous preliminary design report recommends extending the reclaimed water main on N.W. 3rd Avenue between N.W. 3rd Street and N.W. 2nd Street. The intent of this main is to service the Zion Church property. It was assumed during the hydraulic modeling effort that a stub-out be left for the Zion Church rather than extending the main the entire length of the roadway.

The previous preliminary design report identified the Supernatural Outreach Ministry on Depot Avenue as a major user to be serviced as part of this project. This major user would need to be serviced from the existing reclaimed water main on Lake Ida Road, which is outside the limits of this project. This property will not be serviced as part of this project.

The hydraulic model and pipe sizing only includes the reclaimed water users and demands outlined in Table 4-2. Although stub outs for future residential connections are part of the construction scope, residential demands were not included in the hydraulic model analysis.

The associated recommended reclaimed water main improvements and service size are shown in Figure 4-15.

4.7 Reclaimed Water Main Recommendations

Based on the modeling efforts, the following are the recommended improvements to serve the properties identified by the City to be served with reclaimed water:

Northwest Quadrant - north of N.W 2nd Street and west of N.W. 8th Avenue:

Extend 6-inch raw water main along N.W. 8th Avenue from N.W. 2nd Street to N.W. 4th Street to serve the S.D. Spady Elementary School, City owned property (dry detention area), and Jordan Missionary Baptist Church.

Extend 6-inch reclaimed water main along N.W. 4th Street from N.W. 8th Avenue to N.W. 5th Avenue to serve the Morton Downey Family Resource Center and Achievement Centers Foundation.

Extend 6-inch reclaimed water main along N.W. 3rd Street from N.W. 8th Avenue to Lincoln Lane to serve City owned properties (dry detention area).

Extend 6-inch reclaimed water main along Roosevelt Avenue from N.W. 3rd Street to Lake Ida Road to serve the Lake Ida Church of Christ, New Jerusalem Church of God, and City owned property (dry detention area).

Provide stub outs to roads at intersections adjacent to new water main extensions for future residential connections.

Northeast Quadrant - north of N.W. 2nd Street and east of N.W. 8th Avenue:

Provide stub out to Daughter of Zion Seventh-Day Adventist Church from N.W. 3rd Street.

Provide a stub out to Daughter of Zion Junior Academy & Day Care Center.

Extend 4-inch raw water main along N.W. 1st Avenue from N.W. 3rd Street to the Cason United Methodist Church.

Southwest Quadrant - south of N.W. 2nd Street and west of N.W. 8th Avenue:

Extend a 6-inch reclaimed water main along Martin Luther King Jr. Drive from N.W. 12th Avenue to N.W. 13th Avenue.

Extend a 6-inch reclaimed water main along N.W. 13th Avenue from Martin Luther King Jr. Drive to Atlantic Avenue to serve the north and south sides of the I-95 Interchange Right-of-Way.

Provide stub outs to the east and west at the intersection of N.W. 1st Street and N.W. 13th Avenue.

Southeast Quadrant - south N.W. 2nd Street and west of N.W. 8th Avenue:

Extend a 6-inch reclaimed water main along N.W. 5th Avenue from Martin Luther King Jr. Drive to serve the Delray Beach Fire Station adjacent to Atlantic Avenue. Services will also be provided to the Spady Museum and Saint Paul AME Church.

Extend 4-inch reclaimed water mains from along N.W. 1st Street from N.W. 5th Avenue to N.W. 4th Avenue to serve the Mount Olive Baptist Church.

Extend 4-inch reclaimed water mains from along N.W. 1st Street from N.W. 5th Avenue to N.W. 6th Avenue to serve the Delray Beach Housing Authority and Saint John Primitive Baptist Church.

Extend 12-inch reclaimed water main along N.W. 2nd Avenue from Martin Luther King Jr. Drive to south of N.W. 1st Street to serve the Delray Beach Tennis Center.

Extend 12-inch reclaimed water main along Martin Luther King Jr. Drive from N.W. 2nd Avenue to N.W. 1st Avenue to serve future residential connections.

The associated recommended reclaimed water main improvements and service size are shown in Figure 4-15.

Based on the estimated reclaimed water use, each new major user will be required to submit for a permit in accordance with FAC 62-610.890, “General Permit for Adding New Major Users to a Part III Reuse System”. The I-95 Interchange exceeds the threshold of 0.10 mgd annual average flow and is not currently identified in the City’s area of reclaimed water use. The reclaimed water service to the I-95 Interchange requires work within the FDOT’s Right-of-Ways. The following permits are anticipated to be obtained for the proposed reclaimed water main improvements:

Florida Department of Health Palm Beach County (PBCHD) Notice of Intent to Use General Permit for Addition of a Major User of Reclaimed Water

Florida Department of Transportation (FDOT) Utility ROW Permit (Work within W. Atlantic Avenue and the Florida Turnpike Right-of-Ways)

An Engineer's Opinion of Probable Construction cost estimate in Section 7 includes cost for proposed reclaimed water main improvements.

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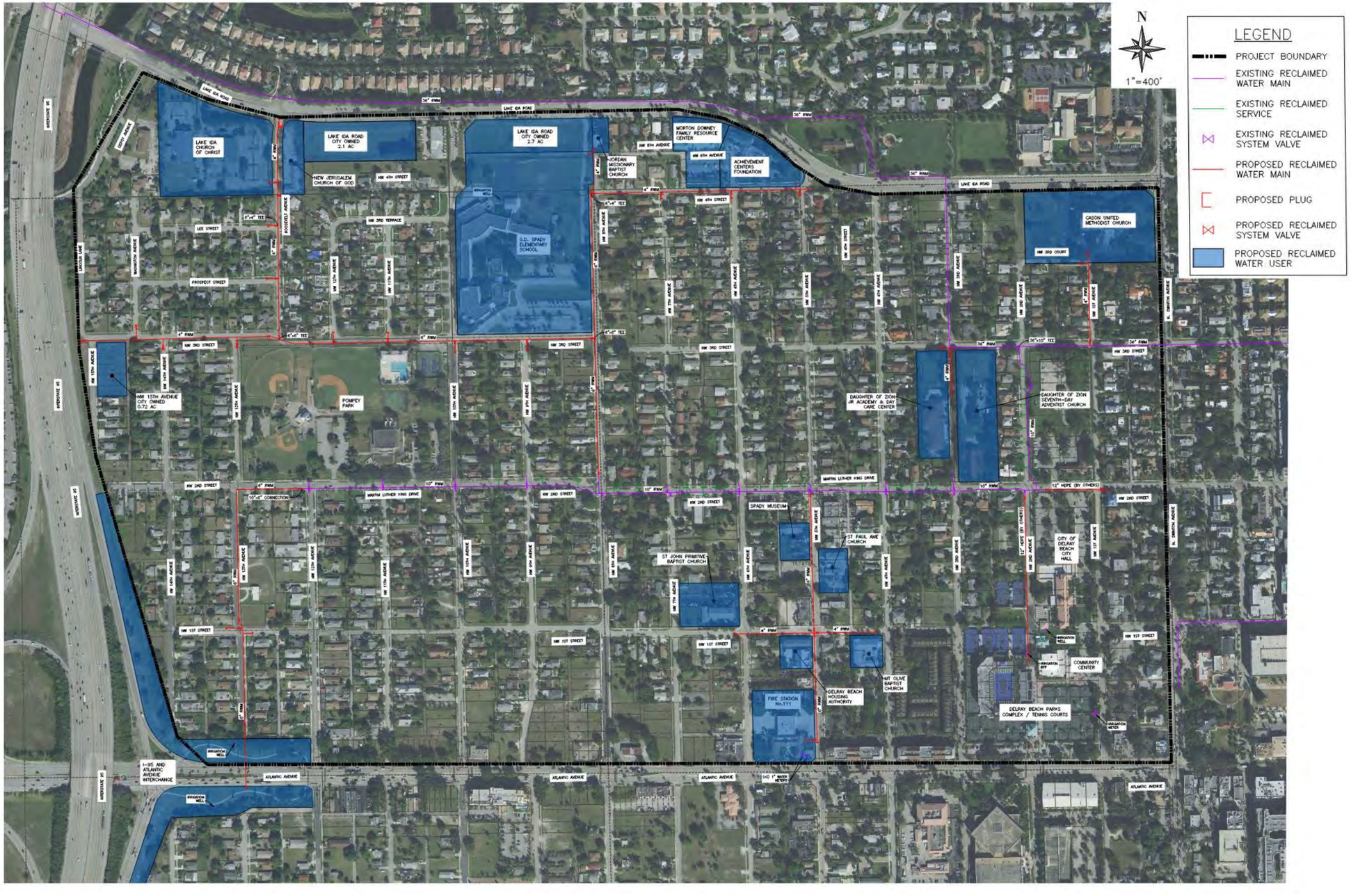


Figure 4-15: Proposed Reclaimed Water Main Improvements

Section 5

Lighting Analysis

5 Lighting Analysis

5.1 Existing Lighting Conditions

The limits of the project are from I-95 to Swinton Avenue and from Atlantic Avenue to Lake Ida Road. The project will include roadway and alleyway improvements in the Northwest Neighborhood area. The existing roadway lighting in the project has been recently upgraded by Florida Power & Light (FPL) to LED fixtures based on the city-wide upgrade program. The lighting in the alleys will consist of FPL installing LED Cobra Head fixtures on existing poles along the alleys. This project will now include lighting of Alley 24.

A visual inspection of the roadway lighting within the limits of I-95 to Swinton Avenue and from Atlantic Avenue to Lake Ida Road produced the following findings:

The roadway lighting along N.W. 3rd Street from North Swinton Avenue to N.W. 15th Avenue, an approximate length of 5,000 LF includes ten (10) pole mounted light fixture assemblies. One (1) of the fixture is FPL type "Cobra head" fixture (***Figure 5-1***) and nine (9) Autobahn type (***Figure 5-3***), mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The "Cobra head" fixture is high pressure sodium type with wattage of 100 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 45 Watts. The poles were found to be a combination of direct buried wood and concrete poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 2nd Street from North Swinton Avenue to N.W. 15th Avenue, an approximate length of 4,960 LF includes forty-two (42) pole mounted light fixture assemblies. Four (4) of the fixtures are FPL type "Cobra head" fixtures and twenty-four (24) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be a combination of direct buried wood and concrete poles. Fourteen (14) of the fixtures are Granville type (***Figure 5-4***), with an approximate mounting height of 18 feet above grade, direct buried poles. The "Cobra head" fixtures are high pressure sodium type ranging in wattage from 70 to 150 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 45 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 1st Street from North Swinton Avenue to N.W. 14th Avenue, an approximate length of 4,600 LF includes nineteen (19) pole mounted light fixture assemblies. One (1) of the fixture is FPL type "Cobra head" fixture, one (1) is an "Open Bottom" type (***Figure 5-2***), and ten (10) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be a combination of direct buried wood and concrete poles. Seven (7) of the fixtures are Granville type, with an approximate mounting height of 18 feet above grade, direct buried poles. The "Cobra head" and "Open Bottom" fixtures are high pressure sodium type ranging in wattage from 70 to 150 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 80 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 1st Avenue from N.W. 3rd Court to West Atlantic Avenue, an approximate length of 2,500 LF includes seventeen (17) pole mounted light fixture assemblies. One (1) of the fixture is FPL type "Cobra head" fixture and sixteen (16) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The "Cobra head" fixture is high pressure sodium type with wattage of 100 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 80 Watts. The poles were found to be a combination of direct buried wood and concrete poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 2nd Avenue from N.W. 3rd Court to N.W. 1st Street, an approximate length of 2,050 LF includes five (5) pole mounted light fixture assemblies. One (1) of the fixture is FPL type "Open Bottom" type, and four (4) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The "Open Bottom" fixture is high pressure sodium type with wattage 100 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 80 Watts. The poles were found to be a combination of direct buried wood and concrete poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 3rd Court from N.W. 1st Avenue to N.W. 2nd Avenue, an approximate length of 300 LF includes two (2) pole mounted light fixture assemblies. Two (2) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The Autobahn fixtures are LED type ranging in wattage from 28 to 80 Watts. The poles were found to be primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 3rd Avenue from Lake Ida Road to West Atlantic Avenue, an approximate length of 2,750 LF includes sixteen (16) pole mounted light fixture assemblies. One (1) of the fixture is FPL type "Cobra head" fixture, and five (5) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. Ten (10) of the fixtures are Granville type, with an approximate mounting height of 18 feet above grade, direct buried poles. The "Cobra head" fixture is high pressure sodium type, 150 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 80 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 4th Avenue from Lake Ida Road to West Atlantic Avenue, an approximate length of 2,750 LF includes nineteen (19) pole mounted light fixture assemblies. Two (2) of the fixtures are FPL type "Cobra head" fixture, and seven (7) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be a combination of direct buried wood and concrete poles. Ten (10) of the fixtures are Granville type, with an approximate mounting height of 18 feet above grade, direct buried poles. The "Cobra head" fixtures are high pressure sodium type ranging in wattage from 70 to 200 Watts. The Autobahn fixtures are LED type ranging in wattage from 28 to 80 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 5th Avenue from N.W. 4th Street to West Atlantic Avenue, an approximate length of 2,700 LF includes thirty-four (34) pole mounted light fixture assemblies. Three of the fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be a combination of direct buried wood and concrete poles. Thirty-one (31) of the fixtures are Granville type, with an approximate mounting height of 18 feet above grade, direct

buried poles. The Autobahn fixtures are LED type, 28 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 6th Avenue from N.W. 4th Street to West Atlantic Avenue, an approximate length of 2,700 LF includes eight (8) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be a combination of direct buried wood and concrete poles. The fixtures are LED type, ranging in wattage from 28 to 45 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 7th Avenue from N.W. 4th Street to West Atlantic Avenue, an approximate length of 2,700 LF includes five (5) pole mounted light fixture assemblies. The five (5) fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The Autobahn fixtures are LED type, 80 Watts. The poles were found to be primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 8th Avenue from N.W. 4th Street to West Atlantic Avenue, an approximate length of 3,000 LF includes ten (10) pole mounted light fixture assemblies. One (1) of the fixture is FPL type "Cobra head" fixtures and nine (9) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The "Cobra head" fixture is high pressure sodium type with wattage of 100 Watts. The Autobahn fixtures are LED type, ranging in wattage from 45 to 80 Watts. The poles were found to be a combination of direct buried wood and concrete poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 9th Avenue from N.W. 3rd Street to West Atlantic Avenue, an approximate length of 2,050 LF includes four (4) pole mounted light fixture assemblies. The four (4) fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The Autobahn fixtures are LED type, ranging in wattage from 28 to 45 Watts. The poles were found to be a primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 10th Avenue from Lake Ida Road to West Atlantic Avenue, an approximate length of 3,100 LF includes six (6) pole mounted light fixture assemblies. Two (2) of the fixtures are FPL type "Cobra head" fixtures and four (4) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The "Cobra head" fixtures are high pressure sodium type ranging in wattage from 70 to 400 Watts. The Autobahn fixtures are LED type, ranging in wattage from 28 to 45 Watts. The poles were found to be a combination of direct buried wood and concrete poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 11th Avenue from N.W. 2nd Street to West Atlantic Avenue, an approximate length of 1,200 LF includes four (4) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. The fixtures are LED type, ranging in wattage from 45 to 80 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 12th Avenue from N.W. 2nd Street to West Atlantic Avenue, an approximate length of 1,200 LF includes eleven (11) pole mounted light fixture assemblies. Three (3) of the fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. Eight (8) of the fixtures are Granville type, with an approximate mounting height of 18 feet above grade, direct buried poles. The Autobahn fixtures are LED type, 45 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 13th Avenue from N.W. 3rd Street to South Alley (North of West Atlantic Avenue), an approximate length of 2,000 LF includes Seven (7) pole mounted light fixture assemblies. Two (2) of the fixtures are FPL type "Cobra head" fixtures and Five (5) Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The "Cobra head" fixtures are high pressure sodium type ranging in wattage from 70 to 100 Watts. The Autobahn fixtures are LED type, ranging in wattage from 45 to 80 Watts. The poles were found to be primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 14th Avenue from N.W. 3rd Street to South Alley (North of West Atlantic Avenue, an approximate length of 1,700 LF includes six (6) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. The fixtures are LED type, ranging in wattage from 28 to 45 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 15th Avenue from N.W. 3rd Street to N.W. 2nd Street, an approximate length of 550 LF includes two (2) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. The fixtures are LED type, 45 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 3rd Terrace from N.W. 10th Avenue to N.W. 11th Avenue, an approximate length of 300 LF includes two (2) pole mounted light fixture assemblies. The fixtures are FPL Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The fixtures are LED type, 45 Watts. The poles were found to be a direct buried wood pole. The service consists of an overhead FPL lighting circuit and the fixture is equipped with individual photocell.

The roadway lighting along N.W. 12th Avenue from N.W. 11th Avenue to N.W. 3rd Street, an approximate length of 800 LF includes one (1) pole mounted light fixture assembly. The fixture is Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The Autobahn fixture is LED type, with wattage of 45 Watts. The poles were found to be primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along N.W. 11th Avenue from N.W. 3rd Terrace to N.W. 3rd Street, an approximate length of 550 LF includes one (1) pole mounted light fixture assembly. The fixture is FPL Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The fixture is LED type, 45 Watts. The pole was found to be a direct buried wood pole. The service consists of an overhead FPL lighting circuit and the fixture is equipped with individual photocell.

The roadway lighting along Roosevelt Avenue from Lake Ida Road to N.W. 3rd Street, an approximate length of 1,050 LF includes five (5) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The Autobahn fixtures are LED type, 45 Watts. The poles were found to be primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along Washington Avenue from Lee Street to N.W. 3rd Street, an approximate length of 650 LF includes two (2) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. The fixtures are LED type, 28 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along Lincoln Lane from Depot Avenue to N.W. 3rd Street, an approximate length of 700 LF includes two (2) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The poles were found to be primarily direct buried wood poles. The fixtures are LED type, 28 Watts. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along Depot Avenue from Lake Ida Road to Lincoln Lane, an approximate length of 700 LF includes three (3) pole mounted light fixture assemblies. The fixtures are Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The Autobahn fixtures are LED type, 45 Watts. The poles were found to be primarily direct buried wood poles. The service consists of an overhead FPL lighting circuit and the fixtures are equipped with individual photocells.

The roadway lighting along Lee Street from Roosevelt Avenue to Washington Avenue, an approximate length of 700 LF includes one (1) pole mounted light fixture assembly. The fixture is FPL Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The fixture is LED type, 28 Watts. The pole was found to be a direct buried wood pole. The service consists of an overhead FPL lighting circuit and the fixture is equipped with individual photocell.

The roadway lighting along Prospect Street from Roosevelt Avenue to Washington Avenue, an approximate length of 700 LF includes one (1) pole mounted light fixture assembly. The fixture is FPL Autobahn type, mounted on a 6-foot arm with a 2-foot rise. The mounting height is approximately 30 feet above grade. The fixture is LED type, 28 Watts. The pole was found to be a direct buried wood pole. The service consists of an overhead FPL lighting circuit and the fixture is equipped with individual photocell.

Alley 24 is located between N.W. 1st Avenue and N.W. 2nd Avenue. Alley 24 lighting is anticipated to consist of three (3) FPL Autobahn type LED pole mounted fixtures with mounting height of 30 feet above grade.

Figure 5-1: Cobra Head Type Fixture

Figure 5-2: Autobahn LED Type Fixture

Figure 5-3: Open Bottom Type Fixture

Figure 5-4: Granville Series LED Decorative Type Fixture

5.2 Proposed Lighting Conditions

The proposed conditions will include improved lighting along the above referenced roadways. The design will be based on the FPL LED street lighting program.

For the purposes of this report the proposed FPL light fixtures will be:

- Holophane
- Style Granville
- Type 3 Light Pattern
- Line Watts – NEMA Watts Label: 60/60
- Color Temp – 3000k – 5000k
- Lumens – 4,990
- Glare Rating (BUG) – B2 U3 G5
- IES File – ISF 32566P12 GVD2 P20 50K AS 3 N.ies
- Billing Tier – C5
- LLF – 0.81

The design shall include consideration of the basic principles of Streetlight design including Safety, Security, Limit of Light Trespass and Light Uniformity. To meet these principles, the design shall be based on the following as per IESNA RP-8-05:

- Pedestrian Conflict
  - Low conflict area – Residential
- Pavement Classification
  - An Asphalt Road with an aggregate comprised of minimum 60% gravel and mixed mode of reflectance
- Roadway Classification
  - Local – Roadway feeding a collector or arterial
  - Alleyways – A non-controlled access roadway located along the rear of, or between buildings
- Recommended Light Levels
  - Average: 0.3
  - Ave/Min Ratio: 6.0
  - Max/Min Ratio: 10.0
- Area Classification:
  - Residential

Section 6

Landscaping & Irrigation Analysis

6 Landscaping & Irrigation Analysis

6.1 Proposed Landscaping

The proposed landscape is primarily native with some accents that may not be native. All plant material will have low water requirements once established, along with having low maintenance requirements. The intent of the landscape will be to enhance the redeveloped roads and sidewalks, provide visual identifications to the traffic calming chicanes, and provide as much shade as possible. Due to the number of utilities above and below ground, typically in the rights-of-way, each area to be planted will be evaluated as to which type of trees or plantings that will accommodate the areas. All proposed plant material will meet FPL's "Right Tree, Right Place" guidelines. The canopies of any existing trees, most of which are out of the existing right-of-way, will also dictate which type of tree that will be placed in certain locations if any are able to be planted. All trees will be planted with clear trunks, there will be no midstory, and shrubs will be kept low to allow visibility through the plantings. Refer to ***Figure 6-1*** for proposed plant palette for this project.

The proposed landscape design will occur between the sidewalk and travel lanes which will be located in bulb outs, chokers, and in the swales. All options will include curbing to be able to plant trees and palms closer to the roadway travel lane. Refer to ***Figure 6-2*** and ***Figure 6-3*** for typical landscape sections for this project.

The corridors along N.W. 10th Avenue and Roosevelt Avenue that lead into Pompey Park will be treated with large clusters of Sabal Palms and flowering native trees where possible. Using the Sabal Palm Clusters will be able to give the best flexibility to the design based on the existing and proposed utilities. This will also give the best impression one year from the completion of the project.

6.2 Proposed Irrigation

The proposed Irrigation will be only in the areas with trees, palms, shrubs, and ground covers. The sodded areas in the swales will have no irrigation since the sod type will be Bahia. Due to the costs of having electrical connections, the number of standard controllers will only be used where there is a concentration of landscaping. Otherwise, since the chicane and swale plantings are typically spaced far apart, the controllers will be battery operated single zone controllers that have been used in the City. The areas will be irrigated with spray heads for shrubs and bubblers for trees and palms.

The existing irrigation system and the proposed on-site irrigation improvements related to the Pompey Park re-design by others, will be coordinated with that project, and with the future provision of reclaimed water for irrigation use at the park.

Large Trees

Gumbo Limbo

Wild Tamerind

Bulnesia

Live Oak

Jamaican Dogwood

Mahogany

Small Trees

Bridal Veil

Powderpuff

Black Ironwood

Spanish Stopper/
Simpson Stopper

Shrubs

Green Island Ficus

Horizontal Coco.

Clusia Nana

Saw Palmetto

Coontie

Large Palms

Sabal Palm

Canary Island Date Palm

Small Palms

Fl. Thatch Palm

Grasses & Groundcover

FL. Gamma Gr.

Sand Cordgrass

Dwf Jasmine

Beach Creeper

Dwarf Ilex

NW Neighborhood Landscape Plant Palette

GENTILE HOLLOWAY O'MAHONEY & WATKINS, INC.

BAXTER & WOODMAN Consulting Engineers

COMMUNITY REDEVELOPMENT AGENCY DELRAY BEACH CRA

CITY OF DELRAY BEACH

Date: 10.3.22

Figure 6-1: Plant Palette

Typical Planting Section A

Typical Planting Section C

Typical Planting Section B

Typical Planting Section D

NW Neighborhood Landscape Sections

Date: 9.17.22

Figure 6-2: Landscape Sections

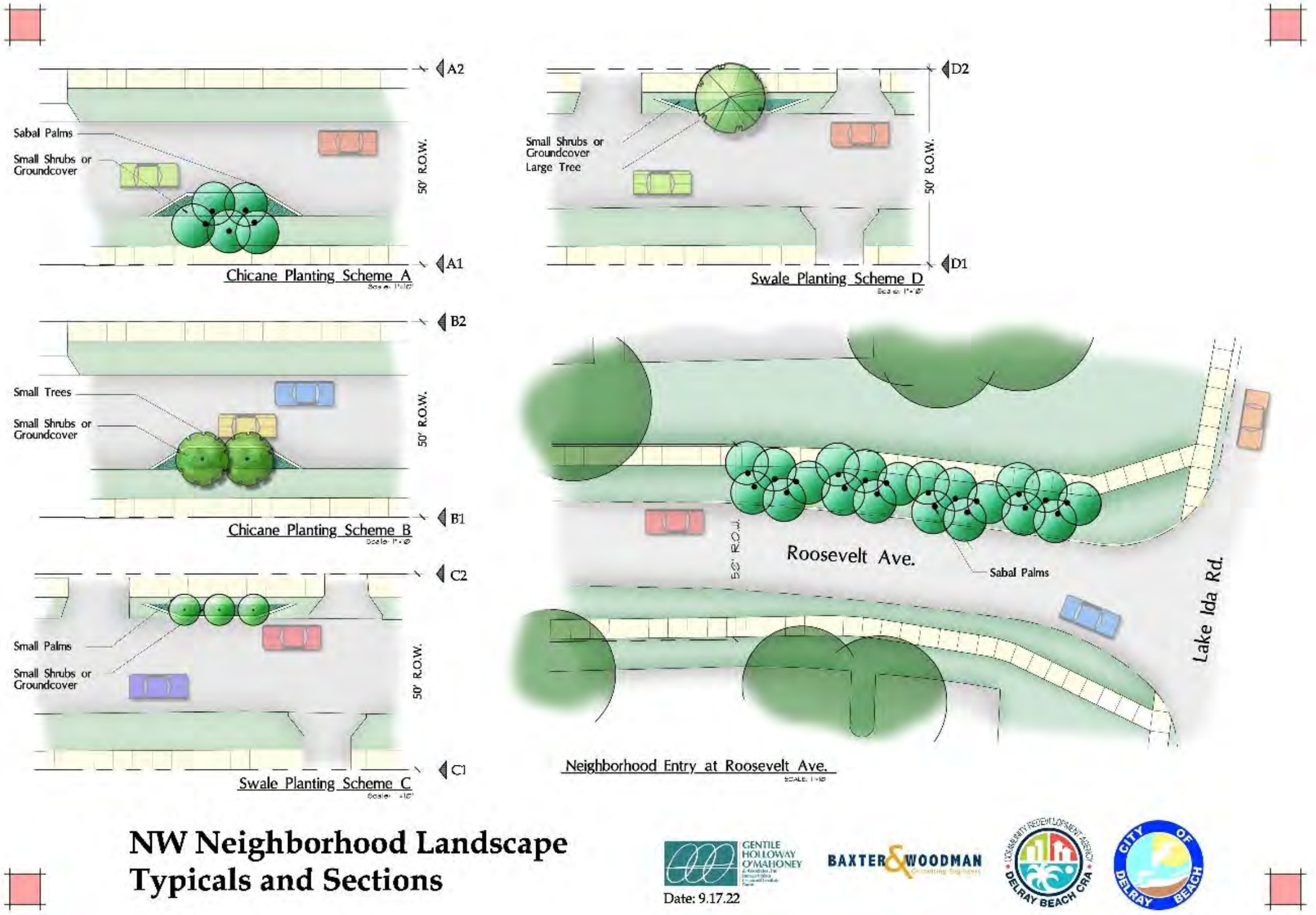


Figure 6-3: Landscape Typicals and Sections

Section 7

Project Conclusions & Recommendations

7 Project Conclusions & Recommendations

The Preliminary Design Report utilized the previously completed preliminary design report (RFQ #2018-054) and performed selective analyses as detailed in the contract and in each respective section. The results of each analysis were looked at from a holistic project approach and the recommended improvements were coordinated spatially. The preliminary construction cost estimates for the recommended improvements are presented in *Section 7.6*.

7.1 Transportation Planning & Roadway Improvements Summary

Overall transportation planning including both vehicular and pedestrian systems were considered in the proposed recommendations presented in *Section 2*. To summarize, the recommendations provided in *Section 2* in regards to the roadway and alleyway improvements are as follows:

- Total roadway reconstruction for the majority of the roadways, or mill and overlay
- Proposed traffic calming features along the main north-south corridors within the neighborhood:
  - N.W. 3rd Avenue
  - N.W. 4th Avenue
  - N.W. 8th Avenue
  - N.W. 10th Avenue
- Along portions of the following roadways:
  - Roosevelt Avenue
  - N.W. 3rd Street
  - N.W. 12th Avenue
  - N.W. 2nd Street
  - Lincoln Lane at Depot Avenue
  - And at selected neighborhood gateway entrance locations
  - Lane edge striping throughout the neighborhood
- Enhanced traffic signage and pavement markings in areas near schools
- On-street permeable concrete parking on:
  - N.W. 3rd Street and N.W. 13th Avenue surrounding Pompey Park
  - Various locations within the project area, where feasible
- Replacement of existing sidewalk and installation of new 5-foot wide concrete sidewalk on both sides of the City's Road ROW. Existing paver sidewalks will remain
- Replacement of driveway aprons within the City's ROW with new concrete driveway aprons. Existing paver driveway aprons will be removed and reinstalled
- Permeable concrete pavement in selected alleyways
- Pavement markings will be replaced upon completion of the roadway improvements
- Existing street name signs will be replaced with the applicable neighborhood enclave on the street name sign. All existing traffic signage will be replaced based on their condition.
- Replacement of existing individual neighborhood entry signs

7.2 Stormwater Improvements Summary

The recommendations concerning drainage infrastructure within the project area were based on the condition of the existing drainage pipes, severity of flooding, and the presence of persistent ponding. In response to flooding, exfiltration trenches were added to the model at locations that would provide the benefit where it is needed. Additional pipes and inlets are recommended to provide connectivity to trapped areas where potential ponding was determined as well as observed ponding. Swales are recommended along 50-foot wide right-of-way section, in all areas where they can be accommodated, especially in areas where no drainage infrastructure is recommended. Swales provide additional water quality and can assist in draining water from paved surfaces. Curb and gutter will be proposed along 40-foot wide road rights-of-way. Additional recommended improvements include modifying the outfall structure weir by 0.6 feet to take full advantage of the peak discharge rate that it allowed for this area. Based on a thorough review of the modeling results, inline check valves at two (2) specific locations are also recommended to prevent backflow into areas that may be experiencing flooding.

7.3 Utility Improvements Summary

7.3.1 Sanitary Sewer System Improvements

The rehabilitation of the sanitary sewer system provides significant benefit to the City of Delray Beach both financially and environmentally. The existing system consists of predominately vitrified clay pipe installed 50+ years ago. Vitrified clay pipe is inflexible and is relatively brittle in comparison to polyvinyl chloride pipe (PVC) used in current construction. Vitrified clay pipe (VCP) is also susceptible to root intrusion and joint leakage. An analysis of the existing sanitary sewer system was performed previously by others utilizing closed-circuit television (CCTV) inspection videos to determine the condition and recommendations for rehabilitating the sanitary sewer system. It was determined that a significant portion of the sanitary sewer system was not inspected by CCTV. The City performed additional CCTV inspections. The additional videos were reviewed and the recommendations for rehabilitation are included herein. Not all segments were televised, therefore the recommendations from the previous consultant for the rehabilitation of those sanitary sewer mains were utilized for this report.

The majority of the CCTV footage of the sanitary sewer system revealed leaking due to cracks or root intrusion and occasionally pipe wall failure. The recommendation for rehabilitation of leaking pipes due to cracks or root intrusion is to remove the root intrusion and line the pipes by cured-in-place pipe (CIPP) lining. CIPP technology has been utilized for decades in the rehabilitation of pipes include sanitary sewer piping. The existing host pipe must be cleaned thoroughly with removal of all roots and debris prior to commencing CIPP lining.

Once cleaning is complete the insertion of a high strength woven fiber sleeve saturated with an epoxy resin mix can begin. The CIPP sleeve is inserted into the existing pipe, which, then expands against the walls of the existing pipe by compressed air. Steam is then introduced to the CIPP sleeve to cure the epoxy resin mix. Once completely cured, the CIPP liner is structurally sound and no longer relies on the existing pipe walls for structural integrity.

Because CIPP lining requires an existing pipe to be relatively intact, CIPP cannot be utilized for damaged pipes that have lost significant sections of the pipe walls. Complete removal and replacement of those damaged segments of sanitary sewer main is necessary. Either a segment of damaged VCP sanitary

sewer main will be saw cut and removed, a new section of PVC will be installed utilizing appropriate couplings to join the dissimilar materials. If the damage is significant enough along the sanitary sewer run between manholes, the entire section of sanitary sewer will be replaced with new PVC pipe.

Root intrusion is a significant issue with respect to causes of leakage in the sanitary sewer system. It is recommended that root barrier systems be installed in locations where significant amounts of root intrusion were witnessed and where trees that have extensive root systems have been identified in the field.

In alignment with the City's standards for rehabilitation of sanitary sewer, the following recommendations are provided herein:

- Sanitary Sewer Mains to be Lined – sanitary sewer laterals along main segment will remain and new clean-outs will be installed at the City's right-of-way line.
- Sanitary Sewer Mains to be Replaced – sanitary sewer laterals along the main sewer segment will be replaced in their entirety and new clean-outs will be installed at the City's right-of-way line.

All sanitary sewer manholes within the project area will be cleaned and lined with an approved coating system to prohibit infiltration to the manhole.

7.3.2 Potable Water System Improvements

The proposed improvements to the potable water system consists of two projects. One project that was previously designed in 2018; and a second project for the increase of pipe sizes to facilitate fire flow requirements as determined by the report prepared by the previous consultant. The previous report recommended upsizing 18,750 LF of water main throughout the project area to 8-inch diameter pipes. Baxter & Woodman reviewed the information and determined that there were discrepancies in the total length of pipe to be upsized and that the existing projects designed in 2018 do not meet the City's initiative to increase all potable water distribution mains to a minimum of 8-inch diameter. The City's *Potable Water By Size* map dated October 2, 2020, was utilized to determine a more accurate pipe length, and identified a total of 20,190 LF of potable water main pipe in the project area that requires upsizing, replacement, or addition to the system to achieve the goals of 1) relocation of rear yard water services to the street; and 2) provision of a minimum water main size of 8-inch diameter. All potable water main pipes will be replaced with the City's standard of AWWA PVC C900 (DR18) piping.

Baxter & Woodman also performed a fire hydrant coverage analysis throughout the project area utilizing the City's maximum distance requirements for residential and non-residential areas. Twenty-seven fire hydrants were strategically placed to provide improved fire protection coverage.

A review of maintenance records is typically reviewed in order to assist in identification of water system deficiencies or indication that the system components have reached the end of their useful life. The City reported no water main breaks, inoperable valves, or inoperable fire hydrants within the project area, however, the comprehensive nature of the proposed water main improvements will result in replacement of these items that are reaching the end of their useful service lives.

7.3.3 Reclaimed Water System Improvements

The improvements to the reclaimed water system involves the extension of reclaimed water mains to serve properties identified as "large users" including schools/educational properties, vacant City- owned lands, places of worship, and the open areas along the east-side of I-95 on the north and south sides of the intersection with Atlantic Avenue.

Baxter & Woodman reviewed the City's reclaimed water hydraulic model and performed updates based on projects constructed by the City since the latest *2016 Reclaimed Master Plan Update* report prepared by Baxter & Woodman. The model was also updated by reviewing the list of previously proposed large reclaimed water users within the project area and adding new reclaimed water users to the hydraulic model, as identified by the City.

Reclaimed water mains will be extended utilizing AWWA PVC C900 (DR18) piping as per the City's standards.

7.4 Street Lighting Improvements Summary

The recommended street lighting improvements within the project area will utilize the FP&L LED Street Lighting Program. The City has selected the Granville style light fixture from the FP&L LED Street Lighting Program for the streets within this neighborhood. This is a decorative "acorn" style light fixture, which has been installed on other projects within the City. A photometric lighting design plan shall be prepared including consideration of the basic principles of streetlight design including safety, security, limit of light trespass, and light uniformity. The photometric lighting design plan shall be provided to FP&L for their own internal design and FPL's installation of the proposed street lighting improvements. The estimated street lighting improvements cost is based on the cost provided by FP&L for the Osceola Park Neighborhood Improvements project and adjusted by ratio for the difference between the project areas.

During the public informational meetings held in the spring of this year, it was found that the residents also wished to have the improved alleyways lit. The alleyways will be lit by installation of LED "cobra head" style light fixtures on the existing power poles along the alleyways.

7.5 Landscaping & Irrigation Improvements Summary

The intent of the proposed landscaping improvements is to enhance and beautify the redeveloped roads and sidewalks, provide visual identifications to the traffic calming features, and to emphasize the gateway entrances to the neighborhood. The proposed landscape design will occur between the sidewalk and travel lanes which will be located in bulbouts, along side street parking and in selected swale area. Curbing will be utilized to allow for a reduced setback between planted trees and the roadway travel lane. The corridor along Roosevelt Avenue will be treated with large clusters of Sabal Palms and flowering native trees where possible. Other gateway entrance locations and traffic calming corridors will include landscaping.

Irrigation will be provided in the areas with trees, palms, shrubs, and ground covers. The irrigation controllers will be battery-operated, single zone controllers similar to those utilized in other areas of the City. The areas will be irrigated with spray heads for shrubs and bubblers for trees and palms.

The landscaping and irrigation construction costs presented in *Section 7.7* are based on the average as-bid pricing on the Osceola Park Neighborhood Improvements project and increased based upon a ratio comparison of the size of the neighborhoods.

7.6 Phasing Plan

The proposed phasing plan as per this preliminary design report is shown in *Figure 7-1*. Phases 1 and 2 are the area west of N.W. 5th Avenue and divided north and south by Martin Luther King Jr. Drive. Martin Luther King Jr. Drive has previously been improved and offers a travel route which will be minimally impacted by this project construction. This allows for each of these two (2) phases to have both a north-south and east-west travel corridors open during construction. The roadways adjacent to Pompey Park are included in Phase 1 in order to coordinate the construction schedules and timing of both the N.W. Neighborhood and Pompey Park projects. Phase 3 is the area bounded by Lake Ida Road on the north, Swinton Avenue on the east, Atlantic Avenue on the south and N.W. 5th Avenue on the west. For Phases 1, 2 and 3, the open east-west corridors include Lake Ida Road, Atlantic Avenue and Martin Luther King Jr. Drive. Phases 1 and 2 are anticipated to be slightly larger than Phase 3 with anticipated construction durations of 18 months for Phases 1 and 2, and 12 months for Phase 3. The project will be designed as three (3) separate bid packages that will be bid and constructed in three (3) consecutive phases.

7.7 Preliminary Construction Cost Opinion

The preliminary construction cost estimate for the entire project is shown in *Table 7-1*. The construction cost information is preliminary in nature. These costs are based upon comparisons of previous and current similar types of work and materials underway in the Southeast Florida area. All costs developed herein are in 2022 dollars and do not include land acquisition. In the 2020 to 2022 timeframe, the market has been affected by availability of materials, supply chain delivery issues, labor shortages, and the price of fuel due to world events. Because of these factors and the uncertainty of future pricing, we have included an additional unit price markup of 7.1% based on the US Bureau of Labor Statistics Cost of Living Index for the period October 2021 to January 2022. As the design of the neighborhood improvements progresses, the construction cost estimate will be refined.

Baxter & Woodman has divided the preliminary construction cost estimate into the respective Phases 1, 2, and 3 as shown in *Table 7-2, Table 7-3,* and *Table 7-4*.

Figure 7-1: Proposed Phasing Plan

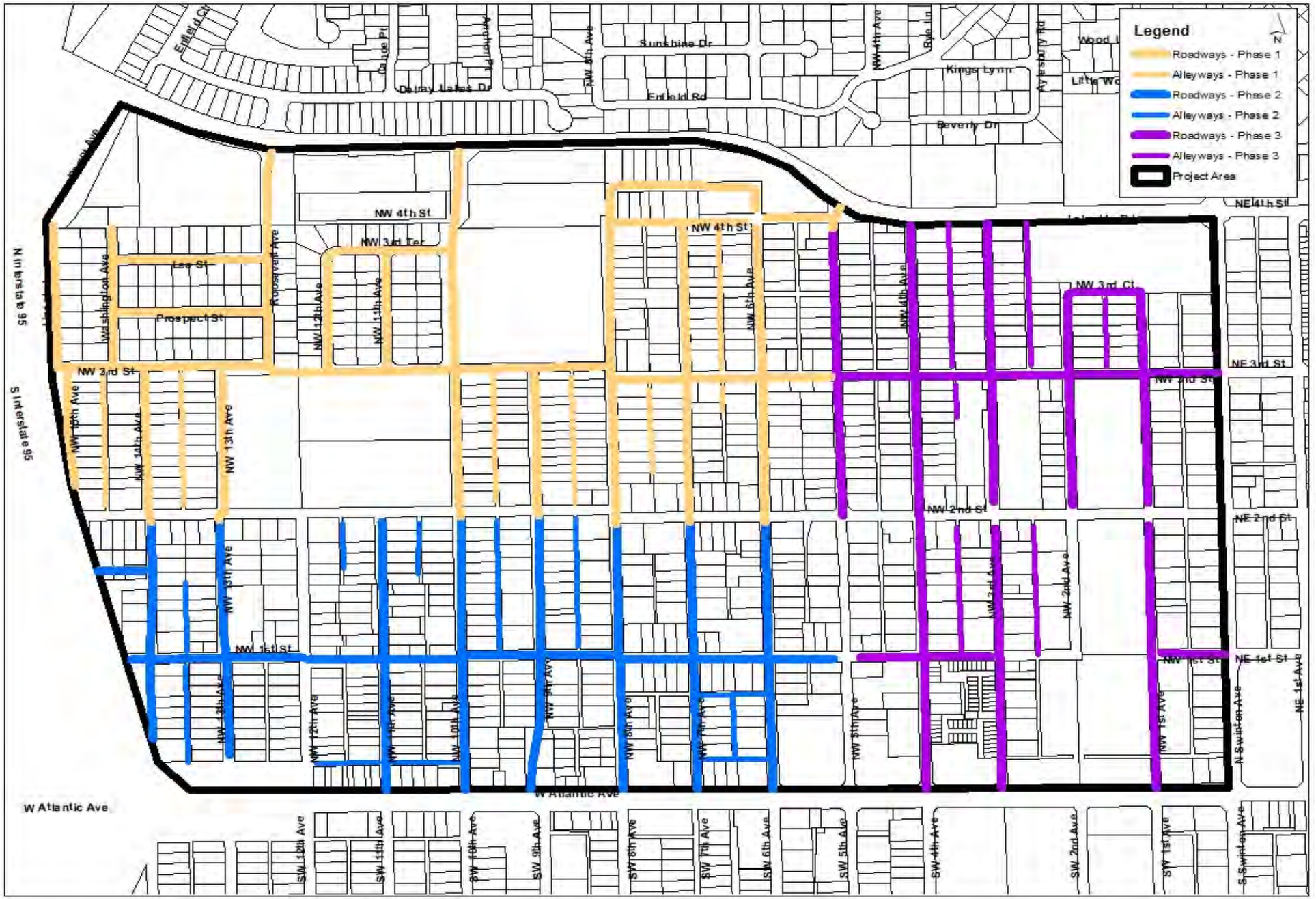


Table 7-1: Preliminary Construction Cost Estimate

Table 7-1

City of Delray Beach

NW Neighborhood Improvements (All Phases Totaled)

Preliminary Engineer's Estimate of Probable Construction Costs (October 2022)

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Extended Cost
General					
G-1	Mobilization, Bonds, Insurance	LS	1	$2,273,411.70	$2,273,411.70
G-2	Maintenance of Traffic	LS	1	$880,362.00	$880,362.00
G-3	As-Built Record Drawings	LS	1	$321,300.00	$321,300.00
G-4	NPDES Permit/Erosion Protection Measures	LS	1	$160,650.00	$160,650.00
G-5	Professional Audio/Video of Construction Site	LS	1	$80,325.00	$80,325.00
				Subtotal General:	**$3,716,048.70**
Roadway					
R1-1	Remove & Dispose of Existing Pavement Section (varying thickness)	SY	94,660	$5.36	$506,904.30
R1-2	Remove & Dispose of Trees, Shrubs, Fencing, etc. in Road & Alley ROW	LS	1	$963,900.00	$963,900.00
R1-3	Tree Root Prune and Branch Pruning in Alley ROW	LS	1	$160,650.00	$160,650.00
R1-4	Superpave Asphalt Concrete SP 9.5 (2 lifts) (2" thick for road recon & 1" thick for mill & overlay)	TONS	14,410	$192.78	$2,777,959.80
R1-5	Basegroup 6 (8" Baserock) (LBR 100)	SY	132,294	$17.14	$2,266,989.98
R1-6	12" Compacted Subgrade (LBR 40)	SY	142,663	$7.50	$1,069,544.51
R1-7	6" Stabilized Shoulder	SY	31,453	$4.00	$125,812.00
R1-8	Mill Existing Asphalt Pavement (1" Avg Depth) and Hauloff	SY	6,070	$4.28	$26,003.88
R1-9	Alleyway Permeable Concrete Pavement	SY	24,480	$85.68	$2,097,446.40
R1-10	Alleyway Base	SY	24,480	$17.14	$419,489.28
R1-11	12" Header Curb	LF	26,670	$26.78	$714,089.25
R1-12	Type F Curb and Gutter	LF	38,388	$26.78	$1,027,838.70
R1-13	Valley Gutter	LF	11,810	$28.92	$341,509.77
R1-14	5' Wide Concrete Sidewalk Replacement (4" thick)	SF	452,900	$5.89	$2,667,807.45
R1-15	Driveway Apron Replacement	SF	172,400	$7.50	$1,292,482.80
R1-16	Curb Ramp with ADA-Compliant Tactile Surface Mat per FDOT Index 522	EA	212	$1,606.50	$340,578.00
R1-17	Raised Intersection/Raised Crosswalk	EA	7	$42,535.71	$297,750.00
R1-18	Chicanes	EA	1	$25,000.00	$25,000.00
R1-19	Landscaped Bulbouts	EA	13	$23,562.00	$306,306.00
R1-20	Speed Hump	EA	20	$18,207.00	$364,140.00
R1-21	~~Traffic Circle~~	EA	0	$139,230.00	$0.00
R1-22	Decorative Asphalt Pavement Entry Feature (incl baserock)	EA	5	$44,982.00	$224,910.00
R1-23	Remove Existing Neighborhood Sign & Replace with New Neighborhood Sign	EA	16	$3,213.00	$51,408.00
R1-24	Remove & Replace Existing Traffic Signs & Street Name Signs	LS	1	$78,000.00	$78,000.00
R1-25	Furnish & Install Flashing Cross Walk Sign	EA	13	$5,355.00	$69,615.00
R1-26	Temporary & Permanent Pavement Markings & RPM's	LS	1	$118,825.00	$118,825.00
				Subtotal Roadway:	**$18,334,960.13**
Stormwater					
D-1	Remove Existing Drainage Pipe	LF	3,554	$21.42	$76,126.68
D-2	Remove Existing Exfiltration Trench	LF	3,181	$48.20	$153,308.30
D-3	Type C Drainage Inlet w/Frame & Grate	EA	144	$5,033.70	$723,523.90
D-4	Type E Drainage Inlet w/Frame & Grate	EA	36	$6,104.70	$219,366.29
D-5	Drainage Manhole - 4' Dia	EA	72	$5,890.50	$423,338.45
D-6	Drainage Manhole - 5' Dia	EA	18	$6,961.50	$125,077.27
D-7	18" RCP	LF	4,633	$96.39	$446,574.87
D-8	24" RCP	LF	520	$128.52	$66,830.40
D-9	30" RCP	LF	174	$171.36	$29,816.64
D-10	48" RCP	LF	132	$289.17	$38,170.44
D-11	18" Exfiltration Trench w/4'x4' Envelope	LF	5,887	$198.14	$1,166,420.75
D-12	18" Exfiltration Trench w/5'x5' Envelope	LF	6,071	$214.20	$1,300,408.20
D-13	24" Exfiltration Trench w/ 5'x5' Envelope	LF	550	$278.46	$153,153.00
D-14	Connections to Existing Structure/Pipe	EA	51	$2,142.00	$109,242.00
D-15	18" Inline Check Valve	EA	1	$19,278.00	$19,278.00
D-16	30" Inline Check Valve	EA	1	$51,408.00	$51,408.00
D-17	Swale Regrading & Bahia Sod	SY	25,200	$12.85	$323,870.40
D-18	Modify Existing Control Structure	LS	1	$10,710.00	$10,710.00
				Subtotal Stormwater:	**$5,436,623.59**
Sanitary Sewer					
S1-1	Remove Existing Gravity Sanitary Sewer Main	LF	865	$23.56	$20,381.13
S1-2	8" PVC SDR 26 Sanitary Sewer Pipe	LF	865	$74.97	$64,849.05
S1-3	Remove and Replace Sewer Lateral	EA	24	$1,606.50	$38,556.00
S1-4	Clean and Line Sanitary Manholes (SewperCoat)	SF	19,217	$21.42	$411,623.86
S1-5	Sanitary Sewer Bypass Pumping	LS	1	$257,040.00	$257,040.00
S1-6	8" Sanitary Sewer Pipe RootX Application	LF	9,720	$7.50	$72,870.84
S1-7	10" Sanitary Sewer Pipe RootX Application	LF	555	$9.64	$5,349.65
S1-8	Clean & 8" Sanitary Sewer Pipe Lining (CIPP)	LF	39,420	$74.97	$2,955,317.40
S1-9	Clean & 10" Sanitary Sewer Pipe Lining (CIPP)	LF	1,840	$96.39	$177,357.60
S1-10	Furnish & Install Sewer Clean-Out at ROW	EA	665	$1,071.00	$712,215.00
				Subtotal Sanitary Sewer:	**$4,715,560.52**
Potable Water					
W-1	8" PVC C900 (DR18) WM	LF	20,865	$80.33	$1,675,981.13
W-2	Tapping Tee & Valve	EA	3	$8,568.00	$25,704.00
W-3	8" Gate Valve	EA	42	$2,463.30	$103,458.60
W-4	DIP Compact Fittings (cement-lined)	TON	7	$12,852.00	$89,964.00
W-5	Connect to Existing Water Main	EA	31	$3,213.00	$99,603.00
W-6	Sample Point	EA	34	$2,142.00	$72,828.00
W-7	Fill & Flush Assembly	EA	24	$2,677.50	$64,260.00
W-8	Abandon & Grout Existing WM (2"-6")	LF	22,377	$10.71	$239,657.67
W-9	Fire Hydrant Assembly	EA	50	$5,355.00	$267,750.00
W-10	Remove & Salvage Existing Fire Hydrant Assembly	EA	19	$1,606.50	$30,523.50
W-11	Transfer Rear-Yard Water Services to Front-Yard	EA	16	$1,285.20	$20,563.20
W-12	1" Single Water Service w/ Meter Box on Proposed Water Main	EA	313	$1,285.20	$402,267.60
				Subtotal Potable Water:	**$3,092,560.70**
Reclaimed Water					
RW-1	4" PVC C900 (DR18) RWM	LF	4,390	$58.91	$258,592.95
RW-2	6" PVC C900 (DR18) RWM	LF	6,190	$69.62	$430,916.85
RW-3	4" Gate Valve	EA	21	$1,071.00	$22,491.00
RW-4	6" Gate Valve	EA	18	$1,820.70	$32,772.60
RW-5	DIP Compact Fittings RWM (cement lined)	TON	9	$10,710.00	$91,035.00
RW-6	Connect to Existing Reclaimed Water Main	EA	6	$3,213.00	$19,278.00
RW-7	Fill & Flush Assembly	EA	6	$2,677.50	$16,065.00
RW-8	4" Reclaimed Water Meter, Vault, and Service	EA	14	$8,032.50	$112,455.00
RW-9	6" Reclaimed Water Meter, Vault, and Service	EA	4	$10,710.00	$42,840.00
RW-10	Furnish & Install BFP on Potable Water Meter in Areas where RWM to be installed	EA	241	$2,142.00	$516,222.00
RW-11	2" Terminal Blow-Off Assembly RWM w/ box	EA	23	$1,285.20	$29,559.60
				Subtotal Reclaimed Water:	**$1,572,228.00**
Miscellaneous					
M-1	Miscellaneous Restoration	LS	1	$481,950.00	$481,950.00
M-2	Lighting Improvements*	LS	1	$562,275.00	$562,275.00
M-3	Landscaping & Irrigation Improvements**	LS	1	$1,285,200.00	$1,285,200.00
				Subtotal Miscellaneous:	**$2,329,425.00**
TOTAL					**$39,197,406.63**
Construction Contingency (30%)					$11,759,221.99
Construction Administration (10%)					$4,703,688.80
GRAND TOTAL - PHASES 1, 2 &3					**$55,660,317.41**

Note: Costs presented in this Engineer's Opinion of Probable Construction Cost Estimate are based on Preliminary Design (2022 dollars) assuming a competitive bidding process. The Engineer has no control over the Contractor's methods of determing prices, or over future market conditions. The Engineer cannot and does not guarantee that actual contstruction costs will not vary from this estimate.

*Lighting Improvements cost estimate based on price provided for FP&L on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the street lighting improvements.

**Landscape and Irrigation Improvements cost estimate based on the average as-bid pricing on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the landscaping & irrigation improvements.

Table 7-2: Preliminary Construction Estimate – Phase 1

Table 7-2

City of Delray Beach NW Neighborhood Improvements

Preliminary Engineer's Estimate of Probable Construction Costs (October 2022)

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Extended Cost
PHASE 1					
General					
G-1	Mobilization, Bonds, Insurance	LS	1	$978,894.00	$978,894.00
G-2	Maintenance of Traffic	LS	1	$417,690.00	$417,690.00
G-3	As-Built Record Drawings	LS	1	$107,100.00	$107,100.00
G-4	NPDES Permit/Erosion Protection Measures	LS	1	$53,550.00	$53,550.00
G-5	Professional Audio/Video of Construction Site	LS	1	$26,775.00	$26,775.00
				Subtotal General:	**$1,584,009.00**
Roadway					
R1-1	Remove & Dispose of Existing Pavement Section (varying thickness)	SY	38,200	$5.36	$204,561.00
R1-2	Remove & Dispose of Trees, Shrubs, Fencing, etc. in Road & Alley ROW	LS	1	$321,300.00	$321,300.00
R1-3	Tree Root Prune and Branch Pruning in Alley ROW	LS	1	$53,550.00	$53,550.00
R1-4	Superpave Asphalt Concrete SP 9.5 (2 lifts) (2" thick for road recon & 1" thick for mill & overlay)	TONS	5,972	$192.78	$1,151,282.16
R1-5	Basegroup 6 (8" Baserock) (LBR 100)	SY	54,900	$17.14	$940,766.40
R1-6	12" Stabilized Subgrade (LBR 40)	SY	58,880	$7.50	$441,423.36
R1-7	6" Stabilized Shoulder	SY	13,500	$4.00	$54,000.00
R1-8	Mill Existing Asphalt Pavement (1" Avg Depth) and Hauloff	SY	3,310	$4.28	$14,180.04
R1-9	Alleyway Permeable Concrete Pavement	SY	9,470	$85.68	$811,389.60
R1-10	Alleyway Base	SY	9,470	$17.14	$162,277.92
R1-11	12" Header Curb	LF	10,800	$26.78	$289,170.00
R1-12	Type F Curb and Gutter	LF	12,250	$26.78	$327,993.75
R1-13	Valley Gutter	LF	5,310	$28.92	$153,549.27
R1-14	5' Wide Concrete Sidewalk Replacement (4" thick)	SF	186,750	$5.89	$1,100,050.88
R1-15	Driveway Apron Replacement	SF	66,800	$7.50	$500,799.60
R1-16	Curb Ramp with ADA-Compliant Tactile Surface Mat per FDOT Index 522	EA	94	$1,606.50	$151,011.00
R1-17	Raised Intersection (incl decorative pavement)	EA	4	$53,550.00	$214,200.00
R1-18	Roosevelt Avenue Chicane	EA	1	$25,000.00	$25,000.00
R1-19	Landscaped Bulbouts	EA	2	$23,562.00	$47,124.00
R1-20	Speed Hump	EA	6	$18,207.00	$109,242.00
R1-21	~~Traffic Circle~~	EA	0	$0.00	$0.00
R1-22	Decorative Asphalt Pavement Entry Feature (incl baserock)	EA	2	$53,975.00	$107,950.00
R1-23	Remove Existing Neighborhood Sign & Replace with New Neighborhood Sign	EA	8	$3,213.00	$25,704.00
R1-24	Remove & Replace Existing Traffic Signs & Street Name Signs	LS	1	$35,600.00	$35,600.00
R1-25	Furnish & Install Flashing Regulatory Signs	EA	9	$5,355.00	$48,195.00
R1-26	Temporary & Permanent Pavement Markings & RPM's	LS	1	$43,200.00	$43,200.00
				Subtotal Roadway:	**$7,333,519.98**
Stormwater					
D-1	Remove Existing Drainage Pipe	LF	1,607	$21.42	$34,421.94
D-2	Remove Existing Exfiltration Trench	LF	1,206	$48.20	$58,123.17
D-3	Type C Drainage Inlet w/Frame & Grate	EA	63	$5,033.70	$318,693.61
D-4	Type E Drainage Inlet w/Frame & Grate	EA	16	$6,104.70	$96,625.19
D-5	Drainage Manhole - 4' Dia	EA	32	$5,890.50	$186,469.67
D-6	Drainage Manhole - 5' Dia	EA	8	$6,961.50	$55,093.31
D-7	18" RCP	LF	907	$96.39	$87,425.73
D-8	24" RCP	LF	290	$128.52	$37,270.80
D-9	30" RCP	LF	174	$171.36	$29,816.64
D-10	48" RCP	LF	132	$289.17	$38,170.44
D-11	18" Exfiltration Trench w/4'x4' Envelope	LF	0	$198.14	$0.00
D-12	18" Exfiltration Trench w/5'x5' Envelope	LF	6,071	$214.20	$1,300,408.20
D-13	24" Exfiltration Trench w/ 5'x5' Envelope	LF	340	$278.46	$94,676.40
D-14	Connections to Existing Structure/Pipe	EA	30	$2,142.00	$64,260.00
D-15	18" Inline Check Valve	EA	1	$19,278.00	$19,278.00
D-16	30" Inline Check Valve	EA	1	$51,408.00	$51,408.00
D-17	Swale Regrading & Bahia Sod	SY	10,400	$12.85	$133,660.80
D-18	Modify Existing Control Structure	LS	1	$10,710.00	$10,710.00
				Subtotal Stormwater:	**$2,616,511.91**
Sanitary Sewer					
S1-1	Remove Existing Gravity Sanitary Sewer Main	LF	275	$23.56	$6,479.55
S1-2	8" PVC SDR 26 Sanitary Sewer Pipe	LF	275	$74.97	$20,616.75
S1-3	Remove and Replace Sewer Lateral	EA	4	$1,606.50	$6,426.00
S1-4	Clean and Line Sanitary Manholes (SewperCoat)	SF	8,415	$21.42	$180,253.58
S1-5	Sanitary Sewer Bypass Pumping	LS	1	$85,680.00	$85,680.00
S1-6	8" Sanitary Sewer Pipe RootX Application	LF	4,600	$7.50	$34,486.20
S1-7	10" Sanitary Sewer Pipe RootX Application	LF	0	$9.64	$0.00
S1-8	Clean & 8" Sanitary Sewer Pipe Lining (CIPP)	LF	13,300	$74.97	$997,101.00
S1-9	Clean & 10" Sanitary Sewer Pipe Lining (CIPP)	LF	840	$96.39	$80,967.60
S1-10	Furnish & Install Sewer Clean-Out at ROW	EA	270	$1,071.00	$289,170.00
				Subtotal Sanitary Sewer:	**$1,701,180.68**
Potable Water					
W-1	8" PVC C900 (DR18) WM	LF	10,970	$80.33	$881,165.25
W-2	Tapping Tee & Valve	EA	3	$8,568.00	$25,704.00
W-3	8" Gate Valve	EA	21	$2,463.30	$51,729.30
W-4	DIP Compact Fittings (cement-lined)	TON	4.0	$12,852.00	$51,408.00
W-5	Connect to Existing Water Main	EA	11	$3,213.00	$35,343.00
W-6	Sample Point	EA	14	$2,142.00	$29,988.00
W-7	Fill & Flush Assembly	EA	9	$2,677.50	$24,097.50
W-8	Abandon & Grout Existing WM (2"-6")	LF	11,782	$10.71	$126,185.22
W-9	Fire Hydrant Assembly	EA	27	$5,355.00	$144,585.00
W-10	Remove & Salvage Existing Fire Hydrant Assembly	EA	9	$1,606.50	$14,458.50
W-11	Transfer Rear-Yard Water Services to Front-Yard	EA	16	$1,285.20	$20,563.20
W-12	1" Single Water Service w/ Meter Box on Proposed Water Main	EA	190	$1,285.20	$244,188.00
				Subtotal Potable Water:	**$1,649,414.97**
Reclaimed Water					
RW-1	4" PVC C900 (DR18) RWM	LF	2,660	$58.91	$156,687.30
RW-2	6" PVC C900 (DR18) RWM	LF	3,320	$69.62	$231,121.80
RW-3	4" Gate Valve	EA	16	$1,071.00	$17,136.00
RW-4	6" Gate Valve	EA	10	$1,820.70	$18,207.00
RW-5	DIP Compact Fittings RWM (cement lined)	TON	4.5	$10,710.00	$48,195.00
RW-6	Connect to Existing Reclaimed Water Main	EA	2	$3,213.00	$6,426.00
RW-7	Fill & Flush Assembly	EA	2	$2,677.50	$5,355.00
RW-8	4" Reclaimed Water Meter, Vault, and Service	EA	9	$8,032.50	$72,292.50
RW-9	6" Reclaimed Water Meter, Vault, and Service	EA	0	$10,710.00	$0.00
RW-10	Furnish & Install BFP on Potable Water Meter in Areas where RWM to be installed	EA	95	$2,142.00	$203,490.00
RW-11	2" Terminal Blow-Off Assembly RWM w/ box	EA	14	$1,285.20	$17,992.80
				Subtotal Reclaimed Water:	**$776,903.40**
Miscellaneous					
M-1	Miscellaneous Restoration	LS	1	$160,650.00	$160,650.00
M-2	Lighting Improvements*	LS	1	$187,425.00	$187,425.00
M-3	Landscaping & Irrigation Improvements**	LS	1	$428,400.00	$428,400.00
				Subtotal Miscellaneous:	**$776,475.00**
TOTAL					**$16,438,014.93**
Construction Contingency (30%)					$4,931,404.48
Construction Engineering & Inspection Services (10%)					$1,643,801.49
GRAND TOTAL - PHASE 1					**$23,013,220.91**

Note: Costs presented in this Engineer's Opinion of Probable Construction Cost Estimate are based on Preliminary Design (2022 dollars) assuming a competitive bidding process. The Engineer has no control over the Contractor's methods of determing prices, or over future market conditions. The Engineer cannot and does not guarantee that actual contstruction costs will not vary from this estimate.

*Lighting Improvements cost estimate based on price provided for FP&L on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the street lighting improvements.

**Landscape and Irrigation Improvements cost estimate based on the average as-bid pricing on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the landscaping & irrigation improvements.

Table 7-3: Preliminary Construction Cost Estimate – Phase 2

Table 7-3

City of Delray Beach NW Neighborhood Improvements

Preliminary Engineer's Estimate of Probable Construction Costs (October 2022)

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Extended Cost
PHASE 2					
General					
G-1	Mobilization, Bonds, Insurance	LS	1	$683,298.00	$683,298.00
G-2	Maintenance of Traffic	LS	1	$244,188.00	$244,188.00
G-3	As-Built Record Drawings	LS	1	$107,100.00	$107,100.00
G-4	NPDES Permit/Erosion Protection Measures	LS	1	$53,550.00	$53,550.00
G-5	Professional Audio/Video of Construction Site	LS	1	$26,775.00	$26,775.00
				Subtotal General:	**$1,114,911.00**
Roadway					
R1-1	Remove & Dispose of Existing Pavement Section (varying thickness)	SY	28,760	$5.36	$154,009.80
R1-2	Remove & Dispose of Trees, Shrubs, Fencing, etc. in Road & Alley ROW	LS	1	$321,300.00	$321,300.00
R1-3	Tree Root Prune and Branch Pruning in Alley ROW	LS	1	$53,550.00	$53,550.00
R1-4	Superpave Asphalt Concrete SP 9.5 (2 lifts) (2" thick for road recon & 1" thick for mill & overlay)	TONS	4,200	$192.78	$809,676.00
R1-5	Basegroup 6 (8" Baserock) (LBR 100)	SY	38,750	$17.14	$664,020.00
R1-6	12" Stabilized Subgrade (LBR 40)	SY	40,958	$7.50	$307,062.13
R1-7	6" Stabilized Shoulder	SY	10,363	$4.00	$41,452.00
R1-8	Mill Existing Asphalt Pavement (1" Avg Depth) and Hauloff	SY	0	$4.28	$0.00
R1-9	Alleyway Permeable Concrete Pavement	SY	7,410	$85.68	$634,888.80
R1-10	Alleyway Base	SY	7,410	$17.14	$126,977.76
R1-11	12" Header Curb	LF	9,900	$26.78	$265,072.50
R1-12	Type F Curb and Gutter	LF	5,060	$26.78	$135,481.50
R1-13	Valley Gutter	LF	2,500	$28.92	$72,292.50
R1-14	5' Wide Concrete Sidewalk Replacement (4" thick)	SF	129,400	$5.89	$762,230.70
R1-15	Driveway Apron Replacement	SF	66,000	$7.50	$494,802.00
R1-16	Curb Ramp with ADA-Compliant Tactile Surface Mat per FDOT Index 522	EA	56	$1,606.50	$89,964.00
R1-17	Raised Intersection	EA	1	$53,550.00	$53,550.00
R1-18	Chicanes	EA	0	$0.00	$0.00
R1-19	Landscaped Bulbout	EA	3	$23,562.00	$70,686.00
R1-20	Speed Hump	EA	6	$18,207.00	$109,242.00
R1-21	~~Traffic Circle~~	EA	0	$0.00	$0.00
R1-22	Decorative Asphalt Pavement Entry Feature (incl baserock)	EA	3	$53,975.00	$161,925.00
R1-23	Remove Existing Neighborhood Sign & Replace with New Neighborhood Sign	EA	4	$3,213.00	$12,852.00
R1-24	Remove & Replace Existing Traffic Signs & Street Name Signs	LS	1	$20,200.00	$20,200.00
R1-25	Furnish & Install Flashing Cross Walk Sign	EA	0	$5,355.00	$0.00
R1-26	Temporary & Permanent Pavement Markings & RPM's	LS	1	$37,450.00	$37,450.00
				Subtotal Roadway:	**$5,398,684.69**
Stormwater					
D-1	Remove Existing Drainage Pipe	LF	1,391	$21.42	$29,795.22
D-2	Remove Existing Exfiltration Trench	LF	1,546	$48.20	$74,509.47
D-3	Type C Drainage Inlet w/Frame & Grate	EA	35	$5,033.70	$177,307.05
D-4	Type E Drainage Inlet w/Frame & Grate	EA	9	$6,104.70	$53,757.99
D-5	Drainage Manhole - 4' Dia	EA	18	$5,890.50	$103,743.49
D-6	Drainage Manhole - 5' Dia	EA	4	$6,961.50	$30,651.48
D-7	18" RCP	LF	595	$96.39	$57,352.05
D-8	24" RCP	LF	0	$128.52	$0.00
D-9	30" RCP	LF	0	$171.36	$0.00
D-10	48" RCP	LF	0	$289.17	$0.00
D-11	18" Exfiltration Trench w/4'x4' Envelope	LF	3,808	$198.14	$754,498.08
D-12	18" Exfiltration Trench w/5'x5' Envelope	LF	0	$214.20	$0.00
D-13	24" Exfiltration Trench w/ 5'x5' Envelope	LF	0	$278.46	$0.00
D-14	Connections to Existing Structure/Pipe	EA	13	$2,142.00	$27,846.00
D-15	18" Inline Check Valve	EA	0	$19,278.00	$0.00
D-16	30" Inline Check Valve	EA	0	$51,408.00	$0.00
D-17	Swale Regrading & Bahia Sod	SY	7,200	$12.85	$92,534.40
D-18	Modify Existing Control Structure	LS	0	$10,710.00	$0.00
				Subtotal Stormwater:	**$1,401,995.23**
Sanitary Sewer					
S1-1	Remove Existing Gravity Sanitary Sewer Main	LF	0	$23.56	$0.00
S1-2	8" PVC SDR 26 Sanitary Sewer Pipe	LF	0	$74.97	$0.00
S1-3	Remove and Replace Sewer Lateral	EA	0	$1,606.50	$0.00
S1-4	Clean and Line Sanitary Manholes (SewperCoat)	SF	6,657	$21.42	$142,588.66
S1-5	Sanitary Sewer Bypass Pumping	LS	1	$85,680.00	$85,680.00
S1-6	8" Sanitary Sewer Pipe RootX Application	LF	3,560	$7.50	$26,689.32
S1-7	10" Sanitary Sewer Pipe RootX Application	LF	555	$9.64	$5,349.65
S1-8	Clean & 8" Sanitary Sewer Pipe Lining (CIPP)	LF	14,970	$74.97	$1,122,300.90
S1-9	Clean & 10" Sanitary Sewer Pipe Lining (CIPP)	LF	1,000	$96.39	$96,390.00
S1-10	Furnish & Install Sewer Clean-Out at ROW	EA	245	$1,071.00	$262,395.00
				Subtotal Sanitary Sewer:	**$1,741,393.52**
Potable Water					
W-1	8" PVC C900 (DR18) WM	LF	5,465	$80.33	$438,976.13
W-2	Tapping Tee & Valve	EA	0	$8,568.00	$0.00
W-3	8" Gate Valve	EA	13	$2,463.30	$32,022.90
W-4	DIP Compact Fittings (cement-lined)	TON	1.0	$12,852.00	$12,852.00
W-5	Connect to Existing Water Main	EA	15	$3,213.00	$48,195.00
W-6	Sample Point	EA	12	$2,142.00	$25,704.00
W-7	Fill & Flush Assembly	EA	10	$2,677.50	$26,775.00
W-8	Abandon & Grout Existing WM (2"-6")	LF	5,465	$10.71	$58,530.15
W-9	Fire Hydrant Assembly	EA	10	$5,355.00	$53,550.00
W-10	Remove & Salvage Existing Fire Hydrant Assembly	EA	6	$1,606.50	$9,639.00
W-11	Transfer Rear-Yard Water Services to Front-Yard	EA	0	$1,285.20	$0.00
W-12	1" Single Water Service w/ Meter Box on Proposed Water Main	EA	85	$1,285.20	$109,242.00
				Subtotal Potable Water:	**$815,486.18**
Reclaimed Water					
RW-1	4" PVC C900 (DR18) RWM	LF	0	$58.91	$0.00
RW-2	6" PVC C900 (DR18) RWM	LF	1,710	$69.62	$119,041.65
RW-3	4" Gate Valve	EA	0	$1,071.00	$0.00
RW-4	6" Gate Valve	EA	4	$1,820.70	$7,282.80
RW-5	DIP Compact Fittings RWM (cement lined)	TON	1.5	$10,710.00	$16,065.00
RW-6	Connect to Existing Reclaimed Water Main	EA	1	$3,213.00	$3,213.00
RW-7	Fill & Flush Assembly	EA	1	$2,677.50	$2,677.50
RW-8	4" Reclaimed Water Meter, Vault, and Service	EA	1	$8,032.50	$8,032.50
RW-9	6" Reclaimed Water Meter, Vault, and Service	EA	0	$10,710.00	$0.00
RW-10	Furnish & Install BFP on Potable Water Meter in Areas where RWM to be installed	EA	36	$2,142.00	$77,112.00
RW-11	2" Terminal Blow-Off Assembly RWM w/ box	EA	4	$1,285.20	$5,140.80
				Subtotal Reclaimed Water:	**$238,565.25**
Miscellaneous					
M-1	Miscellaneous Restoration	LS	1	$160,650.00	$160,650.00
M-2	Lighting Improvements*	LS	1	$187,425.00	$187,425.00
M-3	Landscaping & Irrigation Improvements**	LS	1	$428,400.00	$428,400.00
				Subtotal Miscellaneous:	**$776,475.00**
TOTAL					**$11,487,510.86**
Construction Contingency (30%)					$3,446,253.26
Construction Administration (10%)					$1,148,751.09
GRAND TOTAL - PHASE 2					**$16,082,515.20**

Note: Costs presented in this Engineer's Opinion of Probable Construction Cost Estimate are based on Preliminary Design (2022 dollars) assuming a competitive bidding process. The Engineer has no control over the Contractor's methods of determing prices, or over future market conditions. The Engineer cannot and does not guarantee that actual contstruction costs will not vary from this estimate.

*Lighting Improvements cost estimate based on price provided for FP&L on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the street lighting improvements.

**Landscape and Irrigation Improvements cost estimate based on the average as-bid pricing on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the landscaping & irrigation improvements.

Table 7-4: Preliminary Construction Cost Estimate – Phase 3

Table 7-4

City of Delray Beach NW Neighborhood Improvements

Preliminary Engineer's Estimate of Probable Construction Costs (October 2022)

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Extended Cost
PHASE 3					
General					
G-1	Mobilization, Bonds, Insurance	LS	1	$611,219.70	$611,219.70
G-2	Maintenance of Traffic	LS	1	$218,484.00	$218,484.00
G-3	As-Built Record Drawings	LS	1	$107,100.00	$107,100.00
G-4	NPDES Permit/Erosion Protection Measures	LS	1	$53,550.00	$53,550.00
G-5	Professional Audio/Video of Construction Site	LS	1	$26,775.00	$26,775.00
				Subtotal General:	**$1,017,128.70**
Roadway					
R1-1	Remove & Dispose of Existing Pavement Section (varying thickness)	SY	27,700	$5.36	$148,333.50
R1-2	Remove & Dispose of Trees, Shrubs, Fencing, etc. in Road & Alley ROW	LS	1	$321,300.00	$321,300.00
R1-3	Tree Root Prune and Branch Pruning in Alley ROW	LS	1	$53,550.00	$53,550.00
R1-4	Superpave Asphalt Concrete SP 9.5 (2 lifts) (2" thick for road recon & 1" thick for mill & overlay)	TONS	4,238	$192.78	$817,001.64
R1-5	Basegroup 6 (8" Baserock (LBR 100)	SY	38,644	$17.14	$662,203.58
R1-6	12" Stabilized Subgrade (LBR 40)	SY	42,825	$7.50	$321,059.03
R1-7	6" Stabilized Shoulder	SY	7,590	$4.00	$30,360.00
R1-8	Mill Existing Asphalt Pavement (1" Avg Depth) and Hauloff	SY	2,760	$4.28	$11,823.84
R1-9	Alleyway Permeable Concrete Pavement	SY	7,600	$85.68	$651,168.00
R1-10	Alleyway Base	SY	7,600	$17.14	$130,233.60
R1-11	12" Header Curb	LF	5,970	$26.78	$159,846.75
R1-12	Type F Curb and Gutter	LF	21,078	$26.78	$564,363.45
R1-13	Valley Gutter	LF	4,000	$28.92	$115,668.00
R1-14	5' Wide Concrete Sidewalk Replacement (4" thick)	SF	136,750	$5.89	$805,525.88
R1-15	Driveway Apron Replacement	SF	39,600	$7.50	$296,881.20
R1-16	Curb Ramp with ADA-Compliant Tactile Surface Mat per FDOT Index 304	EA	62	$1,606.50	$99,603.00
R1-17	Raised Crosswalk	EA	2	$15,000.00	$30,000.00
R1-18	Chicanes	EA	0	$0.00	$0.00
R1-19	Landscaped Bulbout	EA	8	$23,562.00	$188,496.00
R1-20	Speed Hump	EA	8	$18,207.00	$145,656.00
R1-21	~~Traffic Circle~~	EA	0	$0.00	$0.00
R1-22	Decorative Asphalt Pavement Entry Feature (incl baserock)	EA	0	$53,975.00	$0.00
R1-23	Remove Existing Neighborhood Sign & Replace with New Neighborhood Sign	EA	4	$3,213.00	$12,852.00
R1-24	Remove & Replace Existing Traffic Signs & Street Name Signs	LS	1	$22,200.00	$22,200.00
R1-25	Furnish & Install Flashing Cross Walk Sign	EA	4	$5,355.00	$21,420.00
R1-26	Temporary & Permanent Pavement Markings & RPM's	LS	1	$38,175.00	$38,175.00
				Subtotal Roadway:	**$5,647,720.46**
Stormwater					
D-1	Remove Existing Drainage Pipe	LF	556	$21.42	$11,909.52
D-2	Remove Existing Exfiltration Trench	LF	429	$48.20	$20,675.66
D-3	Type C Drainage Inlet w/Frame & Grate	EA	45	$5,033.70	$227,523.24
D-4	Type E Drainage Inlet w/Frame & Grate	EA	11	$6,104.70	$68,983.11
D-5	Drainage Manhole - 4' Dia	EA	23	$5,890.50	$133,125.30
D-6	Drainage Manhole - 5' Dia	EA	6	$6,961.50	$39,332.48
D-7	18" RCP	LF	3,131	$96.39	$301,797.09
D-8	24" RCP	LF	230	$128.52	$29,559.60
D-9	30" RCP	LF	0	$171.36	$0.00
D-10	48" RCP	LF	0	$289.17	$0.00
D-11	18" Exfiltration Trench w/4'x4' Envelope	LF	2,079	$198.14	$411,922.67
D-12	18" Exfiltration Trench w/5'x5' Envelope	LF	0	$214.20	$0.00
D-13	24" Exfiltration Trench w/ 5'x5' Envelope	LF	210	$278.46	$58,476.60
D-14	Connections to Existing Structure/Pipe	EA	8	$2,142.00	$17,136.00
D-15	18" Inline Check Valve	EA	0	$19,278.00	$0.00
D-16	30" Inline Check Valve	EA	0	$51,408.00	$0.00
D-17	Swale Regrading & Bahia Sod	SY	7,600	$12.85	$97,675.20
D-18	Modify Existing Control Structure	LS	0	$10,710.00	$0.00
				Subtotal Stormwater:	**$1,418,116.46**
Sanitary Sewer					
S1-1	Remove Existing Gravity Sanitary Sewer Main	LF	590	$23.56	$13,901.58
S1-2	8" PVC SDR 26 Sanitary Sewer Pipe	LF	590	$74.97	$44,232.30
S1-3	Remove and Replace Sewer Lateral	EA	20	$1,606.50	$32,130.00
S1-4	Clean and Line Sanitary Manholes (SewperCoat)	SF	4,145	$21.42	$88,781.62
S1-4	Sanitary Sewer Bypass Pumping	LS	1	$85,680.00	$85,680.00
S1-5	8" Sanitary Sewer Pipe RootX Application	LF	1,560	$7.50	$11,695.32
S1-6	10" Sanitary Sewer Pipe RootX Application	LF	0	$9.64	$0.00
S1-7	Clean & 8" Sanitary Sewer Pipe Lining (CIPP)	LF	11,150	$74.97	$835,915.50
S1-8	Clean & 10" Sanitary Sewer Pipe Lining (CIPP)	LF	0	$96.39	$0.00
S1-9	Furnish & Install Sewer Clean-Out at ROW	EA	150	$1,071.00	$160,650.00
				Subtotal Sanitary Sewer:	**$1,272,986.32**
Potable Water					
W-1	8" PVC C900 (DR18) WM	LF	4,430	$80.33	$355,839.75
W-2	Tapping Tee & Valve	EA	0	$8,568.00	$0.00
W-3	8" Gate Valve	EA	8	$2,463.30	$19,706.40
W-4	DIP Compact Fittings (cement-lined)	TON	2.00	$12,852.00	$25,704.00
W-5	Connect to Existing Water Main	EA	5	$3,213.00	$16,065.00
W-6	Sample Point	EA	8	$2,142.00	$17,136.00
W-7	Fill & Flush Assembly	EA	5	$2,677.50	$13,387.50
W-8	Abandon & Grout Existing WM (2"-6")	LF	5,130	$10.71	$54,942.30
W-9	Fire Hydrant Assembly	EA	13	$5,355.00	$69,615.00
W-10	Remove & Salvage Existing Fire Hydrant Assembly	EA	4	$1,606.50	$6,426.00
W-11	Transfer Rear-Yard Water Services to Front-Yard	EA	0	$1,285.20	$0.00
W-12	1" Single Water Service w/ Meter Box on Proposed Water Main	EA	38	$1,285.20	$48,837.60
				Subtotal Potable Water:	**$627,659.55**
Reclaimed Water					
RW-1	4" PVC C900 (DR18) RWM	LF	1,730	$58.91	$101,905.65
RW-2	6" PVC C900 (DR18) RWM	LF	1,160	$69.62	$80,753.40
RW-3	4" Gate Valve	EA	5	$1,071.00	$5,355.00
RW-4	6" Gate Valve	EA	4	$1,820.70	$7,282.80
RW-5	DIP Compact Fittings RWM (cement lined)	TON	2.5	$10,710.00	$26,775.00
RW-6	Connect to Existing Reclaimed Water Main	EA	3	$3,213.00	$9,639.00
RW-7	Fill & Flush Assembly	EA	3	$2,677.50	$8,032.50
RW-8	4" Reclaimed Water Meter, Vault, and Service	EA	4	$8,032.50	$32,130.00
RW-9	6" Reclaimed Water Meter, Vault, and Service	EA	4	$10,710.00	$42,840.00
RW-10	Furnish & Install BFP on Potable Water Meter in Areas where RWM to be installed	EA	110	$2,142.00	$235,620.00
RW-11	2" Terminal Blow-Off Assembly RWM w/ box	EA	5	$1,285.20	$6,426.00
				Subtotal Reclaimed Water:	**$556,759.35**
Miscellaneous					
M-1	Miscellaneous Restoration	LS	1	$160,650.00	$160,650.00
M-2	Lighting Improvements*	LS	1	$187,425.00	$187,425.00
M-3	Landscaping & Irrigation Improvements**	LS	1	$428,400.00	$428,400.00
				Subtotal Miscellaneous:	**$776,475.00**
TOTAL					**$11,316,845.84**
Construction Contingency (30%)					$3,395,053.75
Construction Administration (10%)					$1,131,684.58
GRAND TOTAL - PHASE 1					**$15,843,584.17**

Note: Costs presented in this Engineer's Opinion of Probable Construction Cost Estimate are based on Preliminary Design (2022 dollars) assuming a competitive bidding process. The Engineer has no control over the Contractor's methods of determing prices, or over future market conditions. The Engineer cannot and does not guarantee that actual contstruction costs will not vary from this estimate.

*Lighting Improvements cost estimate based on price provided for FP&L on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the street lighting improvements.

**Landscape and Irrigation Improvements cost estimate based on the average as-bid pricing on the Osceola Park Neighborhood Improvements project. No formal estimate has been prepared for the landscaping & irrigation improvements.

Appendix A

Survey Data

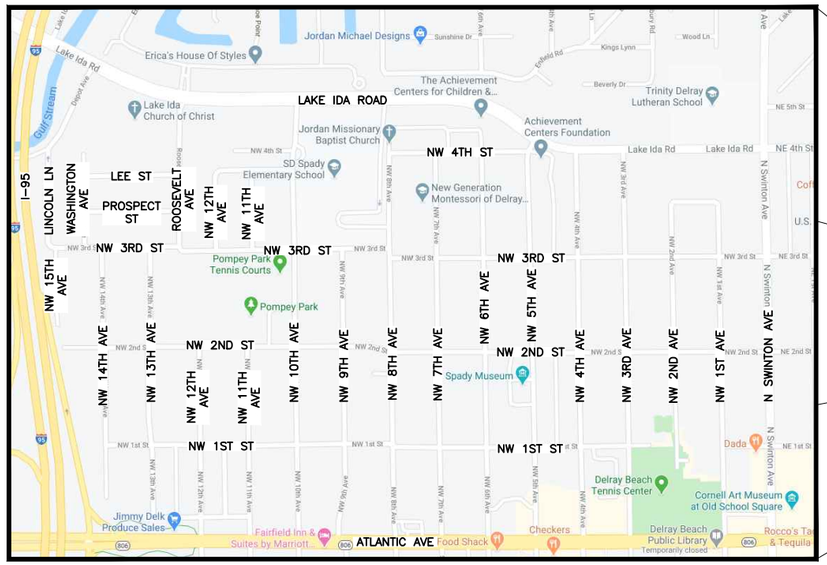
N.W. NEIGHBORHOOD DRAINAGE IMPROVEMENTS
CITY OF DELRAY BEACH PROJECT NO: 17-020
FROM I-95 TO SWINTON AVENUE AND ATLANTIC AVENUE TO LAKE IDA ROAD

Know what's below. Call before you dig.

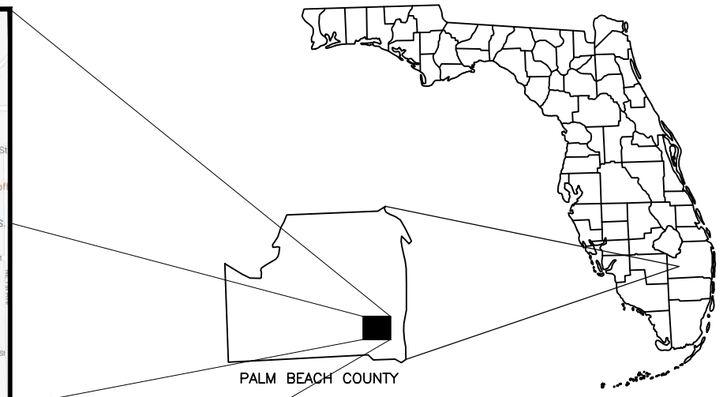
BOARD OF CITY COMMISSIONERS	
MAYOR	SHELLY PETROLIA
VICE MAYOR	RYAN BOYLSTON
DEPUTY VICE MAYOR	SHIRLEY JOHNSON
COMMISSIONER	ADAM FRANKEL
COMMISSIONER	JULI CASALE

FILE NAME: 10-2068-G-00-COVER.dwg

LOCATION MAP



SECTION 8 & 17, TOWNSHIP 46, RANGE 43



VICINITY MAP
SCALE: N.T.S.

PREPARED FOR:
CITY OF DELRAY BEACH

CAS PROJECT No. 19-2068

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

FOR THE FIRM BY: _____
ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SIGNATURE DATE: _____

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL - BOCA RATON, FLORIDA 33486
(561) 314-4445 WWW.CRAIGASMITH.COM
CERTIFICATE OF AUTHORIZATION NUMBER: LB0003110

GENE R. SCHRINER, P.E. (CML)
DATE _____
FLORIDA PROFESSIONAL ENGINEER NO. 38821

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-2-15-NW-NEIGHBORHOOD\09-Plans\10-2068-G-00-COVER.dwg, 7/15/2020 10:21:10 AM, mmarence, 1:2

GENERAL ABBREVIATIONS

ABRV	DESCRIPTION
A/C	AIR CONDITION PAD
ACP	ASBESTOS CEMENT PIPE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
B.C.R.	BROWARD COUNTY RECORDS
B/L	BASELINE
BOTT	BOTTOM
(C)	CALCULATED
CAS	CRAIG A. SMITH & ASSOCIATES
℄	CENTER LINE
CONC	CONCRETE
D	DEED/DESCRIPTION
DB	DEED BOOK
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEV	ELEVATION
EOW	EDGE OF WATER
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FF	FINISHED FLOOR
FND	FOUND
FPL	FLORIDA POWER & LIGHT
GFF	GARAGE FINISHED FLOOR
HDPE	HIGH DENSITY POLYETHYLENE
I.E.	INVERT ELEVATION
IR	IRON ROD
IR&C	IRON ROD AND CAP
IP	IRON PIPE
L	ARC LENGTH
LB	LICENSED BUSINESS
LF	LINEAR FEET
(M)	MEASURED

ABRV	DESCRIPTION
NTS	NOT TO SCALE
ORB	OFFICIAL RECORDS BOOK
O / S	OFF SET
(P)	PLAT
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PC	POINT OF CURVE
PCP	PERMANENT CONTROL POINT
PGS	PAGES
PHDPE	PERFORATED HIGH DENSITY POLYETHYLENE
PI	POINT OF INTERSECTION
PK&D	PK NAIL AND DISK
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PRM	PERMANENT REFERENCE MARKER
PSM	PROFESSIONAL SURVEYOR AND MAPPER
PT	POINT OF TANGENCY
PVC	POLY VINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
RGE	RANGE
R/W	RIGHT-OF-WAY LINE
SEC	SECTION
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF PIPE
TWP	TOWNSHIP
TYP	TYPICAL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
△	DELTA

STANDARD LINETYPES

SYMBOL	DESCRIPTION
	BASELINE
	PARCEL LINE
	BOUNDARY LINE
	EASEMENT LINE
	LOT LINE
	RIGHT OF WAY LINE
	CENTER LINE
	SECTION LINE
	LANDSCAPE LINE
	EDGE OF WATER
	RR TRACKS
	PLAT LINE
	CURB & GUTTER
—X—X—X—X—X—	FENCE LINE
	GUARD RAIL
UNK UNK	UNKNOWN UTILITY
	ABANDONED UTILITY
NFVU NFVU	NON FIELD VERIFIED UTILITY
BCTV BCTV	BURIED CABLE TV
BCL BCL	BURIED COMMUNICATIONS LINE
FOC FOC	FIBER OPTIC CABLE
BT	BURIED TELEPHONE

SYMBOL	DESCRIPTION
BTC BTC	BURIED TRAFFIC CONTROL
<C> <C>	COMMUNICATIONS DUCTBANK CL
<F> <F>	FIBER OPTIC DUCTBANK CL
OHW	OVERHEAD WIRE
BE	BURIED ELECTRIC
SL	BURIED STREET LIGHTING
<E> <E>	ELECTRICAL DUCTBANK CENTER LINE
FM	FORCE MAIN
SAN	SANITARY SEWER
SNS SNS	SANITARY SERVICE
VS	VACUUM SEWER
SD	STORM DRAIN
FIRE FIRE	FIRE LINE
RWL RWL	RAW WATER LINE
WL	WATER LINE MAIN
WLC WLC	WATER LINE CHILLED
WS	WATER SERVICE
IRR	IRRIGATION LINE
GAS	GAS LINE ABOVE GROUND
BG	BURIED GAS LINE
GS	BURIED GAS SERVICE LINE
FUEL FUEL	FUEL LINE

GENERAL SYMBOL LEGEND

	SYM.	DESCRIPTION
CONTROL		AERIAL TARGET
		BENCH MARK
		CONCRETE MONUMENT
		IRON PIPE
		IRON ROD
	ND	NAIL & DISC
		CAS CONTROL POINT
		IRON ROD AND CAP
		X CUT
	DH	DRILL HOLE
PIPE FITTINGS		11.25° PIPE BEND
		22.5° PIPE BEND
		45° PIPE BEND
		90° PIPE BEND
		CROSS PIPE FITTING
		TEE PIPE FITTING
		WYE PIPE FITTING
		REDUCER PIPE FITTING
ELECTRICAL	EMH	ELECTRIC MANHOLE
	EMTR	ELECTRIC MOTOR
		ELECTRICAL OUTLET
		GROUND LIGHT
	EJB	ELECTRIC JUNCTION BOX
	EM	ELECTRIC METER
	LPB	LIGHT POLE BOX
	TCB	TRAFFIC CONTROL BOX
	ER	ELECTRICAL RISER
	T FPL	TRANSFORMER
	CW	CROSSWALK POST
UTILITY POLES		GUY WIRE
		GUY POLE
		LIGHT POLE
		CONCRETE POWER POLE
		CONCRETE UTILITY POLE
		METAL POWER POLE
		METAL UTILITY POLE
		WOOD UTILITY POLE
		WOOD POWER POLE
		MAST ARM POLE
SAN SWR	CO	CLEAN OUT
	SMH	SANITARY MANHOLE
	SO	STUB OUT
		STAND PIPE
	SV	SEWER VALVE
	GRND	GRINDER
STORM	CB	CATCH BASIN
	SDMH	STORM DRAIN MANHOLE
	YD	YARD DRAIN
	DR	DRAIN
		CURB INLET
		CURB INLET W/ MANHOLE
		CURB INLET W/ GRATE
		CI W/ MANHOLE & GRATE

	SYM.	DESCRIPTION
GAS / FUEL	GM	GAS METER
	GMH	GAS MANHOLE
	GSV	GAS VALVE
	MW	MONITORING WELL
	VEP	VAPOR EXTRACTION POINT
	GSP	FUEL PUMP DISPENSER
	GASM	GAS MARKER
	VTP	VENT PIPE
	VBG	GAS VALVE BOX
	FCAP	FUEL FILL CAP
TELE/ TV	PJB	TELEPHONE JUNCTION BOX
	PR	TELEPHONE RISER
	TMH	TELEPHONE MANHOLE
	FIBO	FIBER OPTIC CABLE MARKER
	CATV	CATV RISER
	TM	TELEPHONE MARKER
WATER / IRRIGATION		BACKFLOW PREVENTOR
	BO	BLOW OFF
	ARV	AIR RELEASE VALVE
	SP	SAMPLE POINT
	FH	FIRE HYDRANT
	SIA	SIAMESE CONNECTION
	WM	WATER METER
	WV	WATER VALVE
		WATER SPIGOT
	ICV	IRRIGATION CONTROL VALVE
	IM	IRRIGATION METER
	SPR	SPRINKLER
TREES	12	CITRUS TREE (TRC)
		CYPRESS TREE (TRCY)
	12	GENERIC TREE (TRG)
	12	OAK TREE (TRO)
	12	PINE TREE (TRP)
	12	PALM TREE (TRPL)
		MANGROVE (TRMG)
MISCELLANEOUS	GPR	GROUND PENETRATING RADAR
		BORING HOLE
	M	METER (UNKNOWN)
		BOLLARD
		COLUMN
	MB	MAIL BOX
	FP	FLAG POLE
		HANDICAP MARKER
	MH	MANHOLE (UNKNOWN)
		SATELLITE DISH
		SIGN
	PM	PARKING METER
		POST
	UB	UTILITY BOX
	UR	UTILITY RISER
		CEMETERY HEAD STONE
	HH	HAND HOLE
		GATE POST
	TC	TRASH CAN
	NPB	NEWSPAPER BOX
	BR	BIKE RACK
	PP	PAY PHONE

HATCH PATTERNS

	CONCRETE		DIRT
	BRICK PAVERS		ASPHALT

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS
SURVEY LEGEND

FILE NAME: 10-2068-V-1A-LEGEND.dwg
LAST SAVED: 06/04/20 - 1:59pm

CAS PROJECT NUMBER
19-2068

SHEET
V-1A
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-21-5-NW-NEIGHBORHOOD\09-Plans\10-2068-V-1A-LEGEND.dwg, 7/28/2020 2:30:40 PM, mmarenco, 1:2

SURVEYOR'S NOTES:

1. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

2. NO SEARCH OF THE PUBLIC RECORDS WAS UNDERTAKEN FOR EASEMENTS, RIGHTS OF WAYS, RESTRICTIONS OR OTHER RECORDED OR EVIDENCE OF UNRECORDED DOCUMENTS BY THIS FIRM THOUGH A LIMITED SEARCH OF THE PALM BEACH COUNTY PROPERTY APPRAISER'S WEBSITE WAS PERFORMED FOR VARIOUS DEED AND PLAT INFORMATION. RIGHTS OF WAYS WERE SEARCHED FOR OWNERSHIP BY: STATEWIDE LAND TITLE, INC. UNDER CUSTOMER FILE NO. "CITY OF DELRAY BEACH, NW NEIGHBORHOOD IMPROVEMENTS RFQ 2018-054". A "BEST FIT" APPROACH WAS TAKEN FOR VARIOUS INTERIOR STREETS WITHIN THE LIMITS OF THE PROJECT. THE RIGHT OF WAY INFORMATION SHOWN FOR ATLANTIC AVENUE (STATE ROAD NO. 806) IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030-2505 (DATED: 04-21-09) AND 93030 – 2506 (DATED: 07-09-09). THE RIGHT OF WAY INFORMATION SHOWN FOR INTERSTATE 95 IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93220-2411 (LAST REVISED 11-01-99). THE RIGHT OF WAY INFORMATION SHOWN FOR LAKE IDA ROAD IS PER THE PALM BEACH COUNTY RIGHT OF WAY ACQUISITION MAP – PALM BEACH COUNTY PROJECT NUMBER: 90502 (DATED: 10-90). BENCHMARK INFORMATION LISTED ALONG SWINTON AVENUE IS PER THE PROJECT NETWORK CONTROL SHEETS PREPARED UNDER FINANCIAL PROJECT ID: 438389-1-52-01.

3. THE INTENT OF THIS "MAP OF SPECIFIC PURPOSE SURVEY" IS TO AID IN THE DESIGN OF INFRASTRUCTURE IMPROVEMENTS WITHIN THE CORRIDORS SHOWN HEREON. THIS IS NOT A BOUNDARY SURVEY.

4. THERE MAY BE UNDERGROUND "FOOTINGS", DRAINAGE, UTILITIES, ETC. NOT SHOWN OR INDICATED HEREON. UTILITY SURFACE MARKINGS SHOWN HEREON WERE LOCATED AS PROVIDED BY THE CRAIG A. SMITH & ASSOCIATES UTILITY LOCATES DEPARTMENT.

5. BASELINES SHOWN HEREON WERE DETERMINED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AS SHOWN ALONG ATLANTIC AVENUE (STATE ROAD NO. 806), LAKE IDA ROAD AND THE SURVEYOR ALONG ALL APPLICABLE INTERIOR ROADS AND ALLEYS. BASELINES HAVE NOT BEEN ESTABLISHED IN THE FIELD.

6. HORIZONTAL COORDINATES SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE GRID SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT). CAS STATIC POINTS 1 AND 2, AS ADJUSTED BY THE FLROIDA DEPARTMENT OF TRANSPORTATION (LISTED BELOW) WERE USED AS REDUNDANT CHECKS FOR THE DURATION OF THE PROJECT. A BEARING OF N 89° 19' 21" E WAS HELD ALONG THE SURVEY BASELINE OF ATLANTIC AVENUE (STATE ROAD 806) FROM STATION 320+52.07 TO STATION 347+00 PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030 – 2506 (DATED: 07-09-09). ALL OTHER BEARINGS ARE RELATIVE THERETO. ELEVATIONS SHOWN HEREON ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 AND VERIFIED UTILIZING VARIOUS FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) BENCHMARKS (BM) (AS LISTED BELOW). HORIZONTAL AND VERTICAL DATA FOR CRAIG A. SMITH & ASSOCIATES (CAS) CONTROL POINTS (CP) ESTABLISHED FOR THE PROJECT ARE ALSO LISTED BELOW:

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1	774626.90	959380.00	18.47	ND RLS 2963
CAS 2	775917.00	959403.40	19.40	PK AVIRON
CAS 3	775227.20	957388.10	17.03	MND LB 3110
CAS 4	775230.40	957774.30	17.66	MND LB 3110
CAS 5	775209.10	958046.40	17.48	MND LB 3110
CAS 6	775209.00	958385.60	18.12	MND LB 3110
CAS 7	775252.40	959035.30	19.11	MND LB 3110
CAS 8	775874.40	959026.50	19.27	MND LB 3110
CAS 9	775214.60	959437.80	18.40	MND EGI
CAS 10	775909.00	958731.60	18.86	MND LB 3110
CAS 11	775255.70	958750.30	16.22	MND LB 3110
CAS 12	775871.00	958362.20	18.64	MND LB 3110
CAS 13	775901.50	958035.70	18.81	MND LB 3110
CAS 14	775864.90	957743.20	19.91	MND LB 3110
CAS 15	775888.90	957399.30	18.17	MND LB 3110
CAS 16	774497.10	957397.80	15.87	MND LB 3300
CAS 17	774501.30	957782.00	15.61	IRC
CAS 18	774552.20	958074.90	15.51	MND LB 3110
CAS 19	774606.10	958441.30	15.28	MND LB 3110
CAS 20	774561.80	958808.40	17.00	MND LB 3110
CAS 21	774519.10	959104.40	16.28	MND MGI
CAS 22	776572.70	959398.20	19.44	MND LB 3110
CAS 23	776544.40	959010.50	19.09	MND LB 3110
CAS 24	776565.80	958710.00	19.53	MND LB 3110
CAS 25	776565.90	958376.20	17.63	MND LB 3110
CAS 26	776559.20	958015.80	18.58	MND LB 3110

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 27	776528.00	957721.80	17.88	MND LB 3110
CAS 28	776549.40	957384.90	17.56	MND LB 3110
CAS 29	776924.50	959004.50	19.82	MND LB 3110
CAS 30	776945.40	958679.10	17.87	MND HSQ GROUP LB 7924
CAS 31	777270.60	958693.70	16.57	MND LB 3110
CAS 32	777337.00	958344.10	16.62	MND LB 3110
CAS 33	777317.20	957665.90	15.34	MND LB 3110
CAS 34	777302.70	957361.80	16.98	MND LB 3110
CAS 35	777276.40	957016.90	18.06	MND LB 3110
CAS 36	777274.60	956697.80	14.87	MND LB 3110
CAS 37	776594.90	956724.70	14.98	MND LB 3110
CAS 38	776528.90	956705.40	15.01	MND LB 3110
CAS 39	776599.90	956377.10	14.57	MND LB 3110
CAS 40	776571.40	956060.40	14.07	MND LB 3110
CAS 41	776567.80	955738.40	13.89	MND LB 3110
CAS 42	776560.80	955492.30	13.13	MND LB 3110
CAS 43	776575.90	955216.00	13.19	MND LB 3110
CAS 44	776595.60	955026.00	13.66	PK
CAS 45	776590.70	954693.10	14.39	PK
CAS 46	775890.20	954719.30	15.38	MND LB 3110
CAS 47	775213.40	954714.50	16.81	MND LB 3110
CAS 48	775201.90	955074.20	17.86	MND LB 3110
CAS 49	775225.40	955408.80	17.22	MND LB 3110
CAS 50	775194.40	955752.70	15.74	MND LB 3110
CAS 51	774501.70	955773.30	16.24	MND LB 3110
CAS 52	774501.90	956064.80	15.66	PKD AVIROM ASSOC
CAS 53	774492.10	956453.40	17.62	MND LB 3110
CAS 54	774489.90	956793.40	15.22	MND LB 3300
CAS 55	774501.90	957116.90	15.71	MND LB 3110
CAS 56	775252.00	956090.90	16.46	MND LB 3110
CAS 57	775208.50	956432.20	15.22	MND LB 3110
CAS 58	775213.70	956727.30	14.64	MND LB 3110
CAS 59	775189.70	957055.60	15.57	MND LB 3110
CAS 60	777600.10	956084.40	14.32	MND LB 3110
CAS 61	777618.30	955187.90	14.68	MND LB 3110
CAS 62	777095.80	955235.80	11.72	MND LB 3110
CAS 63	777331.40	958034.80	16.48	MND LB 3110
CAS 64	775853.90	957047.70	16.05	MND LB 3110
CAS 65	776532.70	957042.60	16.87	PK
CAS 66	777417.40	957195.70	18.46	MND OSO LB 353
CAS 67	775886.40	956716.10	14.52	MND LB 3110
CAS 68	775910.20	956394.50	17.97	ND
CAS 69	775910.10	956394.60	17.93	ND
CAS 70	775906.10	956057.80	16.06	MND CAS
CAS 71	777140.20	956037.10	12.88	PK AVIROM
CAS 72	777146.50	955747.90	12.21	MND LB 3110
CAS 73	777117.20	955484.40	11.78	MND LB 3110
CAS 74	776848.40	955239.90	12.03	MND HSQ GROUP LB 7924
CAS 75	775914.10	955709.80	16.59	MND CAS
CAS 76	775880.40	955036.90	17.44	MND LB 3110
CAS 77	774724.00	955082.90	17.71	MND LB 3110
CAS 78	776609.30	954303.40	17.13	MND LB 3110
CAS 79	777292.00	954293.60	12.36	MND LB 3110
CAS 80	774713.20	955371.20	17.28	MND LB 3110
CAS 81	777445.60	956726.80	16.13	MND LB 3110
CAS 82	777089.30	954557.00	17.53	PKD
CAS 83	776839.10	954560.50	16.57	PKD
CAS 84	776588.80	954564.00	14.75	NAIL CONC
CAS 85	774903.80	954720.80	19.48	MND LB 3110
CAS 86	776160.80	954368.30	14.49	PK

PRIMARY CONTROL POINTS

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1 (STATIC)	774626.90	959380.00	18.72'	MND LB 3110
CAS 2 (STATIC)	775917.08	959403.39	19.22'	MND LB 3110
FDOT C02	774589.66	957386.84	15.79'	FDOT BRASS DISK
PNC-BM M02	774507.52	958398.40	15.06'	FDOT BRASS DISK
PNC-BM C3	774556.99	959460.96	18.59'	FDOT BRASS DISK
BLC-4	775265.00	959479.79	17.99'	FDOT BRASS DISK
BLC-5	777371.16	959300.96	20.23'	FDOT BRASS DISK

7. ALL SYMBOLS ARE SHOWN FOR REPRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE.

8. FINISHED FLOOR AND ELEVATIONS SHOWN HEREON, IF ANY, WERE TAKEN AT THE DOORWAY THRESHOLD. NO SEARCH WAS PERFORMED FOR ANY LOWER "SUNKEN" FLOORS OR HIGHER RAISED FLOORS WITHIN ANY STRUCTURE.

16. THE ACCURACY OF THIS SURVEY IS PREMISED ON THE EXPECTED USE OF THE SURVEY. THE EXPECTED USE/PREMISE OF THIS SURVEY IS THE DESIGN OF NEIGHBORHOOD IMPROVEMENTS, WHICH MAY CONSIST OF IMPROVEMENTS TO OR ADDITIONS OF ROADWAYS, DRAINAGE, LIGHTING, ETC. TRIMBLE R2 AND R8 GNSS INSTRUMENTS WITH TRIMBLE TSC-3 DATA COLLECTION WERE UTILIZED TO ESTABLISH HORIZONTAL CONTROL AND LOCATE UTILITY SURFACE MARKS AND MISC. FEATURES HORIZONTALLY. A TOPCON ES-102 INSTRUMENT WITH RANGER (TDS) DATA COLLECTION WAS UTILIZED TO COLLECT DATA IN BOTH THE HORIZONTAL AND VERTICAL PLANES. CLOSED LEVEL LOOPS WERE PERFORMED USING TOPCON GTS 2 LEVELS TO TRANSFER ELEVATIONS FROM KNOWN BENCHMARKS AND THROUGHOUT THE PROJECT.

17. THE DIGITAL DATA PROVIDED IS INTENDED TO BE VIEWED AT A SCALE OF 1" = 20' OR SMALLER.

18. ALL DISTANCES AND ELEVATIONS SHOWN HEREON ARE IN ACCORD WITH THE UNITED STATES STANDARD USING FEET AND DECIMALS THEREOF.

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS
SURVEYOR'S NOTES

FILE NAME: 10-2068-V-1B-NOTES.dwg
LAST SAVED: 06/04/20 – 2:04pm

CAS PROJECT NUMBER
19-2068

SHEET
V-1B
OF
87

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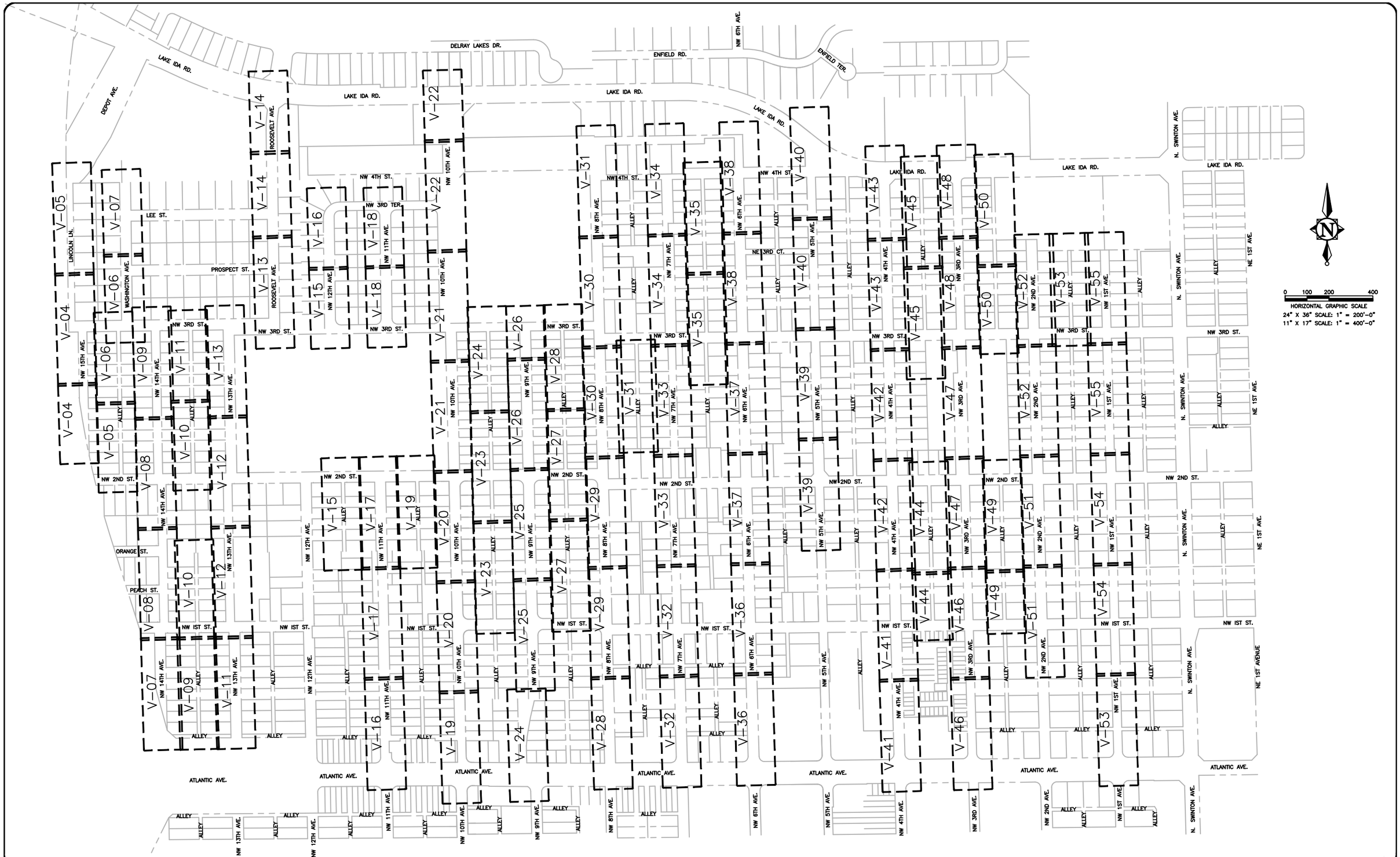

0 100 200 400

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 200'-0"
11" X 17" SCALE: 1" = 400'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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PALM BEACH COUNTY, FLORIDA

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CERTIFICATE. NO. LB0003110

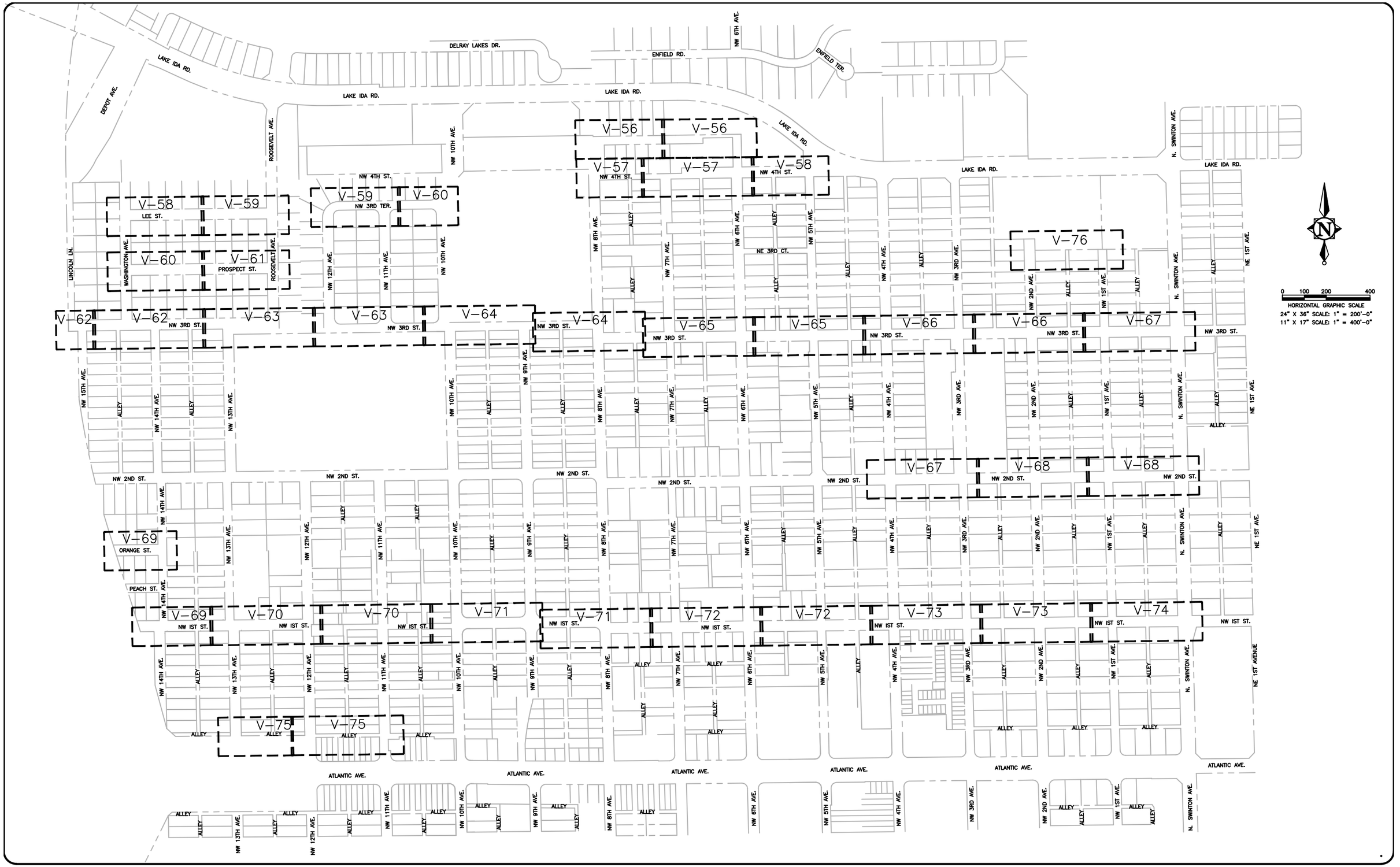
MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS
KEY SHEET
SOUTH-NORTH VIEWS

FILE NAME: 20-2068-V-02-KEY-N-S.dwg
LAST SAVED: 05/14/20 - 8:33am

CAS PROJECT NUMBER
19-2068

SHEET
V-02
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
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PALM BEACH COUNTY, FLORIDA

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21045 COMMERCIAL TRAIL
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(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS
KEY SHEET
WEST-EAST VIEWS

FILE NAME: 20-2068-V-03-KEY-E-W.dwg
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CAS PROJECT NUMBER
19-2068

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V-03
OF
87

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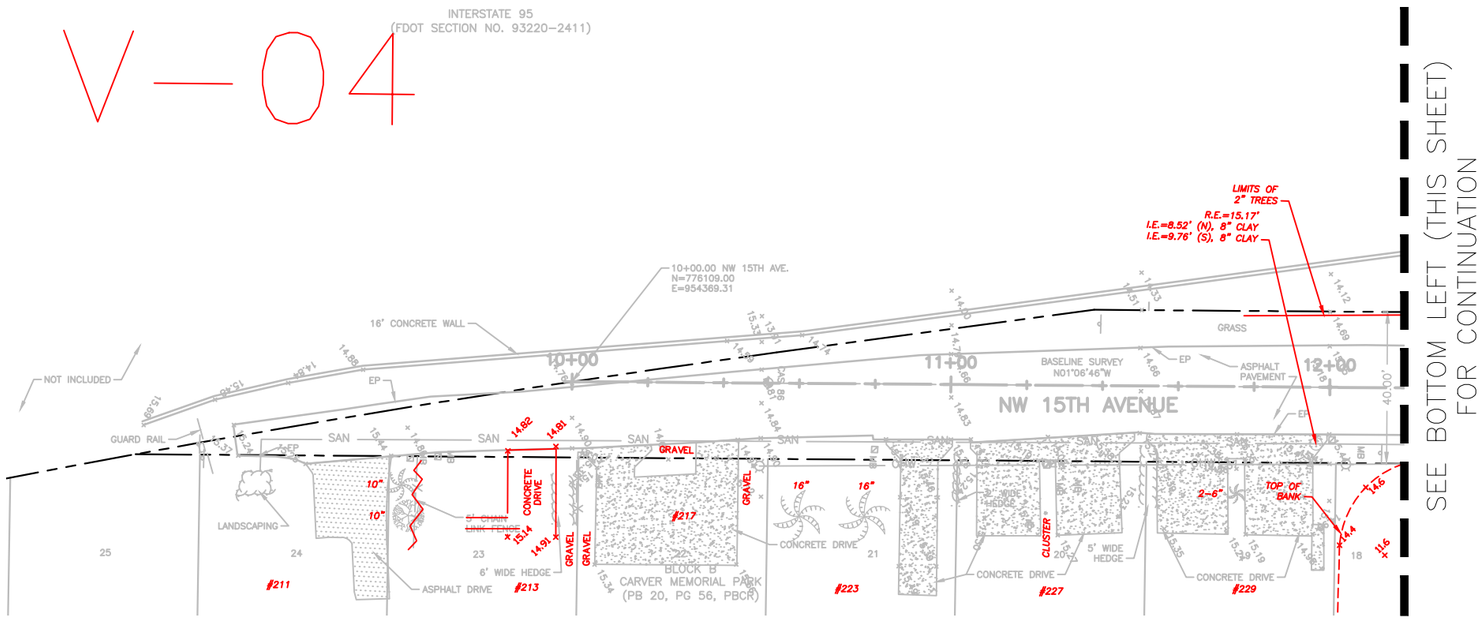
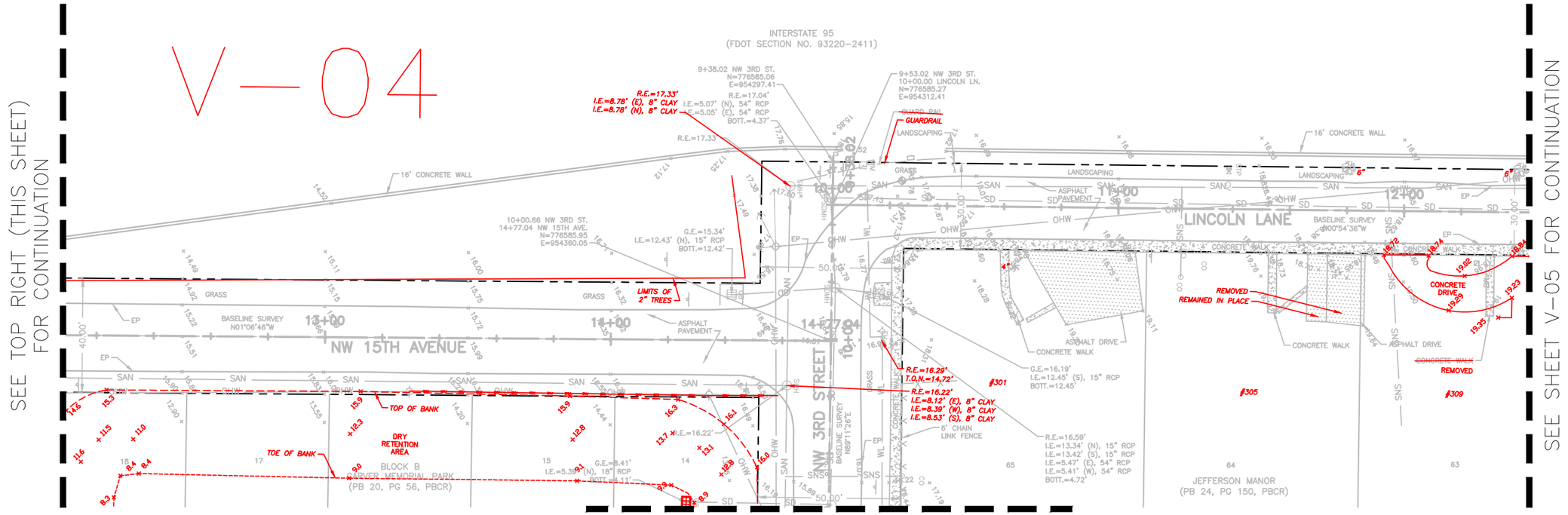
V-04



V-04



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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CERTIFICATE NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-04-SRVY.dwg
LAST SAVED: 12/19/21 - 12:27pm

CAS PROJECT NUMBER
19-2068

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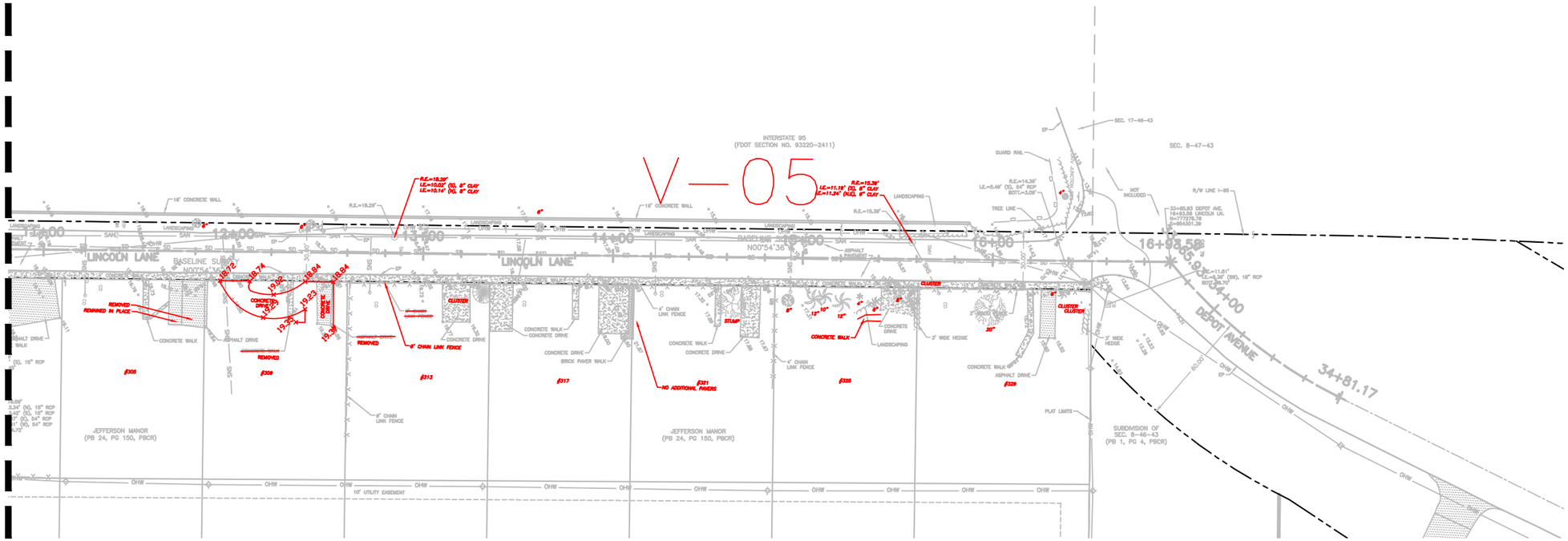
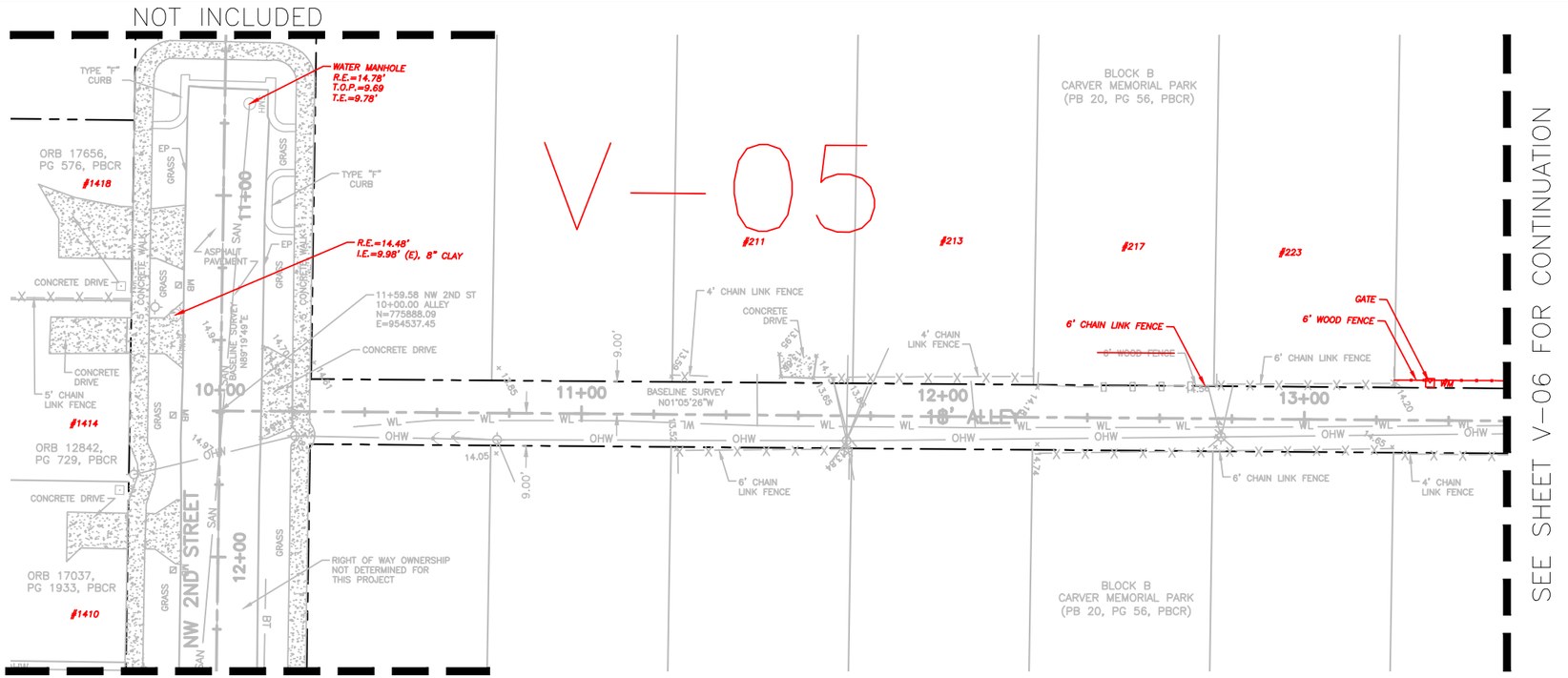
87

SEE SHEET V-04 FOR CONTINUATION





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
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PALM BEACH COUNTY, FLORIDA

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MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-05-SRVY.dwg
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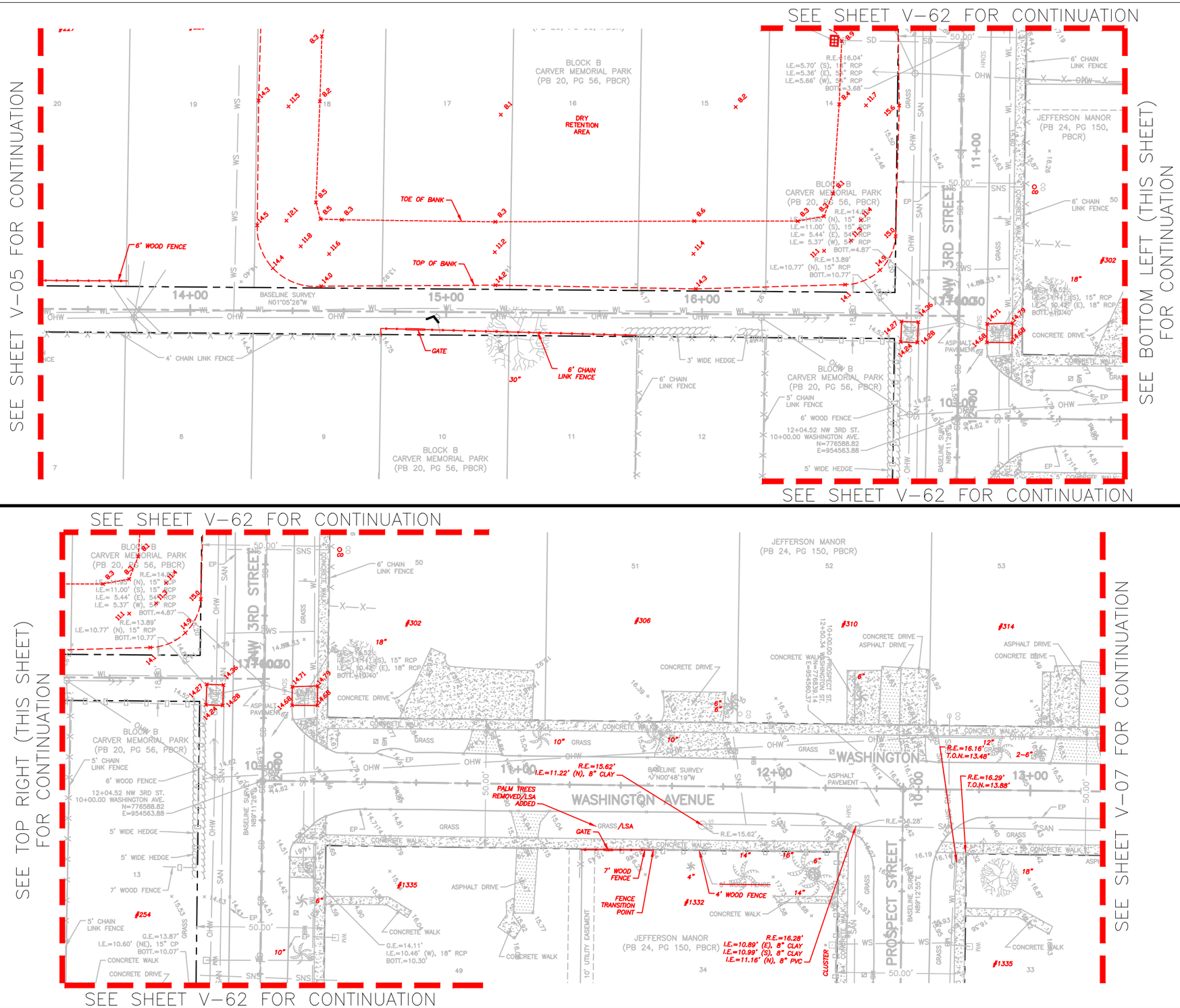
CAS PROJECT NUMBER
19-2068

SHEET
V-05
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

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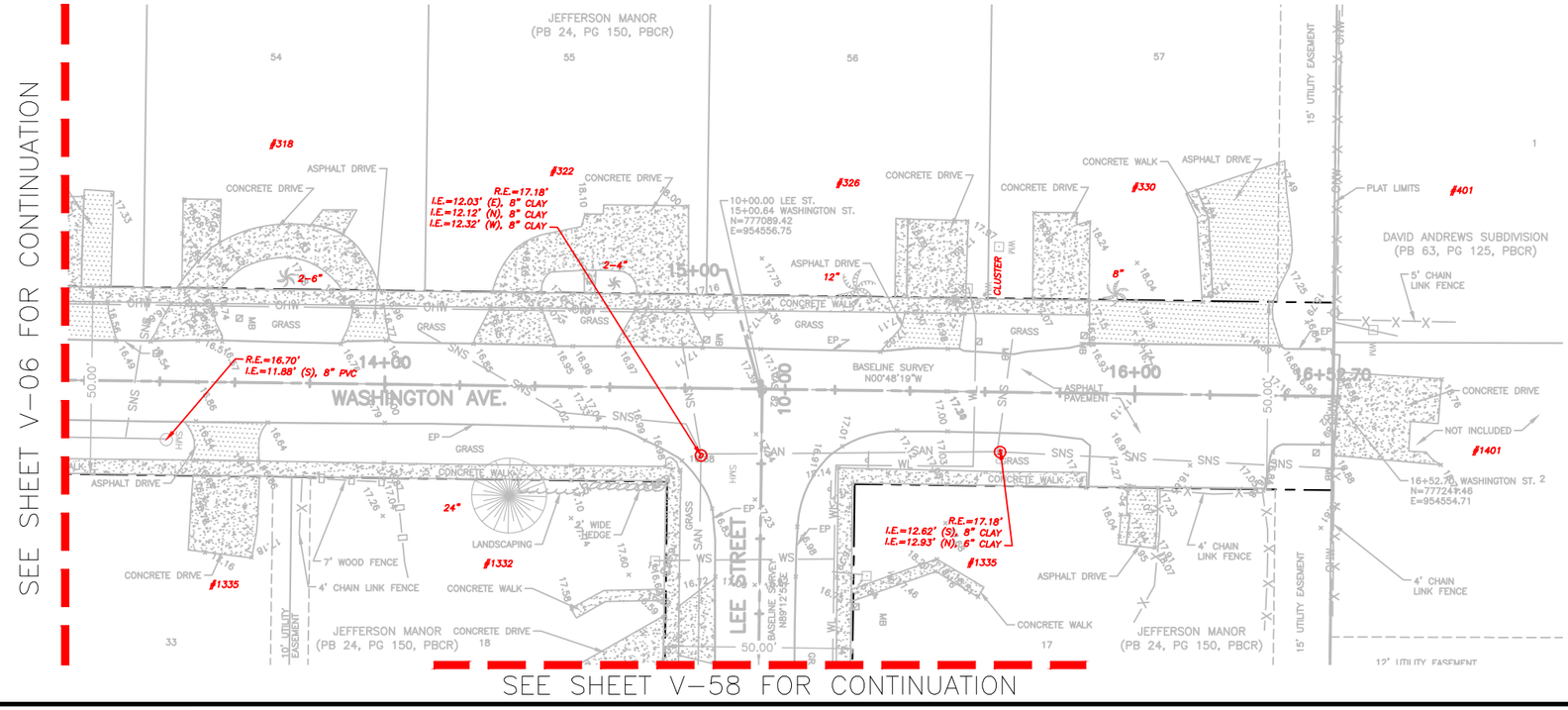
MAP OF
SPECIFIC PURPOSE
SURVEY

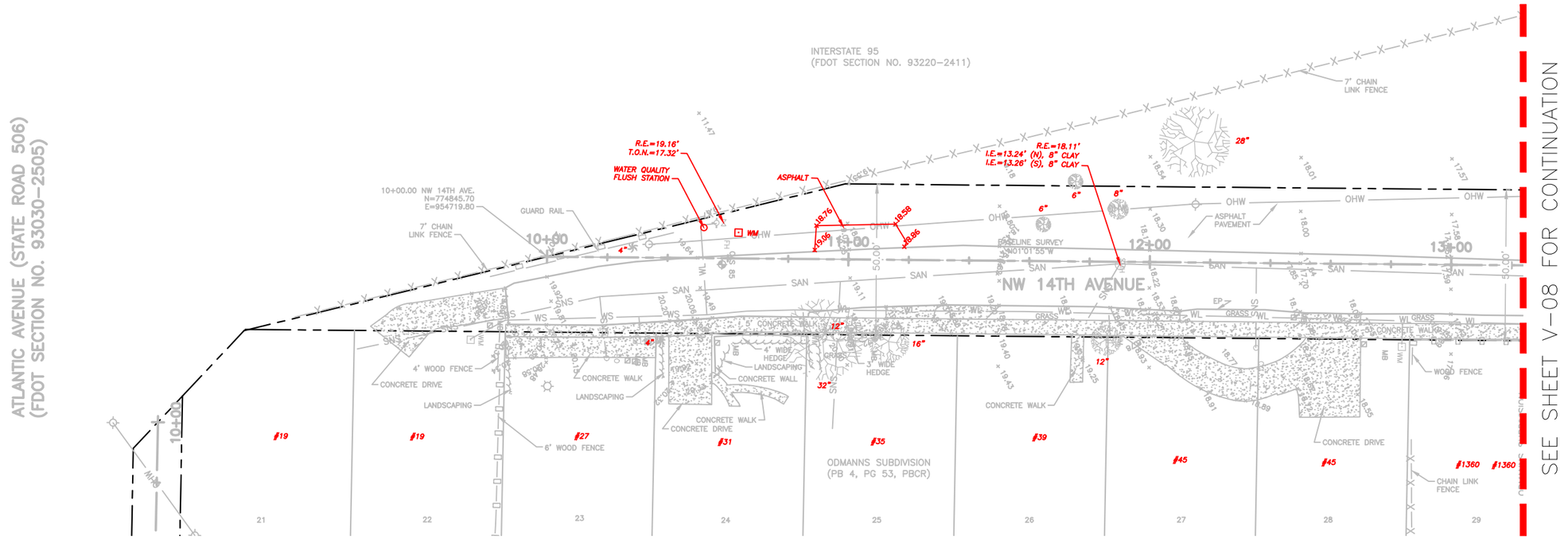
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-06-SRVY.dwg
LAST SAVED: 12/22/21 - 2:30pm

CAS PROJECT NUMBER
19-2068

SHEET
V-06
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

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CERTIFICATE. NO. LB0003110

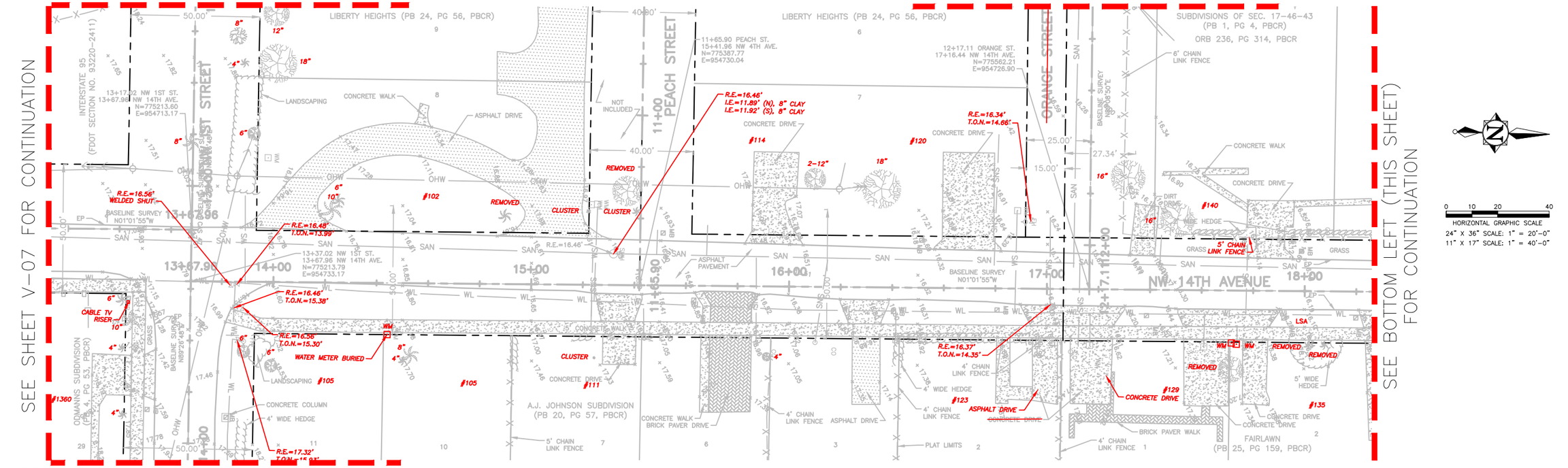
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-07-SRVY.dwg
LAST SAVED: 12/22/21 - 2:36pm

CAS PROJECT NUMBER
19-2068

SHEET
V-07
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

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(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-08-SRVY.dwg
LAST SAVED: 12/22/21 - 2:42pm

CAS PROJECT NUMBER
19-2068

SHEET
V-08
OF
87

SEE SHEET V-08 FOR CONTINUATION

SEE SHEET V-62 FOR CONTINUATION

SEE SHEET V-62 FOR CONTINUATION

BLOCK B
CARVER MEMORIAL PARK
(PB 20, PG 56, PBCR)

BLOCK A
CARVER MEMORIAL PARK
(PB 20, PG 56, PBCR)

JEFFERSON MANOR
(PB 24, PG 150, PBCR)

NW 14TH AVENUE

NW 3RD STREET

BASELINE SURVEY
N01°04'14"W

BASELINE SURVEY
N01°04'12"W

BASELINE SURVEY
N89°32'38"E

BASELINE SURVEY
N89°11'27"E

CONCRETE WALK
CONCRETE DRIVE
5' WIDE HEDGE
7' WOOD FENCE
5' CHAIN LINK FENCE
4' CHAIN LINK FENCE
6' CHAIN LINK FENCE
4' WIDE HEDGE
3' WIDE HEDGE
1' WIDE HEDGE
6' WOOD FENCE
4' PVC FENCE
ASPHALT PAVEMENT
GRASS
TREE LINE
CONCRETE SLAB
1 STORY CBS
1 STORY CBS

R.E.=14.33' (E), 15" RCP
BOTT.=10.46'
I.E.=10.87'
R.E.=14.24'
I.E.=5.39' (N), 48" RCP
I.E.=5.46' (S), 48" RCP
I.E.=12.39' (E), 15" RCP
I.E.=12.27' (W), 15" RCP
BOTT.=5.12'
R.E.=14.33'
T.O.N.=11.60'
TYPE "D" CURB
R.E.=14.32'
I.E.=7.92' (N), 8" CLAY
I.E.=7.96' (S), 8" CLAY
2-4"
G.E.=13.84'
I.E.=11.13' (W), 15" RCP
BOTT.=10.61'
UNABLE TO LOCATE
CLEAN OUT IN AREA
CLUSTER
G.E.=13.73'
G.E.=13.87'
I.E.=10.60' (NE), 15" CP
BOTT.=10.07'
R.E.=14.28'
I.E.=5.76' (N), 48" RCP
I.E.=5.46' (S), 48" RCP
I.E.=11.93' (E), 15" RCP
BOTT.=4.74'
R.E.=14.22'
I.E.=5.77' (E), 8" CLAY
I.E.=5.82' (W), 8" CLAY
I.E.=6.40' (S), 8" CLAY
R.E.=14.18'
T.O.N.=12.35'
R.E.=14.15'
T.O.N.=12.25'
13+33.83 NW 3RD ST.
27+45.22 NW 14TH AVE.
N=776590.65
E=954693.19
I.E.=14.22'
R.E.=14.34'
I.E.=10.43' (SE), 15" RCP
I.E.=5.50' (S), 48" RCP
I.E.=7.48' (E), 15" RCP
I.E.=5.44' (W), 54" RCP
BOTT.=4.8"
R.E.=13.99'
T.O.N.=13.42'
G.E.=13.50'
(W), 15" RCP
BOTT.=10.49'
G.E.=14.11'
I.E.=10.46' (W), 18" RCP
BOTT.=10.30'

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-10 FOR CONTINUATION

ATLANTIC AVENUE (STATE ROAD 506)
(FDOT SECTION NO. 93030-2505)

16' ALLEY

ODMANNS SUBDIVISION
(PB 4, PG 53, PBCR)
BLOCK 1

11+14.14 ALLEY
10+00.00 ALLEY
N=774719.01
E=954892.22

GATE
UNABLE TO LOCATE
RISER IN AREA
BELLSOUTH
RISER
AT&T
RISER
CONCRETE

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

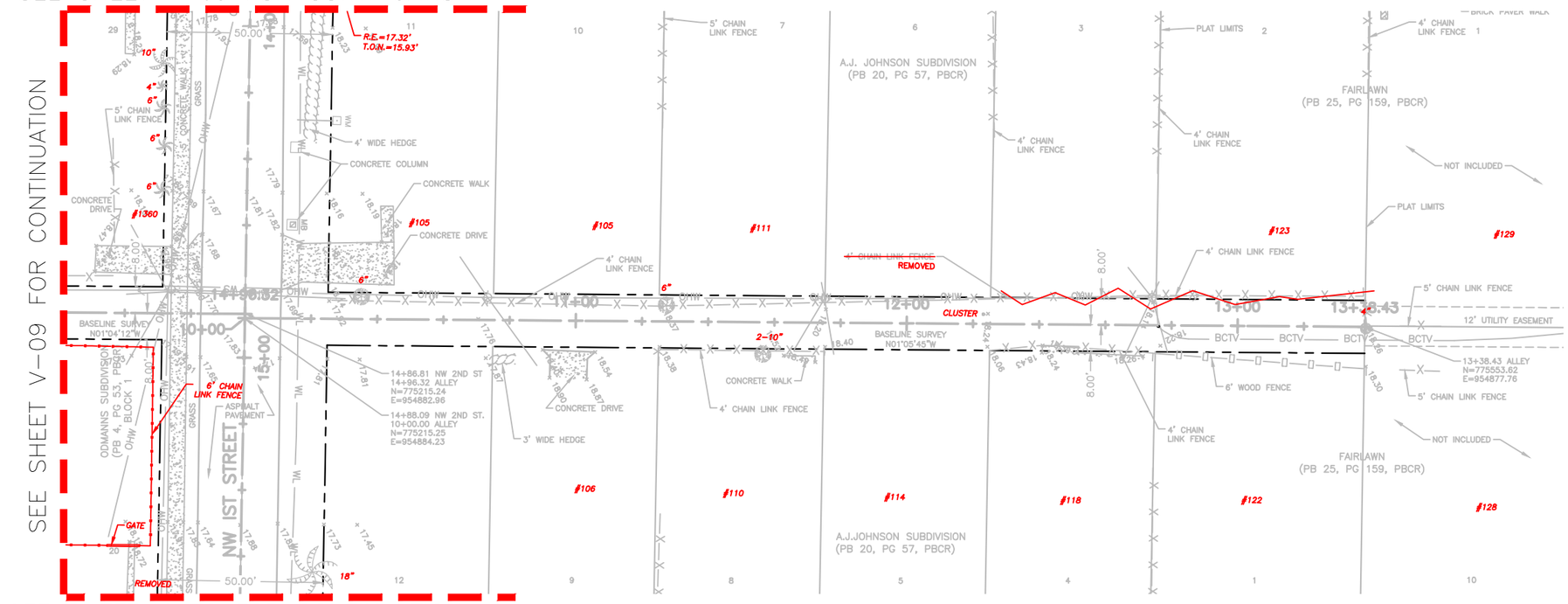
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

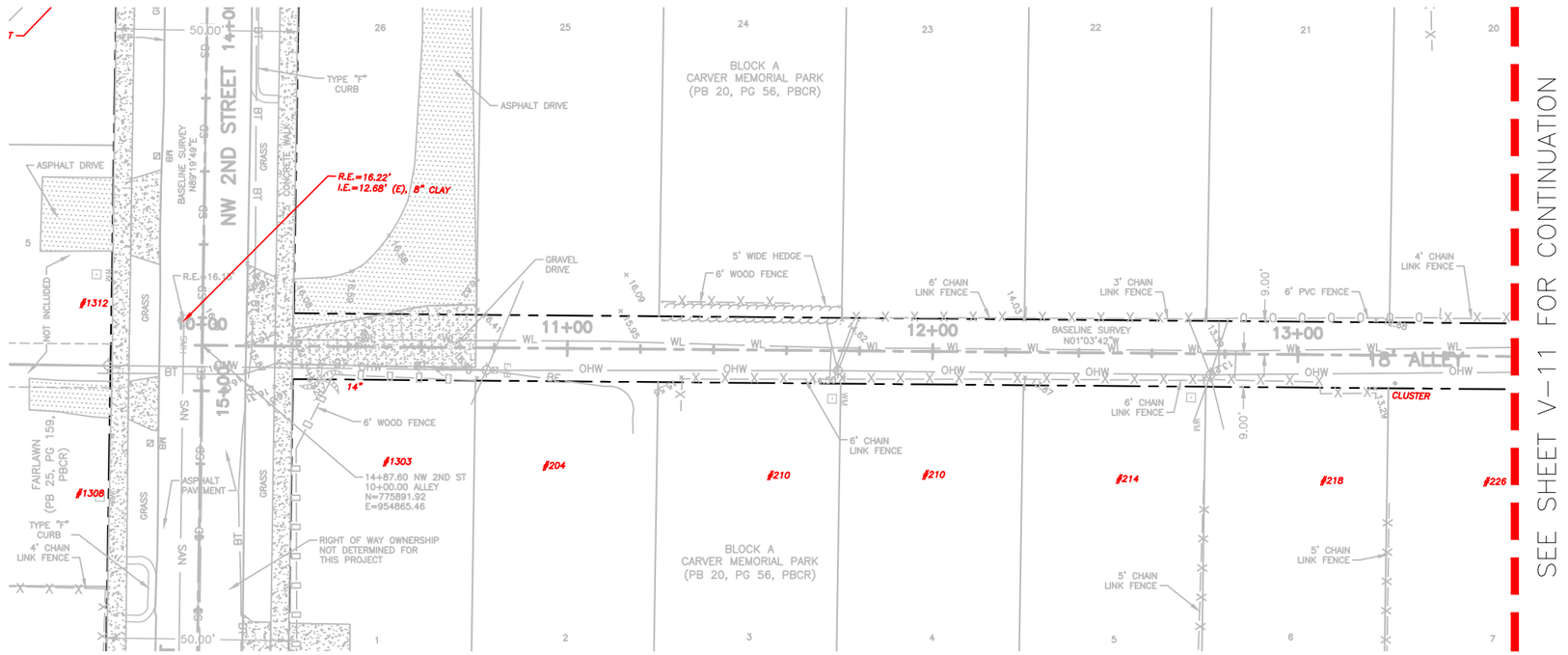
FILE NAME: 20-2068-V-09-SRVY.dwg
LAST SAVED: 12/22/21 - 2:54pm

CAS PROJECT NUMBER
19-2068

SHEET
V-09
OF
87

SEE SHEET V-69 FOR CONTINUATION





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

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21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-10-SRVY.dwg
LAST SAVED: 12/19/21 - 1:58pm

CAS PROJECT NUMBER
19-2068

SHEET
V-10
OF
87

SEE SHEET V-10 FOR CONTINUATION

SEE SHEET V-62 FOR CONTINUATION

SEE SHEET V-63 FOR CONTINUATION

SEE SHEET V-12 FOR CONTINUATION

SEE SHEET V-75 FOR CONTINUATION

BLOCK A
CARVER MEMORIAL PARK
(PB 20, PG 56, PBCR)

BLOCK A
CARVER MEMORIAL PARK
(PB 20, PG 56, PBCR)

JEFFERSON MANOR
(PB 24, PG 150, PBCR)

ODMANNS SUBDIVISION
(PB 4, PG 53, PBCR)
BLOCK 1

ATLANTIC PARK GARDENS
(PB 14, PG 56, PBCR)
BLOCK 1

NW 3RD STREET

NW 13TH AVENUE

16' ALLEY

ATLANTIC AVENUE (STATE ROAD 506)
(FDOT SECTION NO. 93030-2505)

R.E.=13.32'
I.E.=8.26' (S), 15" RCP
I.E.=8.05' (N), 15" RCP
I.E.=7.80' (W), 18" RCP
I.E.=7.61' (E), 18" RCP
BOTTOM 6.64'

14+93.13 NW 3RD AVE
17+01.09 ALLEY
N=776902.89
E=954635.27

R.E.=13.28'

G.E.=13.64'
I.E.=9.04' (S), 15" RCP
BOTT.=8.18'

G.E.=13.34'
I.E.=8.69' (N), 15" RCP
BOTT.=7.14'

R.E.=14.04"
I.E.=8.78' (N), 15" RCP
I.E.=8.75' (S), 15" RCP
I.E.=8.38' (E), 24" RCP
I.E.=8.67' (W), 15" RCP
BOTT.=6.99'

G.E.=17.98'
I.E.=13.22' (E), 15" RCP
BOTT.=UNK
NOTE=FULL OF DEBRIS

G.E.=17.53'
I.E.=12.64' (W), 15" RCP
BOTT.=UNK
NOTE=FULL OF DEBRIS

R.E.=17.97'
I.E.=12.41' (N), 18" RCP
I.E.=12.69' (S), 18" RCP
I.E.=12.41' (E), 15" RCP
I.E.=12.65' (W), 15" RCP
BOTT.=11.97'

R.E.=17.91'
I.E.=11.88' (N), 8" CLAY
I.E.=11.93' (S), 8" CLAY

11+58.00 NW 13TH AVE.
10+00.00 NW 13TH AVE. (E)
N=774597.34
E=955062.75

303+56.15 ATLANTIC AVE
10+00.00 NW 13TH AVE
N=774539.39
E=955065.80

R.E.=18.07'
I.E.=13.14' (N), 8" CLAY
I.E.=13.22' (W), 8" CLAY

R.E.=17.62'
T.O.N.=16.13'

R.E.=17.49'
FILLED W/ROCK

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

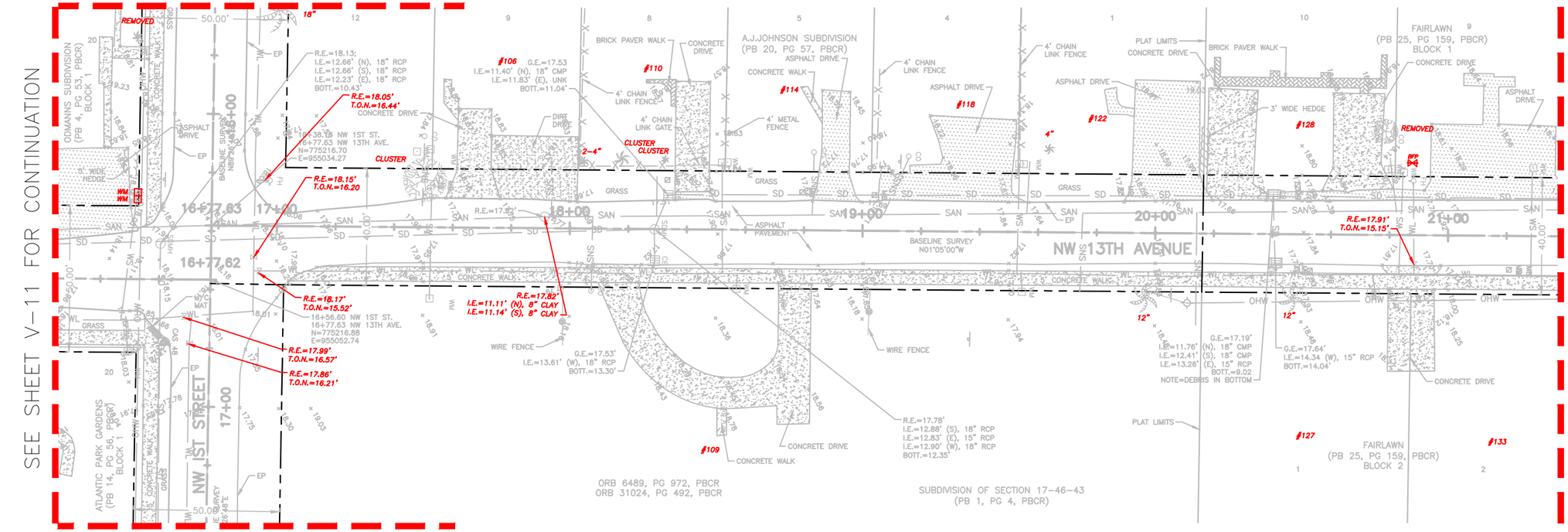
FILE NAME: 20-2068-V-11-SRVY.dwg
LAST SAVED: 12/22/21 - 3:11pm

CAS PROJECT NUMBER
19-2068

SHEET
V-11
OF
87

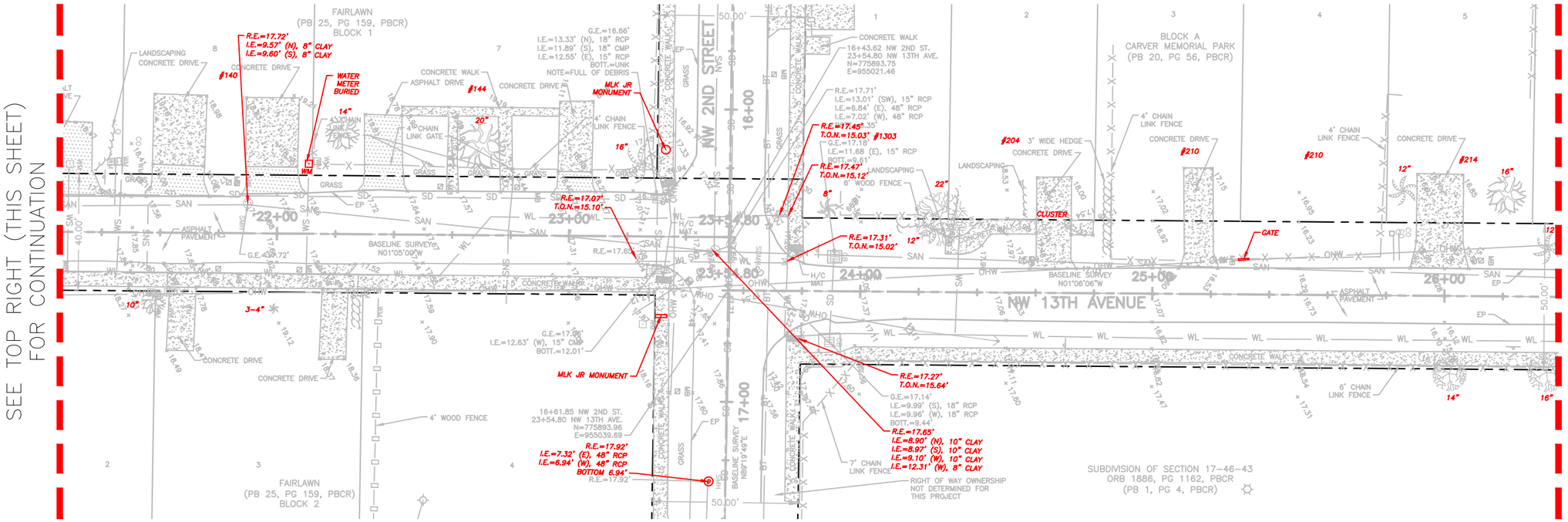
SEE SHEET V-69 FOR CONTINUATION

SEE SHEET V-11 FOR CONTINUATION



SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION



SEE SHEET V-13 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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BOCA RATON, FLORIDA 33486
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CERTIFICATE. NO. LB0003110

MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

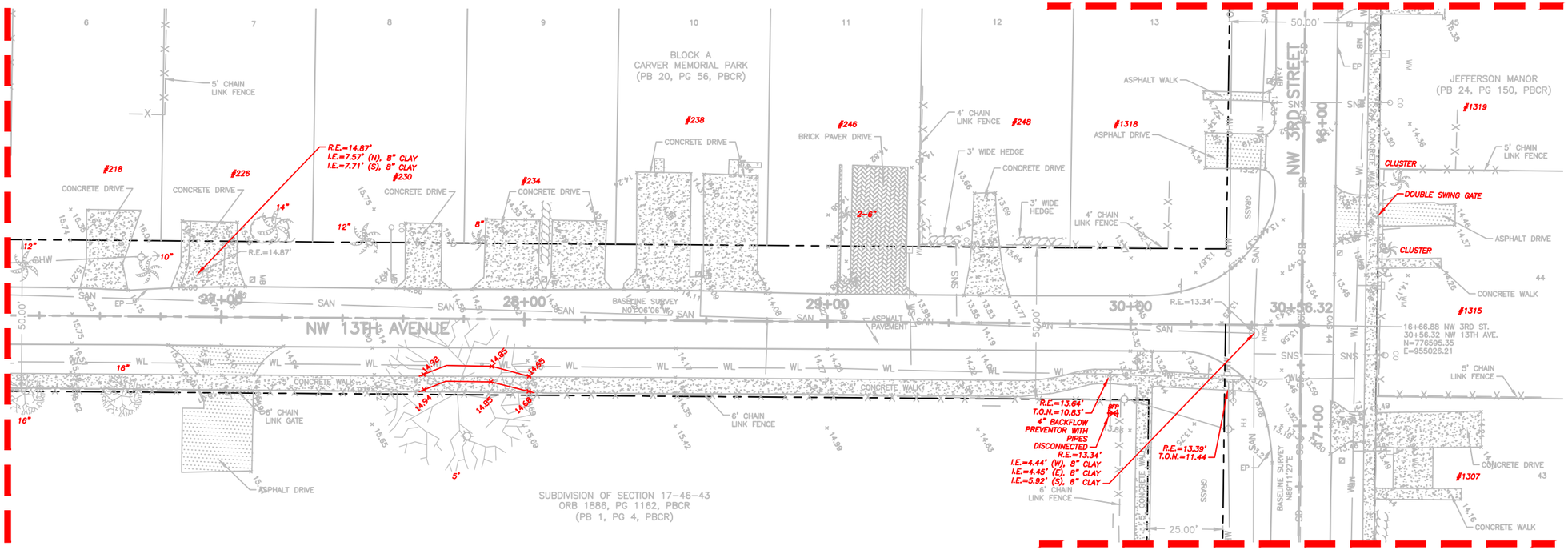
FILE NAME: 20-2068-V-12-SRVY.dwg
LAST SAVED: 12/22/21 - 3:51pm

CAS PROJECT NUMBER
19-2068

SHEET
V-12
OF
87

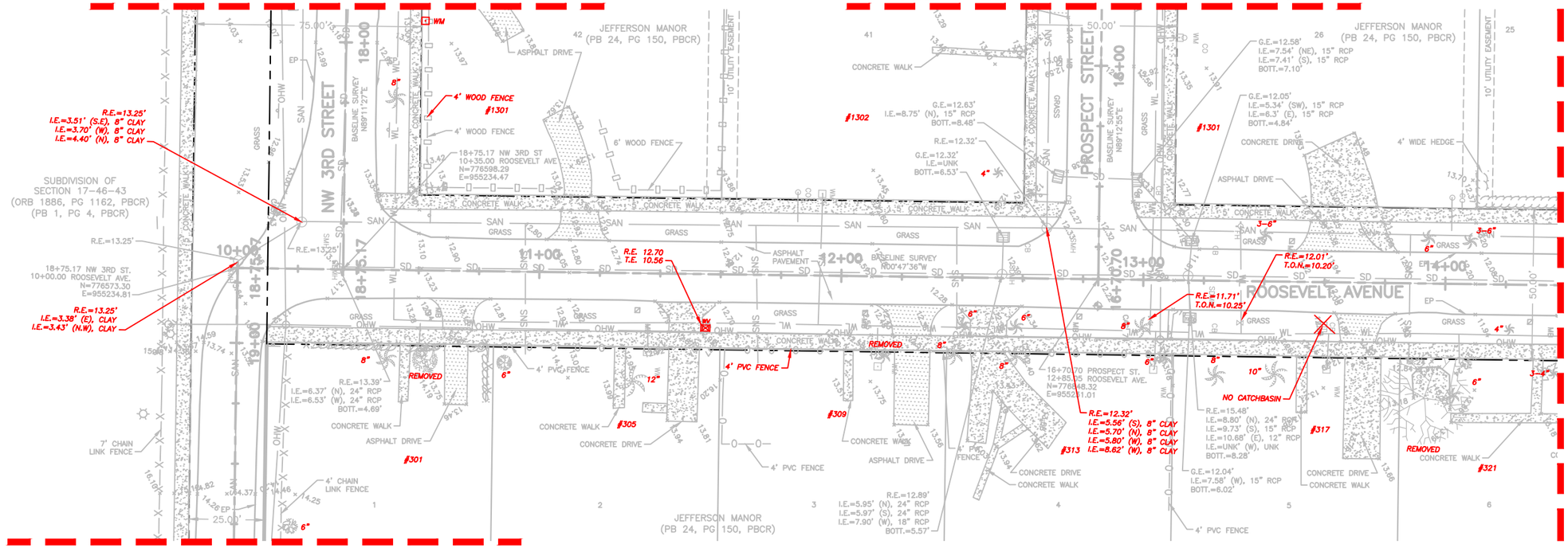
SEE SHEET V-12 FOR CONTINUATION

SEE SHEET V-62 FOR CONTINUATION



SEE SHEET V-63 FOR CONTINUATION

SEE SHEET V-61 FOR CONTINUATION



SEE SHEET V-14 FOR CONTINUATION

SEE SHEET V-63 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

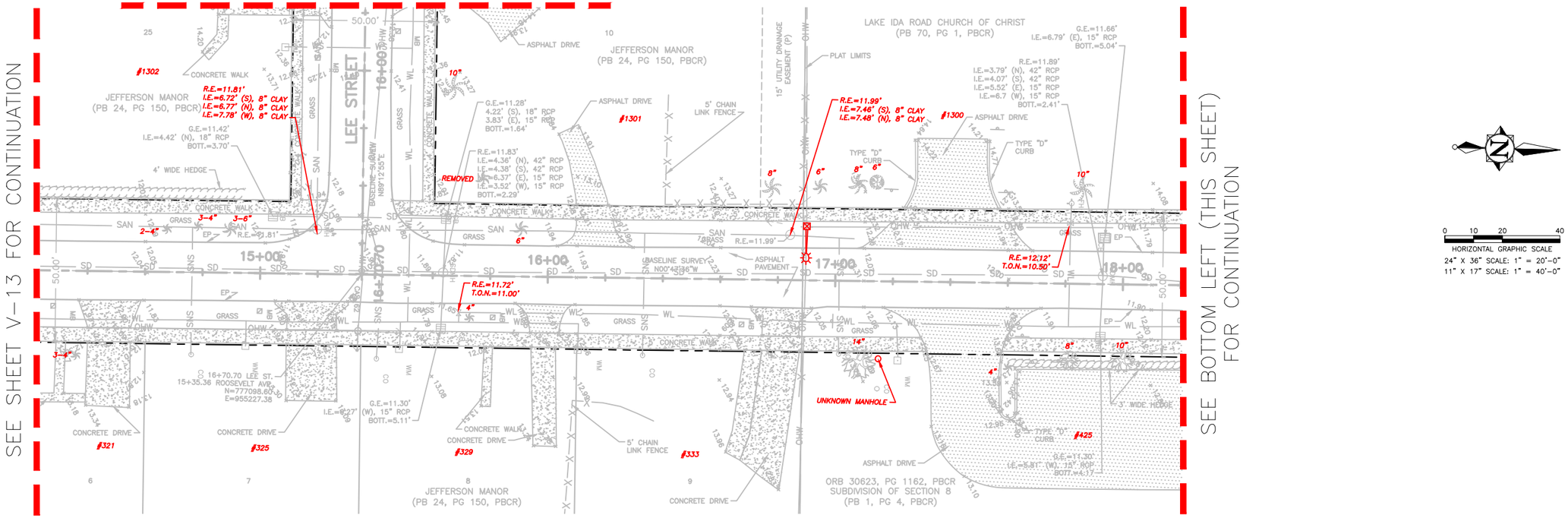
MAP OF
SPECIFIC PURPOSE
SURVEY

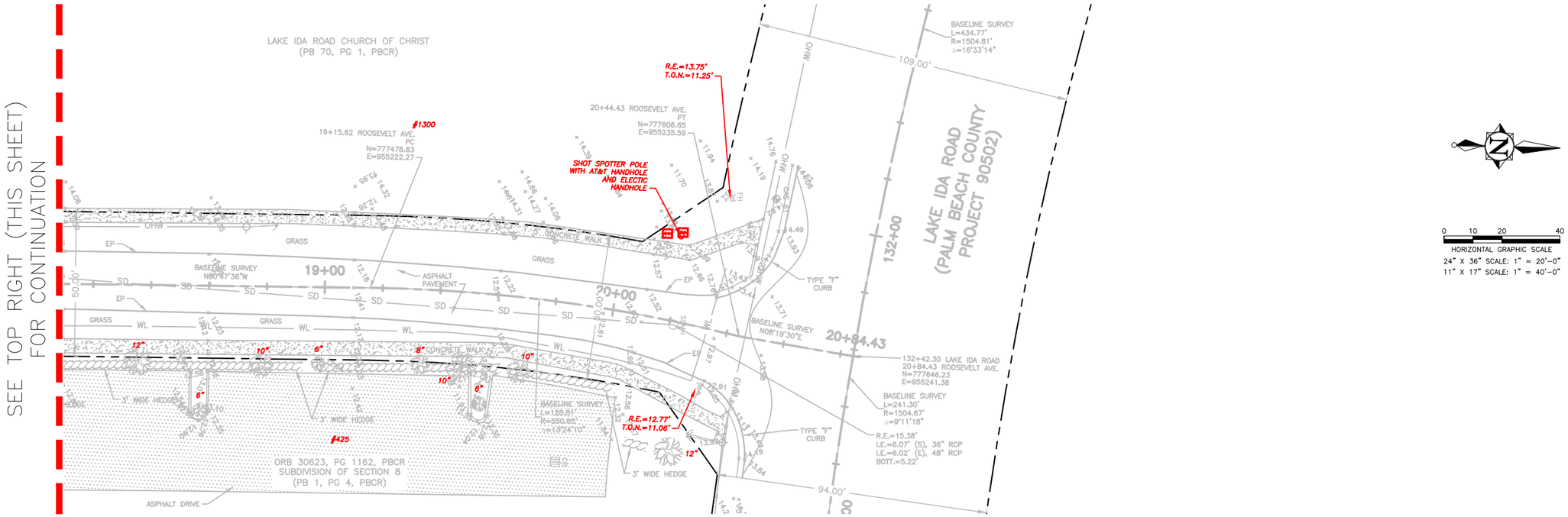
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-13-SRVY.dwg
LAST SAVED: 12/19/21 - 2:45pm

CAS PROJECT NUMBER
19-2068

SHEET
V-13
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-14-SRVY.dwg
LAST SAVED: 12/19/21 - 2:53pm

CAS PROJECT NUMBER
19-2068

SHEET
V-14
OF
87

NOT INCLUDED

PINE CREST SUBDIVISION
(PB 26, PG 14, PBCR) BLOCK 1

#125
ORB 26124, PG 1755, PBCR

#127 #131 #139 #1122

LIMITS OF HEAVY VEGETATION/TRASH

HEAVY VEGETATION/TRASH

4' CHAIN LINK FENCE

LIMITS OF VEGETATION

4' WIDE HEDGE

VEGETATION

6' PVC FENCE

6' WOOD FENCE

2' WIDE HEDGE

3' CHAIN LINK GATE

3' CHAIN LINK FENCE

NOT INCLUDED

10+00.00 ALLEY
N=775560.92
E=955554.00

16' ALLEY

#126 #128 #132 #140 #146 #1102

ORB 19069, PG 1359, PBCR

ORB 19069, PG 1359, PBCR

SUBDIVISION OF SECTION 17
(PB 1, PG 4, PBCR)

PINE CREST SUBDIVISION
(PB 26, PG 14, PBCR) BLOCK 1

ASPHALT DRIVE

TYPE "F" CURB

LANDSCAPING

5' CONCRETE WALK

GRASS

BASELINE SURVEY
N89°19'49"E

21+00

22+00

NW 2ND STREET

50.00'

RIGHT OF WAY OWNERSHIP NOT DETERMINED FOR THIS PROJECT

NOT INCLUDED

21+69.38 NW 2ND ST.
13+39.05 ALLEY
N=775899.89
E=955547.19

6' CHAIN LINK FENCE

CONCRETE WALK

NOT INCLUDED

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-63 FOR CONTINUATION

POINCIANA HEIGHTS OF DELRAY BEACH
(PB 26, PG 245, PBCR)

NW 3RD STREET

SUBDIVISION OF SECTION 17
(PB 1, PG 4, PBCR)
(ORB 1886, PG 1162, PBCR)

21+29.45 NW 3RD ST.
30+44.16 NW 12TH AVE.
N=776566.89
E=955489.08

30+44.16

21+00

31+00

32+00

33+00

BASELINE SURVEY
S00°43'08"W

NW 12TH AVENUE

#302 #306 #310 #314 #318

#301 #307 #311 #315

3' WIDE HEDGE

CONCRETE DRIVE

CONCRETE BLOCK WALL

2' WIDE HEDGE

5' CHAIN LINK GATE

5' CHAIN LINK FENCE

4' CHAIN LINK FENCE

7' CHAIN LINK FENCE

6' WOOD FENCE

1.3' CONCRETE LOW WALL

GATE

ASPHALT PAVEMENT

CONCRETE WALK

6' EASEMENT

6' UTILITY EASEMENT

12' EASEMENT

CLUSTER

NO CO

R.E.=13.08'
I.E.=7.43' (N), 15" RCP
I.E.=8.24' (S), 15" RCP
I.E.=7.48' (W), 15" RCP
BOTT.=4.69'

R.E.=13.14'
I.E.=2.83' (E), 8" CLAY
I.E.=2.83' (W), 8" CLAY
I.E.=3.08' (N), 8" CLAY
I.E.=5.81' (N), 6" CLAY

G.E.=12.92'
I.E.=8.82' (NW), 15" RCP
BOTT.=8.54'

G.E.=12.66'
I.E.=6.53' (E), 15" RCP
BOTT.=7.26'

G.E.=12.70'
I.E.=7.25' (S), 15" RCP
I.E.=7.27' (W), 15" RCP
BOTT.=6.60'

R.E.=12.44'
I.E.=6.79' (N), 8" CLAY
I.E.=6.78' (S), 8" CLAY

SEE SHEET V-16 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-63 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

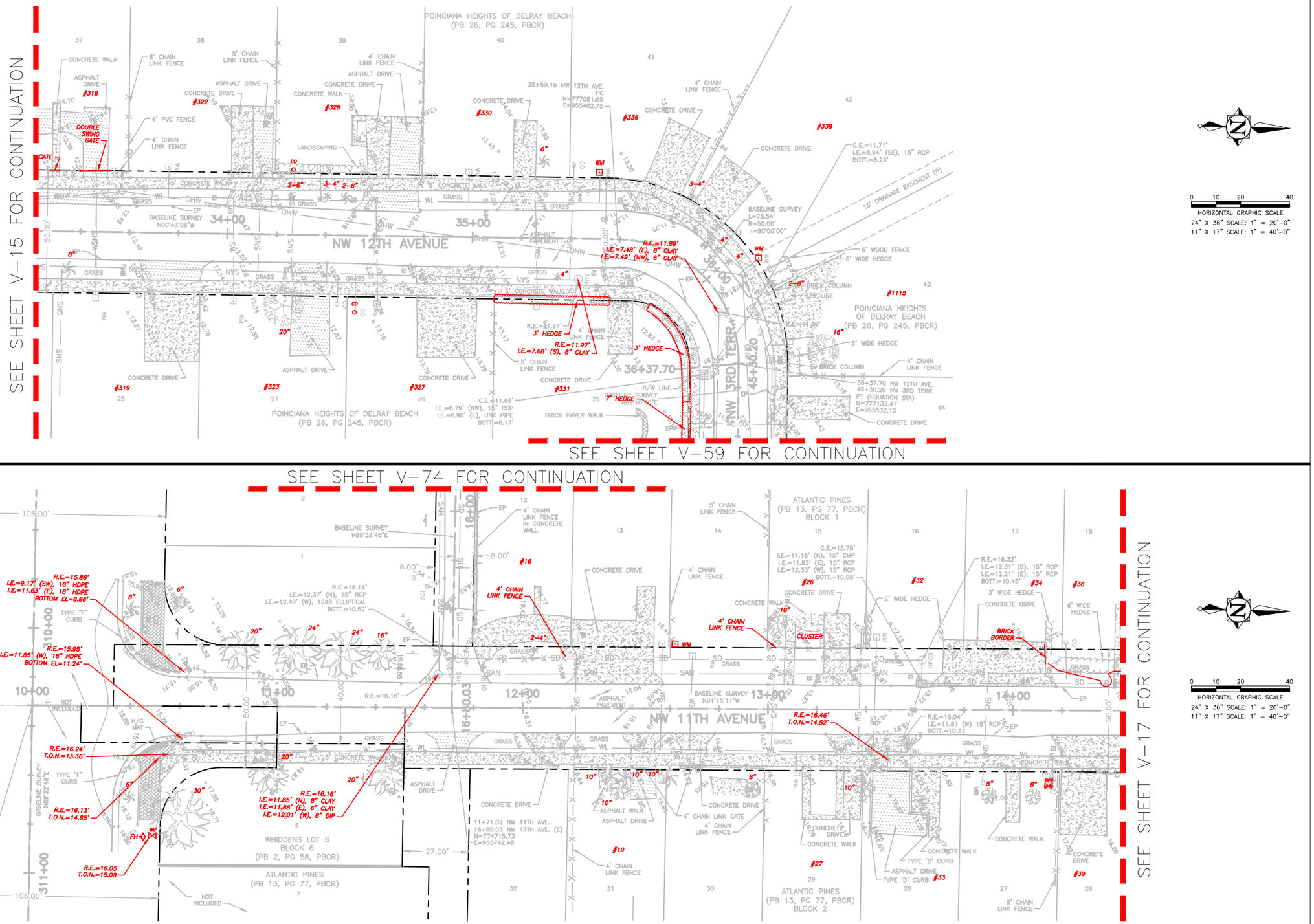
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-15-SRVY.dwg
LAST SAVED: 12/22/21 - 4:09pm

CAS PROJECT NUMBER
19-2068

SHEET
V-15
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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CERTIFICATE, NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-16-SRVY.dwg
LAST SAVED: 12/19/21 - 3:11pm

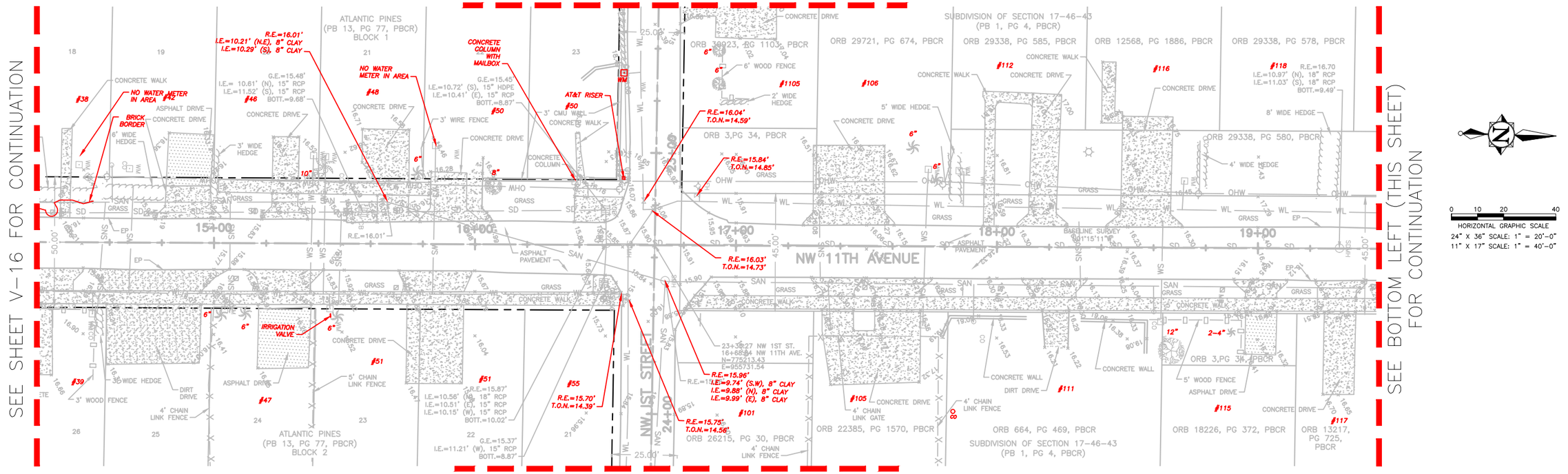
CAS PROJECT NUMBER
19-2068

SHEET
V-16
OF
87

SEE SHEET V-70 FOR CONTINUATION

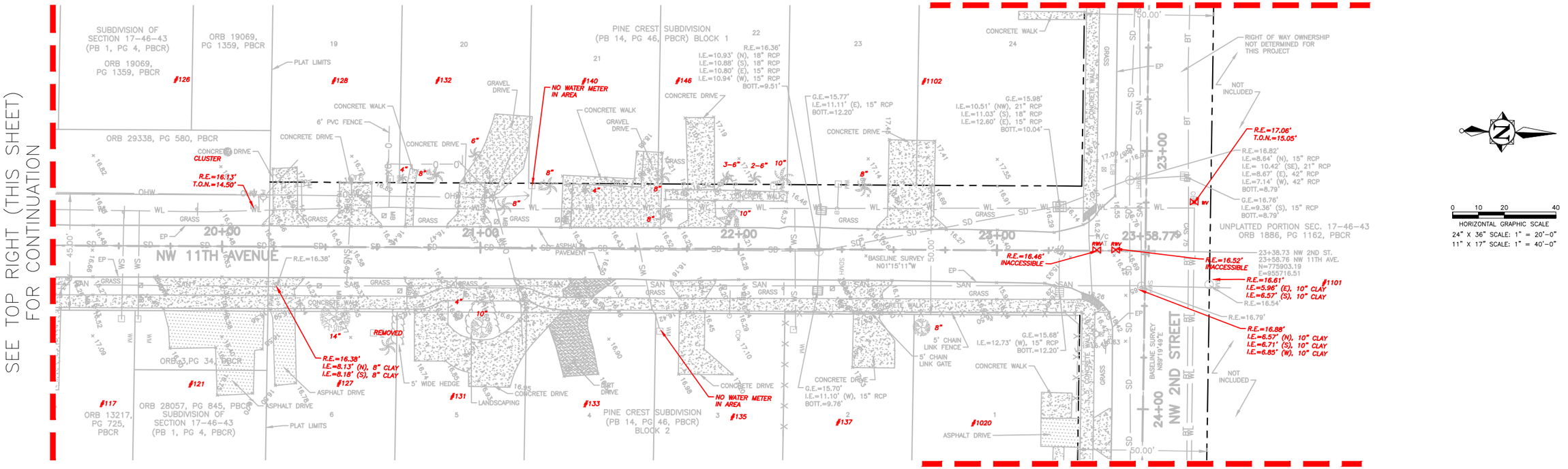
SEE SHEET V-16 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION



SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

NOT INCLUDED



HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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PALM BEACH COUNTY, FLORIDA

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CERTIFICATE NO. LB0003110

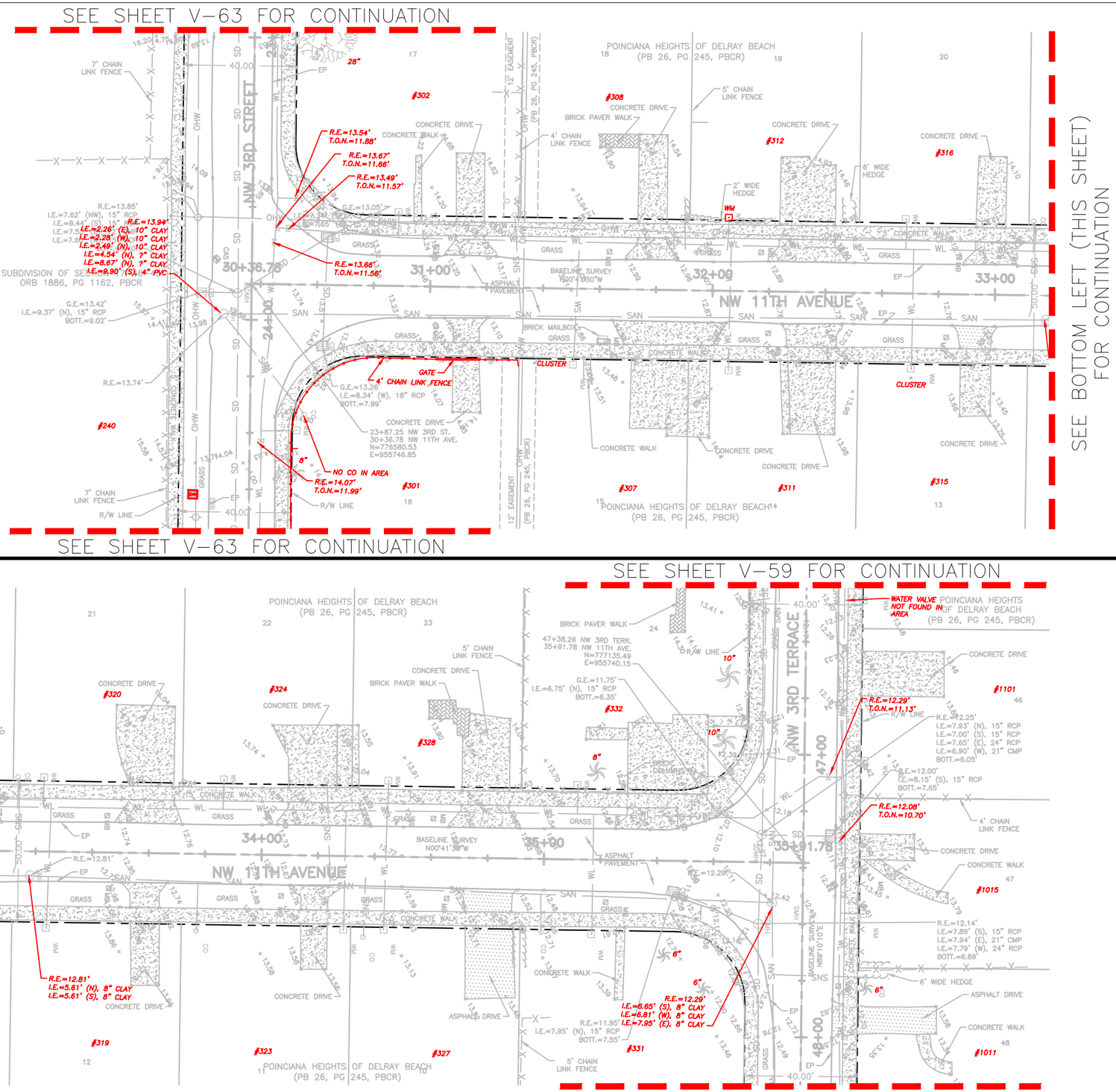
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-17-SRVY.dwg
LAST SAVED: 12/19/21 - 3:19pm

CAS PROJECT NUMBER
19-2068

SHEET
V-17
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF SPECIFIC PURPOSE SURVEY

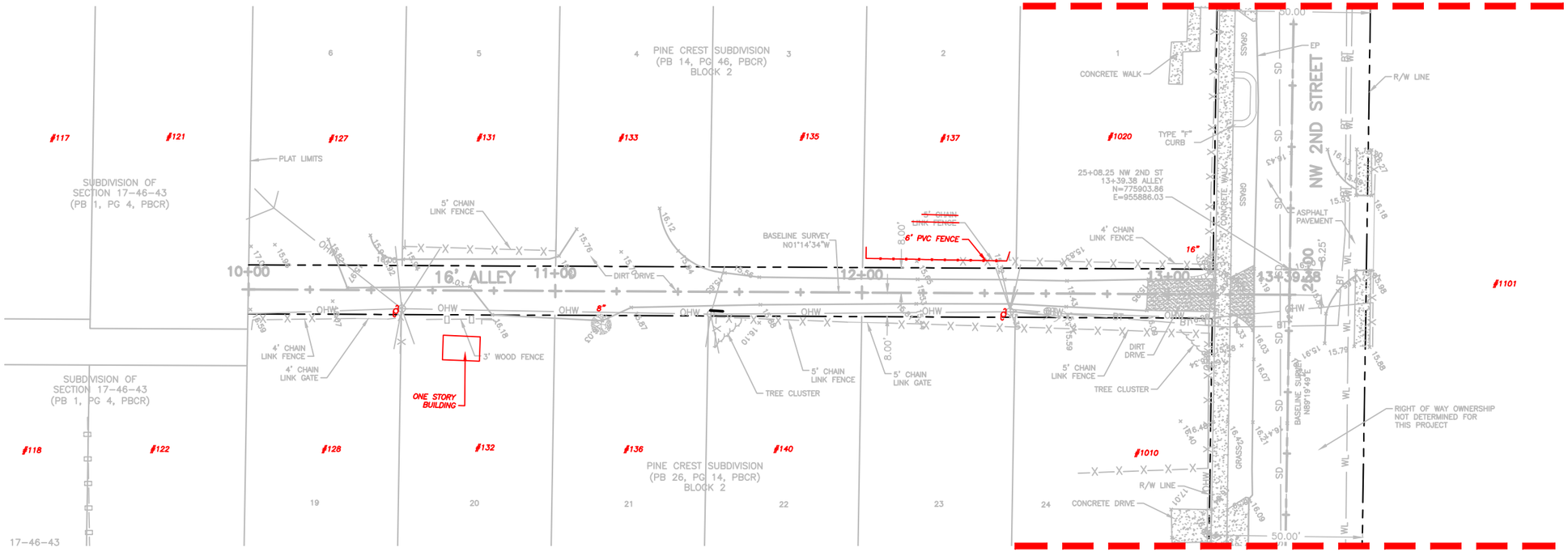
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-18-SRVY.dwg
LAST SAVED: 12/19/21 - 3:28pm

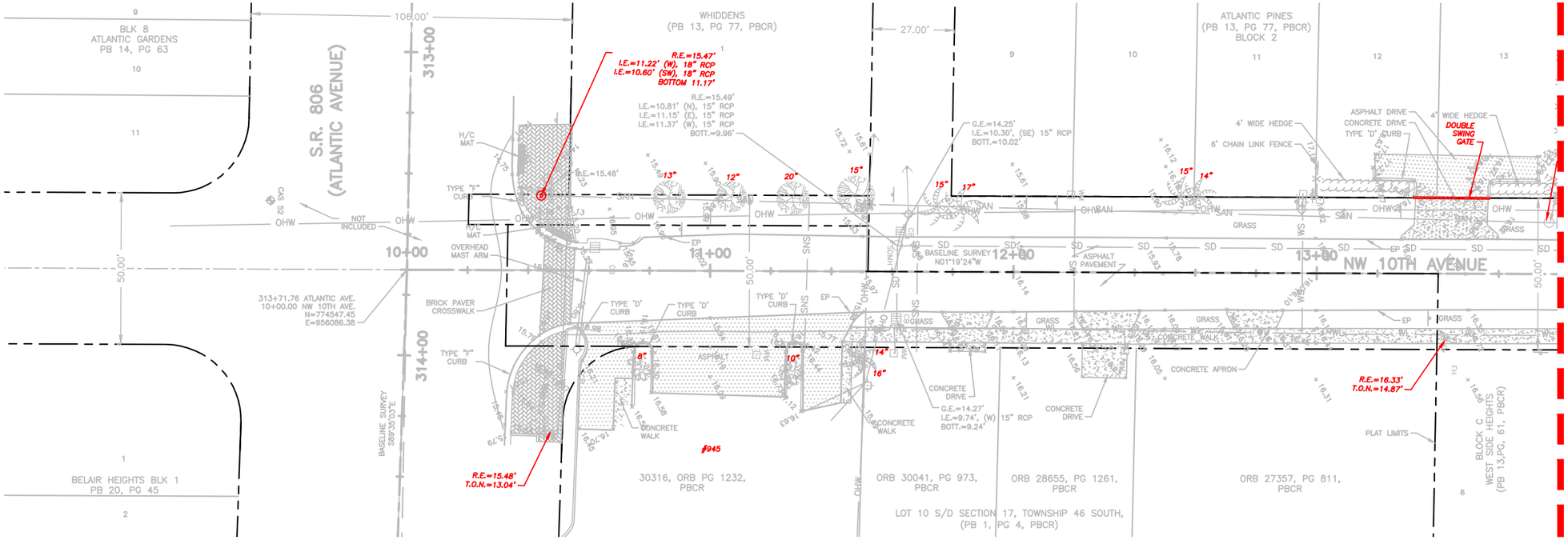
CAS PROJECT NUMBER
19-2068

SHEET
V-18
OF
87

SEE SHEET V-20 FOR CONTINUATION



SEE SHEET V-20 FOR CONTINUATION



SEE SHEET V-20 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

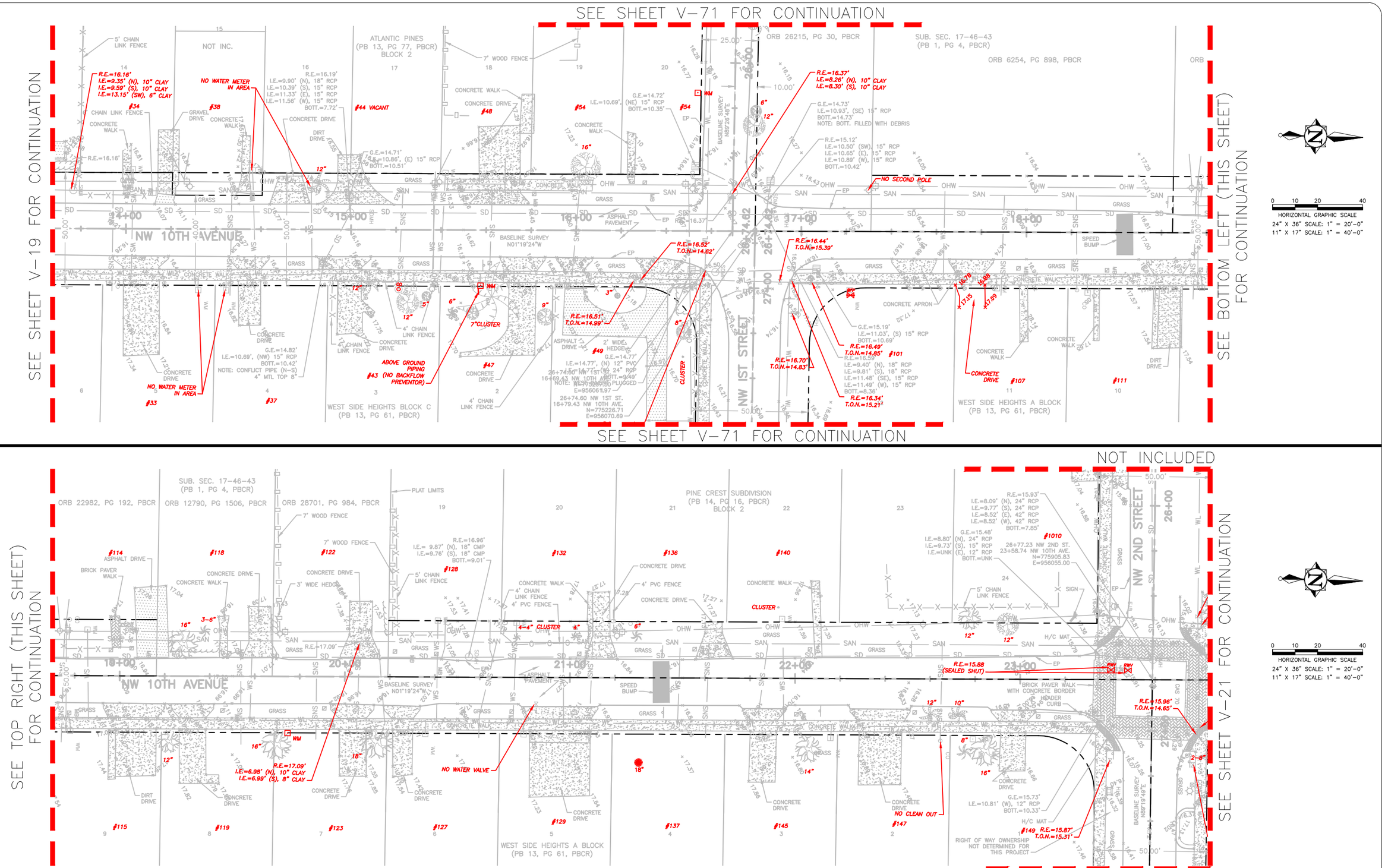
MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-19-SRVY.dwg
LAST SAVED: 12/23/21 - 3:07pm

CAS PROJECT NUMBER
19-2068

SHEET
V-19
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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PALM BEACH COUNTY, FLORIDA

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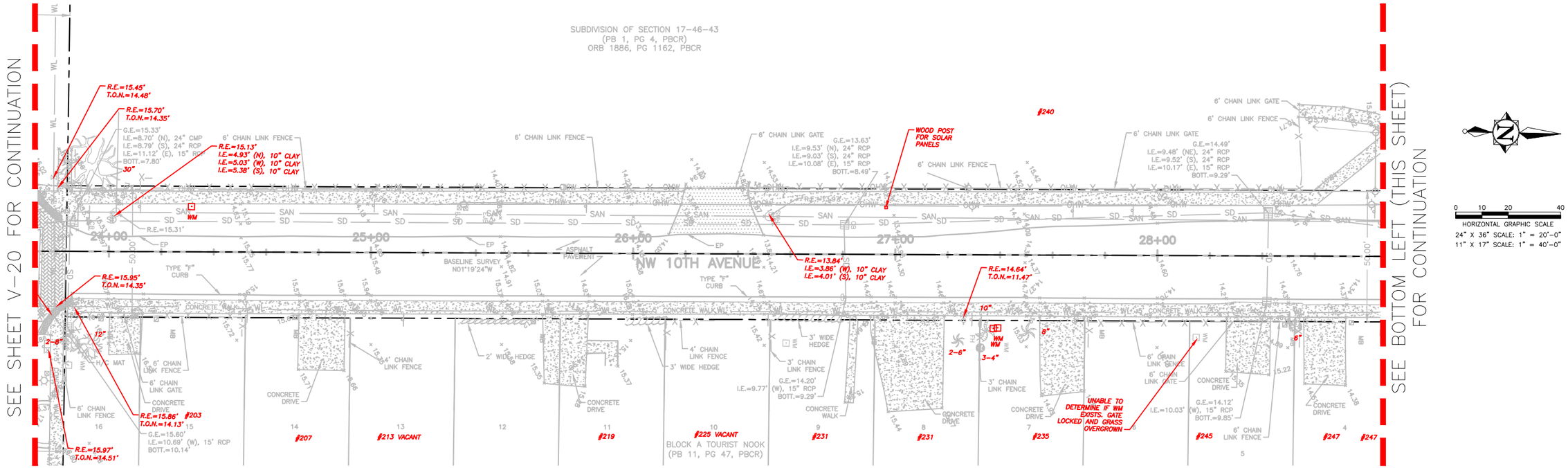
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-20-SRVY.dwg
LAST SAVED: 12/19/21 - 3:46pm

CAS PROJECT NUMBER
19-2068

SHEET
V-20
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
SPECIFIC PURPOSE
SURVEY

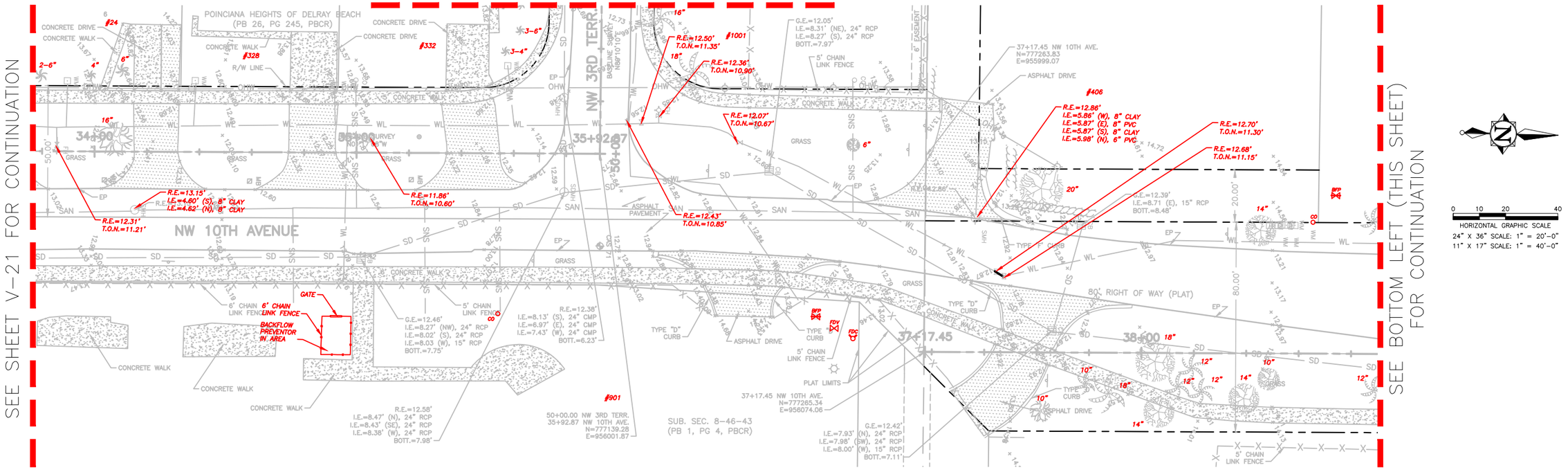
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

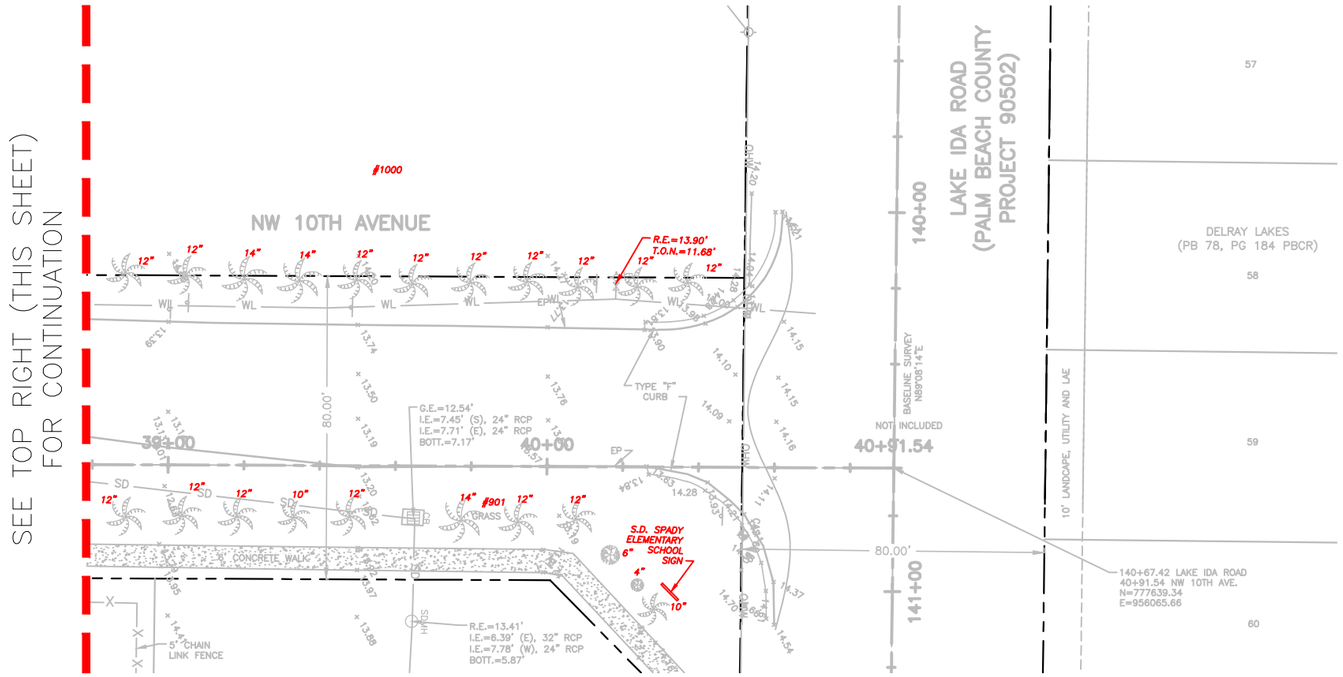
FILE NAME: 20-2068-V-21-SRVY.dwg
LAST SAVED: 12/19/21 - 3:55pm

CAS PROJECT NUMBER
19-2068

SHEET
V-21
OF
87

SEE SHEET V-60 FOR CONTINUATION





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MAP OF
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SURVEY

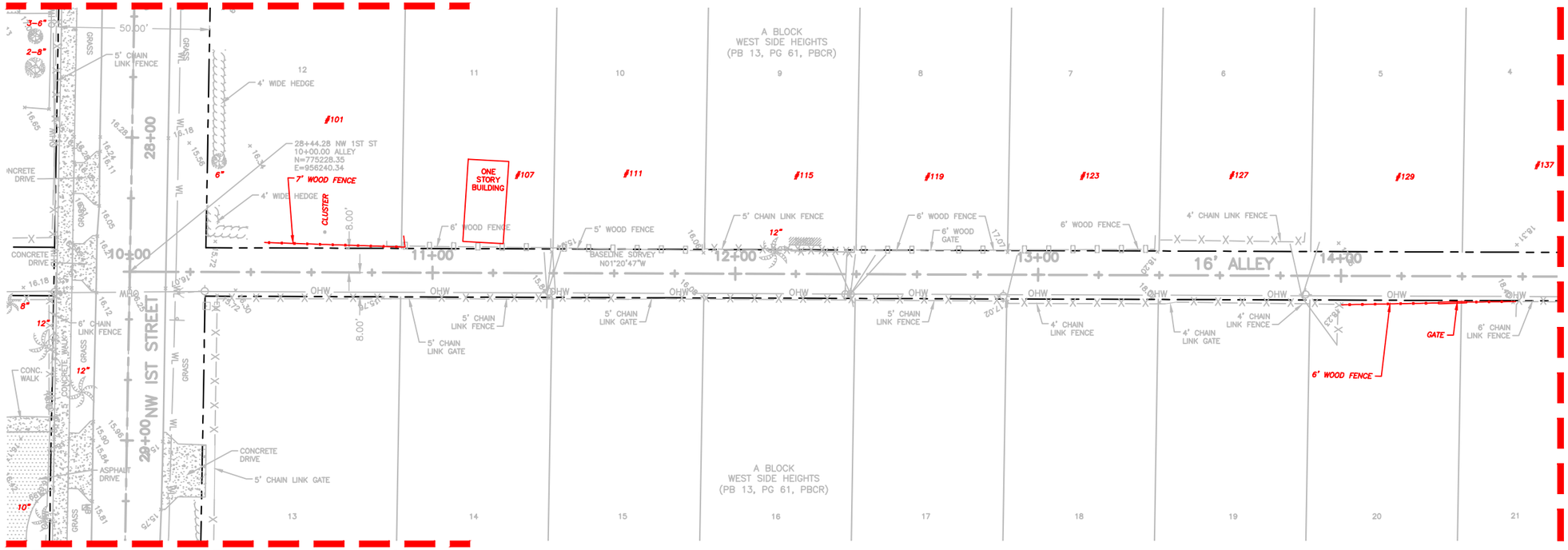
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-22-SRVY.dwg
LAST SAVED: 12/19/21 - 4:07pm

CAS PROJECT NUMBER
19-2068

SHEET
V-22
OF
87

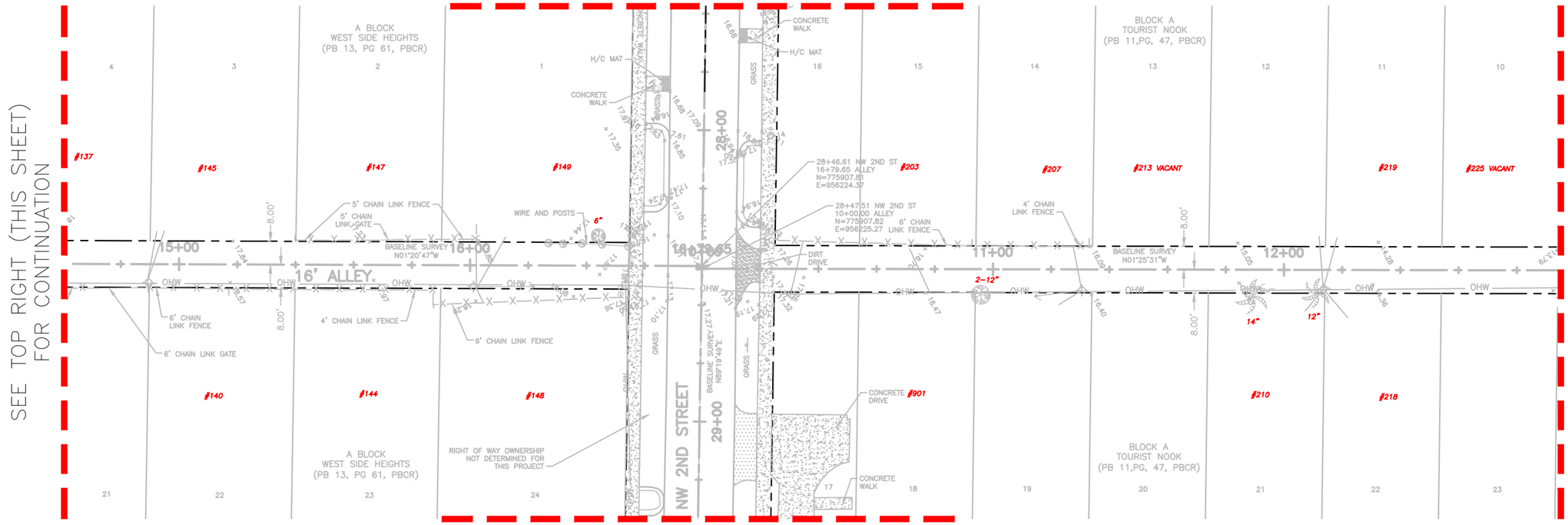
SEE SHEET V-71 FOR CONTINUATION



HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-71 FOR CONTINUATION

NOT INCLUDED



HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NOT INCLUDED

NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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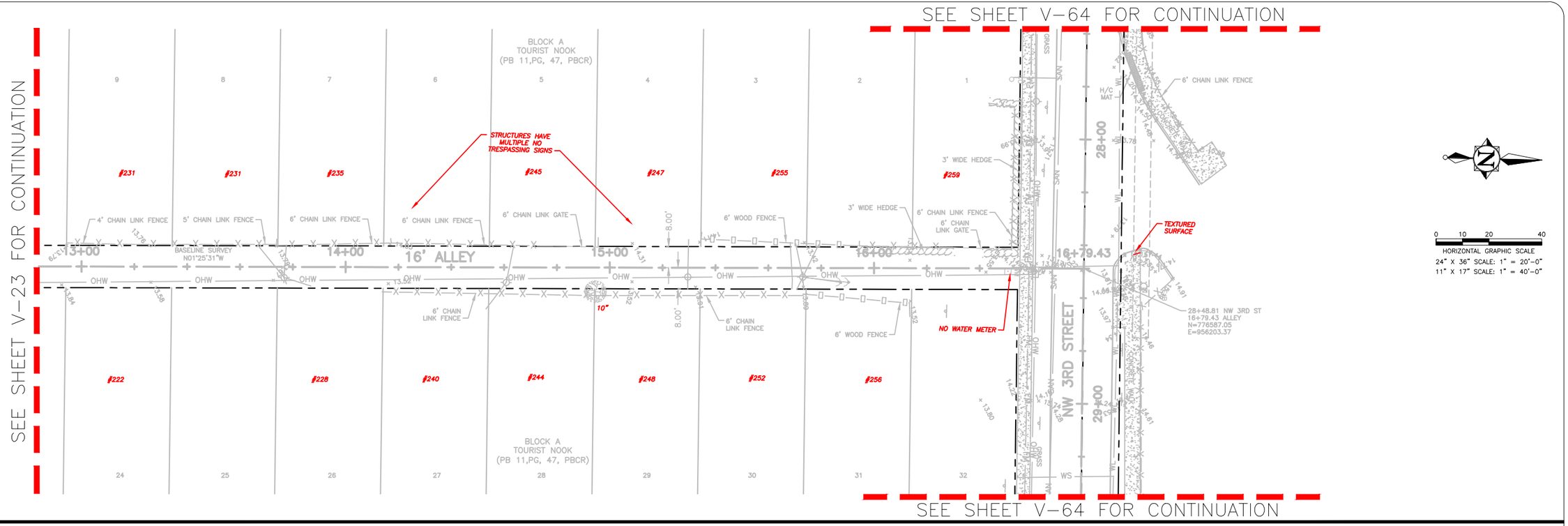
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-23-SRVY.dwg
LAST SAVED: 12/19/21 - 4:18pm

CAS PROJECT NUMBER
19-2068

SHEET
V-23
OF
87



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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-24-SRVY.dwg
LAST SAVED: 12/19/21 - 6:08pm

CAS PROJECT NUMBER
19-2068

SHEET
V-24
OF
87

SEE SHEET V-71 FOR CONTINUATION

SEE SHEET V-24 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

NW 9TH AVENUE

NW 1ST STREET

BLOCK C
WEST SIDE HEIGHTS
(PB 13,PG, 61, PBCR)

BLOCK D
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

A BLOCK
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

B BLOCK
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

BASELINE SURVEY
N01°22'09"W

R.E.=15.41'
T.O.N.=13.11'

R.E.=15.30'
T.O.N.=12.91'

R.E.=15.57'
I.E.=8.87' (N), 8" CLAY
I.E.=8.87' (S), 8" CLAY

R.E.=15.41'
T.O.N.=13.84'

R.E.=15.25'
I.E.=8.14' (E), 8" CLAY
I.E.=8.15' (S), 8" CLAY
I.E.=8.37' (N), 8" CLAY

R.E.=15.22'
T.O.N.=13.73'

R.E.=15.17'
T.O.N.=13.14'

R.E.=15.00'
I.E.=8.91' (N), 18" RCP
I.E.=8.5' (S), 18" CMP
I.E.=8.71' (W), 15" RCP
BOTT.=8.27'

R.E.=15.29'
I.E.=10.02' (N), 15" RCP
I.E.=UNK (S), 15" RCP
BOTT.=8.31'

G.E.=14.78' REMOVED
I.E.=8.69'
BOTT.=6.83'

G.E.=14.97'
I.E.=11.21', (E) 15" RCP
BOTT.=10.85'

G.E.=14.74'
I.E.=12.07', (W) 15" RCP
BOTT.=10.78'

#36 #40 #42 #46 #902 #104 #33 #37 #43 #51 #101

NOT INCLUDED

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-26 FOR CONTINUATION

NW 2ND STREET

NW 9TH AVENUE

BLOCK B
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

BASELINE SURVEY
N01°19'49"E

R.E.=17.15'
I.E.=11.62' (S), 8" CLAY
I.E.=11.68' (N), 8" CLAY

R.E.=17.81'
I.E.=13.51' (S), 8" CLAY
I.E.=13.58' (W), 8" CLAY

R.E.=17.92'
INACCESSIBLE

R.E.=17.79'
INACCESSIBLE

R.E.=17.49'
T.O.N.=16.39'

R.E.=15.98'
T.O.N.=14.30'

R.E.=16.70'
I.E.=9.76' (N), 18" RCP
I.E.=9.73' (S), 18" RCP
BOTT.=8.45'

R.E.=17.81'
I.E.=9.22' (NW), 18" RCP
I.E.=9.22' (S), 18" RCP
BOTT.=8.05'

G.E.=16.92'
(N) 24" RCP
(SE) 18" RCP
(E) 15" RCP
BOTT.=8.39'

R.E.=17.96'
I.E.=10.09' (N), 15" RCP
I.E.=8.65' (S), 24" RCP
I.E.=8.41' (E), 36" RCP
I.E.=8.49' (W), 42" RCP
BOTT.=7.91'

G.E.=17.00'
I.E.=13.15', (W) 15" RCP
BOTT.=12.78'

#120 #119 #127 #129 #131 #132 #140 #144 #148 #133 #139 #141 #145

NOT INCLUDED

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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PALM BEACH COUNTY, FLORIDA

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21045 COMMERCIAL TRAIL
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(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

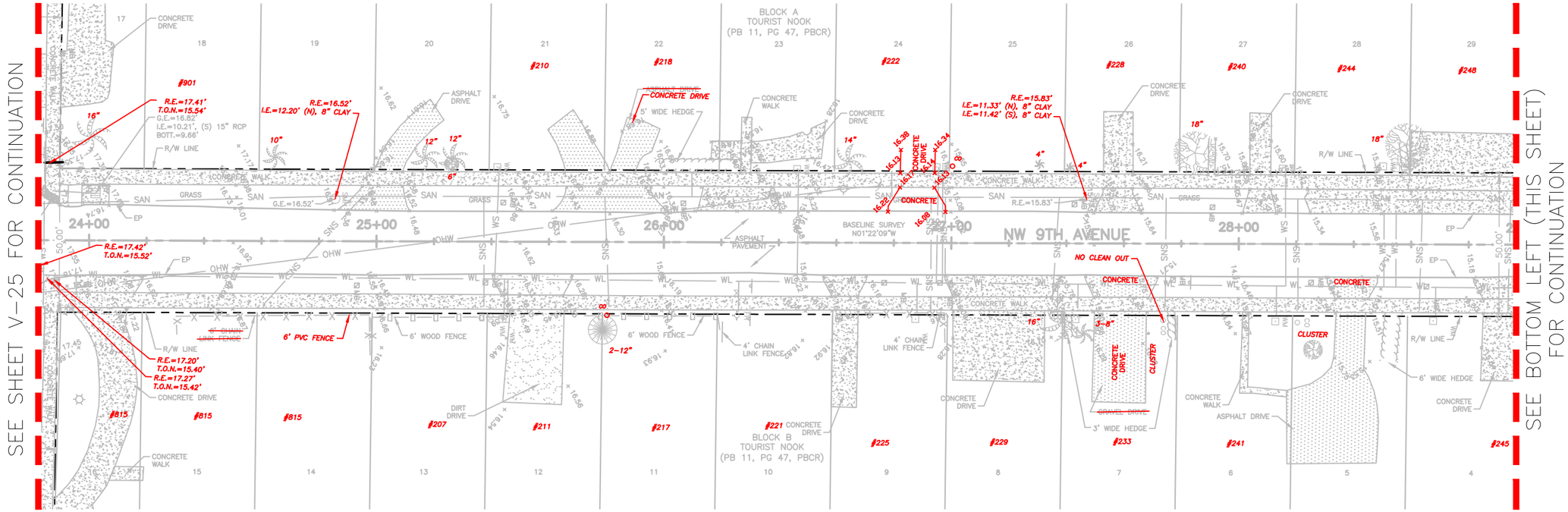
FILE NAME: 20-2068-V-25-SRVY.dwg
LAST SAVED: 12/19/21 - 6:16pm

CAS PROJECT NUMBER
19-2068

SHEET
V-25
OF
87

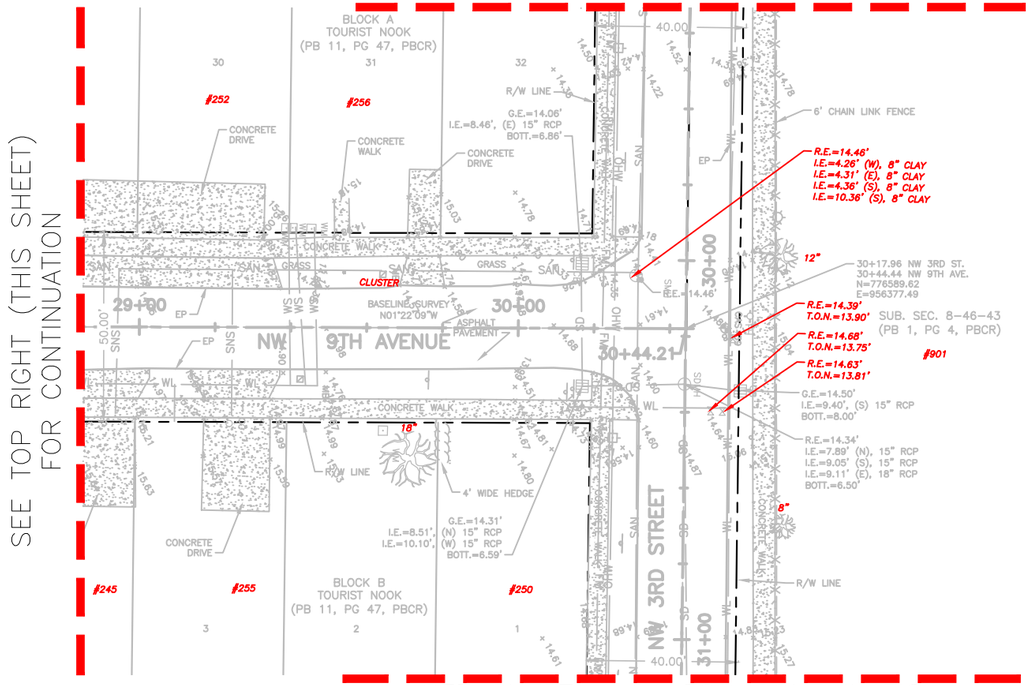
SEE SHEET V-25 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION



SEE SHEET V-64 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION



SEE SHEET V-64 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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PALM BEACH COUNTY, FLORIDA

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

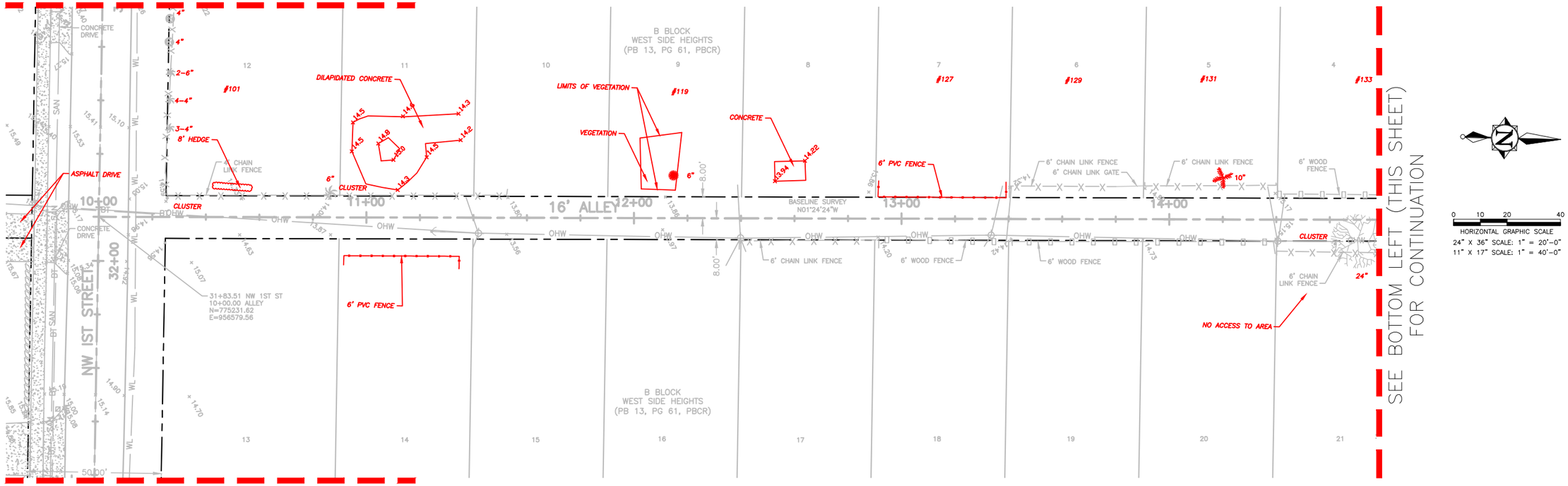
FILE NAME: 20-2068-V-26-SRVY.dwg
LAST SAVED: 12/19/21 - 6:25pm

CAS PROJECT NUMBER
19-2068

SHEET
V-26
OF
87

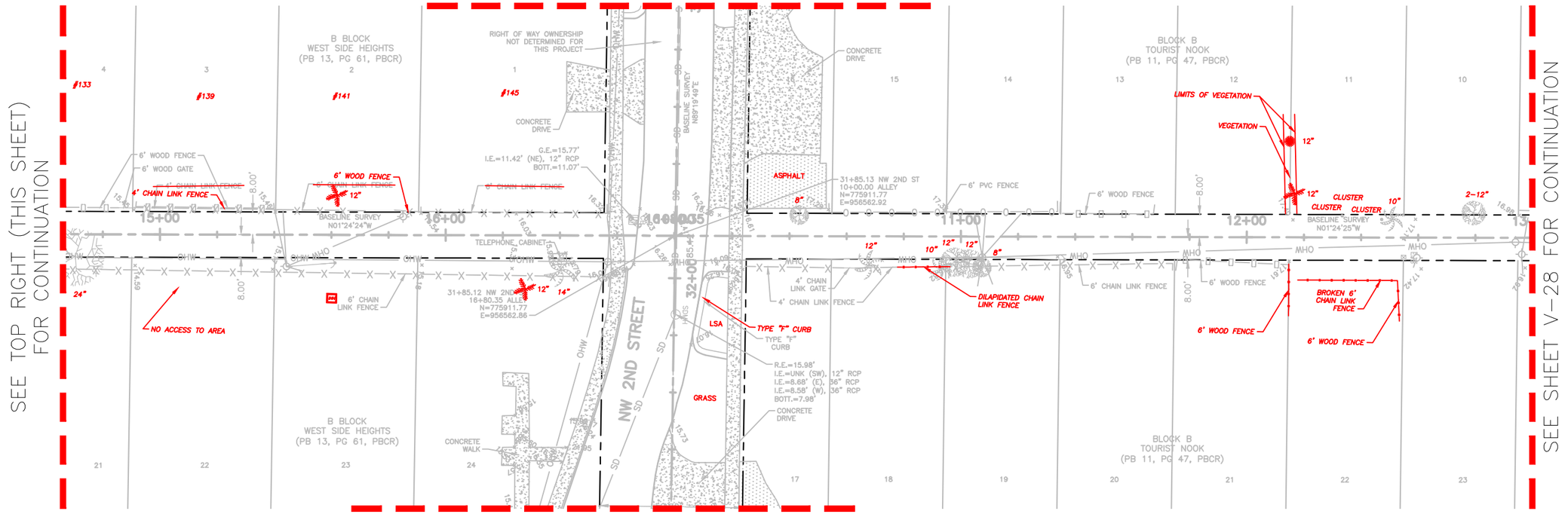
SEE SHEET V-71 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION



NOT INCLUDED

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION



SEE SHEET V-28 FOR CONTINUATION

NOT INCLUDED

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-27-SRVY.dwg
LAST SAVED: 12/23/21 - 6:48pm

CAS PROJECT NUMBER
19-2068

SHEET
V-27
OF
87

SEE SHEET V-64 FOR CONTINUATION

SEE SHEET V-27 FOR CONTINUATION

#225 #229 #233 #241 #245 #255 #250

BLOCK B
TOURIST NOOK
(PB 11, PG 47, PBCR)

13+00 14+00 15+00 16+00 16+80.25 32+00

16' ALLEY

BASELINE SURVEY
N01°24'25"W

LIMITS OF VEGETATION
VEGETATION
6" CLUSTER CLUSTER
4' CHAIN LINK FENCE
6' WOOD FENCE GATE
20" CLUSTER CLUSTER CLUSTER
5' CHAIN LINK FENCE
8" 16" 28"
6' WOOD FENCE
6' WOOD GATE
5' CHAIN LINK GATE
ROPE AND POSTS
CLUSTER CLUSTER CLUSTER
JUNCTION BOX
10"
TEXTURED SURFACE
31+86.69 NW 3RD ST
16+80.25 ALLEY
N=776591.82
E=956546.22

NW 3RD STREET

MHO OHW SAN SD W WL

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-29 FOR CONTINUATION

106.00'

320+00 321+00

J.G. FENNO'S S/D BLOCK 1
(PB 2, PG 89, PBCR)

NOTE: EDGE OF PAVEMENT=RIGHT OF WAY LINE
PER REPLATTED (ORB 7875, PG 795, PBCR)

ORB 11136, PG 1816, PBCR

BLOCK D
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

ORB 25134, PG 1808, PBCR

#24

R.E.=15.55'
I.E.=8.21' (S), 18" HDPE
I.E.=10.55' (E), 18" HDPE
BOTTOM EL=7.61'

R.E.=15.76'
T.O.N.=14.11'
CONCRETE
TRAFFIC SIGNAL CABINET
CHAIN LINK FENCE REMOVED
18"
OVERHEAD TRAFFIC LIGHT MAST
NOT INCLUDED
TYPE "E" CURB
CURB INLET
3' WIDE HEDGE
ASPHALT DRIVE
CONCRETE WALK
EP
R.E.=16.66'
I.E.=9.64' (N), 10" CLAY
I.E.=9.87' (E), 8" CLAY

10+00 11+00 12+00 13+00 14+00

BRICK PAVER CROSSWALK
H/C MAT
R.E.=15.43'
I.E.=11.01' (W), 18" HDPE
BOTTOM EL=10.43'
R.E.=16.15'
I.E.=10.91' (N), 8" CLAY
I.E.=11.68' (W), 6" CLAY
I.E.=PLUGGED (S), N/A
I.E.=PLUGGED (E), N/A
OVERHEAD TRAFFIC LIGHT MAST
BASELINE SURVEY
N89°19'21"E
ASPHALT PAVEMENT
CONCRETE
R.E.=15.75'
T.O.N.=13.47'
R.E.=15.32'
T.O.N.=12.47'
R.E.=15.16
T.O.N.=12.11
LSA
12" 12" 6"
FH WV
METAL LIGHT POST ON CONCRETE PAD
2" SIGN POST
6' CHAIN LINK FENCE
YD
8"
16"
R.E.=16.67'
I.E.=9.97' (W), 8" CLAY
I.E.=9.98' (S), 8" CLAY

NW 8TH AVENUE

320+52.07 ATLANTIC AVE.
10+00.00 NW 8TH AVE.
N=774542.51
E=956766.67

#725 #21

PLAT LIMITS

ORB 26633, PG 1664, PBCR

ORB 10905, PG 1312, PBCR

PARCEL "A" AMOCO PLAT
PB 69, PG 38, PBCR

TOWN OF LINTON BLK 4
(PB 1, PG 3, PBCR)

BLK 4 MONROE SUBDIVISION
(PB 14, PG 67, PBCR)

108.00'

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

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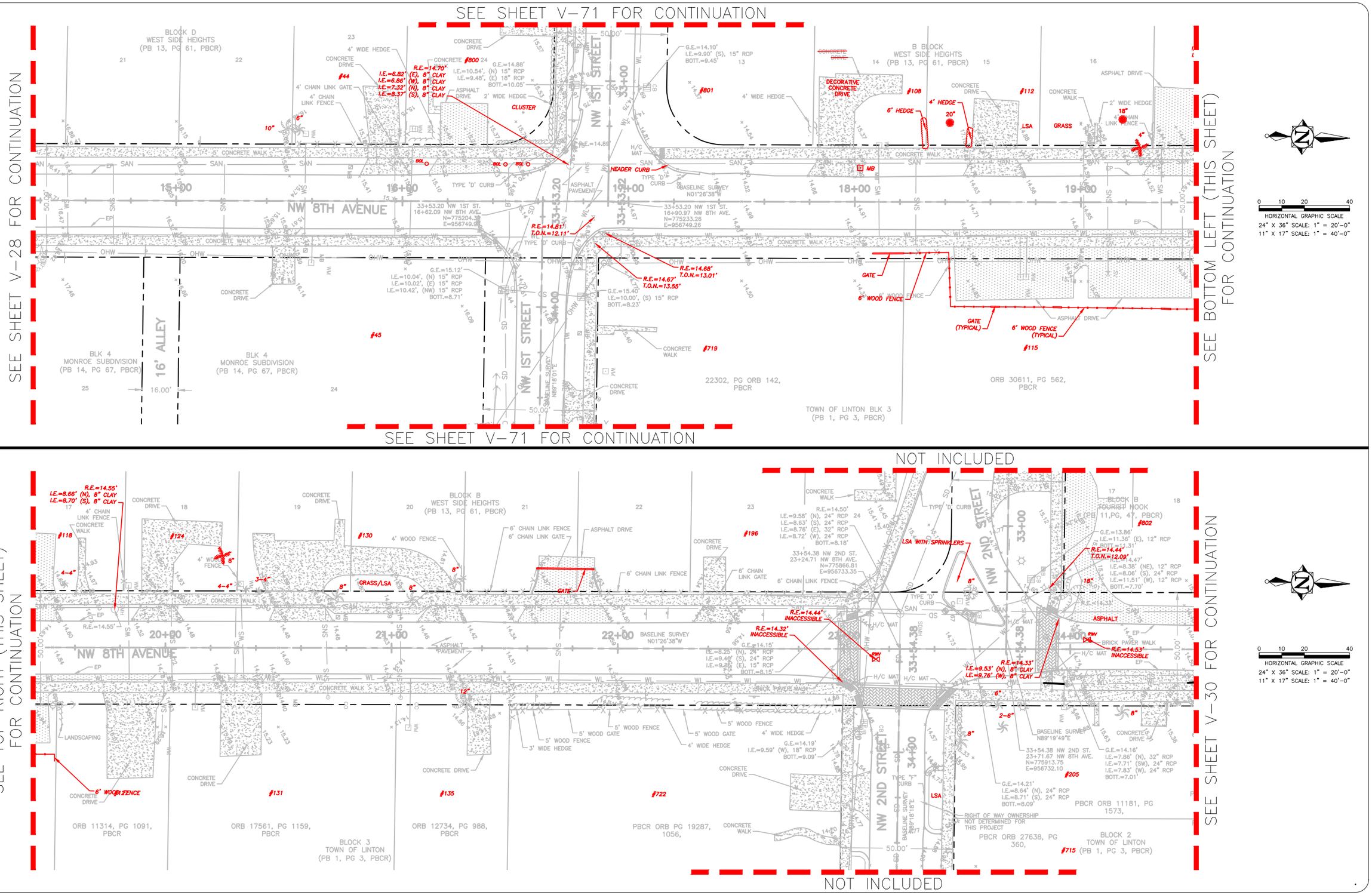
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-28-SRVY.dwg
LAST SAVED: 12/23/21 - 6:54pm

CAS PROJECT NUMBER
19-2068

SHEET
V-28
OF
87



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MAP OF
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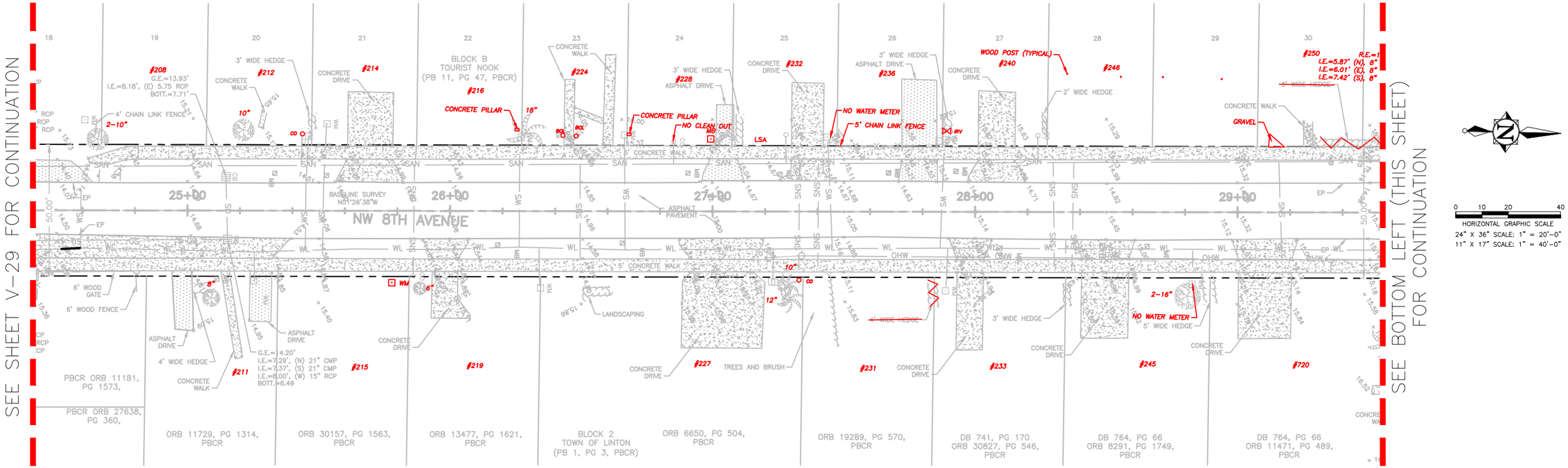
SURVEY

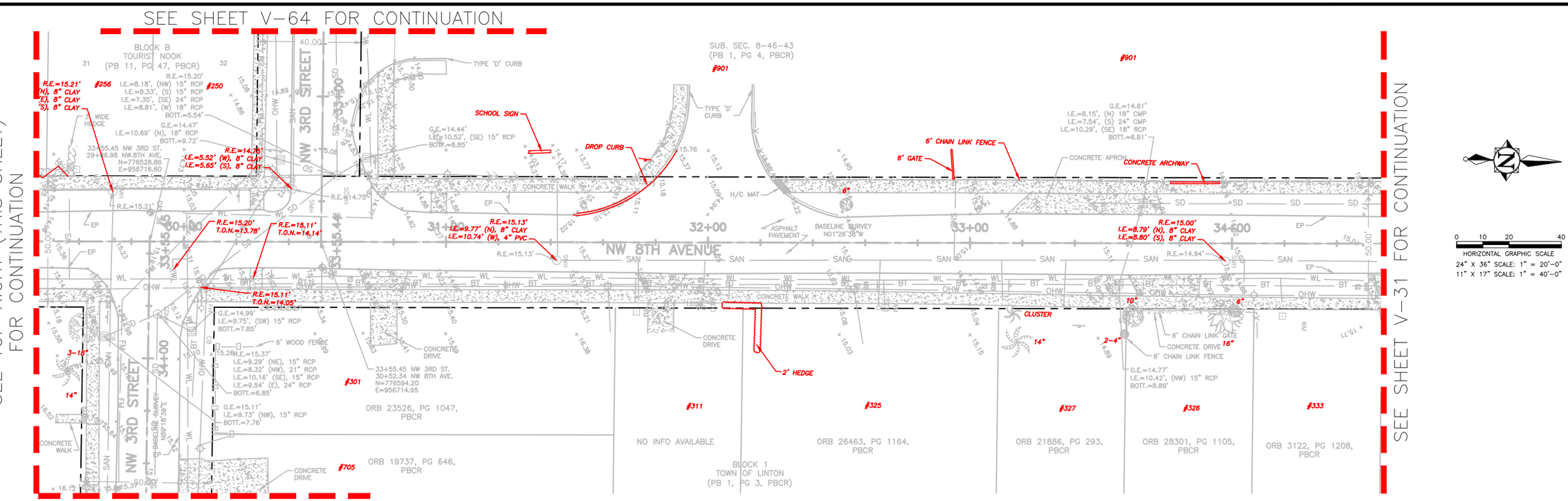
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-29-SRVY.dwg
LAST SAVED: 12/23/21 - 7:18pm

CAS PROJECT NUMBER
19-2068

SHEET
V-29
OF
87





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MAP OF
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CITY OF DELRAY BEACH
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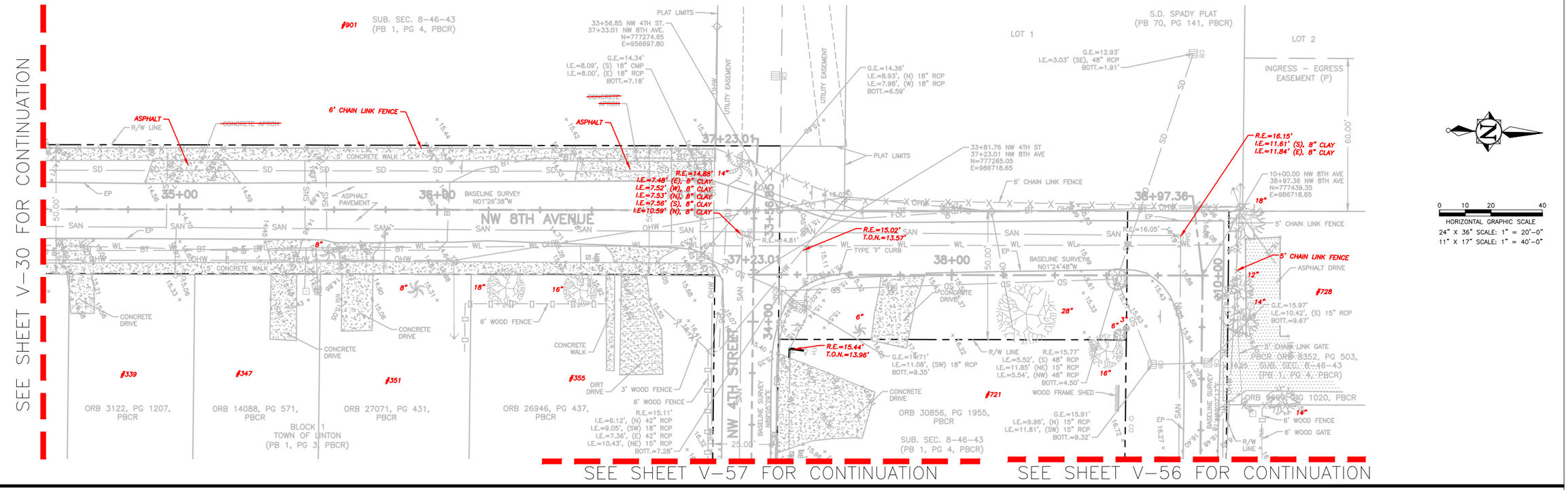
FILE NAME: 20-2068-V-30-SRVY.dwg
LAST SAVED: 12/19/21 - 7:00pm

CAS PROJECT NUMBER
19-2068

SHEET
V-30
OF
87



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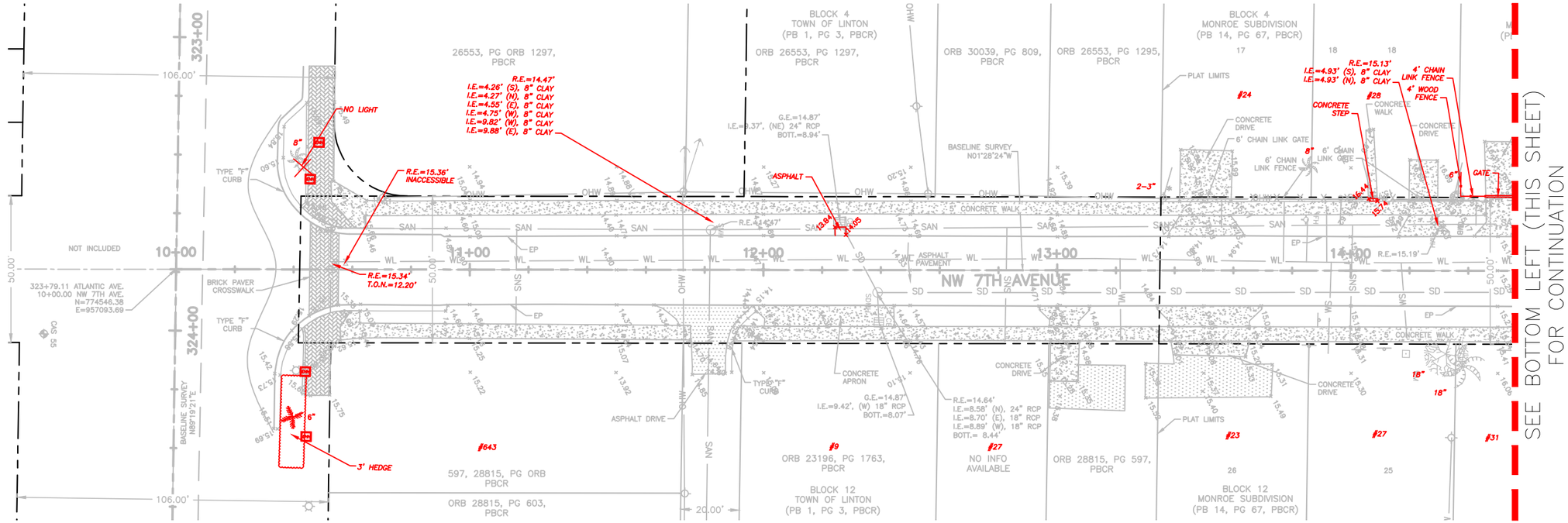
MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

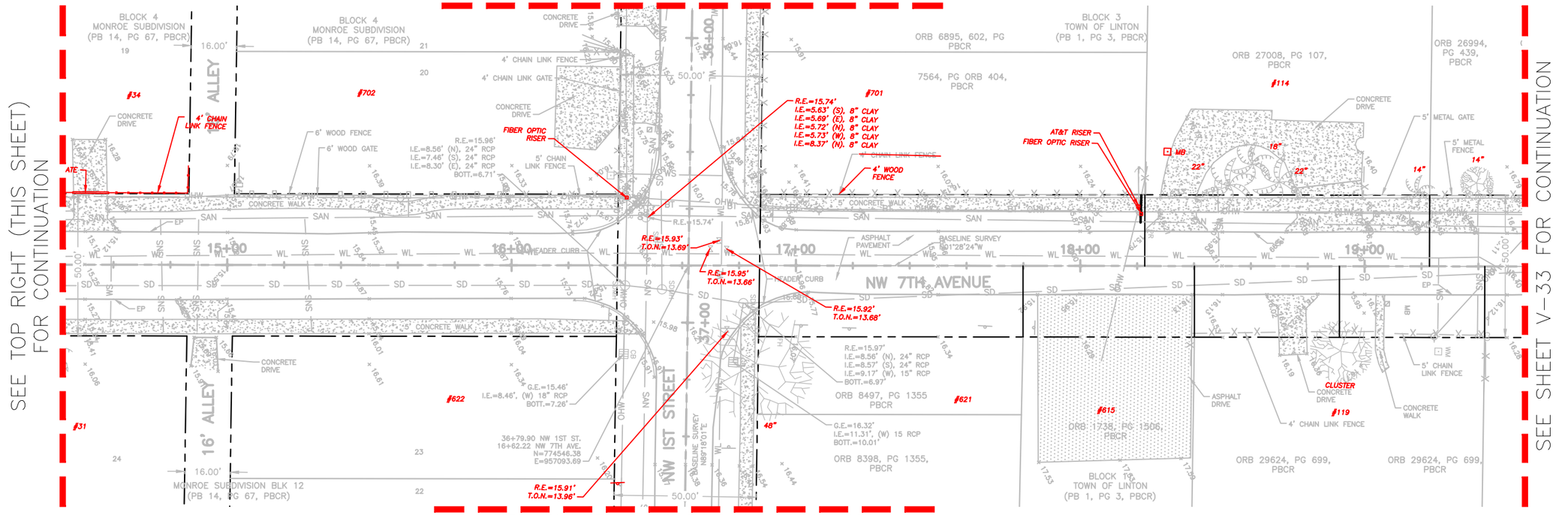
FILE NAME: 20-2068-V-31-SRVY.dwg
LAST SAVED: 12/19/21 - 7:16pm

CAS PROJECT NUMBER
19-2068

SHEET
V-31
OF
87



SEE SHEET V-72 FOR CONTINUATION



SEE SHEET V-72 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
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(561) 314-4445
CERTIFICATE NO. LB0003110

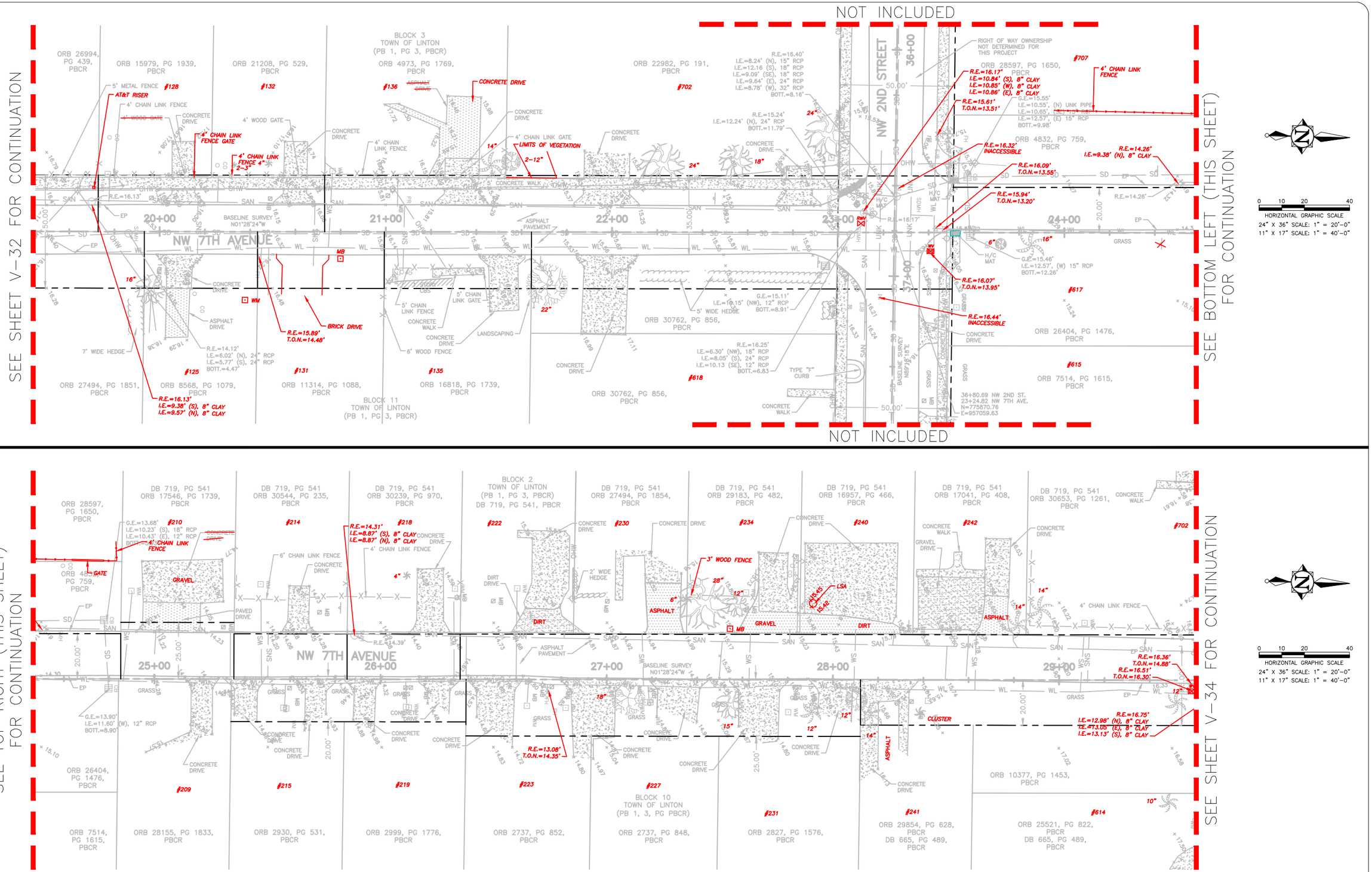
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-32-SRVY.dwg
LAST SAVED: 12/19/21 - 7:24pm

CAS PROJECT NUMBER
19-2068

SHEET
V-32
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-33-SRVY.dwg
LAST SAVED: 12/19/21 - 7:37pm

CAS PROJECT NUMBER
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SHEET
V-33
OF
87

SEE SHEET V-64 FOR CONTINUATION

SEE SHEET V-33 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-65 FOR CONTINUATION

SEE SHEET V-57 FOR CONTINUATION

SEE SHEET V-56 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-57 FOR CONTINUATION

SEE SHEET V-56 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-34-SRVY.dwg
LAST SAVED: 12/23/21 - 7:49pm

CAS PROJECT NUMBER
19-2068

SHEET
V-34
OF
87

SEE SHEET V-65 FOR CONTINUATION

SEE SHEET V-65 FOR CONTINUATION

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SEE SHEET V-57 FOR CONTINUATION

SEE SHEET V-57 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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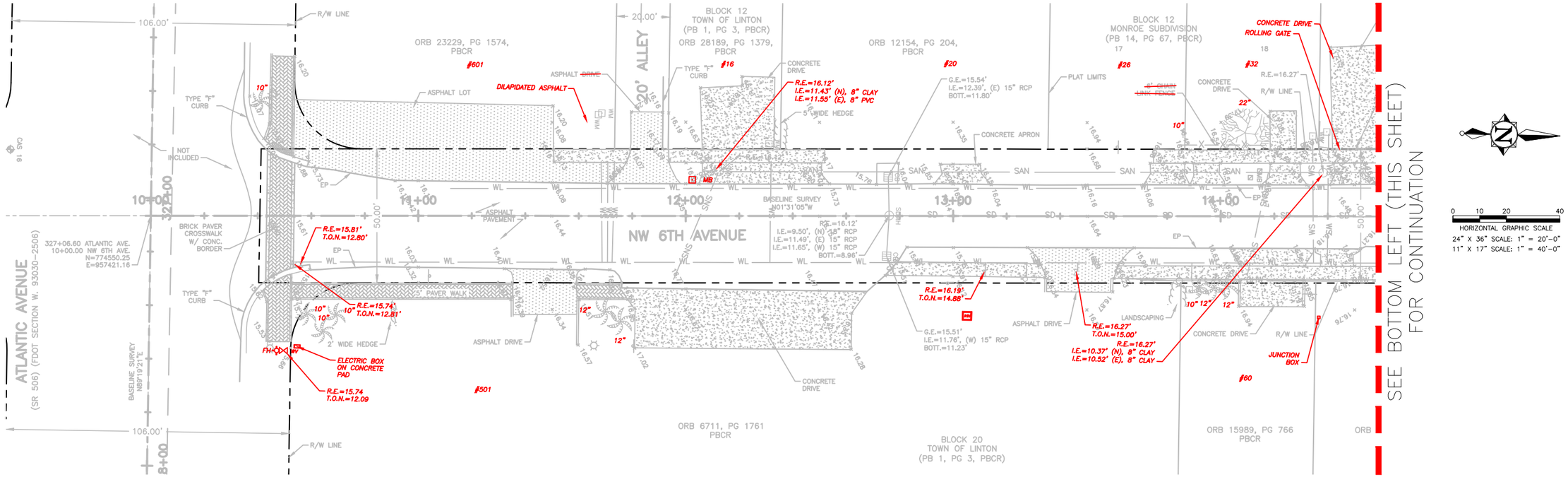
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-35-SRVY.dwg
LAST SAVED: 12/19/21 - 7:55pm

CAS PROJECT NUMBER
19-2068

SHEET
V-35
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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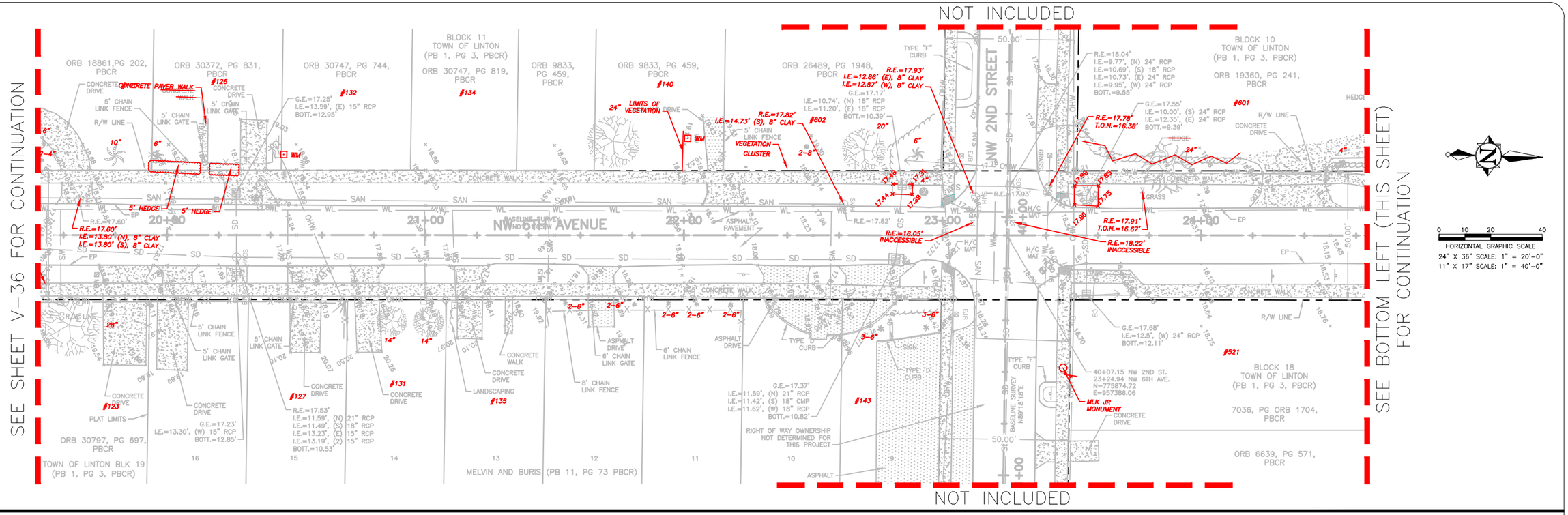
SURVEY

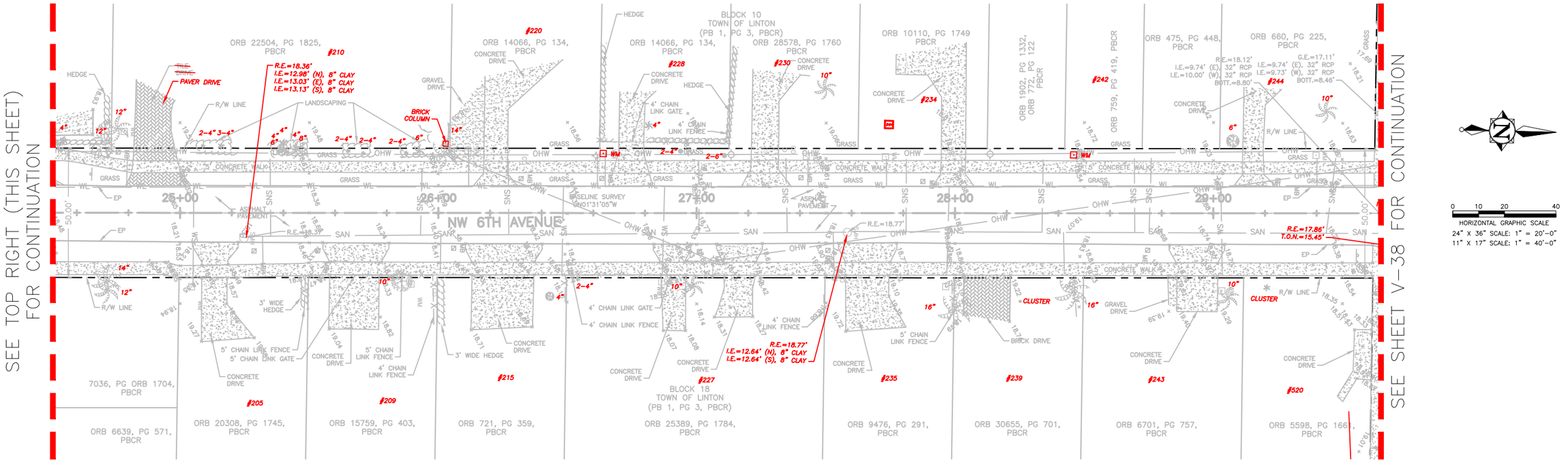
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-36-SRVY.dwg
LAST SAVED: 12/20/21 - 7:40am

CAS PROJECT NUMBER
19-2068

SHEET
V-36
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-37-SRVY.dwg
LAST SAVED: 12/24/21 - 1:03pm

CAS PROJECT NUMBER
19-2068

SHEET
V-37
OF
87

SEE SHEET V-65 FOR CONTINUATION

SEE SHEET V-37 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-65 FOR CONTINUATION

SEE SHEET V-57 FOR CONTINUATION

SEE SHEET V-56 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-58 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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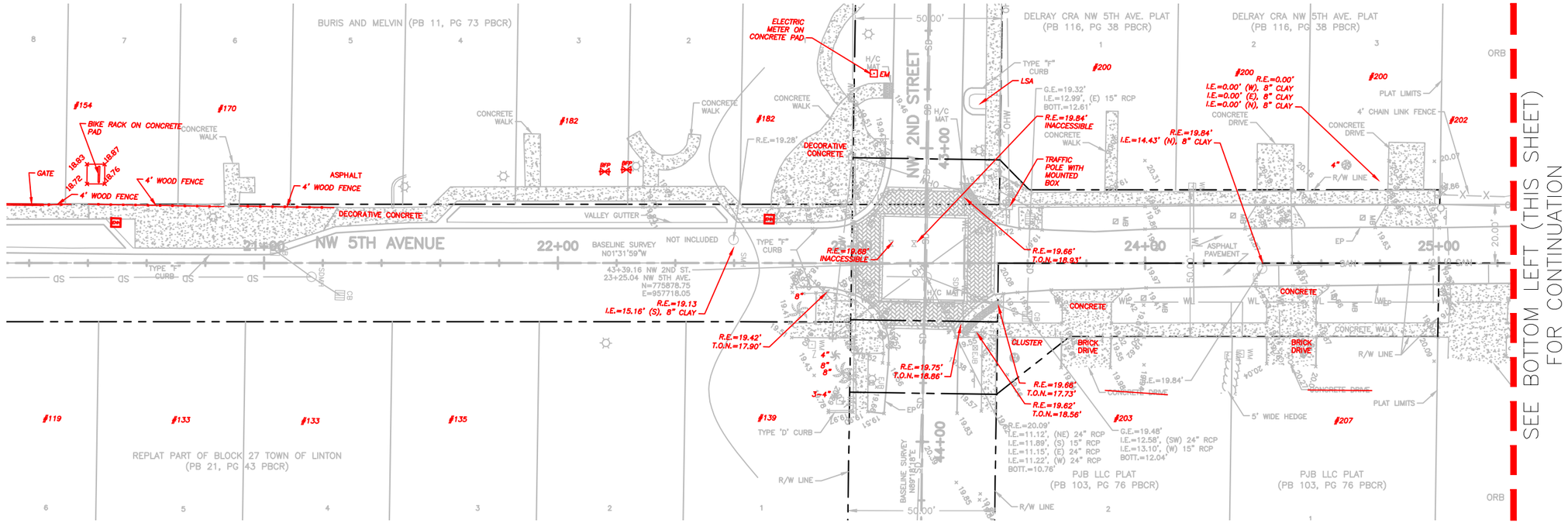
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

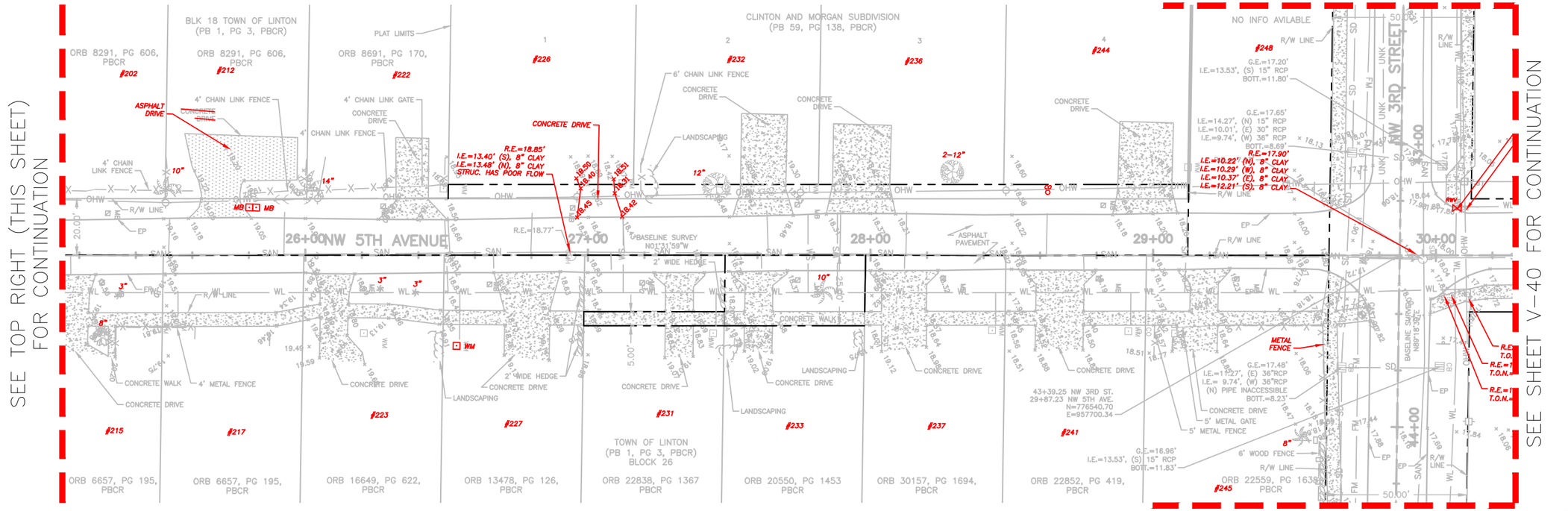
FILE NAME: 20-2068-V-38-SRVY.dwg
LAST SAVED: 12/20/21 - 7:57am

CAS PROJECT NUMBER
19-2068

SHEET
V-38
OF
87



SEE SHEET V-65 FOR CONTINUATION



SEE SHEET V-65 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
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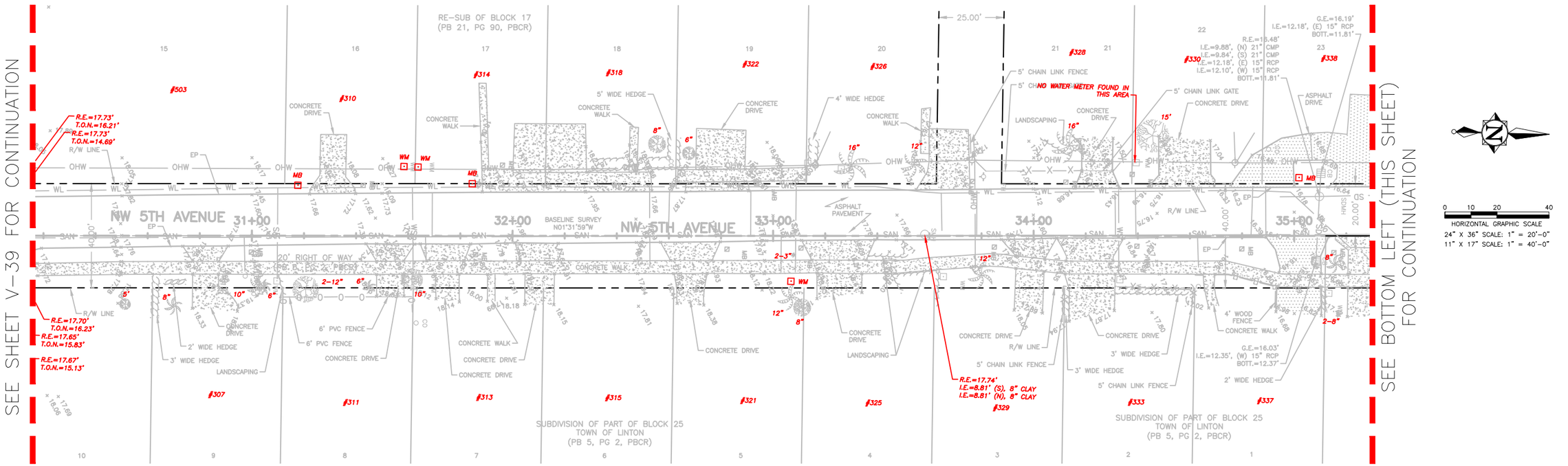
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-39-SRVY.dwg
LAST SAVED: 12/20/21 - 8:05am

CAS PROJECT NUMBER
19-2068

SHEET
V-39
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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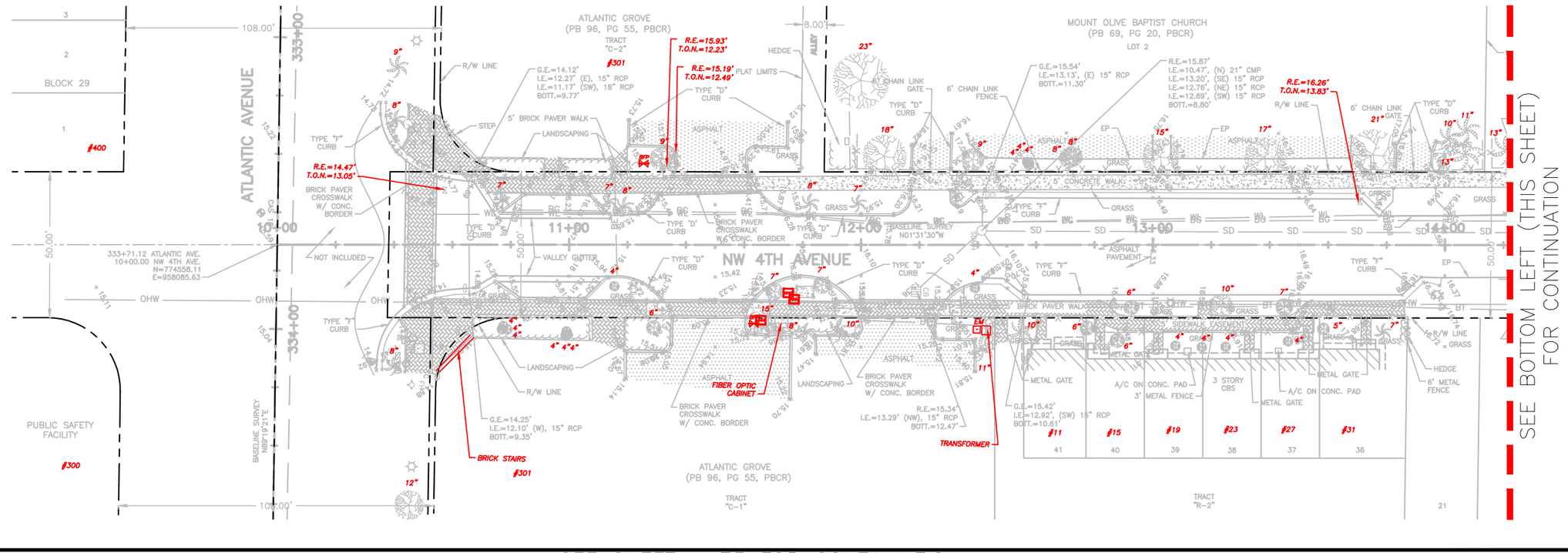
MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-40-SRVY.dwg
LAST SAVED: 12/24/21 - 1:29pm

CAS PROJECT NUMBER
19-2068

SHEET
V-40
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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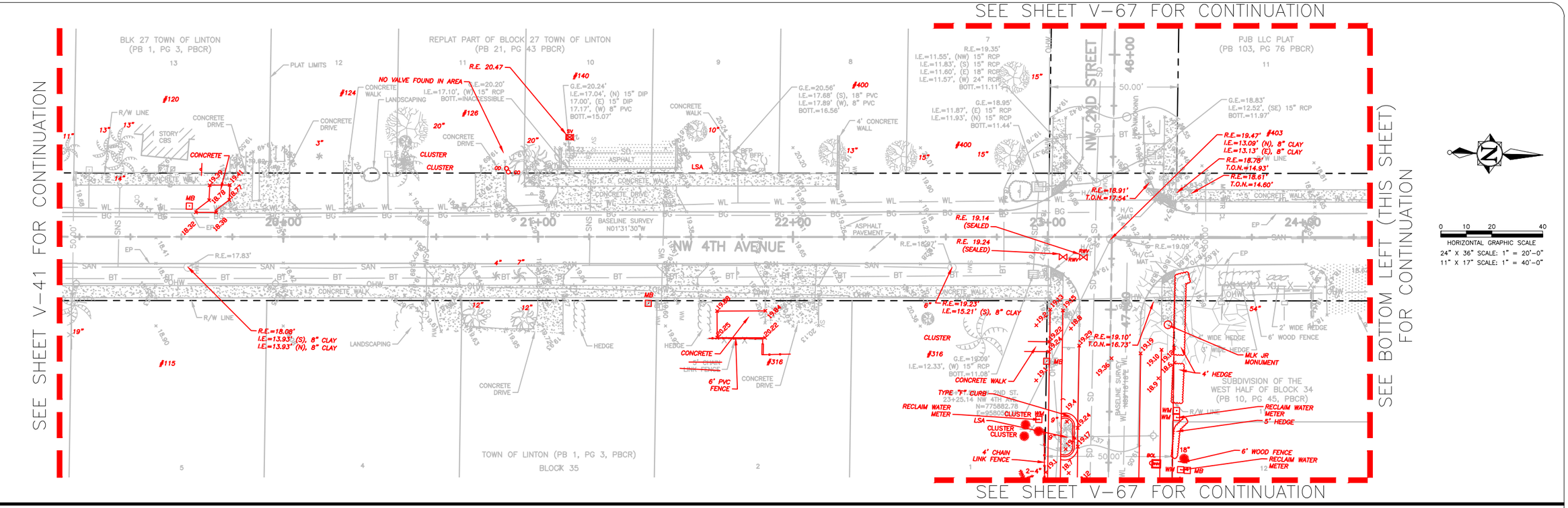
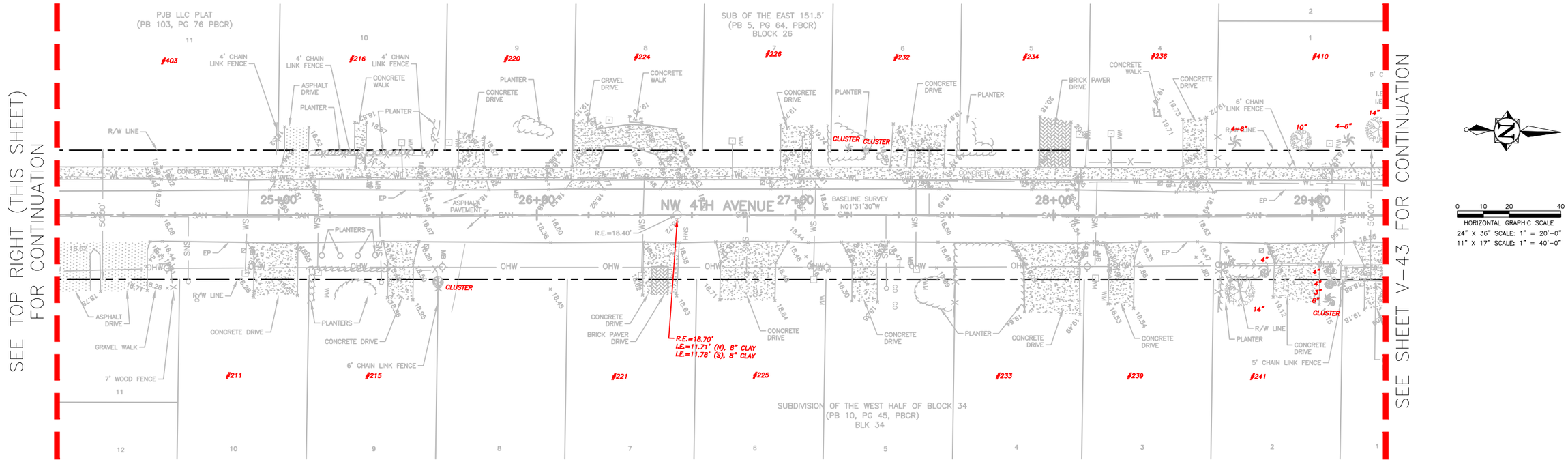
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-41-SRVY.dwg
LAST SAVED: 12/20/21 - 8:22am

CAS PROJECT NUMBER
19-2068

SHEET
V-41
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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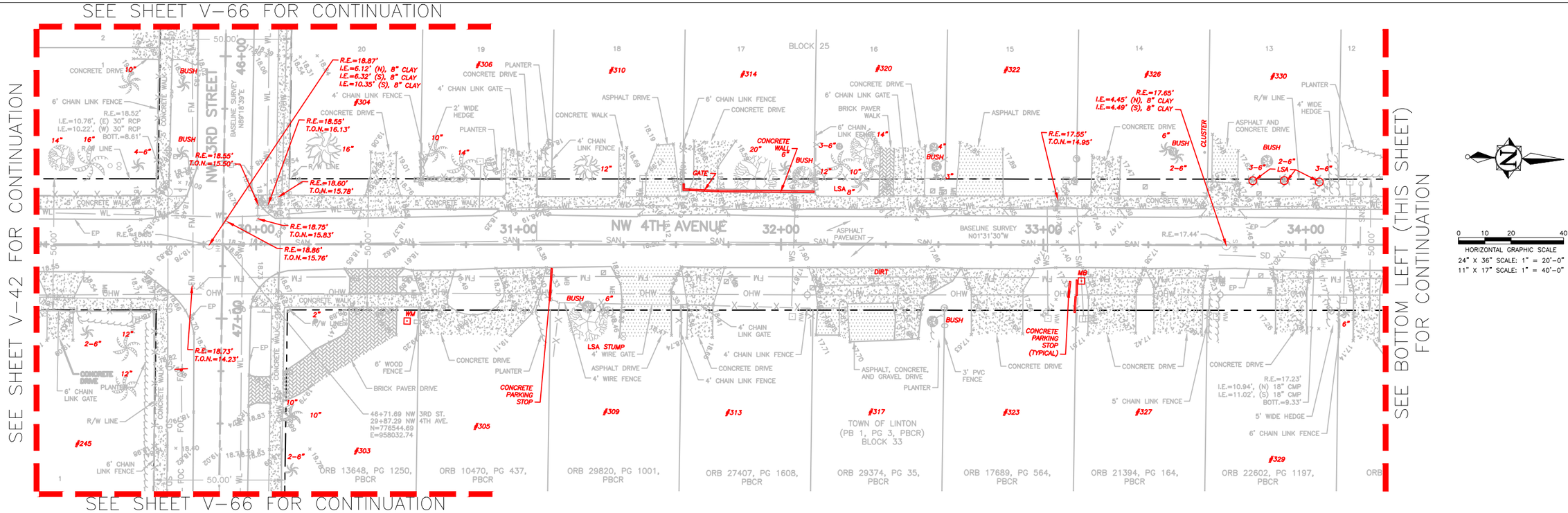
SURVEY

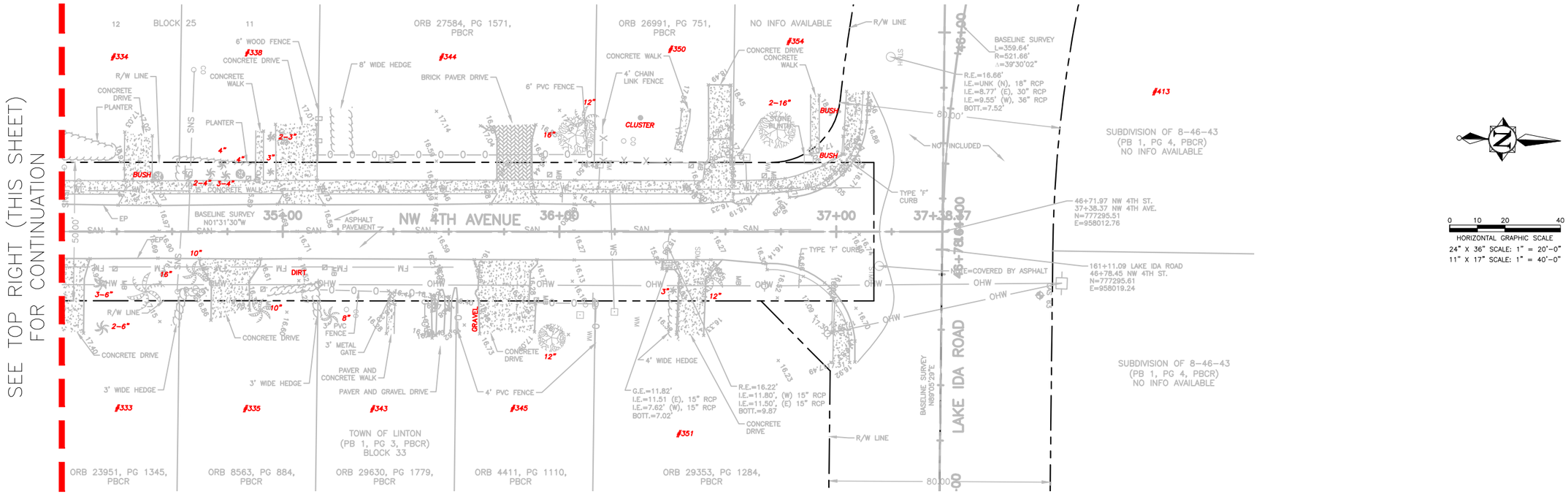
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-42-SRVY.dwg
LAST SAVED: 12/24/21 - 1:41pm

CAS PROJECT NUMBER
19-2068

SHEET
V-42
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-43-SRVY.dwg
LAST SAVED: 12/24/21 - 1:47pm

CAS PROJECT NUMBER
19-2068

SHEET
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OF
87

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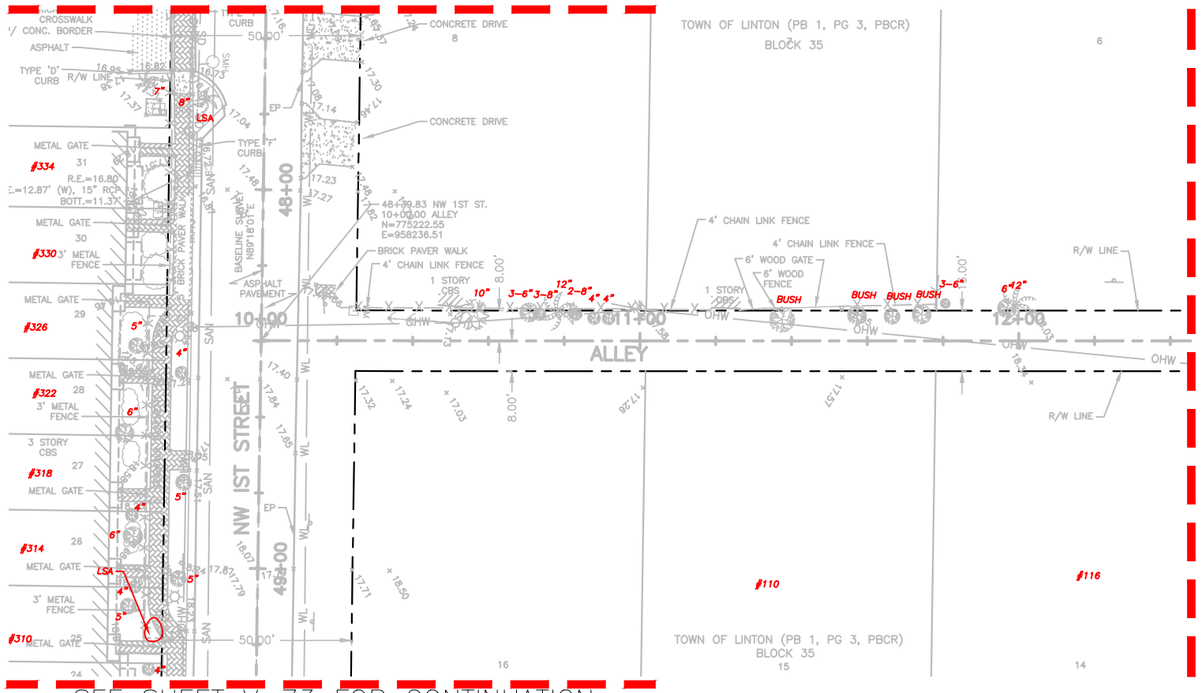
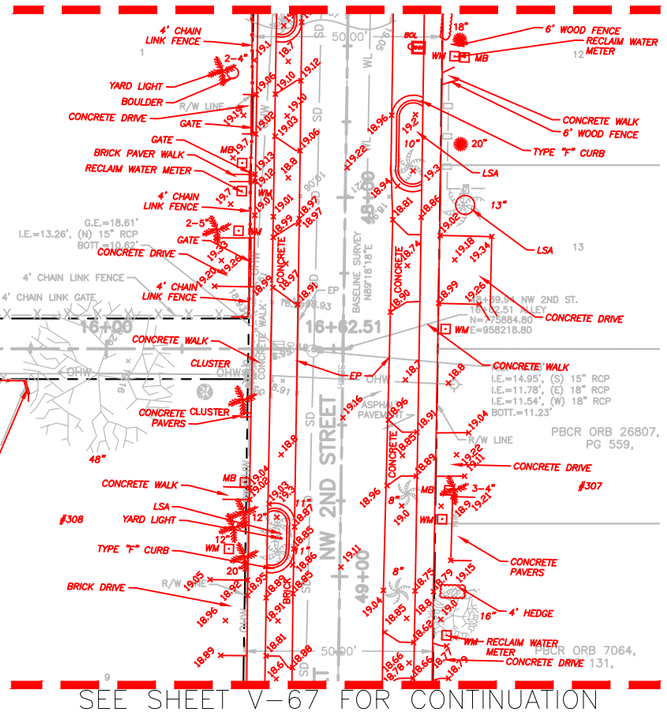


SEE SHEET V-73 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-67 FOR CONTINUATION



SEE SHEET V-67 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	RDK
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MAP OF
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SURVEY

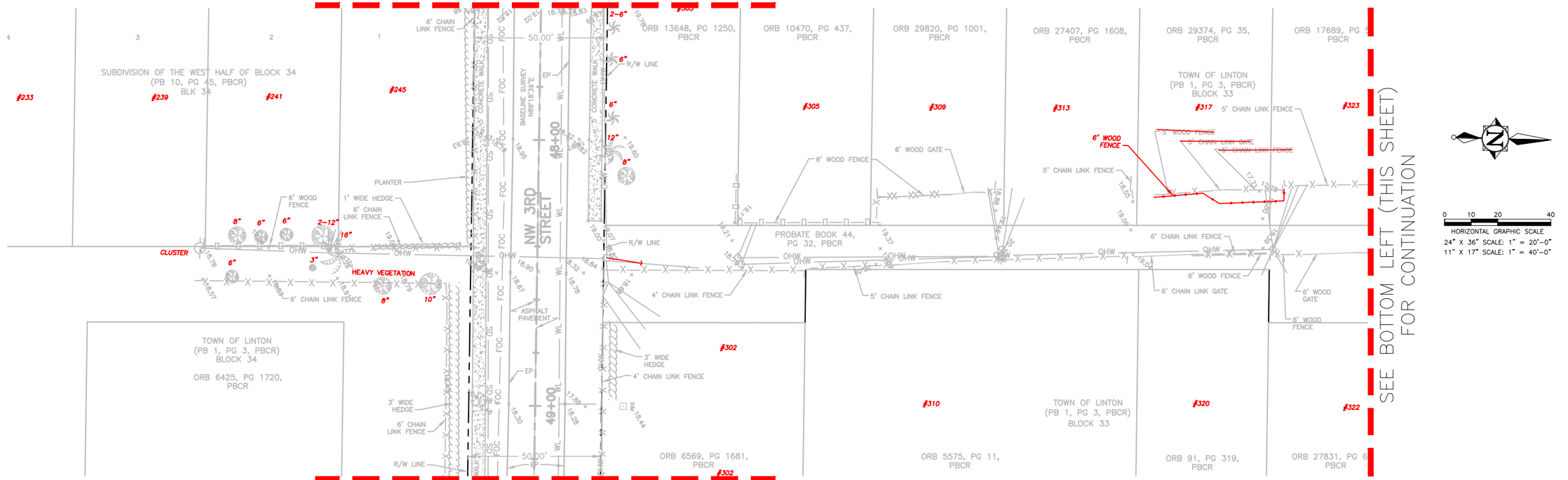
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-44-SRVY.dwg
LAST SAVED: 12/21/21 - 3:35pm

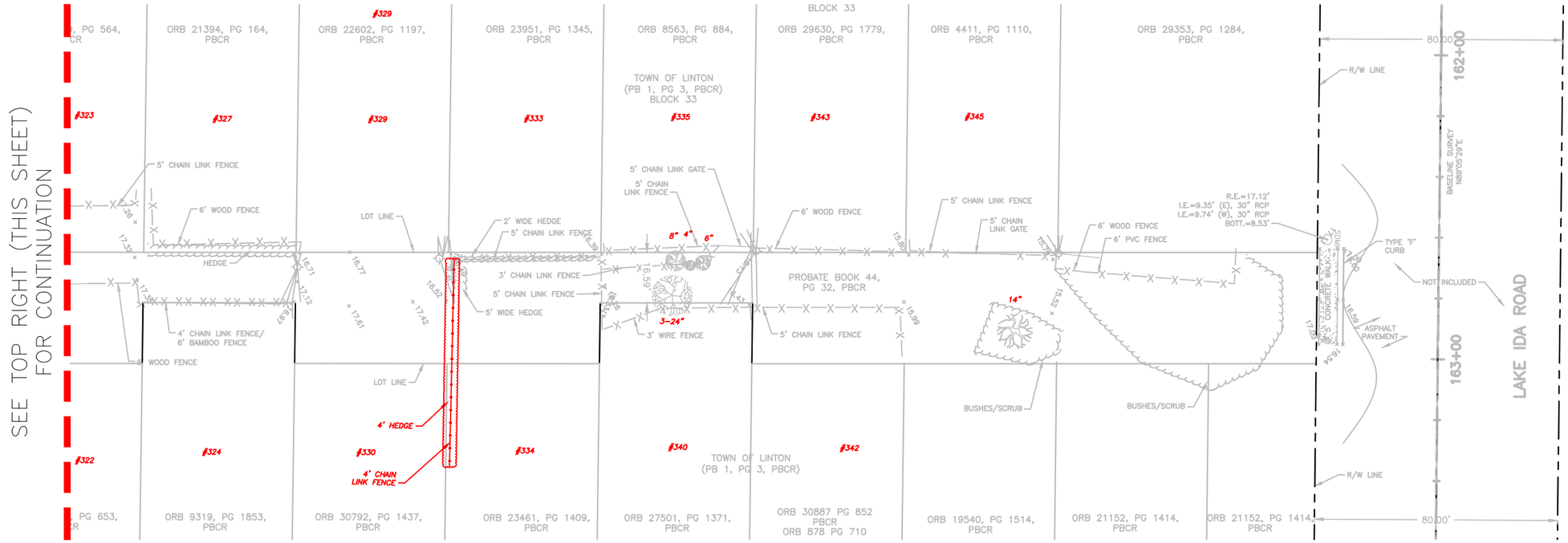
CAS PROJECT NUMBER
19-2068

SHEET
V-44
OF
87

SEE SHEET V-66 FOR CONTINUATION



SEE SHEET V-66 FOR CONTINUATION



NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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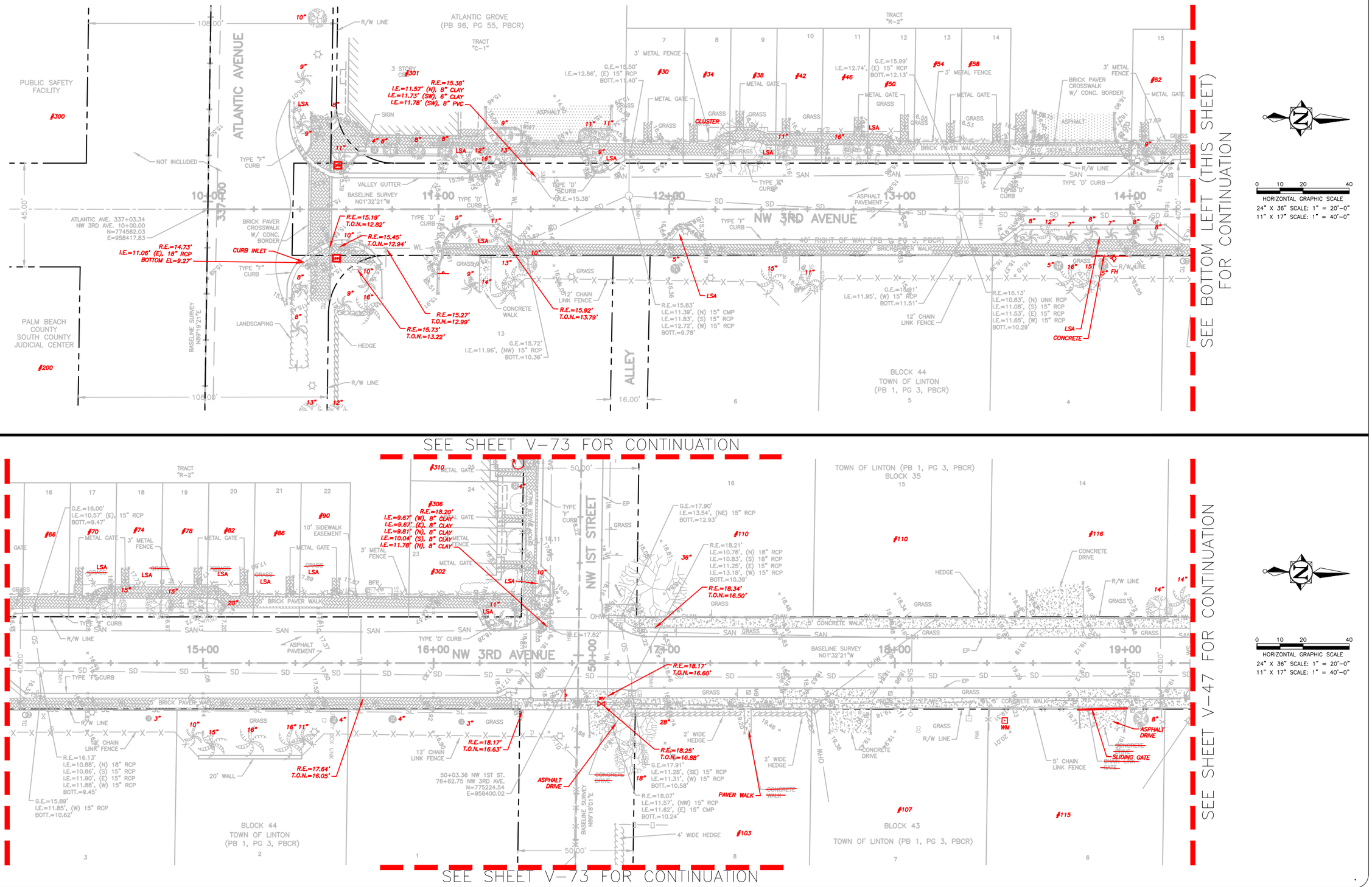
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-45-SRVY.dwg
LAST SAVED: 06/01/20 - 12:00pm

CAS PROJECT NUMBER
19-2068

SHEET
V-45
OF
87



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1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	CKD

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MAP OF
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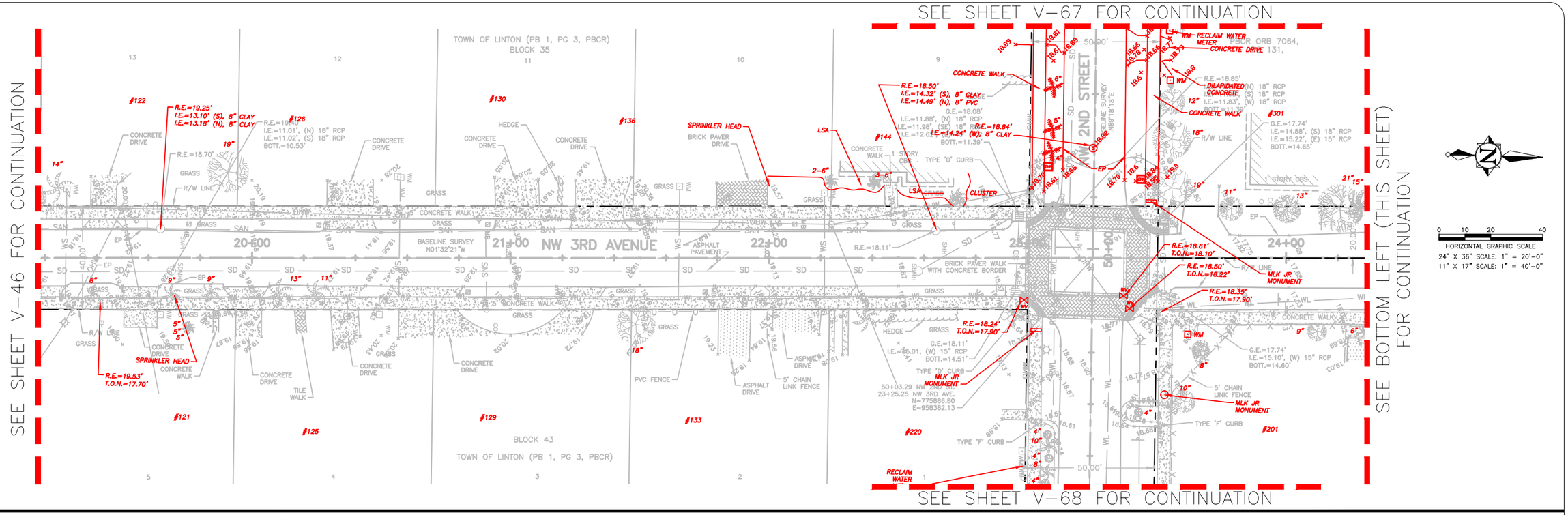
SURVEY

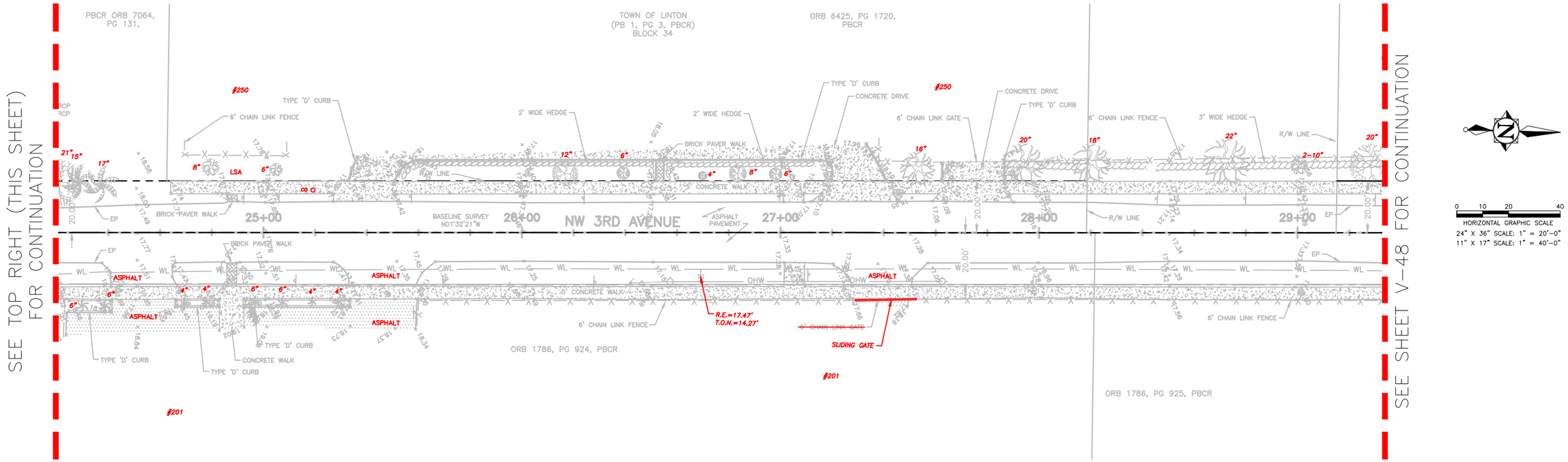
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-46-SRVY.dwg
LAST SAVED: 06/01/20 - 11:47am

CAS PROJECT NUMBER
19-2068

SHEET
V-46
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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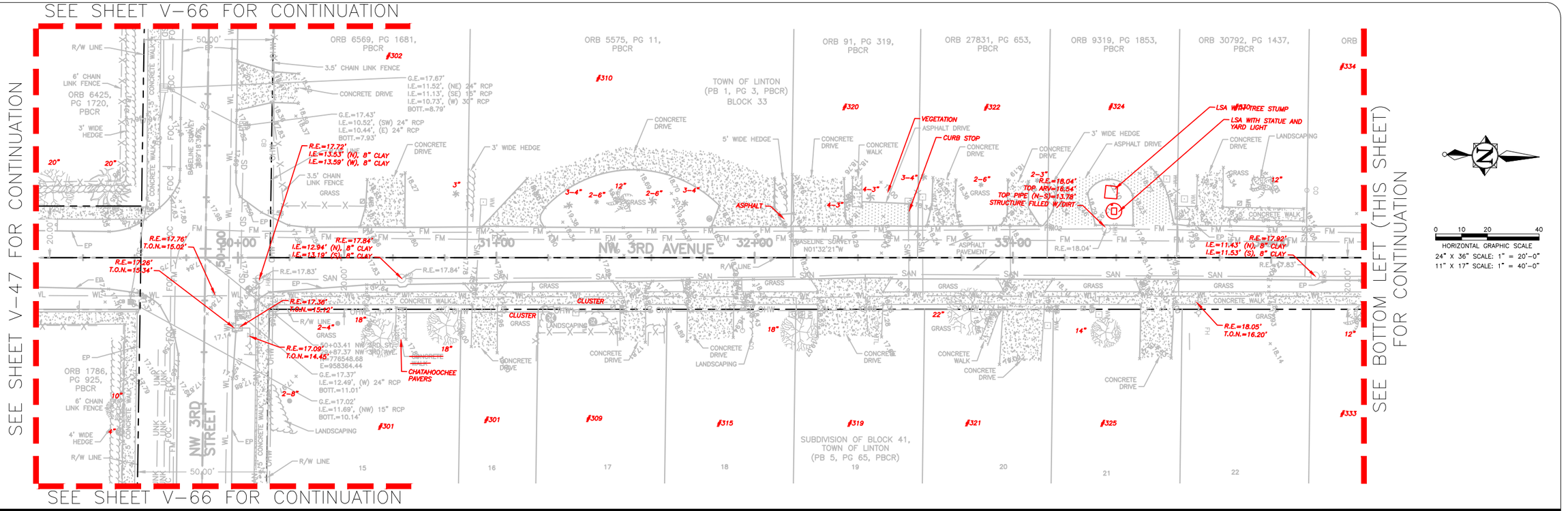
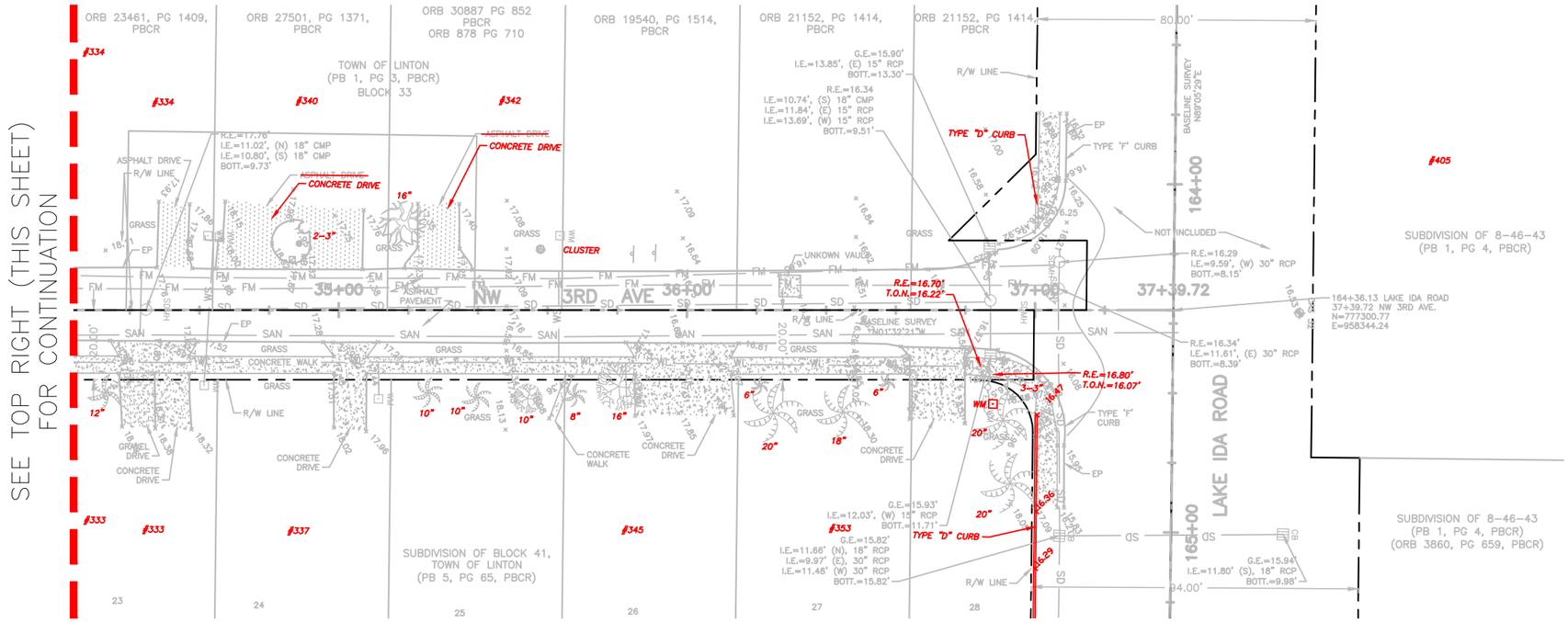
FILE NAME: 20-2068-V-47-SRVY.dwg
LAST SAVED: 06/01/20 - 11:29am

CAS PROJECT NUMBER
19-2068

SHEET
V-47
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
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DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-48-SRVY.dwg
LAST SAVED: 06/01/20 - 11:13am

CAS PROJECT NUMBER
19-2068

SHEET
V-48
OF
87

SEE SHEET V-73 FOR CONTINUATION

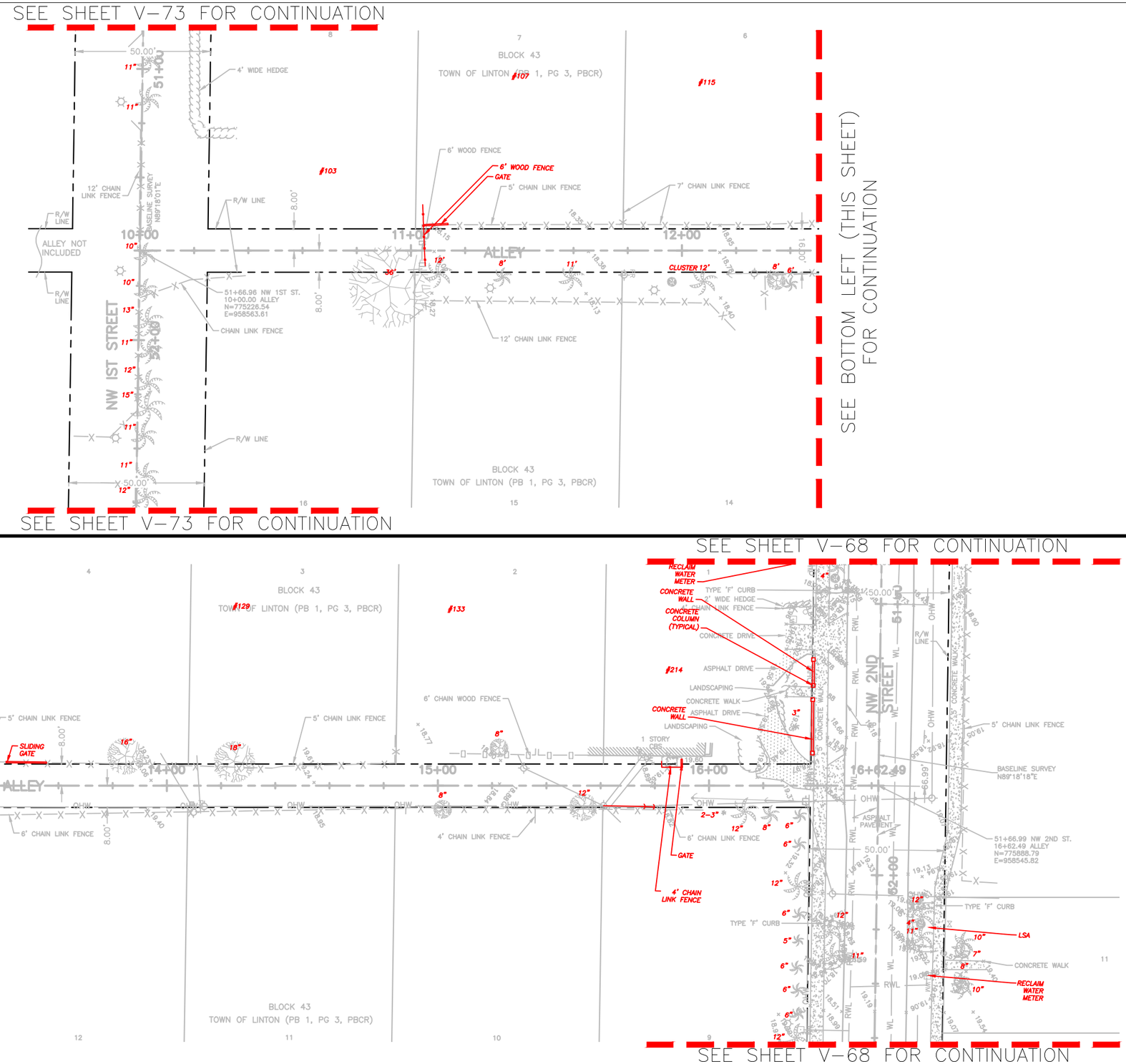
SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-68 FOR CONTINUATION

SEE SHEET V-73 FOR CONTINUATION

SEE SHEET V-68 FOR CONTINUATION



0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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MAP OF
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SURVEY

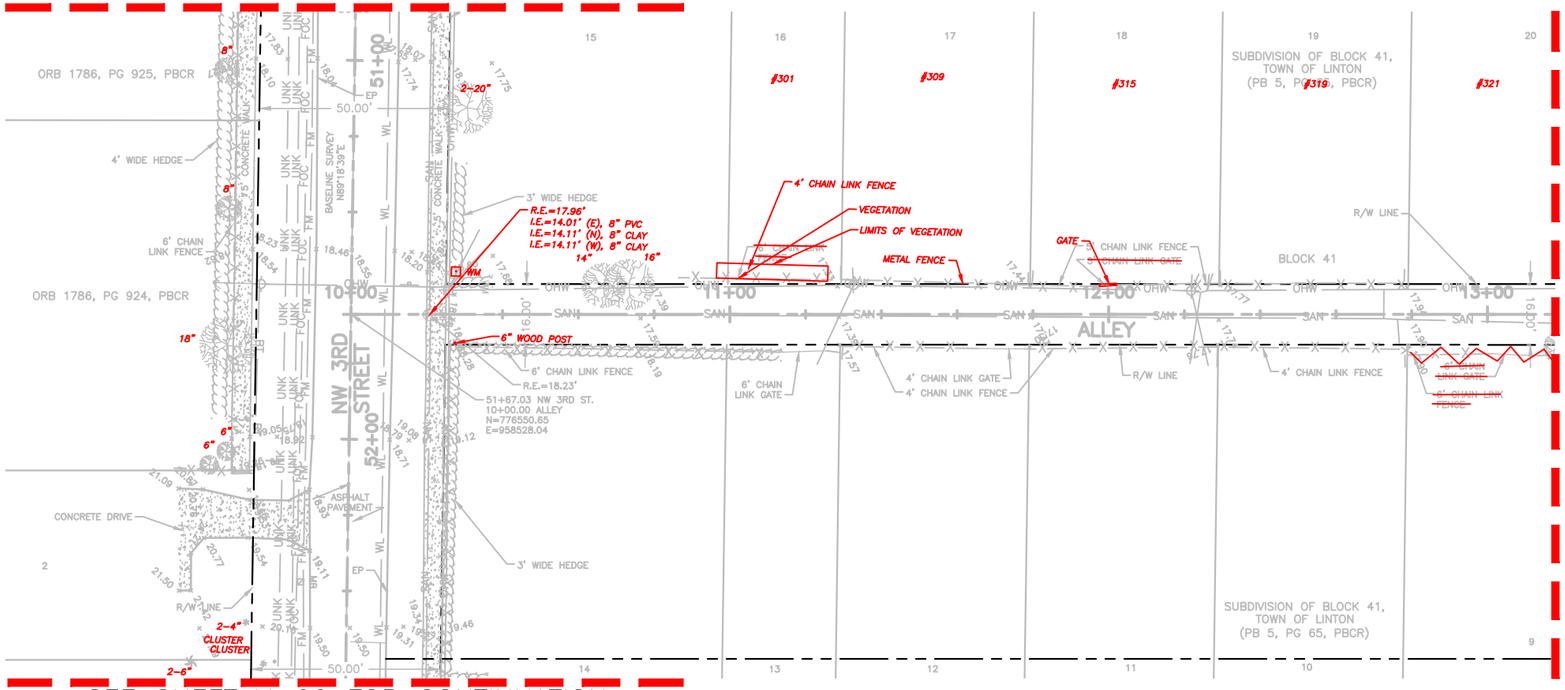
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

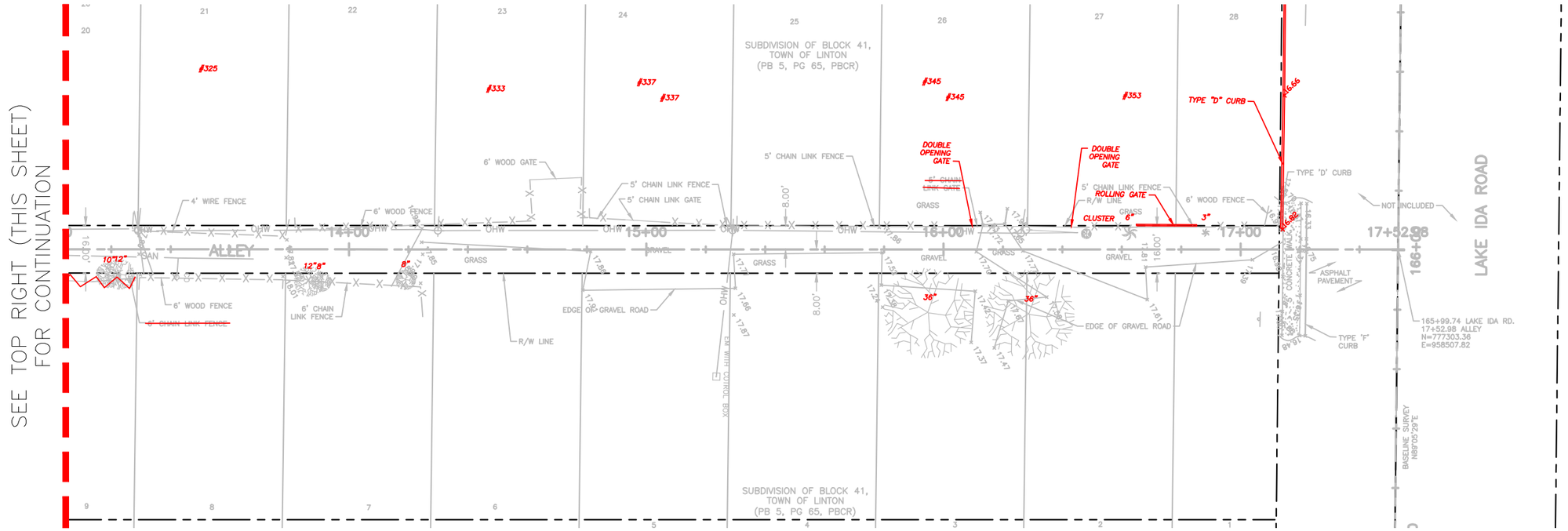
FILE NAME: 20-2068-V-49-SRVY.dwg
LAST SAVED: 06/01/20 - 11:00am

CAS PROJECT NUMBER
19-2068

SHEET
V-49
OF
87

SEE SHEET V-66 FOR CONTINUATION





0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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SURVEY

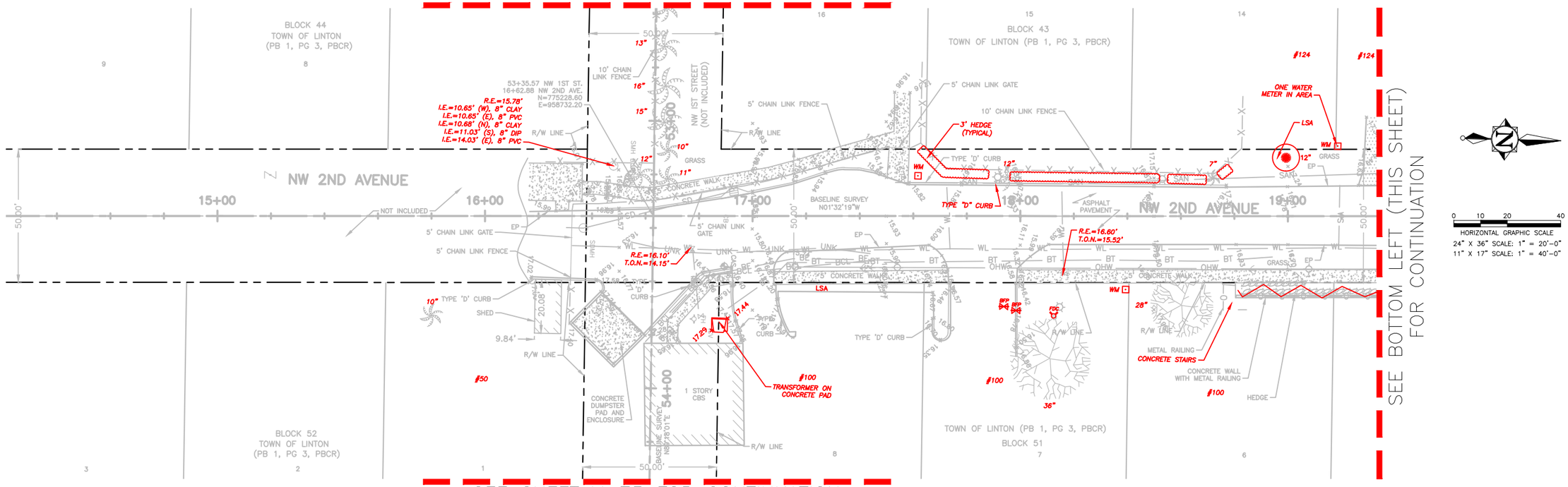
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-50-SRVY.dwg
LAST SAVED: 06/01/20 - 10:44am

CAS PROJECT NUMBER
19-2068

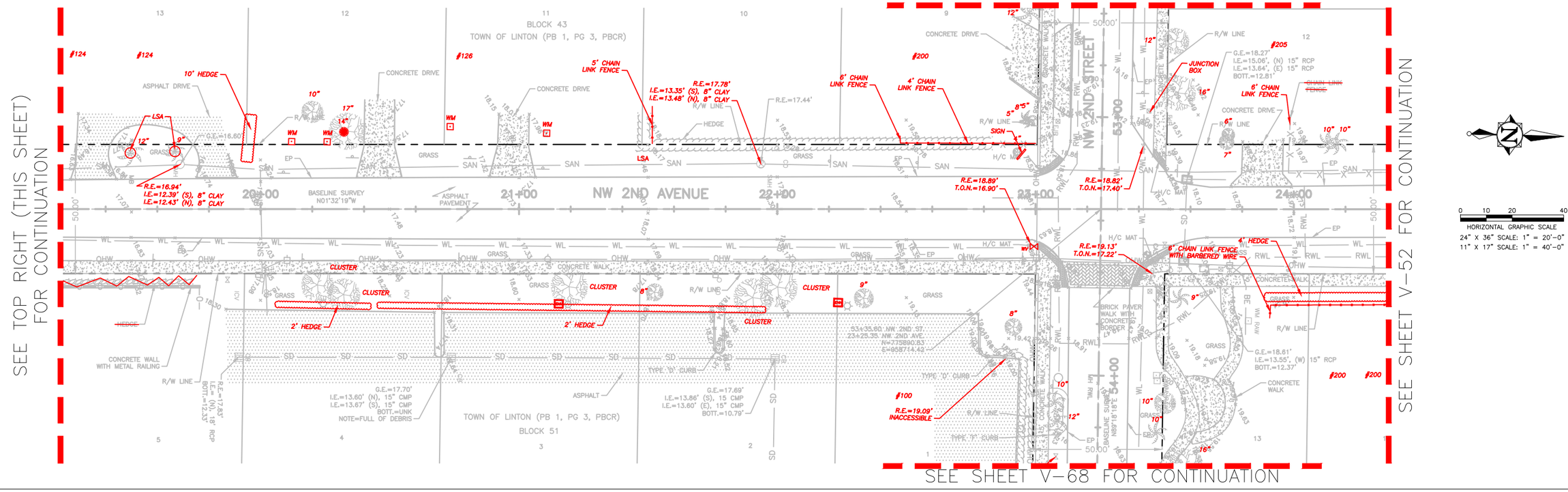
SHEET
V-50
OF
87

SEE SHEET V-73 FOR CONTINUATION



HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-68 FOR CONTINUATION



HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-68 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-51-SRVY.dwg
LAST SAVED: 12/24/21 - 7:00pm

CAS PROJECT NUMBER
19-2068

SHEET
V-51
OF
87

SEE SHEET V-51 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-66 FOR CONTINUATION

SEE SHEET V-66 FOR CONTINUATION

SEE SHEET V-61 FOR CONTINUATION

SUBDIVISION OF BLOCK 42 (PB 21, PG 2, PBCR)

METCALFS SUBDIVISION (PB 10, PG 47 PBCR) BLOCK 50

SUBDIVISION OF BLOCK 41, TOWN OF LINTON (PB 5, PG 65, PBCR)

SUBDIVISION OF THE 5 1/2 BLOCKS 49 & 57, (PB 12, PG 86, PBCR)

TOWN OF LINTON (PB 1, PG 3, PBCR) BLOCK 49

NW 2ND AVENUE

NW 3RD STREET

NW 3RD COURT

25+00 26+00 27+00 28+00 29+00

30+00 31+00 32+00 33+00 33+74

53+00 54+00

10+00

#205 #210 #216 #220 #224 #228 #230 #240 #244

#200 #304 #309 #310 #311 #313 #314 #315 #319 #322 #323 #327 #328 #332

6' CHAIN LINK FENCE
5' CHAIN LINK FENCE
GRAVEL
CONCRETE DRIVE
BRICK PAVER DRIVE
ASPHALT DRIVE
RECLAIM WATER METER
CLUSTER
LSA
WM
MB
GRASS
CONCRETE WALK
R/W LINE
EP
SAN
WL
RWL
OHW
BE
BT
WS
GATE
WOOD POWER POLE WITH LIGHT
6' CHAIN LINK FENCE WITH BARBERED WIRE
4' HEDGE
6' HEDGE
6' WIDE HEDGE
3' WIDE HEDGE
LANDSCAPING
STEEL CABLE
NOT INCLUDED
1 STORY CBS

R.E.=19.15' I.E.=14.48' (S), 8" CLAY I.E.=14.49' (N), 8" CLAY
R.E.=18.98'
R.E.=19.48' T.O.N.=15.87'
R.E.=19.44' T.O.N.=15.77'
R.E.=19.43' T.O.N.=18.43'
R.E.=19.50' T.O.N.=18.68'
R.E.=19.18' T.O.N.=17.75'
R.E.=19.63' T.O.N.=17.53'
R.E.= T.O.N.=

BASELINE SURVEY N01°32'19"W

53+35.63 NW 3RD ST. 29+87.44 NW 2ND AVE. N=776552.68 E=958696.64

10+00.00 NW 3RD CT. 33+74.34 NW 2ND AVE. N=776939.45 E=958686.25

50' RIGHT OF WAY (PB 1, PG 3, PBCR)

0 10 20 40
HORIZONTAL GRAPHIC SCALE
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11" X 17" SCALE: 1" = 40'-0"

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-52-SRVY.dwg
LAST SAVED: 06/01/20 - 9:55am

CAS PROJECT NUMBER
19-2068

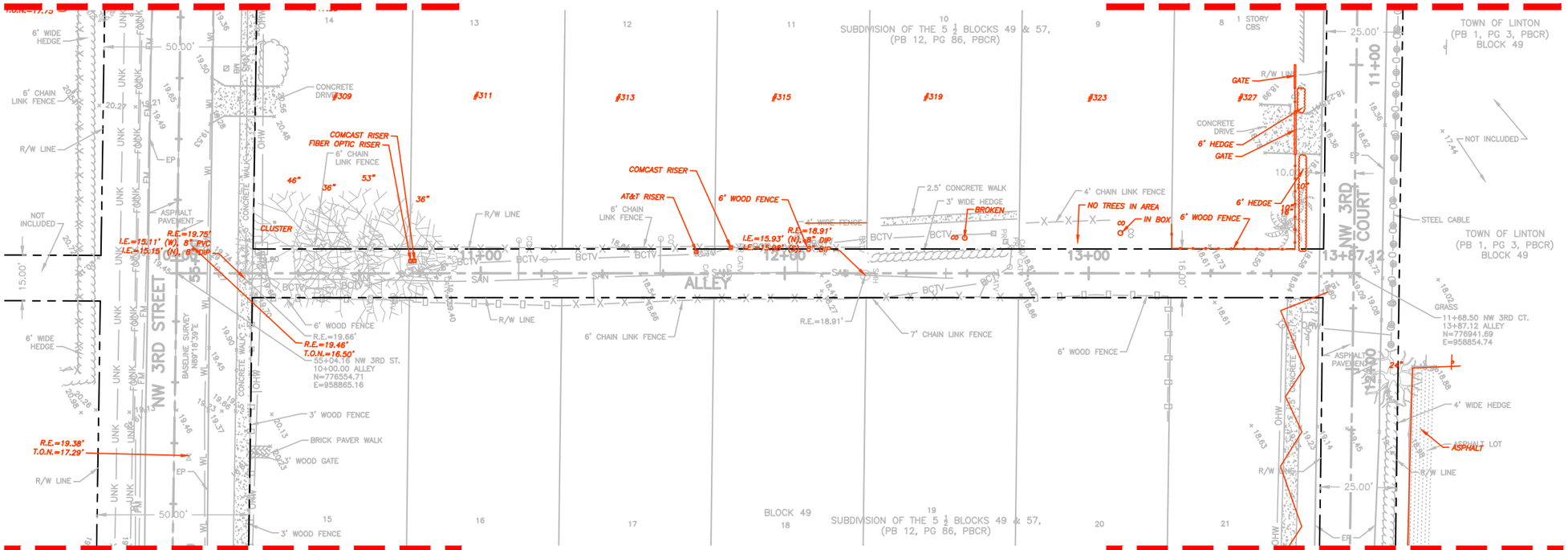
SHEET
V-52
OF
87

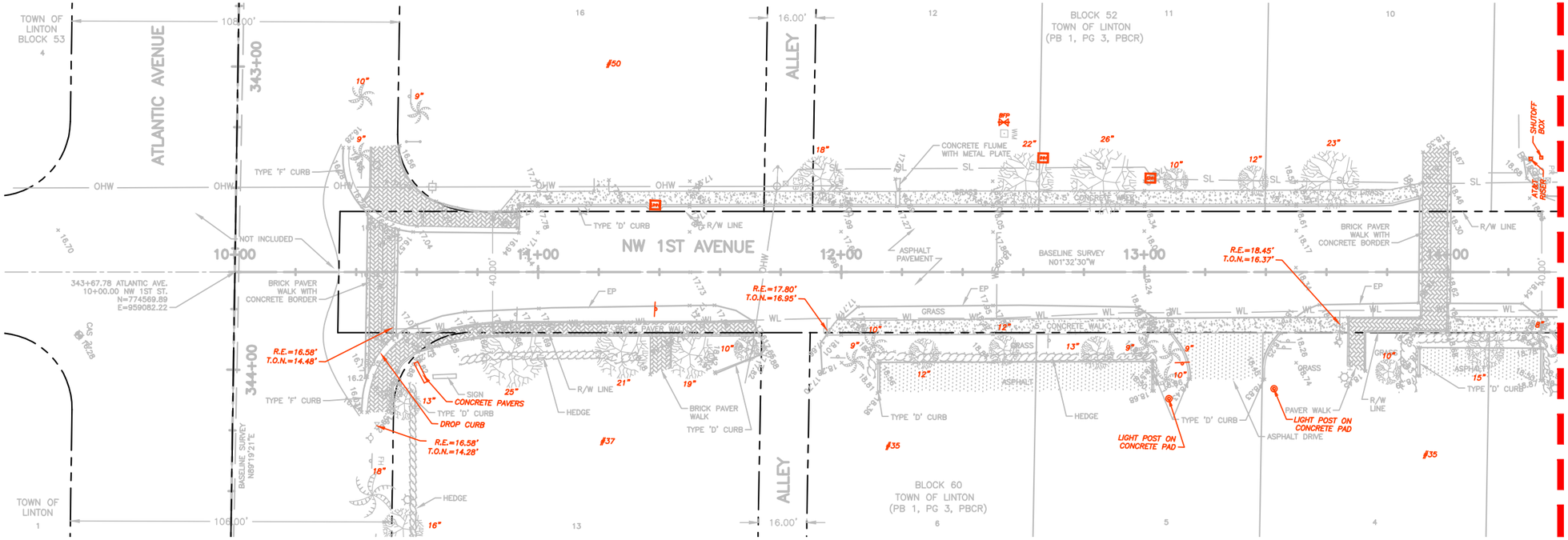
SEE SHEET V-66 FOR CONTINUATION

SEE SHEET V-61 FOR CONTINUATION

SEE SHEET V-67 FOR CONTINUATION

SEE SHEET V-61 FOR CONTINUATION





SEE SHEET V-54 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-53-SRVY.dwg
LAST SAVED: 06/01/20 - 9:38am

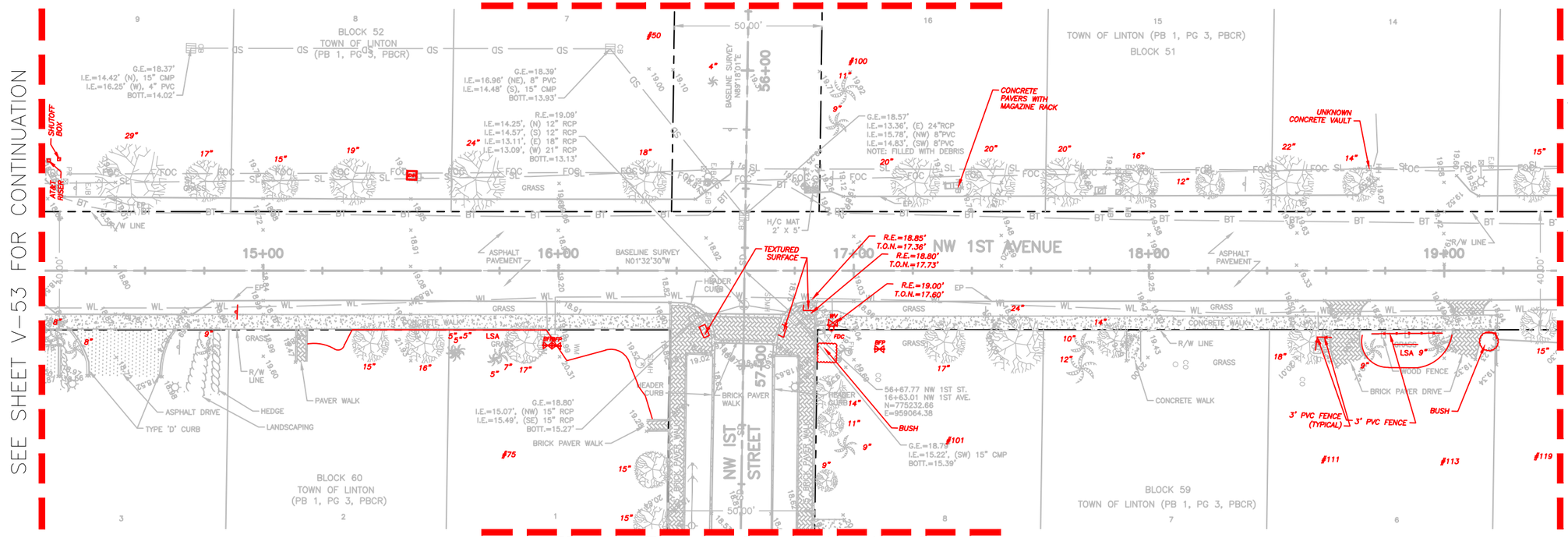
CAS PROJECT NUMBER
19-2068

SHEET
V-53
OF
87

SEE SHEET V-73 FOR CONTINUATION

SEE SHEET V-53 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

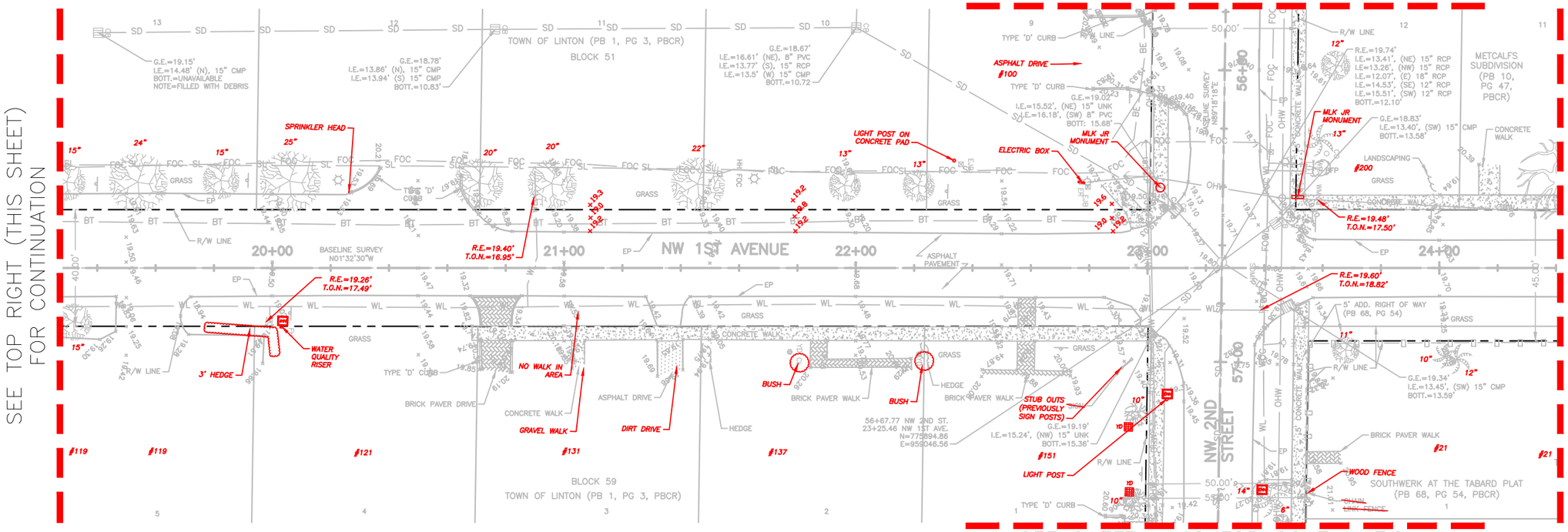


SEE SHEET V-74 FOR CONTINUATION

SEE SHEET V-78 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-55 FOR CONTINUATION



SEE SHEET V-68 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-54-SRVY.dwg
LAST SAVED: 12/24/21 - 7:28pm

CAS PROJECT NUMBER
19-2068

SHEET
V-54
OF
87

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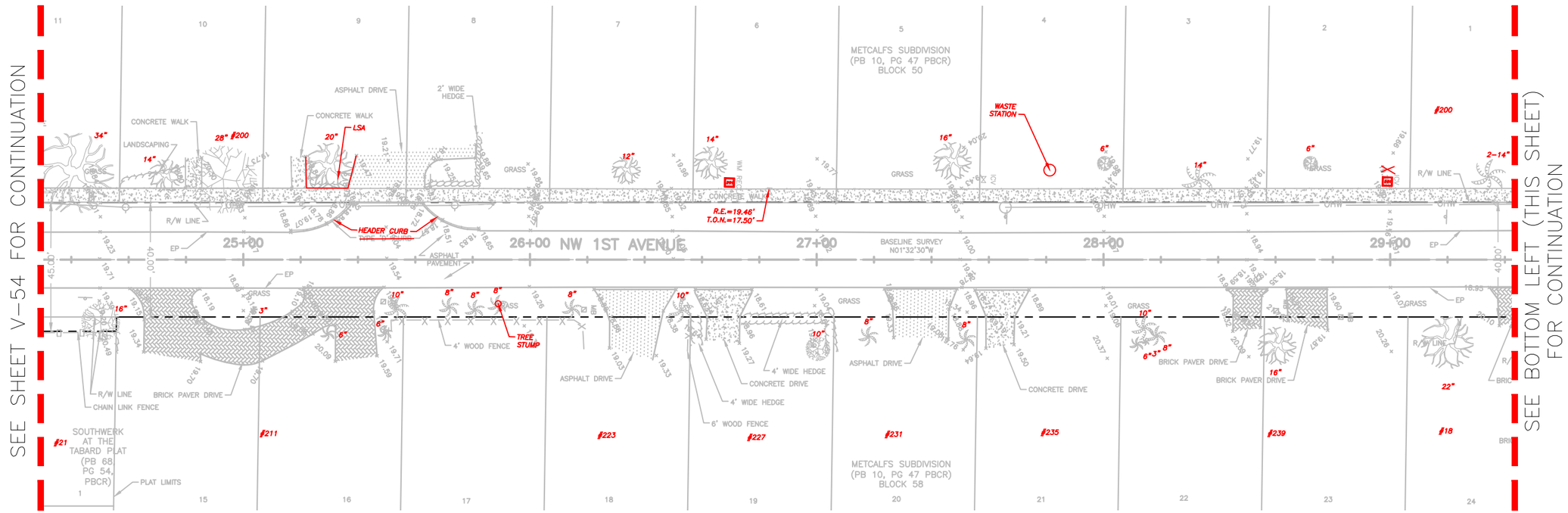
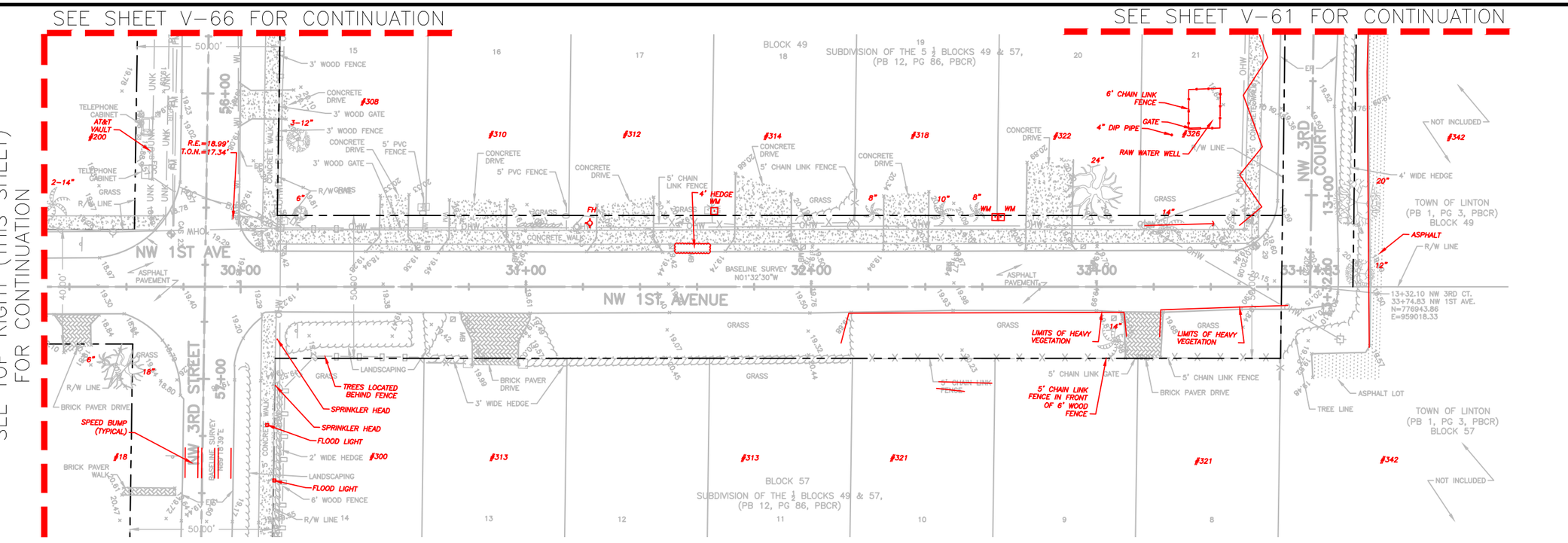
SEE SHEET V-66 FOR CONTINUATION

SEE SHEET V-61 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION





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HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
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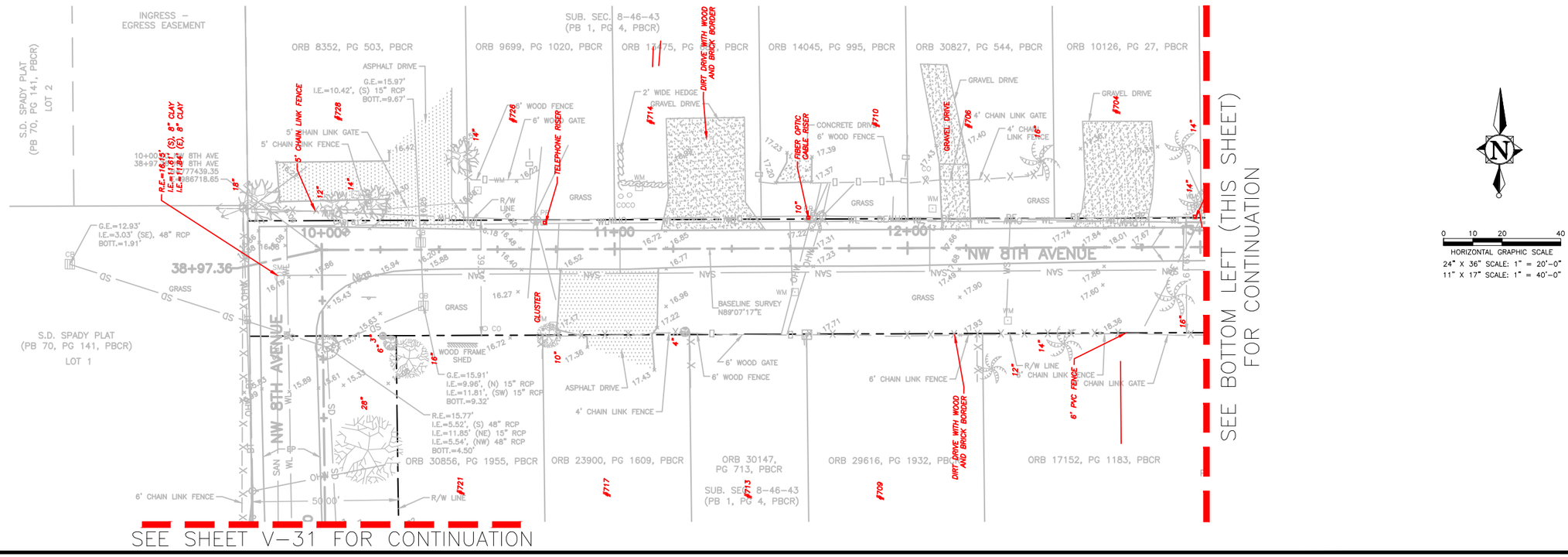
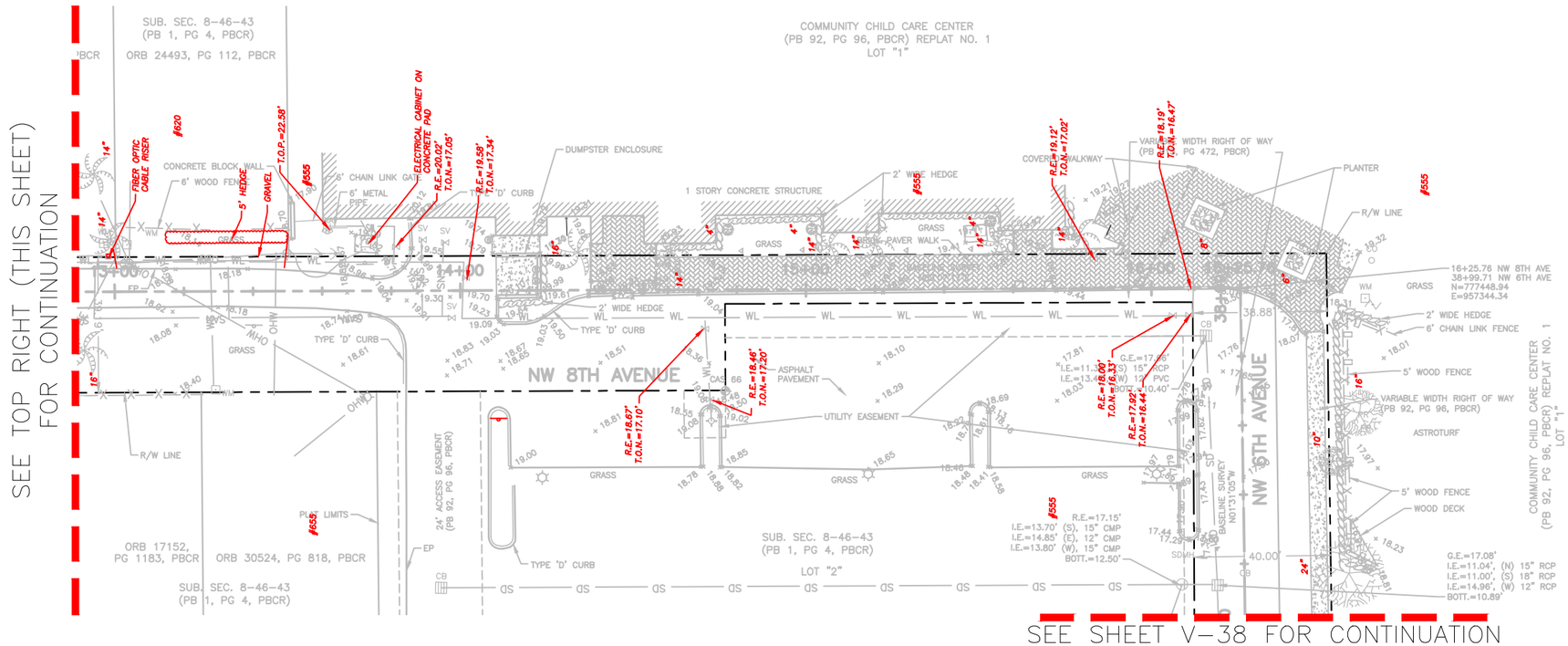
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-55-SRVY.dwg
LAST SAVED: 06/01/20 - 8:55am

CAS PROJECT NUMBER
19-2068

SHEET
V-55
OF
87





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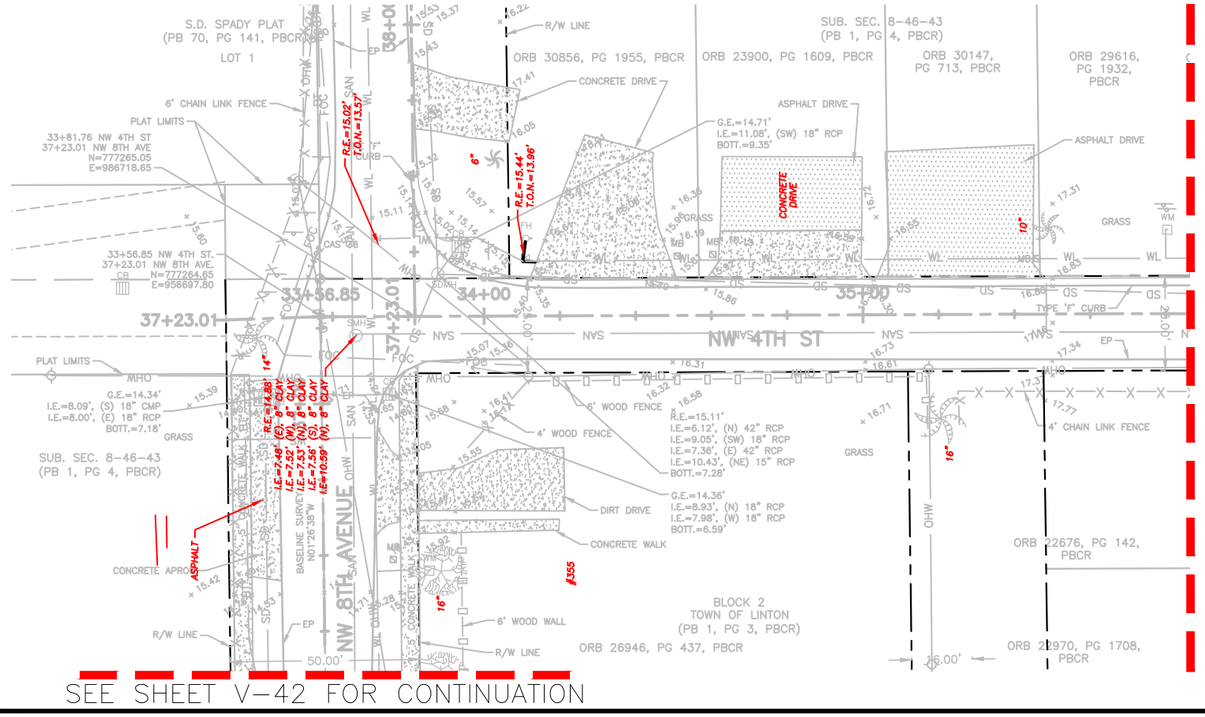
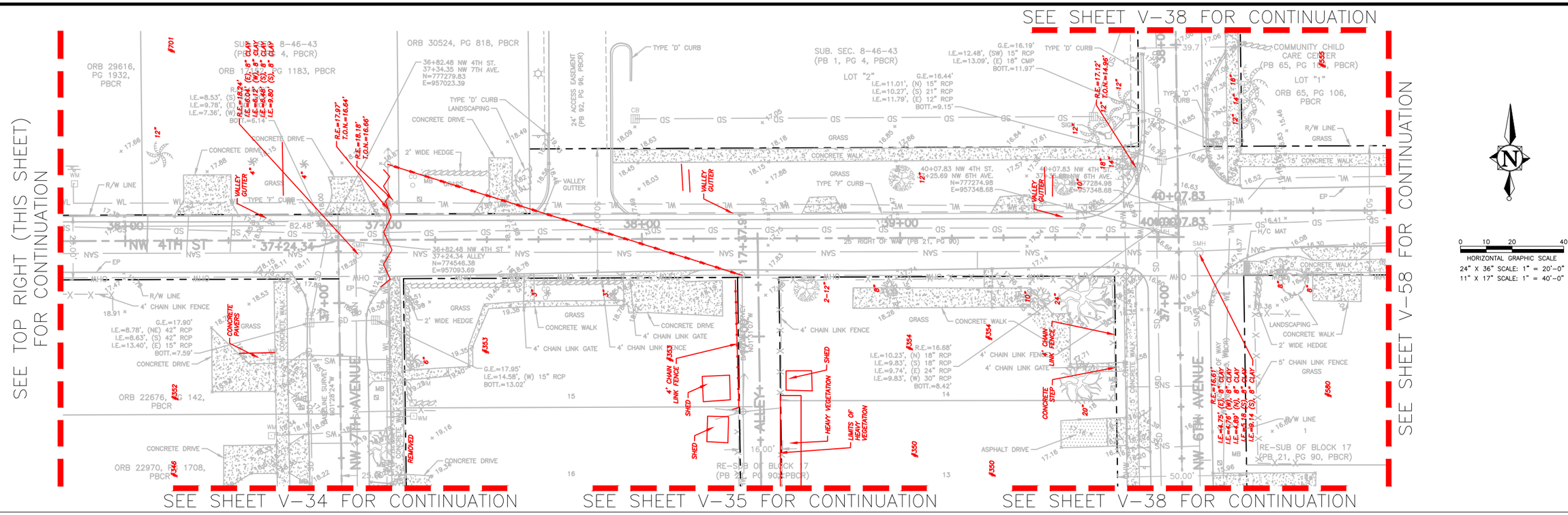
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-56-SRVY.dwg
LAST SAVED: 12/24/21 – 7:47pm

CAS PROJECT NUMBER
19-2068

SHEET
V-56
OF
87





NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

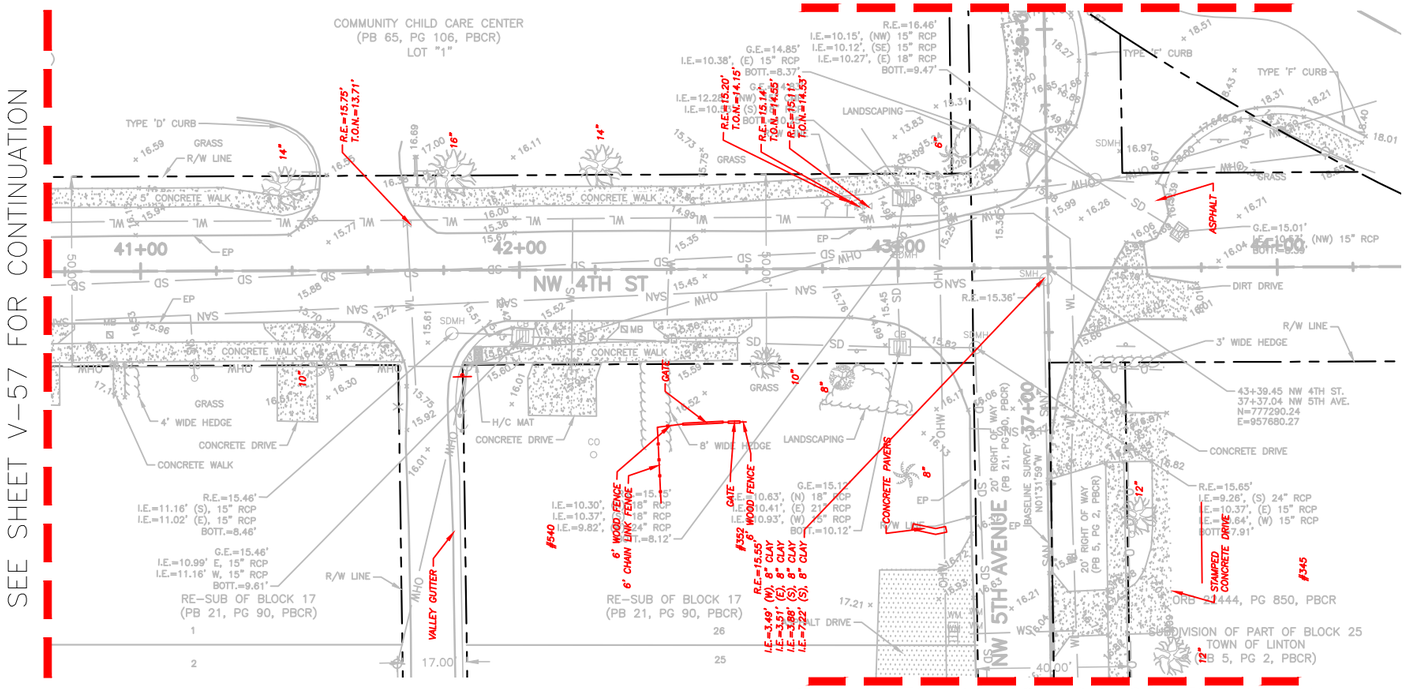
FILE NAME: 20-2068-V-57-SRVY.dwg
LAST SAVED: 12/25/21 - 7:48pm

CAS PROJECT NUMBER
19-2068

SHEET
V-57
OF
87

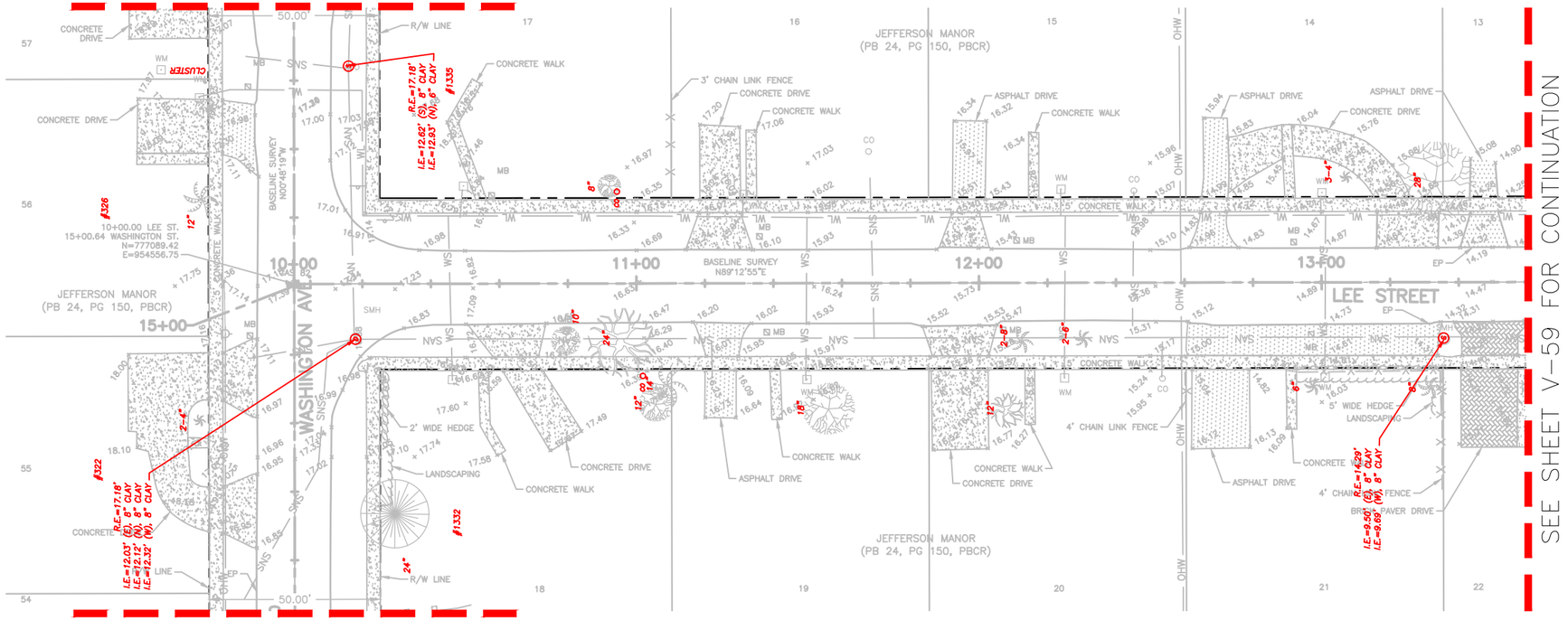
SEE SHEET V-40 FOR CONTINUATION

SEE SHEET V-57 FOR CONTINUATION



SEE SHEET V-07 FOR CONTINUATION

SEE SHEET V-59 FOR CONTINUATION



SEE SHEET V-07 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
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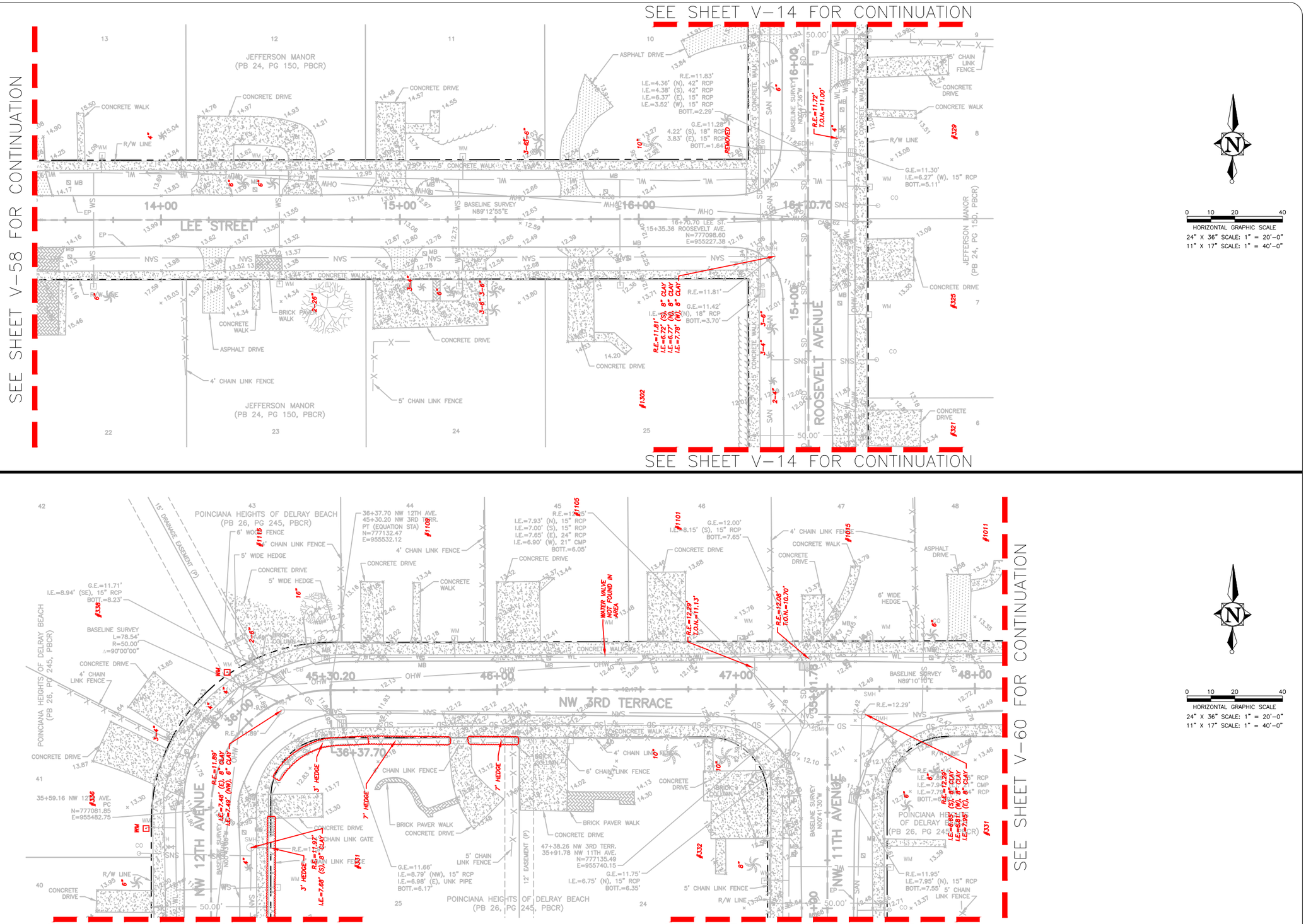
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-58-SRVY.dwg
LAST SAVED: 06/01/20 - 12:46pm

CAS PROJECT NUMBER
19-2068

SHEET
V-58
OF
87



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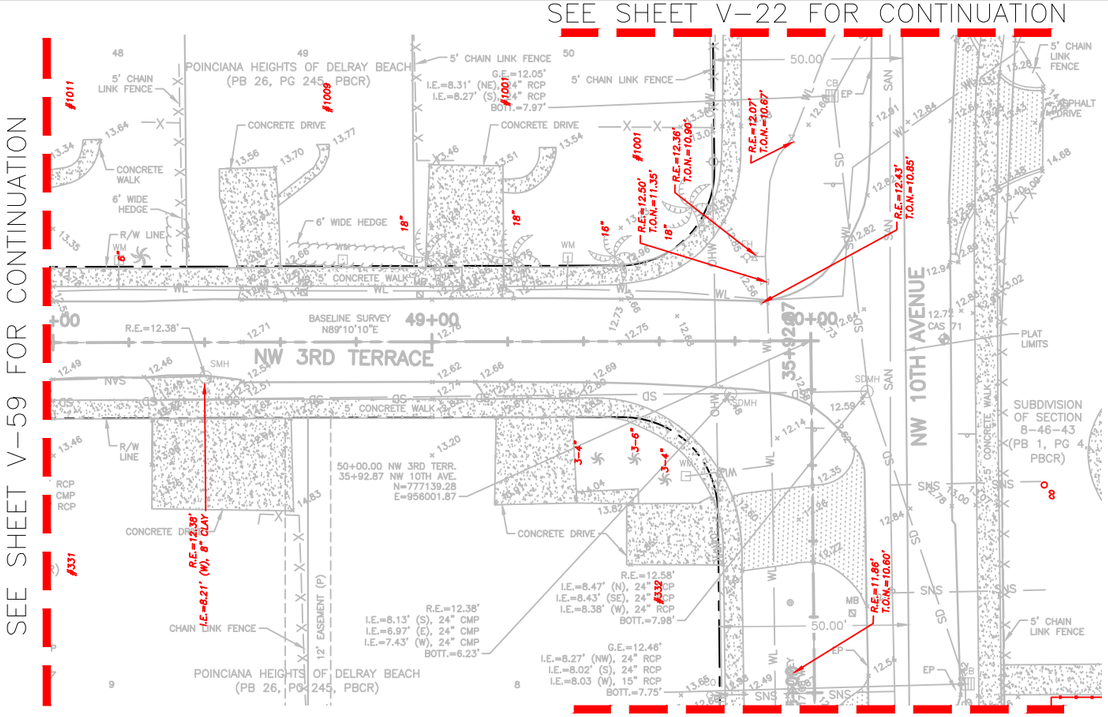
FILE NAME: 20-2068-V-59-SRVY.dwg
LAST SAVED: 06/01/20 - 1:05pm

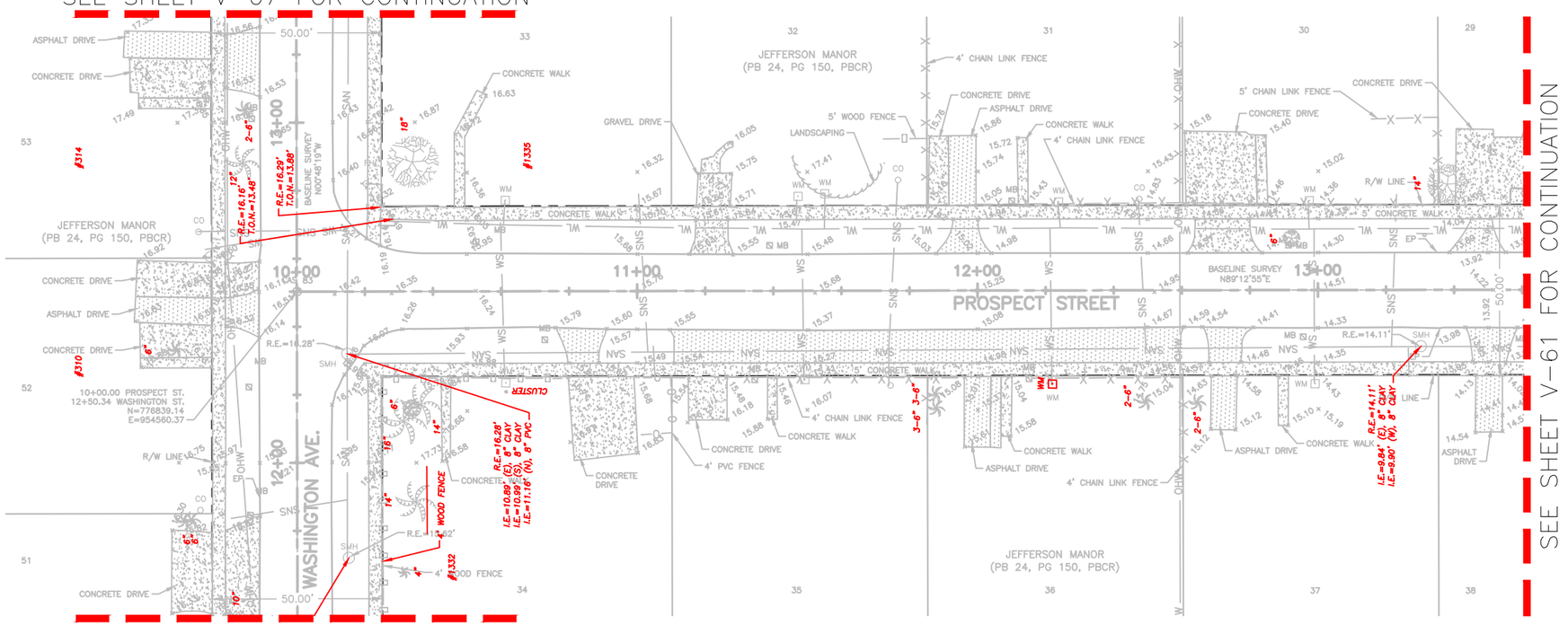
CAS PROJECT NUMBER
19-2068

SHEET
V-59
OF
87

SEE SHEET V-22 FOR CONTINUATION



SEE SHEET V-07 FOR CONTINUATION



SEE SHEET V-06 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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CERTIFICATE. NO. LB0003110

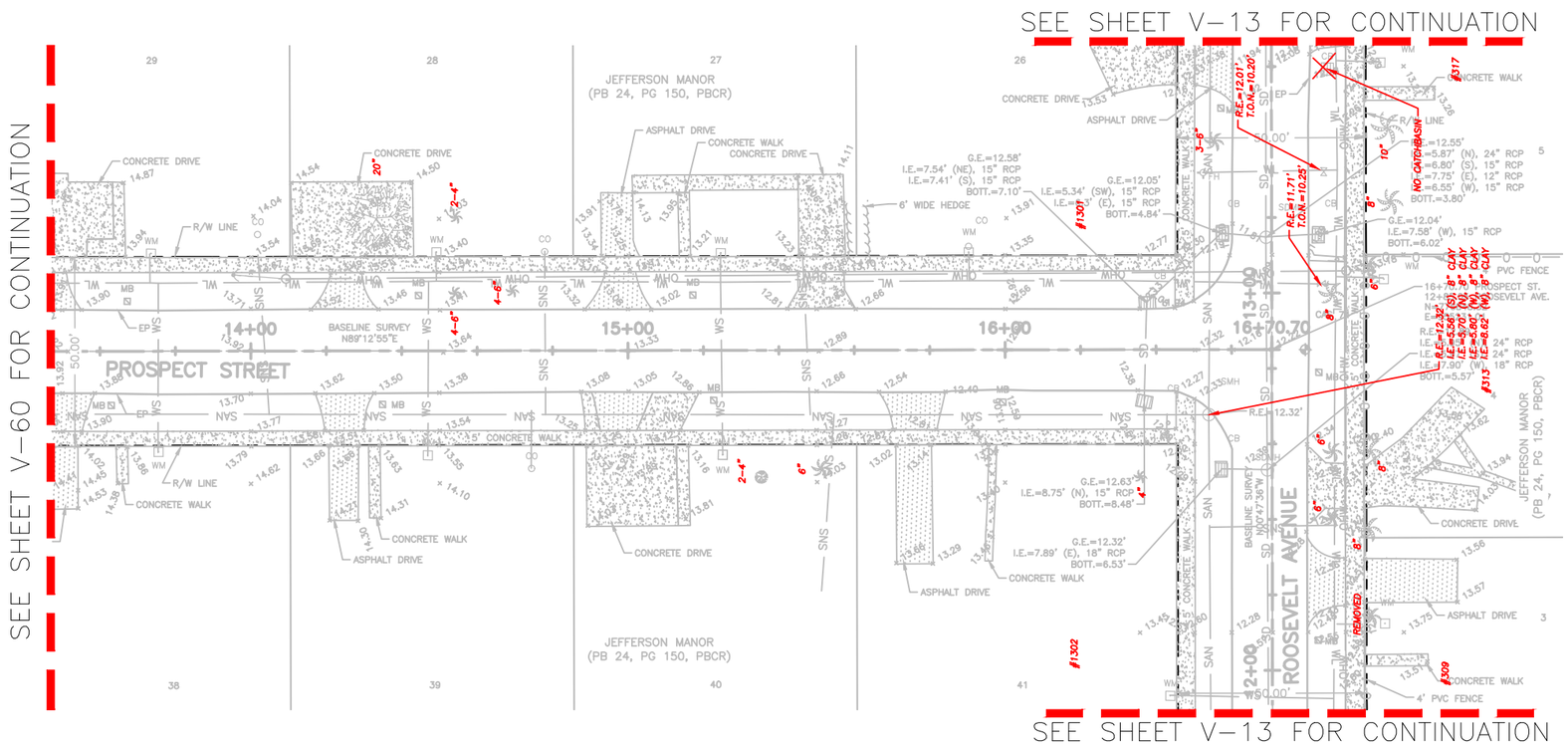
MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-60-SRVY.dwg
LAST SAVED: 06/01/20 - 1:24pm

CAS PROJECT NUMBER
19-2068

SHEET
V-60
OF
87



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MAP OF
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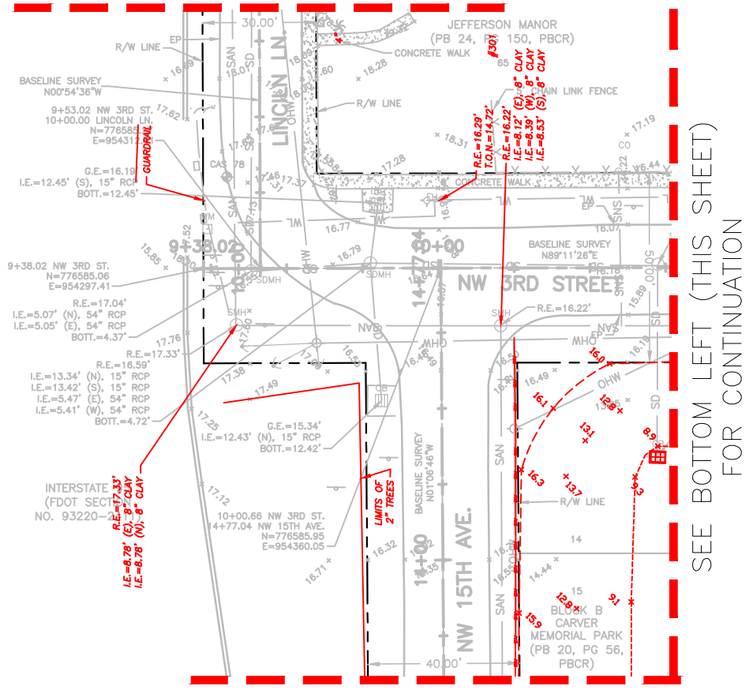
FILE NAME: 20-2068-V-61-SRVY.dwg
LAST SAVED: 06/01/20 - 1:38pm

CAS PROJECT NUMBER
19-2068

SHEET
V-61
OF
87

SEE SHEET V-04 FOR CONTINUATION

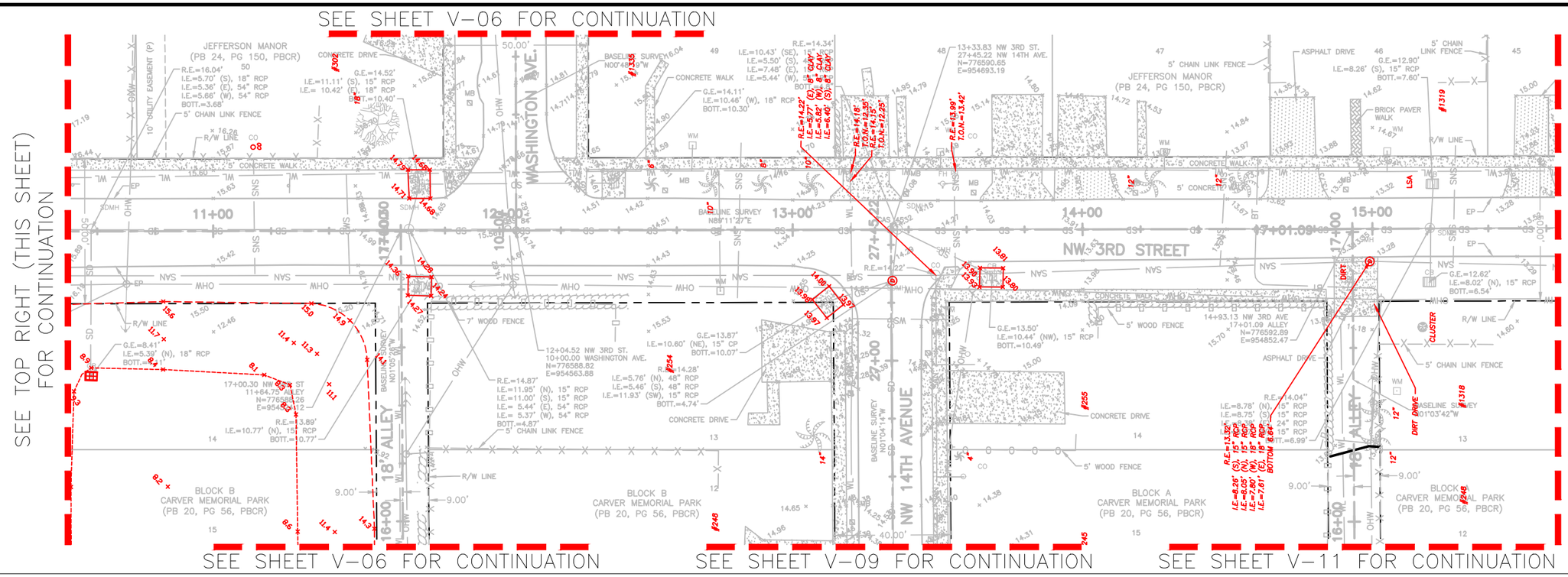


SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-06 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION



SEE SHEET V-63 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-06 FOR CONTINUATION | SEE SHEET V-09 FOR CONTINUATION | SEE SHEET V-11 FOR CONTINUATION

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE, NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-62-SRVY.dwg
LAST SAVED: 12/25/21 - 8:31pm

CAS PROJECT NUMBER
19-2068

SHEET
V-62
OF
87

SEE SHEET V-13 FOR CONTINUATION

SEE SHEET V-62 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-13 FOR CONTINUATION

SEE SHEET V-15 FOR CONTINUATION

SEE SHEET V-18 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-64 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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CERTIFICATE, NO. LB0003110

MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-63-SRVY.dwg
LAST SAVED: 12/25/21 - 8:39pm

CAS PROJECT NUMBER
19-2068

SHEET
V-63
OF
87

SEE SHEET V-21 FOR CONTINUATION

SEE SHEET V-63 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-21 FOR CONTINUATION

SEE SHEET V-24 FOR CONTINUATION

SEE SHEET V-26 FOR CONTINUATION

SEE SHEET V-30 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-65 FOR CONTINUATION

SEE SHEET V-28 FOR CONTINUATION

SEE SHEET V-30 FOR CONTINUATION

SEE SHEET V-31 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-64-SRVY.dwg
LAST SAVED: 12/25/21 - 8:47pm

CAS PROJECT NUMBER
19-2068

SHEET
V-64
OF
87

SEE SHEET V-34 FOR CONTINUATION
SEE SHEET V-35 FOR CONTINUATION
SEE SHEET V-38 FOR CONTINUATION
SEE SHEET V-64 FOR CONTINUATION
SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION
SEE SHEET V-33 FOR CONTINUATION
SEE SHEET V-35 FOR CONTINUATION
SEE SHEET V-37 FOR CONTINUATION
SEE SHEET V-40 FOR CONTINUATION
SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION
SEE SHEET V-66 FOR CONTINUATION
SEE SHEET V-39 FOR CONTINUATION

TOWN OF LINTON BLK 2 (PB 1, PG 3, PBCR)
ORB 30532, PG 1, PBCR
PARADISE HEIGHTS (PB 24, PG 113, PBCR)
RE-SUB OF BLOCK 17 (PB 21, PG 90, PBCR)
ORB 10377, PG 1453, PBCR
ORB 30653, PG 1261, PBCR
ORB 25521, PG 822, PBCR
ORB 30487, PG 1696, PBCR
ORB 5598, PG 1661, PBCR
ORB 6701, PG 757, PBCR
LINTON BLK 10 (PB 5 PG PBCR)
BASELINE SURVEY N89°18'39"E
BASELINE SURVEY N01°31'01"W
NW 7TH AVENUE
NW 6TH AVENUE
NW 5TH AVENUE
NW 3RD STREET
ALLEY
36+00
37+00
38+00
39+00
40+00
41+00
42+00
43+00
44+00
45+00
30+00

SUBDIVISION OF PART OF BLOCK 25 TOWN OF LINTON (PB 5, PG 2, PBCR)
SUB OF THE EAST 151.5' (PB 5, PG 64, PBCR) BLOCK 25
ORB 30571, PG 499, PBCR
ORB 22559, PG 1638, PBCR
BLK 18 TOWN OF LINTON (PB 1, PG 3, PBCR)
CLINTON AND MORGAN SUBDIVISION (PB 59, PG 138, PBCR)
NO INFO AVILABLE

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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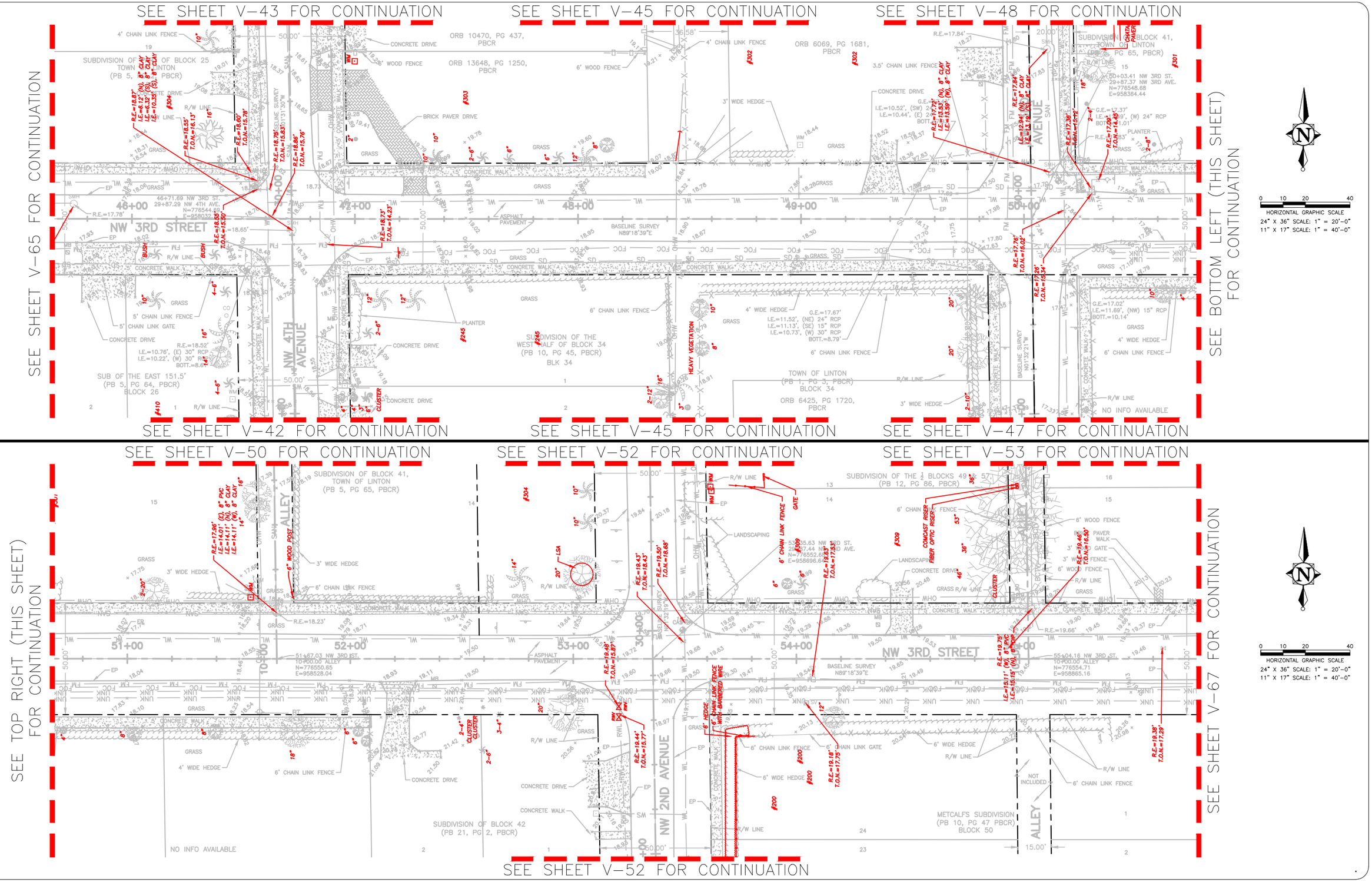
MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-65-SRVY.dwg
LAST SAVED: 06/01/20 - 3:25pm

CAS PROJECT NUMBER
19-2068

SHEET
V-65
OF
87



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1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-66-SRVY.dwg
LAST SAVED: 06/01/20 - 3:43pm

CAS PROJECT NUMBER
19-2068

SHEET
V-66
OF
87

SEE SHEET V-55 FOR CONTINUATION

SEE SHEET V-66 FOR CONTINUATION

SEE SHEET V-55 FOR CONTINUATION

SEE SHEET V-42 FOR CONTINUATION

SEE SHEET V-47 FOR CONTINUATION

SEE SHEET V-68 FOR CONTINUATION

SEE SHEET V-42 FOR CONTINUATION

SEE SHEET V-44 FOR CONTINUATION

SEE SHEET V-47 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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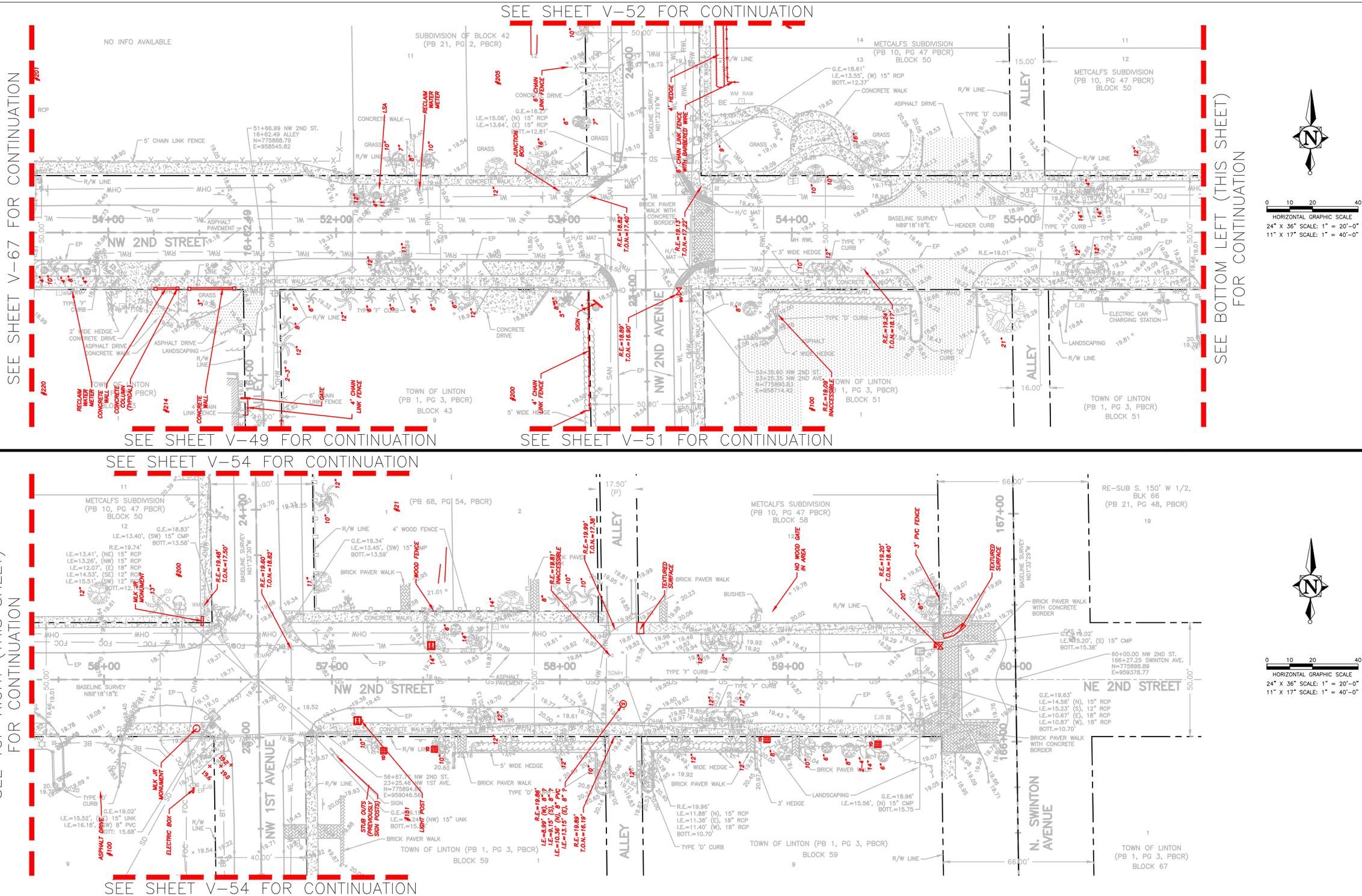
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-67-SRVY.dwg
LAST SAVED: 12/26/21 - 11:30am

CAS PROJECT NUMBER
19-2068

SHEET
V-67
OF
87



NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

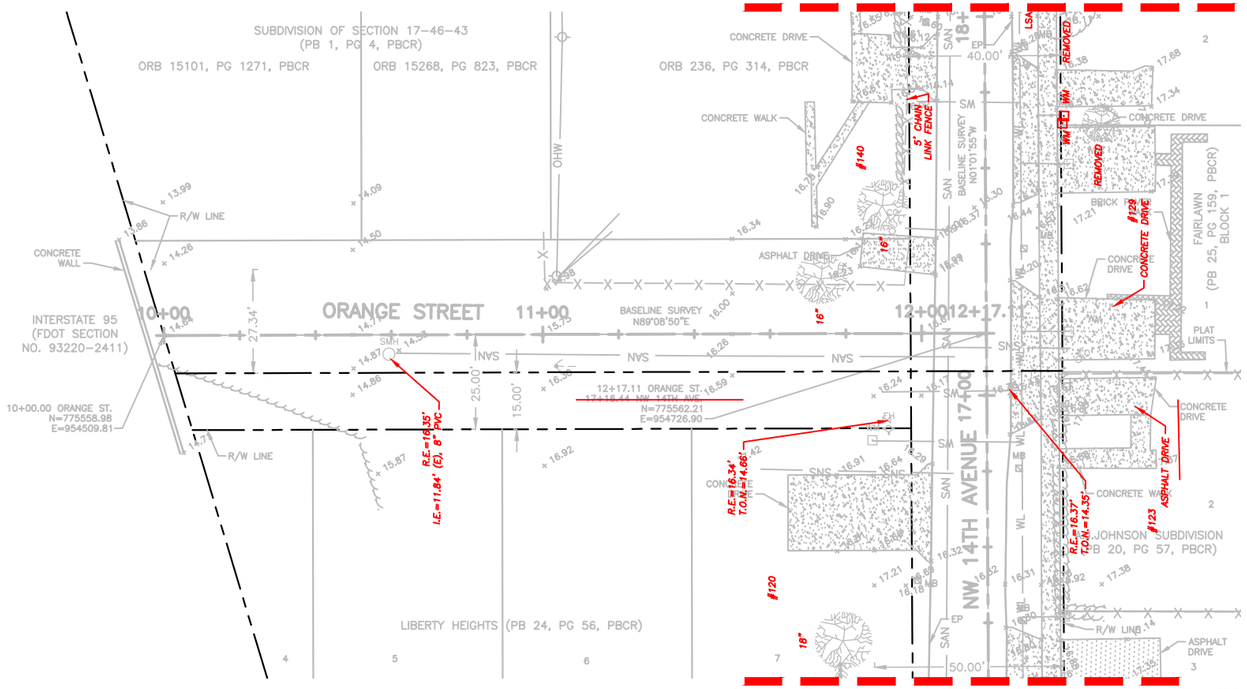
CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-68-SRVY.dwg
LAST SAVED: 06/02/20 - 8:52am

CAS PROJECT NUMBER
19-2068

SHEET
V-68
OF
87

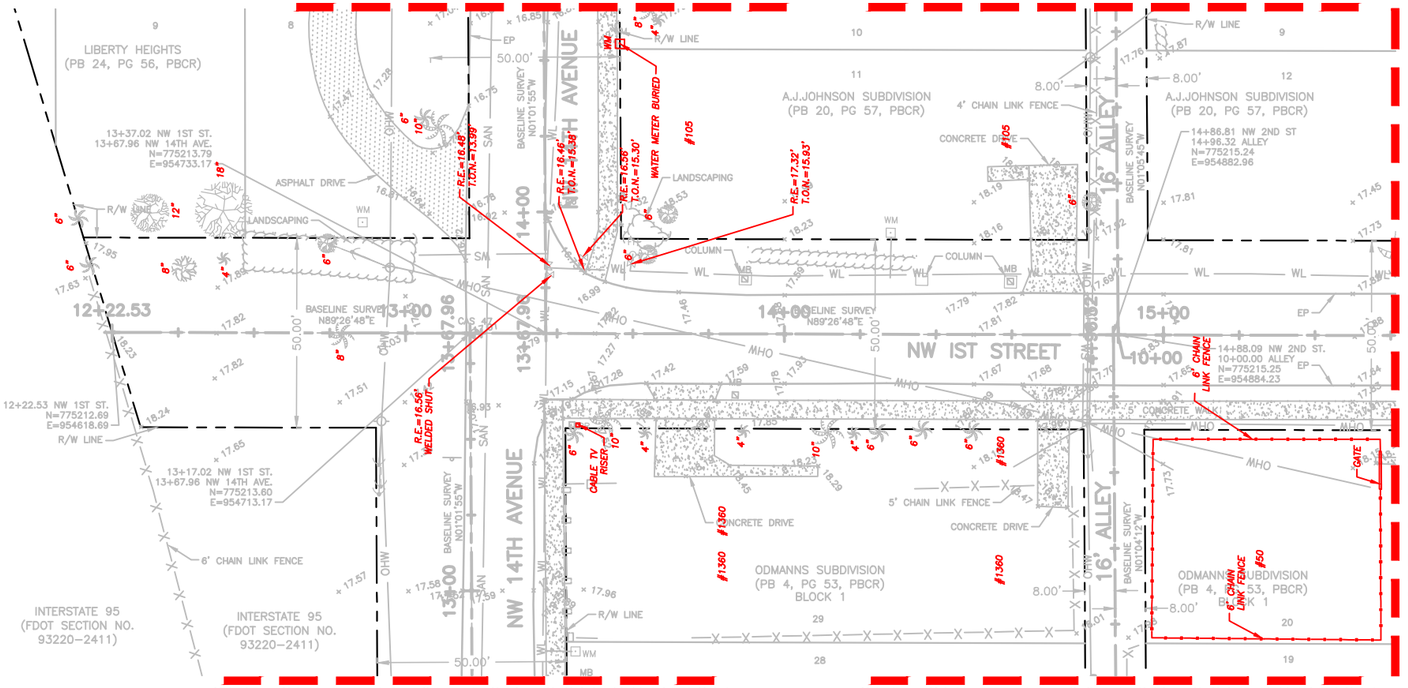
SEE SHEET V-08 FOR CONTINUATION



SEE SHEET V-08 FOR CONTINUATION

SEE SHEET V-08 FOR CONTINUATION

SEE SHEET V-10 FOR CONTINUATION



SEE SHEET V-07 FOR CONTINUATION

SEE SHEET V-09 FOR CONTINUATION

SEE SHEET V-70 FOR CONTINUATION

0 10 20 40
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-69-SRVY.dwg
LAST SAVED: 06/02/20 - 9:06am

CAS PROJECT NUMBER
19-2068

SHEET
V-69
OF
87

SEE SHEET V-12 FOR CONTINUATION

SEE SHEET V-69 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-11 FOR CONTINUATION

SEE SHEET V-17 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-71 FOR CONTINUATION

SEE SHEET V-17 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-70-SRVY.dwg
LAST SAVED: 12/26/21 - 12:23pm

CAS PROJECT NUMBER
19-2068

SHEET
V-70
OF
87

SEE SHEET V-20 FOR CONTINUATION

SEE SHEET V-23 FOR CONTINUATION

SEE SHEET V-25 FOR CONTINUATION

SEE SHEET V-70 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-27 FOR CONTINUATION

SEE SHEET V-29 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-72 FOR CONTINUATION

SEE SHEET V-20 FOR CONTINUATION

SEE SHEET V-25 FOR CONTINUATION

SEE SHEET V-29 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
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PALM BEACH COUNTY, FLORIDA

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(561) 314-4445
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MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-71-SRVY.dwg
LAST SAVED: 06/02/20 - 9:48am

CAS PROJECT NUMBER
19-2068

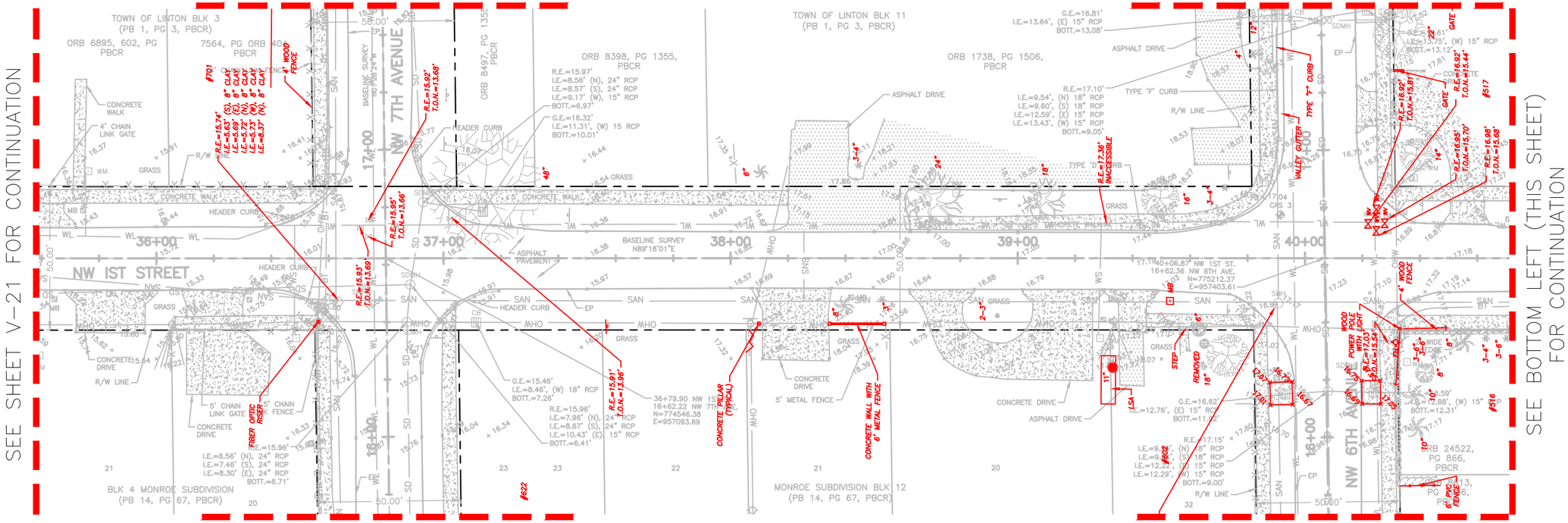
SHEET
V-71
OF
87

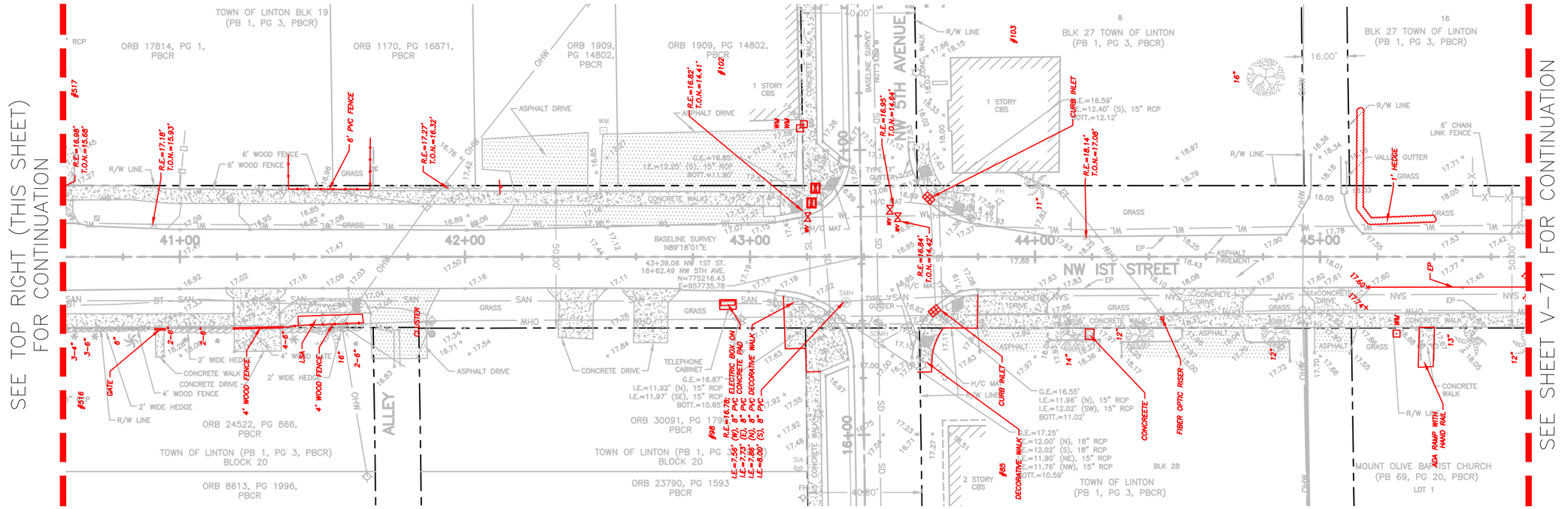
SEE SHEET V-32 FOR CONTINUATION

SEE SHEET V-36 FOR CONTINUATION

SEE SHEET V-21 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION





HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
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NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-72-SRVY.dwg
LAST SAVED: 06/02/20 - 10:03am

CAS PROJECT NUMBER
19-2068

SHEET
V-72
OF
87

SEE SHEET V-41 FOR CONTINUATION

SEE SHEET V-44 FOR CONTINUATION

SEE SHEET V-46 FOR CONTINUATION

SEE SHEET V-72 FOR CONTINUATION

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-41 FOR CONTINUATION

SEE SHEET V-46 FOR CONTINUATION

SEE SHEET V-49 FOR CONTINUATION

SEE SHEET V-51 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

SEE SHEET V-74 FOR CONTINUATION

SEE SHEET V-51 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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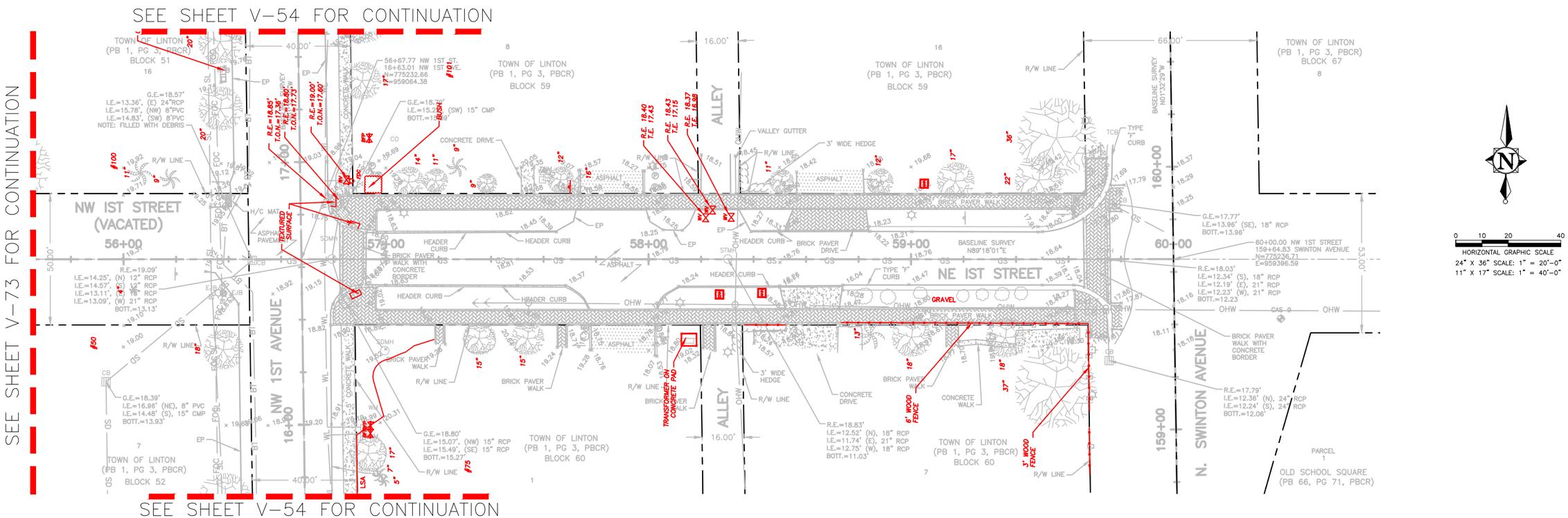
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-73-SRVY.dwg
LAST SAVED: 06/02/20 - 10:17am

CAS PROJECT NUMBER
19-2068

SHEET
V-73
OF
87



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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-74-SRVY.dwg
LAST SAVED: 12/26/21 - 1:06pm

CAS PROJECT NUMBER
19-2068

SHEET
V-74
OF
87

SEE SHEET V-11 FOR CONTINUATION

ATLANTIC PARK GARDENS (PB 14, PG 56, PBCR) BLOCK 1

ATLANTIC PARK GARDENS (PB 14, PG 56, PBCR) BLOCK 1

ASPHALT DRIVE

6' WOOD FENCE

6' WOOD FENCE

2' WIDE HEDGE

BASELINE SURVEY N01°06'14"E

BASELINE SURVEY N89°32'46"E

11+58.00 NW 12TH AVE.
10+00.00 NW 13TH AVE. (E)
N=774697.34
E=955662.75

R.E.=18.07'

ELECTRIC BOX
R.E.=18.07'
I.E.=13.14' (N), 6" CLAY
I.E.=13.22' (W), 8" CLAY

ABANDONED WOOD POWER POLE

R.E.=17.49'
FILLED W/ROCK

NOT INCLUDED

6' CHAIN LINK FENCE

NOT INCLUDED

ATLANTIC AVENUE (STATE ROAD 506)
(FDOT SECTION NO. 93030-2505)

SEE BOTTOM LEFT (THIS SHEET) FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

SEE SHEET V-16 FOR CONTINUATION

SEE TOP RIGHT (THIS SHEET) FOR CONTINUATION

ATLANTIC PARK GARDENS (PB 14, PG 56, PBCR) BLOCK 1

ATLANTIC PINES (PB 13, PG 77, PBCR) BLOCK 1

ATLANTIC PINES (PB 13, PG 77, PBCR) BLOCK 2

12TH AVENUE

NW 11TH AVENUE

16' ALLEY

VALLEY GUTTER

5' CHAIN LINK FENCE

4' PVC FENCE

7' WOOD FENCE

2' WIDE HEDGE

LANDSCAPING

TYPE 'F' CURB

TYPE 'D' CURB

CONCRETE DRIVE

CONCRETE WALK

ASPHALT DRIVE

ASPHALT WALK

ASPHALT PAVEMENT

ASPHALT APRON

CONCRETE WALK

4' CHAIN LINK FENCE IN CONCRETE WALL

6' CHAIN LINK FENCE

6' CHAIN LINK GATE

SPEED BUMP

BASELINE SURVEY N89°32'46"E

BASELINE SURVEY N01°11'18"W

11+66.01 NW 12TH AVE.
13+40.00 NW 13TH AVE. (E)
N=774713.04
E=955402.47

11+58.01 NW 12TH AVE.
13+40.00 NW 13TH AVE. (E)
N=774700.04
E=955402.74

11+71.02 NW 11TH AVE.
16+80.03 NW 13TH AVE. (E)
N=774715.73
E=955742.48

NOT INCLUDED

R.E.=16.71'
I.E.=12.21' (N), 8" CLAY

R.E.=16.39'
I.E.=13.09' (E), 8" DIP

R.E.=15.30'
I.E.=12.36' (E), 12X8 ELLIPTICAL
I.E.=12.33' (W), 12X8 ELLIPTICAL
BOTT.=10.61'

G.E.=14.90'
I.E.=12.34' (E) 12X8 ELLIPTICAL
BOTT.=7.47'

R.E.=16.14'
I.E.=12.37' (N), 15" RCP
I.E.=12.49' (W), 12X8 ELLIPTICAL
BOTT.=10.52'

R.E.=16.16'
I.E.=11.85' (N), 8" CLAY
I.E.=11.68' (E), 8" DIP
I.E.=12.01' (W), 8" DIP

LOT 1, BLOCK 6
(PB 13, PG 77, PBCR)

ATLANTIC AVENUE (STATE ROAD 506)
(FDOT SECTION NO. 93030-2505)

ATLANTIC PINES (PB 13, PG 77, PBCR)

SEE SHEET V-16 FOR CONTINUATION

HORIZONTAL GRAPHIC SCALE
0 10 20 40
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
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BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE, NO. LB0003110

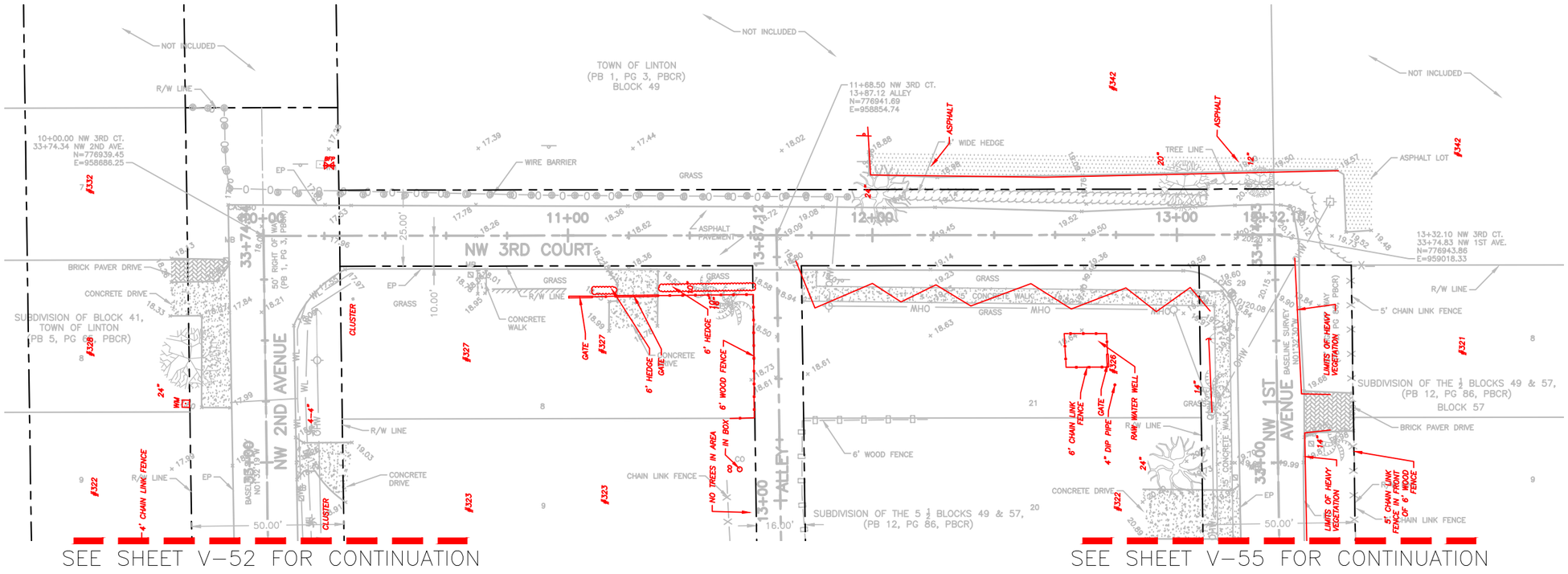
MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-75-SRVY.dwg
LAST SAVED: 03/04/22 - 8:56am

CAS PROJECT NUMBER
19-2068

SHEET
V-75
OF
87



0 10 20 40

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 20'-0"
11" X 17" SCALE: 1" = 40'-0"

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	10/15/19	1917/04	MM	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

FILE NAME: 20-2068-V-76-SRVY.dwg
LAST SAVED: 12/26/21 - 1:25pm

CAS PROJECT NUMBER
19-2068

SHEET
V-76
OF
87

Appendix B

Title Searches

STATEWIDE LAND TITLE, INC.

11726 150th Ct. N. Jupiter, FL 33478
561-743-0039 561-747-1369 (Fax)

Property Information Report

December 10, 2021

Customer File No.: City of Delray Beach, NW Neighborhood Improvements
SLTI File No.: 21-17052 Alleys 21 & N part 22
Expressly prepared for: Baxter & Woodman

Section 1. DESCRIPTION OF REAL PROPERTY SEARCHED:

Alleys Designated 21, and the North portion Designated 22 by the customer.

Section 2. PERIOD SEARCHED:

Beginning: August 23, 1926
Through: December 4, 2021 at 8:00 AM, Effective Date of Search

Section 3. LAST GRANTEE(S) OF RECORD:

City of Delray Beach, a municipal corporation of The State of Florida

Section 4. (a) INSTRUMENTS FOUND OF RECORD PURPORTING TO CONVEY OR TRANSFER AN OWNERSHIP INTEREST IN THE REAL PROPERTY SEARCHED:

	Instrument Type	Recorded In Deed Book /Page
1.	Plat of MONROE SUBDIVISION	14/67

The above-captioned property has been searched only by the above description and by no other description or name. This report purposely omits restrictions, easements, subdivision agreements and any reference to mortgages, judgments and/or liens which appear to be satisfied of record or have expired pursuant to Florida Statues.

This report does not reflect those documents, if any, which may have been recorded prior (other than an assumed mortgage) or subsequent to the time period covered herein and which may disclose the possible existence of encumbrances, liens, rights, interests or other matters which may affect the subject property.

This report is not title insurance. Pursuant to s. 627.7843, Florida Statutes, the maximum liability of the issuer of this property information report is limited to the amount paid for this property information report, and is further limited to the person(s) expressly identified by name in the property information report as the recipient(s) of the property information report. This company, in issuing this report, expressly disclaims any liability for the validity of any document or proceeding appearing in the public records and which constitutes a part of the report. This report does not directly or indirectly set forth or imply any opinion, warranty, guarantee, insurance, or other similar assurance as to the status of title. This report is prepared and furnished for information only.

This is not a certified copy

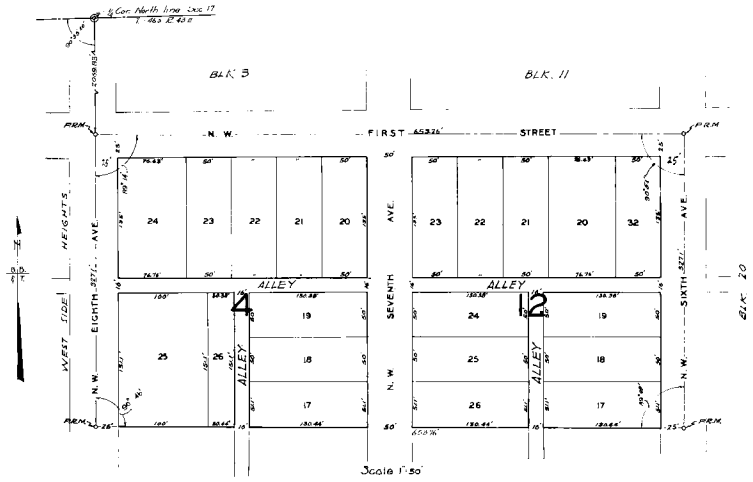
PL 19260169

67

MONROE SUBDIVISION

A SUBDIVISION OF THE NORTH 1/2 OF BLOCKS 4 & 12

DELRAY PALM BEACH COUNTY FLA.



DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That James Monroe, a single owner in fee simple of the tract of land shown on this plat and described as

Being all that portion of the North one half (½) of Blocks Four (4) and Twelve (12) of the original town of Linton (now Delray), Palm Beach County, Florida, according to the plat now on file in the office of the Clerk of Circuit Court, Palm Beach County, Florida

has caused said land to be surveyed and platted, and does hereby dedicate to the perpetual use of the public as public highways the streets and alleys shown thereon, reserving unto himself the reversion and reversions thereof, whereby the same shall be abandoned by the public or discontinued by law.

In Witness Whereof, I have hereunto set my hand and seal the 12th day of [illegible], A.D. 1926.

Signed in the presence of:

[illegible] (Seal)

ACKNOWLEDGMENT

STATE OF FLORIDA

COUNTY OF PALM BEACH

I Hereby Certify, That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments James Monroe, to me well known and known to me to be the individual described in and who executed the foregoing dedication and who acknowledged before me that he executed the same freely and voluntarily for the purpose therein expressed.

Witness my hand and official seal at Delray, County of Palm Beach and State of Florida, this 12th day of [illegible] A.D. 1926.

[illegible]
Notary Public

My Commission expires: [illegible]

ENGINEERS CERTIFICATE

We Certify, That the location, measurements and angles of the boundary lines of the plat shown hereon, to be taken from actual data found on the ground by survey under our direction, that the subdivision into lots of platshown and as located by the above mentioned survey was made under our direction, and that the information shown thereon to be true and accurate to the best of our knowledge and belief.

BUTLER BARNETT & TAYLOR

[illegible]
Florida State Certificate # 457

Subscribed and sworn to before me this 7th day of August A.D. 1926

[illegible]
Notary Public

My Commission expires: April 7th 1927

APPROVED BY BOARD OF COUNTY COMMISSIONERS

[illegible]
COUNTY ENGINEER

APPROVED BY CITY COUNCIL OF DELRAY

[illegible]
CITY CLERK

BUTLER BARNETT & TAYLOR
CIVIL ENGINEERS
411-14 CITIZENS BANK BLDG.
WEST PALM BEACH, FLA.

H.M.D.
5-26-26

STATEWIDE LAND TITLE, INC.

11726 150th Ct. N. Jupiter, FL 33478
561-743-0039 561-747-1369 (Fax)

Property Information Report

December 10, 2021

Customer File No.: City of Delray Beach, NW Neighborhood Improvements
SLTI File No.: 21-17052 Alleys 23 & S part 22
Expressly prepared for: Baxter & Woodman

Section 1. DESCRIPTION OF REAL PROPERTY SEARCHED:

Alleys Designated 23, and the South portion Designated 22, by the customer.

Section 2. PERIOD SEARCHED:

Beginning: March 25, 1910
Through: December 4, 2021 at 8:00 AM, Effective Date of Search

Section 3. LAST GRANTEE(S) OF RECORD:

Heirs and or Devisees under the Estates of John H. Adams

Section 4. (a) INSTRUMENTS FOUND OF RECORD PURPORTING TO CONVEY OR TRANSFER AN OWNERSHIP INTEREST IN THE REAL PROPERTY SEARCHED:

	Instrument Type	Recorded In Deed Book /Page
1.	Tax Deed	666/436

The above-captioned property has been searched only by the above description and by no other description or name. This report purposely omits restrictions, easements, subdivision agreements and any reference to mortgages, judgments and/or liens which appear to be satisfied of record or have expired pursuant to Florida Statues.

This report does not reflect those documents, if any, which may have been recorded prior (other than an assumed mortgage) or subsequent to the time period covered herein and which may disclose the possible existence of encumbrances, liens, rights, interests or other matters which may affect the subject property.

This report is not title insurance. Pursuant to s. 627.7843, Florida Statutes, the maximum liability of the issuer of this property information report is limited to the amount paid for this property information report, and is further limited to the person(s) expressly identified by name in the property information report as the recipient(s) of the property information report. This company, in issuing this report, expressly disclaims any liability for the validity of any document or proceeding appearing in the public records and which constitutes a part of the report. This report does not directly or indirectly set forth or imply any opinion, warranty, guarantee, insurance, or other similar assurance as to the status of title. This report is prepared and furnished for information only.

DEED RECORD BOOK 666 PAGE 436

DEED 666 PAGE 436

Form C-452—(5M-5-21-43)

Printed in Florida

TAX DEED

(Senate Bill No. 163)

STATE OF FLORIDA }
COUNTY OF PALM BEACH }

KNOW ALL MEN BY THESE PRESENTS: That whereas, part of Tax Certificate No. 5285, issued the 7th day of June, 19 26 was duly filed in the office of the Clerk of the Circuit Court of this county and application made for the issuance of a tax deed based thereon; and the applicant having paid or redeemed all other taxes on the lands hereinafter described required by law to be paid or redeemed, and the costs and expenses of this sale; and due notice of sale having been published as required by law, and no person entitled so to do having appeared to redeem said land, such land was on the 7th day of June, 19 43, offered for sale at the court-house door for cash to the highest bidder, and was then and there struck off and sold to John H. Adams, he being the highest bidder for the same and having paid the sum of his bid;

THEREFORE, The State of Florida, in consideration of the premises, and in consideration of the sum of ($ 68.35) Sixty-eight & 35/100 dollars, being the amount paid upon the said part of tax certificate and for costs and charges, and in pursuance of the statute in such cases made and provided, has given, granted, bargained and sold, and does hereby give, grant, bargain and sell, and convey to the said John H. Adams and to his heirs and assigns forever, to their own proper use, benefit and behoof the following land situated in the county and state aforesaid and described as follows: S 1/2 (Less E 51' of S 140')
Block 12 Town of Delray

containing ----- acres, more or less, provided, however, that said land shall continue subject and liable for any unpaid taxes thereon.

IN TESTIMONY WHEREOF, By virtue of authority in me vested by law, and for and on behalf of the State of Florida, I, the undersigned, as Clerk of the Circuit Court for the County and State aforesaid, have executed this deed and have thereunto set my official signature and seal, at West Palm Beach, in the County of Palm Beach, and State of Florida, this the 7th day of June, A.D. 1943.

J. Alex Cornett (SEAL)
Clerk of Circuit Court Palm Beach County, Florida.

Signed, sealed and delivered in the presence of:
J. M. Bloetscher
M. L. Chamberlain

DEED 666 PAGE 437

STATE OF FLORIDA,
County of Palm Beach

On this 7th day of June, A. D. 19 43, before me a Notary Public personally appeared J. Alex Arnette, Clerk of the Circuit Court in and for the State and County aforesaid, to me known to be the person described in, and who executed the foregoing instrument, and acknowledged the execution thereof to be his own free act and deed for the use and purposes therein mentioned.

Witness my hand and official seal the date aforesaid.

Stella M. Shannon

Notary Public, State of Florida at Large.
My commission expires Nov. 16, 1944.
Bonded by American Surety Co. of N. Y.

STATE OF FLORIDA
County of Palm Beach

On this 7th day of June, A. D. 19 43., before me J. Alex Arnette, Clerk of the Circuit Court in and for the County and State aforesaid, personally appeared J. M. Blackburn, to me known to be one of the subscribing witnesses to the foregoing instrument, who, being duly sworn, deposes and says that J. Alex Arnette, Clerk of the Circuit Court in and for County and State aforesaid, to him well known, did, in his presence, sign, seal and deliver the foregoing instrument of writing for the purposes therein mentioned, and that W. L. Campbell did in his presence witness the same, and that he and the said other witness did attest the same as witnesses in the presence of each other.

Sworn to and subscribed before me this the 7th day of June, A. D. 19 43.

J. Alex Arnette
Clerk Circuit Court Palm Beach County.

J. M. Blackburn

615

(Senate Bill No. 163)

TAX DEED No.

Executed on the 7th day of June, 1943 to Palm Beach County.

John H. Adams,

Filed for Record ....., 19....

Delray Beach, Florida.

STATE OF FLORIDA,
County of PALM BEACH

Be It Remembered; That on this 19th day of JUNE AT 11:40 A.M., A. D. 1943, the foregoing instrument of writing was presented for record to the subscriber, the Clerk of the Circuit Court in and for the County aforesaid, and the same being properly authenticated, I have duly recorded the same in Deed Book 666, Page 436, and have verified the record.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of said Court the day and year above mentioned.

J. Alex Arnette
Clerk Circuit Court PALM BEACH County.
By W. L. Campbell, D.C.

STATEWIDE LAND TITLE, INC.

11726 150th Ct. N. Jupiter, FL 33478
561-743-0039 561-747-1369 (Fax)

Property Information Report

December 10, 2021

Customer File No.: City of Delray Beach, NW Neighborhood Improvements
SLTI File No.: 21-17052 Alleys 24 & 25
Expressly prepared for: Baxter & Woodman

Section 1. DESCRIPTION OF REAL PROPERTY SEARCHED:

Alleys Designated 24 & 25 by the customer.

Section 2. PERIOD SEARCHED:

Beginning: February 3, 1926
Through: December 4, 2021 at 8:00 AM, Effective Date of Search

Section 3. LAST GRANTEE(S) OF RECORD:

City of Delray Beach, a municipal corporation of The State of Florida

Section 4. (a) INSTRUMENTS FOUND OF RECORD PURPORTING TO CONVEY OR TRANSFER AN OWNERSHIP INTEREST IN THE REAL PROPERTY SEARCHED:

	Instrument Type	Recorded In Deed Book /Page
1.	Plat of ATLANTIC PINES	13/77

The above-captioned property has been searched only by the above description and by no other description or name. This report purposely omits restrictions, easements, subdivision agreements and any reference to mortgages, judgments and/or liens which appear to be satisfied of record or have expired pursuant to Florida Statues.

This report does not reflect those documents, if any, which may have been recorded prior (other than an assumed mortgage) or subsequent to the time period covered herein and which may disclose the possible existence of encumbrances, liens, rights, interests or other matters which may affect the subject property.

This report is not title insurance. Pursuant to s. 627.7843, Florida Statutes, the maximum liability of the issuer of this property information report is limited to the amount paid for this property information report, and is further limited to the person(s) expressly identified by name in the property information report as the recipient(s) of the property information report. This company, in issuing this report, expressly disclaims any liability for the validity of any document or proceeding appearing in the public records and which constitutes a part of the report. This report does not directly or indirectly set forth or imply any opinion, warranty, guarantee, insurance, or other similar assurance as to the status of title. This report is prepared and furnished for information only.

Refer to Resolution Bk 15070 Pg 1555 Vacating and Abandoning A Pt of 16 FT North/South Alley R/W

PB 17 PG 113

77

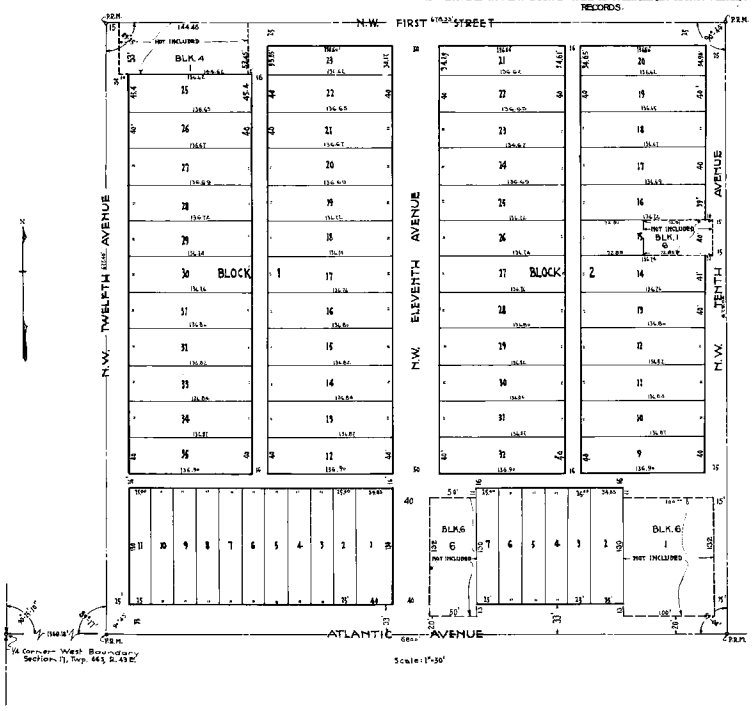
ATLANTIC PINES

A RE-SUBDIVISION OF WHIDDEN'S SUBDIVISION

PALM BEACH COUNTY

FLORIDA

(EXCEPTING LOTS 1 & 6, BLOCK 6, EAST 1/2 OF LOT 6, BLOCK 1 AND LOT 1, BLOCK 4 OF THE ORIGINAL PLAT.)
AS RECORDED IN PLAT BOOK 2 PAGE 58 PALM BEACH COUNTY FLORIDA RECORDS.



DEDICATION

STATE OF FLORIDA
COUNTY OF PALM BEACH.

KNOW ALL MEN BY THESE PRESENTS:—

That CONRAD O. STUMPF, joined by his wife, ELEANOR B. STUMPF, owners in fee simple of the land of land shown on this Plat, excepting lots 1 & 6, block 6, East ½ of lot 6, block 1 and lot 1, block 4 of the original Plat, and described as follows: Being a Re-Subdivision of Whidden's Subdivision as recorded in Platbook 2, page 58, Palm Beach County Records, has caused said land to be surveyed and platted, and do hereby dedicate to the perpetual use of the public as public highways, the streets and alleys shown hereon, reserving unto themselves the limited access easement thereof wherever the same shall be abandoned by the public or discontinued by law.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this day of December A.D. 1925.

SIGNED IN THE PRESENCE OF:

M. H. C. Jaspe
M. C. Pinkney

Conrad O. Stumpf L.S.
Eleanor B. Stumpf L.S.

ACKNOWLEDGEMENT

STATE OF FLORIDA
COUNTY OF PALM BEACH.

I HEREBY CERTIFY, That on this day, personally appeared before me an officer duly authorized to administer oaths and take acknowledgements, CONRAD O. STUMPF and ELEANOR B. STUMPF, to me well known and known to be the individuals described in and who executed the foregoing dedication and who acknowledged before me that they executed the same freely and voluntarily for the purpose therein expressed.

AND I FURTHER CERTIFY, That the said ELEANOR B. STUMPF, known to me to be the wife of the said CONRAD O. STUMPF, on examining and privately examining her, did declare and say before me separately and apart from her said husband, and acknowledge that she made herself a party to said dedication for the purpose of renouncing, relinquishing and conveying all her right title and interest, whether of dower, homestead or of separate property, statutory or otherwise in and to the land described herein and that she executed the same freely and voluntarily and without any compulsion, constraint, apprehension, or fear of or from her said husband.

WITNESS MY HAND AND OFFICIAL SEAL at West Palm Beach, County of Palm Beach and State of Florida, this 24th day of December A.D. 1925.

Notary Public
My Commission Expires April 1st 1929

ENGINEER'S CERTIFICATE

WE CERTIFY that the location, measurements, and angles of the boundary lines of the Plat shown hereon, are taken from actual data found on the ground by survey under our direction, and that the sub-divisions into lots of the Plat shown, and as platted in the above mentioned survey was made under our direction, and that the information shown hereon is true and accurate to the best of our knowledge and belief.

BUTLER BARNETT & TAYLOR
By C. A. Barnett
Florida State Certificate #14

SUBSCRIBED AND SWORN TO before me this 24th day of December A.D. 1925.

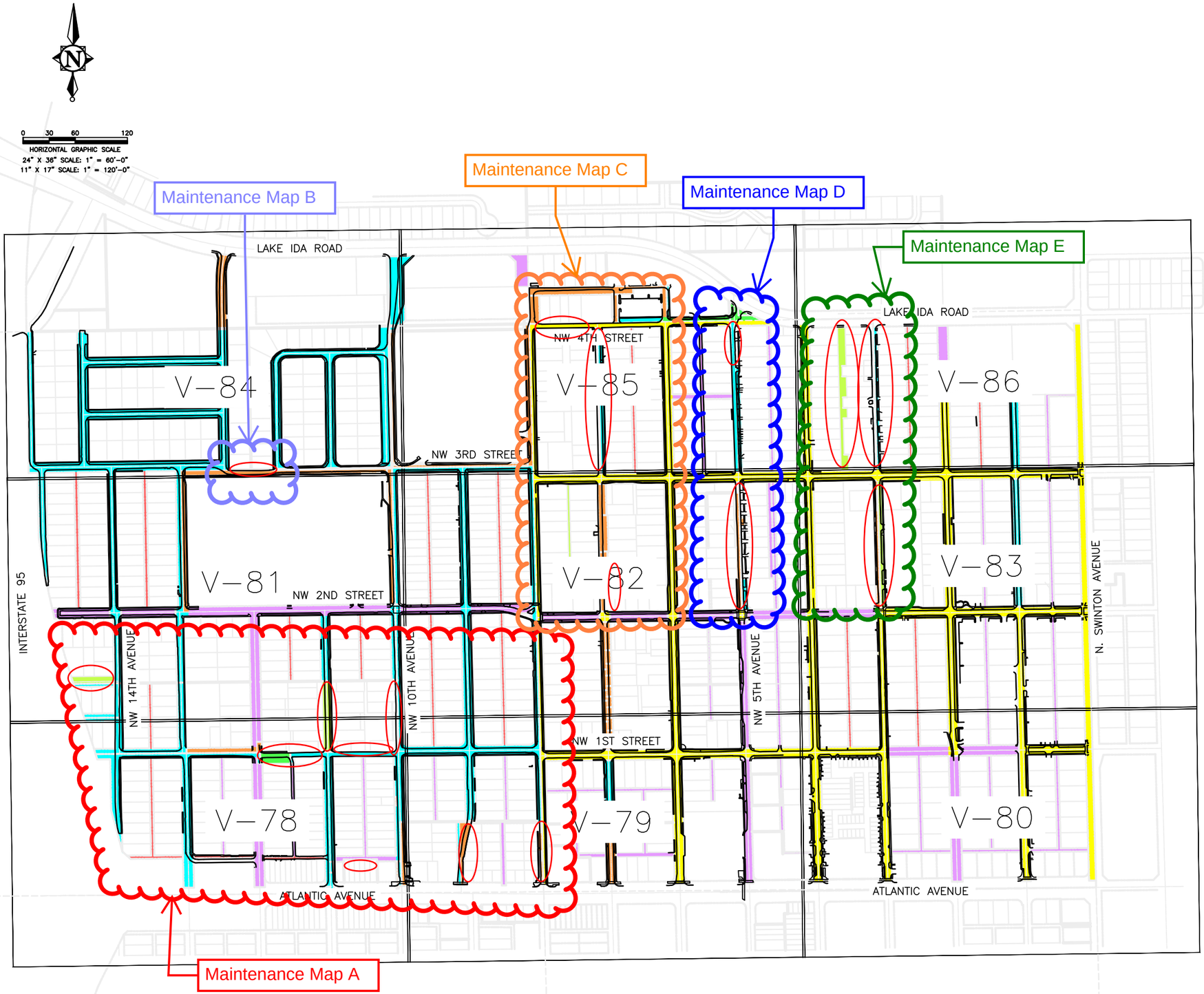
Notary Public
My Commission Expires April 5th 1929

APPROVED BY THE CITY COUNCIL OF DELRAY, FLORIDA.
City Clerk.

APPROVED BY THE BOARD OF COUNTY COMMISSIONERS
County Engineer

BUTLER BARNETT & TAYLOR
CIVIL ENGINEERS
411-14 CITIZENS BANK BLDG.
WEST PALM BEACH, FLA.

11-15
155



0 30 60 120
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

SURVEYOR'S NOTES:

1. THIS RIGHT OF WAY DISPOSITION MAP IS PROVIDED TO CLARIFY INFORMATION FOR RIGHTS OF WAYS, EASEMENTS, PARCELS, ETC. SHOWN ON THE MAP OF SPECIFIC PURPOSE SURVEY, BUT NOT IDENTIFIED DUE TO SPACE LIMITATIONS. NOTE 2 BELOW APPEARS ON THE FACE OF SAID SURVEY IN ITS ENTIRETY AND APPLIES TO THIS MAP AS WELL.

2. NO SEARCH OF THE PUBLIC RECORDS WAS UNDERTAKEN FOR EASEMENTS, RIGHTS OF WAYS, RESTRICTIONS OR OTHER RECORDED OR EVIDENCE OF UNRECORDED DOCUMENTS BY THIS FIRM THOUGH A LIMITED SEARCH OF THE PALM BEACH COUNTY PROPERTY APPRAISER'S WEBSITE WAS PERFORMED FOR VARIOUS DEED AND PLAT INFORMATION. RIGHTS OF WAYS WERE SEARCHED FOR OWNERSHIP BY: STATEWIDE LAND TITLE, INC. UNDER CUSTOMER FILE NO. "CITY OF DELRAY BEACH, NW NEIGHBORHOOD IMPROVEMENTS RFQ 2018-054". A "BEST FIT" APPROACH WAS TAKEN FOR VARIOUS INTERIOR STREETS WITHIN THE LIMITS OF THE PROJECT. THE RIGHT OF WAY INFORMATION SHOWN FOR ATLANTIC AVENUE (STATE ROAD NO. 806) IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP - STATE PROJECT NUMBER 93030-2505 (DATED: 04-21-09) AND 93030 - 2506 (DATED: 07-09-09). THE RIGHT OF WAY INFORMATION SHOWN FOR INTERSTATE 95 IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP - STATE PROJECT NUMBER 93220-2411 (LAST REVISED 11-01-99). THE RIGHT OF WAY INFORMATION SHOWN FOR LAKE IDA ROAD IS PER THE PALM BEACH COUNTY RIGHT OF WAY ACQUISITION MAP - PALM BEACH COUNTY PROJECT NUMBER: 90502 (DATED: 10-90).

3. RIGHTS OF WAYS, ALLEYS, ETC. TO BE INCLUDED IN THE SURVEY WERE DETERMINED BY THE CITY OF DELRAY BEACH.

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

LEGEND

ORB	OFFICIAL RECORDS BOOK
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PBCR	PALM BEACH COUNTY RECORDS
17-46-43	SECTION, TOWNSHIP, RANGE

- RIGHT OF WAY - TOWN OF LINTON (PB 1, PG 3, PBCR)
- RIGHT OF WAY - DEDICATED BY PLAT (OTHER THAN TOWN OF LINTON)
- RIGHT OF WAY OR EASEMENT DEDICATED BY SEPARATE INSTRUMENT (DEED)
- CITY OWNED PROPERTY NOT OFFICIALLY DEDICATED AS RIGHT OF WAY
- COUNTY AND/OR STATE ROAD RIGHT OF WAY
- ALLEY RIGHT OF WAY DEDICATED BY PLAT OR SEPARATE INSTRUMENT (DEED)
- NOT INCLUDED - NO SURVEY (SCOPE)
- PRIVATELY OWNED STREETS/ALLEYS

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

FILE NAME: 20-2068-V-77-SRVY.dwg
LAST SAVED: 07/29/20 - 8:44am

CAS PROJECT NUMBER
19-2068

SHEET
V-77
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-2-15-NW-NEIGHBORHOOD\09-Plans\05-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-77-SRVY.dwg, 9/30/2020 9:52:56 AM, mmarenco, 1:2

P:\Cities_Villages_Towns\Delray Beach\19-2068\1-2\5-NW-NEIGHBORHOOD\09-Plans\09-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-78-SRVY.dwg, 9/30/2020 9:40:24 AM, mmarenco, 1:2

N

0 30 60 120
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

LEGEND

ORB	OFFICIAL RECORDS BOOK
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PBCR	PALM BEACH COUNTY RECORDS
17-46-43	SECTION, TOWNSHIP, RANGE

- RIGHT OF WAY – TOWN OF LINTON (PB 1, PG 3, PBCR)
- RIGHT OF WAY – DEDICATED BY PLAT (OTHER THAN TOWN OF LINTON)
- RIGHT OF WAY OR EASEMENT DEDICATED BY SEPARATE INSTRUMENT (DEED)
- CITY OWNED PROPERTY NOT OFFICIALLY DEDICATED AS RIGHT OF WAY
- COUNTY AND/OR STATE ROAD RIGHT OF WAY
- ALLEY RIGHT OF WAY DEDICATED BY PLAT OR SEPARATE INSTRUMENT (DEED)
- NOT INCLUDED – NO SURVEY (SCOPE)
- PRIVATELY OWNED STREETS/ALLEYS

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

Maintenance Map A

LIBERTY HEIGHTS (PB 24, PG 56, PBCR)
A.J. JOHNSON SUBDIVISION (PB 20, PG 57, PBCR)
SUB. SEC. 17-46-43 (PB 1, PG 4, PBCR)
ORB 6489, PG 972, PBCR
ORB 30582, PG 339, PBCR
ORB 20079, PG 152, PBCR
ORB 30768, PG 1065, PBCR
ORB 24101, PG 1147, PBCR
ORB 30224, PG 904, PBCR
ORB 29338, PG 585, PBCR
ORB 29338, PG 580, PBCR
ORB 26367, PG 773, PBCR
ORB 29721, PG 674, PBCR
ORB 664, PG 469, PBCR
ORB 22385, PG 1570, PBCR
NO R/W DEDICATION PROVIDED LAST KNOWN OWNER: MAGGIE ROLLE ORB 6254, PG 898, PBCR
OWNER: MAGGIE & WALTER ROLLE HEIRS AND/OR ASSIGNS PER PETITION FILED JUNE 16, 1927
ORB 25915, PG 1932
ORB 26215, PG 30, PBCR
ORB 3, PG 34, PBCR
ORB 30923, PG 1103, PBCR
ORB 25941, PG 1711, PBCR
CITY OF DELRAY BEACH (ORB 2727, 1297, PBCR) LOT 1, BLOCK 4 WHIDDENS SUBDIVISION (PB 2, PG 58, PBCR)
ATLANTIC PARK GARDENS (PB 14, PG 56, PBCR)
ATLANTIC PINES (PB 13, PG 77, PBCR) BLOCK 1
ATLANTIC PINES (PB 13, PG 77, PBCR) BLOCK 2
BLOCK 1 ODMANNS SUBDIVISION (PB 4, PG 53, PBCR)
INTERSTATE 95 (FDOT SECTION NO. 93220-2411)
25' RIGHT OF WAY (PB 24, PG 56, PBCR)
25' RIGHT OF WAY (PB 4, PG 53, PBCR)
25' RIGHT OF WAY (PB 20, PG 57, PBCR)
25' RIGHT OF WAY (ORB 1158, PG 61, PBCR)
NW 1ST STREET
25' RIGHT OF WAY (PB 14, PG 56, PBCR)
25' RIGHT OF WAY (PB 13, PG 77, PBCR)
30' RIGHT OF WAY (PB 4, PG 53, PBCR)
NW 14TH AVENUE
NW 13TH AVENUE
NW 12TH AVENUE
NW 11TH AVENUE
NW 10TH AVENUE
50' RIGHT OF WAY (NOT INCLUDED)
15' RIGHT OF WAY (PB 2, PG 58, PBCR)
25' RIGHT OF WAY (PB 13, PG 76, PBCR)
30' RIGHT OF WAY (PB 13, PG 77, PBCR)
16' ALLEY (PB 4, PG 53, PBCR)
16' ALLEY (PB 14, PG 56, PBCR)
16' ALLEY (PB 13, PG 77, PBCR)
16' ALLEY (PB 13, PG 7, PBCR) (NOT INCLUDED)
10' RIGHT OF WAY (ORB 865, PG 227, PBCR)
NOT INCLUDED
173.00'
53.00'
27.00'
SOUTH LINE NW 1/4 SEC. 17-46-43
BASELINE SURVEY ATLANTIC AVENUE (STATE ROAD 506) (FDOT SECTION NO. 93030-2505)
ATLANTIC AVENUE (STATE ROAD 506) (FDOT SECTION NO. 93030-2505)
ATLANTIC AVENUE (STATE ROAD 506) (FDOT SECTION NO. 93030-2506)
WHIDDENS (PB 2, PG 58, PBCR) LOT 1, BLOCK 6
10' RIGHT OF WAY (ORB 865, PG 226, PBCR)
15' RIGHT OF WAY (PB 13, PG 77, PBCR)
15' RIGHT OF WAY (PB 13, PG 77, PBCR)
ATLANTIC GARDENS PB 14, PG 63 BLOCK 5
ATLANTIC GARDENS PB 14, PG 63 BLOCK 8
ODMANNS SUB. PB 4, PG 53 BLOCK 4
ATLANTIC PARK GARDENS PB 14, PG 56 BLOCK 2
16' ALLEY (P)
SW 14TH AVENUE
SW 13TH AVENUE
SW 12TH AVENUE
SW 11TH AVENUE

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

FILE NAME: 20-2068-V-78-SRVY.dwg
LAST SAVED: 09/30/20 – 9:34am

CAS PROJECT NUMBER
19-2068

SHEET
V-78
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-I-21-5-NW-NEIGHBORHOOD\09-Plans\05-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-79-SRVY.dwg, 9/30/2020 9:58:30 AM, mmarenco, 1:2

A BLOCK
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

B BLOCK
WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)

WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)
BLOCK C

WEST SIDE HEIGHTS
(PB 13, PG 61, PBCR)
BLOCK D

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

NW 1ST STREET
50' RIGHT OF WAY (PB 13, PG 61, PBCR)

16' ALLEY (PB 13, PG 61, PBCR)

NW 9TH AVE
50' RIGHT OF WAY (PB 13, PG 61, PBCR)

16' ALLEY (PB 13, PG 61, PBCR) (NOT INCLUDED)

25' RIGHT OF WAY (PB 13, PG 61, PBCR)

VARIABLE WIDTH RIGHT OF WAY (PB 2, PG 89, PBCR) (NOT INCLUDED)

15' RIGHT OF WAY (PB 2, PG 89, PBCR)
VARIABLE WIDTH RIGHT OF WAY (ORB 4465, PG 1517, PBCR)

NW 9TH AVE

LOT 3 S/D SECTION 17, TOWNSHIP 46 SOUTH, (PB 1, PG 4, PBCR)

ORB 27357, PG 811, PBCR
ORB 28655, PG 1261, PBCR
ORB 30041, PG 973, PBCR
ORB 30316, PG 1232, PBCR
ORB 4346, PG 559, PBCR
ORB 22141, PG 1212, PBCR
ORB 21961, PG 480, PBCR
ORB 21961, PG 480, PBCR
ORB 12267, PG 1952, PBCR

J.G. FENNO'S S/D (PB 2, PG 89, PBCR)
BLOCK 2

J.G. FENNO'S S/D (PB 2, PG 89, PBCR)
BLOCK 1

20' RIGHT OF WAY (PB 2, PG 89, PBCR) (NOT INCLUDED)

ORB 25134, PG 1808, PBCR
ORB 24808, PG 365, PBCR
ORB 24152, PG 1110, PBCR
ORB 24808, PG 365, PBCR
ORB 11116, PG 1816, PBCR

ORB 30611, PG 562, PBCR
ORB 27008, PG 107, PBCR
ORB 12302, PG 142, PBCR
ORB 30023, PG 272, PBCR
ORB 24810, PG 274, PBCR
ORB 6895, PG 602, PBCR
ORB 7564, PG 404, PBCR

BLOCK 3
TOWN OF LINTON
(PB 1, PG 3, PBCR)

NW 7TH AVENUE

25' RIGHT OF WAY (ORB 1102, PG 179 PBCR)

ORB 8497, PG 1355 PBCR

ORB 8398, PG 1355, PBCR

BLOCK 11
TOWN OF LINTON
(PB 1, PG 3, PBCR)

ORB 1738, PG 1506, PBCR

25' RIGHT OF WAY (ORB 1102, PG 185 PBCR)

NW 1ST STREET
50' RIGHT OF WAY (PB 1, PG 3, PBCR)

ORB 11576, PG 1449, PBCR
ORB 11598, PG 1331, PBCR
ORB 17814, PG 1, PBCR

ORB 5417, PG 229, PBCR

TOWN OF LINTON (PB 1, PG 3, PBCR)
BLK 19

ORB 1170, PG 16871, PBCR
ORB 1909, PG 14802, PBCR
ORB 1909, PG 14802, PBCR

NW 5TH AVENUE
(NOT INCLUDED)

7
8
TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 27

16' ALLEY (PB 1, PG 3, PBCR) (NOT INCLUDED)

15
16
TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 27

NW 1ST STREET
50' RIGHT OF WAY (PB 1, PG 3, PBCR)

24 23 22 21 20
BLOCK 4
MONROE SUBDIVISION
(PB 14, PG 67, PBCR)

23 22 21 20 32
BLOCK 12
MONROE SUBDIVISION
(PB 14, PG 67, PBCR)

16' ALLEY (PB 14, PG 67, PBCR) (NOT INCLUDED)

NW 7TH AVENUE
50' RIGHT OF WAY (PB 14, PG 67, PBCR)

25 26 19 18 17
16' ALLEY (PB 14, PG 67, PBCR) (NOT INCLUDED)

24 25 26 19 18 17
16' ALLEY (PB 14, PG 67, PBCR) (NOT INCLUDED)

NW 6TH AVENUE
50' RIGHT OF WAY (PB 1, PG 3, PBCR)

ORB 24522, PG 866, PBCR
ORB 8613, PG 1996, PBCR
ORB 10484, PG 688, PBCR
ORB 15989, PG 768, PBCR

ORB 30091, PG 1790, PBCR
ORB 23790, PG 1593 PBCR
16' ALLEY (PB 1, PG 3, PBCR) (NOT INCLUDED)

ORB 15989, PG 766 PBCR

TOWN OF LINTON
(PB 1, PG 3, PBCR)
ORB 6711, PG 1761 PBCR
BLOCK 20

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 28

16' UTILITY & INGRESS/EGRESS EASEMENT (PB 69, PG 20, PBCR) (NOT INCLUDED)

LOT 1

MOUNT OLIVIE BAPTIST CHURCH
(PB 69, PG 20, PBCR)
LOT 1

ATLANTIC GROVE
(PB 96, PG 55, PBCR)
TRACT "C-2"

16' ALLEY (PB 1, PG 3, PBCR) VACATED (ORB 10949, PG. 757, PBCR) (NOT INCLUDED)

BLOCK 28

MOUNT OLIVIE BAPTIST CHURCH
(PB 69, PG 20, PBCR)
LOT 2

PORTION 16' ALLEY
(PB 1, PG 3, PBCR)
(NOT INCLUDED)

ATLANTIC GROVE
(PB 96, PG 55, PBCR)
TRACT "C-2"

NW 5TH AVENUE (NOT INCLUDED)
40' RIGHT OF WAY (PB 1, PG 3, PBCR)

ORB 10905, PG 1312, PBCR
TOWN OF LINTON (PB 1, PG 3, PBCR)
BLOCK 4

ORB 26553, PG 1295, PBCR
ORB 30039, PG 809, PBCR
ORB 26553, PG 1297, PBCR

ORB 26633, PG 1664, PBCR

25' RIGHT OF WAY ORB 24808, PG 365, PBCR)

20' ALLEY (ORB 1119, PG 111, PBCR) (NOT INCLUDED)

PARCEL "A"
AMOCO PLAT
(PB 69, PG 38, PBCR)

2' RIGHT OF WAY
(PB 69, PG 38, PBCR)

ORB 26553, PG 1297, PBCR

25' RIGHT OF WAY (ORB 1001, PG 663, PBCR)

ORB 28815, PG 597, PBCR

NO INFO AVAILABLE

ORB 12154, PG 204, PBCR

16' ALLEY (PB 1, PG 3, PBCR) (NOT INCLUDED)

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 12

ORB 23196, PG 1763, PBCR

ORB 28189, PG 1379, PBCR

20' ALLEY (ORB 1119, PG 109, PBCR) (NOT INCLUDED)

ORB 28815, PG 603

ORB 28984, PG 1817

ORB 23229, PG 1574, PBCR

12' RIGHT OF WAY
(PB 1263, PG 532, PBCR)

53.00'
55.00'
53.00'
53.00'

SOUTH LINE NE 1/4
17-46-43

NOTE: RIGHT OF WAY ON EAST SIDE IS THE EDGE OF PAVEMENT PER DELRAY BEACH RESOLUTION (ORB 7675, PG 795, PBCR) UNLESS OTHERWISE SHOWN

ATLANTIC AVENUE (STATE ROAD 506)
(FDOT SECTION NO. 93030-2506)

SE CORNER NW 1/4
17-46-43

BELAIR HEIGHTS
PB 20, PG 45
BLOCK 1

TRACT "B"
BELAIR HEIGHTS REPLAT
PB 73, PG 17

TRACT "C"

7
8
17

A LOT
UNPLATTED

RESUB NE COR SW 1/4
17-46-43
PB 10, PG 79

5 4 3 2 1

NW 8TH AVE

1
BELAIR HEIGHTS
PB 20, PG 45
BLOCK 2
2

UNPLATTED

SUBDIVISION OF BLOCK 5
PB 25, PG 72

1 2 3 4 5 6 7 8 9 10 11

12 21
13 22

BASELINE SURVEY
(FDOT)

TOWN OF LINTON BLK 13
PB 1, PG 3

TOWN OF LINT
PB 1,

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

LEGEND

ORB	OFFICIAL RECORDS BOOK
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PBCR	PALM BEACH COUNTY RECORDS
17-46-43	SECTION, TOWNSHIP, RANGE

- RIGHT OF WAY – TOWN OF LINTON (PB 1, PG 3, PBCR)
- RIGHT OF WAY – DEDICATED BY PLAT (OTHER THAN TOWN OF LINTON)
- RIGHT OF WAY OR EASEMENT DEDICATED BY SEPARATE INSTRUMENT (DEED)
- CITY OWNED PROPERTY NOT OFFICIALLY DEDICATED AS RIGHT OF WAY
- COUNTY AND/OR STATE ROAD RIGHT OF WAY
- ALLEY RIGHT OF WAY DEDICATED BY PLAT OR SEPARATE INSTRUMENT (DEED)
- NOT INCLUDED – NO SURVEY (SCOPE)
- PRIVATELY OWNED STREETS/ALLEYS

NO.	DATE	FB / PG	DWN	REVISION	CKD
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PALM BEACH COUNTY, FLORIDA

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CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

FILE NAME: 20-2068-V-79-SRVY.dwg
LAST SAVED: 07/29/20 – 8:53am

CAS PROJECT NUMBER
19-2068

SHEET
V-79
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-2-5-NW-NEIGHBORHOOD\03-Plans\05-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-80-SRVY.dwg, 9/30/2020 9:42:06 AM, rmarenco, 1:2

NW 1ST STREET
50' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 1ST STREET
50' RIGHT OF WAY (PB 1, PG 3, PBCR)
(NOT INCLUDED)

NW 1ST STREET (VACATED)
(ORB 475, PG 285, PBCR) (NOT INCLUDED)

NW 1ST STREET
50' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 4TH AVENUE
50' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 3RD AVENUE
40' RIGHT OF WAY (PB 1, PG 3, PBCR)

16' ALLEY (PB 1, PG 3, PBCR)

16' ALLEY VACATED (ORB 8473, PG 1867, PBCR) (NOT INCLUDED)

NW 2ND AVENUE (VACATED ORB 475, PG 285, PBCR)
(50' RIGHT OF WAY NOT INCLUDED)

16' ALLEY VACATED (ORB 6060, PG 1455, PBCR) (NOT INCLUDED)

40' RIGHT OF WAY (PB 1, PG 3, PBCR)
NW 1ST AVENUE

16' ALLEY (PB 1, PG 3, PBCR) (NOT INCLUDED)

N. SWINTON AVENUE
33' RIGHT OF WAY (PB 1, PG 3, PBCR)

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 35

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 43

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 51

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 59

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 67

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 44

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 52

TOWN OF LINTON
(PB 1, PG 3, PBCR)
BLOCK 60

OLD SCHOOL SQUARE
(PB 66, PG 71, PBCR)
PARCEL 1

MOUNT OLIVE BAPTIST CHURCH
(PB 69, PG 20, PBCR) LOT 1

MOUNT OLIVE BAPTIST CHURCH
(PB 69, PG 20, PBCR) LOT 2

ATLANTIC GROVE
(PB 96, PG 55, PBCR)
TRACT "C-2"

ATLANTIC GROVE
(PB 96, PG 55, PBCR)
TRACT "C-1"

REVISED PLAT OF BLOCK 36
(PB 5, PG 38, PBCR)

TRACT "R-2"

TRACT "R-1"

2' ADDITIONAL RIGHT OF WAY
(PB 96, PG 55, PBCR)

53.00'

SOUTH LINE SE 1/4
17-46-43

EAST 1/
17-

ATLANTIC AVENUE (STATE ROAD 506)
(FDOT SECTION NO. 93030-2506)

BASELINE SURVEY
(FDOT)

0 30 60 120
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

LEGEND

ORB	OFFICIAL RECORDS BOOK
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PBCR	PALM BEACH COUNTY RECORDS
17-46-43	SECTION, TOWNSHIP, RANGE

- RIGHT OF WAY – TOWN OF LINTON (PB 1, PG 3, PBCR)
- RIGHT OF WAY – DEDICATED BY PLAT (OTHER THAN TOWN OF LINTON)
- RIGHT OF WAY OR EASEMENT DEDICATED BY SEPARATE INSTRUMENT (DEED)
- CITY OWNED PROPERTY NOT OFFICIALLY DEDICATED AS RIGHT OF WAY
- COUNTY AND/OR STATE ROAD RIGHT OF WAY
- ALLEY RIGHT OF WAY DEDICATED BY PLAT OR SEPARATE INSTRUMENT (DEED)
- NOT INCLUDED – NO SURVEY (SCOPE)
- PRIVATELY OWNED STREETS/ALLEYS

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

PREPARED FOR
CITY OF
DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
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21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

MAP OF
SPECIFIC PURPOSE
SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

FILE NAME: 20-2068-V-80-SRVY.dwg
LAST SAVED: 07/29/20 – 8:57am

CAS PROJECT NUMBER
19-2068

SHEET
V-80
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-2-15-NW-NEIGHBORHOOD\09-Plans\05-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-81-SKW.dwg, 9/30/2020 9:45:15 AM, mmarenco, 1:2

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

Maintenance Map A

0 30 60 120
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

INTERSTATE 95
(FDOT SECTION NO.
93220-2411)

40' RIGHT OF WAY (PB 20, PG 56, PBCR)
NW 15TH AVENUE
18' ALLEY (PB 20, PG 56, PBCR)
CARVER MEMORIAL PARK (PB 20, PG 56, PBCR) BLOCK B
40' RIGHT OF WAY (PB 20, PG 56, PBCR)
NW 14TH AVENUE
NW 14TH ST
CARVER MEMORIAL PARK (PB 20, PG 56, PBCR) BLOCK A
25' RIGHT OF WAY (PB 20, PG 56, PBCR)
NW 13TH AVENUE
25' RIGHT OF WAY (ORB 1883, PG 212, PBCR)
CITY OWNED (ORB 1886, PG 1162, PBCR)

UNPLATTED PORTION SEC. 17
ORB 1886, PG 1162, P
(PB 1, PG 4, PBCR)

LEGEND

ORB	OFFICIAL RECORDS BOOK
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PBCR	PALM BEACH COUNTY RECORDS
17-46-43	SECTION, TOWNSHIP, RANGE

RIGHT OF WAY – TOWN OF LINTON (PB 1, PG 3, PBCR)
RIGHT OF WAY – DEDICATED BY PLAT (OTHER THAN TOWN OF LINTON)
RIGHT OF WAY OR EASEMENT DEDICATED BY SEPARATE INSTRUMENT (DEED)
CITY OWNED PROPERTY NOT OFFICIALLY DEDICATED AS RIGHT OF WAY
COUNTY AND/OR STATE ROAD RIGHT OF WAY
ALLEY RIGHT OF WAY DEDICATED BY PLAT OR SEPARATE INSTRUMENT (DEED)
NOT INCLUDED – NO SURVEY (SCOPE)
PRIVATELY OWNED STREETS/ALLEYS

NO R/W DEDICATION PROVIDED
LAST KNOWN OWNER:
GLORIA AND PEARLIDE HOLLIDAY
ORB 5638, PG 114, PBCR

NO R/W DEDICATION PROVIDED
LAST KNOWN OWNER:
MAGGIE ROLLE
ORB 6254, PG 898, PBCR

NW 10TH AVENUE
25' RIGHT OF WAY (ORB 1102, PG 194, PBCR)
25' RIGHT OF WAY (PB 11, PG 41, PBCR)

NW 2ND STREET
50' RIGHT OF WAY
(NOT INCLUDED)

ORB 17656, PG 576, PBCR
ORB 12842, PG 729, PBCR
ORB 17037, PG 1933, PBCR
ORB 2701, PG 1840, PBCR
ORB 19848, PG 1165, PBCR
UNPLATTED PORTION SEC. 17-46-43
ORB 15101, PG 1271, PBCR
ORB 15268, PG 823, PBCR
ORB 15747, PG 1586, PBCR
ORB 236, PG 314, PBCR
INTERSTATE 95
(FDOT SECTION NO.
93220-2411)
OWNER: O.D. PRIEST JR., HEIRS AND/OR ASSIGNS (DB 711, PG 4, PBCR)
ORANGE STREET
15' RIGHT OF WAY (PB 24, PG 56, PBCR)
LIBERTY HEIGHTS (PB 24, PG 56, PBCR)
40' RIGHT OF WAY (PB 24, PG 56, PBCR)
PEACH STREET
20' RIGHT OF WAY (PB 20, PG 57, PBCR)
40' RIGHT OF WAY (PB 24, PG 56, PBCR)
NW 14TH AVENUE
FAIRLAWN (PB 25, PG 159, PBCR) BLOCK 1
A.J. JOHNSON SUBDIVISION (PB 20, PG 57, PBCR)
16' ALLEY (PB 20, PG 57, PBCR)
40' RIGHT OF WAY (PB 25, PG 159, PBCR)
NW 13TH AVENUE
FAIRLAWN (PB 25, PG 159, PBCR) BLOCK 2
ORB 31024, PG 492, PBCR
ORB 6489, PG 972, PBCR
SUB. SEC. 17-46-43 (PB 1, PG 4, PBCR)
NO INFO AVAILABLE
ORB 21050, PG 461, PBCR
NW 12TH AVE
50' RIGHT OF WAY (NOT INCLUDED)
PINE CREST SUBDIVISION (PB 14, PG 46, PBCR) BLOCK 1
16' ALLEY (PB 14, PG 46, PBCR)
ORB 26124, PG 1755, PBCR
ORB 29562, PG 1740, PBCR
ORB 30242, PG 1464, PBCR
ORB 19069, PG 1359, PBCR
ORB 19069, PG 1359, PBCR
ORB 29338, PG 578, PBCR
ORB 12568, PG 1886, PBCR
ORB 29338, PG 580, PBCR
NW 11TH AVENUE
50' RIGHT OF WAY (PB 14, PG 46, PBCR)
OWNER: MAGGIE & WALTER ROLLE, HEIRS AND/OR ASSIGNS PER AFFIDAVIT FILED JUNE 16, 1992
PINE CREST SUBDIVISION (PB 14, PG 46, PBCR) BLOCK 2
16' ALLEY (PB 14, PG 46, PBCR)
ORB 28057, PG 845, PBCR
ORB 3, PG 34, PBCR
ORB 13217, PG 725, PBCR
ORB 18226, PG 372, PBCR
ORB 3, PG 34, PBCR
ORB 664, PG 469, PBCR
ORB 28701, PG 984, PBCR
ORB 12790, PG 1506, PBCR
ORB 22982, PG 192 PBCR
ORB 27209, PG 1744, PBCR
25' RIGHT OF WAY (PB 26, PG 14, PBCR)
26' RIGHT OF WAY (PB 13, PG 61, PBCR)
NW 10TH AVENUE

NO.	DATE	FB / PG	DWN	REVISION	CKD
1	07-13-20	1917/04	MRL	MAP OF SPECIFIC PURPOSE SURVEY	RDK

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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

FILE NAME: 20-2068-V-81-SKW.dwg
LAST SAVED: 07/29/20 – 8:59am

CAS PROJECT NUMBER
19-2068

V-81
OF
87

Maintenance Map C

Maintenance Map D

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

LEGEND

ORB	OFFICIAL RECORDS BOOK
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PBCR	PALM BEACH COUNTY RECORDS
17-46-43	SECTION, TOWNSHIP, RANGE

- RIGHT OF WAY – TOWN OF LINTON (PB 1, PG 3, PBCR)
- RIGHT OF WAY – DEDICATED BY PLAT (OTHER THAN TOWN OF LINTON)
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- PRIVATELY OWNED STREETS/ALLEYS

NO.	DATE	FB / PG	DWN	REVISION	CKD
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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

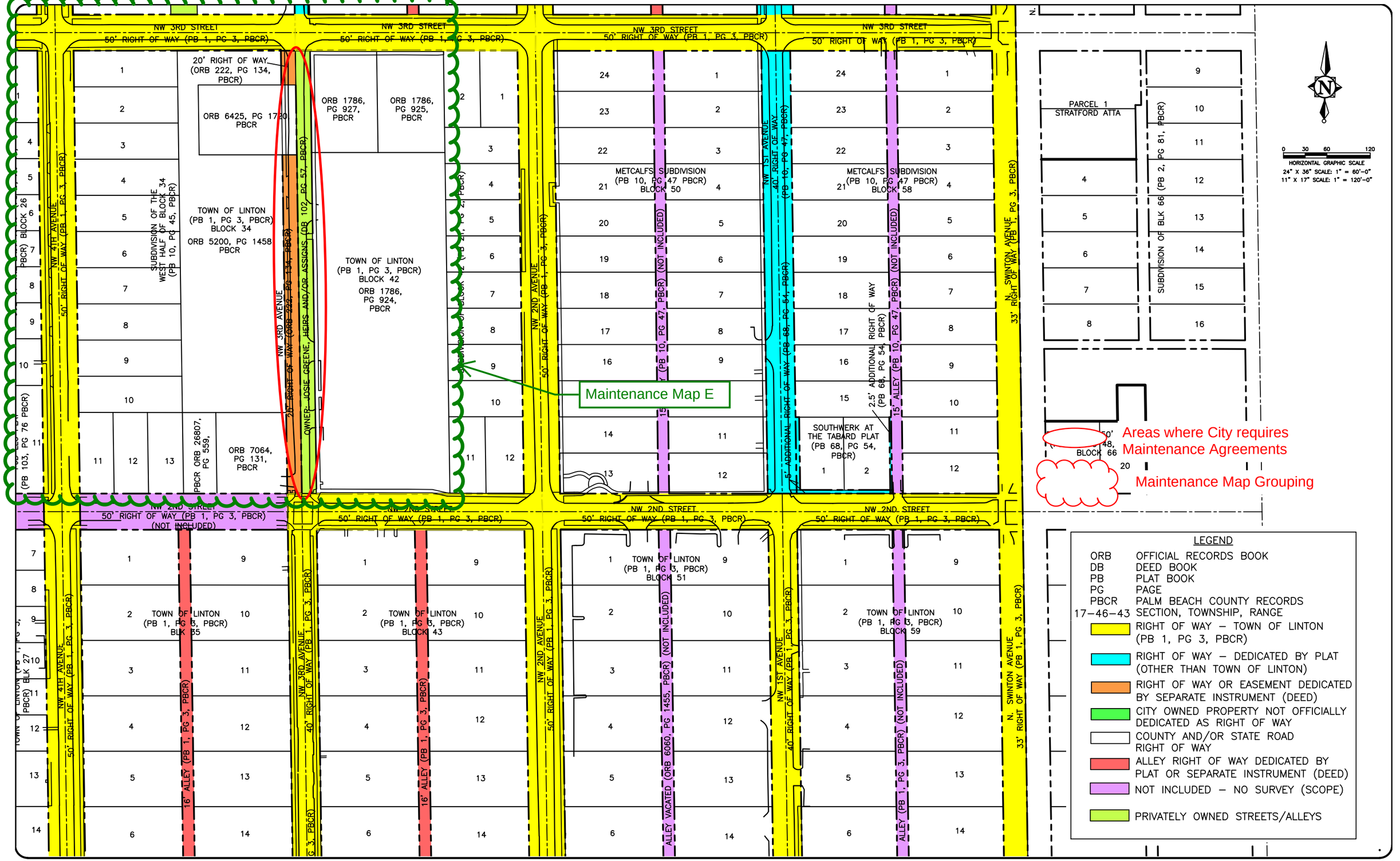
Exhibit 2

FILE NAME: 20-2068-V-82-SRVY.dwg
LAST SAVED: 07/29/20 – 9:01am

CAS PROJECT NUMBER
19-2068

SHEET
V-82
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-2-5-NW-NEIGHBORHOOD\09-Plans\05-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-82-SRVY.dwg, 9/30/2020 9:44:55 AM, mmarenco, 1:2



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MAP OF
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SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

FILE NAME: 20-2068-V-83-SRVY.dwg
LAST SAVED: 07/29/20 – 9:06am

CAS PROJECT NUMBER
19-2068

SHEET
V-83
OF
87

P:\Cities_Villages_Towns\Delray Beach\19-2068-1-2-15-NW-NEIGHBORHOOD\09-Plans\05-EXHIBITS\ROW-SIDEWALK-ROADWAY\20-2068-V-83-SRVY.dwg, 9/30/2020 9:45:45 AM, mmarenco, 1:2

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- NOT INCLUDED – NO SURVEY (SCOPE)
- PRIVATELY OWNED STREETS/ALLEYS

0 30 60 120
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

Maintenance Map B

LAKE IDA ROAD (PALM BEACH COUNTY PROJECT 90502) 55.00'

LAKE IDA ROAD (PALM BEACH COUNTY PROJECT 90502) 40.00'

DELRAY LAKES (PB 78, PG 184 PBCR)

LAKE IDA ROAD CHURCH OF CHRIST (PB 70, PG 1, PBCR)

ORB 8635, PG 723, PBCR

ORB 30370, PG 490, PBCR

SUB. SEC. 8-46-43 (PB 1, PG 4, PBCR)

ORB 29429, PG 1221, PBCR

20' EASEMENT (ORB 9449, PG 849, PBCR)

50' RIGHT OF WAY (ORB 6035, PG 491, PBCR)

ORB 30623, PG 1162, PBCR

80' RIGHT OF WAY (PB 70, PG 141, PBCR)

INTERSTATE 95 (FDOT SECTION NO. 93220-2411)

ROOSEVELT AVENUE

WASHINGTON AVE.

LEE STREET
50' RIGHT OF WAY (PB 24, PG 150, PBCR)

PROSPECT STREET
50' RIGHT OF WAY (PB 24, PG 150, PBCR)

LINCOLN LANE 30' RIGHT OF WAY (PB 24, PG 150, PBCR)

LINCOLN LANE JEFFERSON MANOR (PB 24, PG 150, PBCR)

NW 3RD STREET
50' RIGHT OF WAY (PB 24, PG 150, PBCR)

NW 14TH ST

NW 13TH ST

NW 3RD TERR
50' RIGHT OF WAY (PB 26, PG 245, PBCR)

NW 12TH AVE

NW 11TH AVE

NW 10TH AVENUE

50' RIGHT OF WAY (PB 26, PG 245, PBCR)

POINCIANA HEIGHTS OF DELRAY BEACH (PB 26, PG 245, PBCR)

JEFFERSON MANOR (PB 24, PG 150, PBCR)

14' RIGHT OF WAY (ORB 3305, PG 1023, PBCR)

6' SIDEWALK EASEMENT (ORB 3305, PG 1021, PBCR)

15' RIGHT OF WAY (PB 26, PG 245, PBCR)

25' RIGHT OF WAY (ORB 901, PG 479, PBCR)

VARIABLE WIDTH RIGHT OF WAY (ORB 16269, PG 1182, PBCR)

NO.	DATE	FB / PG	DWN	REVISION	CKD
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PREPARED FOR
CITY OF DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE NO. LB0003110

MAP OF SPECIFIC PURPOSE SURVEY

CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

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SHEET V-84 OF 87

Maintenance Map C

Maintenance Map D

LAKE IDA ROAD (PALM BEACH COUNTY PROJECT 90502)

40.00'

0 30 60 120
HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

60 61 62 63 64 65 66 67

DELRAY LAKES (PB 78, PG 184 PBCR)

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2

LAKE IDA MANOR ADDITION NO. 2 (PB 25, PG 61, PBCR)

80' RIGHT OF WAY (PB 70, PG 141, PBCR)

S.D. SPADY PLAT (PB 70, PG 141, PBCR) LOT 2

S.D. SPADY PLAT (PB 70, PG 141, PBCR) LOT 1

INGRESS - EGRESS EASEMENT (PB 70, PG 141, PBCR)

SUB. SEC. 8-46-43 (PB 1, PG 4, PBCR)

ORB 8352, PG 503, PBCR

ORB 9699, PG 1020, PBCR

ORB 13475, PG 687, PBCR

ORB 14045, PG 995, PBCR

ORB 30827, PG 544, PBCR

ORB 10126, PG 27, PBCR

ORB 24493, PG 112, PBCR

COMMUNITY CHILD CARE CENTER REPLAT NO. 1 (PB 92, PG 96, PBCR) LOT "1"

VARIABLE WIDTH RIGHT OF WAY (ORB 913, PG 472, PBCR)

NW 7TH AVENUE (VARIABLE WIDTH) (PB 92, PG 96, PBCR)

CITY OF DELRAY BEACH (DB 706, PG 367, PBCR)

5' RIGHT OF WAY (PB 65, PG 106, PBCR)

COMMUNITY CHILD CARE CENTER REPLAT NO. 1 (PB 92, PG 96, PBCR) LOT "2"

50' RIGHT OF WAY (ORB 1546, PG 155, PBCR)

ORB 30856, PG 1955, PBCR

ORB 23900, PG 1609, PBCR

ORB 30147, PG 713, PBCR

ORB 29616, PG 1932, PBCR

ORB 17152, PG 1183, PBCR

ORB 30524, PG 818, PBCR

25' RIGHT OF WAY (PB 92, PG 96, PBCR)

RIGHT OF WAY NW 47TH STREET (ABANDONED) (ORB 7660, PG 1927, PBCR) (ORB 70, PG 141, PBCR)

NW 4TH ST 25' RIGHT OF WAY (PB 21, PG 90, PBCR)

NW 4TH ST 25' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 4TH ST 25' RIGHT OF WAY (PB 1, PG 3, PBCR)

NE CORNER NW 1/4 17-46-43

ORB 26946, PG 437, PBCR

ORB 27071, PG 431, PBCR

ORB 14088, PG 571, PBCR

ORB 3122, PG 1207, PBCR

ORB 3122, PG 1208, PBCR

(NOT INCLUDED) NO INFO AVAILABLE

ORB 22676, PG 142, PBCR

ORB 22970, PG 1708, PBCR

ORB 20948, PG 691, PBCR

ORB 28018, PG 52, PBCR

ORB 27953, PG 754, PBCR

ORB 31070, PG 29, PBCR

TOWN OF LINTON (PB 1, PG 3, PBCR) BLOCK 1

ORB 28301, PG 1105, PBCR

ORB 21886, PG 293, PBCR

ORB 26463, PG 1164, PBCR

NO INFO AVAILABLE

(NOT INCLUDED) NO INFO AVAILABLE

ORB 7981, PG 1953, PBCR

ORB 23526, PG 1047, PBCR

ORB 19737, PG 646, PBCR

ORB 9607, PG 1477, PBCR

ORB 30532, PG 171, PBCR

25' RIGHT OF WAY (PB 24, PG 113, PBCR)

25' RIGHT OF WAY (PB 24, PG 117, PBCR)

25' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 8TH AVENUE 50' RIGHT OF WAY

NW 7TH AVENUE

16' ALLEY (PB 24, PG 113, PBCR)

NW 6TH AVENUE 50' RIGHT OF WAY (PB 1, PG 3, PBCR)

PARADISE HEIGHTS (PB 24, PG 113, PBCR)

ORB 3882, PG 1999, PBCR

NW 3RD COURT 25' RIGHT OF WAY (PB 21, PG 90, PBCR) (NOT INCLUDED)

RE-SUB OF BLOCK 17 (PB 21, PG 90, PBCR)

NW 5TH AVENUE 20' RIGHT OF WAY (PB 21, PG 90, PBCR)

20' RIGHT OF WAY (PB 1, PG 3, PBCR)

NO INFO AVAILABLE

NO INFO AVAILABLE

ORB 22241, PG 1847, PBCR

ORB 26991, PG 751, PBCR

ORB 20012, PG 1454, PBCR

TOWN OF LINTON (PB 1, PG 3, PBCR) BLOCK 25

ORB 16436, PG 648, PBCR

ORB 27584, PG 1571, PBCR

SUBDIVISION OF PART OF BLOCK 25 TOWN OF LINTON (PB 5, PG 2, PBCR)

SUBDIVISION OF PART OF BLOCK 25 TOWN OF LINTON (PB 5, PG 2, PBCR)

SUBDIVISION OF PART OF BLOCK 25 TOWN OF LINTON (PB 5, PG 2, PBCR)

14' RIGHT OF WAY (ORB 3305, PG 1023, PBCR)

NW 3RD STREET 25' RIGHT OF WAY (PB 11, PG 47, PBCR)

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Areas where City requires Maintenance Agreements

Maintenance Map Grouping

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PREPARED FOR
CITY OF DELRAY BEACH
PALM BEACH COUNTY, FLORIDA

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21045 COMMERCIAL TRAIL
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(561) 314-4445
CERTIFICATE. NO. LB0003110

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CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

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Maintenance Map E

HORIZONTAL GRAPHIC SCALE
24" X 36" SCALE: 1" = 60'-0"
11" X 17" SCALE: 1" = 120'-0"

LAKE IDA ROAD (PALM BEACH COUNTY PROJECT 90502)

SOUTH LINE SE 1/4 8-46-43

NORTH LINE NE 1/4 17-46-43

NW 2ND AVENUE (VACATED) (ORB 950, PG 220, PBCR)

NW 2ND AVENUE 50' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 3RD AVENUE 20' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 4TH AVENUE 50' RIGHT OF WAY (PB 1, PG 3, PBCR)

NW 1ST AVENUE 50' RIGHT OF WAY (PB 12, PG 86, PBCR)

N. SWINTON AVENUE 33' RIGHT OF WAY (PB 1, PG 3, PBCR)

16' ALLEY (PB 12, PG 86, PBCR)

16' ALLEY (PB 12, PG 81, PBCR) NOT INCLUDED

NW 3RD COURT (ORB 936, PG 561, PBCR)

9' ALLEY (PB 12, PG 86, PBCR) (NOT INCLUDED)

TOWN OF LINTON (PB 1, PG 3, PBCR) BLOCK 49

TOWN OF LINTON (PB 1, PG 3, PBCR) BLOCK 57

ORB 761, PG 562, PBCR

SUBDIVISION OF BLOCK 41, TOWN OF LINTON (PB 5, PG 85, PBCR)

SUBDIVISION OF THE 3 BLOCKS 49 & 57, (PB 12, PG 86, PBCR) BLOCK 49

SUBDIVISION OF THE 5 ½ BLOCKS 49 & 57, (PB 12, PG 86, PBCR) BLOCK 57

TOWN OF LINTON (PB 1, PG 3, PBCR) BLOCK 33

OWNER: OLIVE RICHARDSON AND MARION STRAIN, HEIRS AND/OR ASSIGNS (PROBATE ORDER 44, PG 32, PBCR)

ORB 29353, PG 1284, PBCR
ORB 878, PG 710 ORB 21152, PG 1412, PBCR
ORB 21152, PG 1414, PBCR
ORB 4411, PG 1110, PBCR
ORB 878, PG 710, PBCR
ORB 29630, PG 779, PBCR
ORB 30887, PG 852, PBCR
ORB 8563, PG 884, PBCR
ORB 27501, PG 1371, PBCR
ORB 1575, PG 126, PBCR
ORB 23951, PG 1345, PBCR
ORB 23461, PG 1409, PBCR
ORB 22602, PG 1197, PBCR
ORB 30792, PG 1437, PBCR
ORB 21394, PG 164, PBCR
ORB 9319, PG 1853, PBCR
ORB 17689, PG 564, PBCR
ORB 27831, PG 653, PBCR
ORB 29374, PG 35, PBCR
ORB 91, PG 319, PBCR
ORB 27407, PG 1608, PBCR
ORB 5575, PG 11, PBCR
ORB 29820, PG 1001, PBCR
ORB 10470, PG 457, PBCR
ORB 13648, PG 1250, PBCR
ORB 6569, PG 1681, PBCR

Areas where City requires Maintenance Agreements

Maintenance Map Grouping

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CITY OF DELRAY BEACH
NW NEIGHBORHOOD IMPROVEMENTS

Exhibit 2

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SHEET
V-86
OF
87

Appendix C

Geotechnical Report

CITY OF DELRAY BEACH
PRELIMINARY DESIGN REPORT
NW NEIGHBORHOOD IMPROVEMENTS

APPENDIX C

GEOTECHNICAL REPORT

May 6, 2020

CRAIG A. SMITH & ASSOCIATES
21045 Commercial Trail
Boca Raton, Florida 33486

Attn: Mr. Dimitrios Scarlatos
Office: (561) 314 - 4445 Ext. 222
Cell: (561) 400 - 22811
Email: dscarlatos@craigasmith.com

RE: Geotechnical Engineering Services Report
City of Delray Beach
NW Neighborhood Improvements
Palm Beach County, Florida
RADISE Project No: 191008

Dear Mr. Scarlatos,

RADISE International, L.C. (RADISE) is pleased to submit this Geotechnical Engineering Services Report for the above referenced project. The services were performed in general accordance with our proposal dated April 30, 2019.

We appreciate the opportunity to be of service to Craig A. Smith & Associates and City of Delray Beach on this project. Should you have any questions regarding the report, or if we can be of further assistance as this project develops, please contact us at (561) 841-0103.

Sincerely,

RADISE International, LC
Florida Certificate of Authorization No.8901

Andrew Nixon, State of Florida, Professional Engineer, License No. 71458. This document has been digitally signed and sealed by Andrew Nixon, P.E. on the date indicated here.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Akash Bissoon, P.E.
Senior Project Engineer
Florida Registration No. 74582

Andrew Nixon, P.E.
Operations Manager
Florida Registration No. 71458

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ATTACHMENTS

Sheet 1: Vicinity Map
Sheet 2: USDA Soil Survey
Sheet 3: USGS Topographic Map
Sheets 4A through 4D: Boring Location Plan
Sheets 5A through 5E: Subsurface Profiles

APPENDIX A
Table A-1: Summary of Laboratory Test Results

APPENDIX B
Table B-1: Summary of Exfiltration Test Results

APPENDIX C
Pavement Core and Base Material Photographs

1.0 INTRODUCTION

RADISE International, LC (RADISE) understands that the overall scope of work for the City of Delray Beach NW Neighborhood Improvements Project includes determination of existing right-of-way widths, geotechnical investigations, subsurface utility engineering (utility locates), permeable/flexible pavement design for roads and alley ways, pavement assessment, roadway restoration, analysis of existing drainage and sanitary sewer systems, reclaimed water main extension, driveway/pedestrian ramp upgrades/restoration, signage, pavement markings, sidewalk improvements, drainage improvements, water main improvements, traffic calming, parallel parking, bicycle lanes where required, landscaping, irrigation and street lighting. To aid in the evaluation and design of the project, RADISE was requested to provide geotechnical engineering services to determine the existing pavement condition, subsurface stratigraphy, groundwater levels and physical properties of the soils generally underlying the site.

The information presented in this report is based upon our interpretation of the subsurface information revealed by the test borings. The report does not reflect variations in subsurface conditions that may exist between or beyond these borings. Variations in soil and groundwater conditions should be expected, the nature and extent of which might not become evident until construction is undertaken. If variations are encountered, and/or the scope of the project altered, we should be consulted for additional recommendations.

2.0 PROJECT DESCRIPTION

The NW Neighborhood project is located in the City of Delray Beach, Florida immediately east of 1-95, bordered by Atlantic Avenue to the south; 1-95 to the west; Lake Ida Road on the north; and Swinton Avenue on the east. The approximate location and limits of the project is shown on the attached *Vicinity Map*, Sheet 1.

Alley-way paving and roadway milling and resurfacing or reconstruction is proposed. Associated streetscape, landscape and drainage improvements are also proposed. Permeable pavement is anticipated for the alleyways and flexible pavement is anticipated for the restoration of the existing roadways.

3.0 PURPOSE AND SCOPE OF WORK

The purpose of this study was to perform a limited geotechnical engineering exploration of the pavement and subsurface conditions within the project area, to aid in the planning and design of the roadway milling and resurfacing or reconstruction, the alley-way paving and drainage improvements.

More specifically, the purpose of the work included the following:

- Development of the anticipated pavement and underlying soil profiles and subsurface conditions within the depth of influence of the anticipated improvements.
- Identification of critical geotechnical design or construction considerations based on the soil and groundwater conditions encountered in the borings.

RADISE performed the following services in accordance with the proposed scope of work:

1. Visited the site to field mark (paint or/and stake) the planned soil boring test and pavement core locations and observe existing site conditions.

2. Contacted Sunshine 811 to request the field location and clearance of underground utilities in the areas of the proposed borings, as per Florida Statutes.

3. Set up Temporary Traffic Control (TTC) safety controls prior to and during the field coring and drilling operations.

4. Mobilized drilling and TTC equipment to the site to perform fifty eight (58) asphalt pavement cores and fifty nine (59) auger soil borings. Base material was collected from the pavement cored holes. The auger borings were performed in the existing alley-ways to a depths of six (6) feet below the existing ground surface.

5. Performed three (3) percolation tests with associated auger soil borings to depths of 15 feet in accordance with the usual open-hole exfiltration test method described in the South Florida Water Management District (SFWMD) Permit Information Manual, Volume IV.

6. Samples of the subsurface soils encountered were obtained and the depth to the encountered groundwater level was measured, if encountered, in each of the borings. Following completion of the field drilling, testing and sampling activities, the boreholes were backfilled with neat cement grout and the asphalt pavement surface patched with asphalt cold patch.

7. Visually classified the soil samples retrieved from the roadway borings using the AASHTO Soil Classification System in general accordance with the American Society of Testing and Materials (ASTM) test method D 3282.

8. Performed a limited laboratory testing program for soil index property determinations on selected auger samples to aid in the final classification process.

9. Prepared this geotechnical report to summarize the field exploration and laboratory testing results, and present our geotechnical evaluation and design recommendations.

4.0 FIELD EXPLORATION

During this work phase, TTC was used to protect our field personnel, equipment, and the general public. The TTC was designed and set up in accordance with the FDOT Design Standards.

4.1 PAVEMENT CORING

The field exploration program to evaluate the existing asphalt pavement thicknesses consisted of a total of fifty-eight (58) Pavement Cores. The approximate boring locations are shown on the attached *Boring Location Plan*, Sheets 4A through 4D.

The following *Pavement Coring Data*, Table 1, presents a summary of the measured asphalt section thickness, the base thickness and composition, and estimated existing structural numbers (SN_E) for the asphalt and base. The layer coefficient was estimated following the guidelines of FDOT's Flexible Pavement Design Manual, which is based on visual inspections of the condition of the core (i.e., good, fair or poor). Latitude and Longitude coordinates of the boring locations were obtained by the field crew using hand-held GPS equipment.

TABLE 1 – PAVEMENT CORING DATA

Core No.	Core Location Latitude & Longitude	Asphalt			Base Course			Base Course Composition
		Thickness (in.)	Layer Coeff. per inch	SN_E	Thickness (in.)	Layer Coeff. per inch	SN_E	
C-1	N26.4687° W80.0887°	1.5	0.30	0.45	5.0	0.08	0.4	Brown, fine sand, with gravel and silt
C-2	N26.4677° W80.0878°	1.25	0.30	0.34	4.75	0.18	0.86	Gray limerock, with sand
C-3	N26.4687° W80.0867°	2.5	0.30	0.75	6.0	0.08	0.48	Brown, fine sand, with gravel and silt
C-4	N26.4679° W80.0869°	1.25	0.30	0.38	4.5	0.08	0.36	Brown, fine sand, with gravel and silt
C-5	N26.4673° W80.0868°	1.5	0.30	0.45	5.0	0.18	0.9	Gray limerock, with sand
C-6	N26.4663° W80.0875°	1.5	0.30	0.45	4.75	0.08	0.38	Brown, fine sand, with gravel and silt
C-7	N26.4667° W80.0864°	1.75	0.30	0.53	5.0	0.18	0.9	Gray, limerock

Core No.	Core Location Latitude & Longitude	Asphalt			Base Course			Base Course Composition
		Thickness (in.)	Layer Coeff. per inch	SN_E	Thickness (in.)	Layer Coeff. per inch	SN_E	
C-8	N26.4640° W80.0874°	1.25	0.15	0.19	4.0	0.18	0.72	Gray, limerock
C-9	N26.4647° W80.0866°	2.25	0.30	0.68	6.0	0.18	1.08	Gray, limerock
C-10	N26.4635° W80.0868°	1.25	0.30	0.38	5.0	0.18	0.9	Gray, limerock
C-11	N26.4630° W80.0864°	1.75	0.30	0.53	7.0	0.18	1.26	Gray, limerock
C-12	N26.4682° W80.0851°	2.0	0.30	0.60	5.0	0.18	0.9	Gray, limerock
C-13	N26.4688° W80.0845°	2.75	0.30	0.83	5.0	0.18	0.9	Gray, limerock
C-14	N26.4683° W80.0842°	1.5	0.30	0.45	6.0	0.18	1.08	Gray, limerock
C-15	N26.4679° W80.0834°	2.5	0.30	0.75	6.0	0.18	1.08	Gray, limerock
C-16	N26.4664° W80.0833°	4.0	0.30	1.20	5.0	0.18	0.9	Gray, limerock
C-17	N26.4643° W80.0843°	3.25	0.30	0.98	6.0	0.18	1.08	Gray, limerock
C-18	N26.8136° W80.0736°	2.0	0.30	0.60	6.0	0.18	1.08	Gray, limerock
C-19	N26.4635° W80.0448°	2.5	0.30	0.75	6.5	0.18	1.17	Gray, limerock

Core No.	Core Location Latitude & Longitude	Asphalt			Base Course			Base Course Composition
		Thickness (in.)	Layer Coeff. per inch	SN_E	Thickness (in.)	Layer Coeff. per inch	SN_E	
C-20	N26.4625° W80.0844°	5.5	0.20	1.1	5.0	0.5	2.5	Concrete
C-21	N26.4628° W80.0833°	1.5	0.25	0.38	7.0	0.18	1.26	Gray, limerock
C-22	N26.4633° W80.0817°	1.0	0.25	0.25	5.0	0.18	0.9	Gray, limerock
C-23	N26.4662° W80.0823°	1.0	0.25	0.25	4.5	0.18	0.81	Gray, limerock
C-24	N26.4648° W80.0823°	2.0	0.30	0.60	5.5	0.18	0.99	Gray, limerock
C-25	N26.4625° W80.0823°	2.5	0.30	0.75	6.5	0.18	1.17	Gray, limerock
C-26	N26.4696° W80.0806°	1.5	0.30	0.45	6.0	0.18	1.08	Gray, limerock
C-27	N26.4692° W80.0799°	1.5	0.15	0.23	6.0	0.08	0.48	Brown fine sand, trace gravel
C-28	N26.4683° W80.0813°	2.0	0.30	0.60	5.5	0.18	0.99	Gray, sandy limerock
C-29	N26.4683° W80.0803°	1.75	0.30	0.53	5.0	0.18	0.90	Gray, sandy limerock
C-30	N26.4681° W80.0794°	2.75	0.30	0.83	4.5	0.18	0.81	Gray, sandy limerock
C-31	N26.4662° W80.0813°	2.0	0.30	0.60	4.75	0.18	0.86	Gray, sandy limerock

Core No.	Core Location Latitude & Longitude	Asphalt			Base Course			Base Course Composition
		Thickness (in.)	Layer Coeff. per inch	SN_E	Thickness (in.)	Layer Coeff. per inch	SN_E	
C-32	N26.4662° W80.0804°	1.75	0.30	0.53	5.25	0.18	0.95	Gray, limerock
C-33	N26.4659° W80.0793°	2.0	0.25	0.50	6.0	0.18	1.08	Gray, limerock
C-34	N26.4643° W80.0812°	1.5	0.30	0.45	4.0	0.18	0.72	Gray, limerock
C-35	N26.4645° W80.0803°	1.75	0.30	0.53	4.5	0.18	0.81	Gray, limerock
C-36	N26.4644° W80.0793°	1.0	0.30	0.30	6.0	0.18	1.08	Gray, limerock
C-37	N26.4627° W80.0812°	1.0	0.15	0.15	5.0	0.18	0.9	Gray, limerock
C-38	N26.4625° W80.0802°	3.25	0.30	0.98	3.75	0.18	0.68	Gray, limerock
C-39	N26.4626° W80.0792°	1.125	0.30	0.34	6.5	0.18	1.17	Gray, limerock
C-40	N26.4684° W80.0784°	1.5	0.30	0.45	5.0	0.08	0.40	Brown fine sand, trace gravel
C-41	N26.4681° W80.0773°	2.25	0.30	0.68	5.5	0.18	0.99	Gray, sandy limerock
C-42	N26.4682° W80.0763°	3.5	0.30	1.05	6.0	0.18	1.08	Gray, limerock
C-43	N26.4671° W80.0779°	2.75	0.30	0.83	6.0	0.18	1.08	Gray, sandy limerock

Core No.	Core Location Latitude & Longitude	Asphalt			Base Course			Base Course Composition
		Thickness (in.)	Layer Coeff. per inch	SN_E	Thickness (in.)	Layer Coeff. per inch	SN_E	
C-44	N26.4663° W80.0783°	3.25	0.30	0.98	5.0	0.18	0.90	Gray, sandy limerock
C-45	N26.4661° W80.0773°	2.0	0.30	0.60	4.5	0.18	0.81	Gray, sandy limerock
C-46	N26.4644° W80.0773°	3.0	0.15	0.45	6.0	0.18	1.08	Gray, limerock
C-47	N26.4644° W80.0762°	1.25	0.30	0.38	6.0	0.18	1.08	Gray, limerock
C-48	N26.4626° W80.0771°	2.25	0.30	0.68	7.0	0.18	1.26	Gray, limerock
C-49	N26.4663° W80.0761°	2.5	0.30	0.75	5.5	0.18	0.99	Gray, limerock
C-50	N26.4682° W80.0748°	2.5	0.30	0.75	6.25	0.18	1.13	Gray, limerock
C-51	N26.4676° W80.0753°	2.75	0.30	0.83	5.0	0.18	0.9	Gray, limerock
C-52	N26.4671° W80.0747°	2.75	0.30	0.83	5.5	0.18	0.99	Gray, limerock
C-53	N26.4664° W80.0752°	1.5	0.15	0.23	6.0	0.18	1.08	Gray, limerock
C-54	N26.4663° W80.0742°	1.75	0.30	0.53	5.5	0.18	0.99	Gray, limerock
C-55	N26.4646° W80.0752°	2.25	0.30	0.68	6.5	0.18	1.17	Gray, limerock

Core No.	Core Location Latitude & Longitude	Asphalt			Base Course			Base Course Composition
		Thickness (in.)	Layer Coeff. per inch	SN_E	Thickness (in.)	Layer Coeff. per inch	SN_E	
C-56	N26.4642° W80.0742°	4.5	0.30	1.35	8.0	0.18	1.44	Gray, limerock
C-57	N26.4635° W80.0739°	3.5	0.30	1.05	6.0	0.18	1.08	Gray, limerock
C-58	N26.4626° W80.0741°	3.0	0.30	0.90	6.0	0.18	1.08	Gray, limerock

Pavement Core samples were obtained at fifty-eight (58) locations using a portable electric stand-up core drill with a 6-inch diameter diamond tipped core drill bit. Upon removal of the asphalt core, a hand-held power auger and a hand operated bucket-type auger were used to loosen the base course material and to clean out the borehole. Subsequent down-hole field measurements were made using a surveyor's tape to document the approximate thickness and composition of the encountered pavement base course materials.

It should be noted that 5.0 inches of concrete was encountered below 5.5 inches of asphalt in pavement core C-20. The concrete material below the asphalt could not be recovered during the coring. The concrete thickness was measured by the amount of core bit penetration while coring.

Representative samples of the base course, obtained from the hand bucket-type auger, were placed in moisture proof bags and transported to our laboratory. The samples were then examined by a geotechnical engineer in the lab to confirm the field classifications.

4.2 SOIL BORINGS

The field exploration program to evaluate the existing subsurface conditions consisted of drilling fifty-nine (59) auger borings to depths of six (6) feet below the existing ground surface within the allay-ways. The approximate locations of the auger borings are depicted on the attached Boring Location Plan, Sheets 4A through 4D. Latitude and Longitude coordinates of the boring locations were obtained by the field crew using hand-held GPS equipment and are listed on the attached Subsurface Profiles, Sheets 5A through 5E.

The auger borings were performed in general accordance with ASTM D 4152 "*Standard Practice for Soil Exploration and Sampling by Auger Borings*". Grab samples of in-place materials were obtained at frequent vertical depth intervals in the auger borings.

4.3 EXFILTRATION TESTS

To evaluate the hydraulic conductivity of the subsurface soils, three (3) exfiltration/permeability tests were performed at the project site. The permeability tests were performed in general accordance with the South Florida Water Management District (SFWMD) procedures in 8-inch diameter by fifteen (15) feet deep augered boreholes. The approximate locations of the tests are shown on the attached ***Boring Location Plan*, Sheets 4A through 4D.** The Hydraulic Conductivity results are presented in Appendix B on ***Table B-1: Summary of Exfiltration Test Results*** and summarized in the following Table 2:

TABLE 2 – EXFILTRATION TEST RESULTS

Test Number	Subsurface Conditions	Test Depth (ft.)	Hydraulic Conductivity, K (cfs/ft2 - ft. head)	Hydraulic Conductivity, K_v (ft./day – ft. head)
EX-1	0-1 ft = Brown, fine sand (A-3) 1-4 ft = Gray, fine sand (A-3) 4-9 ft = Brown, fine sand (A-3) 9-15 ft = Light brown, fine sand (A-3)	15	3.11E-05	1.34
EX-2	0-2 ft = Brown, fine sand (A-3) 2-6 ft = Orange, fine sand (A-3) 6-10 ft = Brown, fine sand (A-3) 10-15 ft = Tan, fine sand (A-3)	15	4.11E-05	1.78
EX-3	0-1 ft = Brown, fine sand (A-3) 1-4 ft = Gray, fine sand (A-3) 4-9 ft = Brown, fine sand (A-3) 9-15 ft = Tan, fine sand (A-3)	15	3.81E-05	1.64

Prior to field permeability testing, auger borings were advanced to depths of 15 feet below the existing ground surface at each of the exfiltration test locations to determine the subsurface conditions. The auger borings were performed in general accordance with ASTM D 1452, "*Standard Practice for Soil Exploration and Sampling by Auger Borings*". As summarized in Table 1 above, the tested soil conditions generally consisted of fine sand from the ground surface to the maximum explored depth of 15 feet.

4.4 GROUNDWATER LEVEL MEASUREMENTS

Groundwater was not encountered in any of the 59 auger borings performed. Groundwater was encountered in the exfiltration test boreholes at depths between 8 and 9 feet below the existing ground surface.

5.0 PUBLISHED INFORMATION

Published information related to the proposed project site was reviewed prior to commencing field exploration. This information was obtained from the "Soil Survey of Palm Beach County, Florida" published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) and the "Delray Beach" Quadrangle Map published by the United States Geological Survey (USGS). The findings are described below.

5.1 USDA SOIL SURVEY

A USDA Soil Survey Map for the project area is presented on the attached *USDA Soil Survey Map*, Sheet 2. The U. S. Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS) Web Soil Survey of Palm Beach County, Florida, shows the project alignment to be underlain by six main soil units. These soil units described by the USDA are presented in the following Table 3:

TABLE 3 – LISTING OF MAPPED SOIL UNITS

Palm Beach County Soil Units & Descriptions	Stratification	Water Table/Permeability	USDA Environmental Classification*
Basinger fine sand, 0 to 2 percent slopes (6): This is a nearly level, poorly drained, deep, sandy soil in broad grassy sloughs in the eastern part of the county. This soil has the pedon described as representative of the series. The water table is within 10 inches of the surface for 2 to 6 months in most years and within 10 to 30 inches for the rest of the year.	**0 to 80"** Fine Sand (A-3, A-2-4)	About 0 to 12 inches to water table. Permeability ranges between 5.95 to 19.98 in/hr.	Risk of Corrosion Uncoated Steel : High Concrete : Moderate
Immokalee fine sand, 0 to 2 percent slopes (18): This is a nearly level, poorly drained, deep, sandy soil that has 3; dark colored layer below a depth of 30 inches that is weakly cemented with organic matter. This soil is in broad flatwood areas in the eastern part of the survey area. It has the pedon described as representative of the series.	**0 to 80"** Fine sand (A-3, A-2-4)	About 6 to 18 inches to water table. Permeability ranges between 0.57 to 1.98 in/hr.	Risk of Corrosion Uncoated Steel : High Concrete : High

Myakka-Urban land complex (22): This complex consists of Myakka sand and Urban land. About 25 to 50 percent of the complex is covered by streets, sidewalks, driveways, houses, and other structures. About 40 to 65 percent of the complex consists of open land, such as lawns, vacant lots, and playgrounds. These areas are made up mainly of nearly level, poorly drained Myakka sand which has been modified in most places by spreading about 12 inches of sandy fill material on the original surface.	**0 to 72”** Sand (A-3, A-2-4)	About 6 to 18 inches to water table. Permeability ranges between 0.57 to 5.95 in/hr.	Risk of Corrosion Uncoated Steel : High Concrete : High
Pomello fine sand, 0 to 5 percent slopes (33): This is a nearly level to gently sloping, moderately well drained, deep, sandy soil that has a dark, weakly cemented layer below a depth of 30 inches. This soil is on low ridges and knolls. Slopes range from 0 to 5 percent. It has the pedon described as representative of the series.	**0 to 80”** Fine sand (A-3, A-2-4)	About 24 to 42 inches to water table. Permeability ranges between 1.98 to 5.95 in/hr.	Risk of Corrosion Uncoated Steel : Low Concrete : High
St. Lucie-Paola-Urban land complex, 0 to 8 percent slopes (41): This nearly level to sloping, excessively drained, deep, sandy soil is on long narrow, dune-like coastal ridges and on isolated knolls. This soil has the pedon described as representative of the series.	**0 to 80”** Sand (A-3, A-2-4)	More than 80 inches to water table. Permeability ranges between 19.98 to 39.96 in/hr.	Risk of Corrosion Uncoated Steel : Low Concrete : Moderate
Urban land, 0 to 2 percent slopes (48): Consists of areas that are 60 to more than 75 percent covered with streets, buildings, large parking lots, shopping centers, industrial parks, airports, and related facilities. Other areas, mostly lawns, parks, vacant lots, and playgrounds, are generally altered to such an extent that the former soils cannot be easily recognized and are in tracts too small to be mapped separately.	**0 to 80”** Sand	Depth to water table varies. Permeability Varies	Risk of Corrosion Uncoated Steel : Low Concrete : Moderate
Water (99)	N/A	N/A	N/A

*Independent of FDOT Structures Design Guidelines

The soil and groundwater conditions reported by the SCS in the *Palm Beach County Soil Survey* have likely been modified by the placement of fill materials and drainage improvements associated with the construction of roadways and development of adjacent lands.

5.2 TOPOGRAPHICAL MAPS

The USGS topographical map which covers the project area, consists of the Riviera Beach Quadrangle. A USGS Topographic Map snippet for the project area is presented on the attached Sheet 3. Based on review of this map, the ground surface elevation in the project area ranges from approximately 15 feet to 20 feet NAVD.

6.0 LABORATORY TESTING

6.1 GENERAL

Representative soils samples collected from the borings were visually reviewed in the laboratory by a RADISE Geotechnical Engineer to confirm field classifications. The samples were classified in general accordance with the AASHTO Soil Classification System in general accordance with the American Society of Testing and Materials (ASTM) test method D 3282. The classifications were based on visual observations supplemented by laboratory test results performed on selected representative SPT samples. Laboratory index tests consisting of Percent Passing No. 200 Sieve, Moisture, and Organics Content tests were performed on selected samples to further confirm and finalize field soils classifications.

6.2 LABORATORY TEST RESULTS

Test assignments were provided by a Geotechnical Engineer during the laboratory review of secured soil samples. Laboratory assignments were made to supplement and confirm soil classification at each general boring location.

The following list summarizes the types and numbers of laboratory tests performed.

- Twelve (12) Moisture Content Tests (ASTM D 2216).
- Three (3) Organics Content Tests (ASTM 2216 D).
- Nine (9) Percent Passing No. 200 Sieve Tests (ASTM D 1140).

All of the laboratory test results are presented on the attached *Subsurface Profiles*, Sheet 5A through 5E, and on Table A: *Summary of Laboratory Test Results* in Appendix A.

7.0 SURFACE AND SUBSURFACE EXPLORATION

7.1 STRATIGRAPHY

Stratification of the explored soils is based on visual examination of the recovered soil samples, index testing, laboratory classification and interpretation of the field boring logs by a geotechnical engineer in accordance with the Unified Soil Classification System. Subsurface profiles showing the soil stratification at the boring locations were developed and are presented on the attached *Subsurface Profiles*, Sheets 5A through 5E. Stratification lines represent approximate boundaries between soil types, but the actual transition between layers may be gradual or abrupt. Additionally, soil and groundwater conditions will vary between boring locations.

The soils encountered in all fifty-nine (59) of the soil borings generally consist of sand with varying amounts of silt and gravel and traces of organics near the surface. Generalized descriptions of the soil stratigraphy are provided in Table 4:

TABLE 4 - STRATIGRAPHY

Stratum No.	Description	AASHTO Class.	Lab Results
1	Dark Brown, black, fine SAND, few Silt	A-3	-
2	Gray, brown, black, fine SAND, occasional few gravel and shell fragments, occasional trace organics	A-3	OC = 0.8 to 1.6% -200 = 0.6 to 3.9%

Notes: OC = Organic Content
-200 = Percent passing #200 sieve

7.2 GROUNDWATER LEVELS

Groundwater was not encountered in any of the auger borings. Groundwater was encountered in the exfiltration test bore holes and varied between 8.0 to 9.0 feet below the existing ground surface.

It is our recommendation that the seasonal high groundwater table levels, be based on the normal high water levels of the adjacent lakes and canals existing near the project area. Normal high groundwater levels can be expected to be on the order of as much as 2 feet above the measured groundwater levels encountered in the exfiltration test boreholes. It should be noted that the groundwater levels will fluctuate with variations of precipitation.

8.0 ENGINEERING CONSIDERATIONS AND RECOMMENDATIONS

The soils encountered in the borings performed for this study will be suitable for the proposed neighborhood improvements.

8.1 FLEXIBLE PAVEMENT DESIGN CONSIDERATIONS (ROADWAY)

During our reconnaissance field visits to project site, the existing pavement was observed to be in fair condition. Cracking, raveling and utility patches were observed on the existing asphalt pavement.

The present Palm Beach County roadway pavement standards for new construction include the following:

1. 12 inches of Type B stabilized subgrade (LBR 40 or Structural Number (SN) 0.96)
2. Optional Base Group 7 (SN of at least 1.5).
3. 1.5 inches of Type SP structural course (Traffic C) asphalt (SN 0.66).
4. 1 inch of friction course FC-9.5 asphalt (SN 0.44).
5. Total SN should be at least 3.56

The present Palm Beach County roadway pavement standards for widening projects include the following:

1. Optional Base Group 13 (SN ranging between 2.35 and 2.45).
2. 1.5 inches of Type SP structural course (Traffic C) asphalt (SN 0.66).
3. 1 inch of friction course FC-9.5 asphalt (SN 0.44).
4. Total SN should be at least 3.50

The present City of Delray Beach pavement specifications include the following:

1. 12 inches of stabilized subgrade (75 P.S.I. Florida Bearing Value (FBV)) and compacted to 98% maximum density per AASHTO T-180. (LBR 40 or SN 0.96)
2. 8” Limerock or 10” crushed concrete compacted to 98% maximum density per AASHTO T-180. Prime & tack coat per FDOT section 300. (SN between 1.35 and 1.85)
3. 1.5 inches of Type S-III (2 lifts). (SN 0.65)
4. Total SN should be at least approximately 2.96.

The asphalt cores physically varied in length between 1.0 and 5.5 inches as listed in Table 1 and shown on the photographs in Appendix C. The encountered base coarse material typically consisted of Limerock or fine sand with varying amounts of gravel and silt. Base material photographs are also presented on the photographs in Appendix C. The estimated Asphalt pavement SN_E ranged between approximately 0.15 and 1.35. The estimated base course material SN_E ranges between approximately 0.36 and 2.50.

The subbase (prepared subgrade) material was observed to be comprised of a brown to gray fine sand, occasionally with gravel. Normally, preliminary opinions on Limerock Bearing Ratio (LBR) values can be provided based on the results of upper Standard Penetration Test (SPT) samples or

LBR tests performed on bulk samples obtained from the roadway or adjacent areas at the edge of pavement. LBR values of the subbase were not determined since LBR field sampling and laboratory testing was not included in the scope of work for this project. Also, SPT borings were not performed, since it was not included in the scope of work for this project. Accordingly, based on visual classification of the sands encountered in the auger borings, we believe the LBR values for the subgrade sands are less than 40, which indicates that the material would likely have to be stabilized and properly compacted in order meet the present City of Delray Beach, Palm Beach County, and typical FDOT pavement design criteria requirement of a minimum LBR value of 40 (SN of 0.96). It would be appropriate to consider obtaining and testing additional bulk samples of the pavement subgrade soils to further quantify and provide more accurate LBR value determinations.

Alternatively, non-destructive pavement Resilient Modulus Determinations can be made using a specialized field procedure known as the Falling Weight Deflectometer (FWD) Test to directly measure dynamic pavement responses to such dynamic simulation testing. Given the location and nature of the project, such field testing should be highly considered.

A FWD is a field testing device used by engineers to evaluate the physical properties of existing pavement systems. FWD data is primarily used to estimate pavement structural capacity for 1) overlay design and 2) to determine if a pavement is being overloaded. The machine is usually contained within a trailer that can be towed to a location by another vehicle. The FWD is designed to impart a load pulse to the pavement surface which simulates the load produced by a rolling vehicle wheel.

The load is produced by dropping a large weight, and transmitted to the pavement through a circular load plate - typically 300 mm diameter on roads and 450 mm on airports. A load cell mounted on top of the load plate measures the load imparted to the pavement surface. The load plate can be solid or segmented. Typically, the load for road testing is about 40 kN giving about 700 kPa pressure under the load plate.

FWD data is most often used to calculate stiffness-related parameters of a pavement structure. The process of calculating the elastic modulus/elastic moduli of individual layers in a multi-layer system (e.g. asphalt or concrete on top of a base course on top of the subgrade based on surface deflections is known as "back-calculation", as there is no closed-form solution. Initial moduli are assumed, surface deflections calculated, and then the moduli are adjusted in an iterative fashion to converge on the measured deflections. This process is computationally intensive although quick on modern computers. However, reliable results require an experienced analyst. Commonly used back-calculation software are BAKFAA (Federal Aviation Administration), Elmod (Dynatest), PVD (KUAB), MichBack (Michigan DOT) and Modulus (TxDOT).

Without the benefit of additional field FWD testing, we would overall recommend reconstruction of the roadways since pavement coring data shows that most of the roadway areas do not meet the City of Delray Beach, Palm Beach County, and FDOT pavement design criteria. If a complete pavement re-construction option is pursued, it would be suggested that the existing limerock or sand with gravel base materials be roto-tilled into the upper subgrade soils and the mixed soils then be used as the prepared subgrade for the pavement re-construction effort.

Since the pavement coring data shows that the existing pavement sections along the project alignment do not meet the current City of Delray Beach, Palm Beach County and FDOT pavement design criteria, a milling and resurfacing program is not recommended. However, a milling and resurfacing program may be performed if desired by City of Delray Beach with the understanding that the asphalt lifespan will be reduced when compared to that of the performance of full depth reconstruction. If milling and resurfacing is desired, we recommend that the roadway surface be inspected as the milling work is performed to determine if it is necessary to deepen the milling depth considering the presence of scabs, gaps, etc. As with any milling effort, since the asphalt is not removed in its entirety and the remaining layer(s) are cracked, the cracks are likely to help form similar cracks in the new asphalt layer referred to as reflective cracking. Therefore, close inspection of the milled surface could help identify areas that will very likely result in reflective cracks in the new pavement in which case additional milling and replacement of asphalt would be prudent to reduce the possibility of reflective cracking. Upon removal of a thickness of the asphalt, major cracks in the underlying asphalt need to be cleared of debris and then filled with a sealant (selected based on temperature extremes and the intended purpose, such as a Craftco PN No. 34521 Polyflex Type 3) before installing the replacement layer of asphalt.

Actual pavement section thickness should be determined by the Design Civil Engineer based on traffic loads, volume, and the Owner's design life requirements. The above sections represent minimum thickness representative of typical local construction practices and, as such, periodic maintenance should be anticipated. All pavement materials and construction procedures should conform to FDOT, American Concrete Institute (ACI), and/or appropriate City or County requirements for roadway pavement construction.

8.2 PERMEABLE PAVEMENT DESIGN CONSIDERATIONS (ALLEYWAYS)

The soil borings and laboratory test results indicate that the existing sands encountered are suitable for subgrade use in pervious pavement areas, as defined by the South Florida Water Management District (SFWMD). The sand subgrade soils should be compacted to a maximum density of 95% of the maximum dry density as determined by ASTM D1557, or AASHTO T180, to a minimum depth of 24 inches. As per the SFWMD specifications, subgrade stabilization is not required for sand type of soils (A-3). If additional fill material is required to bring the subgrade to final elevation, it should be hydraulically clean (maximum of 10% silt or clay), and free of deleterious materials.

For redevelopment projects where the existing pavement section is to be removed; the compacted base should also be removed and the underlying subgrade soils scarified to a minimum depth of

20 inches. The subgrade should be re-graded and filled with clean (hydraulically clean and free of deleterious material) soils. The clean soils should be placed in 8-inch maximum layers and compacted to a maximum density of 95% of the Modified Proctor density within 3% of the optimum moisture content (ASTM D-1557, or AASHTO T180).

It is recommended by SFWMD that the Seasonal High Groundwater Table (SHGWT) elevation be greater than 24 inches below the bottom of any pervious pavement system. The pervious pavement system is suggested to include an underlying storage reservoir consisting of pea rock, #57 stone, etc. If utilized, the underlying storage reservoir should be wrapped with geo-fabric. SFWMD recommends that the underlying storage reservoir layer be no more than 36 inches thick. Runoff from adjacent landscaped areas should not be directed onto any pervious pavement system unless the adjacent landscape areas that drain onto the pervious pavement, will not increase sediment, silt, sand, or organic debris deposition on the pavement that increases the potential for clogging of the pervious pavement section. The site design should include measures to reduce the likelihood of silts and sands from entering and plugging the pervious pavement system void spaces.

Periodic vacuum sweeping of pervious pavements can be used and is recommended. For areas where wind transported soil (i.e. near sand dunes or other coastal areas), or other conditions where excessive soil or other material deposition can occur, vacuum sweeping should be utilized a minimum of twice a year.

8.3 CLEARING AND GRUBBING

The site preparation for the drainage and roadway improvements should consist of clearing and grubbing in accordance with Section 110 of the FDOT Standard Specifications for Road and Bridge Construction. Topsoil needs to be stripped, removed and replaced with embankment or roadway fill in accordance with FDOT Standard Plans Index 120-002. Buried organic soils, debris or other unsuitable materials per FDOT Standard Plans Index 120-002 are encountered during the construction, which are not disclosed by the borings, they should be removed and replaced with a backfill material as described in Section 8.7.

8.4 UNDERGROUND UTILITIES AND STRUCTURES

Existing underground utilities and structures are present in the proposed construction area. Any such utilities will need to be properly identified/marked, excavated, trenched, and the existing utilities removed as necessary to construct the project. The excavation bottoms should be cleaned of any undesirable materials prior to placing any engineered backfill. We recommend that a Geotechnical Engineer be present to observe that the areas have been adequately stripped and prepared.

Site preparation, excavation, and backfilling for new utilities or re-aligned utilities should follow all of the applicable recommendations of this report.

8.5 ROADWAY EMBANKMENT

Roadway embankment should be constructed after the Clearing and Grubbing as described in the above section. Embankment soils should consist of sands or sand and gravel, with an AASHTO classification of A-3, A-2-4 or A-1. The embankment materials should be placed in accordance with FDOT Standard Plans Index 120-001 and Section 120 of Standard Specifications for Road and Bridge Construction.

The materials from Strata 1 and 2 appears to be satisfactory for use in embankment when utilized in accordance with the FDOT Standard Plans Index 120-001.

8.6 EXCAVATIONS

The Contractor should be solely responsible for making temporary excavations in a safe manner and provide appropriate measures to retain side slopes to ensure that persons working in or near the excavation are protected. All excavations shall comply with the Occupational Health and Safety Administration (OHSA) stipulations for Trench Excavation Safety including all temporary design and safety requirements. Temporary and/or permanent structural retaining walls shall be designed and sealed by a structural engineer registered in the State of Florida.

The soils encountered in the borings generally consist of sand. OSHA 29 CFR part 1926 (Subpart P, Excavations) defines such sandy soils as Type C soils. As such, temporary side slopes in fully dewatered excavations could be made at a 1½H:1V inclination or flatter if sufficient area is available around the excavation. Adjustment to this inclination and/or the use of sheeting, shoring or trench boxes will be required where inadequate area/space is not available.

Excavations for pipes should be performed in accordance with “Section 125, Excavation for Structures and Pipe” Division II Construction Details: Earthwork and Related Operations of the current FDOT Standard Specifications for Road and Bridge Construction.

8.7 DEWATERING

At the time of drilling of the borings (January 2020), groundwater was encountered at depths ranging between approximately 8.0 and 9.0 feet below the existing ground surface. In-the-dry construction of deep utility lines may require groundwater lowering via dewatering and control of groundwater seepage. Dewatering of the excavations may necessitate the use of sumps, wells, well-points or combinations thereof to be operated on a 24/7 basis until the drainage pipes are constructed and properly backfilled. Control of groundwater should be accomplished in a manner that preserves the integrity of the foundation bearing materials and does not cause instability of the excavation sidewalls. The dewatering system employed should be capable of maintaining a pre-drained surface a minimum of 24 inches below the excavation bottoms. Dewatering measures should be controlled so that the groundwater is not lowered beneath any nearby structure.

8.8 PIPE BEDDING

The sands encountered in the borings are expected to provide good support for utility pipelines without the need for bedding when the invert elevations are at least 24 inches above the groundwater level (natural or pre-drained by dewatering). Should organics or other deleterious materials be encountered at or below the pipe invert, such soils shall be considered compressible and unsuitable for pipe support. These soils should be over-excavated and replaced with compacted clean sand or FDOT No. 57 coarse aggregate.

The bedding surface should be uniformly compacted to a density of not less than 95 percent of the maximum dry density in accordance with ASTM D 1557, the Modified Proctor Method.

8.9 TRENCH BACKFILL AND COMPACTION

Backfilling and compaction should be performed in accordance with "Section 125-8 Backfilling, Excavation for Structures and Pipe" Division II Construction Details: Earthwork and Related Operations of the current FDOT Standard Specifications for Road and Bridge Construction. Should unsuitable soils be present at or below the drainage pipes, such soils shall be considered compressible and unsuitable for pipe support. These soils should be over-excavated and replaced in accordance with the Index 120-002 of the FDOT Standard Plans and "Section 125-8 Backfilling, Excavation for Structures and Pipe" Division II Construction Details: Earthwork and Related Operations of the current FDOT Standard Specifications for Road and Bridge Construction.

Soils used for backfill should consist of relatively clean sands having no materials larger than two inches in size, not more than ten (10) percent passing the U.S. Standard No. 200 sieve. Such backfill shall not contain more than three (3) percent organics or other deleterious materials by weight in accordance with Section 125 of the FDOT Standard Specifications for Road and Bridge Construction.

Granular backfill should be placed at a moisture content within three (3) percent of its ASTM D 1557 determined optimum moisture and in level lifts whose thickness does not exceed eight (8) inches. Each fill lift should be stable, unyielding and uniformly compacted to at least ninety-five (95) percent of the maximum dry density in accordance with ASTM D 1557, the Modified Proctor Method. We recommend the use of only relatively light, hand-held compaction equipment in the densification operations around utilities to limit the potential damage to the pipelines and buried structures.

9.0 PROTECTION OF EXISTING STRUCTURES

Ground vibrations induced upon the adjacent structures and utilities, primarily by heavy soil compaction equipment or any other heavy vibratory construction activities, should be monitored to assure that they do not reach levels which prove damaging to any adjacent/nearby structures and utilities. Vibration levels on adjacent facilities should generally be maintained at or below a 0.25

ips peak particle velocity vibration level. However, more restrictive/lessor levels may be specified for highly sensitive residential areas at the discretion of the Designer or City.

"Section 108, Monitor Existing Structures" Division II Construction Details: General Construction Operations of the current FDOT Standard Specifications for Road and Bridge Construction requires Inspection and Settlement Monitoring during embankment and asphalt compaction. We have identified no structures which would require Inspection and Settlement Monitoring or Vibration Monitoring other than those included in the Standard Specs section 108-2.

10.0 LIMITATIONS

This report is intended for geotechnical purposes only, and not to document or detect the presence, or absence of any environmental conditions at the site, or to perform an environmental assessment of the site.

The analysis and recommendations presented in this report are based upon our interpretation of the subsurface information revealed by the test borings. The report does not reflect variations in subsurface conditions that may exist between or beyond these borings. Variations in soil and groundwater conditions should be expected, the nature and extent of which might not become evident until construction is undertaken. If variations are encountered, and/or the scope of the project altered, we should be consulted for additional recommendations.

RADISE warrants that the professional services performed and presented in this report are prepared for Craig A. Smith & Associates and are based upon typical standard of care recognized principles and practices in the discipline of geotechnical engineering and hydrogeology at this place and point in time, for this project site. No other warranties are expressed or implied.

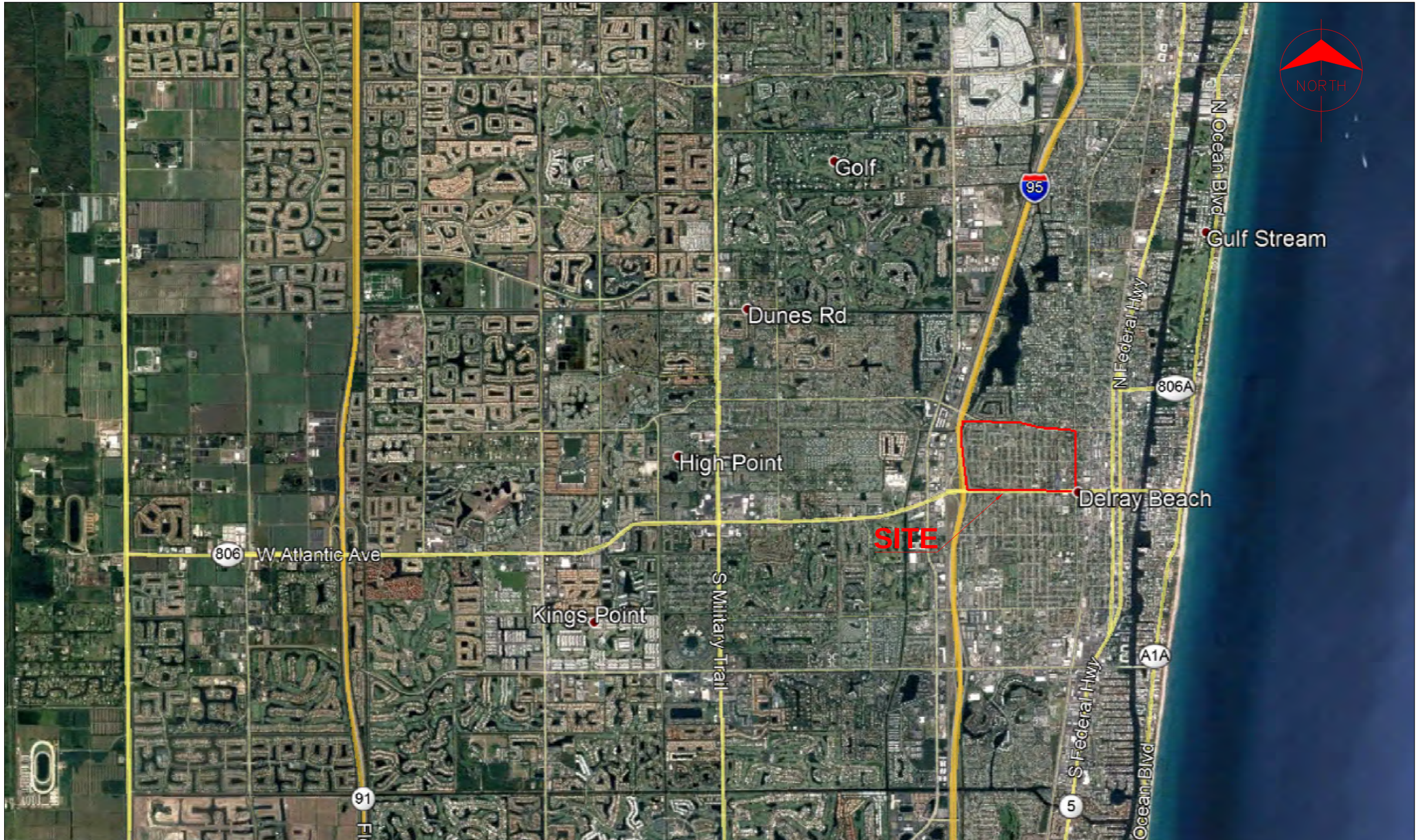
-oOo-

RADISE appreciates the opportunity to be of service to you. Please feel free to contact us at 561-841-0103 if you have any questions or comments regarding this report.

Respectfully submitted
RADISE International, L.C.

ATTACHMENTS

SHEET 1: VICINITY MAP
SHEET 2: USDA SOIL SURVEY
SHEET 3: USGS TOPOGRAPHIC MAP
SHEET 4: BORING LOCATION PLAN
SHEETS 5A THROUGH 5E: SUBSURFACE PROFILES



REVISIONS					
Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
Drawn by	AK	12/06/2018
Checked by	AP	12/06/2018
Designed by	AB	12/06/2018
Checked by	AB	12/06/2018
Approved by		

RADISE INTERNATIONAL

LICENSE NO. - 8901

ENGINEER OF RECORD
ANDREW NIXON (P.E.No. - 71458)
RADISE International
4152 West Blue Heron Boulevard, Suite 1114
Riviera Beach, Florida. 33404
TEL 561-841-0103 FAX 561-841-0104
URL : http:// www.radise.net

CITY OF DELRAY BEACH

COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.

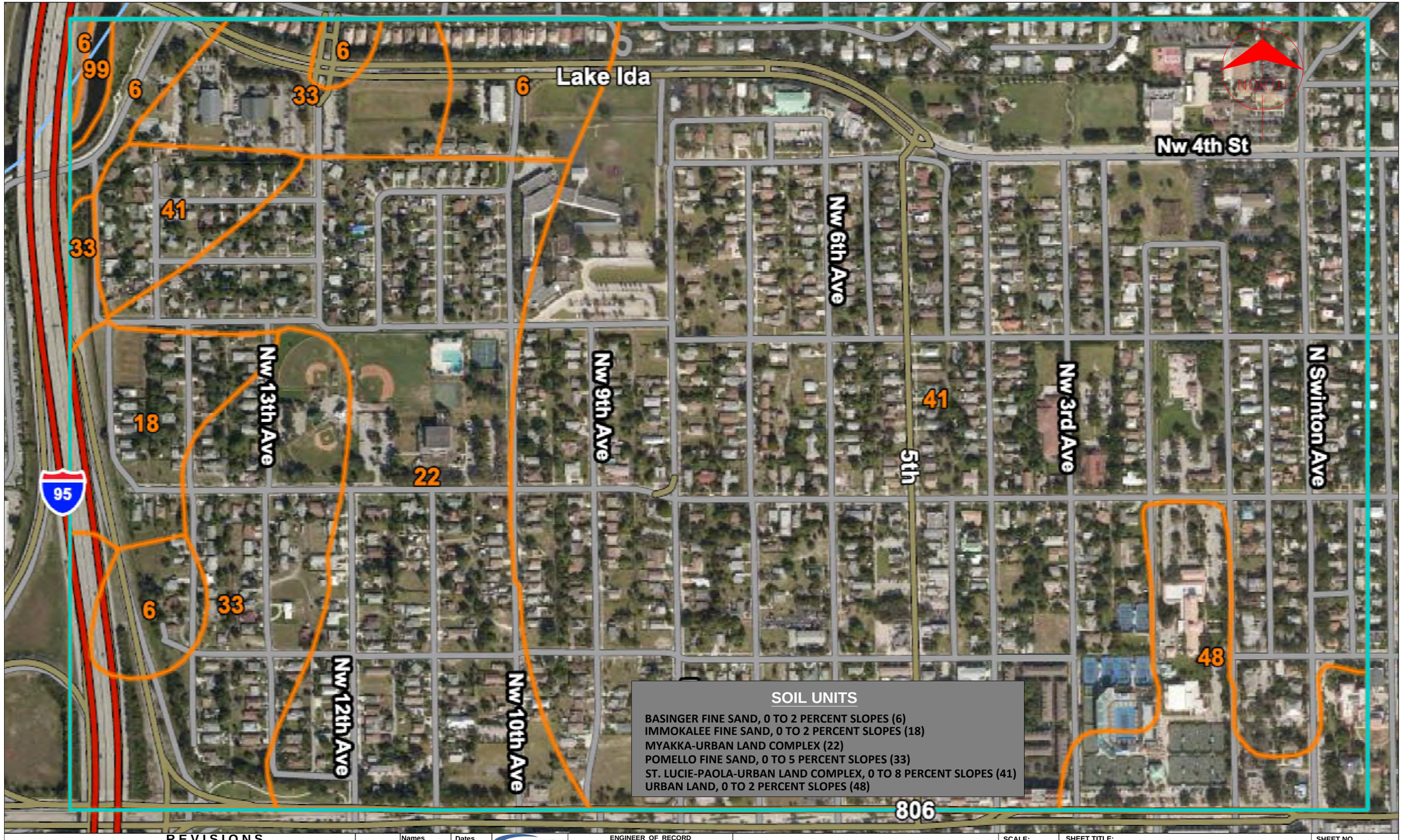
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: VICINITY MAP

PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

SHEET NO. 1

RADISE PROJECT NO: 191008



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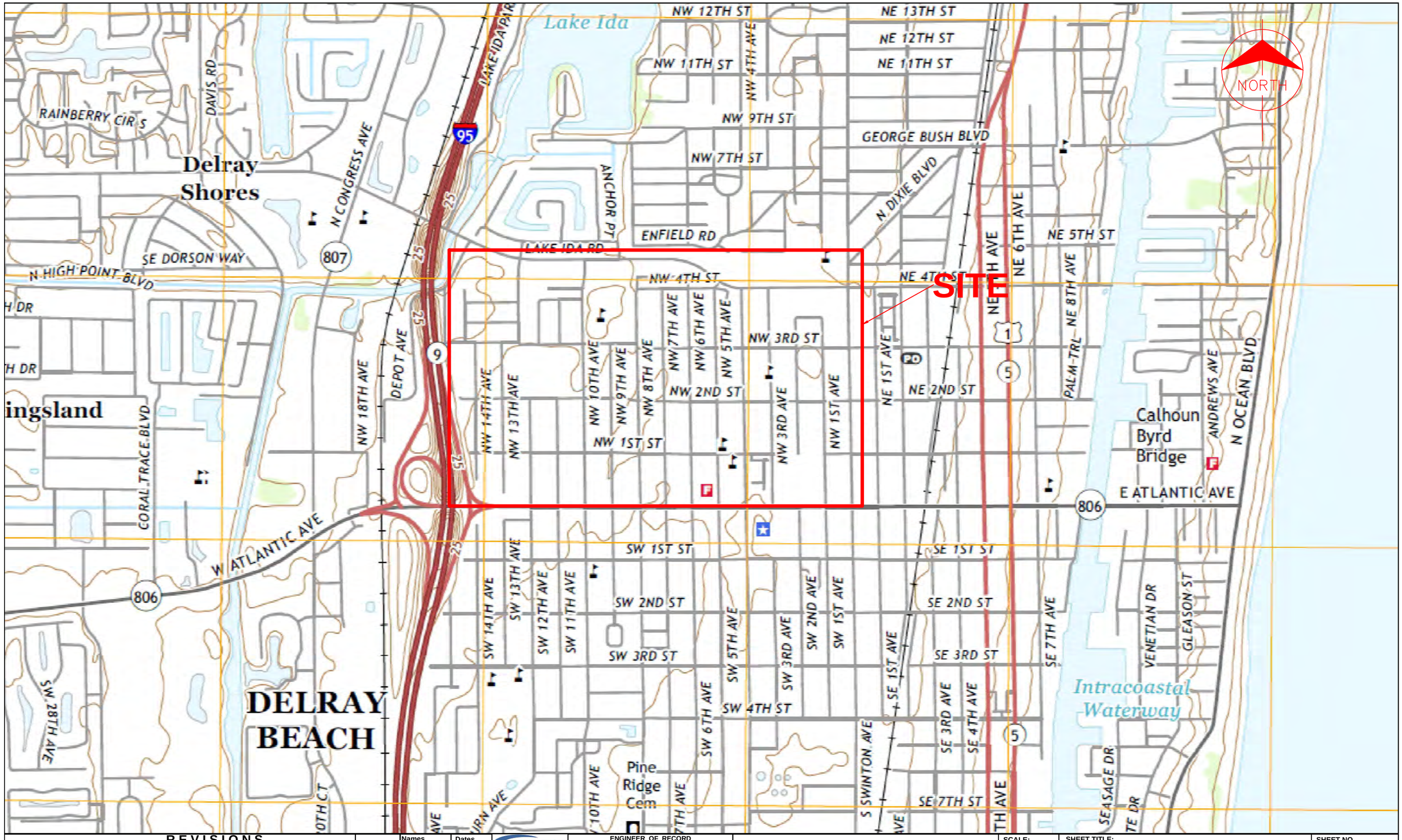
CITY OF DELRAY BEACH		SCALE: VERTICAL N.T.S.	SHEET TITLE: USDA SOIL SURVEY	SHEET NO. 2
COUNTY	CLIENT	SCALE: HORIZONTAL N.T.S.	PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS	RADISE PROJECT NO: 191008
PALM BEACH	CRAIG A. SMITH & ASSOCIATES			



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CITY OF DELRAY BEACH

COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.

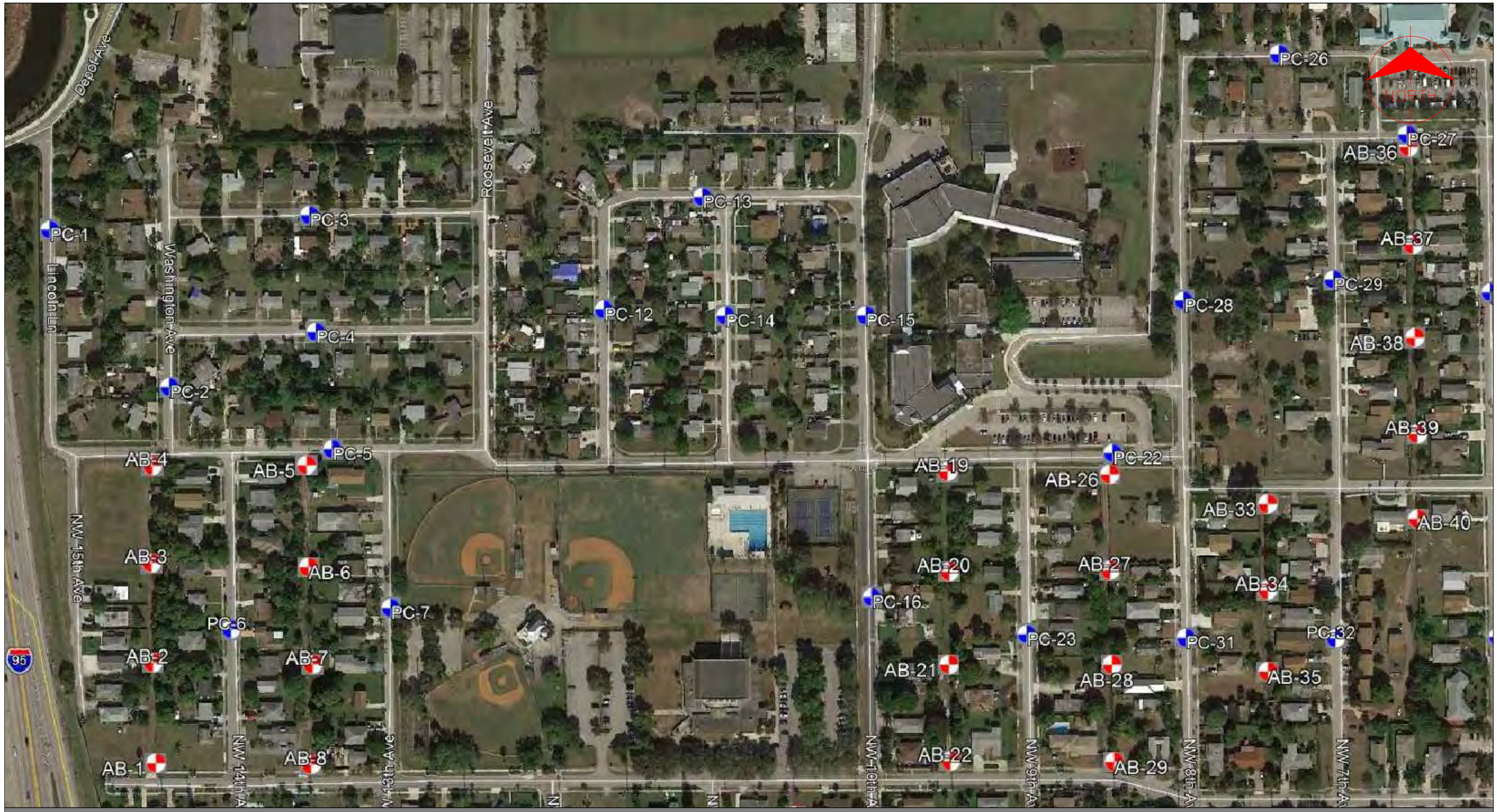
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: USGS TOPOGRAPHIC MAP DELRAY BEACH QUADRANGLE

PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

SHEET NO. 3

RADISE PROJECT NO: 191008



LEGEND

AB-1 TO AB-59 — 6' DEEP AUGER BORING LOCATION AND NUMBERING

PC-1 TO PC-58 — PAVEMENT CORE LOCATION AND NUMBERING

EX-1 TO EX-3 — EXFILTRATION TEST LOCAITON AND NUMBERING

REVISIONS							Names	Dates
Date.	By	Descriptions	Date.	By	Descriptions	Drawn by	AK	02/12/2020
						Checked by	NK	02/12/2020
						Designed by	AB	02/12/2020
						Checked by	AB	02/12/2020
						Approved by		

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PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.

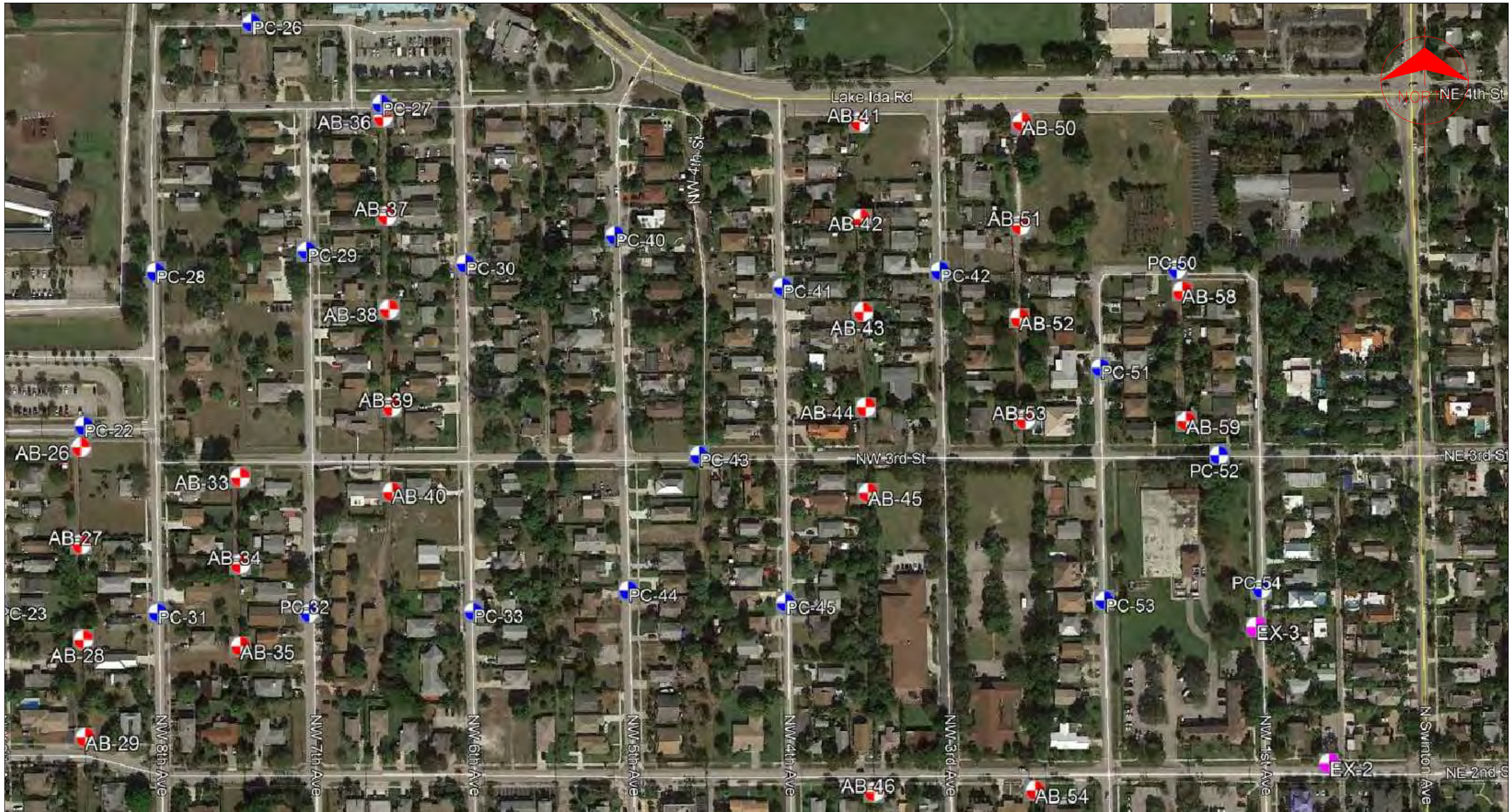
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: BORING LOCATION PLAN

SHEET NO. 4A

PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

RADISE PROJECT NO: 191008



LEGEND

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PC-1 TO PC-58 — PAVEMENT CORE LOCATION AND NUMBERING

EX-1 TO EX-3 — EXFILTRATION TEST LOCAITON AND NUMBERING

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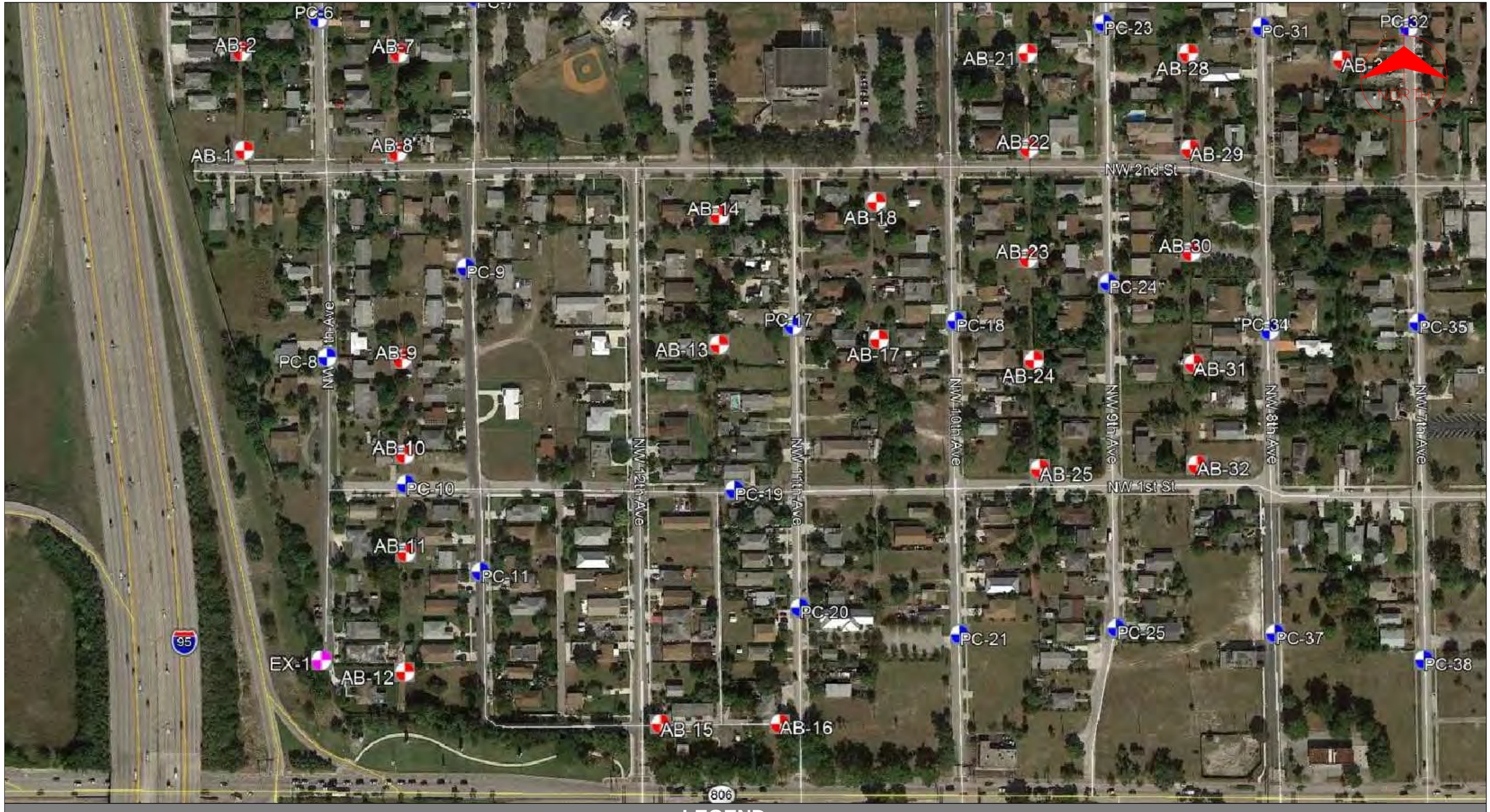
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: BORING LOCATION PLAN

SHEET NO. 4B

PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

RADISE PROJECT NO: 191008



LEGEND

AB-1 TO AB-59 — 6' DEEP AUGER BORING LOCATION AND NUMBERING

PC-1 TO PC-58 — PAVEMENT CORE LOCATION AND NUMBERING

EX-1 TO EX-3 — EXFILTRATION TEST LOCAITON AND NUMBERING

REVISIONS

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SCALE: VERTICAL N.T.S.

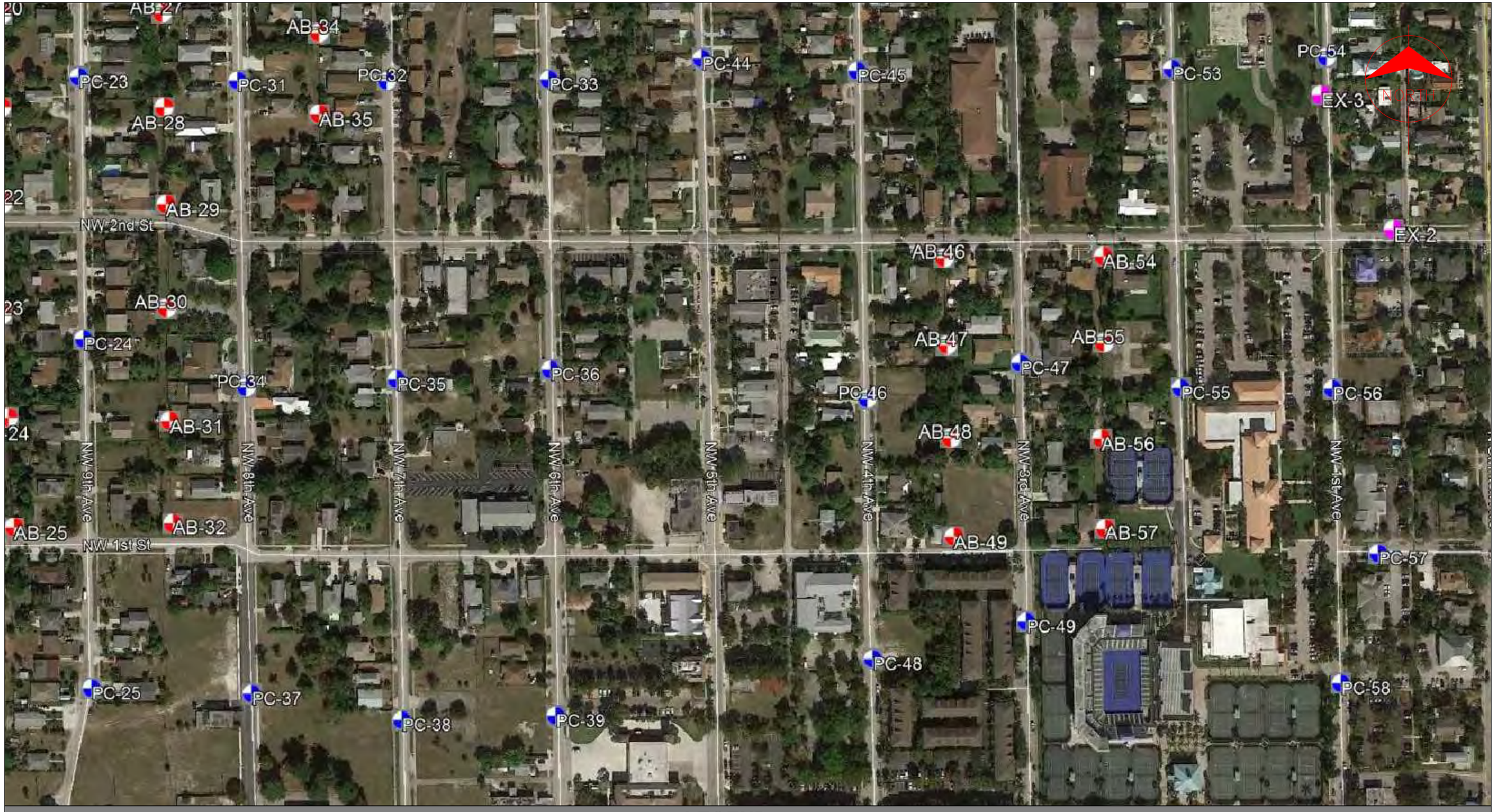
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: BORING LOCATION PLAN

SHEET NO. 4C

PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

RADISE PROJECT NO: 191008



LEGEND

AB-1 TO AB-59 — 6' DEEP AUGER BORING LOCATION AND NUMBERING

PC-1 TO PC-58 — PAVEMENT CORE LOCATION AND NUMBERING

EX-1 TO EX-3 — EXFILTRATION TEST LOCAITON AND NUMBERING

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PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.

SCALE: HORIZONTAL N.T.S.

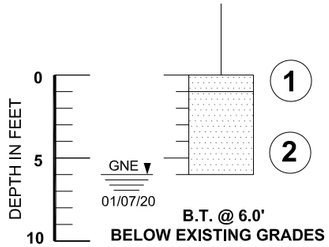
SHEET TITLE: BORING LOCATION PLAN

SHEET NO. 4D

PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

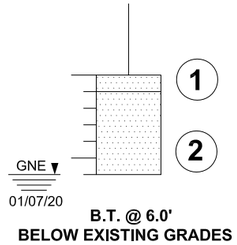
RADISE PROJECT NO: 191008

BORING NO. AB-1
LONGITUDE: W -80.0880°
LATITUDE: N 26.4655°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



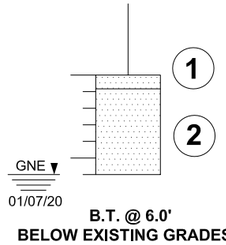
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-2
LONGITUDE: W -80.0880°
LATITUDE: N 26.4661°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



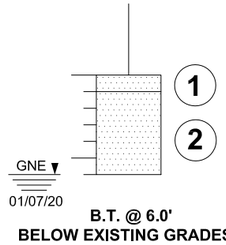
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-3
LONGITUDE: W -80.0880°
LATITUDE: N 26.4666°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



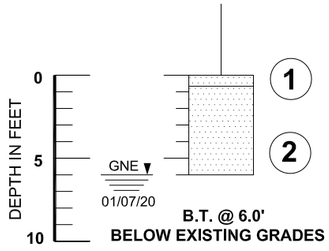
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-4
LONGITUDE: W -80.0880°
LATITUDE: N 26.4672°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



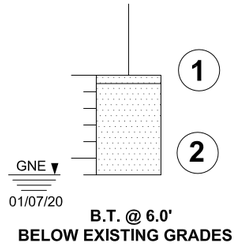
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-5
LONGITUDE: W -80.0870°
LATITUDE: N 26.4672°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



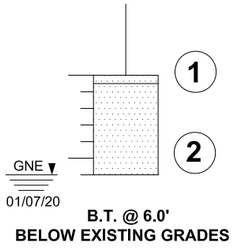
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-6
LONGITUDE: W -80.0870°
LATITUDE: N 26.4666°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



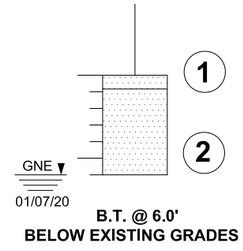
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-7
LONGITUDE: W -80.0870°
LATITUDE: N 26.4660°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



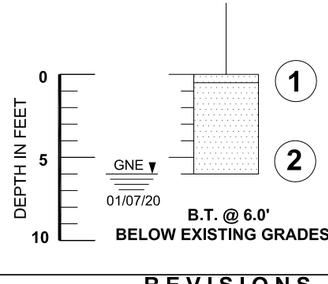
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-8
LONGITUDE: W -80.0870°
LATITUDE: N 26.4655°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



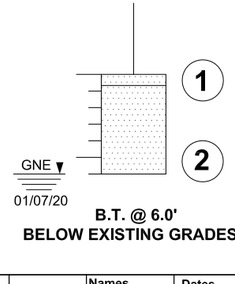
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-9
LONGITUDE: W -80.0869°
LATITUDE: N 26.4642°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-10
LONGITUDE: W -80.0869°
LATITUDE: N 26.4637°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-11
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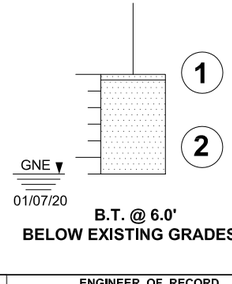
LATITUDE: N 26.4631°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

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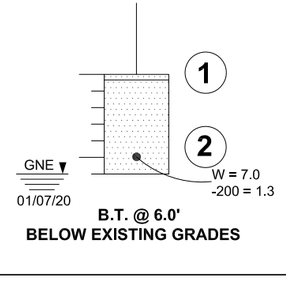
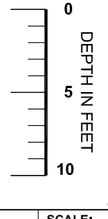
LONGITUDE: W -80.0869°
LATITUDE: N 26.4624°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES



LEGEND

1 — DARK BROWN, BLACK, FINE SAND, FEW SILT (A-3)

2 — GRAY, BROWN, BLACK, FINE SAND, OCCASIONAL FEW GRAVEL AND SHELL FRAGMENTS, OCCASIONAL TRACE ORGANICS (A-3)

AB-1	BORING NUMBER
B.T @ 6.0'	BORING TERMINATED AT 6.0 FEET BELOW THE EXISTING GROUND SURFACE
GNE ▼ 01/07/20	GROUNDWATER LEVEL NOT ENCOUNTERED AND DRILLING DATE
W	MOISTURE CONTENT (%)
OC	ORGANIC CONTENT (%)
-200	AMOUNT PASSING US STANDARD 200 SIEVE (%)
A-3, A-2-4	AASHTO SOIL CLASSIFICATION SYSTEM GROUP SYMBOL (ASTM D 3282)

NOTES:

1. BORINGS WERE DRILLED BETWEEN 01/07/2020 AND 02/09/2020.BORINGS WERE PERFORMED USING HAND AUGER DRILLING EQUIPMENT (ASTM D4152)
2. STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. SOIL TRANSITIONS MAY BE MORE GRADUAL THAN IMPLIED.
3. GROUNDWATER LEVELS SHOWN ON THE SUBSURFACE PROFILES REPRESENT GROUNDWATER SURFACES ON THE DATES SHOWN. GROUNDWATER LEVEL FLUCTUATIONS SHOULD BE ANTICIPATED THROUGHOUT THE YEAR.
4. AFTER COMPLETION OF DRILLING, BOREHOLES WERE BACKFILLED WITH SOIL CUTTINGS.

REVISIONS

Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
Drawn by	AK	02/12/2020
Checked by	NK	02/12/2020
Designed by	AB	02/12/2020
Checked by	AB	02/12/2020
Approved by		

RADISE INTERNATIONAL
LICENSE NO. - 8901

ENGINEER OF RECORD
ANDREW NIXON (P.E.No. - 71458)
RADISE International
4152 West Blue Heron Boulevard, Suite 1114
Riviera Beach, Florida, 33404
TEL 561-841-0103 FAX 561-841-0104
URL : http:// www.radise.net

CITY OF DELRAY BEACH

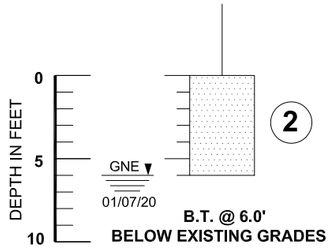
COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: SUBSURFACE PROFILES (AUGER BORINGS)
PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

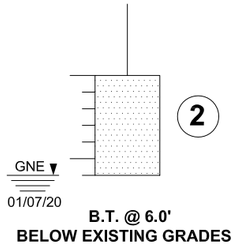
SHEET NO. 5A
RADISE PROJECT NO: 191008

BORING NO. AB-13
LONGITUDE: W -80.0849°
LATITUDE: N 26.4643°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



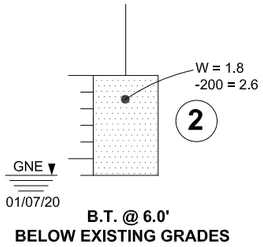
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-14
LONGITUDE: W -80.0849°
LATITUDE: N 26.4651°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



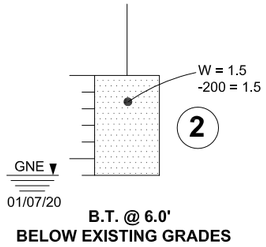
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-15
LONGITUDE: W -80.0852°
LATITUDE: N 26.4621°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020

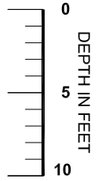


B.T. @ 6.0'
BELOW EXISTING GRADES

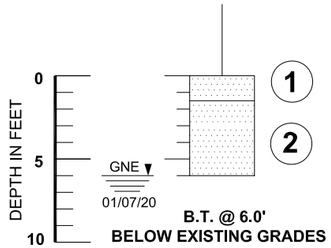
BORING NO. AB-16
LONGITUDE: W -80.0845°
LATITUDE: N 26.4621°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

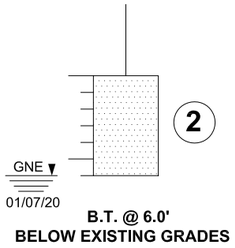


BORING NO. AB-17
LONGITUDE: W -80.0838°
LATITUDE: N 26.4644°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



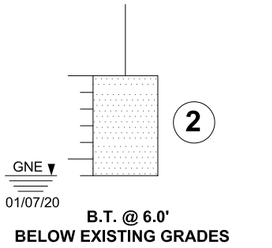
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-18
LONGITUDE: W -80.0838°
LATITUDE: N 26.4652°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



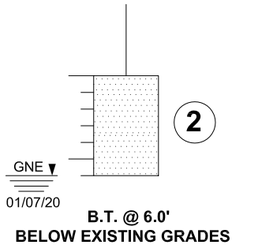
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-19
LONGITUDE: W -80.0828°
LATITUDE: N 26.4672°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



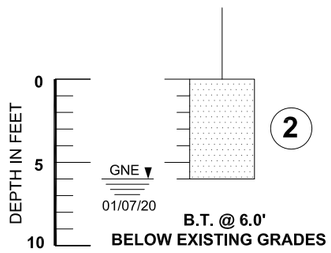
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-20
LONGITUDE: W -80.0828°
LATITUDE: N 26.4666°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



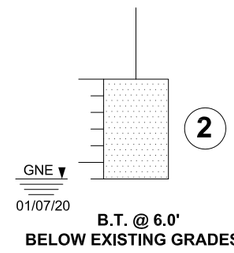
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-21
LONGITUDE: W -80.0828°
LATITUDE: N 26.4660°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



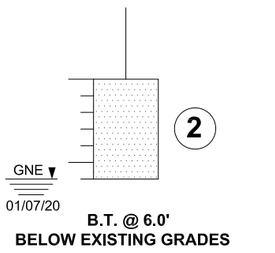
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-22
LONGITUDE: W -80.0828°
LATITUDE: N 26.4655°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



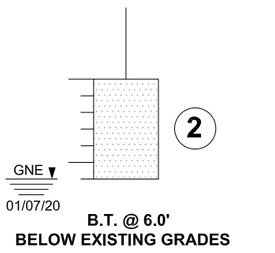
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-23
LONGITUDE: W -80.0829°
LATITUDE: N 26.4650°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 02/09/2020

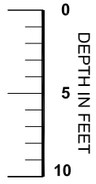


B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-24
LONGITUDE: W -80.0828°
LATITUDE: N 26.4642°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 02/09/2020



B.T. @ 6.0'
BELOW EXISTING GRADES



LEGEND

1	DARK BROWN, BLACK, FINE SAND, FEW SILT (A-3)
2	GRAY, BROWN, BLACK, FINE SAND, OCCASIONAL FEW GRAVEL AND SHELL FRAGMENTS, OCCASIONAL TRACE ORGANICS (A-3)
AB-1	BORING NUMBER
B.T @ 6.0'	BORING TERMINATED AT 6.0 FEET BELOW THE EXISTING GROUND SURFACE
GNE ▼ 01/07/20	GROUNDWATER LEVEL NOT ENCOUNTERED AND DRILLING DATE
W	MOISTURE CONTENT (%)
OC	ORGANIC CONTENT (%)
-200	AMOUNT PASSING US STANDARD 200 SIEVE (%)
A-3, A-2-4	AASHTO SOIL CLASSIFICATION SYSTEM GROUP SYMBOL (ASTM D 3282)

NOTES:

1. BORINGS WERE DRILLED BETWEEN 01/07/2020 AND 02/09/2020.BORINGS WERE PERFORMED USING HAND AUGER DRILLING EQUIPMENT (ASTM D4152)
2. STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. SOIL TRANSITIONS MAY BE MORE GRADUAL THAN IMPLIED.
3. GROUNDWATER LEVELS SHOWN ON THE SUBSURFACE PROFILES REPRESENT GROUNDWATER SURFACES ON THE DATES SHOWN. GROUNDWATER LEVEL FLUCTUATIONS SHOULD BE ANTICIPATED THROUGHOUT THE YEAR.
4. AFTER COMPLETION OF DRILLING, BOREHOLES WERE BACKFILLED WITH SOIL CUTTINGS.

REVISIONS

Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
Drawn by	AK	02/12/2020
Checked by	NK	02/12/2020
Designed by	AB	02/12/2020
Checked by	AB	02/12/2020
Approved by		

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CITY OF DELRAY BEACH

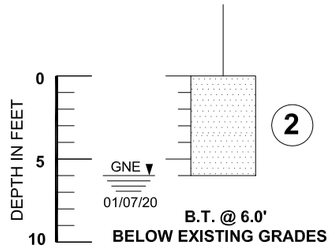
COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: SUBSURFACE PROFILES (AUGER BORINGS)
PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

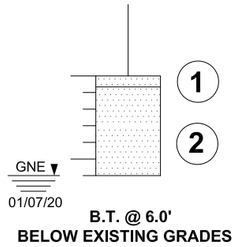
SHEET NO. 5B
RADISE PROJECT NO: 191008

BORING NO.	AB-25
LONGITUDE:	W -80.0828°
LATITUDE:	N 26.4636°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	02/09/2020



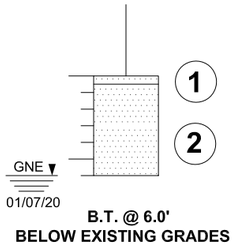
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-26
LONGITUDE:	W -80.0818°
LATITUDE:	N 26.4671°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



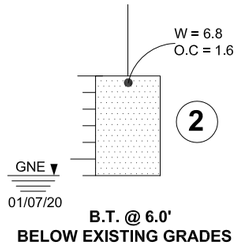
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-27
LONGITUDE:	W -80.0818°
LATITUDE:	N 26.4666°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



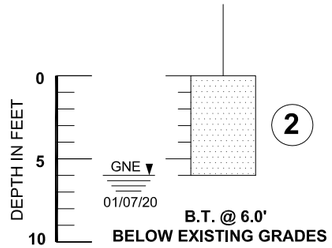
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-28
LONGITUDE:	W -80.0818°
LATITUDE:	N 26.4660°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



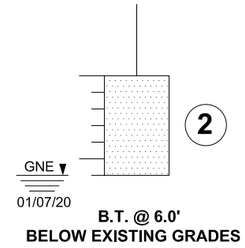
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-29
LONGITUDE:	W -80.0818°
LATITUDE:	N 26.4655°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



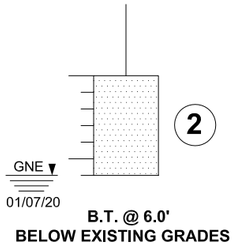
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-30
LONGITUDE:	W -80.0818°
LATITUDE:	N 26.4652°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	02/09/2020



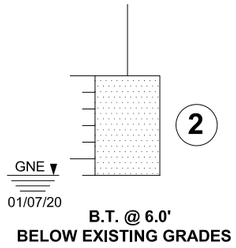
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-31
LONGITUDE:	W -80.0818°
LATITUDE:	N 26.4643°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	02/09/2020



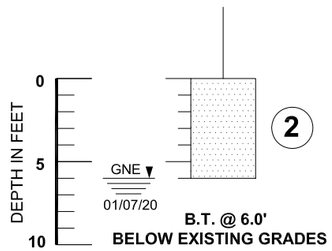
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-32
LONGITUDE:	W -80.0817°
LATITUDE:	N 26.4636°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	02/09/2020



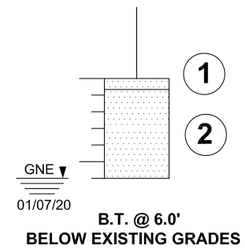
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-33
LONGITUDE:	W -80.0808°
LATITUDE:	N 26.4670°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



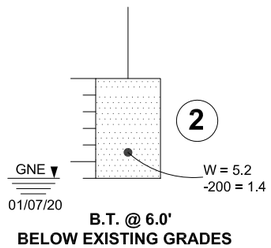
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-34
LONGITUDE:	W -80.0808°
LATITUDE:	N 26.4665°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



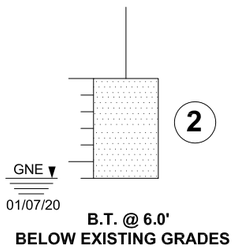
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-35
LONGITUDE:	W -80.0808°
LATITUDE:	N 26.4660°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-36
LONGITUDE:	W -80.0799°
LATITUDE:	N 26.4690°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

LEGEND

1	DARK BROWN, BLACK, FINE SAND, FEW SILT (A-3)
2	GRAY, BROWN, BLACK, FINE SAND, OCCASIONAL FEW GRAVEL AND SHELL FRAGMENTS, OCCASIONAL TRACE ORGANICS (A-3)
AB-1	BORING NUMBER
B.T @ 6.0'	BORING TERMINATED AT 6.0 FEET BELOW THE EXISTING GROUND SURFACE
GNE ▼ 01/07/20	GROUNDWATER LEVEL NOT ENCOUNTERED AND DRILLING DATE
W	MOISTURE CONTENT (%)
OC	ORGANIC CONTENT (%)
-200	AMOUNT PASSING US STANDARD 200 SIEVE (%)
A-3, A-2-4	AASHTO SOIL CLASSIFICATION SYSTEM GROUP SYMBOL (ASTM D 3282)

NOTES:

1. BORINGS WERE DRILLED BETWEEN 01/07/2020 AND 02/09/2020.BORINGS WERE PERFORMED USING HAND AUGER DRILLING EQUIPMENT (ASTM D4152)
2. STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. SOIL TRANSITIONS MAY BE MORE GRADUAL THAN IMPLIED.
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4. AFTER COMPLETION OF DRILLING, BOREHOLES WERE BACKFILLED WITH SOIL CUTTINGS.

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Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
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Approved by		

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COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

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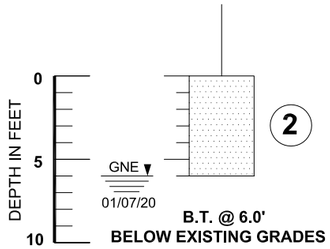
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: SUBSURFACE PROFILES (AUGER BORINGS)
PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

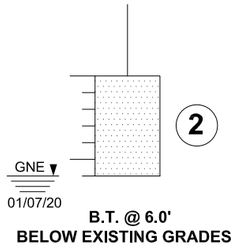
SHEET NO. 5C
RADISE PROJECT NO: 191008

BORING NO.	AB-37
LONGITUDE:	W -80.0798°
LATITUDE:	N 26.4685°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



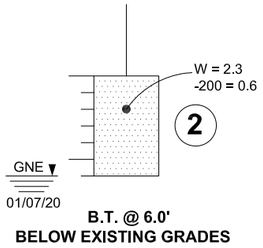
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-38
LONGITUDE:	W -80.0798°
LATITUDE:	N 26.4679°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



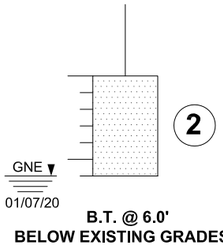
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-39
LONGITUDE:	W -80.0798°
LATITUDE:	N 26.4674°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020

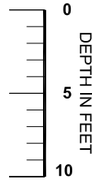


B.T. @ 6.0'
BELOW EXISTING GRADES

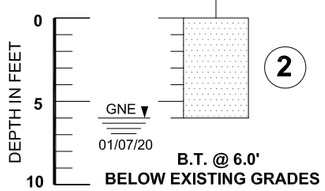
BORING NO.	AB-40
LONGITUDE:	W -80.0798°
LATITUDE:	N 26.4669°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

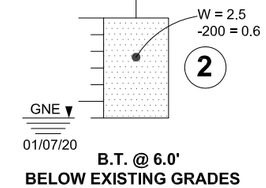


BORING NO.	AB-41
LONGITUDE:	W -80.0768°
LATITUDE:	N 26.4690°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



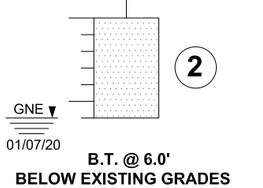
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-42
LONGITUDE:	W -80.0768°
LATITUDE:	N 26.4685°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



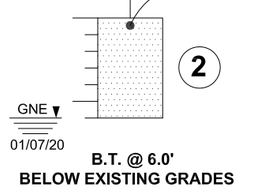
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-43
LONGITUDE:	W -80.0768°
LATITUDE:	N 26.4679°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020

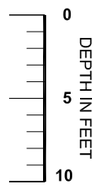


B.T. @ 6.0'
BELOW EXISTING GRADES

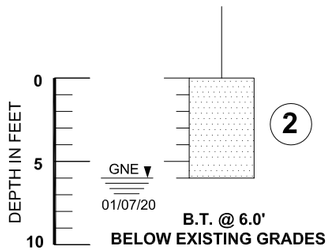
BORING NO.	AB-44
LONGITUDE:	W -80.0768°
LATITUDE:	N 26.4674°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

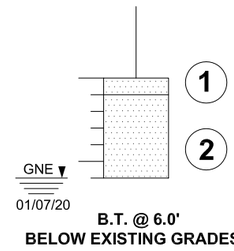


BORING NO.	AB-45
LONGITUDE:	W -80.0767°
LATITUDE:	N 26.4669°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



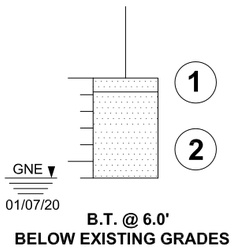
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-46
LONGITUDE:	W -80.0767°
LATITUDE:	N 26.4652°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



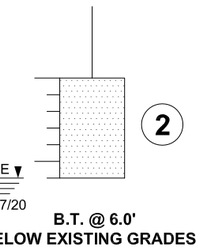
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-47
LONGITUDE:	W -80.0767°
LATITUDE:	N 26.4647°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020

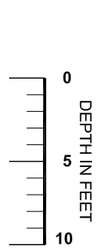


B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO.	AB-48
LONGITUDE:	W -80.0767°
LATITUDE:	N 26.4641°
RIG:	HAND AUGER
HAMMER:	N/A
DRILLER:	T.FICKLING
DATE:	01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES



LEGEND

1	DARK BROWN, BLACK, FINE SAND, FEW SILT (A-3)
2	GRAY, BROWN, BLACK, FINE SAND, OCCASIONAL FEW GRAVEL AND SHELL FRAGMENTS, OCCASIONAL TRACE ORGANICS (A-3)
AB-1	BORING NUMBER
B.T @ 6.0'	BORING TERMINATED AT 6.0 FEET BELOW THE EXISTING GROUND SURFACE
GNE ▼ 01/07/20	GROUNDWATER LEVEL NOT ENCOUNTERED AND DRILLING DATE
W	MOISTURE CONTENT (%)
OC	ORGANIC CONTENT (%)
-200	AMOUNT PASSING US STANDARD 200 SIEVE (%)
A-3, A-2-4	AASHTO SOIL CLASSIFICATION SYSTEM GROUP SYMBOL (ASTM D 3282)

NOTES:

1. BORINGS WERE DRILLED BETWEEN 01/07/2020 AND 02/09/2020.BORINGS WERE PERFORMED USING HAND AUGER DRILLING EQUIPMENT (ASTM D4152)
2. STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. SOIL TRANSITIONS MAY BE MORE GRADUAL THAN IMPLIED.
3. GROUNDWATER LEVELS SHOWN ON THE SUBSURFACE PROFILES REPRESENT GROUNDWATER SURFACES ON THE DATES SHOWN. GROUNDWATER LEVEL FLUCTUATIONS SHOULD BE ANTICIPATED THROUGHOUT THE YEAR.
4. AFTER COMPLETION OF DRILLING, BOREHOLES WERE BACKFILLED WITH SOIL CUTTINGS.

REVISIONS

Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
Drawn by	AK	02/12/2020
Checked by	NK	02/12/2020
Designed by	AB	02/12/2020
Checked by	AB	02/12/2020
Approved by		

RADISE INTERNATIONAL
LICENSE NO. - 8901

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4152 West Blue Heron Boulevard, Suite 1114
Riviera Beach, Florida, 33404
TEL 561-841-0103 FAX 561-841-0104
URL : http:// www.radise.net

CITY OF DELRAY BEACH

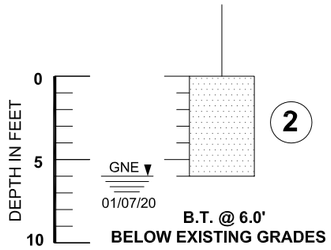
COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: SUBSURFACE PROFILES (AUGER BORINGS)
PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

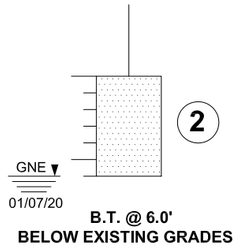
SHEET NO. 5D
RADISE PROJECT NO: 191008

BORING NO. AB-49
LONGITUDE: W -80.0766°
LATITUDE: N 26.4635°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



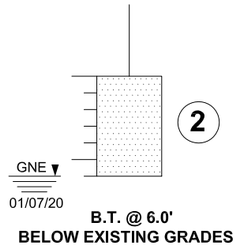
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-50
LONGITUDE: W -80.0758°
LATITUDE: N 26.4690°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



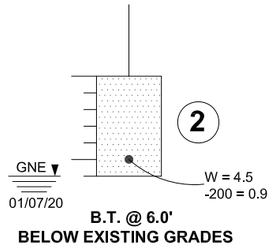
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-51
LONGITUDE: W -80.0758°
LATITUDE: N 26.4684°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



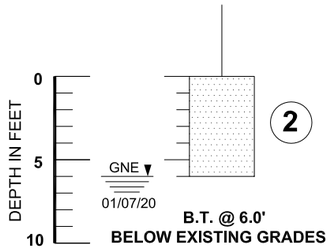
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-52
LONGITUDE: W -80.0758°
LATITUDE: N 26.4679°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



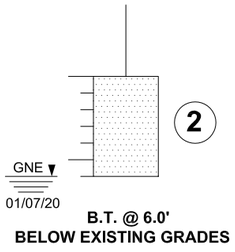
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-53
LONGITUDE: W -80.0757°
LATITUDE: N 26.4673°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



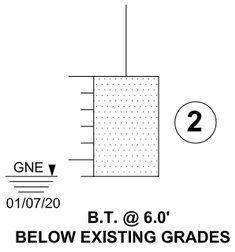
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-54
LONGITUDE: W -80.0757°
LATITUDE: N 26.4652°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



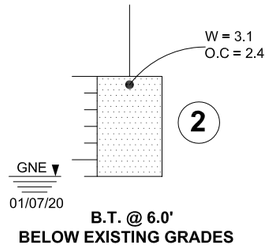
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-55
LONGITUDE: W -80.0757°
LATITUDE: N 26.4647°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020

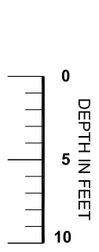


B.T. @ 6.0'
BELOW EXISTING GRADES

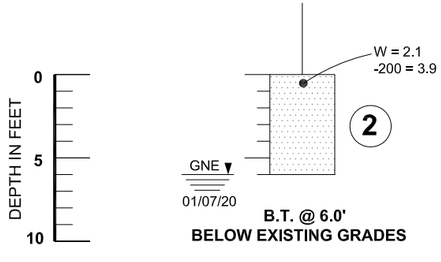
BORING NO. AB-56
LONGITUDE: W -80.0757°
LATITUDE: N 26.4641°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

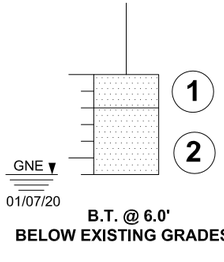


BORING NO. AB-57
LONGITUDE: W -80.0757°
LATITUDE: N 26.4636°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



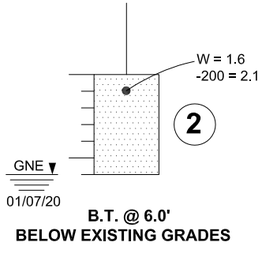
B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-58
LONGITUDE: W -80.0747°
LATITUDE: N 26.4680°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

BORING NO. AB-59
LONGITUDE: W -80.0747°
LATITUDE: N 26.4673°
RIG: HAND AUGER
HAMMER: N/A
DRILLER: T.FICKLING
DATE: 01/07/2020



B.T. @ 6.0'
BELOW EXISTING GRADES

LEGEND

1	DARK BROWN, BLACK, FINE SAND, FEW SILT (A-3)
2	GRAY, BROWN, BLACK, FINE SAND, OCCASIONAL FEW GRAVEL AND SHELL FRAGMENTS, OCCASIONAL TRACE ORGANICS (A-3)
AB-1	BORING NUMBER
B.T @ 6.0'	BORING TERMINATED AT 6.0 FEET BELOW THE EXISTING GROUND SURFACE
GNE ▼ 01/07/20	GROUNDWATER LEVEL NOT ENCOUNTERED AND DRILLING DATE
W	MOISTURE CONTENT (%)
OC	ORGANIC CONTENT (%)
-200	AMOUNT PASSING US STANDARD 200 SIEVE (%)
A-3, A-2-4	AASHTO SOIL CLASSIFICATION SYSTEM GROUP SYMBOL (ASTM D 3282)

NOTES:

1. BORINGS WERE DRILLED BETWEEN 01/07/2020 AND 02/09/2020.BORINGS WERE PERFORMED USING HAND AUGER DRILLING EQUIPMENT (ASTM D4152)
2. STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. SOIL TRANSITIONS MAY BE MORE GRADUAL THAN IMPLIED.
3. GROUNDWATER LEVELS SHOWN ON THE SUBSURFACE PROFILES REPRESENT GROUNDWATER SURFACES ON THE DATES SHOWN. GROUNDWATER LEVEL FLUCTUATIONS SHOULD BE ANTICIPATED THROUGHOUT THE YEAR.
4. AFTER COMPLETION OF DRILLING, BOREHOLES WERE BACKFILLED WITH SOIL CUTTINGS.

REVISIONS

Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
Drawn by	AK	02/12/2020
Checked by	NK	02/12/2020
Designed by	AB	02/12/2020
Checked by	AB	02/12/2020
Approved by		

RADISE INTERNATIONAL
LICENSE NO. - 8901

ENGINEER OF RECORD
ANDREW NIXON (P.E.No. - 71458)
RADISE International
4152 West Blue Heron Boulevard, Suite 1114
Riviera Beach, Florida, 33404
TEL 561-841-0103 FAX 561-841-0104
URL : http:// www.radise.net

CITY OF DELRAY BEACH

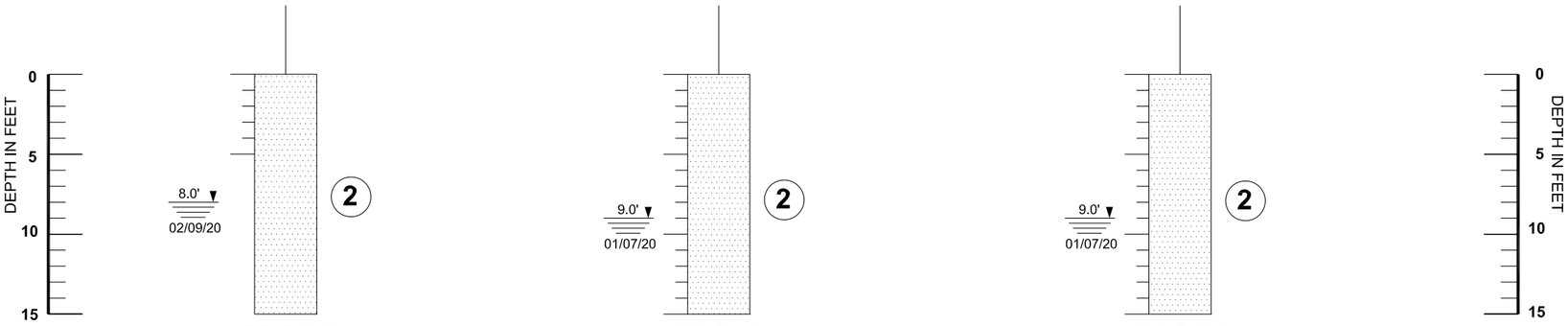
COUNTY	CLIENT
PALM BEACH	CRAIG A. SMITH & ASSOCIATES

SCALE: VERTICAL N.T.S.
SCALE: HORIZONTAL N.T.S.

SHEET TITLE: SUBSURFACE PROFILES (AUGER BORINGS)
PROJECT NAME: NW NEIGHBORHOOD IMPROVEMENTS

SHEET NO. 5E
RADISE PROJECT NO: 191008

BORING NO.	**EX-1**	**EX-2**	**EX-3**
LONGITUDE:	**W -80.0875°**	**W -80.0738°**	**W -80.0743°**
LATITUDE:	**N 26.4627°**	**N 26.4653°**	**N 26.4664°**
RIG:	**HAND AUGER**	**HAND AUGER**	**HAND AUGER**
HAMMER:	**N/A**	**N/A**	**N/A**
DRILLER:	**T.FICKLING**	**T.FICKLING**	**T.FICKLING**
DATE:	**02/09/2020**	**02/09/2020**	**02/09/2020**



B.T. @ 15.0'
BELOW EXISTING GRADES

B.T. @ 15.0'
BELOW EXISTING GRADES

B.T. @ 15.0'
BELOW EXISTING GRADES

LEGEND

1	DARK BROWN, BLACK, FINE SAND, FEW SILT (A-3)
2	GRAY, BROWN, BLACK, FINE SAND, OCCASIONAL FEW GRAVEL AND SHELL FRAGMENTS, OCCASIONAL TRACE ORGANICS (A-3)

AB-1	BORING NUMBER
B.T @ 6.0'	BORING TERMINATED AT 6.0 FEET BELOW THE EXISTING GROUND SURFACE
GNE▼ 01/07/20	GROUNDWATER LEVEL NOT ENCOUNTERED AND DRILLING DATE
W	MOISTURE CONTENT (%)
OC	ORGANIC CONTENT (%)
-200	AMOUNT PASSING US STANDARD 200 SIEVE (%)
A-3, A-2-4	AASHTO SOIL CLASSIFICATION SYSTEM GROUP SYMBOL (ASTM D 3282)

NOTES:

1. BORINGS WERE DRILLED BETWEEN 01/07/2020 AND 02/09/2020.BORINGS WERE PERFORMED USING HAND AUGER DRILLING EQUIPMENT (ASTM D4152)
2. STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION ONLY. SOIL TRANSITIONS MAY BE MORE GRADUAL THAN IMPLIED.
3. GROUNDWATER LEVELS SHOWN ON THE SUBSURFACE PROFILES REPRESENT GROUNDWATER SURFACES ON THE DATES SHOWN. GROUNDWATER LEVEL FLUCTUATIONS SHOULD BE ANTICIPATED THROUGHOUT THE YEAR.
4. AFTER COMPLETION OF DRILLING, BOREHOLES WERE BACKFILLED WITH SOIL CUTTINGS.

REVISIONS

Date.	By	Descriptions	Date.	By	Descriptions

	Names	Dates
Drawn by	AK	02/12/2020
Checked by	NK	02/12/2020
Designed by	AB	02/12/2020
Checked by	AB	02/12/2020
Approved by		

RADISE INTERNATIONAL
LICENSE NO. - 8901

ENGINEER OF RECORD
ANDREW NIXON (P.E.No. - 71458)
RADISE International
4152 West Blue Heron Boulevard, Suite 1114
Riviera Beach, Florida, 33404
TEL 561-841-0103 FAX 561-841-0104
URL : http:// www.radise.net

CITY OF DELRAY BEACH		**SCALE: VERTICAL** N.T.S.	**SHEET TITLE:** SUBSURFACE PROFILES (EXFILTRATION TESTS)
COUNTY	**CLIENT**	**SCALE: HORIZONTAL** N.T.S.	**PROJECT NAME:** NW NEIGHBORHOOD IMPROVEMENTS
PALM BEACH	CRAIG A. SMITH & ASSOCIATES		

SHEET NO. 5F
RADISE PROJECT NO: 191008

APPENDIX A

TABLE A-1: SUMMARY OF LABORATORY TEST RESULTS

Table A-1: Summary of Laboratory Test Results

Project Name: Delray NW Neighborhood Improvements

Project ID: 191008

						ATTERBERG LIMITS		
Boring No	**Sample Depth**	**Soil Classification**	**Moisture Content(%)**	**Organic Content(%)**	**-200**	**LL (%)**	**PL (%)**	**PI**
AB-12	4' - 6'	A-3	7.0	-	1.3	-	-	-
AB-15	0 - 3'	A-3	1.8	-	2.6	-	-	-
AB-16	0 - 3'	A-3	1.5	-	1.5	-	-	-
AB-28	0" - 10"	A-3	6.8	1.6	-	-	-	-
AB-35	3' - 6'	A-3	5.2	-	1.4	-	-	-
AB-39	10" - 3'	A-3	2.3	-	0.6	-	-	-
AB-42	10" - 4'	A-3	2.5	-	0.6	-	-	-
AB-44	0' - 1'	A-3	1.9	0.8	-	-	-	-
AB-52	4' - 6'	A-3	4.5	-	0.9	-	-	-
AB-56	0' - 1'	A-3	3.1	2.4	-	-	-	-
AB-57	0 - 1'	A-3	2.1	-	3.9	-	-	-
AB-59	0 - 2'	A-3	1.6	-	2.1	-	-	-

Notes:

Organic Content tests are performed with furnace temperature @450 Celsius and tested accordance ASTM-D2974,
Fines Content (Passing No. 200 Sieve) was tested in general accordance with ASTM D 1140,

APPENDIX B

TABLE B-1: SUMMARY OF EXFILTRATION TEST RESULTS

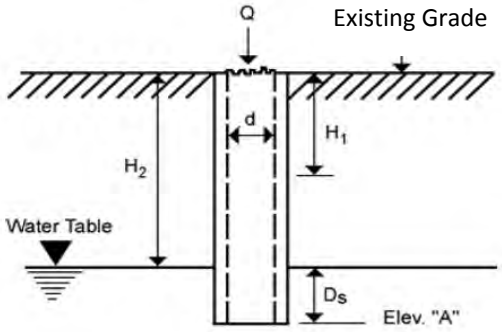
Table B-1: Summary of Exfiltration Test Results
Delray NW Neighborhood Improvements
Palm Beach County, Florida

Boring No.	Test Depth (ft.)	Diameter of the test hole (in.)	Diameter of the test hole, d (ft.)	Length of the exposed soil, L (ft.)	Depth to water table, H_2 (ft.)	Volume of Water (gal.)	Time (sec)	Stabilized flow rate, Q (cfs)	Saturated Hole Depth, Ds (ft)	Hydraulic Conductivity, K (cfs/ft^2 - ft head)	Infiltration Rate, K_v (inches/hour - ft head)
EX-1	0 - 15	8	0.67	15	8.0	26.1	600	0.006	7.0	3.11E-05	0.67
EX-2	0 - 15	8	0.67	15	9.0	37.1	600	0.008	6.0	4.11E-05	0.89
EX-2	0 - 15	8	0.67	15	9.0	34.4	600	0.008	6.0	3.81E-05	0.82

Notes:

1. Methodology and equation from the SFWMD Environmental Resource Permit Information Manual Volume IV

USUAL OPEN-HOLE TEST



$$K = \frac{4Q}{\pi d (2H_2^2 + 4H_2D_S + H_2d)}$$

K = Hydraulic Conductivity ($cfs/ft.^2$ – ft. head)
Q = "Stabilized" Flow Rate (cfs)
d = Diameter of Test Hole (feet)
H_2 = Depth to Water Table (feet)
D_S = Saturated Hole Depth (feet)

APPENDIX C

PAVEMENT CORE AND BASE MATERIAL PHOTOGRAPHS

Pavement Core C-1

Pavement Core C-2

Pavement Base C-1

Pavement Base C-2

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-1 and C-2**
		Drawn by: Jesudoss / **Date: 2/19/2020**
		Checked by: Akash / **Scale: NTS**

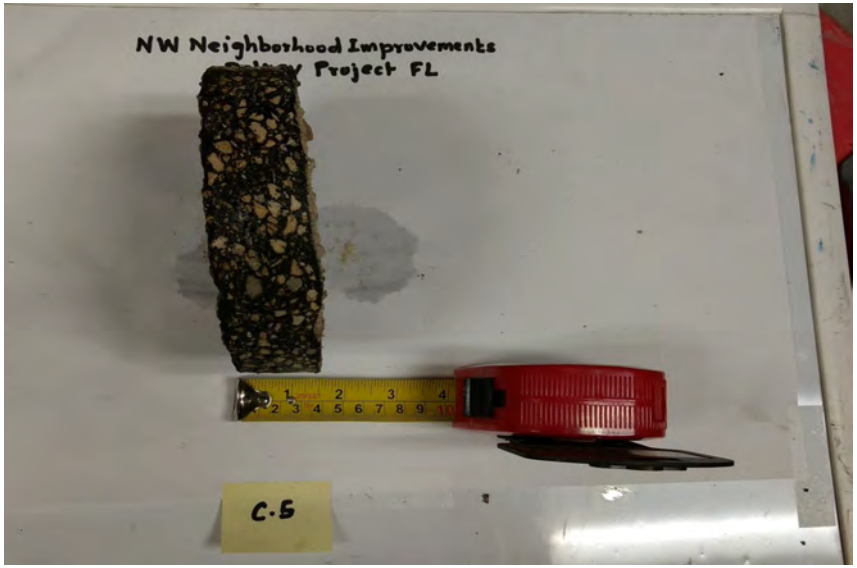
Pavement Core C-3

Pavement Core C-4

Pavement Base C-3

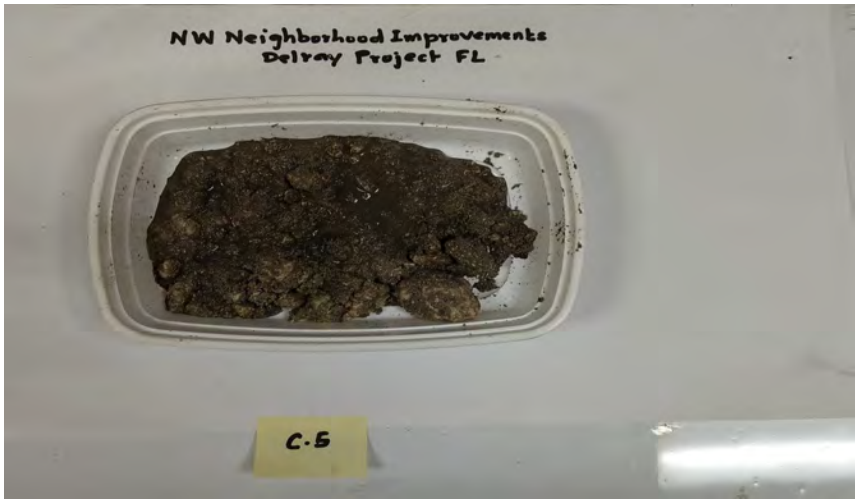
Pavement Base C-4

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-3 and C-4**	
		Drawn by: Jesudoss	**Date: 2/19/2020**
		Checked by: Akash	**Scale: NTS**



Pavement Core C-5

Pavement Core C-6

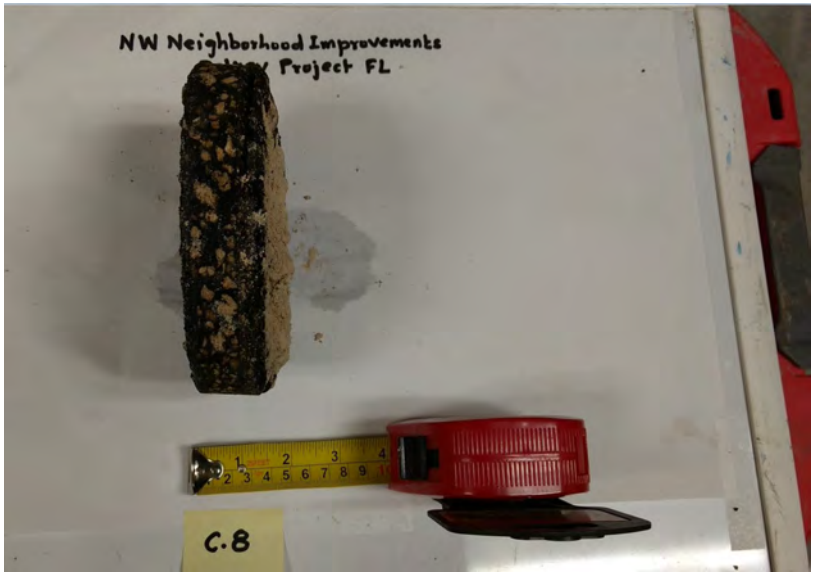


Pavement Base C-5

Pavement Base C-6

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-5 and C-6**
		Drawn by: Jesudoss / **Date: 2/19/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-7



Pavement Core C-8

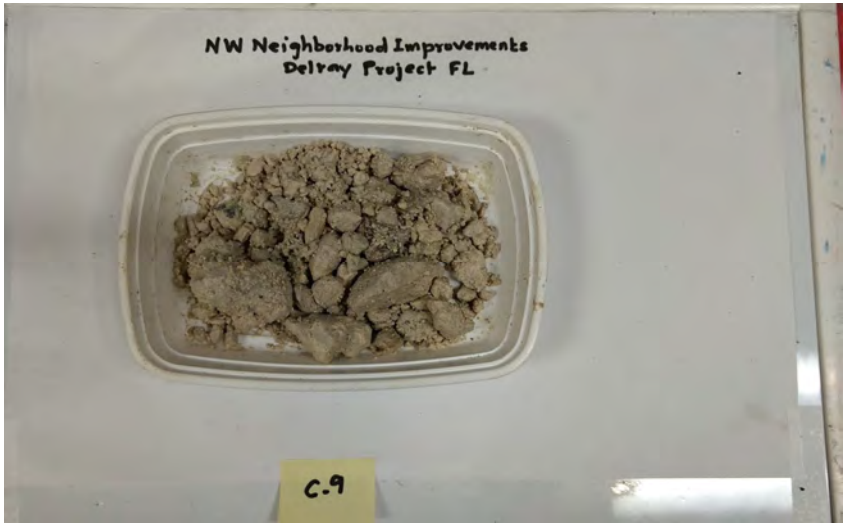
Pavement Base C-7

Pavement Base C-8

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-7 and C-8
		Drawn by: Jesudoss / Date: 2/19/2020
		Checked by: Akash / Scale: NTS

Pavement Core C-9

Pavement Core C-10

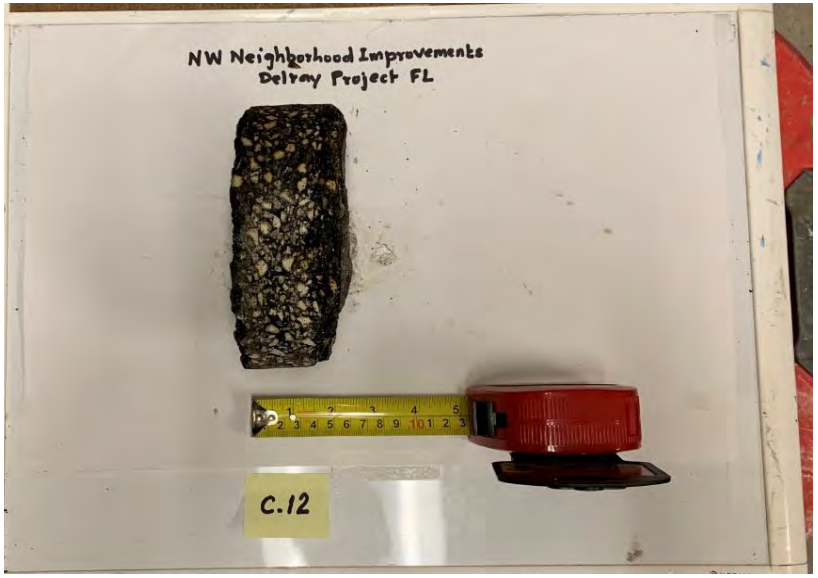


Pavement Base C- 9

Pavement Base C-10

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-9 and C-10**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-11



Pavement Core C-12

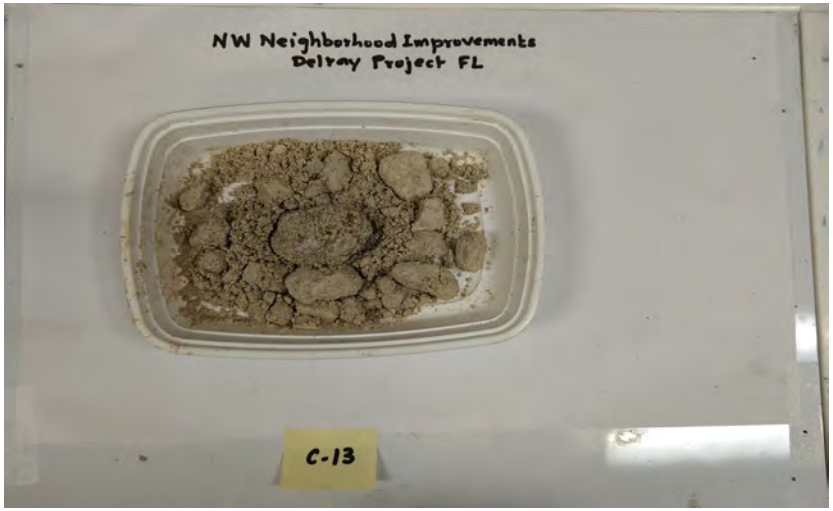
Pavement Base C-11

Pavement Base C-12

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-11 and C-12**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-13

Pavement Core C-14



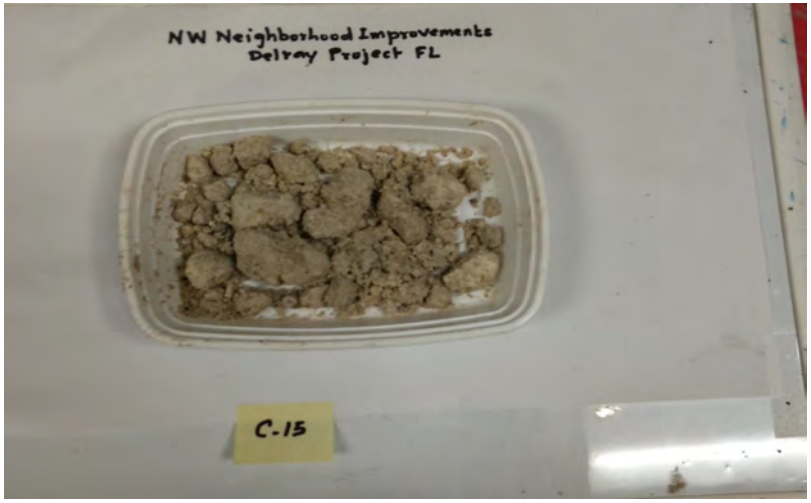
Pavement Base C-13

Pavement Base C-14

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-13 and C-14
		Drawn by: Jesudoss / Date: 2/20/2020
		Checked by: Akash / Scale: NTS

Pavement Core C-15

Pavement Core C-16



Pavement Base-15

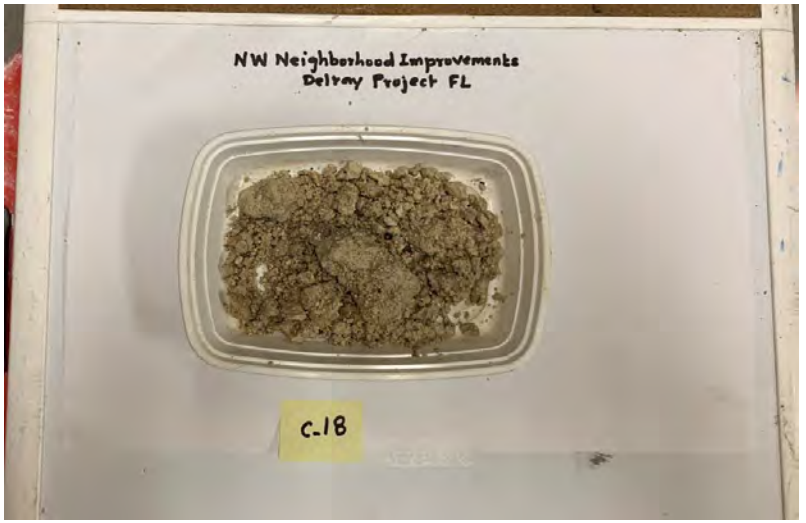
Pavement Base C-16

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-15 and C-16**	
		Drawn by: Jesudoss	**Date: 2/20/2020**
		Checked by: Akash	**Scale: NTS**

Pavement Core C17

Pavement Core C18

Pavement Base C-17

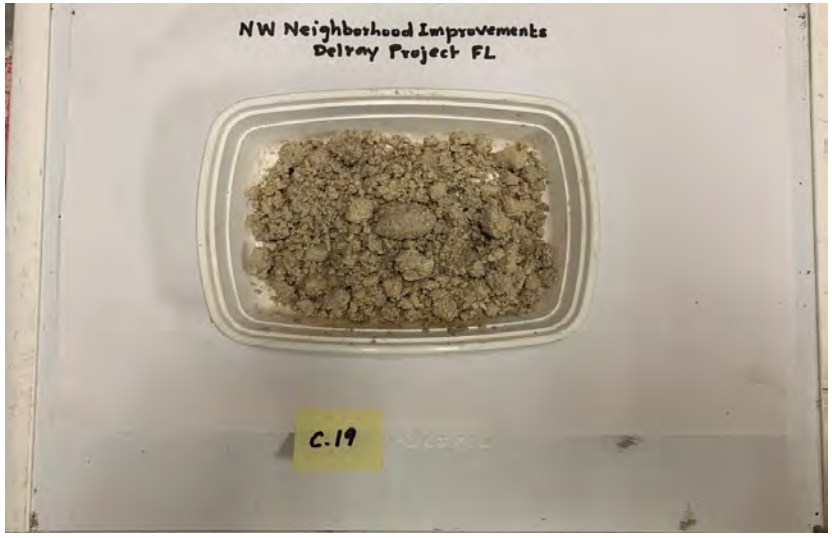


Pavement Base C-18

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-17 and C-18**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-19

Pavement Core C-20

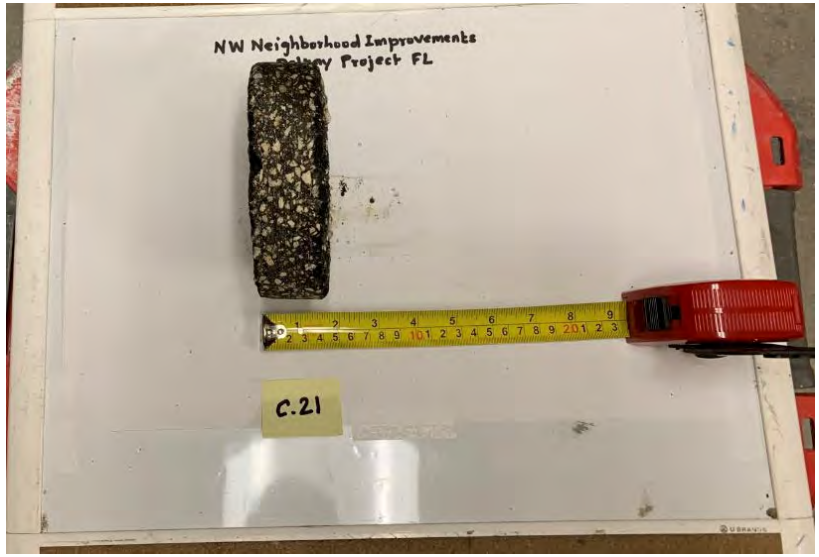


Pavement Base C-19

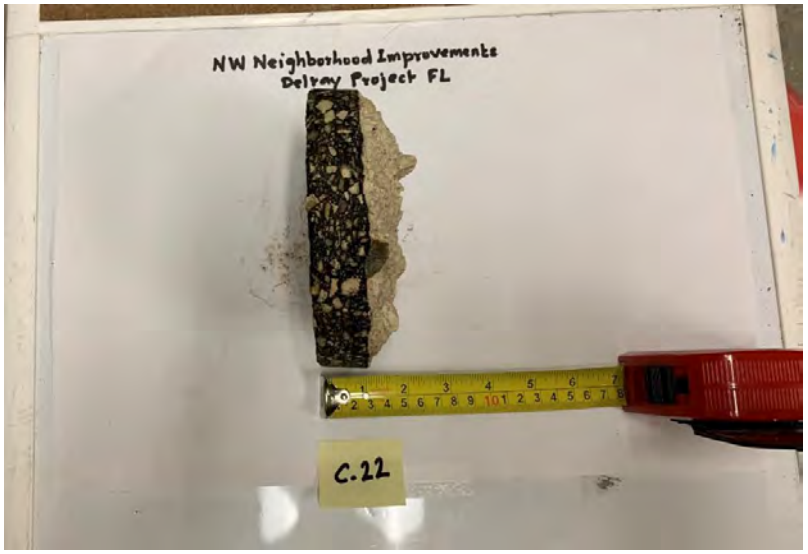
No recovery

Pavement Base C-20

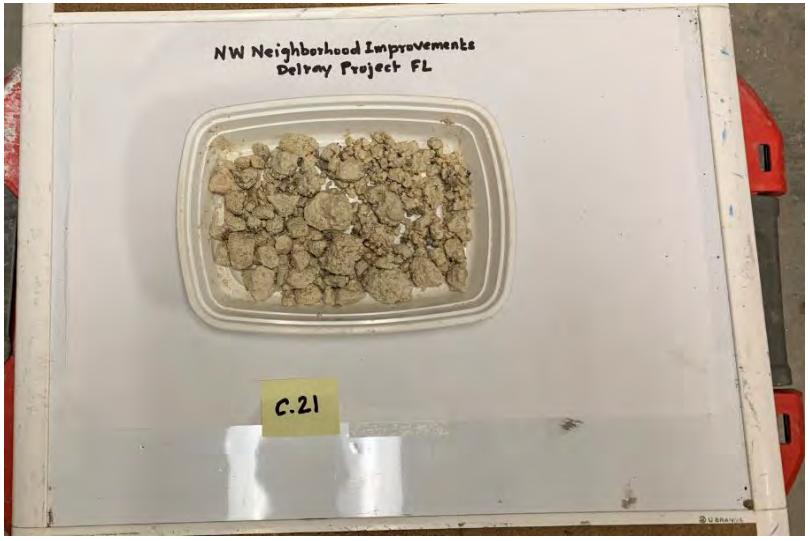
Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-19 and C-20** **Drawn by: Jesudoss** / **Date: 2/20/2020** **Checked by: Akash** / **Scale: NTS**



Pavement Core C-21



Pavement Core C-22



Pavement Base C-21

Pavement Base C-22

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-21 and C-22**	
		Drawn by: Jesudoss	**Date: 2/20/2020**
		Checked by: Akash	**Scale: NTS**

Pavement Core C-23

Pavement Core C-24

Pavement Base C-23

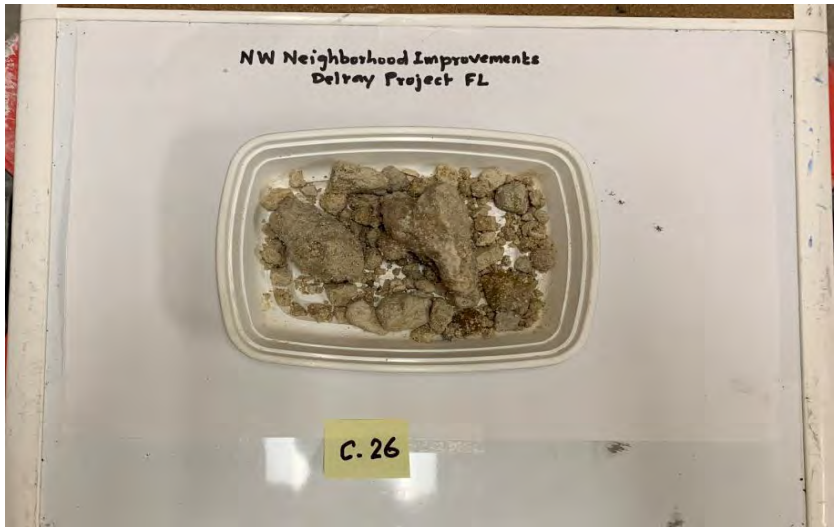
Pavement Base C-24

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-23 and C-24	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-25

Pavement Core C-26

Pavement Base C-25



Pavement Base C-26

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-25 and C-26	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-27

Pavement Core C-28

Pavement Base C-27

Pavement Base C-28

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-27 and C-28**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-29

Pavement Core C-30

Pavement Base C-29

Pavement Base C-30

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-29 and C-30**	
		Drawn by: Jesudoss	**Date: 2/20/2020**
		Checked by: Akash	**Scale: NTS**

Pavement Core C- 31

Pavement Core C- 32

Pavement Base C-31

Pavement Base C-32

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-31 and C-32**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

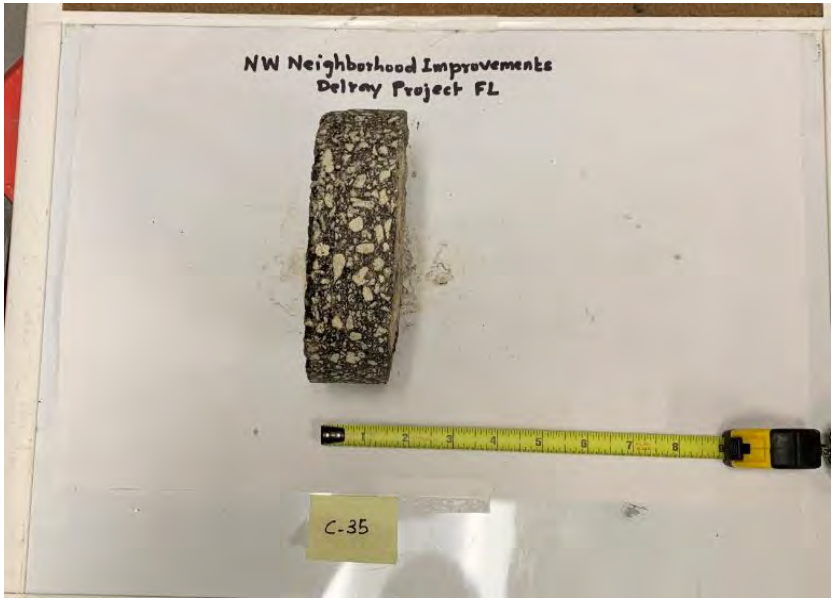
Pavement Core C-33

Pavement Core C-34

Pavement Base C-33

Pavement Base C-34

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-33 and C-34	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS



Pavement Core C-35

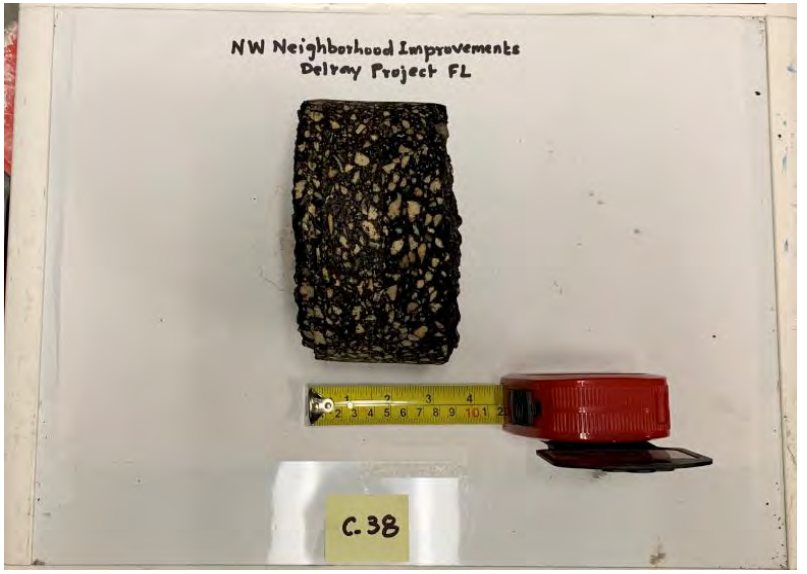
Pavement Core C-36

Pavement Base C-35

Pavement Base C-36

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-35 and C-36	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-37



Pavement Core C-38

Pavement Base C-37

Pavement Base C-38

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-37 and C-38	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

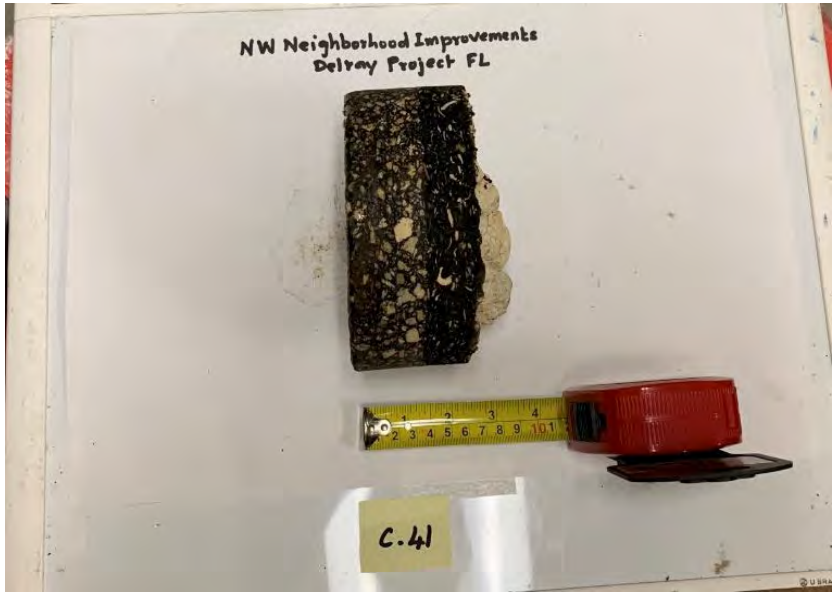
Pavement Core C-39

Pavement Core C-40

Pavement Base C-39

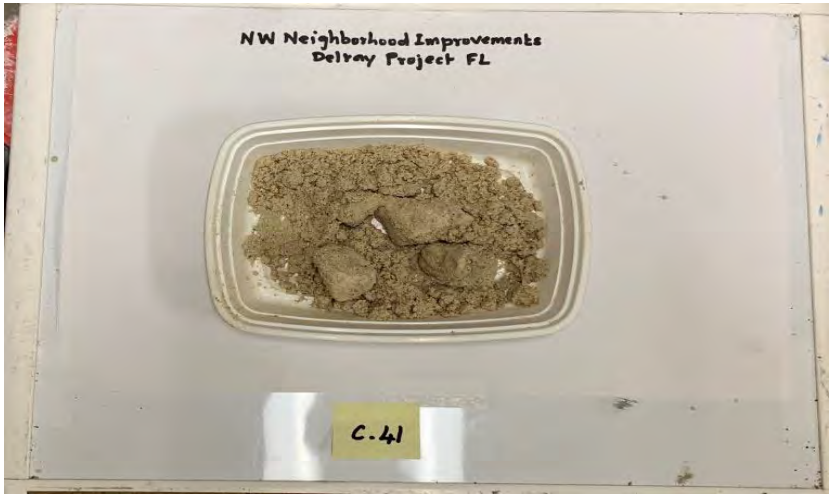
Pavement Base C-40

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-39 and C-40	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

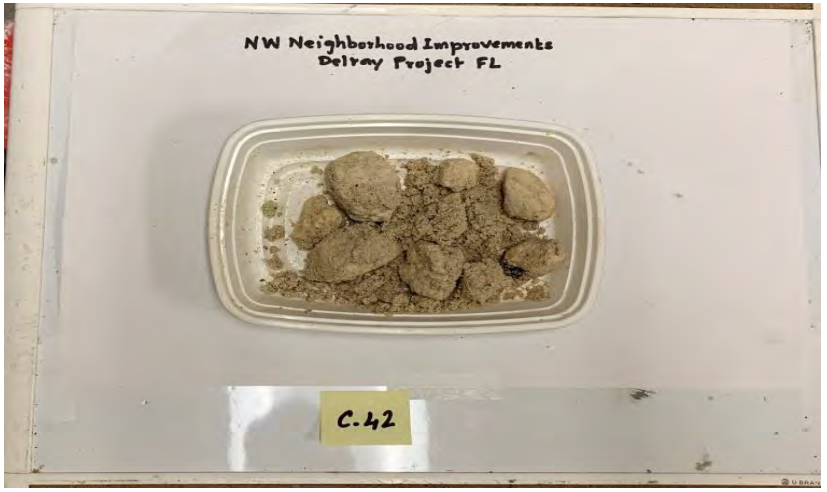


Pavement Core C-41

Pavement Core C-42



Pavement Base C-41

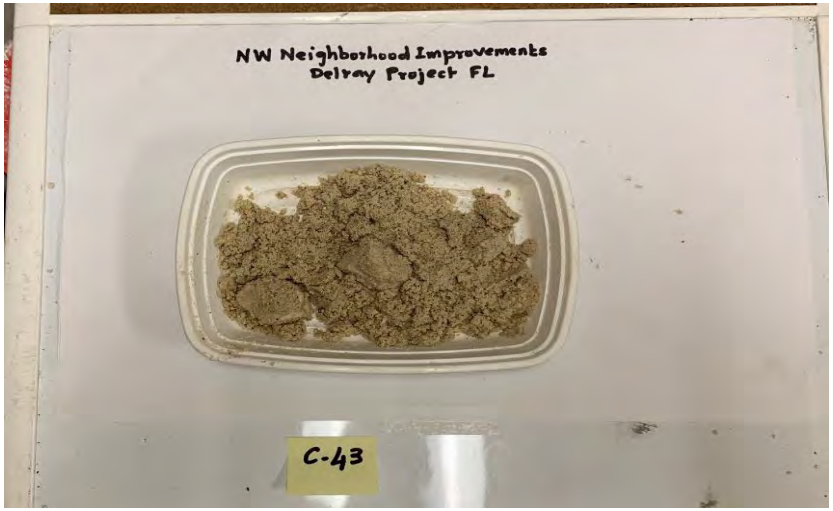


Pavement Base C-42

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-41 and C-42	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-43

Pavement Core C-44



Pavement Base C-43

Pavement Base C-44

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-43 and C-44	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-45

Pavement Core C-46

Pavement Base C-45

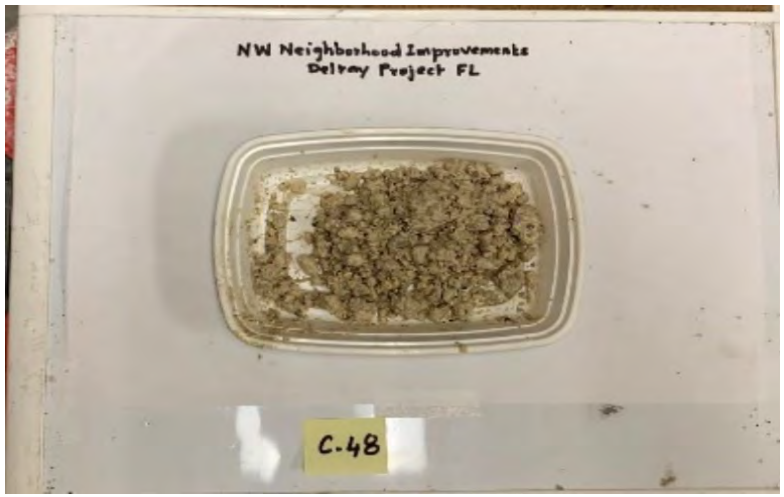
Pavement Base C-46

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-45 and C-46	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-47

Pavement Core C-48

Pavement Base C-47

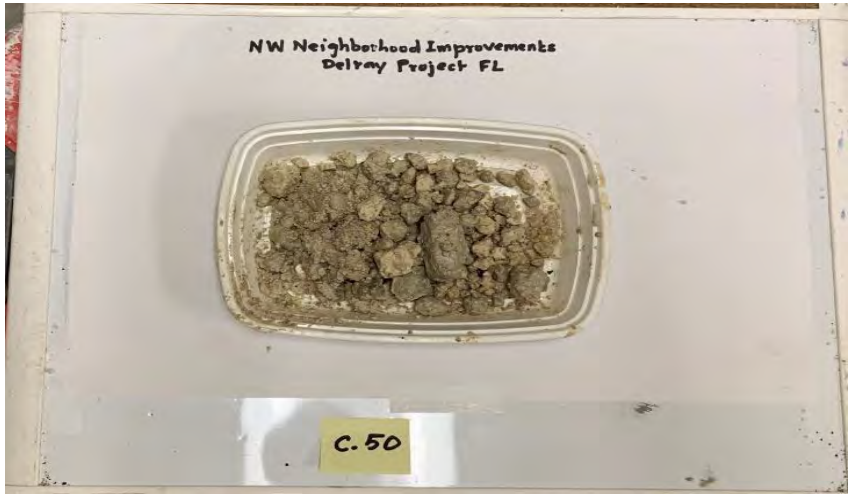


Pavement Base C-48

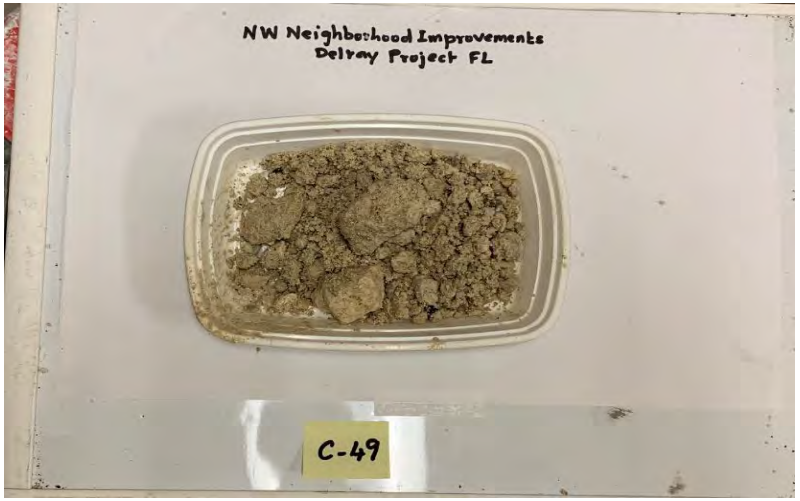
Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-47 and C-48	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-49

Pavement Core C-50



Pavement Base C-49



Pavement Base C-50

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-49 and C-50	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-51

Pavement Core C-52

Pavement Base C-51

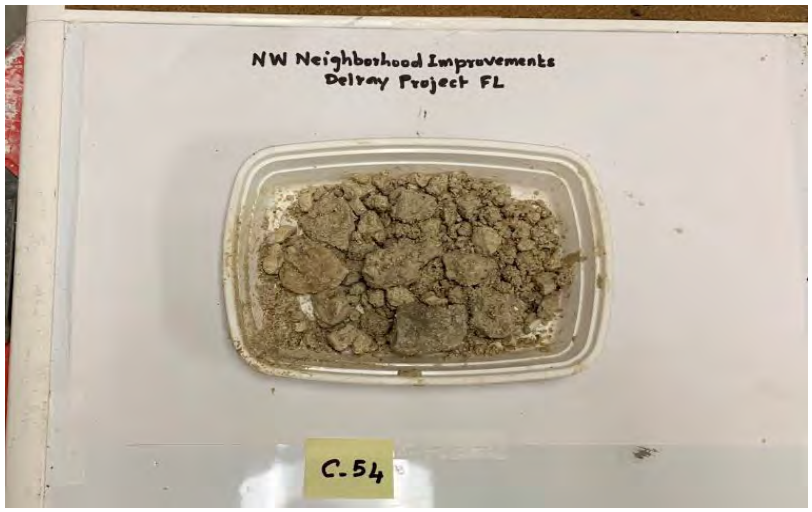
Pavement Base C-52

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-51 and C-52**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-53

Pavement Core C-54

Pavement Base C-53



Pavement Base C-54

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-53 and C-54**
		Drawn by: Jesudoss / **Date: 2/20/2020**
		Checked by: Akash / **Scale: NTS**

Pavement Core C-55

Pavement Core C-56

Pavement Base C-55

Pavement Base C-56

Delray NW Neighborhood Improvements Palm Beach County, Florida RADISE Project No: 191008	**RADISE International, L.C.**	Pavement Core and Base Material Photographs: C-55 and C-56	
		Drawn by: Jesudoss	Date: 2/20/2020
		Checked by: Akash	Scale: NTS

Pavement Core C-57

Pavement Core C-58

Pavement Base C-57

Pavement Base C-58

Delray NW Neighborhood Improvements **Palm Beach County, Florida** **RADISE Project No: 191008**	**RADISE International, L.C.**	**Pavement Core and Base Material Photographs: C-57 and C-58**	
		Drawn by: Jesudoss	**Date: 2/20/2020**
		Checked by: Akash	**Scale: NTS**

Appendix D

Right-of-Way Agreement Template

Delray Beach Florida
All-America City
1993*2001*2017

CITY OF DELRAY BEACH
PUBLIC WORKS DEPARTMENT

434 South Swinton Avenue, Delray Beach, Florida 33444 • Public Works Department: (561) 243-7000

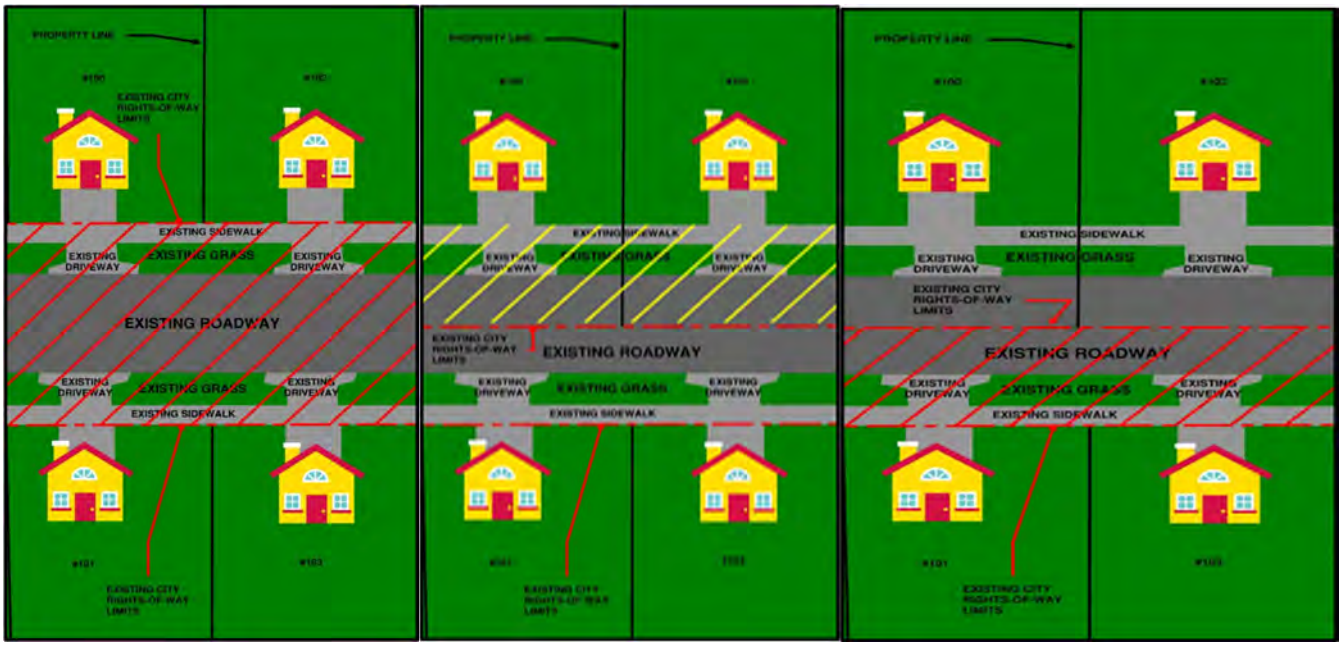
DATE

Name of the property owner
Street Address
DELRAY BEACH FL 33444 3811

Subject: NW Neighborhood Project Right of Way Deed, Project No.17-020
Property Location

Dear Property Owner,

This letter is to inform you that the City of Delray Beach Public Works Department is designing the Northwest Neighborhood Improvements project which includes rebuilding the roadway, new curbing, new sidewalks, street lighting, new water main, replacing the sewer main, drainage improvements, and landscaping within the City's right-of-way. Some areas of the Northwest Neighborhood have missing sections of continuous right-of-way ownership that need to be addressed prior to constructing these improvements. The property address above falls within these anomalies and the City would like to discuss right-of-way agreements on your property. The project is expected to begin construction in 2024. To construct or repair any City owned infrastructure such as roadway, sidewalk or swales located on your property, the City of Delray Beach needs a formal agreement. Without your formal agreement, the missing or defective improvement cannot be addressed and could ultimately be excluded from the project and your responsibility.



Enclosed is a Right of Way Deed Agreement for the area on your property. This Right of Way Deed Agreement is for the purpose of constructing, installing, and maintaining the infrastructure and the agreement shall continue and exist in perpetuity even after the completion of construction activities.

The City is looking forward to your support of the project and is providing two options to property owners to sign the agreements:

1. The City of Delray Beach can provide notary services, and would like to schedule a meeting with you, at the Swinton Operations Center (SOC) building located at 434 S Swinton Avenue. If desired, please contact the City of Delray Beach at the number below and coordinate a date and time. On the day of the meeting bring the documents and two witnesses to Swinton Operations Center (SOC) building located at South 434 Swinton Avenue.

2. You can fill in all required information in the highlighted areas, except the date on the top page of the Easement Agreement, sign, notarize, and return it to us for processing. If you have any questions, please feel free to contact us.

Enclosed are the Sketches and legal descriptions of your property and the area included in the proposed right-of-way agreement. The City of Delray Beach appreciates your collaboration on this matter and does not compensate private property owners for Right-of-Way.

Note: “The Its” under Grantor is the position or title of the person who signed the form, like Owner, President etc.

We appreciate your support of the Neighborhood Improvement project. If you have any questions, please do not hesitate to contact Begona Krane at 561-243-7299 / Krane@mydelraybeach.com or Rebecca Travis (Baxter and Woodman) at 561-425-7715 / rtravis@baxterwoodman.com.

Sincerely,

Begoña Krane
Project Manager

cc: File

Prepared by: RETURN:

City Attorney's Office
200 N.W. 1st Avenue
Delray Beach, Florida 33444

PCN 12434616010010180
Address: 302 NW 7TH AVENUE

RIGHT-OF-WAY DEED

THIS INDENTURE made this __ day of _____, 202_, between _____
_____,
with a mailing address of _____,
GRANTOR, and **CITY OF DELRAY BEACH, FLORIDA**, a Florida municipal corporation with a mailing address of 100 N.W. 1st Avenue, Delray Beach, Florida 33444, GRANTEE.
(Whenever used herein the term "GRANTOR" and "GRANTEE" include singular and plural, heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporation, whenever the context so admits or requires.)

WITNESSETH:

That GRANTOR, for and in consideration of the mutual promises herein contained and other good and valuable consideration, does hereby grant, remise, release, quit claim and convey unto GRANTEE, its successors and assigns, all right, title, interest, claim and demand which GRANTOR has in and to the following-described land, situate, lying and being in the County of Palm Beach, State of Florida, to-wit:

See Exhibit "A" attached hereto.

This Deed is made for the purpose of giving and granting to GRANTEE, its successors and assigns, a right-of-way and easement in and to said lands for public highway, street, and public utility purposes; and is made, executed and delivered with the express understanding and condition that should the same ever be discontinued or abandoned as a public highway or street, the title to same shall thereupon revert to and revest in GRANTOR or assigns.

That this right-of-way shall be subject only to those easements, restrictions, and reservation of record. GRANTOR agrees to provide for the release of any and all mortgages or liens encumbering this right-of-way. GRANTOR also agrees to erect no building or effect any other kind of construction or improvements upon the above-described property.

GRANTOR does hereby fully warrant the title to said land and will defend the same against the lawful claims of all persons whomsoever claimed by, through or under it, that it has good right and lawful authority to grant the above-described right-of-way and that the same is unencumbered. Where the context of this Right-of-Way Deed allows or permits, the same shall include the successors or assigns of the parties.

TO HAVE AND TO HOLD THE SAME, together with all and singular the appurtenances thereto belonging or in anywise incident or appertaining, and all the estate, right, title, interest, and claim whatsoever of the said GRANTOR, in law or in equity to the only proper use, benefit, and behalf of the said GRANTEE, its successors and assigns.

IN WITNESS WHEREOF, said Grantor has signed and sealed these presents the day and year first above written.

WITNESSES:

GRANTOR

By:_____

Name:_____

Its: _____

Date: _____

_____
Signature

_____
Print Name

_____
Signature

_____
Print Name

STATE OF FLORIDA _____

COUNTY OF PALM BEACH _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this ___ day of _____, 20__, by _____ (name of person), as _____ (type of authority) for _____ (name of party on behalf of whom instrument was executed).

Personally known ___ OR Produced Identification ___
Type of Identification Produced _____

_____
Notary Public – State of Florida

[Remainder of Page Intentionally Left Blank]

[Remainder of Page Intentionally Left Blank]

ATTEST:

By: _____
City Clerk

GRANTEE/ CITY OF DELRAY BEACH, FLORIDA

By: _____
Mayor

Approved as to Form:

By: _____
City Attorney

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EXHIBIT “A”

Appendix E

ICPR4 Model Input & Output Data

Manual Basin: B01

Scenario: Existing
Node: B01
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.9600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.0100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0900	Fixed Single Family Units	MYAKKA4			
2.8700	Fixed Single Family Units	ST. LUCIE4			
0.0500	Institutional	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B01	100Y3D	73.50	60.0333	19.00	15.60	10.0100	75.6	40.15	40.15
B01	10Y1D	32.10	12.0667	8.00	5.39	10.0100	78.1	40.15	40.15
B01	25Y3D	56.22	60.0333	15.00	11.79	10.0100	76.1	40.15	40.15
B01	3Y1D	24.14	12.0667	6.50	4.12	10.0100	78.9	40.15	40.15

Manual Basin: B02

Scenario: Existing
Node: B02
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 19.9300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 19.7100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
17.2600	Fixed Single Family Units	ST. LUCIE4			
2.2800	Institutional	ST. LUCIE4			
0.1700	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B02	100Y3D	113.38	60.1000	19.00	14.94	19.7100	71.6	43.73	43.73
B02	10Y1D	45.69	12.1667	8.00	5.06	19.7100	75.2	43.73	43.73
B02	25Y3D	85.72	60.1000	15.00	11.22	19.7100	72.4	43.73	43.73

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B02	3Y1D	34.08	12.1667	6.50	3.86	19.7100	76.5	43.73	43.73

Manual Basin: B03

Scenario: Existing
Node: B03
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 15.2900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.2100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.2900	Fixed Single Family Units	ST. LUCIE4			
0.3400	Fixed Single Family Units	URBAN LAND4			
0.0500	Institutional	ST. LUCIE4			
1.5300	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B03	100Y3D	53.64	60.0667	19.00	15.17	8.2100	73.0	45.77	45.77
B03	10Y1D	22.28	12.1000	8.00	5.21	8.2100	76.5	45.77	45.77
B03	25Y3D	40.70	60.0667	15.00	11.43	8.2100	73.7	45.77	45.77
B03	3Y1D	16.72	12.1000	6.50	3.99	8.2100	77.7	45.77	45.77

Manual Basin: B04

Scenario: Existing
Node: B04
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 4.1700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.9900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.6700	Fixed Single Family Units	ST. LUCIE4			
3.4400	Institutional	ST. LUCIE4			
3.8800	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B04	100Y3D	106.02	59.9333	19.00	16.06	11.9900	78.7	58.32	58.32
B04	10Y1D	53.62	12.0000	8.00	5.87	11.9900	82.2	58.32	58.32
B04	25Y3D	81.40	59.9333	15.00	12.26	11.9900	79.5	58.32	58.32
B04	3Y1D	41.34	12.0000	6.50	4.58	11.9900	83.3	58.32	58.32

Manual Basin: B05

Scenario: Existing
Node: B05
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 9.6000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.1900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
2.8600	Fixed Single Family Units	ST. LUCIE4			
3.3300	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B05	100Y3D	48.29	60.0167	19.00	15.83	6.1900	77.1	56.14	56.14
B05	10Y1D	22.04	12.0500	8.00	5.71	6.1900	80.7	56.14	56.14
B05	25Y3D	36.94	60.0167	15.00	12.05	6.1900	77.9	56.14	56.14
B05	3Y1D	16.89	12.0500	6.50	4.44	6.1900	82.0	56.14	56.14

Manual Basin: B06

Scenario: Existing
Node: B06
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.7700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.6600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.0100	Fixed Single Family Units	ST. LUCIE4			
1.6500	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B06	100Y3D	66.52	60.0667	19.00	15.01	10.6600	72.0	44.64	44.64
B06	10Y1D	27.13	12.1167	8.00	5.11	10.6600	75.6	44.64	44.64
B06	25Y3D	50.34	60.0667	15.00	11.28	10.6600	72.7	44.64	44.64
B06	3Y1D	20.27	12.1167	6.50	3.90	10.6600	76.9	44.64	44.64

Manual Basin: B07

Scenario: Existing
Node: B07
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.9500 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.8400 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7800	Fixed Single Family Units	ST. LUCIE4			
0.0900	Fixed Single Family Units	URBAN LAND4			
0.7800	Institutional	ST. LUCIE4			
0.1900	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B07	100Y3D	67.06	60.0833	19.00	14.88	10.8400	71.2	42.68	42.68
B07	10Y1D	26.96	12.1167	8.00	5.01	10.8400	74.8	42.68	42.68
B07	25Y3D	50.69	60.0833	15.00	11.16	10.8400	72.0	42.68	42.68
B07	3Y1D	20.05	12.1333	6.50	3.82	10.8400	76.0	42.68	42.68

Manual Basin: B08

Scenario: Existing
Node: B08
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.9500 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.9500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.9500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B08	100Y3D	72.93	60.0500	19.00	14.67	10.9500	70.0	40.00	40.00
B08	10Y1D	28.92	12.0833	8.00	4.87	10.9500	73.5	40.00	40.00
B08	25Y3D	55.00	60.0500	15.00	10.97	10.9500	70.8	40.00	40.00
B08	3Y1D	21.37	12.1000	6.50	3.69	10.9500	74.8	40.00	40.00

Manual Basin: B09

Scenario: Existing
Node: B09
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.6900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.8500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.8500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B09	100Y3D	62.69	60.0333	19.00	14.67	8.8500	70.0	40.00	40.00
B09	10Y1D	25.22	12.0667	8.00	4.87	8.8500	73.5	40.00	40.00
B09	25Y3D	47.30	60.0333	15.00	10.96	8.8500	70.8	40.00	40.00
B09	3Y1D	18.64	12.0667	6.50	3.69	8.8500	74.8	40.00	40.00

Manual Basin: B10

Scenario: Existing
Node: B10
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 5.2400 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 2.1000 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.3100	Educational Facilities	BASINGER2			
0.1200	Educational Facilities	BASINGER3			
0.6000	Educational Facilities	BASINGER4			
0.1400	Educational Facilities	ST. LUCIE1			
0.1800	Educational Facilities	ST. LUCIE2			
0.1300	Educational Facilities	ST. LUCIE3			

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.6200	Educational Facilities	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B10	100Y3D	19.29	59.9833	19.00	17.59	2.1000	89.3	70.00	70.00
B10	10Y1D	10.64	12.0000	8.00	6.92	2.1000	91.1	70.00	70.00
B10	25Y3D	15.07	59.9833	15.00	13.67	2.1000	89.7	70.00	70.00
B10	3Y1D	8.44	12.0000	6.50	5.51	2.1000	91.7	70.00	70.00

Manual Basin: B11

Scenario: Existing
Node: B11
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.6300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.4300 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.9300	Educational Facilities	BASINGER4			
1.5900	Educational Facilities	MYAKKA4			
8.9100	Educational Facilities	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B11	100Y3D	86.93	60.0333	19.00	16.97	11.4300	84.6	70.00	70.00
B11	10Y1D	42.92	12.0667	8.00	6.51	11.4300	87.6	70.00	70.00
B11	25Y3D	67.33	60.0333	15.00	13.10	11.4300	85.3	70.00	70.00
B11	3Y1D	33.70	12.0667	6.50	5.16	11.4300	88.5	70.00	70.00

Manual Basin: B12

Scenario: Existing
Node: B12
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.5000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256

Peaking Factor: 256.0
Area: 10.1100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.6600	Fixed Single Family Units	MYAKKA4			
9.4500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B12	100Y3D	66.58	60.0500	19.00	14.75	10.1100	70.5	40.00	40.00
B12	10Y1D	26.59	12.1000	8.00	4.91	10.1100	73.9	40.00	40.00
B12	25Y3D	50.27	60.0500	15.00	11.04	10.1100	71.2	40.00	40.00
B12	3Y1D	19.68	12.1000	6.50	3.72	10.1100	75.2	40.00	40.00

Manual Basin: B13

Scenario: Existing
Node: B13
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.9600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.7500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B13	100Y3D	59.91	60.0833	19.00	14.68	9.7500	70.0	40.00	40.00
B13	10Y1D	23.57	12.1167	8.00	4.87	9.7500	73.5	40.00	40.00
B13	25Y3D	45.17	60.0833	15.00	10.97	9.7500	70.8	40.00	40.00
B13	3Y1D	17.41	12.1333	6.50	3.69	9.7500	74.8	40.00	40.00

Manual Basin: B14

Scenario: Existing
Node: B14
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.4300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr

Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.4200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1100	Educational Facilities	ST. LUCIE4			
6.3100	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B14	100Y3D	50.19	60.0167	19.00	14.69	6.4200	70.2	40.51	40.51
B14	10Y1D	20.81	12.0333	8.00	4.89	6.4200	73.7	40.51	40.51
B14	25Y3D	37.92	60.0167	15.00	10.99	6.4200	71.0	40.51	40.51
B14	3Y1D	15.41	12.0333	6.50	3.71	6.4200	75.0	40.51	40.51

Manual Basin: B15

Scenario: Existing
Node: B15
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 17.4200 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.8200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.6400	Educational Facilities	ST. LUCIE4			
8.1800	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B15	100Y3D	53.82	60.0833	19.00	14.83	8.8200	70.9	42.18	42.18
B15	10Y1D	21.51	12.1333	8.00	4.98	8.8200	74.5	42.18	42.18
B15	25Y3D	40.64	60.0833	15.00	11.11	8.8200	71.7	42.18	42.18
B15	3Y1D	15.98	12.1333	6.50	3.79	8.8200	75.8	42.18	42.18

Manual Basin: B16

Scenario: Existing
Node: B16
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 15.7300 min

Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.0600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.0600	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B16	100Y3D	70.19	60.0667	19.00	14.67	11.0600	70.0	40.00	40.00
B16	10Y1D	27.68	12.1167	8.00	4.87	11.0600	73.5	40.00	40.00
B16	25Y3D	52.92	60.0667	15.00	10.96	11.0600	70.8	40.00	40.00
B16	3Y1D	20.45	12.1167	6.50	3.68	11.0600	74.8	40.00	40.00

Manual Basin: B17

Scenario: Existing
Node: B17
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.5400 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.4700 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.4700	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B17	100Y3D	89.31	60.0167	19.00	14.66	11.4700	70.0	40.00	40.00
B17	10Y1D	36.84	12.0333	8.00	4.86	11.4700	73.5	40.00	40.00
B17	25Y3D	67.45	60.0167	15.00	10.96	11.4700	70.8	40.00	40.00
B17	3Y1D	27.25	12.0333	6.50	3.68	11.4700	74.8	40.00	40.00

Manual Basin: B18

Scenario: Existing
Node: B18
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 6.1400 min

Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 3.6900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.2800	Fixed Single Family Units	BASINGER4			
0.1600	Fixed Single Family Units	POMELLO4			
0.1400	Institutional	POMELLO4			
0.0200	Open Land	BASINGER1			
0.0500	Open Land	BASINGER2			
0.0200	Open Land	BASINGER3			
0.8300	Open Land	BASINGER4			
0.7100	Open Land	POMELLO1			
0.1500	Open Land	POMELLO2			
0.0200	Open Land	POMELLO3			
1.3100	Open Land	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B18	100Y3D	31.72	60.0000	19.00	14.95	3.6900	71.7	7.43	7.43
B18	10Y1D	13.90	12.0167	8.00	4.85	3.6900	73.4	7.43	7.43
B18	25Y3D	24.18	60.0000	15.00	11.17	3.6900	72.1	7.43	7.43
B18	3Y1D	10.26	12.0167	6.50	3.61	3.6900	74.1	7.43	7.43

Manual Basin: B19

Scenario: Existing
Node: B19
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0500 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.6200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0300	Educational Facilities	MYAKKA4			
0.3500	Educational Facilities	POMELLO4			
0.1200	Fixed Single Family Units	MYAKKA4			
4.1200	Fixed Single Family Units	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B19	100Y3D	32.70	60.0333	19.00	15.47	4.6200	74.7	42.47	42.47
B19	10Y1D	13.97	12.0833	8.00	5.33	4.6200	77.4	42.47	42.47
B19	25Y3D	24.93	60.0333	15.00	11.67	4.6200	75.3	42.47	42.47
B19	3Y1D	10.49	12.0833	6.50	4.07	4.6200	78.4	42.47	42.47

Manual Basin: B20

Scenario: Existing
Node: B20
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.6300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.6100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.1900	Fixed Single Family Units	MYAKKA4			
3.3900	Fixed Single Family Units	POMELLO4			
0.0300	Roads and Highways	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B20	100Y3D	73.04	60.0500	19.00	15.76	10.6100	76.6	40.13	40.13
B20	10Y1D	31.83	12.1000	8.00	5.48	10.6100	78.8	40.13	40.13
B20	25Y3D	55.96	60.0500	15.00	11.93	10.6100	77.0	40.13	40.13
B20	3Y1D	23.97	12.1000	6.50	4.18	10.6100	79.5	40.13	40.13

Manual Basin: B21

Scenario: Existing
Node: B21
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 19.5100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.8000 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.9800	Educational Facilities	MYAKKA4			
12.8200	Fixed Single Family Units	MYAKKA4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B21	100Y3D	84.81	60.1000	19.00	16.08	13.8000	78.6	42.13	42.13
B21	10Y1D	37.64	12.1500	8.00	5.69	13.8000	80.5	42.13	42.13
B21	25Y3D	65.22	60.1000	15.00	12.22	13.8000	79.0	42.13	42.13
B21	3Y1D	28.53	12.1500	6.50	4.37	13.8000	81.2	42.13	42.13

Manual Basin: B22

Scenario: Existing
Node: B22
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 1733.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 18.5200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.2000	Educational Facilities	MYAKKA4			
1.2100	Educational Facilities	POMELLO4			
0.3700	Educational Facilities	ST. LUCIE4			
1.5500	Fixed Single Family Units	MYAKKA4			
5.1900	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B22	100Y3D	5.26	79.6833	19.00	9.78	18.5200	81.6	59.08	59.08
B22	10Y1D	2.12	30.0167	8.00	1.04	18.5200	84.4	59.08	59.08
B22	25Y3D	4.04	79.7333	15.00	7.49	18.5200	82.2	59.08	59.08
B22	3Y1D	1.66	30.0167	6.50	0.82	18.5200	85.3	59.08	59.08

Manual Basin: B23

Scenario: Existing
Node: B23
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.5100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.5900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
2.3100	Fixed Single Family Units	BASINGER4			
1.1200	Fixed Single Family Units	IMMOKALEE4			

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.0800	Fixed Single Family Units	POMELLO4			
0.0200	Roads and Highways	IMMOKALEE4			
0.0600	Roads and Highways	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B23	100Y3D	73.28	60.0167	19.00	15.55	9.5900	75.3	40.38	40.38
B23	10Y1D	32.12	12.0500	8.00	5.36	9.5900	77.8	40.38	40.38
B23	25Y3D	56.01	60.0167	15.00	11.74	9.5900	75.8	40.38	40.38
B23	3Y1D	24.12	12.0500	6.50	4.09	9.5900	78.6	40.38	40.38

Manual Basin: B24

Scenario: Existing
Node: B24
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 12.4100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.4200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.3400	Educational Facilities	BASINGER4			
0.5600	Educational Facilities	MYAKKA4			
0.5800	Fixed Single Family Units	BASINGER4			
9.0900	Fixed Single Family Units	MYAKKA4			
0.2000	Fixed Single Family Units	POMELLO4			
0.0200	Institutional	POMELLO4			
0.4100	Open Land	BASINGER4			
0.2200	Open Land	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B24	100Y3D	84.14	60.0333	19.00	15.94	11.4200	77.8	40.21	40.21
B24	10Y1D	37.62	12.0667	8.00	5.59	11.4200	79.7	40.21	40.21
B24	25Y3D	64.65	60.0333	15.00	12.09	11.4200	78.2	40.21	40.21
B24	3Y1D	28.44	12.0667	6.50	4.28	11.4200	80.4	40.21	40.21

Manual Basin: B25

Scenario: Existing

Node: B25
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.3300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.2400 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1400	Fixed Single Family Units	BASINGER4			
0.2800	Fixed Single Family Units	IMMOKALEE1			
0.0400	Fixed Single Family Units	IMMOKALEE2			
0.0600	Fixed Single Family Units	IMMOKALEE3			
1.5800	Fixed Single Family Units	IMMOKALEE4			
0.9500	Fixed Single Family Units	MYAKKA4			
0.3400	Fixed Single Family Units	POMELLO4			
3.5300	Fixed Single Family Units	ST. LUCIE4			
0.2900	Roads and Highways	IMMOKALEE4			
0.0300	Roads and Highways	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B25	100Y3D	55.23	60.0167	19.00	15.52	7.2400	75.2	41.99	41.99
B25	10Y1D	24.33	12.0500	8.00	5.39	7.2400	78.1	41.99	41.99
B25	25Y3D	42.18	60.0167	15.00	11.73	7.2400	75.8	41.99	41.99
B25	3Y1D	18.36	12.0500	6.50	4.13	7.2400	79.1	41.99	41.99

Manual Basin: B26

Scenario: Existing
Node: B26
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 6.0800 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.7900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0900	Fixed Single Family Units	MYAKKA4			
1.2000	Fixed Single Family Units	ST. LUCIE4			
0.3100	Institutional	BASINGER4			
5.6500	Institutional	POMELLO4			
0.5400	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B26	100Y3D	69.18	60.0000	19.00	16.73	7.7900	83.0	65.03	65.03
B26	10Y1D	35.04	12.0167	8.00	6.31	7.7900	85.9	65.03	65.03
B26	25Y3D	53.52	60.0000	15.00	12.87	7.7900	83.6	65.03	65.03
B26	3Y1D	27.34	12.0167	6.50	4.97	7.7900	86.8	65.03	65.03

Manual Basin: B27

Scenario: Existing
Node: B27
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 12.5100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.5800	Fixed Single Family Units	MYAKKA4			
0.3300	Fixed Single Family Units	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B27	100Y3D	13.98	60.0333	19.00	15.85	1.9100	77.2	40.00	40.00
B27	10Y1D	6.20	12.0667	8.00	5.53	1.9100	79.2	40.00	40.00
B27	25Y3D	10.73	60.0333	15.00	12.01	1.9100	77.6	40.00	40.00
B27	3Y1D	4.68	12.0833	6.50	4.23	1.9100	80.0	40.00	40.00

Manual Basin: B28

Scenario: Existing
Node: B28
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.0600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 3.6800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
3.6800	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B28	100Y3D	29.06	60.0000	19.00	14.65	3.6800	70.0	40.00	40.00
B28	10Y1D	12.05	12.0333	8.00	4.86	3.6800	73.5	40.00	40.00
B28	25Y3D	21.94	60.0000	15.00	10.95	3.6800	70.8	40.00	40.00
B28	3Y1D	8.92	12.0333	6.50	3.68	3.6800	74.8	40.00	40.00

Manual Basin: B29

Scenario: Existing
Node: B29
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.7700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.6800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.9300	Fixed Single Family Units	ST. LUCIE4			
4.7500	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B29	100Y3D	61.76	60.0667	19.00	15.74	9.6800	76.4	54.72	54.72
B29	10Y1D	27.03	12.1167	8.00	5.64	9.6800	80.1	54.72	54.72
B29	25Y3D	47.14	60.0667	15.00	11.96	9.6800	77.2	54.72	54.72
B29	3Y1D	20.65	12.1167	6.50	4.38	9.6800	81.3	54.72	54.72

Manual Basin: B30

Scenario: Existing
Node: B30
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 4.6900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 2.8500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.1300	Fixed Single Family Units	ST. LUCIE4			
1.7200	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B30	100Y3D	24.95	59.9500	19.00	15.90	2.8500	78.0	58.11	58.11
B30	10Y1D	12.35	12.0000	8.00	5.79	2.8500	81.6	58.11	58.11
B30	25Y3D	19.13	59.9500	15.00	12.13	2.8500	78.8	58.11	58.11
B30	3Y1D	9.50	12.0000	6.50	4.51	2.8500	82.8	58.11	58.11

Manual Basin: B31

Scenario: Existing
Node: B31
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 5.6000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.6800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0600	Fixed Single Family Units	BASINGER4			
0.1900	Fixed Single Family Units	POMELLO4			
0.0800	Fixed Single Family Units	ST. LUCIE4			
0.6400	Institutional	BASINGER4			
0.7100	Institutional	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B31	100Y3D	15.18	60.0000	19.00	16.93	1.6800	84.1	64.11	64.11
B31	10Y1D	7.84	12.0000	8.00	6.41	1.6800	86.6	64.11	64.11
B31	25Y3D	11.77	60.0000	15.00	13.04	1.6800	84.7	64.11	64.11
B31	3Y1D	6.12	12.0000	6.50	5.05	1.6800	87.4	64.11	64.11

Manual Basin: B32

Scenario: Existing
Node: B32
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.4100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.7800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
3.4800	Fixed Single Family Units	IMMOKALEE4			
0.0800	Fixed Single Family Units	MYAKKA4			

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.1200	Fixed Single Family Units	POMELLO4			
0.1000	Roads and Highways	IMMOKALEE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B32	100Y3D	39.38	60.0167	19.00	15.84	4.7800	77.2	40.94	40.94
B32	10Y1D	18.05	12.0333	8.00	5.54	4.7800	79.3	40.94	40.94
B32	25Y3D	30.24	60.0167	15.00	12.00	4.7800	77.7	40.94	40.94
B32	3Y1D	13.65	12.0333	6.50	4.24	4.7800	80.1	40.94	40.94

Manual Basin: B33

Scenario: Existing
Node: B33
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.1400 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.6500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0500	Educational Facilities	IMMOKALEE4			
0.4700	Educational Facilities	MYAKKA4			
2.8000	Educational Facilities	POMELLO4			
1.6000	Fixed Single Family Units	IMMOKALEE4			
1.6400	Fixed Single Family Units	MYAKKA4			
2.0900	Fixed Single Family Units	POMELLO4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B33	100Y3D	66.13	60.0167	19.00	16.27	8.6500	79.9	51.51	51.51
B33	10Y1D	30.77	12.0667	8.00	5.90	8.6500	82.4	51.51	51.51
B33	25Y3D	50.93	60.0333	15.00	12.42	8.6500	80.4	51.51	51.51
B33	3Y1D	23.60	12.0667	6.50	4.58	8.6500	83.2	51.51	51.51

Manual Basin: B34

Scenario: Existing
Node: B34
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 13.1700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.8600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.8600	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B34	100Y3D	33.07	60.0333	19.00	14.68	4.8600	70.0	40.00	40.00
B34	10Y1D	13.18	12.0833	8.00	4.87	4.8600	73.5	40.00	40.00
B34	25Y3D	24.95	60.0500	15.00	10.97	4.8600	70.8	40.00	40.00
B34	3Y1D	9.74	12.0833	6.50	3.69	4.8600	74.8	40.00	40.00

Manual Basin: B35

Scenario: Existing
Node: B35
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 7.2800 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.0800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0800	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B35	100Y3D	57.38	60.0000	19.00	14.67	7.0800	70.0	40.00	40.00
B35	10Y1D	23.95	12.0333	8.00	4.87	7.0800	73.5	40.00	40.00
B35	25Y3D	43.34	60.0000	15.00	10.96	7.0800	70.8	40.00	40.00
B35	3Y1D	17.74	12.0333	6.50	3.68	7.0800	74.8	40.00	40.00

Manual Basin: B36

Scenario: Existing
Node: B36
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 15.6600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.5600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
3.8500	Fixed Single Family Units	MYAKKA4			
0.7100	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B36	100Y3D	30.54	60.0667	19.00	15.76	4.5600	76.7	40.00	40.00
B36	10Y1D	13.28	12.1000	8.00	5.49	4.5600	78.9	40.00	40.00
B36	25Y3D	23.40	60.0667	15.00	11.93	4.5600	77.1	40.00	40.00
B36	3Y1D	10.01	12.1167	6.50	4.19	4.5600	79.6	40.00	40.00

Manual Basin: B37

Scenario: Existing
Node: B37
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.4700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.2700 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.2200	Fixed Single Family Units	ST. LUCIE4			
0.0500	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B37	100Y3D	28.05	60.0500	19.00	14.69	4.2700	70.2	40.35	40.35
B37	10Y1D	11.14	12.1000	8.00	4.88	4.2700	73.7	40.35	40.35
B37	25Y3D	21.16	60.0500	15.00	10.99	4.2700	70.9	40.35	40.35
B37	3Y1D	8.24	12.1000	6.50	3.70	4.2700	74.9	40.35	40.35

Manual Basin: B38

Scenario: Existing
Node: B38

Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 7.2300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.5700 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.2700	Fixed Single Family Units	MYAKKA4			
0.3000	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B38	100Y3D	13.36	60.0000	19.00	15.71	1.5700	76.4	40.00	40.00
B38	10Y1D	6.11	12.0167	8.00	5.46	1.5700	78.6	40.00	40.00
B38	25Y3D	10.24	60.0000	15.00	11.89	1.5700	76.8	40.00	40.00
B38	3Y1D	4.62	12.0333	6.50	4.17	1.5700	79.4	40.00	40.00

Manual Basin: B39

Scenario: Existing
Node: B39
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.2900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.3000 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
2.7500	Fixed Single Family Units	ST. LUCIE4			
1.6000	Fixed Single Family Units	URBAN LAND4			
2.9100	Institutional	ST. LUCIE4			
6.0400	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B39	100Y3D	103.43	60.0167	19.00	16.33	13.3000	80.3	60.19	60.19
B39	10Y1D	48.89	12.0500	8.00	6.03	13.3000	83.5	60.19	60.19
B39	25Y3D	79.59	60.0167	15.00	12.50	13.3000	81.0	60.19	60.19
B39	3Y1D	37.81	12.0500	6.50	4.72	13.3000	84.6	60.19	60.19

Manual Basin: B01

Scenario: Proposed
Node: B01
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.9600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.0100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0900	Fixed Single Family Units	MYAKKA4			
2.8700	Fixed Single Family Units	ST. LUCIE4			
0.0500	Institutional	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B01	100Y3D	73.50	60.0333	19.00	15.60	10.0100	75.6	40.15	40.15
B01	10Y1D	32.10	12.0667	8.00	5.39	10.0100	78.1	40.15	40.15
B01	25Y3D	56.22	60.0333	15.00	11.79	10.0100	76.1	40.15	40.15
B01	3Y1D	24.14	12.0667	6.50	4.12	10.0100	78.9	40.15	40.15

Manual Basin: B02

Scenario: Proposed
Node: B02
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 19.9300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 19.7100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
17.2600	Fixed Single Family Units	ST. LUCIE4			
2.2800	Institutional	ST. LUCIE4			
0.1700	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B02	100Y3D	113.38	60.1000	19.00	14.94	19.7100	71.6	43.73	43.73
B02	10Y1D	45.69	12.1667	8.00	5.06	19.7100	75.2	43.73	43.73
B02	25Y3D	85.72	60.1000	15.00	11.22	19.7100	72.4	43.73	43.73

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B02	3Y1D	34.08	12.1667	6.50	3.86	19.7100	76.5	43.73	43.73

Manual Basin: B03

Scenario: Proposed
Node: B03
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 15.2900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.2100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.2900	Fixed Single Family Units	ST. LUCIE4			
0.3400	Fixed Single Family Units	URBAN LAND4			
0.0500	Institutional	ST. LUCIE4			
1.5300	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B03	100Y3D	53.64	60.0667	19.00	15.17	8.2100	73.0	45.77	45.77
B03	10Y1D	22.28	12.1000	8.00	5.21	8.2100	76.5	45.77	45.77
B03	25Y3D	40.70	60.0667	15.00	11.43	8.2100	73.7	45.77	45.77
B03	3Y1D	16.72	12.1000	6.50	3.99	8.2100	77.7	45.77	45.77

Manual Basin: B04

Scenario: Proposed
Node: B04
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 4.1700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.9900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.6700	Fixed Single Family Units	ST. LUCIE4			
3.4400	Institutional	ST. LUCIE4			
3.8800	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B04	100Y3D	106.02	59.9333	19.00	16.06	11.9900	78.7	58.32	58.32
B04	10Y1D	53.62	12.0000	8.00	5.87	11.9900	82.2	58.32	58.32
B04	25Y3D	81.40	59.9333	15.00	12.26	11.9900	79.5	58.32	58.32
B04	3Y1D	41.34	12.0000	6.50	4.58	11.9900	83.3	58.32	58.32

Manual Basin: B05

Scenario: Proposed
Node: B05
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 9.6000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.1900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
2.8600	Fixed Single Family Units	ST. LUCIE4			
3.3300	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B05	100Y3D	48.29	60.0167	19.00	15.83	6.1900	77.1	56.14	56.14
B05	10Y1D	22.04	12.0500	8.00	5.71	6.1900	80.7	56.14	56.14
B05	25Y3D	36.94	60.0167	15.00	12.05	6.1900	77.9	56.14	56.14
B05	3Y1D	16.89	12.0500	6.50	4.44	6.1900	82.0	56.14	56.14

Manual Basin: B06

Scenario: Proposed
Node: B06
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.7700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.6600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.0100	Fixed Single Family Units	ST. LUCIE4			
1.6500	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B06	100Y3D	66.52	60.0667	19.00	15.01	10.6600	72.0	44.64	44.64
B06	10Y1D	27.13	12.1167	8.00	5.11	10.6600	75.6	44.64	44.64
B06	25Y3D	50.34	60.0667	15.00	11.28	10.6600	72.7	44.64	44.64
B06	3Y1D	20.27	12.1167	6.50	3.90	10.6600	76.9	44.64	44.64

Manual Basin: B07

Scenario: Proposed
Node: B07
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.9500 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.8400 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7800	Fixed Single Family Units	ST. LUCIE4			
0.0900	Fixed Single Family Units	URBAN LAND4			
0.7800	Institutional	ST. LUCIE4			
0.1900	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B07	100Y3D	67.06	60.0833	19.00	14.88	10.8400	71.2	42.68	42.68
B07	10Y1D	26.96	12.1167	8.00	5.01	10.8400	74.8	42.68	42.68
B07	25Y3D	50.69	60.0833	15.00	11.16	10.8400	72.0	42.68	42.68
B07	3Y1D	20.05	12.1333	6.50	3.82	10.8400	76.0	42.68	42.68

Manual Basin: B08

Scenario: Proposed
Node: B08
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.9500 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.9500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.9500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B08	100Y3D	72.93	60.0500	19.00	14.67	10.9500	70.0	40.00	40.00
B08	10Y1D	28.92	12.0833	8.00	4.87	10.9500	73.5	40.00	40.00
B08	25Y3D	55.00	60.0500	15.00	10.97	10.9500	70.8	40.00	40.00
B08	3Y1D	21.37	12.1000	6.50	3.69	10.9500	74.8	40.00	40.00

Manual Basin: B09

Scenario: Proposed
Node: B09
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.6900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.8500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.8500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B09	100Y3D	62.69	60.0333	19.00	14.67	8.8500	70.0	40.00	40.00
B09	10Y1D	25.22	12.0667	8.00	4.87	8.8500	73.5	40.00	40.00
B09	25Y3D	47.30	60.0333	15.00	10.96	8.8500	70.8	40.00	40.00
B09	3Y1D	18.64	12.0667	6.50	3.69	8.8500	74.8	40.00	40.00

Manual Basin: B10

Scenario: Proposed
Node: B10
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 5.2400 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 2.1000 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.3100	Educational Facilities	BASINGER2			
0.1200	Educational Facilities	BASINGER3			
0.6000	Educational Facilities	BASINGER4			
0.1400	Educational Facilities	ST. LUCIE1			
0.1800	Educational Facilities	ST. LUCIE2			
0.1300	Educational Facilities	ST. LUCIE3			

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.6200	Educational Facilities	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B10	100Y3D	19.29	59.9833	19.00	17.59	2.1000	89.3	70.00	70.00
B10	10Y1D	10.64	12.0000	8.00	6.92	2.1000	91.1	70.00	70.00
B10	25Y3D	15.07	59.9833	15.00	13.67	2.1000	89.7	70.00	70.00
B10	3Y1D	8.44	12.0000	6.50	5.51	2.1000	91.7	70.00	70.00

Manual Basin: B11

Scenario: Proposed
Node: B11
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.6300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.4300 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.9300	Educational Facilities	BASINGER4			
1.5900	Educational Facilities	MYAKKA4			
8.9100	Educational Facilities	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B11	100Y3D	86.93	60.0333	19.00	16.97	11.4300	84.6	70.00	70.00
B11	10Y1D	42.92	12.0667	8.00	6.51	11.4300	87.6	70.00	70.00
B11	25Y3D	67.33	60.0333	15.00	13.10	11.4300	85.3	70.00	70.00
B11	3Y1D	33.70	12.0667	6.50	5.16	11.4300	88.5	70.00	70.00

Manual Basin: B12

Scenario: Proposed
Node: B12
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.5000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256

Peaking Factor: 256.0
Area: 10.1100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.6600	Fixed Single Family Units	MYAKKA4			
9.4500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B12	100Y3D	66.58	60.0500	19.00	14.75	10.1100	70.5	40.00	40.00
B12	10Y1D	26.59	12.1000	8.00	4.91	10.1100	73.9	40.00	40.00
B12	25Y3D	50.27	60.0500	15.00	11.04	10.1100	71.2	40.00	40.00
B12	3Y1D	19.68	12.1000	6.50	3.72	10.1100	75.2	40.00	40.00

Manual Basin: B13

Scenario: Proposed
Node: B13
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.9600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.7500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7500	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B13	100Y3D	59.91	60.0833	19.00	14.68	9.7500	70.0	40.00	40.00
B13	10Y1D	23.57	12.1167	8.00	4.87	9.7500	73.5	40.00	40.00
B13	25Y3D	45.17	60.0833	15.00	10.97	9.7500	70.8	40.00	40.00
B13	3Y1D	17.41	12.1333	6.50	3.69	9.7500	74.8	40.00	40.00

Manual Basin: B14

Scenario: Proposed
Node: B14
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.4300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr

Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.4200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1100	Educational Facilities	ST. LUCIE4			
6.3100	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B14	100Y3D	50.19	60.0167	19.00	14.69	6.4200	70.2	40.51	40.51
B14	10Y1D	20.81	12.0333	8.00	4.89	6.4200	73.7	40.51	40.51
B14	25Y3D	37.92	60.0167	15.00	10.99	6.4200	71.0	40.51	40.51
B14	3Y1D	15.41	12.0333	6.50	3.71	6.4200	75.0	40.51	40.51

Manual Basin: B15

Scenario: Proposed
Node: B15
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 17.4200 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.8200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.6400	Educational Facilities	ST. LUCIE4			
8.1800	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B15	100Y3D	53.82	60.0833	19.00	14.83	8.8200	70.9	42.18	42.18
B15	10Y1D	21.51	12.1333	8.00	4.98	8.8200	74.5	42.18	42.18
B15	25Y3D	40.64	60.0833	15.00	11.11	8.8200	71.7	42.18	42.18
B15	3Y1D	15.98	12.1333	6.50	3.79	8.8200	75.8	42.18	42.18

Manual Basin: B16

Scenario: Proposed
Node: B16
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 15.7300 min

Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.0600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.0600	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B16	100Y3D	70.19	60.0667	19.00	14.67	11.0600	70.0	40.00	40.00
B16	10Y1D	27.68	12.1167	8.00	4.87	11.0600	73.5	40.00	40.00
B16	25Y3D	52.92	60.0667	15.00	10.96	11.0600	70.8	40.00	40.00
B16	3Y1D	20.45	12.1167	6.50	3.68	11.0600	74.8	40.00	40.00

Manual Basin: B17

Scenario: Proposed
Node: B17
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.5400 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.4700 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.4700	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B17	100Y3D	89.31	60.0167	19.00	14.66	11.4700	70.0	40.00	40.00
B17	10Y1D	36.84	12.0333	8.00	4.86	11.4700	73.5	40.00	40.00
B17	25Y3D	67.45	60.0167	15.00	10.96	11.4700	70.8	40.00	40.00
B17	3Y1D	27.25	12.0333	6.50	3.68	11.4700	74.8	40.00	40.00

Manual Basin: B18

Scenario: Proposed
Node: B18
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 6.1400 min

Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 3.6900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.2800	Fixed Single Family Units	BASINGER4			
0.1600	Fixed Single Family Units	POMELLO4			
0.1400	Institutional	POMELLO4			
0.0200	Open Land	BASINGER1			
0.0500	Open Land	BASINGER2			
0.0200	Open Land	BASINGER3			
0.8300	Open Land	BASINGER4			
0.7100	Open Land	POMELLO1			
0.1500	Open Land	POMELLO2			
0.0200	Open Land	POMELLO3			
1.3100	Open Land	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B18	100Y3D	31.72	60.0000	19.00	14.95	3.6900	71.7	7.43	7.43
B18	10Y1D	13.90	12.0167	8.00	4.85	3.6900	73.4	7.43	7.43
B18	25Y3D	24.18	60.0000	15.00	11.17	3.6900	72.1	7.43	7.43
B18	3Y1D	10.26	12.0167	6.50	3.61	3.6900	74.1	7.43	7.43

Manual Basin: B19

Scenario: Proposed
Node: B19
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0500 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.6200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0300	Educational Facilities	MYAKKA4			
0.3500	Educational Facilities	POMELLO4			
0.1200	Fixed Single Family Units	MYAKKA4			
4.1200	Fixed Single Family Units	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B19	100Y3D	32.70	60.0333	19.00	15.47	4.6200	74.7	42.47	42.47
B19	10Y1D	13.97	12.0833	8.00	5.33	4.6200	77.4	42.47	42.47
B19	25Y3D	24.93	60.0333	15.00	11.67	4.6200	75.3	42.47	42.47
B19	3Y1D	10.49	12.0833	6.50	4.07	4.6200	78.4	42.47	42.47

Manual Basin: B20

Scenario: Proposed
Node: B20
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.6300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 10.6100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.1900	Fixed Single Family Units	MYAKKA4			
3.3900	Fixed Single Family Units	POMELLO4			
0.0300	Roads and Highways	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B20	100Y3D	73.04	60.0500	19.00	15.76	10.6100	76.6	40.13	40.13
B20	10Y1D	31.83	12.1000	8.00	5.48	10.6100	78.8	40.13	40.13
B20	25Y3D	55.96	60.0500	15.00	11.93	10.6100	77.0	40.13	40.13
B20	3Y1D	23.97	12.1000	6.50	4.18	10.6100	79.5	40.13	40.13

Manual Basin: B21

Scenario: Proposed
Node: B21
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 19.5100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.8000 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.9800	Educational Facilities	MYAKKA4			
12.8200	Fixed Single Family Units	MYAKKA4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B21	100Y3D	84.81	60.1000	19.00	16.08	13.8000	78.6	42.13	42.13
B21	10Y1D	37.64	12.1500	8.00	5.69	13.8000	80.5	42.13	42.13
B21	25Y3D	65.22	60.1000	15.00	12.22	13.8000	79.0	42.13	42.13
B21	3Y1D	28.53	12.1500	6.50	4.37	13.8000	81.2	42.13	42.13

Manual Basin: B22

Scenario: Proposed
Node: B22
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 1733.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 18.5200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.2000	Educational Facilities	MYAKKA4			
1.2100	Educational Facilities	POMELLO4			
0.3700	Educational Facilities	ST. LUCIE4			
1.5500	Fixed Single Family Units	MYAKKA4			
5.1900	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B22	100Y3D	5.26	79.6833	19.00	9.78	18.5200	81.6	59.08	59.08
B22	10Y1D	2.12	30.0167	8.00	1.04	18.5200	84.4	59.08	59.08
B22	25Y3D	4.04	79.7333	15.00	7.49	18.5200	82.2	59.08	59.08
B22	3Y1D	1.66	30.0167	6.50	0.82	18.5200	85.3	59.08	59.08

Manual Basin: B23

Scenario: Proposed
Node: B23
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.5100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.5900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
2.3100	Fixed Single Family Units	BASINGER4			
1.1200	Fixed Single Family Units	IMMOKALEE4			

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.0800	Fixed Single Family Units	POMELLO4			
0.0200	Roads and Highways	IMMOKALEE4			
0.0600	Roads and Highways	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B23	100Y3D	73.28	60.0167	19.00	15.55	9.5900	75.3	40.38	40.38
B23	10Y1D	32.12	12.0500	8.00	5.36	9.5900	77.8	40.38	40.38
B23	25Y3D	56.01	60.0167	15.00	11.74	9.5900	75.8	40.38	40.38
B23	3Y1D	24.12	12.0500	6.50	4.09	9.5900	78.6	40.38	40.38

Manual Basin: B24

Scenario: Proposed
Node: B24
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 12.4100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.4200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.3400	Educational Facilities	BASINGER4			
0.5600	Educational Facilities	MYAKKA4			
0.5800	Fixed Single Family Units	BASINGER4			
9.0900	Fixed Single Family Units	MYAKKA4			
0.2000	Fixed Single Family Units	POMELLO4			
0.0200	Institutional	POMELLO4			
0.4100	Open Land	BASINGER4			
0.2200	Open Land	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B24	100Y3D	84.14	60.0333	19.00	15.94	11.4200	77.8	40.21	40.21
B24	10Y1D	37.62	12.0667	8.00	5.59	11.4200	79.7	40.21	40.21
B24	25Y3D	64.65	60.0333	15.00	12.09	11.4200	78.2	40.21	40.21
B24	3Y1D	28.44	12.0667	6.50	4.28	11.4200	80.4	40.21	40.21

Manual Basin: B25

Scenario: Proposed

Node: B25
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.3300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.2400 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1400	Fixed Single Family Units	BASINGER4			
0.2800	Fixed Single Family Units	IMMOKALEE1			
0.0400	Fixed Single Family Units	IMMOKALEE2			
0.0600	Fixed Single Family Units	IMMOKALEE3			
1.5800	Fixed Single Family Units	IMMOKALEE4			
0.9500	Fixed Single Family Units	MYAKKA4			
0.3400	Fixed Single Family Units	POMELLO4			
3.5300	Fixed Single Family Units	ST. LUCIE4			
0.2900	Roads and Highways	IMMOKALEE4			
0.0300	Roads and Highways	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B25	100Y3D	55.23	60.0167	19.00	15.52	7.2400	75.2	41.99	41.99
B25	10Y1D	24.33	12.0500	8.00	5.39	7.2400	78.1	41.99	41.99
B25	25Y3D	42.18	60.0167	15.00	11.73	7.2400	75.8	41.99	41.99
B25	3Y1D	18.36	12.0500	6.50	4.13	7.2400	79.1	41.99	41.99

Manual Basin: B26

Scenario: Proposed
Node: B26
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 6.0800 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.7900 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0900	Fixed Single Family Units	MYAKKA4			
1.2000	Fixed Single Family Units	ST. LUCIE4			
0.3100	Institutional	BASINGER4			
5.6500	Institutional	POMELLO4			
0.5400	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B26	100Y3D	69.18	60.0000	19.00	16.73	7.7900	83.0	65.03	65.03
B26	10Y1D	35.04	12.0167	8.00	6.31	7.7900	85.9	65.03	65.03
B26	25Y3D	53.52	60.0000	15.00	12.87	7.7900	83.6	65.03	65.03
B26	3Y1D	27.34	12.0167	6.50	4.97	7.7900	86.8	65.03	65.03

Manual Basin: B27

Scenario: Proposed
Node: B27
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 12.5100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9100 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.5800	Fixed Single Family Units	MYAKKA4			
0.3300	Fixed Single Family Units	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B27	100Y3D	13.98	60.0333	19.00	15.85	1.9100	77.2	40.00	40.00
B27	10Y1D	6.20	12.0667	8.00	5.53	1.9100	79.2	40.00	40.00
B27	25Y3D	10.73	60.0333	15.00	12.01	1.9100	77.6	40.00	40.00
B27	3Y1D	4.68	12.0833	6.50	4.23	1.9100	80.0	40.00	40.00

Manual Basin: B28

Scenario: Proposed
Node: B28
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.0600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 3.6800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
3.6800	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B28	100Y3D	29.06	60.0000	19.00	14.65	3.6800	70.0	40.00	40.00
B28	10Y1D	12.05	12.0333	8.00	4.86	3.6800	73.5	40.00	40.00
B28	25Y3D	21.94	60.0000	15.00	10.95	3.6800	70.8	40.00	40.00
B28	3Y1D	8.92	12.0333	6.50	3.68	3.6800	74.8	40.00	40.00

Manual Basin: B29

Scenario: Proposed
Node: B29
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 16.7700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.6800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.9300	Fixed Single Family Units	ST. LUCIE4			
4.7500	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B29	100Y3D	61.76	60.0667	19.00	15.74	9.6800	76.4	54.72	54.72
B29	10Y1D	27.03	12.1167	8.00	5.64	9.6800	80.1	54.72	54.72
B29	25Y3D	47.14	60.0667	15.00	11.96	9.6800	77.2	54.72	54.72
B29	3Y1D	20.65	12.1167	6.50	4.38	9.6800	81.3	54.72	54.72

Manual Basin: B30

Scenario: Proposed
Node: B30
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 4.6900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 2.8500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.1300	Fixed Single Family Units	ST. LUCIE4			
1.7200	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B30	100Y3D	24.95	59.9500	19.00	15.90	2.8500	78.0	58.11	58.11
B30	10Y1D	12.35	12.0000	8.00	5.79	2.8500	81.6	58.11	58.11
B30	25Y3D	19.13	59.9500	15.00	12.13	2.8500	78.8	58.11	58.11
B30	3Y1D	9.50	12.0000	6.50	4.51	2.8500	82.8	58.11	58.11

Manual Basin: B31

Scenario: Proposed
Node: B31
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 5.6000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.6800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0600	Fixed Single Family Units	BASINGER4			
0.1900	Fixed Single Family Units	POMELLO4			
0.0800	Fixed Single Family Units	ST. LUCIE4			
0.6400	Institutional	BASINGER4			
0.7100	Institutional	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B31	100Y3D	15.18	60.0000	19.00	16.93	1.6800	84.1	64.11	64.11
B31	10Y1D	7.84	12.0000	8.00	6.41	1.6800	86.6	64.11	64.11
B31	25Y3D	11.77	60.0000	15.00	13.04	1.6800	84.7	64.11	64.11
B31	3Y1D	6.12	12.0000	6.50	5.05	1.6800	87.4	64.11	64.11

Manual Basin: B32

Scenario: Proposed
Node: B32
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 8.4100 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.7800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
3.4800	Fixed Single Family Units	IMMOKALEE4			
0.0800	Fixed Single Family Units	MYAKKA4			

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.1200	Fixed Single Family Units	POMELLO4			
0.1000	Roads and Highways	IMMOKALEE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B32	100Y3D	39.38	60.0167	19.00	15.84	4.7800	77.2	40.94	40.94
B32	10Y1D	18.05	12.0333	8.00	5.54	4.7800	79.3	40.94	40.94
B32	25Y3D	30.24	60.0167	15.00	12.00	4.7800	77.7	40.94	40.94
B32	3Y1D	13.65	12.0333	6.50	4.24	4.7800	80.1	40.94	40.94

Manual Basin: B33

Scenario: Proposed
Node: B33
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 11.1400 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.6500 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0500	Educational Facilities	IMMOKALEE4			
0.4700	Educational Facilities	MYAKKA4			
2.8000	Educational Facilities	POMELLO4			
1.6000	Fixed Single Family Units	IMMOKALEE4			
1.6400	Fixed Single Family Units	MYAKKA4			
2.0900	Fixed Single Family Units	POMELLO4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B33	100Y3D	66.13	60.0167	19.00	16.27	8.6500	79.9	51.51	51.51
B33	10Y1D	30.77	12.0667	8.00	5.90	8.6500	82.4	51.51	51.51
B33	25Y3D	50.93	60.0333	15.00	12.42	8.6500	80.4	51.51	51.51
B33	3Y1D	23.60	12.0667	6.50	4.58	8.6500	83.2	51.51	51.51

Manual Basin: B34

Scenario: Proposed
Node: B34
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 13.1700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.8600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.8600	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B34	100Y3D	33.07	60.0333	19.00	14.68	4.8600	70.0	40.00	40.00
B34	10Y1D	13.18	12.0833	8.00	4.87	4.8600	73.5	40.00	40.00
B34	25Y3D	24.95	60.0500	15.00	10.97	4.8600	70.8	40.00	40.00
B34	3Y1D	9.74	12.0833	6.50	3.69	4.8600	74.8	40.00	40.00

Manual Basin: B35

Scenario: Proposed
Node: B35
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 7.2800 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.0800 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0800	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B35	100Y3D	57.38	60.0000	19.00	14.67	7.0800	70.0	40.00	40.00
B35	10Y1D	23.95	12.0333	8.00	4.87	7.0800	73.5	40.00	40.00
B35	25Y3D	43.34	60.0000	15.00	10.96	7.0800	70.8	40.00	40.00
B35	3Y1D	17.74	12.0333	6.50	3.68	7.0800	74.8	40.00	40.00

Manual Basin: B36

Scenario: Proposed
Node: B36
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 15.6600 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.5600 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
3.8500	Fixed Single Family Units	MYAKKA4			
0.7100	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B36	100Y3D	30.54	60.0667	19.00	15.76	4.5600	76.7	40.00	40.00
B36	10Y1D	13.28	12.1000	8.00	5.49	4.5600	78.9	40.00	40.00
B36	25Y3D	23.40	60.0667	15.00	11.93	4.5600	77.1	40.00	40.00
B36	3Y1D	10.01	12.1167	6.50	4.19	4.5600	79.6	40.00	40.00

Manual Basin: B37

Scenario: Proposed
Node: B37
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 14.4700 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.2700 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.2200	Fixed Single Family Units	ST. LUCIE4			
0.0500	Institutional	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B37	100Y3D	28.05	60.0500	19.00	14.69	4.2700	70.2	40.35	40.35
B37	10Y1D	11.14	12.1000	8.00	4.88	4.2700	73.7	40.35	40.35
B37	25Y3D	21.16	60.0500	15.00	10.99	4.2700	70.9	40.35	40.35
B37	3Y1D	8.24	12.1000	6.50	3.70	4.2700	74.9	40.35	40.35

Manual Basin: B38

Scenario: Proposed
Node: B38

Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 7.2300 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.5700 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.2700	Fixed Single Family Units	MYAKKA4			
0.3000	Fixed Single Family Units	ST. LUCIE4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B38	100Y3D	13.36	60.0000	19.00	15.71	1.5700	76.4	40.00	40.00
B38	10Y1D	6.11	12.0167	8.00	5.46	1.5700	78.6	40.00	40.00
B38	25Y3D	10.24	60.0000	15.00	11.89	1.5700	76.8	40.00	40.00
B38	3Y1D	4.62	12.0333	6.50	4.17	1.5700	79.4	40.00	40.00

Manual Basin: B39

Scenario: Proposed
Node: B39
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.2900 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.3000 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
2.7500	Fixed Single Family Units	ST. LUCIE4			
1.6000	Fixed Single Family Units	URBAN LAND4			
2.9100	Institutional	ST. LUCIE4			
6.0400	Institutional	URBAN LAND4			

Comment:

Manual Basin Runoff Summary [Proposed]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
B39	100Y3D	103.43	60.0167	19.00	16.33	13.3000	80.3	60.19	60.19
B39	10Y1D	48.89	12.0500	8.00	6.03	13.3000	83.5	60.19	60.19
B39	25Y3D	79.59	60.0167	15.00	12.50	13.3000	81.0	60.19	60.19
B39	3Y1D	37.81	12.0500	6.50	4.72	13.3000	84.6	60.19	60.19

Node: ATL_AV1

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	13.50
0	0	0	100.0000	13.50

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV1	100Y3D	0.00	13.50	0.0000	104.60	0.00	0
ATL_AV1	10Y1D	0.00	13.50	0.0000	43.28	0.00	0
ATL_AV1	25Y3D	0.00	13.50	0.0000	76.12	0.00	0
ATL_AV1	3Y1D	0.00	13.50	0.0000	30.85	0.00	0

Node: ATL_AV2

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 13.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	13.00
0	0	0	100.0000	13.00

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV2	100Y3D	0.00	13.00	0.0000	223.05	0.00	0
ATL_AV2	10Y1D	0.00	13.00	0.0000	56.10	0.00	0
ATL_AV2	25Y3D	0.00	13.00	0.0000	153.62	0.00	0
ATL_AV2	3Y1D	0.00	13.00	0.0000	40.60	0.00	0

Node: ATL_AV3

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft

Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	12.50
0	0	0	100.0000	12.50

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV3	100Y3D	0.00	12.50	0.0000	150.69	0.00	0
ATL_AV3	10Y1D	0.00	12.50	0.0000	2.93	0.00	0
ATL_AV3	25Y3D	0.00	12.50	0.0000	80.99	0.00	0
ATL_AV3	3Y1D	0.00	12.50	0.0000	0.00	0.00	0

Node: ATL_AV4

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	12.00
0	0	0	100.0000	12.00

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV4	100Y3D	0.00	12.00	0.0000	98.52	0.00	0
ATL_AV4	10Y1D	0.00	12.00	0.0000	41.56	0.00	0
ATL_AV4	25Y3D	0.00	12.00	0.0000	77.64	0.00	0
ATL_AV4	3Y1D	0.00	12.00	0.0000	31.16	0.00	0

Node: B01

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 11.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
11.00	0.0000	0
11.50	0.0300	1307
12.00	0.5200	22651
12.50	1.0100	43996

Stage [ft]	Area [ac]	Area [ft2]
13.00	1.6900	73616
13.50	2.7900	121532
14.00	3.9700	172933
14.50	5.0100	218236
15.00	5.8600	255262
15.50	6.6800	290981
16.00	7.2000	313632
16.50	7.6100	331492
17.00	8.0400	350222
17.50	8.2700	360241
18.00	8.3900	365468
18.50	8.4400	367646
19.00	8.4500	368082

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B01	100Y3D	0.00	14.09	-0.0207	209.40	196.27	181222
B01	10Y1D	0.00	13.51	-0.0207	75.27	59.93	122155
B01	25Y3D	0.00	13.97	-0.0207	147.69	129.62	170078
B01	3Y1D	0.00	13.34	-0.0207	45.70	41.12	105766

Node: B02

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.0570	2483
14.50	0.4500	19602
15.00	1.3700	59677
15.50	2.2800	99317
16.00	4.0600	176854
16.50	6.3300	275735
17.00	8.4900	369824
17.50	10.3500	450846
18.00	12.0600	525334
18.50	13.8000	601128
19.00	15.0600	656014
19.50	15.7300	685199
20.00	16.0100	697396
20.50	16.0500	699138
14.00	0.0570	2483

Comment: 191' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B02	100Y3D	0.00	15.35	-0.0007	223.20	216.41	87190
B02	10Y1D	0.00	14.83	-0.0005	50.57	49.37	46362
B02	25Y3D	0.00	15.17	-0.0006	153.22	146.65	72944
B02	3Y1D	0.00	14.76	-0.0007	35.05	34.92	40180

Node: B02x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B02x	100Y3D	0.00	15.30	-0.0008	9.01	8.45	2857
B02x	10Y1D	0.00	14.86	-0.0008	8.04	7.70	2855
B02x	25Y3D	0.00	15.16	-0.0006	8.79	8.42	2857
B02x	3Y1D	0.00	14.75	-0.0007	7.49	6.60	2855

Node: B03

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.00	0.0000	0
16.50	0.0100	436
17.00	0.0900	3920
17.50	0.2700	11761
18.00	1.5100	65776
18.50	3.6700	159865
19.00	5.2700	229561
19.50	6.5400	284882
20.00	6.7400	293594
20.50	6.7800	295337
21.00	6.7900	295772

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B03	100Y3D	0.00	18.35	-0.0010	53.64	32.53	131468
B03	10Y1D	0.00	17.90	-0.0010	22.28	12.19	55362
B03	25Y3D	0.00	18.23	-0.0010	40.70	22.20	109776
B03	3Y1D	0.00	17.67	-0.0010	16.72	11.41	29719

Node: B04

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.50	0.0000	0
16.00	0.0200	871
16.50	0.1600	6970
17.00	0.3200	13939
17.50	0.4400	19166
18.00	0.8800	38333
18.50	1.6300	71003
19.00	3.6600	159430
19.50	7.0700	307969
20.00	8.9000	387684
20.50	9.5800	417305
21.00	9.8500	429066
21.50	9.9700	434293

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B04	100Y3D	0.00	19.18	-0.0010	106.02	67.60	211597
B04	10Y1D	0.00	18.73	-0.0010	53.62	11.56	111369
B04	25Y3D	0.00	19.04	-0.0010	81.40	37.41	171619
B04	3Y1D	0.00	18.47	-0.0010	41.34	9.48	69358

Node: B05

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 14.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.0000	0
15.00	0.0600	2614
15.50	0.2100	9148
16.00	0.5300	23087

Stage [ft]	Area [ac]	Area [ft2]
16.50	1.0400	45302
17.00	1.7500	76230
17.50	2.4100	104980
18.00	2.7500	119790
18.50	3.0900	134600
19.00	3.5900	156380
19.50	4.4200	192535
20.00	5.6100	244372
20.50	5.7200	249163

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B05	100Y3D	0.00	16.62	-0.0003	172.33	170.68	52877
B05	10Y1D	0.00	16.30	-0.0003	52.93	52.53	36350
B05	25Y3D	0.00	16.51	0.0003	118.87	117.56	45760
B05	3Y1D	0.00	16.21	-0.0002	35.94	34.93	32419

Node: B06

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.50	0.0000	0
17.00	0.0100	436
17.50	0.0900	3920
18.00	0.2800	12197
18.50	0.6000	26136
19.00	1.9000	82764
19.50	4.6000	200376
20.00	6.6200	288367
20.50	8.0100	348916
21.00	8.4600	368518
21.50	8.6700	377665

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B06	100Y3D	0.00	18.08	0.0004	84.70	84.57	14354
B06	10Y1D	0.00	17.88	0.0003	27.13	27.07	10171
B06	25Y3D	0.00	17.99	0.0003	56.41	56.32	12046
B06	3Y1D	0.00	17.84	0.0003	20.27	20.23	9612

Node: B07

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.50	0.3330	14505
13.50	0.3330	14505
14.00	0.3330	14505
14.50	0.3330	14505
15.00	0.3330	14505
15.50	0.3330	14505
16.00	0.4500	19602
16.50	0.5800	25265
17.00	0.7600	33106
17.50	1.1600	50530
18.00	1.8400	80150
18.50	3.2000	139392
19.00	5.4500	237402
19.50	7.6100	331492
20.00	8.6900	378536
20.50	9.0100	392476
21.00	9.0600	394654

Comment: 1111' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B07	100Y3D	0.00	17.39	0.0009	109.34	107.95	46546
B07	10Y1D	0.00	16.71	0.0010	27.32	10.86	28629
B07	25Y3D	0.00	17.27	0.0010	70.71	67.69	42655
B07	3Y1D	0.00	15.84	-0.0010	21.80	8.14	18000

Node: B07x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B07x	100Y3D	0.00	17.55	0.0010	7.10	7.27	3352
B07x	10Y1D	0.00	16.03	0.0010	7.77	7.93	3278
B07x	25Y3D	0.00	17.27	0.0010	7.27	7.48	3359
B07x	3Y1D	0.00	15.42	0.0010	6.14	6.09	3147

Node: B08

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.1210	5271
14.00	0.1400	6098
14.50	0.7500	32670
15.00	1.9800	86249
15.50	3.7200	162043
16.00	5.8900	256568
16.50	7.7200	336283
17.00	8.4600	368518
17.50	9.0200	392911
18.00	9.4100	409900
18.50	9.7600	425146
19.00	9.8200	427759
19.50	9.8300	428195

Comment: 404' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B08	100Y3D	0.00	15.67	-0.0008	146.64	143.81	194564
B08	10Y1D	0.00	15.08	-0.0010	44.84	42.20	98723
B08	25Y3D	0.00	15.48	-0.0006	95.91	77.41	159539
B08	3Y1D	0.00	14.76	0.0010	26.71	24.51	60915

Node: B09

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.00	0.1500	6534
15.50	0.1500	6534
16.00	0.4500	19602
16.50	1.2800	55757
17.00	2.4700	107593

Stage [ft]	Area [ac]	Area [ft2]
17.50	3.8600	168142
18.00	5.4500	237402
18.50	6.5200	284011
19.00	7.0200	305791
19.50	7.1700	312325
20.00	7.2100	314068

Comment: 499' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B09	100Y3D	0.00	16.90	-0.0003	62.79	54.44	97712
B09	10Y1D	0.00	16.61	0.0007	25.22	15.94	66700
B09	25Y3D	0.00	16.81	-0.0002	47.30	40.65	88224
B09	3Y1D	0.00	16.51	0.0006	18.64	8.16	57117

Node: B10

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.50	0.0000	0
9.00	0.5500	23958
9.50	0.9100	39640
10.00	1.0000	43560
10.50	1.0600	46174
11.00	1.1300	49223
11.50	1.2000	52272
12.00	1.2700	55321
12.50	1.3400	58370
13.00	1.4000	60984
13.50	1.4700	64033
14.00	1.5800	68825
14.50	1.6700	72745
15.00	1.7900	77972
15.50	1.9300	84071
16.00	2.0800	90605
16.50	2.1000	91476

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B10	100Y3D	0.00	14.10	0.0028	69.08	59.16	69646
B10	10Y1D	0.00	13.82	0.0028	57.97	38.84	67148
B10	25Y3D	0.00	14.00	0.0028	61.32	55.72	68841

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B10	3Y1D	0.00	13.76	0.0028	55.52	27.69	66522

Node: B11

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.50	0.0000	0
11.00	0.0400	1742
11.50	0.1600	6970
12.00	0.5400	23522
12.50	0.7000	30492
13.00	0.8300	36155
13.50	0.9900	43124
14.00	1.3000	56628
14.50	2.4100	104980
15.00	4.8700	212137
15.50	7.4800	325829
16.00	9.2600	403366
16.50	9.3900	409028

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B11	100Y3D	0.00	15.73	0.0004	86.93	8.71	361292
B11	10Y1D	0.00	14.94	0.0003	42.92	2.06	200240
B11	25Y3D	0.00	15.41	0.0004	67.33	7.78	305353
B11	3Y1D	0.00	14.82	0.0003	33.70	0.84	174164

Node: B12

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.0740	3223
14.00	0.0740	3223
14.50	0.4900	21344
15.00	2.3800	103673
15.50	4.4300	192971
16.00	5.8100	253084
16.50	6.8800	299693
17.00	7.4800	325829

Stage [ft]	Area [ac]	Area [ft2]
17.50	7.9400	345866
18.00	8.3000	361548
18.50	8.5300	371567
19.00	8.6600	377230
19.50	8.7600	381586
20.00	8.7700	382021

Comment: 248' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B12	100Y3D	0.00	15.71	0.0007	84.59	34.29	218662
B12	10Y1D	0.00	15.08	-0.0009	26.59	21.13	118136
B12	25Y3D	0.00	15.50	-0.0009	59.64	17.52	193525
B12	3Y1D	0.00	14.76	-0.0010	19.68	15.57	64093

Node: B13

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.00	0.0000	0
12.50	0.0100	436
13.00	0.0200	871
13.50	0.2400	10454
14.00	1.5400	67082
14.50	3.7300	162479
15.00	5.3200	231739
15.50	6.3700	277477
16.00	7.0200	305791
16.50	7.5000	326700
17.00	7.8000	339768
17.50	8.0400	350222
18.00	8.1600	355450
18.50	8.2100	357628

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B13	100Y3D	0.00	15.70	-0.0048	132.51	96.94	288583
B13	10Y1D	0.00	15.08	-0.0048	91.71	30.63	238992
B13	25Y3D	0.00	15.50	-0.0048	123.37	51.92	277141
B13	3Y1D	0.00	14.76	-0.0048	59.04	30.63	198195

Node: B13x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B13x	100Y3D	0.00	15.75	0.0014	30.12	25.45	3814
B13x	10Y1D	0.00	14.85	0.0014	30.12	26.47	3921
B13x	25Y3D	0.00	15.49	0.0014	30.12	26.05	3749
B13x	3Y1D	0.00	14.52	0.0014	30.12	24.36	3885

Node: B14

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.0740	3223
14.00	0.0740	3223
14.50	0.5300	23087
15.00	1.7500	76230
15.50	2.7500	119790
16.00	3.8000	165528
16.50	4.8600	211702
17.00	5.3600	233482
17.50	5.6500	246114
18.00	5.7400	250034
18.50	5.7500	250470

Comment: 248' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B14	100Y3D	0.00	15.17	-0.0005	89.39	86.13	90741
B14	10Y1D	0.00	14.64	0.0010	26.70	23.86	38244
B14	25Y3D	0.00	14.93	-0.0010	62.78	60.52	68907
B14	3Y1D	0.00	14.57	-0.0010	17.35	16.00	30965

Node: B15

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.0940	4095
14.50	0.3200	13939
15.00	1.0000	43560
15.50	1.3600	59242
16.00	1.9600	85378
16.50	2.8400	123710
17.00	3.6000	156816
17.50	4.6200	201247
18.00	5.7400	250034
18.50	7.0400	306662
19.00	7.5800	330185
19.50	7.6200	331927
14.00	0.0940	4095

Comment: 312' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B15	100Y3D	0.00	15.29	-0.0022	82.58	78.25	52677
B15	10Y1D	0.00	14.76	-0.0022	55.26	47.61	29342
B15	25Y3D	0.00	15.18	-0.0022	68.54	63.95	49166
B15	3Y1D	0.00	14.33	-0.0022	50.80	45.99	10627

Node: B16

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.00	0.0000	0
15.50	0.1400	6098
16.00	0.4300	18731
16.50	0.7300	31799
17.00	1.2500	54450
17.50	2.3700	103237
18.00	4.3800	190793
18.50	6.0600	263974
19.00	7.3000	317988
19.50	8.4000	365904
20.00	8.9800	391169
20.50	9.1700	399445
21.00	9.2400	402494

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B16	100Y3D	0.00	17.29	-0.0118	75.94	57.46	82839
B16	10Y1D	0.00	16.35	-0.0118	37.32	43.84	28001
B16	25Y3D	0.00	17.11	-0.0118	59.37	43.84	65656
B16	3Y1D	0.00	15.85	-0.0118	31.00	43.84	14878

Node: B16x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B16x	100Y3D	0.00	16.11	0.0021	45.55	29.41	4296
B16x	10Y1D	0.00	15.44	0.0021	45.55	25.85	4298
B16x	25Y3D	0.00	15.96	0.0021	45.55	29.20	4296
B16x	3Y1D	0.00	15.04	0.0021	45.55	24.47	4298

Node: B17

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.00	0.1290	5619
12.50	0.1290	5619
13.00	0.1290	5619
13.50	0.1290	5619
14.00	0.1290	5619
14.50	0.1290	5619
15.00	0.1600	6970
15.50	1.0300	44867
16.00	2.4200	105415
16.50	4.0200	175111
17.00	5.3700	233917
17.50	6.7400	293594
18.00	7.7900	339332
18.50	8.5200	371131
19.00	8.8900	387248

Stage [ft]	Area [ac]	Area [ft2]
19.50	9.0700	395089
20.00	9.0900	395960

Comment: 430' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B17	100Y3D	0.00	15.80	-0.0010	99.25	91.46	81026
B17	10Y1D	0.00	15.36	0.0010	36.84	25.32	34405
B17	25Y3D	0.00	15.66	0.0010	67.48	63.00	64239
B17	3Y1D	0.00	14.99	0.0010	27.43	14.93	6961

Node: B18

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0000	0
8.00	0.0100	436
8.50	0.5800	25265
9.00	0.9700	42253
9.50	1.0800	47045
10.00	1.1500	50094
10.50	1.2200	53143
11.00	1.2900	56192
11.50	1.3900	60548
12.00	1.6100	70132
12.50	2.0100	87556
13.00	2.4400	106286
13.50	2.8900	125888
14.00	3.3300	145055
14.50	3.5100	152896
15.00	3.5600	155074

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B18	100Y3D	0.00	14.05	0.0796	185.61	182.75	145885
B18	10Y1D	0.00	13.51	0.0796	80.29	25.27	126103
B18	25Y3D	0.00	13.95	0.0796	132.84	133.81	143033
B18	3Y1D	0.00	13.34	0.0796	80.29	10.24	119444

Node: B19

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.50	0.0000	0
17.00	0.0800	3485
17.50	0.5100	22216
18.00	1.3700	59677
18.50	2.6100	113692
19.00	3.6400	158558
19.50	4.0000	174240
20.00	4.1000	178596
20.50	4.1200	179467

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B19	100Y3D	0.00	16.50	-0.1435	43.86	307.93	3635
B19	10Y1D	0.00	16.50	-0.1435	26.04	307.93	3635
B19	25Y3D	0.00	16.50	-0.1435	37.93	307.93	3635
B19	3Y1D	0.00	16.50	-0.1435	21.72	307.93	3635

Node: B20

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.50	0.0000	0
16.00	0.1400	6098
16.50	0.7600	33106
17.00	2.2700	98881
17.50	3.5900	156380
18.00	5.4100	235660
18.50	6.9400	302306
19.00	8.0600	351094
19.50	8.5400	372002
20.00	8.9100	388120
20.50	9.0500	394218
21.00	9.1100	396832
21.50	9.1300	397703

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B20	100Y3D	0.00	16.55	-0.0043	73.04	71.93	39212
B20	10Y1D	0.00	16.32	-0.0043	31.83	31.17	23560
B20	25Y3D	0.00	16.47	-0.0043	55.96	55.10	31469
B20	3Y1D	0.00	16.27	-0.0043	23.97	23.35	20483

Node: B21

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.50	0.0690	3006
14.50	0.0690	3006
15.00	0.0690	3006
15.50	0.2000	8712
16.00	2.1400	93218
16.50	5.6800	247421
17.00	8.3000	361548
17.50	9.6400	419918
18.00	10.4500	455202
18.50	11.0300	480467
19.00	11.2700	490921
19.50	11.3700	495277
20.00	11.4900	500504
20.50	11.5100	501376

Comment: 230' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B21	100Y3D	0.00	16.60	-0.0010	84.81	47.04	270014
B21	10Y1D	0.00	16.29	-0.0010	37.64	16.45	181324
B21	25Y3D	0.00	16.49	-0.0010	65.22	32.54	244598
B21	3Y1D	0.00	16.15	-0.0010	28.53	12.43	138704

Node: B21x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B21x	100Y3D	0.00	15.62	0.0055	120.82	28.81	4267
B21x	10Y1D	0.00	14.71	0.0055	120.82	18.50	4326
B21x	25Y3D	0.00	15.32	0.0055	120.82	26.71	4277
B21x	3Y1D	0.00	14.39	0.0055	120.82	17.73	4323

Node: B22

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.00	0.1890	8233
12.50	0.1890	8233
13.00	0.1890	8233
13.50	0.4900	21344
14.00	1.7900	77972
14.50	3.6900	160736
15.00	5.4500	237402
15.50	6.4400	280526
16.00	8.5200	371131
16.50	12.1900	530996
17.00	13.8100	601564
17.50	15.1500	659934
18.00	16.0900	700880
18.50	16.6000	723096
19.00	16.7400	729194
19.50	16.8700	734857
20.00	16.9000	736164

Comment: 629' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B22	100Y3D	0.00	15.16	0.0007	98.69	22.37	251439
B22	10Y1D	0.00	14.18	0.0008	34.38	19.88	107547
B22	25Y3D	0.00	14.93	0.0007	72.27	20.94	226024
B22	3Y1D	0.00	13.73	0.0009	26.58	19.64	47976

Node: B22x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B22x	100Y3D	0.00	15.78	0.0009	39.66	39.73	4074
B22x	10Y1D	0.00	14.76	0.0010	26.47	26.57	4241
B22x	25Y3D	0.00	15.49	0.0007	30.87	31.01	4036
B22x	3Y1D	0.00	14.42	0.0010	24.36	24.51	4234

Node: B23

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 11.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
11.50	0.0000	0
12.00	0.0100	436
12.50	0.0700	3049
13.00	0.1600	6970
13.50	0.3200	13939
14.00	0.5000	21780
14.50	0.9000	39204
15.00	1.3300	57935
15.50	1.6600	72310
16.00	2.1100	91912
16.50	2.8000	121968
17.00	3.4700	151153
17.50	4.7600	207346
18.00	6.1600	268330
18.50	7.1700	312325
19.00	7.6000	331056
19.50	7.7300	336719
20.00	7.8600	342382
20.50	7.9400	345866
21.00	7.9700	347173

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B23	100Y3D	0.00	15.07	-0.0156	73.28	68.20	60078
B23	10Y1D	0.00	14.69	-0.0156	32.12	18.01	46246
B23	25Y3D	0.00	14.97	-0.0156	56.01	50.51	56708
B23	3Y1D	0.00	14.49	-0.0156	24.12	15.65	39000

Node: B23x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B23x	100Y3D	0.00	15.08	0.0146	318.00	44.04	3602
B23x	10Y1D	0.00	14.48	0.0146	318.00	30.97	3602
B23x	25Y3D	0.00	14.89	0.0146	318.00	39.69	3602
B23x	3Y1D	0.00	14.24	0.0146	318.00	27.55	3602

Node: B24

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 7.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
7.50	0.1300	5663
11.50	0.1300	5663
12.00	0.6600	28750
12.50	2.4300	105851
13.00	4.3700	190357
13.50	6.1400	267458
14.00	8.1400	354578
14.50	9.4000	409464
15.00	9.6200	419047
15.50	9.6300	419483
16.00	9.6400	419918

Comment: 434' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B24	100Y3D	0.00	14.08	0.0003	225.51	194.93	362950
B24	10Y1D	0.00	13.51	0.0006	77.54	43.38	269223
B24	25Y3D	0.00	13.96	0.0003	167.61	137.34	348492
B24	3Y1D	0.00	13.34	0.0005	51.82	40.02	242592

Node: B24x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B24x	100Y3D	0.00	14.08	0.0010	13.28	22.45	3060
B24x	10Y1D	0.00	13.51	0.0010	11.75	14.60	3056
B24x	25Y3D	0.00	13.97	0.0010	12.43	20.06	3294
B24x	3Y1D	0.00	13.34	0.0010	11.54	11.47	3056

Node: B25

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0000	0
8.00	0.1600	6970
8.50	0.3500	15246
9.00	0.4100	17860
9.50	0.4400	19166
10.00	0.4600	20038
10.50	0.4900	21344
11.00	0.5200	22651
11.50	0.5400	23522
12.00	0.5700	24829
12.50	0.6100	26572
13.00	0.6400	27878
13.50	0.6700	29185
14.00	0.8000	34848
14.50	1.5600	67954
15.00	2.2100	96268
15.50	2.6800	116741
16.00	3.2700	142441
16.50	3.8600	168142
17.00	4.5100	196456
17.50	5.1600	224770
18.00	5.7200	249163
18.50	6.0600	263974
19.00	6.2900	273992
19.50	6.3500	276606
20.00	6.3600	277042

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B25	100Y3D	0.00	14.58	-0.0010	97.60	62.11	72532
B25	10Y1D	0.00	13.38	0.0010	53.15	39.42	28924
B25	25Y3D	0.00	14.33	0.0009	78.85	56.80	56681
B25	3Y1D	0.00	13.07	0.0010	51.04	33.22	28110

Node: B26

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.50	0.0000	0
11.00	0.1600	6970
11.50	0.3400	14810
12.00	0.8400	36590
12.50	1.2600	54886
13.00	1.5200	66211
13.50	1.7700	77101
14.00	2.3200	101059
14.50	3.3800	147233
15.00	4.8800	212573
15.50	5.9100	257440
16.00	6.3100	274864
16.50	6.5300	284447
17.00	6.6600	290110
17.50	6.7400	293594
18.00	6.7900	295772
18.50	6.8500	298386
19.00	6.9300	301871
19.50	6.9700	303613

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B26	100Y3D	0.00	14.05	-0.0588	168.54	156.58	106060
B26	10Y1D	0.00	13.50	-0.0588	84.37	80.29	77157
B26	25Y3D	0.00	13.94	-0.0588	128.32	124.96	98393
B26	3Y1D	0.00	13.33	-0.0588	52.15	80.29	73464

Node: B27

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 14.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.0000	0
15.00	0.0500	2178
15.50	0.3000	13068
16.00	0.6900	30056
16.50	1.1000	47916
17.00	1.3400	58370
17.50	1.4700	64033
18.00	1.5300	66647
18.50	1.5900	69260
19.00	1.6500	71874
19.50	1.7000	74052
20.00	1.7600	76666
20.50	1.8300	79715
21.00	1.8500	80586
21.50	1.8600	81022

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B27	100Y3D	0.00	15.73	-0.0151	83.99	83.58	20777
B27	10Y1D	0.00	15.45	-0.0151	33.63	33.38	11909
B27	25Y3D	0.00	15.63	-0.0151	63.46	63.12	17661
B27	3Y1D	0.00	15.37	-0.0151	24.97	24.69	10171

Node: B28

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 13.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
13.50	0.0000	0
14.00	0.0400	1742
14.50	0.2100	9148
15.00	0.6200	27007
15.50	1.2600	54886
16.00	2.2300	97139
16.50	3.0300	131987
17.00	3.4000	148104
17.50	3.5000	152460
18.00	3.5300	153767
18.50	3.5300	153767
19.00	3.5400	154202

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B28	100Y3D	0.00	15.63	0.0005	151.01	150.69	65959
B28	10Y1D	0.00	15.08	-0.0009	12.05	8.25	31478
B28	25Y3D	0.00	15.46	0.0006	81.16	80.99	52670
B28	3Y1D	0.00	14.77	-0.0006	8.92	8.02	18625

Node: B29

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.50	0.0000	0
17.00	0.4100	17860
17.50	1.9400	84506
18.00	3.6300	158123
18.50	4.9000	213444
19.00	6.3900	278348
19.50	7.3200	318859
20.00	7.8200	340639
20.50	8.0000	348480
21.00	8.0600	351094
21.50	8.0800	351965

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B29	100Y3D	0.00	17.58	-0.0106	61.76	54.00	95747
B29	10Y1D	0.00	17.30	-0.0106	27.03	21.18	57841
B29	25Y3D	0.00	17.49	-0.0106	47.14	39.24	83151
B29	3Y1D	0.00	17.20	-0.0106	20.65	15.28	44364

Node: B30

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.50	0.0000	0
13.00	0.0200	871
13.50	0.0300	1307
14.00	0.0400	1742
14.50	0.0500	2178
15.00	0.0900	3920

Stage [ft]	Area [ac]	Area [ft2]
15.50	0.2900	12632
16.00	0.9200	40075
16.50	1.6900	73616
17.00	2.1300	92783
17.50	2.2600	98446

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B30	100Y3D	0.00	15.77	-0.0010	24.95	23.56	27454
B30	10Y1D	0.00	15.40	-0.0010	12.35	8.04	10898
B30	25Y3D	0.00	15.69	0.0008	19.13	17.71	23124
B30	3Y1D	0.00	15.14	-0.0008	9.50	6.91	6406

Node: B31

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.00	0.0000	0
12.50	0.0100	436
13.00	0.0500	2178
13.50	0.1000	4356
14.00	0.1400	6098
14.50	0.1900	8276
15.00	0.2500	10890
15.50	0.3400	14810
16.00	0.4500	19602
16.50	0.5500	23958
17.00	0.7600	33106
17.50	1.0600	46174
18.00	1.3700	59677
18.50	1.4500	63162
19.00	1.5000	65340
19.50	1.5100	65776

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B31	100Y3D	0.00	12.16	-0.0041	15.18	15.18	139
B31	10Y1D	0.00	12.07	-0.0041	7.84	7.84	100
B31	25Y3D	0.00	12.12	-0.0041	11.77	11.77	105
B31	3Y1D	0.00	12.04	-0.0041	6.12	6.12	100

Node: B32

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 13.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
13.00	0.0000	0
13.50	0.0600	2614
14.00	0.7400	32234
14.50	2.4200	105415
15.00	3.2900	143312
15.50	3.6100	157252
16.00	3.7500	163350
16.50	3.8900	169448
17.00	3.9700	172933
17.50	4.0200	175111
18.00	4.1000	178596
18.50	4.1600	181210
19.00	4.1700	181645

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B32	100Y3D	0.00	14.61	-0.0302	146.78	180.26	113846
B32	10Y1D	0.00	14.23	-0.0302	52.39	180.26	66564
B32	25Y3D	0.00	14.48	-0.0302	112.70	180.26	103048
B32	3Y1D	0.00	14.05	-0.0302	36.17	180.26	39060

Node: B32x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B32x	100Y3D	0.00	14.58	0.0028	61.10	31.04	4654
B32x	10Y1D	0.00	13.46	0.0028	61.10	30.76	4654
B32x	25Y3D	0.00	14.34	0.0028	61.10	30.76	4653
B32x	3Y1D	0.00	13.16	0.0028	61.10	32.71	4654

Node: B33

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.00	0.0000	0
12.50	0.0400	1742
13.00	0.3900	16988
13.50	1.1600	50530
14.00	2.4200	105415
14.50	3.4700	151153
15.00	4.0500	176418
15.50	4.4400	193406
16.00	4.9000	213444
16.50	5.5100	240016
17.00	6.2300	271379
17.50	6.9500	302742
18.00	7.3900	321908
18.50	7.6300	332363
19.00	7.6400	332798

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B33	100Y3D	0.00	14.15	-0.0281	156.70	147.15	119395
B33	10Y1D	0.00	13.51	-0.0281	36.55	35.67	51424
B33	25Y3D	0.00	14.01	-0.0281	111.00	97.81	106654
B33	3Y1D	0.00	13.33	-0.0281	23.60	28.11	39321

Node: B33x

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B33x	100Y3D	0.00	14.21	0.0008	18.32	4.02	2760
B33x	10Y1D	0.00	13.47	0.0009	18.32	3.90	2760

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B33x	25Y3D	0.00	14.05	0.0008	18.32	3.99	2760
B33x	3Y1D	0.00	13.27	0.0008	18.32	3.80	2760

Node: B34

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.00	0.0730	3180
17.50	0.0730	3180
18.00	0.5600	24394
18.50	1.6100	70132
19.00	2.7100	118048
19.50	3.6800	160301
20.00	4.0700	177289
20.50	4.1400	180338
21.00	4.2500	185130

Comment: 243' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B34	100Y3D	0.00	17.66	-0.0012	33.07	31.64	9868
B34	10Y1D	0.00	15.66	-0.0012	14.93	13.57	4226
B34	25Y3D	0.00	17.26	-0.0012	25.61	22.73	4226
B34	3Y1D	0.00	15.18	-0.0012	12.91	12.87	4226

Node: B35

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 13.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
13.00	0.0000	0
13.50	0.0200	871
14.00	0.2900	12632
14.50	0.8100	35284
15.00	1.5800	68825
15.50	2.8400	123710
16.00	3.7600	163786
16.50	4.2300	184259
17.00	4.5800	199505
17.50	4.8800	212573
18.00	5.1400	223898

Stage [ft]	Area [ac]	Area [ft2]
18.50	5.3500	233046
19.00	5.5400	241322
19.50	5.6100	244372
20.00	5.6300	245243

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B35	100Y3D	0.00	15.71	-0.0495	76.47	49.83	140472
B35	10Y1D	0.00	15.09	-0.0495	34.20	49.83	78974
B35	25Y3D	0.00	15.51	-0.0495	58.98	49.83	124458
B35	3Y1D	0.00	14.80	-0.0495	23.77	49.83	55169

Node: B36

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.00	0.0000	0
15.50	0.1100	4792
16.00	0.7200	31363
16.50	1.9900	86684
17.00	3.4300	149411
17.50	3.9500	172062
18.00	4.0200	175111

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B36	100Y3D	0.00	15.84	-0.0137	30.54	29.20	22810
B36	10Y1D	0.00	15.32	-0.0137	13.28	17.60	3133
B36	25Y3D	0.00	15.75	-0.0137	23.40	22.48	18284
B36	3Y1D	0.00	15.00	-0.0137	10.01	17.60	1546

Node: B37

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.50	0.1060	4617
15.00	0.1060	4617
15.50	0.1600	6970
16.00	0.6900	30056
16.50	1.0600	46174
17.00	1.6300	71003
17.50	1.9800	86249
18.00	2.5300	110207
18.50	3.0800	134165
19.00	3.3400	145490
19.50	3.5100	152896
20.00	3.6500	158994
20.50	3.6700	159865

Comment: 352' Exfil

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B37	100Y3D	0.00	15.69	-0.0007	49.90	49.03	15533
B37	10Y1D	0.00	15.20	0.0010	11.87	11.83	5576
B37	25Y3D	0.00	15.50	0.0006	35.63	35.48	6989
B37	3Y1D	0.00	15.09	0.0010	10.49	6.40	5326

Node: B38

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 14.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.0000	0
15.00	0.0200	871
15.50	0.2600	11326
16.00	0.8600	37462
16.50	1.2500	54450
17.00	1.3800	60113
17.50	1.4500	63162
18.00	1.4700	64033
18.50	1.4800	64469
19.00	1.4900	64904

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B38	100Y3D	0.00	15.77	-0.0088	35.36	33.50	25545
B38	10Y1D	0.00	14.50	-0.0088	9.07	10.91	311
B38	25Y3D	0.00	15.63	-0.0088	24.40	22.11	17873

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B38	3Y1D	0.00	14.50	-0.0088	6.92	10.91	317

Node: B39

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.50	0.0000	0
10.00	0.0100	436
10.50	0.0200	871
11.00	0.0300	1307
11.50	0.0400	1742
12.00	0.0500	2178
12.50	0.0700	3049
13.00	0.0800	3485
13.50	0.0900	3920
14.00	0.1000	4356
14.50	0.1200	5227
15.00	0.3300	14375
15.50	1.0000	43560
16.00	2.8300	123275
16.50	4.2800	186437
17.00	6.3200	275299
17.50	7.9200	344995
18.00	9.3800	408593
18.50	10.2900	448232
19.00	10.9500	476982
19.50	11.2100	488308
20.00	11.3400	493970
20.50	11.3900	496148
21.00	11.4000	496584

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B39	100Y3D	0.00	15.66	-0.0006	109.25	107.03	68887
B39	10Y1D	0.00	15.46	0.0009	48.89	46.28	41204
B39	25Y3D	0.00	15.58	0.0006	80.55	79.04	56868
B39	3Y1D	0.00	15.40	-0.0009	37.81	34.04	37455

Node: B40

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft

Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B40	100Y3D	0.00	15.36	-0.0006	6.49	6.34	2863
B40	10Y1D	0.00	15.02	-0.0006	5.13	5.13	2865
B40	25Y3D	0.00	15.19	0.0006	6.40	6.29	2845
B40	3Y1D	0.00	15.00	-0.0010	4.13	4.13	2864

Node: Depot Ave

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	7.00
0	0	0	8.0000	10.00
0	0	0	12.0000	11.00
0	0	0	16.0000	10.50
0	0	0	24.0000	8.50
0	0	0	30.0000	7.00

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
Depot Ave	100Y3D	0.00	11.00	-0.0002	15.18	0.00	0
Depot Ave	10Y1D	0.00	11.00	-0.0004	7.84	0.00	0
Depot Ave	25Y3D	0.00	11.00	-0.0001	11.77	0.00	0
Depot Ave	3Y1D	0.00	11.00	-0.0003	6.12	0.00	0

Node: LAKE_IDA1

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 15.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	15.00
0	0	0	100.0000	15.00

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
LAKE_IDA1	100Y3D	0.00	15.00	0.0000	304.68	0.19	0
LAKE_IDA1	10Y1D	0.00	15.00	0.0000	77.78	0.19	0
LAKE_IDA1	25Y3D	0.00	15.00	0.0000	208.34	0.19	0
LAKE_IDA1	3Y1D	0.00	15.00	0.0000	37.98	0.19	0

Node: LAKE_IDA2

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 14.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	13.50
0	0	0	100.0000	13.50

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
LAKE_IDA2	100Y3D	0.00	13.50	0.0000	26.22	0.00	0
LAKE_IDA2	10Y1D	0.00	13.50	0.0000	0.00	0.00	0
LAKE_IDA2	25Y3D	0.00	13.50	0.0000	12.40	0.00	0
LAKE_IDA2	3Y1D	0.00	13.50	0.0000	0.00	0.00	0

Node: LAKE_IDA3

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	12.50
0	0	0	100.0000	12.50

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
LAKE_IDA3	100Y3D	0.00	12.50	0.0000	336.55	0.00	0
LAKE_IDA3	10Y1D	0.00	12.50	0.0000	43.00	0.00	0
LAKE_IDA3	25Y3D	0.00	12.50	0.0000	243.71	0.00	0
LAKE_IDA3	3Y1D	0.00	12.50	0.0000	17.33	0.00	0

Node: OFF

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 16.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	16.00
0	0	0	100.0000	16.00

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OFF	100Y3D	0.00	16.00	0.0000	10.74	0.00	0
OFF	10Y1D	0.00	16.00	0.0000	9.96	0.00	0
OFF	25Y3D	0.00	16.00	0.0000	10.51	0.00	0
OFF	3Y1D	0.00	16.00	0.0000	9.48	0.00	0

Node: OFF2

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 16.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	16.00
0	0	0	100.0000	16.00

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OFF2	100Y3D	0.00	16.00	0.0000	13.55	0.00	0
OFF2	10Y1D	0.00	16.00	0.0000	12.19	0.00	0
OFF2	25Y3D	0.00	16.00	0.0000	13.21	0.00	0

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OFF2	3Y1D	0.00	16.00	0.0000	11.41	0.00	0

Node: OUTFALL

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage: 3Y1D

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OUTFALL	100Y3D	0.00	8.50	0.0001	62.03	0.05	0
OUTFALL	10Y1D	0.00	8.50	-0.0002	39.38	0.00	0
OUTFALL	25Y3D	0.00	10.00	0.0002	56.74	0.00	0
OUTFALL	3Y1D	0.00	8.50	-0.0002	33.19	0.00	0

Node: Weir Node

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.1000	4356
99.00	0.1000	4356

Comment:

Node Max Conditions [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
Weir Node	100Y3D	0.00	13.70	0.0006	62.11	62.04	6059
Weir Node	10Y1D	0.00	13.03	0.0006	39.42	39.38	6059
Weir Node	25Y3D	0.00	13.59	0.0004	56.80	56.74	6059
Weir Node	3Y1D	0.00	12.82	0.0005	33.22	33.19	6059

Node: ATL_AV1

Scenario: Proposed
Type: Time/Stage

Base Flow: 0.00 cfs
Initial Stage: 13.50 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	13.50
0	0	0	100.0000	13.50

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV1	100Y3D	0.00	13.50	0.0000	104.48	0.00	0
ATL_AV1	10Y1D	0.00	13.50	0.0000	42.91	0.00	0
ATL_AV1	25Y3D	0.00	13.50	0.0000	76.06	0.00	0
ATL_AV1	3Y1D	0.00	13.50	0.0000	30.65	0.00	0

Node: ATL_AV2

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 13.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	13.00
0	0	0	100.0000	13.00

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV2	100Y3D	0.00	13.00	0.0000	217.49	0.00	0
ATL_AV2	10Y1D	0.00	13.00	0.0000	53.10	0.00	0
ATL_AV2	25Y3D	0.00	13.00	0.0000	142.21	0.00	0
ATL_AV2	3Y1D	0.00	13.00	0.0000	39.52	0.00	0

Node: ATL_AV3

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	12.50
0	0	0	100.0000	12.50

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV3	100Y3D	0.00	12.50	0.0000	145.54	0.00	0
ATL_AV3	10Y1D	0.00	12.50	0.0000	0.00	0.00	0
ATL_AV3	25Y3D	0.00	12.50	0.0000	75.29	0.00	0
ATL_AV3	3Y1D	0.00	12.50	0.0000	0.00	0.00	0

Node: ATL_AV4

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	12.00
0	0	0	100.0000	12.00

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
ATL_AV4	100Y3D	0.00	12.00	0.0000	98.45	0.00	0
ATL_AV4	10Y1D	0.00	12.00	0.0000	41.28	0.00	0
ATL_AV4	25Y3D	0.00	12.00	0.0000	77.47	0.00	0
ATL_AV4	3Y1D	0.00	12.00	0.0000	28.26	0.00	0

Node: B01

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 7.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
7.50	0.5120	22303
11.50	0.5120	22303
12.00	0.5120	22303
12.50	1.0100	43996
13.00	1.6900	73616
13.50	2.7900	121532

Stage [ft]	Area [ac]	Area [ft2]
14.00	3.9700	172933
14.50	5.0100	218236
15.00	5.8600	255262
15.50	6.6800	290981
16.00	7.2000	313632
16.50	7.6100	331492
17.00	8.0400	350222
17.50	8.2700	360241
18.00	8.3900	365468
18.50	8.4400	367646
19.00	8.4500	368082

Comment: 1707' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B01	100Y3D	0.00	14.06	-0.0107	192.99	172.90	177964
B01	10Y1D	0.00	13.27	-0.0107	49.30	37.64	99495
B01	25Y3D	0.00	13.90	-0.0107	126.72	99.28	163054
B01	3Y1D	0.00	12.90	-0.0107	49.30	16.60	67925

Node: B02

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.0570	2483
14.50	0.4500	19602
15.00	1.3700	59677
15.50	2.2800	99317
16.00	4.0600	176854
16.50	6.3300	275735
17.00	8.4900	369824
17.50	10.3500	450846
18.00	12.0600	525334
18.50	13.8000	601128
19.00	15.0600	656014
19.50	15.7300	685199
20.00	16.0100	697396
20.50	16.0500	699138
14.00	0.0570	2483

Comment: 191' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B02	100Y3D	0.00	15.33	-0.0010	217.89	210.85	86116
B02	10Y1D	0.00	14.82	-0.0010	47.43	46.37	45234
B02	25Y3D	0.00	15.13	-0.0010	141.87	135.25	70380
B02	3Y1D	0.00	14.75	-0.0010	34.08	33.34	39682

Node: B02x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B02x	100Y3D	0.00	15.29	0.0009	9.02	8.47	2857
B02x	10Y1D	0.00	14.85	0.0009	8.05	7.77	2855
B02x	25Y3D	0.00	15.13	0.0010	8.81	8.45	2857
B02x	3Y1D	0.00	14.75	0.0009	7.49	6.60	2855

Node: B03

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.00	0.0000	0
16.50	0.0100	436
17.00	0.0900	3920
17.50	0.2700	11761
18.00	1.5100	65776
18.50	3.6700	159865
19.00	5.2700	229561
19.50	6.5400	284882
20.00	6.7400	293594
20.50	6.7800	295337
21.00	6.7900	295772

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B03	100Y3D	0.00	18.35	-0.0010	53.64	32.53	131470
B03	10Y1D	0.00	17.90	-0.0010	22.28	12.19	55361
B03	25Y3D	0.00	18.23	-0.0010	40.70	22.20	109775
B03	3Y1D	0.00	17.67	-0.0010	16.72	11.41	29717

Node: B04

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.50	0.0000	0
16.00	0.0200	871
16.50	0.1600	6970
17.00	0.3200	13939
17.50	0.4400	19166
18.00	0.8800	38333
18.50	1.6300	71003
19.00	3.6600	159430
19.50	7.0700	307969
20.00	8.9000	387684
20.50	9.5800	417305
21.00	9.8500	429066
21.50	9.9700	434293

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B04	100Y3D	0.00	19.18	-0.0010	106.02	67.60	211593
B04	10Y1D	0.00	18.73	-0.0010	53.62	11.56	111368
B04	25Y3D	0.00	19.04	-0.0010	81.40	37.41	171611
B04	3Y1D	0.00	18.47	-0.0010	41.34	9.48	69359

Node: B05

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 14.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.0000	0
15.00	0.0600	2614
15.50	0.2100	9148
16.00	0.5300	23087

Stage [ft]	Area [ac]	Area [ft2]
16.50	1.0400	45302
17.00	1.7500	76230
17.50	2.4100	104980
18.00	2.7500	119790
18.50	3.0900	134600
19.00	3.5900	156380
19.50	4.4200	192535
20.00	5.6100	244372
20.50	5.7200	249163

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B05	100Y3D	0.00	16.62	-0.0004	171.46	169.80	52774
B05	10Y1D	0.00	16.27	0.0002	47.61	46.49	35125
B05	25Y3D	0.00	16.50	-0.0004	117.11	115.79	45487
B05	3Y1D	0.00	16.21	0.0002	35.94	34.83	32393

Node: B06

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.50	0.0000	0
17.00	0.0100	436
17.50	0.0900	3920
18.00	0.2800	12197
18.50	0.6000	26136
19.00	1.9000	82764
19.50	4.6000	200376
20.00	6.6200	288367
20.50	8.0100	348916
21.00	8.4600	368518
21.50	8.6700	377665

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B06	100Y3D	0.00	18.08	-0.0004	84.70	84.57	14353
B06	10Y1D	0.00	17.88	0.0003	27.13	27.07	10171
B06	25Y3D	0.00	17.99	0.0005	56.41	56.32	12045
B06	3Y1D	0.00	17.84	0.0004	20.27	20.23	9612

Node: B07

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.50	0.5100	22216
13.50	0.5100	22216
14.00	0.5100	22216
14.50	0.5100	22216
15.00	0.5100	22216
15.50	0.5100	22216
16.00	0.5100	22216
16.50	0.5800	25265
17.00	0.7600	33106
17.50	1.1600	50530
18.00	1.8400	80150
18.50	3.2000	139392
19.00	5.4500	237402
19.50	7.6100	331492
20.00	8.6900	378536
20.50	9.0100	392476
21.00	9.0600	394654

Comment: 1705' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B07	100Y3D	0.00	17.37	0.0010	105.72	103.26	46149
B07	10Y1D	0.00	15.90	0.0008	29.22	8.26	23609
B07	25Y3D	0.00	17.25	0.0010	70.71	63.80	41707
B07	3Y1D	0.00	14.98	0.0008	22.65	9.27	23605

Node: B07x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B07x	100Y3D	0.00	17.44	0.0010	6.96	7.14	3399
B07x	10Y1D	0.00	15.47	0.0010	7.76	6.06	3140
B07x	25Y3D	0.00	16.97	0.0010	7.09	7.31	3376
B07x	3Y1D	0.00	14.83	0.0010	15.72	3.57	3140

Node: B08

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.3040	13242
14.00	0.3040	13242
14.50	0.7500	32670
15.00	1.9800	86249
15.50	3.7200	162043
16.00	5.8900	256568
16.50	7.7200	336283
17.00	8.4600	368518
17.50	9.0200	392911
18.00	9.4100	409900
18.50	9.7600	425146
19.00	9.8200	427759
19.50	9.8300	428195

Comment: 1015' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B08	100Y3D	0.00	15.66	-0.0010	141.83	139.16	192179
B08	10Y1D	0.00	14.89	-0.0010	40.56	28.67	74314
B08	25Y3D	0.00	15.47	-0.0010	97.28	72.48	156868
B08	3Y1D	0.00	14.49	-0.0010	29.98	9.49	32395

Node: B09

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.00	0.3610	15725
15.50	0.3610	15725
16.00	0.3610	15725
16.50	1.2800	55757
17.00	2.4700	107593

Stage [ft]	Area [ac]	Area [ft2]
17.50	3.8600	168142
18.00	5.4500	237402
18.50	6.5200	284011
19.00	7.0200	305791
19.50	7.1700	312325
20.00	7.2100	314068

Comment: 1204' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B09	100Y3D	0.00	16.90	-0.0003	62.76	54.42	97701
B09	10Y1D	0.00	16.42	0.0010	25.22	2.60	49186
B09	25Y3D	0.00	16.81	-0.0004	47.30	40.65	88223
B09	3Y1D	0.00	16.35	0.0009	18.64	0.71	43741

Node: B10

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.50	0.0000	0
9.00	0.5500	23958
9.50	0.9100	39640
10.00	1.0000	43560
10.50	1.0600	46174
11.00	1.1300	49223
11.50	1.2000	52272
12.00	1.2700	55321
12.50	1.3400	58370
13.00	1.4000	60984
13.50	1.4700	64033
14.00	1.5800	68825
14.50	1.6700	72745
15.00	1.7900	77972
15.50	1.9300	84071
16.00	2.0800	90605
16.50	2.1000	91476

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B10	100Y3D	0.00	14.07	0.0028	69.79	63.60	69411
B10	10Y1D	0.00	13.79	0.0028	60.90	34.96	66842
B10	25Y3D	0.00	13.94	0.0028	60.82	58.47	68323

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B10	3Y1D	0.00	13.69	0.0028	52.07	19.58	65899

Node: B11

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.50	0.0000	0
11.00	0.0400	1742
11.50	0.1600	6970
12.00	0.5400	23522
12.50	0.7000	30492
13.00	0.8300	36155
13.50	0.9900	43124
14.00	1.3000	56628
14.50	2.4100	104980
15.00	4.8700	212137
15.50	7.4800	325829
16.00	9.2600	403366
16.50	9.3900	409028

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B11	100Y3D	0.00	15.71	0.0006	86.93	8.58	357914
B11	10Y1D	0.00	14.94	0.0004	42.92	2.05	200023
B11	25Y3D	0.00	15.39	0.0005	67.33	7.62	299922
B11	3Y1D	0.00	14.81	0.0004	33.70	0.99	172315

Node: B12

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.1690	7362
14.00	0.1690	7362
14.50	0.4900	21344
15.00	2.3800	103673
15.50	4.4300	192971
16.00	5.8100	253084
16.50	6.8800	299693
17.00	7.4800	325829

Stage [ft]	Area [ac]	Area [ft2]
17.50	7.9400	345866
18.00	8.3000	361548
18.50	8.5300	371567
19.00	8.6600	377230
19.50	8.7600	381586
20.00	8.7700	382021

Comment: 564' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B12	100Y3D	0.00	15.70	-0.0010	84.48	32.69	216988
B12	10Y1D	0.00	14.89	0.0008	26.59	18.72	84924
B12	25Y3D	0.00	15.49	-0.0008	57.52	21.95	190401
B12	3Y1D	0.00	14.46	-0.0008	19.68	11.20	20258

Node: B13

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.00	0.1460	6360
12.50	0.1460	6360
13.00	0.1460	6360
13.50	0.2400	10454
14.00	1.5400	67082
14.50	3.7300	162479
15.00	5.3200	231739
15.50	6.3700	277477
16.00	7.0200	305791
16.50	7.5000	326700
17.00	7.8000	339768
17.50	8.0400	350222
18.00	8.1600	355450
18.50	8.2100	357628

Comment: 488' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B13	100Y3D	0.00	15.68	-0.0010	133.69	94.03	287835
B13	10Y1D	0.00	14.88	-0.0010	67.95	19.21	215742
B13	25Y3D	0.00	15.48	-0.0010	140.24	48.99	275459
B13	3Y1D	0.00	14.33	-0.0009	29.79	17.48	129336

Node: B13x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B13x	100Y3D	0.00	15.74	0.0010	22.46	22.53	3799
B13x	10Y1D	0.00	14.67	0.0010	21.90	21.99	3962
B13x	25Y3D	0.00	15.47	0.0010	22.72	22.78	3739
B13x	3Y1D	0.00	14.09	0.0010	19.93	20.06	3955

Node: B14

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.50	0.0740	3223
14.00	0.0740	3223
14.50	0.5300	23087
15.00	1.7500	76230
15.50	2.7500	119790
16.00	3.8000	165528
16.50	4.8600	211702
17.00	5.3600	233482
17.50	5.6500	246114
18.00	5.7400	250034
18.50	5.7500	250470

Comment: 248' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B14	100Y3D	0.00	15.29	-0.0008	88.62	83.30	101292
B14	10Y1D	0.00	14.61	0.0010	21.87	20.27	35272
B14	25Y3D	0.00	15.05	-0.0009	61.99	59.72	80309
B14	3Y1D	0.00	14.51	-0.0009	15.41	10.52	23674

Node: B15

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.00	0.0940	4095
14.50	0.3200	13939
15.00	1.0000	43560
15.50	1.3600	59242
16.00	1.9600	85378
16.50	2.8400	123710
17.00	3.6000	156816
17.50	4.6200	201247
18.00	5.7400	250034
18.50	7.0400	306662
19.00	7.5800	330185
19.50	7.6200	331927
14.00	0.0940	4095

Comment: 313' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B15	100Y3D	0.00	15.28	-0.0022	82.59	78.15	52535
B15	10Y1D	0.00	14.59	-0.0022	57.88	51.42	19561
B15	25Y3D	0.00	15.17	-0.0022	68.48	64.20	48921
B15	3Y1D	0.00	13.94	-0.0022	50.24	45.61	6194

Node: B16

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.00	0.1000	4356
15.50	0.1400	6098
16.00	0.4300	18731
16.50	0.7300	31799
17.00	1.2500	54450
17.50	2.3700	103237
18.00	4.3800	190793
18.50	6.0600	263974
19.00	7.3000	317988
19.50	8.4000	365904
20.00	8.9800	391169
20.50	9.1700	399445
21.00	9.2400	402494
15.00	0.1000	4356

Comment: 335' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B16	100Y3D	0.00	17.29	-0.0010	75.54	56.83	82432
B16	10Y1D	0.00	16.15	0.0010	36.42	25.64	22736
B16	25Y3D	0.00	17.11	-0.0010	59.46	39.88	64805
B16	3Y1D	0.00	15.44	-0.0008	28.17	23.60	6041

Node: B16x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B16x	100Y3D	0.00	16.12	0.0010	29.33	29.23	4296
B16x	10Y1D	0.00	15.28	0.0010	25.64	25.36	4297
B16x	25Y3D	0.00	15.96	0.0010	29.07	29.11	4296
B16x	3Y1D	0.00	14.70	0.0010	23.60	23.24	4296

Node: B17

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.00	0.1290	5619
12.50	0.1290	5619
13.00	0.1290	5619
13.50	0.1290	5619
14.00	0.1290	5619
14.50	0.1290	5619
15.00	0.1600	6970
15.50	1.0300	44867
16.00	2.4200	105415
16.50	4.0200	175111
17.00	5.3700	233917

Stage [ft]	Area [ac]	Area [ft2]
17.50	6.7400	293594
18.00	7.7900	339332
18.50	8.5200	371131
19.00	8.8900	387248
19.50	9.0700	395089
20.00	9.0900	395960

Comment: 430' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B17	100Y3D	0.00	15.80	-0.0009	98.42	90.78	80645
B17	10Y1D	0.00	15.29	0.0010	37.02	22.51	29302
B17	25Y3D	0.00	15.66	0.0010	67.44	62.85	64094
B17	3Y1D	0.00	14.37	0.0007	27.43	16.09	6903

Node: B18

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0000	0
8.00	0.0100	436
8.50	0.5800	25265
9.00	0.9700	42253
9.50	1.0800	47045
10.00	1.1500	50094
10.50	1.2200	53143
11.00	1.2900	56192
11.50	1.3900	60548
12.00	1.6100	70132
12.50	2.0100	87556
13.00	2.4400	106286
13.50	2.8900	125888
14.00	3.3300	145055
14.50	3.5100	152896
15.00	3.5600	155074

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B18	100Y3D	0.00	14.02	0.0783	165.82	165.55	145405
B18	10Y1D	0.00	13.27	0.0783	79.75	9.19	116923
B18	25Y3D	0.00	13.88	0.0783	109.23	109.17	140638
B18	3Y1D	0.00	12.91	0.0783	79.75	3.36	102808

Node: B19

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 16.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
16.50	0.0000	0
17.00	0.0800	3485
17.50	0.5100	22216
18.00	1.3700	59677
18.50	2.6100	113692
19.00	3.6400	158558
19.50	4.0000	174240
20.00	4.1000	178596
20.50	4.1200	179467

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B19	100Y3D	0.00	16.50	-0.1435	43.86	307.93	3635
B19	10Y1D	0.00	16.50	-0.1435	25.17	307.93	3635
B19	25Y3D	0.00	16.50	-0.1435	37.72	307.93	3635
B19	3Y1D	0.00	16.50	-0.1435	23.56	307.93	3635

Node: B20

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.50	0.0000	0
16.00	0.1400	6098
16.50	0.7600	33106
17.00	2.2700	98881
17.50	3.5900	156380
18.00	5.4100	235660
18.50	6.9400	302306
19.00	8.0600	351094
19.50	8.5400	372002
20.00	8.9100	388120
20.50	9.0500	394218
21.00	9.1100	396832
21.50	9.1300	397703

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B20	100Y3D	0.00	16.55	-0.0043	73.04	71.92	39187
B20	10Y1D	0.00	16.33	-0.0043	31.83	31.03	23827
B20	25Y3D	0.00	16.47	-0.0043	55.96	55.09	31443
B20	3Y1D	0.00	16.27	-0.0043	23.97	23.25	20653

Node: B21

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.00	0.2030	8843
14.50	0.2030	8843
15.00	0.2030	8843
15.50	0.2030	8843
16.00	2.1400	93218
16.50	5.6800	247421
17.00	8.3000	361548
17.50	9.6400	419918
18.00	10.4500	455202
18.50	11.0300	480467
19.00	11.2700	490921
19.50	11.3700	495277
20.00	11.4900	500504
20.50	11.5100	501376

Comment: 676' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B21	100Y3D	0.00	16.60	-0.0010	84.81	46.68	269454
B21	10Y1D	0.00	16.24	-0.0010	37.64	14.83	167222
B21	25Y3D	0.00	16.48	-0.0010	65.22	31.85	242709
B21	3Y1D	0.00	16.05	-0.0010	30.38	11.32	108263

Node: B21x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B21x	100Y3D	0.00	15.60	0.0055	120.82	28.90	4298
B21x	10Y1D	0.00	14.52	0.0055	120.82	18.66	4304
B21x	25Y3D	0.00	15.30	0.0055	120.82	26.75	4284
B21x	3Y1D	0.00	13.91	0.0055	120.82	18.89	4257

Node: B22

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 8.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.00	0.1890	8233
12.50	0.1890	8233
13.00	0.1890	8233
13.50	0.4900	21344
14.00	1.7900	77972
14.50	3.6900	160736
15.00	5.4500	237402
15.50	6.4400	280526
16.00	8.5200	371131
16.50	12.1900	530996
17.00	13.8100	601564
17.50	15.1500	659934
18.00	16.0900	700880
18.50	16.6000	723096
19.00	16.7400	729194
19.50	16.8700	734857
20.00	16.9000	736164

Comment: 629' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B22	100Y3D	0.00	15.29	0.0010	94.99	14.17	262085
B22	10Y1D	0.00	14.32	0.0010	28.94	9.71	131278
B22	25Y3D	0.00	15.04	0.0010	70.87	12.63	241259
B22	3Y1D	0.00	13.80	0.0010	18.76	8.84	55012

Node: B22x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs

Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B22x	100Y3D	0.00	15.77	0.0010	39.28	39.36	4080
B22x	10Y1D	0.00	14.58	0.0008	21.99	22.09	4286
B22x	25Y3D	0.00	15.47	0.0010	29.99	30.10	4039
B22x	3Y1D	0.00	13.97	0.0010	20.06	20.19	4296

Node: B23

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 7.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
7.50	0.1830	7971
12.00	0.1830	7971
12.50	0.1830	7971
13.00	0.1830	7971
13.50	0.7000	30492
14.00	0.8000	34848
14.50	0.9000	39204
15.00	1.3300	57935
15.50	1.6600	72310
16.00	2.1100	91912
16.50	2.8000	121968
17.00	3.4700	151153
17.50	4.7600	207346
18.00	6.1600	268330
18.50	7.1700	312325
19.00	7.6000	331056
19.50	7.7300	336719
20.00	7.8600	342382
20.50	7.9400	345866
21.00	7.9700	347173

Comment: 609' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B23	100Y3D	0.00	15.07	-0.0005	73.28	68.14	60000

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B23	10Y1D	0.00	14.51	0.0009	32.12	7.86	39394
B23	25Y3D	0.00	14.96	0.0006	56.01	48.86	56263
B23	3Y1D	0.00	13.82	0.0008	24.12	6.65	33292

Node: B23x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B23x	100Y3D	0.00	15.07	0.0138	302.46	44.09	3599
B23x	10Y1D	0.00	14.29	0.0138	302.46	30.38	3599
B23x	25Y3D	0.00	14.86	0.0138	302.46	39.50	3599
B23x	3Y1D	0.00	13.69	0.0138	302.46	28.02	3599

Node: B24

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 7.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
7.50	0.4240	18469
11.50	0.4240	18469
12.00	0.6600	28750
12.50	2.4300	105851
13.00	4.3700	190357
13.50	6.1400	267458
14.00	8.1400	354578
14.50	9.4000	409464
15.00	9.6200	419047
15.50	9.6300	419483
16.00	9.6400	419918

Comment: 1412' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B24	100Y3D	0.00	14.04	0.0003	207.51	174.01	359368
B24	10Y1D	0.00	13.27	0.0004	56.37	52.07	232664
B24	25Y3D	0.00	13.90	0.0003	156.91	110.31	337124
B24	3Y1D	0.00	12.91	0.0004	31.83	30.77	174910

Node: B24x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B24x	100Y3D	0.00	14.05	0.0010	9.97	12.14	3625
B24x	10Y1D	0.00	13.27	-0.0010	10.84	10.93	3676
B24x	25Y3D	0.00	13.90	0.0010	9.90	10.00	3611
B24x	3Y1D	0.00	12.90	0.0010	8.84	8.88	3660

Node: B25

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0000	0
8.00	0.1600	6970
8.50	0.3500	15246
9.00	0.4100	17860
9.50	0.4400	19166
10.00	0.4600	20038
10.50	0.4900	21344
11.00	0.5200	22651
11.50	0.5400	23522
12.00	0.5700	24829
12.50	0.6100	26572
13.00	0.6400	27878
13.50	0.6700	29185
14.00	0.8000	34848
14.50	1.5600	67954
15.00	2.2100	96268

Stage [ft]	Area [ac]	Area [ft2]
15.50	2.6800	116741
16.00	3.2700	142441
16.50	3.8600	168142
17.00	4.5100	196456
17.50	5.1600	224770
18.00	5.7200	249163
18.50	6.0600	263974
19.00	6.2900	273992
19.50	6.3500	276606
20.00	6.3600	277042

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B25	100Y3D	0.00	14.52	0.0010	102.74	71.53	68896
B25	10Y1D	0.00	12.90	0.0010	55.23	41.70	27673
B25	25Y3D	0.00	14.10	0.0010	81.97	63.43	41188
B25	3Y1D	0.00	12.55	0.0010	45.09	34.68	26754

Node: B26

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 10.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
10.50	0.0000	0
11.00	0.1600	6970
11.50	0.3400	14810
12.00	0.8400	36590
12.50	1.2600	54886
13.00	1.5200	66211
13.50	1.7700	77101
14.00	2.3200	101059
14.50	3.3800	147233
15.00	4.8800	212573
15.50	5.9100	257440
16.00	6.3100	274864
16.50	6.5300	284447
17.00	6.6600	290110
17.50	6.7400	293594
18.00	6.7900	295772
18.50	6.8500	298386
19.00	6.9300	301871
19.50	6.9700	303613

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B26	100Y3D	0.00	14.02	-0.1272	155.68	144.73	102990
B26	10Y1D	0.00	13.27	-0.1272	45.48	129.05	72066
B26	25Y3D	0.00	13.88	-0.1272	111.84	129.05	95358
B26	3Y1D	0.00	12.91	-0.1272	33.01	129.05	64090

Node: B27

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 14.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.0000	0
15.00	0.0500	2178
15.50	0.3000	13068
16.00	0.6900	30056
16.50	1.1000	47916
17.00	1.3400	58370
17.50	1.4700	64033
18.00	1.5300	66647
18.50	1.5900	69260
19.00	1.6500	71874
19.50	1.7000	74052
20.00	1.7600	76666
20.50	1.8300	79715
21.00	1.8500	80586
21.50	1.8600	81022

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B27	100Y3D	0.00	15.73	-0.0151	83.92	83.52	20768
B27	10Y1D	0.00	15.45	-0.0151	33.81	33.49	11929
B27	25Y3D	0.00	15.63	-0.0151	63.32	62.98	17637
B27	3Y1D	0.00	15.35	-0.0151	23.57	23.04	9783

Node: B28

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 13.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
13.50	0.0000	0
14.00	0.0400	1742

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.2100	9148
15.00	0.6200	27007
15.50	1.2600	54886
16.00	2.2300	97139
16.50	3.0300	131987
17.00	3.4000	148104
17.50	3.5000	152460
18.00	3.5300	153767
18.50	3.5300	153767
19.00	3.5400	154202

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B28	100Y3D	0.00	15.62	-0.0009	145.84	145.54	64994
B28	10Y1D	0.00	14.89	-0.0007	12.05	11.90	23086
B28	25Y3D	0.00	15.44	-0.0009	75.44	75.29	51772
B28	3Y1D	0.00	14.50	-0.0009	8.92	8.79	9079

Node: B29

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 11.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
11.50	0.1050	4574
17.00	0.4100	17860
17.50	1.9400	84506
18.00	3.6300	158123
18.50	4.9000	213444
19.00	6.3900	278348
19.50	7.3200	318859
20.00	7.8200	340639
20.50	8.0000	348480
21.00	8.0600	351094
21.50	8.0800	351965
16.50	0.1050	4574

Comment: 351' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B29	100Y3D	0.00	17.57	-0.0010	61.76	53.61	95468
B29	10Y1D	0.00	17.24	0.0010	27.03	17.13	50186
B29	25Y3D	0.00	17.48	0.0010	47.14	38.42	82372
B29	3Y1D	0.00	16.95	-0.0010	20.65	11.21	16419

Node: B30

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.50	0.0000	0
13.00	0.0200	871
13.50	0.0300	1307
14.00	0.0400	1742
14.50	0.0500	2178
15.00	0.0900	3920
15.50	0.2900	12632
16.00	0.9200	40075
16.50	1.6900	73616
17.00	2.1300	92783
17.50	2.2600	98446

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B30	100Y3D	0.00	15.77	-0.0010	24.95	23.63	27342
B30	10Y1D	0.00	15.40	-0.0008	12.35	8.05	10894
B30	25Y3D	0.00	15.69	0.0010	19.13	17.73	23099
B30	3Y1D	0.00	15.14	-0.0007	9.50	6.91	6406

Node: B31

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.00	0.0000	0
12.50	0.0100	436
13.00	0.0500	2178
13.50	0.1000	4356
14.00	0.1400	6098
14.50	0.1900	8276
15.00	0.2500	10890
15.50	0.3400	14810
16.00	0.4500	19602
16.50	0.5500	23958
17.00	0.7600	33106
17.50	1.0600	46174
18.00	1.3700	59677
18.50	1.4500	63162
19.00	1.5000	65340
19.50	1.5100	65776

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B31	100Y3D	0.00	12.16	-0.0041	15.18	15.18	139
B31	10Y1D	0.00	12.07	-0.0041	7.84	7.84	100
B31	25Y3D	0.00	12.12	-0.0041	11.77	11.77	105
B31	3Y1D	0.00	12.04	-0.0041	6.12	6.12	100

Node: B32

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 13.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
13.00	0.0000	0
13.50	0.0600	2614
14.00	0.7400	32234
14.50	2.4200	105415
15.00	3.2900	143312
15.50	3.6100	157252
16.00	3.7500	163350
16.50	3.8900	169448
17.00	3.9700	172933
17.50	4.0200	175111
18.00	4.1000	178596
18.50	4.1600	181210
19.00	4.1700	181645

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B32	100Y3D	0.00	14.57	-0.0302	146.06	180.26	111113
B32	10Y1D	0.00	14.06	-0.0302	38.96	180.26	40385
B32	25Y3D	0.00	14.46	-0.0302	109.48	180.26	99565
B32	3Y1D	0.00	13.49	-0.0302	32.28	180.26	4497

Node: B32x

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B32x	100Y3D	0.00	14.52	0.0028	61.10	42.84	4888
B32x	10Y1D	0.00	13.10	0.0028	61.10	40.26	4886
B32x	25Y3D	0.00	14.13	0.0028	61.10	42.38	4889
B32x	3Y1D	0.00	12.69	0.0028	61.10	33.69	4886

Node: B33

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 7.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
7.50	0.2380	10367
12.50	0.2380	10367
13.00	0.3900	16988
13.50	1.1600	50530
14.00	2.4200	105415
14.50	3.4700	151153
15.00	4.0500	176418
15.50	4.4400	193406
16.00	4.9000	213444
16.50	5.5100	240016
17.00	6.2300	271379
17.50	6.9500	302742
18.00	7.3900	321908
18.50	7.6300	332363
19.00	7.6400	332798

Comment: 1795' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B33	100Y3D	0.00	14.11	0.0007	149.36	132.81	115313
B33	10Y1D	0.00	13.26	0.0006	32.95	19.69	34456
B33	25Y3D	0.00	13.93	0.0006	102.15	82.75	98309
B33	3Y1D	0.00	12.85	0.0006	27.10	17.33	15115

Node: B33x

Scenario: Proposed

Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B33x	100Y3D	0.00	14.11	0.0010	20.55	20.64	3123
B33x	10Y1D	0.00	13.17	0.0010	19.69	19.73	3125
B33x	25Y3D	0.00	13.93	0.0010	20.64	20.73	3122
B33x	3Y1D	0.00	12.75	0.0010	17.33	17.37	3125

Node: B34

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
12.00	0.2300	10019
17.50	0.2300	10019
18.00	0.5600	24394
18.50	1.6100	70132
19.00	2.7100	118048
19.50	3.6800	160301
20.00	4.0700	177289
20.50	4.1400	180338
21.00	4.2500	185130

Comment: 766' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B34	100Y3D	0.00	17.49	-0.0010	35.13	25.37	10429
B34	10Y1D	0.00	15.20	-0.0010	22.29	15.41	10429
B34	25Y3D	0.00	16.82	-0.0010	28.70	19.69	10429
B34	3Y1D	0.00	14.74	-0.0010	18.07	15.41	10756

Node: B35

Scenario: Proposed
Type: Stage/Area

Base Flow: 0.00 cfs
Initial Stage: 8.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
8.00	0.1660	7231
13.50	0.1660	7231
14.00	0.2900	12632
14.50	0.8100	35284
15.00	1.5800	68825
15.50	2.8400	123710
16.00	3.7600	163786
16.50	4.2300	184259
17.00	4.5800	199505
17.50	4.8800	212573
18.00	5.1400	223898
18.50	5.3500	233046
19.00	5.5400	241322
19.50	5.6100	244372
20.00	5.6300	245243

Comment: 554' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B35	100Y3D	0.00	15.70	-0.0009	72.39	33.28	139413
B35	10Y1D	0.00	14.90	-0.0009	26.97	12.68	62188
B35	25Y3D	0.00	15.49	-0.0009	55.26	29.12	122789
B35	3Y1D	0.00	14.46	-0.0009	23.89	10.75	33320

Node: B36

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 15.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
15.00	0.0000	0
15.50	0.1100	4792
16.00	0.7200	31363
16.50	1.9900	86684
17.00	3.4300	149411
17.50	3.9500	172062
18.00	4.0200	175111

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B36	100Y3D	0.00	15.84	-0.0137	30.54	29.19	22716
B36	10Y1D	0.00	15.00	-0.0137	13.28	17.60	1546
B36	25Y3D	0.00	15.75	-0.0137	23.40	22.46	18104
B36	3Y1D	0.00	15.00	-0.0137	10.01	17.60	1546

Node: B37

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.50	0.1060	4617
15.00	0.1060	4617
15.50	0.1600	6970
16.00	0.6900	30056
16.50	1.0600	46174
17.00	1.6300	71003
17.50	1.9800	86249
18.00	2.5300	110207
18.50	3.0800	134165
19.00	3.3400	145490
19.50	3.5100	152896
20.00	3.6500	158994
20.50	3.6700	159865

Comment: 352' Exfil

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B37	100Y3D	0.00	15.67	0.0007	48.82	48.24	14950
B37	10Y1D	0.00	15.09	0.0010	11.14	7.81	5326
B37	25Y3D	0.00	15.48	0.0007	34.00	33.85	6899
B37	3Y1D	0.00	14.86	0.0010	8.24	2.29	5326

Node: B38

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 14.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
14.50	0.0000	0
15.00	0.0200	871
15.50	0.2600	11326
16.00	0.8600	37462
16.50	1.2500	54450

Stage [ft]	Area [ac]	Area [ft2]
17.00	1.3800	60113
17.50	1.4500	63162
18.00	1.4700	64033
18.50	1.4800	64469
19.00	1.4900	64904

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B38	100Y3D	0.00	15.77	-0.0088	35.17	33.30	25434
B38	10Y1D	0.00	14.50	-0.0088	8.41	10.91	320
B38	25Y3D	0.00	15.62	-0.0088	24.03	21.68	17485
B38	3Y1D	0.00	14.50	-0.0088	5.27	10.91	322

Node: B39

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 9.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
9.50	0.0000	0
10.00	0.0100	436
10.50	0.0200	871
11.00	0.0300	1307
11.50	0.0400	1742
12.00	0.0500	2178
12.50	0.0700	3049
13.00	0.0800	3485
13.50	0.0900	3920
14.00	0.1000	4356
14.50	0.1200	5227
15.00	0.3300	14375
15.50	1.0000	43560
16.00	2.8300	123275
16.50	4.2800	186437
17.00	6.3200	275299
17.50	7.9200	344995
18.00	9.3800	408593
18.50	10.2900	448232
19.00	10.9500	476982
19.50	11.2100	488308
20.00	11.3400	493970
20.50	11.3900	496148
21.00	11.4000	496584

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B39	100Y3D	0.00	15.66	0.0009	109.26	107.01	68842
B39	10Y1D	0.00	15.46	0.0009	48.89	46.28	41101
B39	25Y3D	0.00	15.58	0.0008	80.56	79.10	56842
B39	3Y1D	0.00	15.39	0.0010	37.81	34.17	37385

Node: B40

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 12.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0500	2178
99.00	0.0500	2178

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
B40	100Y3D	0.00	15.34	0.0007	6.48	6.25	2863
B40	10Y1D	0.00	15.00	-0.0008	4.06	4.06	2864
B40	25Y3D	0.00	15.16	0.0007	6.37	6.21	2845
B40	3Y1D	0.00	14.92	-0.0006	3.89	2.80	2864

Node: Depot Ave

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	7.00
0	0	0	8.0000	10.00
0	0	0	12.0000	11.00
0	0	0	16.0000	10.50
0	0	0	24.0000	8.50
0	0	0	30.0000	7.00

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
Depot Ave	100Y3D	0.00	11.00	0.0002	15.18	0.00	0
Depot Ave	10Y1D	0.00	11.00	-0.0007	7.84	0.00	0
Depot Ave	25Y3D	0.00	11.00	0.0003	11.77	0.00	0
Depot Ave	3Y1D	0.00	11.00	-0.0006	6.12	0.00	0

Node: LAKE_IDA1

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 15.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	15.00
0	0	0	100.0000	15.00

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
LAKE_IDA1	100Y3D	0.00	15.00	0.0000	303.09	0.19	0
LAKE_IDA1	10Y1D	0.00	15.00	0.0000	49.15	0.19	0
LAKE_IDA1	25Y3D	0.00	15.00	0.0000	206.05	0.19	0
LAKE_IDA1	3Y1D	0.00	15.00	0.0000	34.83	0.19	0

Node: LAKE_IDA2

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 14.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	13.50
0	0	0	100.0000	13.50

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
LAKE_IDA2	100Y3D	0.00	13.50	0.0000	21.37	0.00	0
LAKE_IDA2	10Y1D	0.00	13.50	0.0000	0.00	0.00	0
LAKE_IDA2	25Y3D	0.00	13.50	0.0000	7.22	0.00	0
LAKE_IDA2	3Y1D	0.00	13.50	0.0000	0.00	0.00	0

Node: LAKE_IDA3

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 12.50 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	12.50
0	0	0	100.0000	12.50

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
LAKE_IDA3	100Y3D	0.00	12.50	0.0000	307.41	0.00	0
LAKE_IDA3	10Y1D	0.00	12.50	0.0000	11.92	0.00	0
LAKE_IDA3	25Y3D	0.00	12.50	0.0000	197.77	0.00	0
LAKE_IDA3	3Y1D	0.00	12.50	0.0000	0.00	0.00	0

Node: OFF

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 16.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	16.00
0	0	0	100.0000	16.00

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OFF	100Y3D	0.00	16.00	0.0000	10.74	0.00	0
OFF	10Y1D	0.00	16.00	0.0000	9.96	0.00	0
OFF	25Y3D	0.00	16.00	0.0000	10.51	0.00	0
OFF	3Y1D	0.00	16.00	0.0000	9.48	0.00	0

Node: OFF2

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 16.00 ft
Warning Stage: 0.00 ft

Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	16.00
0	0	0	100.0000	16.00

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OFF2	100Y3D	0.00	16.00	0.0000	13.55	0.00	0
OFF2	10Y1D	0.00	16.00	0.0000	12.19	0.00	0
OFF2	25Y3D	0.00	16.00	0.0000	13.21	0.00	0
OFF2	3Y1D	0.00	16.00	0.0000	11.41	0.00	0

Node: OUTFALL

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage: 3Y1D

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OUTFALL	100Y3D	0.00	8.50	0.0002	71.45	0.23	0
OUTFALL	10Y1D	0.00	8.50	-0.0002	41.70	0.00	0
OUTFALL	25Y3D	0.00	10.00	-0.0002	63.37	0.00	0
OUTFALL	3Y1D	0.00	8.50	-0.0002	34.68	0.00	0

Node: Weir Node

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.1000	4356
99.00	0.1000	4356

Comment:

Node Max Conditions [Proposed]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
Weir Node	100Y3D	0.00	13.35	0.0010	71.53	71.45	6059
Weir Node	10Y1D	0.00	12.51	0.0010	41.70	41.70	6059
Weir Node	25Y3D	0.00	13.18	0.0010	63.43	63.37	6059
Weir Node	3Y1D	0.00	12.28	0.0010	34.68	34.68	6059

Weir Link: B01_B26W

Scenario:	Existing
From Node:	B01
To Node:	B26
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	11.90 ft
Control Elevation:	11.90 ft
Cross Section:	B01_B26X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B01_B26W	100Y3D	122.41	-1.23	0.14	0.68	0.68	0.68
B01_B26W	10Y1D	50.42	-1.34	-0.08	1.81	1.81	1.81
B01_B26W	25Y3D	89.77	-1.30	0.09	0.54	0.54	0.54
B01_B26W	3Y1D	31.92	-1.34	-0.10	1.59	1.59	1.59

Pipe Link: B01_B33P

Scenario:	Existing
From Node:	B01
To Node:	B33
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	530.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	4.40 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	6.50 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B01_B33P	100Y3D	2.91	-9.78	-0.43	-3.11	-3.11	-3.11
B01_B33P	10Y1D	1.38	-9.78	-0.27	-3.11	-3.11	-3.11
B01_B33P	25Y3D	2.91	-9.78	0.46	-3.11	-3.11	-3.11
B01_B33P	3Y1D	2.07	-9.78	-0.26	-3.11	-3.11	-3.11

Weir Link: B01_B33W

Scenario:	Existing
From Node:	B01
To Node:	B33
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	12.46 ft
Control Elevation:	12.46 ft
Cross Section:	B01_B33X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B01_B33W	100Y3D	3.01	-144.70	0.13	-1.27	-1.27	-1.27
B01_B33W	10Y1D	2.86	-30.99	0.05	-1.70	-1.70	-1.70
B01_B33W	25Y3D	2.94	-95.72	0.06	1.07	1.07	1.07
B01_B33W	3Y1D	2.76	-10.18	-0.01	-1.25	-1.25	-1.25

Pipe Link: B02_ATLP

Scenario:	Existing
From Node:	B02
To Node:	B02x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	363.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	12.00 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	11.50 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment: Downstream invert not included on survey

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B02_ATLP	100Y3D	4.10	-1.42	-0.02	2.32	2.69	2.32
B02_ATLP	10Y1D	4.07	-1.01	0.01	2.30	3.34	2.61
B02_ATLP	25Y3D	4.11	-1.34	0.01	2.33	2.52	2.33
B02_ATLP	3Y1D	4.07	-0.13	0.01	2.30	3.34	2.61

Weir Link: B02_ATL_AVW

Scenario:	Existing	**Bottom Clip**	
From Node:	B02	Default:	0.00 ft
To Node:	ATL_AV2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.30 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B02_ATL_AVX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B02_ATL_AVW	100Y3D	215.25	0.00	0.23	2.50	2.50	2.50
B02_ATL_AVW	10Y1D	49.37	0.00	-0.03	1.68	1.68	1.68
B02_ATL_AVW	25Y3D	146.15	0.00	0.22	2.22	2.22	2.22
B02_ATL_AVW	3Y1D	34.09	0.00	-0.02	1.54	1.54	1.54

Pipe Link: B02x_ATL_AVP

		Upstream		Downstream	
Scenario:	Existing	Invert:	12.50 ft	Invert:	12.00 ft
From Node:	B02x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV2	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	300.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B02x_ATL_AVP	100Y3D	7.80	0.00	-0.02	4.42	5.73	5.07
B02x_ATL_AVP	10Y1D	6.74	0.00	0.01	3.81	5.37	4.59
B02x_ATL_AVP	25Y3D	7.47	0.00	0.02	4.22	5.61	4.92
B02x_ATL_AVP	3Y1D	6.53	0.00	0.01	3.69	5.21	4.45

Pipe Link: B03_OFF2P		Upstream		Downstream	
Scenario:	Existing	Invert:	13.11 ft	Invert:	12.19 ft
From Node:	B03	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	OFF2	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.75 ft	Max Depth:	1.75 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	298.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B03_OFF2P	100Y3D	13.55	0.00	0.07	5.63	5.63	5.63
B03_OFF2P	10Y1D	12.19	0.00	-0.05	5.07	5.07	5.07
B03_OFF2P	25Y3D	13.21	0.00	0.07	5.49	5.49	5.49
B03_OFF2P	3Y1D	11.41	0.00	-0.06	4.74	4.74	4.74

Pipe Link: B04_OFFP		Upstream		Downstream	
Scenario:	Existing	Invert:	12.07 ft	Invert:	10.87 ft
From Node:	B04	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	OFF	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	292.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B04_OFFP	100Y3D	10.74	0.00	0.03	6.08	6.08	6.08
B04_OFFP	10Y1D	9.96	0.00	0.03	5.63	5.63	5.63
B04_OFFP	25Y3D	10.51	0.00	0.03	5.95	5.95	5.95
B04_OFFP	3Y1D	9.48	0.00	0.03	5.37	5.37	5.37

Weir Link: B05_B29W

Scenario:	Existing	Bottom Clip	
From Node:	B05	Default:	0.00 ft
To Node:	B29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.98 ft	Discharge Coefficients	
Control Elevation:	16.98 ft	Weir Default:	2.800
Cross Section:	B05_B29X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B05_B29W	100Y3D	0.00	-48.79	-0.05	0.00	0.00	0.00
B05_B29W	10Y1D	0.00	-12.66	0.01	0.00	0.00	0.00
B05_B29W	25Y3D	0.00	-33.78	-0.03	0.00	0.00	0.00
B05_B29W	3Y1D	0.00	-5.27	0.01	0.00	0.00	0.00

Weir Link: B05_LAKE IDAW

Scenario:	Existing	Bottom Clip	
From Node:	B05	Default:	0.00 ft
To Node:	LAKE_IDA1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.59 ft	Discharge Coefficients	
Control Elevation:	15.59 ft	Weir Default:	2.800
Cross Section:	B05_LAKE IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B05_LAKE IDAW	100Y3D	170.68	0.00	-0.14	2.04	2.04	2.04
B05_LAKE IDAW	10Y1D	52.53	0.00	-0.04	1.72	1.72	1.72
B05_LAKE IDAW	25Y3D	117.56	0.00	-0.10	1.94	1.94	1.94
B05_LAKE IDAW	3Y1D	34.93	0.00	-0.03	1.63	1.63	1.63

Weir Link: B06_B04W

Scenario:	Existing	**Bottom Clip**	
From Node:	B06	Default:	0.00 ft
To Node:	B04	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	18.71 ft	**Discharge Coefficients**	
Control Elevation:	18.71 ft	Weir Default:	2.800
Cross Section:	B06_B04X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B06_B04W	100Y3D	0.00	-18.19	-0.03	0.00	0.00	0.00
B06_B04W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B06_B04W	25Y3D	0.00	-6.38	-0.01	0.00	0.00	0.00
B06_B04W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B06_B05W

Scenario:	Existing	**Bottom Clip**	
From Node:	B06	Default:	0.00 ft
To Node:	B05	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.55 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B06_B05X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B06_B05W	100Y3D	84.57	0.00	-0.09	1.69	1.69	1.69
B06_B05W	10Y1D	27.07	0.00	-0.01	1.24	1.24	1.24
B06_B05W	25Y3D	56.32	0.00	-0.06	1.51	1.51	1.51
B06_B05W	3Y1D	20.23	0.00	-0.01	1.15	1.15	1.15

Weir Link: B07_B02W

Scenario:	Existing	**Bottom Clip**	
From Node:	B07	Default:	0.00 ft
To Node:	B02	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.65 ft	**Discharge Coefficients**	
Control Elevation:	16.65 ft	Weir Default:	2.800
Cross Section:	B07_B02X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B02W	100Y3D	104.60	0.00	0.13	1.76	1.76	1.76
B07_B02W	10Y1D	0.06	0.00	0.00	0.49	0.49	0.49
B07_B02W	25Y3D	63.35	0.00	0.13	1.57	1.57	1.57
B07_B02W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B07_B04W

Scenario:	Existing	**Bottom Clip**	
From Node:	B07	Default:	0.00 ft
To Node:	B04	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	18.57 ft	**Discharge Coefficients**	
Control Elevation:	18.57 ft	Weir Default:	2.800
Cross Section:	B07_B04X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B04W	100Y3D	0.00	-38.67	-0.04	0.00	0.00	0.00
B07_B04W	10Y1D	0.00	-1.61	0.00	0.00	0.00	0.00
B07_B04W	25Y3D	0.00	-20.52	-0.02	0.00	0.00	0.00
B07_B04W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B07_B07xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	11.83 ft	Invert:	11.15 ft
From Node:	B07	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B07x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	612.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B07xP	100Y3D	7.10	-3.73	0.05	2.26	2.84	2.26
B07_B07xP	10Y1D	7.77	-1.68	-0.01	2.47	3.70	2.84
B07_B07xP	25Y3D	7.27	0.00	-0.02	2.31	2.66	2.31
B07_B07xP	3Y1D	5.98	-1.03	-0.02	2.57	3.81	2.94

Weir Link: B07_B29W

Scenario:	Existing	Bottom Clip	
From Node:	B07	Default:	0.00 ft
To Node:	B29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.57 ft	Discharge Coefficients	
Control Elevation:	17.57 ft	Weir Default:	2.800
Cross Section:	B07_B29X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B29W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B29W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B29W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B29W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B07x_B34P

		Upstream		Downstream	
Scenario:	Existing	Invert:	11.22 ft	Invert:	10.73 ft
From Node:	B07x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B34	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	359.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07x_B34P	100Y3D	7.27	-4.21	0.04	2.31	-3.26	2.53
B07x_B34P	10Y1D	7.93	-4.70	0.02	2.53	3.88	3.07
B07x_B34P	25Y3D	7.48	-1.82	0.04	2.38	-3.26	2.42
B07x_B34P	3Y1D	6.09	-4.14	-0.02	2.39	-3.26	2.42

Weir Link: B08_B28W

Scenario:	Existing	Bottom Clip	
From Node:	B08	Default:	0.00 ft
To Node:	B28	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.88 ft	Discharge Coefficients	
Control Elevation:	13.88 ft	Weir Default:	2.800
Cross Section:	B08_B28X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B08_B28W	100Y3D	143.81	-11.29	0.23	-0.96	-0.96	-0.96
B08_B28W	10Y1D	1.91	-8.25	0.03	-1.27	-1.27	-1.27
B08_B28W	25Y3D	77.41	-13.66	0.13	-0.97	-0.97	-0.97
B08_B28W	3Y1D	0.00	-8.02	0.02	-1.29	-1.29	-1.29

Pipe Link: B08_B35P

		Upstream		Downstream	
Scenario:	Existing	Invert:	8.56 ft	Invert:	8.05 ft
From Node:	B08	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B35	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	623.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B08_B35P	100Y3D	4.09	-13.54	0.38	-4.31	-6.14	-5.22
B08_B35P	10Y1D	5.88	-13.54	0.39	-4.31	-6.14	-5.22
B08_B35P	25Y3D	4.22	-13.54	0.39	-4.31	-6.14	-5.22
B08_B35P	3Y1D	6.04	-13.54	-0.41	-4.31	-6.14	-5.22

Weir Link: B09_B29W

Scenario:	Existing	Bottom Clip	
From Node:	B09	Default:	0.00 ft
To Node:	B29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.48 ft	Discharge Coefficients	
Control Elevation:	17.48 ft	Weir Default:	2.800
Cross Section:	B09_B29X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B09_B29W	100Y3D	0.00	-0.53	0.00	0.00	0.00	0.00
B09_B29W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B09_B29W	25Y3D	0.00	-0.01	0.00	0.00	0.00	0.00
B09_B29W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B09_LAKE IDAW

Scenario:	Existing	**Bottom Clip**	
From Node:	B09	Default:	0.00 ft
To Node:	LAKE_IDA1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.25 ft	**Discharge Coefficients**	
Control Elevation:	16.25 ft	Weir Default:	2.800
Cross Section:	B09_LAKE IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B09_LAKE IDAW	100Y3D	54.44	0.00	-0.04	2.02	2.02	2.02
B09_LAKE IDAW	10Y1D	15.94	0.00	0.01	1.42	1.42	1.42
B09_LAKE IDAW	25Y3D	40.65	0.00	-0.03	1.86	1.86	1.86
B09_LAKE IDAW	3Y1D	8.16	0.00	0.01	1.17	1.17	1.17

Weir Link: B10_B15W

Scenario:	Existing	**Bottom Clip**	
From Node:	B10	Default:	0.00 ft
To Node:	B15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.47 ft	**Discharge Coefficients**	
Control Elevation:	15.47 ft	Weir Default:	2.800
Cross Section:	B10_B15X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_B15W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B10_B15W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B10_B15W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B10_B15W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B10_B24P

		Upstream		Downstream	
Scenario:	Existing	Invert:	6.39 ft	Invert:	8.47 ft
From Node:	B10	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B24	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	461.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_B24P	100Y3D	7.24	-0.16	-0.01	2.31	2.31	2.31
B10_B24P	10Y1D	9.37	-4.68	0.04	2.98	2.98	2.98
B10_B24P	25Y3D	7.55	-0.12	0.00	2.40	2.40	2.40
B10_B24P	3Y1D	10.28	-6.28	0.11	3.27	3.27	3.27

Weir Link: B10_B24W

Scenario:	Existing	Bottom Clip	
From Node:	B10	Default:	0.00 ft
To Node:	B24	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.43 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B10_B24X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_B24W	100Y3D	56.29	0.00	0.03	1.50	1.50	1.50
B10_B24W	10Y1D	30.70	0.00	0.07	1.31	1.31	1.31
B10_B24W	25Y3D	52.81	0.00	0.02	1.48	1.48	1.48
B10_B24W	3Y1D	17.92	0.00	0.04	1.14	1.14	1.14

Weir Link: B10_LAKE_IDAW

Scenario:	Existing
From Node:	B10
To Node:	LAKE_IDA2
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.00 ft
Control Elevation:	0.00 ft
Cross Section:	B10_LAKE_IDAX

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_LAKE_IDAW	100Y3D	0.65	0.00	0.00	0.70	0.70	0.70
B10_LAKE_IDAW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B10_LAKE_IDAW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B10_LAKE_IDAW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Drop Structure Link: B11_B10DS

Scenario:	Existing
From Node:	B11
To Node:	B10
Link Count:	1
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	60.00 ft
FHWA Code:	0
Entr Loss Coef:	0.00
Exit Loss Coef:	0.50
Bend Loss Coef:	0.50
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream Pipe

Invert:	8.50 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream Pipe

Invert:	8.50 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir: 1

Bottom Clip

Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	V-Notch Up
Invert:	11.50 ft
Control Elevation:	9.50 ft
Max Depth:	0.50 ft
Max Width:	0.50 ft

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Weir Component

Weir:	2
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	14.80 ft
Control Elevation:	9.50 ft
Max Depth:	99.00 ft
Max Width:	8.00 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: Type C inlet

Drop Structure Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B11_B10DS - Pipe	100Y3D	8.71	0.00	0.01	0.00	0.00	0.00
B11_B10DS - Weir: 1	100Y3D	0.91	0.00	0.00	7.29	7.29	7.29
B11_B10DS - Weir: 2	100Y3D	8.54	0.00	-0.01	2.02	2.02	2.02
B11_B10DS - Pipe	10Y1D	2.06	0.00	0.00	0.00	0.00	0.00
B11_B10DS - Weir: 1	10Y1D	0.83	0.00	0.00	6.65	6.65	6.65
B11_B10DS - Weir: 2	10Y1D	1.41	0.00	0.00	1.22	1.22	1.22
B11_B10DS - Pipe	25Y3D	7.78	0.00	0.01	0.00	0.00	0.00
B11_B10DS - Weir: 1	25Y3D	0.93	0.00	0.00	7.47	7.47	7.47
B11_B10DS - Weir: 2	25Y3D	7.55	0.00	0.01	2.02	2.02	2.02
B11_B10DS - Pipe	3Y1D	0.84	0.00	0.00	0.00	0.00	0.00
B11_B10DS -	3Y1D	0.84	0.00	0.00	6.73	6.73	6.73

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
Weir: 1							
B11_B10DS - Weir: 2	3Y1D	0.09	0.00	0.00	0.00	0.00	0.00

Weir Link: B12_B13W

Scenario:	Existing	**Bottom Clip**	
From Node:	B12	Default:	0.00 ft
To Node:	B13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.13 ft	**Discharge Coefficients**	
Control Elevation:	14.13 ft	Weir Default:	2.800
Cross Section:	B12_B13X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B12_B13W	100Y3D	34.29	-5.76	0.09	1.10	1.10	1.10
B12_B13W	10Y1D	19.17	-0.56	-0.05	1.83	1.83	1.83
B12_B13W	25Y3D	14.52	-4.00	0.08	1.66	1.66	1.66
B12_B13W	3Y1D	12.88	-0.52	-0.04	1.71	1.71	1.71

Pipe Link: B12_B13xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	10.11 ft	Invert:	8.65 ft
From Node:	B12	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B13x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	511.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B12_B13xP	100Y3D	3.29	-0.98	0.02	2.17	1.86	1.86
B12_B13xP	10Y1D	4.08	0.00	0.02	2.49	2.31	2.31
B12_B13xP	25Y3D	3.37	0.00	-0.02	2.04	1.91	1.91
B12_B13xP	3Y1D	4.18	0.00	0.02	2.50	2.36	2.36

Weir Link: B12_B38W

Scenario:	Existing	Bottom Clip	
From Node:	B12	Default:	0.00 ft
To Node:	B38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.33 ft	Discharge Coefficients	
Control Elevation:	15.33 ft	Weir Default:	2.800
Cross Section:	B12_B38X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B12_B38W	100Y3D	5.81	-18.56	0.05	-1.56	-1.56	-1.56
B12_B38W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B12_B38W	25Y3D	2.42	-7.58	0.05	-1.20	-1.20	-1.20
B12_B38W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B13_B08W

Scenario:	Existing	Bottom Clip	
From Node:	B13	Default:	0.00 ft
To Node:	B08	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.27 ft	Discharge Coefficients	
Control Elevation:	14.27 ft	Weir Default:	2.800
Cross Section:	B13_B08X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13_B08W	100Y3D	96.94	-53.63	0.46	-1.15	-1.15	-1.15
B13_B08W	10Y1D	0.00	-42.20	0.10	-1.52	-1.52	-1.52
B13_B08W	25Y3D	47.91	-63.89	0.24	-1.63	-1.63	-1.63
B13_B08W	3Y1D	0.00	-22.62	0.07	-1.30	-1.30	-1.30

Pipe Link: B13_B13xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	8.72 ft	Invert:	8.41 ft
From Node:	B13	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B13x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	350.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13_B13xP	100Y3D	30.12	-7.84	0.81	4.26	6.95	5.59
B13_B13xP	10Y1D	30.12	0.00	-0.87	4.26	6.95	5.59
B13_B13xP	25Y3D	30.12	0.00	0.83	4.26	6.95	5.59
B13_B13xP	3Y1D	30.12	0.00	1.22	4.26	6.95	5.59

Weir Link: B13_B35W

Scenario:	Existing	Bottom Clip	
From Node:	B13	Default:	0.00 ft
To Node:	B35	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.65 ft	Discharge Coefficients	
Control Elevation:	14.65 ft	Weir Default:	2.800
Cross Section:	B13_B35X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13_B35W	100Y3D	0.00	-26.90	0.06	-1.79	-1.79	-1.79
B13_B35W	10Y1D	0.00	-4.77	-0.01	-1.15	-1.15	-1.15
B13_B35W	25Y3D	0.00	-22.54	0.06	-1.77	-1.77	-1.77
B13_B35W	3Y1D	0.00	-1.05	0.00	-0.81	-0.81	-0.81

Pipe Link: B13x_B22xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	8.52 ft	Invert:	8.49 ft
From Node:	B13x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	331.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13x_B22xP	100Y3D	25.45	-8.96	0.27	2.65	2.87	2.65
B13x_B22xP	10Y1D	26.47	0.00	-0.23	2.75	3.21	2.75
B13x_B22xP	25Y3D	26.05	0.00	-0.28	2.71	2.78	2.71
B13x_B22xP	3Y1D	24.36	0.00	-0.33	2.53	3.08	2.53

Weir Link: B14_B13W

Scenario:	Existing	Bottom Clip	
From Node:	B14	Default:	0.00 ft
To Node:	B13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.51 ft	Discharge Coefficients	
Control Elevation:	16.51 ft	Weir Default:	2.800
Cross Section:	B14_B13X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B14_B13W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B14_B13W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B14_B13W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B14_B13W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B14_B15W

Scenario:	Existing
From Node:	B14
To Node:	B15
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.15 ft
Control Elevation:	14.15 ft
Cross Section:	B14_B15X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B14_B15W	100Y3D	11.15	-35.41	0.06	1.81	1.81	1.81
B14_B15W	10Y1D	0.94	-1.61	-0.01	-1.72	-1.72	-1.72
B14_B15W	25Y3D	3.25	-21.19	0.03	1.81	1.81	1.81
B14_B15W	3Y1D	0.65	0.00	0.00	1.46	1.46	1.46

Pipe Link: B14_B16xP

Scenario:	Existing
From Node:	B14
To Node:	B16x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	418.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	7.35 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	8.27 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B14_B16xP	100Y3D	4.53	-11.84	0.06	-3.77	-3.77	-3.77
B14_B16xP	10Y1D	2.84	-9.86	-0.07	-3.14	3.21	-3.14
B14_B16xP	25Y3D	4.90	-11.74	0.08	-3.74	-3.74	-3.74
B14_B16xP	3Y1D	2.80	-7.55	0.06	-2.40	3.21	-2.40

Pipe Link: B15_B10P		Upstream		Downstream	
Scenario:	Existing	Invert:	7.38 ft	Invert:	3.03 ft
From Node:	B15	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B10	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	573.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B15_B10P	100Y3D	43.33	0.00	-0.13	4.50	4.50	4.50
B15_B10P	10Y1D	47.61	0.00	-0.13	4.95	4.95	4.95
B15_B10P	25Y3D	42.88	0.00	-0.13	4.46	4.46	4.46
B15_B10P	3Y1D	45.99	0.00	-0.13	4.78	4.78	4.78

Pipe Link: B15_B16xP		Upstream		Downstream	
Scenario:	Existing	Invert:	8.70 ft	Invert:	9.60 ft
From Node:	B15	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B16x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	744.40 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B15_B16xP	100Y3D	0.00	-18.28	-0.05	-1.90	-1.90	-1.90
B15_B16xP	10Y1D	0.00	-21.35	0.05	-2.22	-2.22	-2.22
B15_B16xP	25Y3D	0.00	-17.87	-0.05	-1.86	-1.86	-1.86
B15_B16xP	3Y1D	0.00	-22.89	-0.05	-2.38	-2.38	-2.38

Weir Link: B16_B09 W

Scenario:	Existing
From Node:	B16
To Node:	B09
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.60 ft
Control Elevation:	17.60 ft
Cross Section:	B16_B09X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B09 W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B09 W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B09 W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B09 W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B16_B16xP

Scenario:	Existing
From Node:	B16
To Node:	B16x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	549.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	9.74 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	3.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	9.32 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	3.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B16xP	100Y3D	43.84	0.00	-1.20	6.20	8.06	7.13
B16_B16xP	10Y1D	43.84	0.00	-1.10	6.20	8.06	7.13
B16_B16xP	25Y3D	43.84	0.00	1.14	6.20	8.06	7.13
B16_B16xP	3Y1D	43.84	0.00	1.21	6.20	8.06	7.13

Weir Link: B16_B17W

Scenario:	Existing	Bottom Clip	
From Node:	B16	Default:	0.00 ft
To Node:	B17	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.73 ft	Discharge Coefficients	
Control Elevation:	16.73 ft	Weir Default:	2.800
Cross Section:	B16_B17X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B17W	100Y3D	28.03	0.00	0.07	1.72	1.72	1.72
B16_B17W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B17W	25Y3D	11.43	0.00	0.04	1.40	1.40	1.40
B16_B17W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B16_B34W

Scenario:	Existing	Bottom Clip	
From Node:	B16	Default:	0.00 ft
To Node:	B34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.51 ft	Discharge Coefficients	
Control Elevation:	17.51 ft	Weir Default:	2.800
Cross Section:	B16_B34X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B34W	100Y3D	0.00	-0.50	0.00	0.00	0.00	0.00
B16_B34W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B34W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B34W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B17_B09W

Scenario:	Existing
From Node:	B17
To Node:	B09
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.54 ft
Control Elevation:	17.54 ft
Cross Section:	B17_B09X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B17_B09W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B17_B09W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B17_B09W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B17_B09W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B17_B15P

Scenario:	Existing
From Node:	B17
To Node:	B15
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	622.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	9.82 ft	Invert:	9.78 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	2.50 ft	Max Depth:	2.50 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B17_B15P	100Y3D	13.97	0.00	-0.01	2.85	2.85	2.85
B17_B15P	10Y1D	16.71	0.00	-0.01	3.40	3.40	3.40
B17_B15P	25Y3D	14.02	0.00	0.01	2.86	2.86	2.86
B17_B15P	3Y1D	14.93	0.00	-0.02	3.04	3.04	3.04

Weir Link: B17_LAKE IDAW

Scenario:	Existing	**Bottom Clip**	
From Node:	B17	Default:	0.00 ft
To Node:	LAKE_IDA1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.90 ft	**Discharge Coefficients**	
Control Elevation:	14.90 ft	Weir Default:	2.800
Cross Section:	B17_LAKE IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B17_LAKE IDAW	100Y3D	79.74	-0.19	-0.09	2.07	2.07	2.07
B17_LAKE IDAW	10Y1D	11.09	-0.19	-0.04	1.36	1.36	1.36
B17_LAKE IDAW	25Y3D	51.24	-0.19	-0.05	1.84	1.84	1.84
B17_LAKE IDAW	3Y1D	0.00	-0.19	0.00	-0.66	-0.66	-0.66

Weir Link: B18_B24W

Scenario:	Existing	**Bottom Clip**	
From Node:	B18	Default:	0.00 ft
To Node:	B24	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.26 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B18_B24X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_B24W	100Y3D	0.59	-169.37	-0.27	-0.84	-0.84	-0.84
B18_B24W	10Y1D	1.30	-33.64	-0.24	-1.39	-1.39	-1.39
B18_B24W	25Y3D	0.87	-124.98	-0.25	-0.85	-0.85	-0.85
B18_B24W	3Y1D	1.40	-22.35	-0.21	-1.31	-1.31	-1.31

Pipe Link: B18_B26P

		Upstream		Downstream	
Scenario:	Existing	Invert:	6.07 ft	Invert:	3.79 ft
From Node:	B18	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B26	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	60.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_B26P	100Y3D	7.46	-80.29	3.54	-6.39	-8.87	-7.63
B18_B26P	10Y1D	6.16	-80.29	2.99	-6.39	-8.87	-7.63
B18_B26P	25Y3D	7.37	-80.29	3.09	-6.39	-8.87	-7.63
B18_B26P	3Y1D	3.99	-80.29	2.69	-6.39	-8.87	-7.63

Weir Link: B18_B26W

Scenario:	Existing	Bottom Clip	
From Node:	B18	Default:	0.00 ft
To Node:	B26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.44 ft	Discharge Coefficients	
Control Elevation:	12.44 ft	Weir Default:	2.800
Cross Section:	B18_B26X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_B26W	100Y3D	24.82	-8.39	0.04	0.19	0.19	0.19
B18_B26W	10Y1D	13.56	-6.31	0.03	-1.15	-1.15	-1.15
B18_B26W	25Y3D	24.53	0.00	0.02	0.18	0.18	0.18
B18_B26W	3Y1D	6.15	-0.85	0.01	-0.56	-0.56	-0.56

Weir Link: B18_LAKE_IDAW

Scenario:	Existing	Bottom Clip	
From Node:	B18	Default:	0.00 ft
To Node:	LAKE_IDA3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.30 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B18_LAKE_IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_LAKE_IDAW	100Y3D	182.75	0.00	0.18	1.84	1.84	1.84
B18_LAKE_IDAW	10Y1D	5.54	0.00	0.00	1.03	1.03	1.03
B18_LAKE_IDAW	25Y3D	118.75	0.00	0.13	1.68	1.68	1.68
B18_LAKE_IDAW	3Y1D	0.09	0.00	0.00	0.00	0.00	0.00

Weir Link: B19_B20W

Scenario:	Existing	Bottom Clip	
From Node:	B19	Default:	0.00 ft
To Node:	B20	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	18.94 ft	Discharge Coefficients	
Control Elevation:	18.94 ft	Weir Default:	2.800
Cross Section:	B19_B20X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B19_B20W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B20W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B20W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B20W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B19_B23W

Scenario:	Existing
From Node:	B19
To Node:	B23
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.31 ft
Control Elevation:	17.31 ft
Cross Section:	B19_B23X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B19_B23W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B23W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B23W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B23W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B19_B23xP

Scenario:	Existing
From Node:	B19
To Node:	B23x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	320.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	6.84 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	4.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	5.03 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	4.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B19_B23xP	100Y3D	183.19	0.00	3.09	14.58	14.96	14.77
B19_B23xP	10Y1D	183.19	0.00	3.09	14.58	14.96	14.77
B19_B23xP	25Y3D	183.19	0.00	3.09	14.58	14.96	14.77
B19_B23xP	3Y1D	183.19	0.00	3.09	14.58	14.96	14.77

Pipe Link: B20_B19P

		Upstream		Downstream	
Scenario:	Existing	Invert:	12.41 ft	Invert:	13.01 ft
From Node:	B20	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B19	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	777.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B20_B19P	100Y3D	5.30	-3.85	1.21	3.00	4.54	3.50
B20_B19P	10Y1D	5.63	-3.85	1.21	3.18	4.67	3.67
B20_B19P	25Y3D	5.48	-3.85	1.21	3.10	4.56	3.52
B20_B19P	3Y1D	5.42	-3.85	1.21	3.07	4.67	3.67

Weir Link: B20_B27W

Scenario:	Existing	Bottom Clip	
From Node:	B20	Default:	0.00 ft
To Node:	B27	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.84 ft	Discharge Coefficients	
Control Elevation:	15.84 ft	Weir Default:	2.800
Cross Section:	B20_B27X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B20_B27W	100Y3D	67.90	0.00	-0.07	1.86	1.86	1.86
B20_B27W	10Y1D	25.55	0.00	-0.02	1.54	1.54	1.54
B20_B27W	25Y3D	50.62	0.00	-0.06	1.76	1.76	1.76
B20_B27W	3Y1D	18.53	0.00	-0.01	1.48	1.48	1.48

Pipe Link: B21_B21xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	10.56 ft	Invert:	10.42 ft
From Node:	B21	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B21x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	705.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B21_B21xP	100Y3D	4.92	-0.32	0.01	2.79	2.92	2.79
B21_B21xP	10Y1D	5.75	0.00	-0.01	3.25	3.98	3.25
B21_B21xP	25Y3D	5.02	0.00	-0.01	2.84	2.84	2.84
B21_B21xP	3Y1D	6.04	0.00	-0.01	3.42	4.15	3.42

Weir Link: B21_B22xW

Scenario:	Existing	Bottom Clip	
From Node:	B21	Default:	0.00 ft
To Node:	B22x	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.96 ft	Discharge Coefficients	
Control Elevation:	15.96 ft	Weir Default:	2.800
Cross Section:	B21_B22X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B21_B22xW	100Y3D	39.66	0.00	0.05	1.78	1.78	1.78
B21_B22xW	10Y1D	6.91	0.00	0.01	1.28	1.28	1.28
B21_B22xW	25Y3D	24.85	0.00	0.04	1.61	1.61	1.61
B21_B22xW	3Y1D	1.99	0.00	0.00	1.03	1.03	1.03

Pipe Link: B21x_B19P

		Upstream		Downstream	
Scenario:	Existing	Invert:	7.14 ft	Invert:	7.02 ft
From Node:	B21x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B19	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	665.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B21x_B19P	100Y3D	28.81	-120.82	1.81	-9.61	-10.89	-10.25
B21x_B19P	10Y1D	18.50	-120.82	2.00	-9.61	-10.89	-10.25
B21x_B19P	25Y3D	26.71	-120.82	1.90	-9.61	-10.89	-10.25
B21x_B19P	3Y1D	17.73	-120.82	1.81	-9.61	-10.89	-10.25

Weir Link: B22_B14W

Scenario:	Existing	Bottom Clip	
From Node:	B22	Default:	0.00 ft
To Node:	B14	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.02 ft	Discharge Coefficients	
Control Elevation:	14.02 ft	Weir Default:	2.800
Cross Section:	B22_B14X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22_B14W	100Y3D	1.52	-86.13	0.16	-1.76	-1.76	-1.76
B22_B14W	10Y1D	0.00	-22.92	0.02	-1.49	-1.49	-1.49
B22_B14W	25Y3D	1.10	-60.52	0.09	-1.65	-1.65	-1.65
B22_B14W	3Y1D	0.00	-15.35	0.01	0.00	0.00	0.00

Pipe Link: B22_B22xP		Upstream		Downstream	
Scenario:	Existing	Invert:	9.03 ft	Invert:	8.09 ft
From Node:	B22	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	293.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22_B22xP	100Y3D	9.91	-11.28	-0.01	-3.59	-3.59	-3.59
B22_B22xP	10Y1D	9.07	-13.45	0.02	-4.28	-4.28	-4.28
B22_B22xP	25Y3D	9.62	-10.78	-0.01	-3.43	-3.43	-3.43
B22_B22xP	3Y1D	8.74	-13.95	0.03	-4.44	-4.44	-4.44

Pipe Link: B22x_B21xP		Upstream		Downstream	
Scenario:	Existing	Invert:	8.67 ft	Invert:	8.67 ft
From Node:	B22x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B21x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	357.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22x_B21xP	100Y3D	24.11	-0.35	0.09	2.51	3.60	2.57
B22x_B21xP	10Y1D	17.31	-1.90	0.12	1.94	3.94	2.83
B22x_B21xP	25Y3D	21.89	-0.27	0.04	2.27	3.49	2.48
B22x_B21xP	3Y1D	15.92	0.00	0.03	1.97	3.97	2.86

Weir Link: B22x_B21xW

Scenario:	Existing	**Bottom Clip**	
From Node:	B22x	Default:	0.00 ft
To Node:	B21x	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.07 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B22x_B21x	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22x_B21xW	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B21xW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B21xW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B21xW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B22x_B36W

Scenario:	Existing	**Bottom Clip**	
From Node:	B22x	Default:	0.00 ft
To Node:	B36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.56 ft	**Discharge Coefficients**	
Control Elevation:	16.56 ft	Weir Default:	2.800
Cross Section:	B22_B36X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22x_B36W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B36W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B36W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B36W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B23_B23xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	7.36 ft	Invert:	6.91 ft
From Node:	B23	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B23x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	26.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B23_B23xP	100Y3D	15.65	-2.68	-0.18	8.85	9.68	9.24
B23_B23xP	10Y1D	15.65	0.00	0.10	8.85	9.68	9.24
B23_B23xP	25Y3D	15.65	0.00	0.47	8.85	9.68	9.24
B23_B23xP	3Y1D	15.65	0.00	-0.10	8.85	9.68	9.24

Weir Link: B23_B32W

Scenario:	Existing	Bottom Clip	
From Node:	B23	Default:	0.00 ft
To Node:	B32	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.35 ft	Discharge Coefficients	
Control Elevation:	14.35 ft	Weir Default:	2.800
Cross Section:	B23_B32X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B23_B32W	100Y3D	67.02	0.00	-0.06	2.00	2.00	2.00
B23_B32W	10Y1D	12.43	0.00	0.01	1.40	1.40	1.40
B23_B32W	25Y3D	46.80	0.00	-0.05	1.86	1.86	1.86
B23_B32W	3Y1D	1.96	0.00	0.00	0.87	0.87	0.87

Pipe Link: B23x_B32P		Upstream		Downstream	
Scenario:	Existing	Invert:	5.42 ft	Invert:	5.46 ft
From Node:	B23x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B32	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	389.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B23x_B32P	100Y3D	43.26	-119.16	-1.53	-9.48	-10.77	-10.13
B23x_B32P	10Y1D	30.97	-119.16	0.86	-9.48	-10.77	-10.13
B23x_B32P	25Y3D	39.69	-119.16	1.60	-9.48	-10.77	-10.13
B23x_B32P	3Y1D	27.55	-119.16	0.86	-9.48	-10.77	-10.13

Weir Link: B24_B01W			
Scenario:	Existing	Bottom Clip	
From Node:	B24	Default:	0.00 ft
To Node:	B01	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.15 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B24_B01X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B01W	100Y3D	17.14	-69.72	0.18	1.13	1.13	1.13
B24_B01W	10Y1D	18.75	-14.21	-0.20	1.30	1.30	1.30
B24_B01W	25Y3D	15.52	-37.32	0.18	1.13	1.13	1.13
B24_B01W	3Y1D	17.85	0.00	-0.15	1.31	1.31	1.31

Pipe Link: B24_B22P		Upstream		Downstream	
Scenario:	Existing	Invert:	8.43 ft	Invert:	9.53 ft
From Node:	B24	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	857.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B22P	100Y3D	1.93	-9.09	0.01	-2.89	-2.89	-2.89
B24_B22P	10Y1D	2.87	-8.13	0.02	-2.59	2.88	-2.59
B24_B22P	25Y3D	2.32	-8.51	0.01	-2.71	-2.71	-2.71
B24_B22P	3Y1D	2.92	-8.12	0.02	-2.58	2.88	-2.58

Pipe Link: B24_B24xP		Upstream		Downstream	
Scenario:	Existing	Invert:	8.50 ft	Invert:	9.00 ft
From Node:	B24	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B24x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	540.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B24xP	100Y3D	1.84	-0.67	0.49	0.85	3.24	2.04
B24_B24xP	10Y1D	2.90	-3.89	0.48	-1.24	3.68	2.38
B24_B24xP	25Y3D	1.75	-0.67	0.49	0.78	3.13	1.95
B24_B24xP	3Y1D	2.87	-4.43	0.43	-1.41	3.67	2.37

Weir Link: B24_B24xW

Scenario:	Existing	Bottom Clip	
From Node:	B24	Default:	0.00 ft
To Node:	B24x	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.42 ft	Discharge Coefficients	
Control Elevation:	12.42 ft	Weir Default:	2.800
Cross Section:	B24_B22X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B24xW	100Y3D	2.36	-21.85	18.92	0.66	0.66	0.66
B24_B24xW	10Y1D	3.52	-13.94	10.09	-1.16	-1.16	-1.16
B24_B24xW	25Y3D	2.86	-19.50	17.15	0.72	0.72	0.72
B24_B24xW	3Y1D	3.52	-9.46	6.48	-1.18	-1.18	-1.18

Weir Link: B24_LAKE_IDAW

Scenario:	Existing	Bottom Clip	
From Node:	B24	Default:	0.00 ft
To Node:	LAKE_IDA2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.60 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B24_LAKE_IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_LAKE_IDAW	100Y3D	25.57	0.00	0.04	1.49	1.49	1.49
B24_LAKE_IDAW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B24_LAKE_IDAW	25Y3D	12.40	0.00	0.02	1.30	1.30	1.30
B24_LAKE_IDAW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B24x_B22P		Upstream		Downstream	
Scenario:	Existing	Invert:	9.00 ft	Invert:	9.00 ft
From Node:	B24x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	350.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24x_B22P	100Y3D	2.75	-13.28	0.06	-4.23	-4.23	-4.23
B24x_B22P	10Y1D	4.14	-11.75	-0.04	-3.74	-3.74	-3.74
B24x_B22P	25Y3D	3.33	-12.43	-0.05	-3.96	-3.96	-3.96
B24x_B22P	3Y1D	4.21	-11.54	-0.03	-3.67	-3.67	-3.67

Weir Link: B24x_B33W			
Scenario:	Existing	Bottom Clip	
From Node:	B24x	Default:	0.00 ft
To Node:	B33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.30 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B24x_B33X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24x_B33W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B33W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B33W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B33W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B25_B32W

Scenario:	Existing
From Node:	B25
To Node:	B32
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	13.91 ft
Control Elevation:	13.91 ft
Cross Section:	B25_B32X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B25_B32W	100Y3D	0.00	-35.58	0.10	-1.74	-1.74	-1.74
B25_B32W	10Y1D	0.00	-3.99	-0.01	0.00	0.00	0.00
B25_B32W	25Y3D	0.00	-26.40	-0.02	-1.61	-1.61	-1.61
B25_B32W	3Y1D	0.00	-0.26	0.00	0.00	0.00	0.00

Pipe Link: B25_OUTFALLP

Scenario:	Existing
From Node:	B25
To Node:	Weir Node
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	757.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	5.66 ft	Invert:	5.49 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	4.50 ft	Max Depth:	4.50 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B25_OUTFALLP	100Y3D	62.11	0.00	-0.03	3.91	3.91	3.91
B25_OUTFALLP	10Y1D	39.42	0.00	0.01	2.48	3.70	2.63
B25_OUTFALLP	25Y3D	56.80	0.00	-0.02	3.57	3.57	3.57
B25_OUTFALLP	3Y1D	33.22	0.00	0.01	2.09	3.61	2.56

Pipe Link: B26_B01P

		Upstream		Downstream	
Scenario:	Existing	Invert:	4.40 ft	Invert:	4.40 ft
From Node:	B26	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B01	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	475.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B26_B01P	100Y3D	1.62	-29.23	-1.82	-4.14	-4.14	-4.14
B26_B01P	10Y1D	1.46	-29.23	-1.46	-4.14	-4.14	-4.14
B26_B01P	25Y3D	1.68	-29.23	-1.86	-4.14	-4.14	-4.14
B26_B01P	3Y1D	1.33	-29.23	-1.45	-4.14	-4.14	-4.14

Weir Link: B26_LAKE_IDAW

Scenario:	Existing	Bottom Clip	
From Node:	B26	Default:	0.00 ft
To Node:	LAKE_IDA3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.90 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B26_LAKE_IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B26_LAKE_IDAW	100Y3D	153.81	0.00	0.07	2.60	2.60	2.60
B26_LAKE_IDAW	10Y1D	37.45	0.00	0.03	1.79	1.79	1.79
B26_LAKE_IDAW	25Y3D	124.96	0.00	0.06	2.47	2.47	2.47
B26_LAKE_IDAW	3Y1D	17.24	0.00	0.02	1.53	1.53	1.53

Pipe Link: B27_ATL_AVP

		Upstream		Downstream	
Scenario:	Existing	Invert:	12.00 ft	Invert:	11.50 ft
From Node:	B27	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV4	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	106.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B27_ATL_AVP	100Y3D	14.73	0.00	0.50	8.34	8.59	8.46
B27_ATL_AVP	10Y1D	13.95	0.00	0.25	7.89	8.21	8.05
B27_ATL_AVP	25Y3D	14.48	0.00	0.25	8.20	8.46	8.33
B27_ATL_AVP	3Y1D	13.73	0.00	0.50	7.77	8.08	7.93

Weir Link: B27_ATL_AVW

Scenario:	Existing	Bottom Clip	
From Node:	B27	Default:	0.00 ft
To Node:	ATL_AV4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.07 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B27_ATL_AVX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B27_ATL_AVW	100Y3D	68.85	0.00	-0.08	1.88	1.88	1.88
B27_ATL_AVW	10Y1D	19.43	0.00	-0.02	1.40	1.40	1.40
B27_ATL_AVW	25Y3D	48.64	0.00	-0.07	1.74	1.74	1.74
B27_ATL_AVW	3Y1D	10.96	0.00	-0.01	1.21	1.21	1.21

Pipe Link: B27_B21P		Upstream		Downstream	
Scenario:	Existing	Invert:	12.37 ft	Invert:	10.15 ft
From Node:	B27	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B21	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	468.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B27_B21P	100Y3D	5.23	-5.20	-0.22	4.26	5.36	4.81
B27_B21P	10Y1D	5.23	-5.22	-0.22	4.26	5.36	4.81
B27_B21P	25Y3D	5.23	-5.22	-0.22	4.26	5.36	4.81
B27_B21P	3Y1D	5.23	-5.11	-0.22	4.26	5.36	4.81

Weir Link: B28_ATL_AVW			
Scenario:	Existing	Bottom Clip	
From Node:	B28	Default:	0.00 ft
To Node:	ATL_AV3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.90 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B28_ATL_AVX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B28_ATL_AVW	100Y3D	150.69	0.00	0.21	1.99	1.99	1.99
B28_ATL_AVW	10Y1D	2.93	0.00	0.00	0.81	0.81	0.81
B28_ATL_AVW	25Y3D	80.99	0.00	0.12	1.66	1.66	1.66
B28_ATL_AVW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B29_B16P		Upstream		Downstream	
Scenario:	Existing	Invert:	11.69 ft	Invert:	10.01 ft
From Node:	B29	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B16	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	717.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B29_B16P	100Y3D	10.57	0.00	0.42	3.36	3.36	3.36
B29_B16P	10Y1D	12.70	0.00	0.50	4.04	4.04	4.04
B29_B16P	25Y3D	10.57	0.00	-0.42	3.36	3.36	3.36
B29_B16P	3Y1D	13.41	0.00	0.38	4.27	4.27	4.27

Pipe Link: B30_B02xP		Upstream		Downstream	
Scenario:	Existing	Invert:	12.50 ft	Invert:	12.00 ft
From Node:	B30	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B02x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	50.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B30_B02xP	100Y3D	9.01	0.00	-0.05	5.10	5.10	5.10
B30_B02xP	10Y1D	8.04	0.00	0.05	4.55	4.55	4.55
B30_B02xP	25Y3D	8.79	0.00	0.06	4.98	4.98	4.98
B30_B02xP	3Y1D	6.91	0.00	0.05	3.91	3.91	3.91

Weir Link: B31_Depot AveW

Scenario:	Existing	**Bottom Clip**	
From Node:	B31	Default:	0.00 ft
To Node:	Depot Ave	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	11.77 ft	**Discharge Coefficients**	
Control Elevation:	11.77 ft	Weir Default:	2.800
Cross Section:	B31_Depot AveX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B31_Depot AveW	100Y3D	15.18	0.00	-0.19	1.42	1.42	1.42
B31_Depot AveW	10Y1D	7.84	0.00	-0.19	1.23	1.23	1.23
B31_Depot AveW	25Y3D	11.77	0.00	-0.19	1.35	1.35	1.35
B31_Depot AveW	3Y1D	6.12	0.00	-0.19	1.16	1.16	1.16

Weir Link: B32_B19W

Scenario:	Existing	**Bottom Clip**	
From Node:	B32	Default:	0.00 ft
To Node:	B19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.39 ft	**Discharge Coefficients**	
Control Elevation:	16.39 ft	Weir Default:	2.800
Cross Section:	B32_B19X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32_B19W	100Y3D	0.00	-0.07	0.07	0.00	0.00	0.00
B32_B19W	10Y1D	0.00	-0.07	0.07	0.00	0.00	0.00
B32_B19W	25Y3D	0.00	-0.07	0.07	0.00	0.00	0.00
B32_B19W	3Y1D	0.00	-0.07	0.07	0.00	0.00	0.00

Pipe Link: B32_B32xP

		Upstream		Downstream	
Scenario:	Existing	Invert:	5.39 ft	Invert:	5.46 ft
From Node:	B32	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B32x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1005.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32_B32xP	100Y3D	61.10	0.00	-0.30	6.35	8.50	7.42
B32_B32xP	10Y1D	61.10	0.00	-0.30	6.35	8.50	7.42
B32_B32xP	25Y3D	61.10	0.00	-0.30	6.35	8.50	7.42
B32_B32xP	3Y1D	61.10	0.00	-0.30	6.35	8.50	7.42

Weir Link: B32_B33W

Scenario:	Existing	Bottom Clip	
From Node:	B32	Default:	0.00 ft
To Node:	B33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.90 ft	Discharge Coefficients	
Control Elevation:	13.90 ft	Weir Default:	2.800
Cross Section:	B32_B33X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32_B33W	100Y3D	100.26	0.00	-0.09	1.97	1.97	1.97
B32_B33W	10Y1D	17.63	0.00	0.02	1.28	1.28	1.28
B32_B33W	25Y3D	64.23	0.00	0.04	1.78	1.78	1.78
B32_B33W	3Y1D	1.77	0.00	0.00	0.79	0.79	0.79

Pipe Link: B32x_B25P		Upstream		Downstream	
Scenario:	Existing	Invert:	5.44 ft	Invert:	5.36 ft
From Node:	B32x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B25	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	278.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32x_B25P	100Y3D	31.04	0.00	0.23	1.95	2.71	1.96
B32x_B25P	10Y1D	30.76	0.00	0.03	1.93	2.73	1.98
B32x_B25P	25Y3D	30.76	0.00	0.06	1.93	2.71	1.94
B32x_B25P	3Y1D	32.71	0.00	0.03	2.06	2.71	2.06

Weir Link: B33_B19W			
Scenario:	Existing	Bottom Clip	
From Node:	B33	Default:	0.00 ft
To Node:	B19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.03 ft	Discharge Coefficients	
Control Elevation:	17.03 ft	Weir Default:	2.800
Cross Section:	B33_B19X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B33_B19W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B33_B19W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B33_B19W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B33_B19W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B33_B32xP		Upstream		Downstream	
Scenario:	Existing	Invert:	6.50 ft	Invert:	7.48 ft
From Node:	B33	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B33x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	350.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B33_B32xP	100Y3D	18.32	-2.74	-0.51	5.83	7.06	6.44
B33_B32xP	10Y1D	18.32	-2.41	-0.11	5.83	7.06	6.44
B33_B32xP	25Y3D	18.32	-2.38	-0.54	5.83	7.06	6.44
B33_B32xP	3Y1D	18.32	-2.25	-0.11	5.83	7.06	6.44

Pipe Link: B33x_B32xP		Upstream		Downstream	
Scenario:	Existing	Invert:	7.50 ft	Invert:	7.50 ft
From Node:	B33x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B32x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	200.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B33x_B32xP	100Y3D	4.02	-2.74	0.03	3.28	3.28	3.28
B33x_B32xP	10Y1D	3.90	-2.48	0.03	3.18	3.68	3.18
B33x_B32xP	25Y3D	3.99	-2.36	0.02	3.25	3.25	3.25
B33x_B32xP	3Y1D	3.80	-2.30	-0.03	3.10	3.63	3.10

Weir Link: B34_B07W

Scenario:	Existing
From Node:	B34
To Node:	B07
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	19.23 ft
Control Elevation:	19.23 ft
Cross Section:	B34_B07X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B34_B07W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B07W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B07W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B07W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B34_B35P

Scenario:	Existing
From Node:	B34
To Node:	B35
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	323.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	9.95 ft	Invert:	9.64 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	2.00 ft	Max Depth:	2.00 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B34_B35P	100Y3D	17.70	-11.92	1.53	5.64	5.64	5.64
B34_B35P	10Y1D	10.61	-11.92	1.53	-3.79	-3.79	-3.79
B34_B35P	25Y3D	16.84	-11.92	1.53	5.36	5.36	5.36
B34_B35P	3Y1D	8.73	-11.92	1.53	-3.79	-3.79	-3.79

Weir Link: B34_B37W

Scenario:	Existing
From Node:	B34
To Node:	B37
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.82 ft
Control Elevation:	17.82 ft
Cross Section:	B34_B37X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B34_B37W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B37W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B37W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B37W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B35_B13P

Scenario:	Existing
From Node:	B35
To Node:	B13
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	327.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	8.76 ft	Invert:	8.76 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	2.67 ft	Max Depth:	2.67 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B35_B13P	100Y3D	24.38	-1.73	1.27	4.35	4.35	4.35
B35_B13P	10Y1D	24.38	-1.73	1.32	4.35	4.35	4.35
B35_B13P	25Y3D	24.38	-1.73	1.30	4.35	4.35	4.35
B35_B13P	3Y1D	24.38	-1.73	1.51	4.35	4.35	4.35

Weir Link: B35_B34W

Scenario:	Existing
From Node:	B35
To Node:	B34
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.44 ft
Control Elevation:	17.44 ft
Cross Section:	B35_B34X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B35_B34W	100Y3D	0.00	-3.39	0.02	0.00	0.00	0.00
B35_B34W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B35_B34W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B35_B34W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B36_B22xP

Scenario:	Existing
From Node:	B36
To Node:	B22x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	647.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	9.40 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	9.77 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B36_B22xP	100Y3D	15.54	-2.46	-0.41	4.95	6.51	5.73
B36_B22xP	10Y1D	15.54	-2.46	-0.07	4.95	6.51	5.73
B36_B22xP	25Y3D	15.54	-2.60	0.42	4.95	6.51	5.73
B36_B22xP	3Y1D	15.54	-2.26	0.06	4.95	6.51	5.73

Weir Link: B36_B38W

Scenario:	Existing	Bottom Clip	
From Node:	B36	Default:	0.00 ft
To Node:	B38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.25 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B36_B38X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B36_B38W	100Y3D	23.74	0.00	-0.02	1.39	1.39	1.39
B36_B38W	10Y1D	0.05	0.00	0.00	0.56	0.56	0.56
B36_B38W	25Y3D	14.87	0.00	-0.02	1.32	1.32	1.32
B36_B38W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B37_B08W

Scenario:	Existing	Bottom Clip	
From Node:	B37	Default:	0.00 ft
To Node:	B08	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.80 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B37_B08X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B37_B08W	100Y3D	49.03	0.00	-0.08	2.00	2.00	2.00
B37_B08W	10Y1D	11.83	0.00	0.03	1.62	1.62	1.62
B37_B08W	25Y3D	35.48	0.00	-0.05	1.94	1.94	1.94
B37_B08W	3Y1D	6.40	0.00	0.02	1.37	1.37	1.37

Weir Link: B37_B30W

Scenario:	Existing
From Node:	B37
To Node:	B30
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	15.40 ft
Control Elevation:	0.00 ft
Cross Section:	B37_B30X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B37_B30W	100Y3D	4.09	-15.73	0.05	-1.41	-1.41	-1.41
B37_B30W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B37_B30W	25Y3D	1.12	-9.09	0.05	-1.31	-1.31	-1.31
B37_B30W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B37_B34P

Scenario:	Existing
From Node:	B37
To Node:	B34
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	607.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	9.50 ft	Invert:	10.69 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	1.50 ft	Max Depth:	1.50 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B37_B34P	100Y3D	1.62	-6.31	0.01	-3.57	-4.57	-3.62
B37_B34P	10Y1D	1.75	-4.38	-0.05	-2.68	-4.57	-3.62
B37_B34P	25Y3D	1.65	-5.92	-0.01	-3.35	-4.57	-3.62
B37_B34P	3Y1D	1.62	-4.38	0.03	-2.68	-4.57	-3.62

Pipe Link: B38_ATL_AVP		Upstream		Downstream	
Scenario:	Existing	Invert:	12.00 ft	Invert:	11.50 ft
From Node:	B38	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV4	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	104.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B38_ATL_AVP	100Y3D	14.94	0.00	0.28	8.46	8.69	8.57
B38_ATL_AVP	10Y1D	10.91	0.00	0.28	6.17	6.85	6.51
B38_ATL_AVP	25Y3D	14.54	0.00	0.28	8.23	8.49	8.36
B38_ATL_AVP	3Y1D	10.91	0.00	-0.28	6.17	6.85	6.51

Pipe Link: B38_B36P		Upstream		Downstream	
Scenario:	Existing	Invert:	10.81 ft	Invert:	9.81 ft
From Node:	B38	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B36	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	524.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B38_B36P	100Y3D	1.07	-4.08	-0.14	-3.32	-3.32	-3.32
B38_B36P	10Y1D	1.12	-3.95	0.04	-3.22	-3.22	-3.22
B38_B36P	25Y3D	1.07	-4.11	-0.15	-3.35	-3.35	-3.35
B38_B36P	3Y1D	1.74	-3.54	0.04	-2.88	-2.88	-2.88

Pipe Link: B39_ATL_AVP		Upstream		Downstream	
Scenario:	Existing	Invert:	12.00 ft	Invert:	11.50 ft
From Node:	B39	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV1	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	50.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_ATL_AVP	100Y3D	10.25	0.00	-0.04	8.36	8.36	8.36
B39_ATL_AVP	10Y1D	9.77	0.00	0.02	7.96	7.96	7.96
B39_ATL_AVP	25Y3D	10.07	0.00	0.03	8.21	8.21	8.21
B39_ATL_AVP	3Y1D	9.61	0.00	-0.02	7.83	7.83	7.83

Weir Link: B39_ATL_AVW			
Scenario:	Existing	Bottom Clip	
From Node:	B39	Default:	0.00 ft
To Node:	ATL_AV1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.05 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39_ATL_AVX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_ATL_AVW	100Y3D	94.35	0.00	-0.09	1.69	1.69	1.69
B39_ATL_AVW	10Y1D	33.52	0.00	-0.03	1.40	1.40	1.40
B39_ATL_AVW	25Y3D	66.04	0.00	-0.08	1.60	1.60	1.60
B39_ATL_AVW	3Y1D	21.25	0.00	-0.02	1.25	1.25	1.25

Weir Link: B39_B03W

Scenario:	Existing
From Node:	B39
To Node:	B03
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.91 ft
Control Elevation:	17.91 ft
Cross Section:	B39_B03X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_B03W	100Y3D	0.00	-18.99	-0.04	0.00	0.00	0.00
B39_B03W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B03W	25Y3D	0.00	-8.99	-0.02	0.00	0.00	0.00
B39_B03W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B39_B39xP

Scenario:	Existing
From Node:	B39
To Node:	B40
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	233.72 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	12.00 ft	Invert:	12.50 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	1.25 ft	Max Depth:	1.25 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_B39xP	100Y3D	3.10	-2.35	-0.02	2.53	3.10	2.53
B39_B39xP	10Y1D	3.89	-2.50	-0.02	3.17	3.17	3.17
B39_B39xP	25Y3D	3.02	-2.43	-0.02	2.46	3.02	2.46
B39_B39xP	3Y1D	3.89	-2.23	-0.01	3.17	3.17	3.17

Weir Link: B39_B39xW

Scenario:	Existing	Bottom Clip	
From Node:	B39	Default:	0.00 ft
To Node:	B40	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.65 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39_B39xX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_B39xW	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B39xW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B39xW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B39xW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B39x_ATL_AVW

Scenario:	Existing	Bottom Clip	
From Node:	B40	Default:	0.00 ft
To Node:	ATL_AV1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.35 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39x_B39X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39x_ATL_AVW	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39x_ATL_AVW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B39x_ATL_AVW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39x_ATL_AVW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B39x_B02W

Scenario:	Existing
From Node:	B40
To Node:	B02
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.80 ft
Control Elevation:	0.00 ft
Cross Section:	B39x_B02X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39x_B02W	100Y3D	6.34	0.00	-0.01	1.28	1.28	1.28
B39x_B02W	10Y1D	5.13	0.00	0.01	1.20	1.20	1.20
B39x_B02W	25Y3D	6.29	0.00	-0.01	1.27	1.27	1.27
B39x_B02W	3Y1D	4.13	0.00	0.01	1.13	1.13	1.13

Pipe Link: B39x_B07P

Scenario:	Existing
From Node:	B40
To Node:	B07
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	575.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	10.78 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	11.98 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39x_B07P	100Y3D	1.34	-3.43	0.01	-1.94	2.63	-1.94
B39x_B07P	10Y1D	2.24	-3.05	-0.02	-1.73	3.10	1.90
B39x_B07P	25Y3D	1.38	-3.42	0.00	-1.93	2.70	-1.93
B39x_B07P	3Y1D	2.38	-2.16	-0.04	1.35	3.05	1.86

Drop Structure Link: CS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	5.52 ft	Invert:	2.55 ft
From Node:	Weir Node	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	OUTFALL	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	6.00 ft	Max Depth:	6.00 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Combine	Default:	0.00 ft	Default:	0.00 ft
Increments:	0	Op Table:		Op Table:	
Pipe Count:	1	Ref Node:		Ref Node:	
Damping:	0.0000 ft	Manning's N:	0.0000	Manning's N:	0.0000
Length:	72.00 ft	Top Clip			
FHWA Code:	1	Default:	0.00 ft	Default:	0.00 ft
Entr Loss Coef:	0.50	Op Table:		Op Table:	
Exit Loss Coef:	1.00	Ref Node:		Ref Node:	
Bend Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Sharp Crested Vertical	Top Clip	
Geometry Type:	V-Notch Up	Default:	0.00 ft
Invert:	8.02 ft	Op Table:	
Control Elevation:	8.02 ft	Ref Node:	
Max Depth:	1.33 ft	Discharge Coefficients	
Max Width:	1.50 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Weir Component			
Weir:	2	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Sharp Crested Vertical	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	11.52 ft	Op Table:	
Control Elevation:	8.02 ft	Ref Node:	
Max Depth:	99.00 ft	Discharge Coefficients	
Max Width:	5.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Link Min/Max Conditions [Existing]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
CS - Pipe	100Y3D	62.03	-0.05	-0.03	0.00	0.00	0.00
CS - Weir: 1	100Y3D	10.51	-0.05	0.00	10.54	10.54	10.54
CS - Weir: 2	100Y3D	51.53	0.00	-0.02	4.73	4.73	4.73
CS - Pipe	10Y1D	39.38	0.00	0.01	0.00	0.00	0.00
CS - Weir: 1	10Y1D	9.74	0.00	0.00	9.77	9.77	9.77
CS - Weir: 2	10Y1D	29.63	0.00	-0.01	3.93	3.93	3.93
CS - Pipe	25Y3D	56.74	0.00	0.02	0.00	0.00	0.00
CS - Weir: 1	25Y3D	8.97	0.00	0.00	8.99	8.99	8.99
CS - Weir: 2	25Y3D	47.77	0.00	0.01	4.61	4.61	4.61
CS - Pipe	3Y1D	33.19	0.00	0.01	0.00	0.00	0.00
CS - Weir: 1	3Y1D	9.49	0.00	0.00	9.52	9.52	9.52
CS - Weir: 2	3Y1D	23.70	0.00	-0.01	3.65	3.65	3.65

Weir Link: B01_B26W

Scenario:	Proposed
From Node:	B01
To Node:	B26
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	11.90 ft
Control Elevation:	11.90 ft
Cross Section:	B01_B26X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B01_B26W	100Y3D	112.40	-3.89	-0.09	0.64	0.64	0.64
B01_B26W	10Y1D	26.70	-3.21	-0.07	1.51	1.51	1.51
B01_B26W	25Y3D	72.68	-4.10	-0.05	-0.61	-0.61	-0.61
B01_B26W	3Y1D	10.39	-2.79	-0.05	1.13	1.13	1.13

Pipe Link: B01_B33P

Scenario:	Proposed
From Node:	B01
To Node:	B33
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft

Upstream

Invert:	4.40 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft

Downstream

Invert:	6.50 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft

Length:	530.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B01_B33P	100Y3D	5.97	-2.31	-0.24	1.90	2.66	1.90
B01_B33P	10Y1D	5.98	-9.69	-0.24	-3.09	3.20	-3.09
B01_B33P	25Y3D	5.95	-2.19	-0.24	1.89	2.50	1.89
B01_B33P	3Y1D	5.73	-9.92	-0.24	-3.16	-3.16	-3.16

Weir Link: B01_B33W

Scenario:	Proposed	Bottom Clip	
From Node:	B01	Default:	0.00 ft
To Node:	B33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.46 ft	Discharge Coefficients	
Control Elevation:	12.46 ft	Weir Default:	2.800
Cross Section:	B01_B33X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B01_B33W	100Y3D	13.85	-124.34	0.15	1.27	1.27	1.27
B01_B33W	10Y1D	12.97	-2.04	-0.03	1.24	1.24	1.24
B01_B33W	25Y3D	13.96	-75.64	0.14	1.27	1.27	1.27
B01_B33W	3Y1D	7.87	-0.13	0.01	1.22	1.22	1.22

Pipe Link: B02_ATLP

		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.00 ft	Invert:	11.50 ft
From Node:	B02	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B02x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	363.00 ft	Op Table:		Op Table:	

FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: Downstream invert not included on survey

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B02_ATLP	100Y3D	4.10	-1.38	-0.02	2.32	2.68	2.32
B02_ATLP	10Y1D	4.07	-1.06	0.01	2.31	3.34	2.61
B02_ATLP	25Y3D	4.11	-1.35	0.02	2.33	2.52	2.33
B02_ATLP	3Y1D	4.07	-0.13	0.02	2.30	3.34	2.61

Weir Link: B02_ATL_AVW

Scenario:	Proposed	Bottom Clip	
From Node:	B02	Default:	0.00 ft
To Node:	ATL_AV2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.30 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B02_ATL_AVX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B02_ATL_AVW	100Y3D	209.71	0.00	-0.25	2.48	2.48	2.48
B02_ATL_AVW	10Y1D	46.37	0.00	-0.03	1.65	1.65	1.65
B02_ATL_AVW	25Y3D	134.80	0.00	-0.20	2.17	2.17	2.17
B02_ATL_AVW	3Y1D	33.00	0.00	-0.02	1.53	1.53	1.53

Pipe Link: B02x_ATL_AVP		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.50 ft	Invert:	12.00 ft
From Node:	B02x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV2	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	300.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	

Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B02x_ATL_AVP	100Y3D	7.78	0.00	-0.02	4.40	5.71	5.06
B02x_ATL_AVP	10Y1D	6.72	0.00	0.01	3.80	5.36	4.58
B02x_ATL_AVP	25Y3D	7.41	0.00	0.02	4.19	5.59	4.88
B02x_ATL_AVP	3Y1D	6.52	0.00	0.01	3.69	5.21	4.45

Pipe Link: B03_OFF2P		Upstream		Downstream	
Scenario:	Proposed	Invert:	13.11 ft	Invert:	12.19 ft
From Node:	B03	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	OFF2	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.75 ft	Max Depth:	1.75 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	298.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B03_OFF2P	100Y3D	13.55	0.00	-0.42	5.63	5.63	5.63
B03_OFF2P	10Y1D	12.19	0.00	-0.31	5.07	5.07	5.07
B03_OFF2P	25Y3D	13.21	0.00	-0.43	5.49	5.49	5.49
B03_OFF2P	3Y1D	11.41	0.00	0.22	4.74	4.74	4.74

Pipe Link: B04_OFFP		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.07 ft	Invert:	10.87 ft
From Node:	B04	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	OFF	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	292.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	

Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B04_OFFP	100Y3D	10.74	0.00	0.03	6.08	6.08	6.08
B04_OFFP	10Y1D	9.96	0.00	0.03	5.63	5.63	5.63
B04_OFFP	25Y3D	10.51	0.00	0.03	5.95	5.95	5.95
B04_OFFP	3Y1D	9.48	0.00	0.03	5.37	5.37	5.37

Weir Link: B05_B29W

Scenario:	Proposed	Bottom Clip	
From Node:	B05	Default:	0.00 ft
To Node:	B29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.98 ft	Discharge Coefficients	
Control Elevation:	16.98 ft	Weir Default:	2.800
Cross Section:	B05_B29X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B05_B29W	100Y3D	0.00	-48.39	0.05	0.00	0.00	0.00
B05_B29W	10Y1D	0.00	-8.14	0.01	0.00	0.00	0.00
B05_B29W	25Y3D	0.00	-32.95	0.04	0.00	0.00	0.00
B05_B29W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B05_LAKE IDAW

Scenario:	Proposed	Bottom Clip	
From Node:	B05	Default:	0.00 ft
To Node:	LAKE_IDA1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.59 ft	Discharge Coefficients	

Control Elevation: 15.59 ft
Cross Section: B05_LAKE IDAX

Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B05_LAKE IDAW	100Y3D	169.80	0.00	-0.25	2.04	2.04	2.04
B05_LAKE IDAW	10Y1D	46.49	0.00	-0.03	1.69	1.69	1.69
B05_LAKE IDAW	25Y3D	115.79	0.00	-0.16	1.93	1.93	1.93
B05_LAKE IDAW	3Y1D	34.83	0.00	-0.02	1.63	1.63	1.63

Weir Link: B06_B04W

Scenario: Proposed
From Node: B06
To Node: B04
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 18.71 ft
Control Elevation: 18.71 ft
Cross Section: B06_B04X

Bottom Clip
Default: 0.00 ft
Op Table:
Ref Node:

Top Clip
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients
Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B06_B04W	100Y3D	0.00	-18.19	0.05	0.00	0.00	0.00
B06_B04W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B06_B04W	25Y3D	0.00	-6.38	0.01	0.00	0.00	0.00
B06_B04W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B06_B05W

Scenario: Proposed
From Node: B06
To Node: B05
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 17.55 ft
Control Elevation: 0.00 ft

Bottom Clip
Default: 0.00 ft
Op Table:
Ref Node:

Top Clip
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients
Weir Default: 2.800

Cross Section: B06_B05X

Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B06_B05W	100Y3D	84.57	0.00	-0.15	1.69	1.69	1.69
B06_B05W	10Y1D	27.07	0.00	-0.01	1.24	1.24	1.24
B06_B05W	25Y3D	56.32	0.00	-0.10	1.51	1.51	1.51
B06_B05W	3Y1D	20.23	0.00	-0.01	1.15	1.15	1.15

Weir Link: B07_B02W

Scenario: Proposed
From Node: B07
To Node: B02
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 16.65 ft
Control Elevation: 16.65 ft
Cross Section: B07_B02X

Bottom Clip
Default: 0.00 ft
Op Table:
Ref Node:

Top Clip
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients
Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B02W	100Y3D	99.92	0.00	0.20	1.74	1.74	1.74
B07_B02W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B02W	25Y3D	54.91	0.00	0.14	1.52	1.52	1.52
B07_B02W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B07_B04W

Scenario: Proposed
From Node: B07
To Node: B04
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 18.57 ft
Control Elevation: 18.57 ft
Cross Section: B07_B04X

Bottom Clip
Default: 0.00 ft
Op Table:
Ref Node:

Top Clip
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients
Weir Default: 2.800
Weir Table:

Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B04W	100Y3D	0.00	-38.66	0.06	0.00	0.00	0.00
B07_B04W	10Y1D	0.00	-1.61	0.00	0.00	0.00	0.00
B07_B04W	25Y3D	0.00	-20.52	0.03	0.00	0.00	0.00
B07_B04W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B07_B07xP

		Upstream		Downstream	
Scenario:	Proposed	Invert:	11.83 ft	Invert:	11.15 ft
From Node:	B07	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B07x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	612.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B07xP	100Y3D	6.96	-2.67	-0.12	2.22	2.84	2.22
B07_B07xP	10Y1D	7.76	0.00	-0.01	2.80	4.57	3.51
B07_B07xP	25Y3D	7.09	0.00	-0.01	2.26	2.66	2.26
B07_B07xP	3Y1D	9.27	0.00	-0.01	2.96	5.16	3.93

Weir Link: B07_B29W

Scenario:	Proposed	Bottom Clip	
From Node:	B07	Default:	0.00 ft
To Node:	B29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.57 ft	Discharge Coefficients	
Control Elevation:	17.57 ft	Weir Default:	2.800
Cross Section:	B07_B29X	Weir Table:	

Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07_B29W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B29W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B29W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B07_B29W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B07x_B34P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	11.22 ft	Invert:	10.73 ft
From Node:	B07x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B34	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	359.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B07x_B34P	100Y3D	7.14	-2.60	0.08	2.27	3.33	2.62
B07x_B34P	10Y1D	6.06	-2.01	0.04	1.93	-3.28	-2.08
B07x_B34P	25Y3D	7.31	-1.82	0.01	2.33	-3.26	2.48
B07x_B34P	3Y1D	3.57	-6.60	0.11	-2.10	-4.61	-3.27

Weir Link: B08_B28W

Scenario:	Proposed	Bottom Clip	
From Node:	B08	Default:	0.00 ft
To Node:	B28	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.88 ft	Discharge Coefficients	
Control Elevation:	13.88 ft	Weir Default:	2.800
Cross Section:	B08_B28X	Weir Table:	

Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B08_B28W	100Y3D	139.16	-11.86	0.32	-0.98	-0.98	-0.98
B08_B28W	10Y1D	0.00	-11.90	0.05	-1.39	-1.39	-1.39
B08_B28W	25Y3D	72.02	-14.94	0.17	-1.02	-1.02	-1.02
B08_B28W	3Y1D	0.00	-8.79	0.02	-1.22	-1.22	-1.22

Pipe Link: B08_B35P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.56 ft	Invert:	8.05 ft
From Node:	B08	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B35	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	623.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B08_B35P	100Y3D	4.14	-3.29	-0.02	1.32	2.41	1.78
B08_B35P	10Y1D	5.72	-1.46	-0.05	1.82	2.41	1.82
B08_B35P	25Y3D	4.31	-3.20	-0.03	1.37	2.41	1.78
B08_B35P	3Y1D	6.14	0.00	-0.01	1.95	2.41	1.95

Weir Link: B09_B29W

Scenario:	Proposed	Bottom Clip	
From Node:	B09	Default:	0.00 ft
To Node:	B29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.48 ft	Discharge Coefficients	
Control Elevation:	17.48 ft	Weir Default:	2.800
Cross Section:	B09_B29X	Weir Table:	

Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B09_B29W	100Y3D	0.00	-0.51	0.00	0.00	0.00	0.00
B09_B29W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B09_B29W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B09_B29W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B09_LAKE IDAW

Scenario:	Proposed
From Node:	B09
To Node:	LAKE_IDA1
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	16.25 ft
Control Elevation:	16.25 ft
Cross Section:	B09_LAKE IDAX

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B09_LAKE IDAW	100Y3D	54.42	0.00	-0.06	2.02	2.02	2.02
B09_LAKE IDAW	10Y1D	2.60	0.00	0.00	0.88	0.88	0.88
B09_LAKE IDAW	25Y3D	40.65	0.00	-0.05	1.86	1.86	1.86
B09_LAKE IDAW	3Y1D	0.71	0.00	0.00	0.73	0.73	0.73

Weir Link: B10_B15W

Scenario:	Proposed
From Node:	B10
To Node:	B15
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	15.47 ft
Control Elevation:	15.47 ft
Cross Section:	B10_B15X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600

Orifice Table:

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_B15W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B10_B15W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B10_B15W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B10_B15W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B10_B24P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	6.39 ft	Invert:	8.47 ft
From Node:	B10	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B24	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	461.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_B24P	100Y3D	9.31	0.00	0.00	2.96	2.96	2.96
B10_B24P	10Y1D	10.98	-3.10	0.04	3.49	3.49	3.49
B10_B24P	25Y3D	9.39	0.00	-0.01	2.99	2.99	2.99
B10_B24P	3Y1D	10.97	-1.66	0.01	3.49	3.49	3.49

Weir Link: B10_B24W

Scenario:	Proposed	Bottom Clip	
From Node:	B10	Default:	0.00 ft
To Node:	B24	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.43 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B10_B24X	Weir Table:	
		Orifice Default:	0.600

Orifice Table:

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_B24W	100Y3D	60.48	0.00	0.04	1.54	1.54	1.54
B10_B24W	10Y1D	24.07	0.00	0.07	1.23	1.23	1.23
B10_B24W	25Y3D	54.39	0.00	-0.04	1.51	1.51	1.51
B10_B24W	3Y1D	8.62	0.00	-0.01	0.97	0.97	0.97

Weir Link: B10_LAKE_IDAW

Scenario:	Proposed
From Node:	B10
To Node:	LAKE_IDA2
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.00 ft
Control Elevation:	0.00 ft
Cross Section:	B10_LAKE_IDAX

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B10_LAKE_IDAW	100Y3D	0.27	0.00	0.00	0.55	0.55	0.55
B10_LAKE_IDAW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B10_LAKE_IDAW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B10_LAKE_IDAW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Drop Structure Link: B11_B10DS

Scenario:	Proposed
From Node:	B11
To Node:	B10
Link Count:	1
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	60.00 ft
FHWA Code:	0
Entr Loss Coef:	0.00
Exit Loss Coef:	0.50

Upstream Pipe

Invert:	8.50 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Downstream Pipe

Invert:	8.50 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Bend Loss Coef: 0.50 Manning's N: 0.0000 Manning's N: 0.0000
Bend Location: 0.00 dec
Energy Switch: Energy

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	V-Notch Up
Invert:	11.50 ft
Control Elevation:	9.50 ft
Max Depth:	0.50 ft
Max Width:	0.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Weir Component

Weir:	2
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	14.80 ft
Control Elevation:	9.50 ft
Max Depth:	99.00 ft
Max Width:	8.00 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: Type C inlet

Drop Structure Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B11_B10DS - Pipe	100Y3D	8.58	0.00	0.00	0.00	0.00	0.00
B11_B10DS - Weir: 1	100Y3D	1.01	0.00	0.00	8.08	8.08	8.08
B11_B10DS - Weir: 2	100Y3D	8.41	0.00	-0.01	2.02	2.02	2.02
B11_B10DS - Pipe	10Y1D	2.05	0.00	0.00	0.00	0.00	0.00
B11_B10DS - Weir: 1	10Y1D	0.93	0.00	0.00	7.42	7.42	7.42
B11_B10DS - Weir: 2	10Y1D	1.39	0.00	0.00	1.21	1.21	1.21
B11_B10DS - Pipe	25Y3D	7.62	0.00	0.01	0.00	0.00	0.00
B11_B10DS -	25Y3D	1.01	0.00	0.00	8.07	8.07	8.07

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
Weir: 1							
B11_B10DS - Weir: 2	25Y3D	7.40	0.00	-0.01	2.01	2.01	2.01
B11_B10DS - Pipe	3Y1D	0.99	0.00	0.00	0.00	0.00	0.00
B11_B10DS - Weir: 1	3Y1D	0.99	0.00	0.00	7.92	7.92	7.92
B11_B10DS - Weir: 2	3Y1D	0.04	0.00	0.00	0.00	0.00	0.00

Weir Link: B12_B13W

Scenario:	Proposed
From Node:	B12
To Node:	B13
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.13 ft
Control Elevation:	14.13 ft
Cross Section:	B12_B13X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B12_B13W	100Y3D	32.69	-4.10	0.13	1.23	1.23	1.23
B12_B13W	10Y1D	16.16	-0.38	-0.04	1.78	1.78	1.78
B12_B13W	25Y3D	20.36	-1.83	0.06	1.82	1.82	1.82
B12_B13W	3Y1D	7.52	-0.15	0.01	1.48	1.48	1.48

Pipe Link: B12_B13xP

Scenario:	Proposed
From Node:	B12
To Node:	B13x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	511.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	10.11 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	8.65 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B12_B13xP	100Y3D	3.23	-1.03	0.02	2.33	2.11	1.88
B12_B13xP	10Y1D	3.75	0.00	0.00	2.78	2.52	2.27
B12_B13xP	25Y3D	3.36	0.00	-0.01	2.19	2.02	1.90
B12_B13xP	3Y1D	4.24	0.00	-0.01	2.93	2.47	2.40

Weir Link: B12_B38W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B12	Default:	0.00 ft
To Node:	B38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.33 ft	**Discharge Coefficients**	
Control Elevation:	15.33 ft	Weir Default:	2.800
Cross Section:	B12_B38X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B12_B38W	100Y3D	5.79	-18.36	0.07	-1.56	-1.56	-1.56
B12_B38W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B12_B38W	25Y3D	1.89	-7.17	0.04	-1.06	-1.06	-1.06
B12_B38W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B13_B08W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B13	Default:	0.00 ft
To Node:	B08	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.27 ft	**Discharge Coefficients**	
Control Elevation:	14.27 ft	Weir Default:	2.800
Cross Section:	B13_B08X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13_B08W	100Y3D	94.03	-56.39	0.39	-1.21	-1.21	-1.21
B13_B08W	10Y1D	0.00	-25.94	0.04	-1.35	-1.35	-1.35
B13_B08W	25Y3D	44.46	-72.48	0.39	-1.69	-1.69	-1.69
B13_B08W	3Y1D	0.00	-5.31	-0.01	-0.96	-0.96	-0.96

Pipe Link: B13_B13xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.72 ft	Invert:	8.41 ft
From Node:	B13	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B13x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	350.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13_B13xP	100Y3D	19.55	-8.10	0.61	2.77	2.77	2.77
B13_B13xP	10Y1D	19.06	0.00	-0.02	2.70	3.14	2.70
B13_B13xP	25Y3D	19.77	-0.08	0.08	2.80	2.80	2.80
B13_B13xP	3Y1D	17.41	0.00	-0.03	2.46	3.08	2.46

Weir Link: B13_B35W			
Scenario:	Proposed	Bottom Clip	
From Node:	B13	Default:	0.00 ft
To Node:	B35	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.65 ft	Discharge Coefficients	
Control Elevation:	14.65 ft	Weir Default:	2.800
Cross Section:	B13_B35X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13_B35W	100Y3D	0.00	-24.05	0.04	-1.77	-1.77	-1.77
B13_B35W	10Y1D	0.00	-2.81	0.00	-0.88	-0.88	-0.88
B13_B35W	25Y3D	0.00	-19.29	0.04	-1.70	-1.70	-1.70
B13_B35W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B13x_B22xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.52 ft	Invert:	8.49 ft
From Node:	B13x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	331.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B13x_B22xP	100Y3D	22.53	-9.29	1.31	2.34	2.85	2.34
B13x_B22xP	10Y1D	21.99	0.00	0.03	2.29	3.35	2.40
B13x_B22xP	25Y3D	22.78	0.00	-0.17	2.37	2.74	2.37
B13x_B22xP	3Y1D	20.06	0.00	-0.03	2.08	3.33	2.38

Weir Link: B14_B13W			
Scenario:	Proposed	Bottom Clip	
From Node:	B14	Default:	0.00 ft
To Node:	B13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.51 ft	Discharge Coefficients	
Control Elevation:	16.51 ft	Weir Default:	2.800
Cross Section:	B14_B13X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B14_B13W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B14_B13W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B14_B13W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B14_B13W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B14_B15W

Scenario:	Proposed
From Node:	B14
To Node:	B15
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.15 ft
Control Elevation:	14.15 ft
Cross Section:	B14_B15X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B14_B15W	100Y3D	18.81	-34.78	0.12	1.81	1.81	1.81
B14_B15W	10Y1D	0.82	-0.48	-0.01	1.52	1.52	1.52
B14_B15W	25Y3D	8.72	-20.31	0.04	1.81	1.81	1.81
B14_B15W	3Y1D	0.42	0.00	0.00	1.33	1.33	1.33

Pipe Link: B14_B16xP

Scenario:	Proposed
From Node:	B14
To Node:	B16x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	418.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	7.35 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	8.27 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	2.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B14_B16xP	100Y3D	6.02	-11.64	-0.05	-3.70	-3.70	-3.70
B14_B16xP	10Y1D	8.21	-9.07	-0.07	-2.89	-2.89	-2.89
B14_B16xP	25Y3D	6.11	-11.67	-0.04	-3.72	-3.72	-3.72
B14_B16xP	3Y1D	7.56	-4.88	-0.02	2.41	2.41	2.41

Pipe Link: B15_B10P		Upstream		Downstream	
Scenario:	Proposed	Invert:	7.38 ft	Invert:	3.03 ft
From Node:	B15	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B10	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	573.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B15_B10P	100Y3D	45.59	0.00	-0.13	4.74	4.74	4.74
B15_B10P	10Y1D	51.42	0.00	-0.13	5.34	5.34	5.34
B15_B10P	25Y3D	43.90	0.00	-0.13	4.56	4.56	4.56
B15_B10P	3Y1D	45.61	0.00	-0.13	4.74	4.74	4.74

Pipe Link: B15_B16xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.70 ft	Invert:	9.60 ft
From Node:	B15	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B16x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	744.40 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B15_B16xP	100Y3D	0.00	-18.32	0.01	-1.90	-1.90	-1.90
B15_B16xP	10Y1D	0.00	-17.93	-0.02	-1.86	-1.86	-1.86
B15_B16xP	25Y3D	0.00	-18.00	-0.12	-1.87	-1.87	-1.87
B15_B16xP	3Y1D	0.00	-19.77	-0.02	-2.05	-2.05	-2.05

Weir Link: B16_B09 W

Scenario:	Proposed
From Node:	B16
To Node:	B09
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.60 ft
Control Elevation:	17.60 ft
Cross Section:	B16_B09X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B09 W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B09 W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B09 W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B09 W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B16_B16xP

Scenario:	Proposed
From Node:	B16
To Node:	B16x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	549.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	9.74 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	3.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	9.32 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	3.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B16xP	100Y3D	29.33	0.00	-0.01	4.15	4.15	4.15
B16_B16xP	10Y1D	25.64	0.00	0.02	3.63	3.63	3.63
B16_B16xP	25Y3D	29.07	0.00	-0.16	4.11	4.11	4.11
B16_B16xP	3Y1D	23.60	0.00	-0.01	3.34	3.34	3.34

Weir Link: B16_B17W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B16	Default:	0.00 ft
To Node:	B17	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.73 ft	**Discharge Coefficients**	
Control Elevation:	16.73 ft	Weir Default:	2.800
Cross Section:	B16_B17X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B17W	100Y3D	27.54	0.00	0.08	1.71	1.71	1.71
B16_B17W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B17W	25Y3D	10.81	0.00	0.04	1.38	1.38	1.38
B16_B17W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B16_B34W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B16	Default:	0.00 ft
To Node:	B34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.51 ft	**Discharge Coefficients**	
Control Elevation:	17.51 ft	Weir Default:	2.800
Cross Section:	B16_B34X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B16_B34W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B34W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B34W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B16_B34W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B17_B09W

Scenario:	Proposed
From Node:	B17
To Node:	B09
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.54 ft
Control Elevation:	17.54 ft
Cross Section:	B17_B09X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B17_B09W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B17_B09W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B17_B09W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B17_B09W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B17_B15P

Scenario:	Proposed
From Node:	B17
To Node:	B15
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	622.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	9.82 ft	Invert:	9.78 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	2.50 ft	Max Depth:	2.50 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B17_B15P	100Y3D	14.12	0.00	-0.01	2.88	2.88	2.88
B17_B15P	10Y1D	18.76	0.00	-0.02	3.82	3.82	3.82
B17_B15P	25Y3D	14.34	0.00	-0.03	2.92	2.92	2.92
B17_B15P	3Y1D	16.09	0.00	-0.02	3.28	4.19	3.35

Weir Link: B17_LAKE IDAW

Scenario:	Proposed	**Bottom Clip**	
From Node:	B17	Default:	0.00 ft
To Node:	LAKE_IDA1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.90 ft	**Discharge Coefficients**	
Control Elevation:	14.90 ft	Weir Default:	2.800
Cross Section:	B17_LAKE IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B17_LAKE IDAW	100Y3D	79.03	-0.19	-0.10	2.07	2.07	2.07
B17_LAKE IDAW	10Y1D	6.66	-0.19	0.02	1.30	1.30	1.30
B17_LAKE IDAW	25Y3D	51.02	-0.19	-0.08	1.84	1.84	1.84
B17_LAKE IDAW	3Y1D	0.00	-0.19	0.00	0.00	0.00	0.00

Weir Link: B18_B24W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B18	Default:	0.00 ft
To Node:	B24	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.26 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B18_B24X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_B24W	100Y3D	1.70	-152.93	0.25	-1.01	-1.01	-1.01
B18_B24W	10Y1D	2.01	-29.17	-0.23	-1.37	-1.37	-1.37
B18_B24W	25Y3D	2.02	-103.06	0.25	-1.05	-1.05	-1.05
B18_B24W	3Y1D	0.89	-15.09	0.07	-1.23	-1.23	-1.23

Pipe Link: B18_B26P		Upstream		Downstream	
Scenario:	Proposed	Invert:	6.07 ft	Invert:	3.79 ft
From Node:	B18	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B26	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	60.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_B26P	100Y3D	7.49	-79.75	3.93	-6.35	-8.88	-7.61
B18_B26P	10Y1D	3.82	-79.75	3.93	-6.35	-8.88	-7.61
B18_B26P	25Y3D	7.38	-79.75	3.93	-6.35	-8.88	-7.61
B18_B26P	3Y1D	3.36	-79.75	3.93	-6.35	-8.88	-7.61

Weir Link: B18_B26W			
Scenario:	Proposed	Bottom Clip	
From Node:	B18	Default:	0.00 ft
To Node:	B26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.44 ft	Discharge Coefficients	
Control Elevation:	12.44 ft	Weir Default:	2.800
Cross Section:	B18_B26X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_B26W	100Y3D	24.66	-5.35	0.04	0.19	0.19	0.19
B18_B26W	10Y1D	5.37	-0.12	-0.02	-0.19	-0.19	-0.19
B18_B26W	25Y3D	24.25	-5.16	0.03	0.19	0.19	0.19
B18_B26W	3Y1D	0.44	-0.01	0.00	0.11	0.11	0.11

Weir Link: B18_LAKE_IDAW

Scenario:	Proposed	**Bottom Clip**	
From Node:	B18	Default:	0.00 ft
To Node:	LAKE_IDA3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.30 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B18_LAKE_IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B18_LAKE_IDAW	100Y3D	162.68	0.00	0.17	1.79	1.79	1.79
B18_LAKE_IDAW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B18_LAKE_IDAW	25Y3D	88.06	0.00	0.15	1.59	1.59	1.59
B18_LAKE_IDAW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B19_B20W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B19	Default:	0.00 ft
To Node:	B20	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	18.94 ft	**Discharge Coefficients**	
Control Elevation:	18.94 ft	Weir Default:	2.800
Cross Section:	B19_B20X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B19_B20W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B20W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B20W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B20W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B19_B23W

Scenario:	Proposed
From Node:	B19
To Node:	B23
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.31 ft
Control Elevation:	17.31 ft
Cross Section:	B19_B23X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B19_B23W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B23W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B23W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B19_B23W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B19_B23xP

Scenario:	Proposed
From Node:	B19
To Node:	B23x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	320.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	6.84 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	4.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	5.03 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	4.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B19_B23xP	100Y3D	183.19	0.00	4.04	14.58	14.96	14.77
B19_B23xP	10Y1D	183.19	0.00	2.75	14.58	14.96	14.77
B19_B23xP	25Y3D	183.19	0.00	3.92	14.58	14.96	14.77
B19_B23xP	3Y1D	183.19	0.00	3.56	14.58	14.96	14.77

Pipe Link: B20_B19P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.41 ft	Invert:	13.01 ft
From Node:	B20	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B19	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	777.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B20_B19P	100Y3D	5.33	-3.85	1.21	3.02	4.55	3.51
B20_B19P	10Y1D	5.52	-3.85	1.21	3.13	4.70	3.70
B20_B19P	25Y3D	5.58	-3.85	1.21	3.16	4.58	3.55
B20_B19P	3Y1D	4.72	-3.85	1.21	2.67	4.67	3.67

Weir Link: B20_B27W

Scenario:	Proposed	Bottom Clip	
From Node:	B20	Default:	0.00 ft
To Node:	B27	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.84 ft	Discharge Coefficients	
Control Elevation:	15.84 ft	Weir Default:	2.800
Cross Section:	B20_B27X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B20_B27W	100Y3D	67.85	0.00	-0.12	1.86	1.86	1.86
B20_B27W	10Y1D	26.24	0.00	-0.02	1.55	1.55	1.55
B20_B27W	25Y3D	50.52	0.00	-0.10	1.76	1.76	1.76
B20_B27W	3Y1D	18.53	0.00	-0.01	1.48	1.48	1.48

Pipe Link: B21_B21xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	10.56 ft	Invert:	10.42 ft
From Node:	B21	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B21x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	705.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B21_B21xP	100Y3D	4.73	-0.74	-0.02	2.68	3.03	2.68
B21_B21xP	10Y1D	5.94	0.00	-0.01	3.36	4.28	3.36
B21_B21xP	25Y3D	4.84	0.00	-0.01	2.74	2.84	2.74
B21_B21xP	3Y1D	6.61	0.00	-0.01	3.74	4.58	3.74

Weir Link: B21_B22xW			
Scenario:	Proposed	Bottom Clip	
From Node:	B21	Default:	0.00 ft
To Node:	B22x	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.96 ft	Discharge Coefficients	
Control Elevation:	15.96 ft	Weir Default:	2.800
Cross Section:	B21_B22X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B21_B22xW	100Y3D	39.28	0.00	0.09	1.78	1.78	1.78
B21_B22xW	10Y1D	4.78	0.00	0.00	1.23	1.23	1.23
B21_B22xW	25Y3D	24.13	0.00	0.06	1.60	1.60	1.60
B21_B22xW	3Y1D	0.36	0.00	0.00	0.66	0.66	0.66

Pipe Link: B21x_B19P		Upstream		Downstream	
Scenario:	Proposed	Invert:	7.14 ft	Invert:	7.02 ft
From Node:	B21x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B19	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	665.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B21x_B19P	100Y3D	28.90	-120.82	2.62	-9.61	-10.89	-10.25
B21x_B19P	10Y1D	18.66	-120.82	1.81	-9.61	-10.89	-10.25
B21x_B19P	25Y3D	26.75	-120.82	-2.95	-9.61	-10.89	-10.25
B21x_B19P	3Y1D	18.89	-120.82	1.81	-9.61	-10.89	-10.25

Weir Link: B22_B14W			
Scenario:	Proposed	Bottom Clip	
From Node:	B22	Default:	0.00 ft
To Node:	B14	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.02 ft	Discharge Coefficients	
Control Elevation:	14.02 ft	Weir Default:	2.800
Cross Section:	B22_B14X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22_B14W	100Y3D	3.98	-83.30	0.24	-1.74	-1.74	-1.74
B22_B14W	10Y1D	1.12	-19.46	-0.01	-1.48	-1.48	-1.48
B22_B14W	25Y3D	4.07	-59.72	0.18	-1.64	-1.64	-1.64
B22_B14W	3Y1D	0.00	-10.10	-0.01	0.00	0.00	0.00

Pipe Link: B22_B22xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	9.03 ft	Invert:	8.09 ft
From Node:	B22	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	293.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22_B22xP	100Y3D	6.45	-10.47	-0.03	-3.33	-3.33	-3.33
B22_B22xP	10Y1D	5.17	-13.92	0.01	-4.43	-4.43	-4.43
B22_B22xP	25Y3D	6.03	-10.18	0.02	-3.24	-3.24	-3.24
B22_B22xP	3Y1D	4.49	-12.73	0.01	-4.05	-4.05	-4.05

Pipe Link: B22x_B21xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.67 ft	Invert:	8.67 ft
From Node:	B22x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B21x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	357.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22x_B21xP	100Y3D	24.19	-1.31	-0.23	2.51	3.08	2.51
B22x_B21xP	10Y1D	16.28	-4.68	-0.05	1.74	3.73	2.67
B22x_B21xP	25Y3D	21.93	-1.08	-0.15	2.28	2.95	2.28
B22x_B21xP	3Y1D	13.05	-0.06	0.03	1.80	3.85	2.77

Weir Link: B22x_B21xW

Scenario:	Proposed	**Bottom Clip**	
From Node:	B22x	Default:	0.00 ft
To Node:	B21x	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.07 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B22x_B21x	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22x_B21xW	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B21xW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B21xW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B21xW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B22x_B36W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B22x	Default:	0.00 ft
To Node:	B36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	16.56 ft	**Discharge Coefficients**	
Control Elevation:	16.56 ft	Weir Default:	2.800
Cross Section:	B22_B36X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B22x_B36W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B36W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B36W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B22x_B36W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B23_B23xP

		Upstream		Downstream	
Scenario:	Proposed	Invert:	7.36 ft	Invert:	6.91 ft
From Node:	B23	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B23x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	26.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B23_B23xP	100Y3D	4.98	-2.25	0.09	2.82	3.46	2.82
B23_B23xP	10Y1D	6.55	-0.72	0.12	3.71	4.29	3.71
B23_B23xP	25Y3D	5.32	-0.33	0.09	3.01	3.22	3.01
B23_B23xP	3Y1D	6.65	-0.71	0.10	3.76	4.21	3.76

Weir Link: B23_B32W

Scenario:	Proposed	Bottom Clip	
From Node:	B23	Default:	0.00 ft
To Node:	B32	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.35 ft	Discharge Coefficients	
Control Elevation:	14.35 ft	Weir Default:	2.800
Cross Section:	B23_B32X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B23_B32W	100Y3D	66.46	0.00	-0.10	2.00	2.00	2.00
B23_B32W	10Y1D	2.32	0.00	0.00	0.91	0.91	0.91
B23_B32W	25Y3D	44.82	0.00	-0.08	1.84	1.84	1.84
B23_B32W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B23x_B32P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	5.42 ft	Invert:	5.46 ft
From Node:	B23x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B32	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	389.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B23x_B32P	100Y3D	43.64	-119.16	2.74	-9.48	-10.77	-10.13
B23x_B32P	10Y1D	30.38	-119.16	0.88	-9.48	-10.77	-10.13
B23x_B32P	25Y3D	39.50	-119.16	2.82	-9.48	-10.77	-10.13
B23x_B32P	3Y1D	28.02	-119.16	-1.49	-9.48	-10.77	-10.13

Weir Link: B24_B01W

Scenario:	Proposed	Bottom Clip	
From Node:	B24	Default:	0.00 ft
To Node:	B01	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.15 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B24_B01X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B01W	100Y3D	20.55	-60.27	0.12	1.13	1.13	1.13
B24_B01W	10Y1D	22.99	-0.20	0.10	1.38	1.38	1.38
B24_B01W	25Y3D	18.86	-24.94	0.12	1.13	1.13	1.13
B24_B01W	3Y1D	12.18	-0.17	-0.05	1.21	1.21	1.21

Pipe Link: B24_B22P		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.43 ft	Invert:	9.53 ft
From Node:	B24	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	857.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B22P	100Y3D	0.95	-9.72	0.01	-3.10	-3.10	-3.10
B24_B22P	10Y1D	2.86	-9.71	0.01	-3.09	-3.09	-3.09
B24_B22P	25Y3D	1.74	-9.23	0.01	-2.94	-2.94	-2.94
B24_B22P	3Y1D	2.91	-8.84	-0.02	-2.81	3.42	-2.81

Pipe Link: B24_B24xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.50 ft	Invert:	9.00 ft
From Node:	B24	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B24x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	540.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B24xP	100Y3D	5.46	-0.28	-0.42	1.74	3.52	2.25
B24_B24xP	10Y1D	8.30	-2.89	-0.44	2.64	4.60	3.25
B24_B24xP	25Y3D	5.44	-0.27	-0.43	1.73	3.48	2.22
B24_B24xP	3Y1D	8.24	0.00	-0.01	2.62	4.62	3.28

Weir Link: B24_B24xW

Scenario:	Proposed	Bottom Clip	
From Node:	B24	Default:	0.00 ft
To Node:	B24x	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	12.42 ft	Discharge Coefficients	
Control Elevation:	12.42 ft	Weir Default:	2.800
Cross Section:	B24_B22X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_B24xW	100Y3D	8.46	-11.91	11.91	1.11	1.11	1.11
B24_B24xW	10Y1D	9.27	-5.20	-5.06	1.13	1.13	1.13
B24_B24xW	25Y3D	8.44	-9.19	9.20	1.10	1.10	1.10
B24_B24xW	3Y1D	7.48	0.00	0.01	1.06	1.06	1.06

Weir Link: B24_LAKE_IDAW

Scenario:	Proposed	Bottom Clip	
From Node:	B24	Default:	0.00 ft
To Node:	LAKE_IDA2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.60 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B24_LAKE_IDAX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24_LAKE_IDAW	100Y3D	21.09	0.00	0.03	1.44	1.44	1.44
B24_LAKE_IDAW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B24_LAKE_IDAW	25Y3D	7.22	0.00	0.02	1.21	1.21	1.21
B24_LAKE_IDAW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B24x_B22P		Upstream		Downstream	
Scenario:	Proposed	Invert:	9.00 ft	Invert:	9.00 ft
From Node:	B24x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	350.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24x_B22P	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B22P	10Y1D	1.23	0.00	0.00	0.39	0.39	0.39
B24x_B22P	25Y3D	0.10	0.00	0.00	0.03	0.03	0.03
B24x_B22P	3Y1D	0.08	0.00	0.00	0.02	0.02	0.02

Pipe Link: B24x_B33P		Upstream		Downstream	
Scenario:	Proposed	Invert:	6.50 ft	Invert:	6.00 ft
From Node:	B24x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B33	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	820.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24x_B33P	100Y3D	10.06	-6.02	0.36	1.42	-3.58	-2.26
B24x_B33P	10Y1D	9.76	-7.21	-0.36	1.38	-3.58	-2.26
B24x_B33P	25Y3D	10.00	-4.94	0.36	1.41	-3.58	-2.26
B24x_B33P	3Y1D	8.85	-3.35	0.05	1.25	-3.58	-2.26

Weir Link: B24x_B33W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B24x	Default:	0.00 ft
To Node:	B33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.30 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B24x_B33X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B24x_B33W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B33W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B33W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B24x_B33W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B25_B32W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B25	Default:	0.00 ft
To Node:	B32	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	13.91 ft	**Discharge Coefficients**	
Control Elevation:	13.91 ft	Weir Default:	2.800
Cross Section:	B25_B32X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B25_B32W	100Y3D	0.00	-37.60	0.11	-1.78	-1.78	-1.78
B25_B32W	10Y1D	0.00	-0.32	0.00	0.00	0.00	0.00
B25_B32W	25Y3D	0.00	-23.54	0.03	-1.56	-1.56	-1.56
B25_B32W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B25_OUTFALLP		Upstream		Downstream	
Scenario:	Proposed	Invert:	5.66 ft	Invert:	5.49 ft
From Node:	B25	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	Weir Node	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	757.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B25_OUTFALLP	100Y3D	71.53	0.00	-0.03	4.50	4.50	4.50
B25_OUTFALLP	10Y1D	41.70	0.00	0.01	2.62	3.46	2.62
B25_OUTFALLP	25Y3D	63.43	0.00	-0.03	3.99	3.99	3.99
B25_OUTFALLP	3Y1D	34.68	0.00	0.01	2.18	3.37	2.37

Pipe Link: B26_B01P		Upstream		Downstream	
Scenario:	Proposed	Invert:	4.40 ft	Invert:	4.40 ft
From Node:	B26	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B01	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	475.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B26_B01P	100Y3D	49.30	-8.91	-1.96	6.97	6.97	6.97
B26_B01P	10Y1D	49.30	-21.03	-1.96	6.97	6.97	6.97
B26_B01P	25Y3D	49.30	-8.91	-1.96	6.97	6.97	6.97
B26_B01P	3Y1D	49.30	-14.61	-1.96	6.97	6.97	6.97

Weir Link: B26_LAKE_IDAW

Scenario:	Proposed
From Node:	B26
To Node:	LAKE_IDA3
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	12.90 ft
Control Elevation:	0.00 ft
Cross Section:	B26_LAKE_IDAX

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B26_LAKE_IDAW	100Y3D	144.73	0.00	0.07	2.57	2.57	2.57
B26_LAKE_IDAW	10Y1D	11.92	0.00	0.01	1.43	1.43	1.43
B26_LAKE_IDAW	25Y3D	109.71	0.00	0.09	2.39	2.39	2.39
B26_LAKE_IDAW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B27_ATL_AVP

Scenario:	Proposed
From Node:	B27
To Node:	ATL_AV4
Link Count:	1
Flow Direction:	Positive
Damping:	0.0000 ft
Length:	106.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	12.00 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	11.50 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B27_ATL_AVP	100Y3D	14.73	0.00	-0.25	8.34	8.59	8.46
B27_ATL_AVP	10Y1D	13.95	0.00	0.25	7.89	8.21	8.05
B27_ATL_AVP	25Y3D	14.48	0.00	0.50	8.20	8.46	8.33
B27_ATL_AVP	3Y1D	13.67	0.00	0.25	7.73	8.07	7.90

Weir Link: B27_ATL_AVW

Scenario:	Proposed
From Node:	B27
To Node:	ATL_AV4
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	15.07 ft
Control Elevation:	0.00 ft
Cross Section:	B27_ATL_AVX

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B27_ATL_AVW	100Y3D	68.78	0.00	-0.15	1.88	1.88	1.88
B27_ATL_AVW	10Y1D	19.54	0.00	-0.01	1.41	1.41	1.41
B27_ATL_AVW	25Y3D	48.50	0.00	-0.11	1.74	1.74	1.74
B27_ATL_AVW	3Y1D	9.37	0.00	-0.01	1.16	1.16	1.16

Pipe Link: B27_B21P

Scenario:	Proposed
From Node:	B27
To Node:	B21
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	468.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream	
Invert:	12.37 ft
Manning's N:	0.0120
Geometry: Circular	
Max Depth:	1.25 ft
Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream	
Invert:	10.15 ft
Manning's N:	0.0120
Geometry: Circular	
Max Depth:	1.25 ft
Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B27_B21P	100Y3D	5.23	-5.20	-0.22	4.26	5.36	4.81
B27_B21P	10Y1D	5.23	-5.19	-0.22	4.26	5.36	4.81
B27_B21P	25Y3D	5.23	-5.22	-0.22	4.26	5.36	4.81
B27_B21P	3Y1D	5.23	-5.01	-0.22	4.26	5.36	4.81

Weir Link: B28_ATL_AVW

Scenario:	Proposed
From Node:	B28
To Node:	ATL_AV3
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	14.90 ft
Control Elevation:	0.00 ft
Cross Section:	B28_ATL_AVX

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B28_ATL_AVW	100Y3D	145.54	0.00	0.31	1.97	1.97	1.97
B28_ATL_AVW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B28_ATL_AVW	25Y3D	75.29	0.00	0.18	1.62	1.62	1.62
B28_ATL_AVW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B29_B16P

Scenario:	Proposed
From Node:	B29
To Node:	B16
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	717.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	11.69 ft	Invert:	10.01 ft
Manning's N:	0.0120	Manning's N:	0.0120
Geometry: Circular		Geometry: Circular	
Max Depth:	2.00 ft	Max Depth:	2.00 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B29_B16P	100Y3D	8.70	0.00	-0.01	2.77	2.77	2.77
B29_B16P	10Y1D	11.16	0.00	0.01	3.65	3.55	3.55
B29_B16P	25Y3D	9.09	0.00	-0.01	2.89	2.89	2.89
B29_B16P	3Y1D	11.21	0.00	0.01	3.82	3.57	3.57

Pipe Link: B30_B02xP

		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.50 ft	Invert:	12.00 ft
From Node:	B30	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B02x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	50.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B30_B02xP	100Y3D	9.02	0.00	-0.05	5.10	5.10	5.10
B30_B02xP	10Y1D	8.05	0.00	0.05	4.55	4.55	4.55
B30_B02xP	25Y3D	8.81	0.00	-0.06	4.98	4.98	4.98
B30_B02xP	3Y1D	6.91	0.00	0.05	3.91	3.91	3.91

Weir Link: B31_Depot AveW

Scenario:	Proposed	Bottom Clip	
From Node:	B31	Default:	0.00 ft
To Node:	Depot Ave	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	11.77 ft	Discharge Coefficients	
Control Elevation:	11.77 ft	Weir Default:	2.800
Cross Section:	B31_Depot AveX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B31_Depot AveW	100Y3D	15.18	0.00	-0.19	1.42	1.42	1.42
B31_Depot AveW	10Y1D	7.84	0.00	-0.19	1.23	1.23	1.23
B31_Depot AveW	25Y3D	11.77	0.00	-0.19	1.35	1.35	1.35
B31_Depot AveW	3Y1D	6.12	0.00	-0.19	1.16	1.16	1.16

Weir Link: B32_B19W

Scenario:	Proposed
From Node:	B32
To Node:	B19
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	16.39 ft
Control Elevation:	16.39 ft
Cross Section:	B32_B19X

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32_B19W	100Y3D	0.00	-0.07	0.07	0.00	0.00	0.00
B32_B19W	10Y1D	0.00	-0.07	0.07	0.00	0.00	0.00
B32_B19W	25Y3D	0.00	-0.07	0.07	0.00	0.00	0.00
B32_B19W	3Y1D	0.00	-0.07	0.07	0.00	0.00	0.00

Pipe Link: B32_B32xP

Scenario:	Proposed
From Node:	B32
To Node:	B32x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	1005.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream	
Invert:	5.39 ft
Manning's N:	0.0120
Geometry: Circular	
Max Depth:	3.50 ft
Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream	
Invert:	5.46 ft
Manning's N:	0.0120
Geometry: Circular	
Max Depth:	3.50 ft
Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32_B32xP	100Y3D	61.10	0.00	-0.42	6.35	8.50	7.42
B32_B32xP	10Y1D	61.10	0.00	-0.32	6.35	8.50	7.42
B32_B32xP	25Y3D	61.10	0.00	-0.59	6.35	8.50	7.42
B32_B32xP	3Y1D	61.10	0.00	0.33	6.35	8.50	7.42

Weir Link: B32_B33W

Scenario:	Proposed
From Node:	B32
To Node:	B33
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	13.90 ft
Control Elevation:	13.90 ft
Cross Section:	B32_B33X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32_B33W	100Y3D	89.03	0.00	-0.10	1.92	1.92	1.92
B32_B33W	10Y1D	2.11	0.00	0.00	0.81	0.81	0.81
B32_B33W	25Y3D	58.43	0.00	-0.07	1.74	1.74	1.74
B32_B33W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B32x_B25P

Scenario:	Proposed
From Node:	B32x
To Node:	B25
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	278.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	5.44 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	4.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	5.36 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	4.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B32x_B25P	100Y3D	42.84	0.00	0.12	2.69	2.87	2.69
B32x_B25P	10Y1D	40.26	0.00	0.04	2.53	3.06	2.53
B32x_B25P	25Y3D	42.38	0.00	0.12	2.66	2.69	2.66
B32x_B25P	3Y1D	33.69	0.00	-0.08	2.12	2.90	2.12

Weir Link: B33_B19W

Scenario:	Proposed
From Node:	B33
To Node:	B19
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	17.03 ft
Control Elevation:	17.03 ft
Cross Section:	B33_B19X

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B33_B19W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B33_B19W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B33_B19W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B33_B19W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B33_B32xP

Scenario:	Proposed
From Node:	B33
To Node:	B33x
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	350.00 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	0.50
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream

Invert:	6.00 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	3.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream

Invert:	5.50 ft
Manning's N:	0.0120

Geometry: Circular

Max Depth:	3.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B33_B32xP	100Y3D	20.55	-0.19	0.15	3.04	4.95	3.99
B33_B32xP	10Y1D	19.69	-0.16	-0.17	3.04	4.95	3.99
B33_B32xP	25Y3D	20.64	-0.08	0.19	3.04	4.95	3.99
B33_B32xP	3Y1D	17.33	0.00	0.63	3.04	4.95	3.99

Pipe Link: B33x_B32xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	5.00 ft	Invert:	5.00 ft
From Node:	B33x	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B32x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	200.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B33x_B32xP	100Y3D	20.64	0.00	0.17	2.15	2.15	2.15
B33x_B32xP	10Y1D	19.73	0.00	0.14	2.05	2.05	2.05
B33x_B32xP	25Y3D	20.73	0.00	-0.17	2.15	2.15	2.15
B33x_B32xP	3Y1D	17.37	0.00	1.18	1.81	1.81	1.81

Weir Link: B34_B07W			
Scenario:	Proposed	Bottom Clip	
From Node:	B34	Default:	0.00 ft
To Node:	B07	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	19.23 ft	Discharge Coefficients	
Control Elevation:	19.23 ft	Weir Default:	2.800
Cross Section:	B34_B07X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B34_B07W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B07W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B07W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B07W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B34_B35P		Upstream		Downstream	
Scenario:	Proposed	Invert:	9.95 ft	Invert:	9.64 ft
From Node:	B34	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B35	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	323.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B34_B35P	100Y3D	16.66	0.00	-0.03	5.30	5.32	5.30
B34_B35P	10Y1D	9.22	-6.36	0.09	2.94	5.32	4.11
B34_B35P	25Y3D	14.50	0.00	-0.02	4.62	5.32	4.62
B34_B35P	3Y1D	9.22	-6.58	-0.06	2.94	5.32	4.11

Weir Link: B34_B37W			
Scenario:	Proposed	Bottom Clip	
From Node:	B34	Default:	0.00 ft
To Node:	B37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.82 ft	Discharge Coefficients	
Control Elevation:	17.82 ft	Weir Default:	2.800
Cross Section:	B34_B37X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B34_B37W	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B37W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B37W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B34_B37W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B35_B13P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.76 ft	Invert:	8.76 ft
From Node:	B35	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B13	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.67 ft	Max Depth:	2.67 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	327.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B35_B13P	100Y3D	10.61	0.00	-0.02	1.90	2.15	1.90
B35_B13P	10Y1D	9.86	0.00	-0.01	1.76	2.27	1.76
B35_B13P	25Y3D	13.58	0.00	-0.02	2.42	2.42	2.42
B35_B13P	3Y1D	10.75	0.00	0.01	1.92	2.20	1.95

Weir Link: B35_B34W

Scenario:	Proposed	Bottom Clip	
From Node:	B35	Default:	0.00 ft
To Node:	B34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.44 ft	Discharge Coefficients	
Control Elevation:	17.44 ft	Weir Default:	2.800
Cross Section:	B35_B34X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B35_B34W	100Y3D	0.00	-0.12	0.00	0.00	0.00	0.00
B35_B34W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B35_B34W	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B35_B34W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B36_B22xP		Upstream		Downstream	
Scenario:	Proposed	Invert:	9.40 ft	Invert:	9.77 ft
From Node:	B36	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B22x	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	647.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B36_B22xP	100Y3D	15.54	-2.81	0.41	4.95	6.51	5.73
B36_B22xP	10Y1D	15.54	-2.49	-0.04	4.95	6.51	5.73
B36_B22xP	25Y3D	15.54	-2.77	0.39	4.95	6.51	5.73
B36_B22xP	3Y1D	15.54	-1.89	0.16	4.95	6.51	5.73

Weir Link: B36_B38W			
Scenario:	Proposed	Bottom Clip	
From Node:	B36	Default:	0.00 ft
To Node:	B38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.25 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B36_B38X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B36_B38W	100Y3D	23.55	0.00	-0.03	1.38	1.38	1.38
B36_B38W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B36_B38W	25Y3D	14.52	0.00	-0.03	1.32	1.32	1.32
B36_B38W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B37_B08W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B37	Default:	0.00 ft
To Node:	B08	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.80 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B37_B08X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B37_B08W	100Y3D	48.24	0.00	-0.13	2.00	2.00	2.00
B37_B08W	10Y1D	6.55	0.00	0.02	1.38	1.38	1.38
B37_B08W	25Y3D	33.85	0.00	-0.08	1.93	1.93	1.93
B37_B08W	3Y1D	0.27	0.00	0.00	0.53	0.53	0.53

Weir Link: B37_B30W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B37	Default:	0.00 ft
To Node:	B30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.40 ft	**Discharge Coefficients**	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B37_B30X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B37_B30W	100Y3D	4.15	-15.52	0.09	-1.40	-1.40	-1.40
B37_B30W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B37_B30W	25Y3D	0.77	-9.06	0.03	-1.31	-1.31	-1.31
B37_B30W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B37_B34P		Upstream		Downstream	
Scenario:	Proposed	Invert:	9.50 ft	Invert:	10.69 ft
From Node:	B37	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B34	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	607.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B37_B34P	100Y3D	1.85	-6.03	0.02	-3.41	-4.57	-3.62
B37_B34P	10Y1D	2.73	-4.37	0.04	-2.68	-4.57	-3.62
B37_B34P	25Y3D	2.18	-5.21	0.03	-2.95	-4.57	-3.62
B37_B34P	3Y1D	2.29	-4.37	0.03	-2.68	-4.57	-3.62

Pipe Link: B38_ATL_AVP		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.00 ft	Invert:	11.50 ft
From Node:	B38	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV4	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	104.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B38_ATL_AVP	100Y3D	14.94	0.00	0.28	8.45	8.68	8.57
B38_ATL_AVP	10Y1D	10.91	0.00	0.28	6.17	6.85	6.51
B38_ATL_AVP	25Y3D	14.52	0.00	0.28	8.22	8.48	8.35
B38_ATL_AVP	3Y1D	10.91	0.00	0.28	6.17	6.85	6.51

Pipe Link: B38_B36P		Upstream		Downstream	
Scenario:	Proposed	Invert:	10.81 ft	Invert:	9.81 ft
From Node:	B38	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B36	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	524.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B38_B36P	100Y3D	1.07	-4.14	0.08	-3.37	-3.37	-3.37
B38_B36P	10Y1D	2.12	-3.70	0.04	-3.01	-3.01	-3.01
B38_B36P	25Y3D	1.07	-4.13	-0.04	-3.37	-3.37	-3.37
B38_B36P	3Y1D	1.96	-3.07	0.04	-2.50	-2.50	-2.50

Pipe Link: B39_ATL_AVP		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.00 ft	Invert:	11.50 ft
From Node:	B39	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	ATL_AV1	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	50.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_ATL_AVP	100Y3D	10.25	0.00	-0.02	8.35	8.35	8.35
B39_ATL_AVP	10Y1D	9.76	0.00	-0.03	7.96	7.96	7.96
B39_ATL_AVP	25Y3D	10.07	0.00	-0.02	8.21	8.21	8.21
B39_ATL_AVP	3Y1D	9.60	0.00	-0.02	7.83	7.83	7.83

Weir Link: B39_ATL_AVW

Scenario:	Proposed	Bottom Clip	
From Node:	B39	Default:	0.00 ft
To Node:	ATL_AV1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.05 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39_ATL_AVX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_ATL_AVW	100Y3D	94.23	0.00	-0.16	1.69	1.69	1.69
B39_ATL_AVW	10Y1D	33.14	0.00	0.02	1.39	1.39	1.39
B39_ATL_AVW	25Y3D	65.99	0.00	-0.12	1.60	1.60	1.60
B39_ATL_AVW	3Y1D	21.04	0.00	-0.01	1.25	1.25	1.25

Weir Link: B39_B03W

Scenario:	Proposed	Bottom Clip	
From Node:	B39	Default:	0.00 ft
To Node:	B03	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	17.91 ft	Discharge Coefficients	
Control Elevation:	17.91 ft	Weir Default:	2.800
Cross Section:	B39_B03X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_B03W	100Y3D	0.00	-18.99	-0.06	0.00	0.00	0.00
B39_B03W	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B03W	25Y3D	0.00	-8.99	-0.02	0.00	0.00	0.00
B39_B03W	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Pipe Link: B39_B39xP

		Upstream		Downstream	
Scenario:	Proposed	Invert:	12.00 ft	Invert:	12.50 ft
From Node:	B39	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B40	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	233.72 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_B39xP	100Y3D	3.12	-2.44	-0.02	2.55	3.10	2.55
B39_B39xP	10Y1D	3.92	-2.23	-0.02	3.19	3.19	3.19
B39_B39xP	25Y3D	3.04	-2.45	-0.02	2.48	3.03	2.48
B39_B39xP	3Y1D	3.89	-1.88	-0.01	3.17	3.17	3.17

Weir Link: B39_B39xW

Scenario:	Proposed	Bottom Clip	
From Node:	B39	Default:	0.00 ft
To Node:	B40	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.65 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39_B39xX	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta	Max Us Velocity	Max Ds Velocity	Max Avg Velocity

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39_B39xW	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B39xW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B39xW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39_B39xW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B39x_ATL_AVW

Scenario:	Proposed	Bottom Clip	
From Node:	B40	Default:	0.00 ft
To Node:	ATL_AV1	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	15.35 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39x_B39X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39x_ATL_AVW	100Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39x_ATL_AVW	10Y1D	0.00	0.00	0.00	0.00	0.00	0.00
B39x_ATL_AVW	25Y3D	0.00	0.00	0.00	0.00	0.00	0.00
B39x_ATL_AVW	3Y1D	0.00	0.00	0.00	0.00	0.00	0.00

Weir Link: B39x_B02W

Scenario:	Proposed	Bottom Clip	
From Node:	B40	Default:	0.00 ft
To Node:	B02	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	14.80 ft	Discharge Coefficients	
Control Elevation:	0.00 ft	Weir Default:	2.800
Cross Section:	B39x_B02X	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39x_B02W	100Y3D	6.25	0.00	-0.01	1.27	1.27	1.27
B39x_B02W	10Y1D	4.06	0.00	0.01	1.13	1.13	1.13
B39x_B02W	25Y3D	6.21	0.00	-0.01	1.27	1.27	1.27
B39x_B02W	3Y1D	1.46	0.00	0.00	0.84	0.84	0.84

Pipe Link: B39x_B07P		Upstream		Downstream	
Scenario:	Proposed	Invert:	10.78 ft	Invert:	11.98 ft
From Node:	B40	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B07	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	575.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
B39x_B07P	100Y3D	1.41	-3.42	0.01	-1.93	2.65	-1.93
B39x_B07P	10Y1D	2.58	-2.25	-0.04	1.46	3.21	2.00
B39x_B07P	25Y3D	1.43	-3.41	-0.01	-1.93	2.52	-1.93
B39x_B07P	3Y1D	2.68	-1.64	-0.01	1.51	3.21	2.01

Drop Structure Link: CS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	5.52 ft	Invert:	2.55 ft
From Node:	Weir Node	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	OUTFALL	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	6.00 ft	Max Depth:	6.00 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Combine	Default:	0.00 ft	Default:	0.00 ft
Increments:	0	Op Table:		Op Table:	
Pipe Count:	1	Ref Node:		Ref Node:	
Damping:	0.0000 ft	Manning's N:	0.0000	Manning's N:	0.0000
Length:	72.00 ft	Top Clip			
FHWA Code:	1	Default:	0.00 ft	Default:	0.00 ft
Entr Loss Coef:	0.50	Op Table:		Op Table:	
Exit Loss Coef:	1.00	Ref Node:		Ref Node:	
Bend Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	V-Notch Up
Invert:	8.02 ft
Control Elevation:	8.02 ft
Max Depth:	1.33 ft
Max Width:	1.50 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Weir Component

Weir:	2
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	10.90 ft
Control Elevation:	8.02 ft
Max Depth:	99.00 ft
Max Width:	5.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Link Min/Max Conditions [Proposed]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
CS - Pipe	100Y3D	71.45	-0.23	-0.03	0.00	0.00	0.00
CS - Weir: 1	100Y3D	10.12	-0.23	0.00	10.14	10.14	10.14
CS - Weir: 2	100Y3D	61.33	0.00	-0.02	5.01	5.01	5.01
CS - Pipe	10Y1D	41.70	0.00	0.01	0.00	0.00	0.00
CS - Weir: 1	10Y1D	9.11	0.00	0.00	9.13	9.13	9.13
CS - Weir: 2	10Y1D	32.59	0.00	-0.01	4.06	4.06	4.06
CS - Pipe	25Y3D	63.37	0.00	-0.02	0.00	0.00	0.00
CS - Weir: 1	25Y3D	8.89	0.00	0.00	8.91	8.91	8.91
CS - Weir: 2	25Y3D	55.00	0.00	-0.02	4.83	4.83	4.83
CS - Pipe	3Y1D	34.68	0.00	0.01	0.00	0.00	0.00
CS - Weir: 1	3Y1D	8.81	0.00	0.00	8.83	8.83	8.83
CS - Weir: 2	3Y1D	25.86	0.00	0.01	3.76	3.76	3.76

Simulation: 100Y3D

Scenario:	Existing
Run Date/Time:	3/3/2022 1:10:18 PM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	100.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 19.00 in
Storm Duration: 72.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 10Y1D

Scenario: Existing
Run Date/Time: 9/20/2022 7:28:40 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
IA Recovery Time: 24.0000 hr

Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	8.00 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 25Y3D

Scenario: Existing
Run Date/Time: 2/22/2022 9:48:18 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	100.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:

Vertical Layers Set:	
Impervious Set:	Imperv
Roughness Set:	
Crop Coef Set:	
Fillable Porosity Set:	
Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	15.00 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 3Y1D

Scenario:	Existing
Run Date/Time:	9/30/2022 1:10:13 PM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 6.50 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 100Y3D

Scenario: Proposed
Run Date/Time: 3/3/2022 1:13:11 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	100.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 19.00 in
Storm Duration: 72.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 10Y1D

Scenario: Proposed
Run Date/Time: 9/20/2022 7:29:37 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

Year	Month	Day	Hour [hr]

Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 8.00 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 25Y3D

Scenario: Proposed
Run Date/Time: 2/22/2022 9:53:29 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	100.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 15.00 in

Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 3Y1D

Scenario: Proposed
Run Date/Time: 2/22/2022 9:57:15 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: E-4 Canal
Extern Hydrograph Set:
Curve Number Set: CNs
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Imperv
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:

Leakage Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	6.50 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

CITY OF DELRAY BEACH

NORTHWEST NEIGHBORHOOD IMPROVEMENTS PROJECT

The City of Delray Beach, with funding from the Delray Beach Community Redevelopment Agency, is in the design stage of the Northwest Neighborhood Improvements Project.

The project area is bounded by Lake Ida Road to the north, Swinton Avenue to the east, W. Atlantic Avenue to the south, and Interstate 95 to the west.

The City held 10 public meetings in 2022 to present the Preliminary Design Report and get public input.

The resulting project will include roadway improvements, with the goal of providing traffic calming to address speeding and cut-through traffic in the neighborhood and to allow for safer streets. Utility systems will be replaced or upgraded. Other improvements will be made to beautify and provide consistent design elements for the neighborhood area as a whole.

- ☑ Pave Alleys, provide LED Lighting
- ☑ Decorative Street Lighting
- ☑ School Zone Flashing Signage and Crosswalks
- ☑ New Roadways With Sidewalks Both Sides
- ☑ Raised Intersection With Decorative Pavement
- ☑ Side Street Parking With Landscaped Islands
- ☑ Raised Intersection With Decorative Pavement and Speed Humps
- ☑ Traffic Calming Improvements (*See Attached Map For Additional Details)*

This is a brief summary of the exciting improvements proposed for your neighborhood. We appreciate your support of the NW Neighborhood Improvement Project.

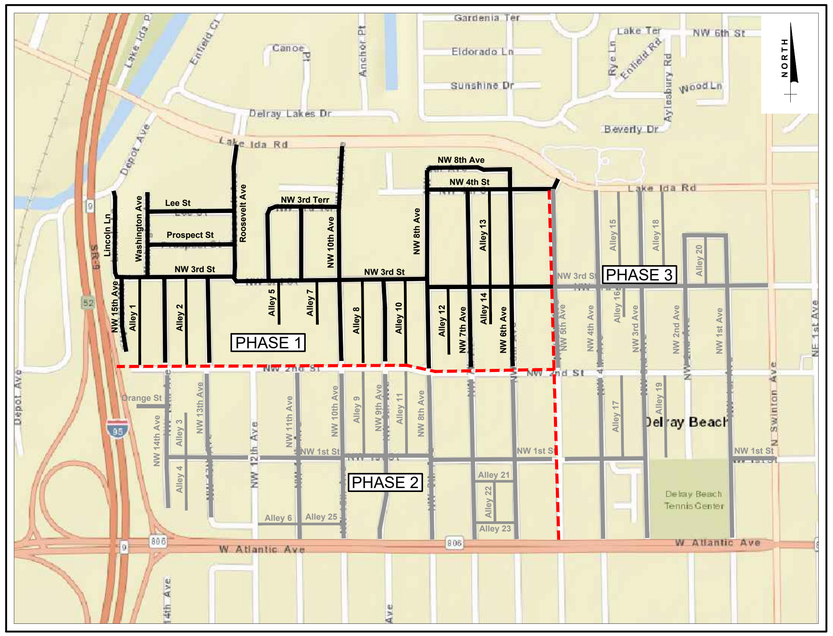
For more details, please visit the project website **NWNeighborhoodproject.com**.

Contact Rebecca Travis for information & updates. BAXTER & WOODMAN Consulting Engineers

561-425-7715 rtravis@baxterwoodman.com NWNeighborhoodproject.com

CITY OF DELRAY BEACH
CONCEPTUAL IMPROVEMENTS OF NW NEIGHBORHOOD

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS - PHASE 1
VOLUME 1 - CIVIL
CITY PROJECT No. 2017-020



S 8 & 17, TWP 46S, RNG 43E

= LIMITS OF PROJECT AREA

= PHASING LINE

PROJECT LOCATION MAP

N.T.S.

CITY OFFICIALS

MAYOR	SHELLY PETROLIA
VICE MAYOR	RYAN BOYLSTON
DEPUTY VICE MAYOR	ROB LONG
COMMISSIONER	ADAM FRANKEL
COMMISSIONER	ANGELA BURNS

CRA OFFICIALS

CHAIR	ADAM FRANKEL
VICE CHAIR	ANGELA BURNS
DEPUTY VICE CHAIR	SHELLY PETROLIA
COMMISSIONER	RYAN BOYLSTON
COMMISSIONER	ROB LONG

GOVERNING STANDARD PLANS:
Florida Department of Transportation, FY 2019-20 Standard PLans for Road and Bridge Construction and application Interim Revision (IRs)

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

GOVERNING STANDARD SPECIFICATIONS:
Florida Department of Transportation, July 2019 Standard Specifications for Road and Bridge Construction at the following website:
http://www.fdot.gov/programmanagement/implemented/SpecBooks

POSTED SPEED LIMIT

ATLANTIC AVENUE (FDOT ROW) - 35 MPH
LAKE IDA ROAD (PBCo ROW) - 35 MPH
NORTHWEST NEIGHBORHOOD - 25 MPH

60% DESIGN - PHASE 1
OCTOBER 2023

VOLUME 1 - CIVIL
VOLUME 2 - ELECTRICAL
VOLUME 3 - LANDSCAPE AND IRRIGATION

CITY of DELRAY BEACH
PUBLIC WORKS
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7322 Fax: (561) 243-7314

CITY of DELRAY BEACH
COMMUNITY REDEVELOPMENT AGENCY
20 NORTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 276-8640 Fax: (561) 276-8558

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL

M. REBECCA TRAVIS, P.E.
No. 40988

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS - PHASE 1

TITLE SHEET AND LOCATION MAP

PROJECT NO. 2017-020
DRAWING NO. G-1
FILE ID. 210336_G01_Phase 1.dwg

Acad Version : R24.1s (LMS Tech)
User Name : sgrossinger
Date\Time : Thu, 19 Oct 2023 – 5:56pm
Path\Name : P:\DELBCH\210336-NW Neigh Design\00-Misc\Cad\00_Working Folder\PHASE 1\210336_G01_Phase 1.dwg
Current Plotstyle : ByColor
Layout Tab: G-1A – VOLUME 1

DRAWING LIST

VOLUME 1 - CIVIL
VOLUME 2 - ELECTRICAL
VOLUME 3 - LANDSCAPE AND IRRIGATION

VOLUME 1-CIVIL

DRAWING TITLE

GENERAL

G-1 TITLE SHEET AND LOCATION MAP
G-2 DRAWING LIST & FDOT GENERAL NOTES
G-3 GENERAL NOTES, SURVEY NOTES AND SURVEY LEGEND
G-4 SYMBOLS AND SURVEY LEGEND
G-5 SURVEY NOTES AND SITE BENCHMARKS
G-6 HORIZONTAL CONTROL PLAN
G-7 PHASING PLAN
G-8 KEY MAP PLAN

CIVIL - DEMOLITION PLAN

DEM-1 LEE STREET - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-2 LEE STREET - DEMOLITION PLAN STA. 14+00 TO STA. 16+71
DEM-3 PROSPECT STREET - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-4 PROSPECT STREET - DEMOLITION PLAN STA. 14+00 TO STA. 16+71
DEM-5 NW 3RD TERRACE - DEMOLITION PLAN STA. 45+30 TO STA. 50+00
DEM-6 NW 8TH AVENUE - DEMOLITION PLAN STA. 10+00 TO STA. 13+60
DEM-7 ACCESS EASEMENT - DEMOLITION PLAN STA. 10+00 TO STA. 11+75
DEM-8 NW 4TH STREET - DEMOLITION PLAN STA. 33+57 TO STA. 37+20
DEM-9 NW 4TH STREET - DEMOLITION PLAN STA. 37+20 TO STA. 41+00
DEM-10 NW 4TH STREET - DEMOLITION PLAN STA. 41+00 TO STA. 45+00
DEM-11 NW 3RD STREET - DEMOLITION PLAN STA. 9+38 TO STA. 13+60
DEM-12 NW 3RD STREET - DEMOLITION PLAN STA. 13+60 TO STA. 17+60
DEM-13 NW 3RD STREET - DEMOLITION PLAN STA. 17+60 TO STA. 22+20
DEM-14 NW 3RD STREET - DEMOLITION PLAN STA. 22+20 TO STA. 26+00
DEM-15 NW 3RD STREET - DEMOLITION PLAN STA. 26+00 TO STA. 30+60
DEM-16 NW 3RD STREET - DEMOLITION PLAN STA. 30+60 TO STA. 35+00
DEM-17 NW 3RD STREET - DEMOLITION PLAN STA. 35+00 TO STA. 39+60
DEM-18 NW 3RD STREET - DEMOLITION PLAN STA. 39+60 TO STA. 44+00
DEM-19 NW 15TH AVENUE - DEMOLITION PLAN STA. 10+00 TO STA. 13+00
DEM-20 NW 15TH STREET - DEMOLITION PLAN STA. 13+00 TO STA. 14+77
DEM-21 LINCOLN LANE - DEMOLITION PLAN STA. 10+00 TO STA. 13+00
DEM-22 LINCOLN LANE - DEMOLITION PLAN STA. 13+00 TO STA. 16+94
DEM-23 ALLEY 1 - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-24 ALLEY 1 - DEMOLITION PLAN STA. 14+00 TO STA. 17+00
DEM-25 WASHINGTON AVENUE - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-26 WASHINGTON AVENUE - DEMOLITION PLAN STA. 14+00 TO STA. 16+53
DEM-27 NW 14TH AVENUE - DEMOLITION PLAN STA. 20+45 TO STA. 24+40
DEM-28 NW 14TH AVENUE - DEMOLITION PLAN STA. 24+40 TO STA. 27+45
DEM-29 ALLEY 2 - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-30 ALLEY 2 - DEMOLITION PLAN STA. 14+00 TO STA. 17+01
DEM-31 NW 13TH AVENUE - DEMOLITION PLAN STA. 23+55 TO STA. 27+40
DEM-32 NW 13TH AVENUE - DEMOLITION PLAN STA. 27+40 TO STA. 30+56
DEM-33 ROOSEVELT AVENUE - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-34 ROOSEVELT AVENUE - DEMOLITION PLAN STA. 14+00 TO STA. 18+40
DEM-35 ROOSEVELT AVENUE - DEMOLITION PLAN STATION 18+40 TO STATION 20+84
DEM-36 NW 12TH AVENUE - DEMOLITION PLAN STA. 30+44 TO STA. 34+00
DEM-37 NW 12TH AVENUE - DEMOLITION PLAN STA. 34+00 TO STA. 36+38
DEM-38 NW 11TH AVENUE - DEMOLITION PLAN STA. 30+37 TO STA. 33+80
DEM-39 NW 11TH AVENUE - DEMOLITION PLAN STA. 33+80 TO STA. 35+92
DEM-40 NW 10TH AVENUE - DEMOLITION PLAN STA. 23+00 TO STA. 27+60
DEM-41 NW 10TH AVENUE - DEMOLITION PLAN STA. 27+60 TO STA. 32+20
DEM-42 NW 10TH AVENUE - DEMOLITION PLAN STA. 32+20 TO STA. 36+80
DEM-43 NW 10TH AVENUE - DEMOLITION PLAN STA. 36+80 TO STA. 40+92
DEM-44 ALLEY 8 - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-45 ALLEY 8 - DEMOLITION PLAN STA. 14+00 TO STA. 16+79
DEM-46 NW 9TH AVENUE - DEMOLITION PLAN STA. 23+00 TO STA. 27+80
DEM-47 NW 9TH AVENUE - DEMOLITION PLAN STA. 27+80 TO STA. 30+44
DEM-48 ALLEY 10 - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-49 ALLEY 10 - DEMOLITION PLAN STA. 14+00 TO STA. 16+80
DEM-50 NW 8TH AVENUE - DEMOLITION PLAN STA. 23+00 TO STA. 27+20
DEM-51 NW 8TH AVENUE - DEMOLITION PLAN STA. 27+20 TO STA. 31+60
DEM-52 NW 8TH AVENUE - DEMOLITION PLAN STA. 31+60 TO STA. 36+20
DEM-53 NW 6TH AVENUE - DEMOLITION PLAN STA. 36+20 TO STA. 38+97
DEM-54 ALLEY 12 - DEMOLITION PLAN STA. 20+00 TO STA. 25+02
DEM-55 NW 7TH AVENUE - DEMOLITION PLAN STA. 23+00 TO STA. 27+00
DEM-56 NW 7TH AVENUE - DEMOLITION PLAN STA. 27+00 TO STA. 31+00
DEM-57 NW 7TH AVENUE - DEMOLITION PLAN STA. 31+00 TO STA. 35+60
DEM-58 NW 7TH AVENUE - DEMOLITION PLAN STA. 35+60 TO STA. 37+24
DEM-59 ALLEY 14 - DEMOLITION PLAN STA. 60+00 TO STA. 61+74
DEM-60 ALLEY 13 - DEMOLITION PLAN STA. 10+00 TO STA. 14+00
DEM-61 ALLEY 13 - DEMOLITION PLAN STA. 14+00 TO STA. 17+38
DEM-62 NW 6TH AVENUE - DEMOLITION PLAN STA. 23+00 TO STA. 27+00
DEM-63 NW 6TH AVENUE - DEMOLITION PLAN STA. 27+00 TO STA. 31+40
DEM-64 NW 6TH AVENUE - DEMOLITION PLAN STA. 31+40 TO STA. 35+20
DEM-65 NW 6TH AVENUE - DEMOLITION PLAN STA. 35+20 TO STA. 39+00

TYPICAL SECTION DRAWINGS

TS-1 TYPICAL ROADWAY SECTIONS - SHEET 1
TS-2 TYPICAL ROADWAY SECTIONS - SHEET 2
TS-3 TYPICAL ROADWAY SECTIONS - SHEET 3
TS-4 TYPICAL ROADWAY SECTIONS - SHEET 4
TS-5 TYPICAL ROADWAY SECTIONS - SHEET 5

CIVIL- PAVING, GRADING & DRAINAGE

PGD-1 LEE STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA 10+00 TO STA. 14+00
PGD-2 LEE STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 16+71
PGD-3 PROSPECT STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-4 PROSPECT STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 16+71
PGD-5 NW 3RD TERRACE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 45+30 TO STA. 50+00
PGD-6 NW 8TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 13+60
PGD-7 COMMUNITY CENTER - EASEMENT PAVING, GRADING & DRAINAGE - PLAN AND PROFILE STA. 10+00 TO STA. 11+50
PGD-8 NW 4TH STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE ATA. 33+57 TO STA. 37+20
PGD-9 NW 4TH STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 37+20 TO STA. 41+00
PGD-10 NW 4TH STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 41+00 TO STA. 45+00
PGD-11 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 9+38 TO STA. 13+00
PGD-12 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 13+00 TO STA. 17+60
PGD-13 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 17+60 TO STA. 22+20
PGD-14 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 22+20 TO STA. 26+00
PGD-15 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 26+00 TO STA. 30+60
PGD-16 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 30+60 TO STA. 35+00
PGD-17 NW 3RD STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 35+00 TO STA. 39+60
PGD-19 NW 15TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 13+00
PGD-20 NW 15TH STREET - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 13+00 TO STA. 14+77
PGD-21 LINCOLN LANE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 13+00
PGD-22 LINCOLN LANE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 13+00 TO STA. 16+94
PGD-23 ALLEY 1 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-24 ALLEY 1 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 17+00
PGD-25 WASHINGTON AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-26 WASHINGTON AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 16+53
PGD-27 NW 14TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 20+45 TO STA. 24+40
PGD-28 NW 14TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 24+40 TO STA. 27+45
PGD-29 ALLEY 2 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-30 ALLEY 2 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 17+01
PGD-31 NW 13TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 23+55 TO STA. 27+40
PGD-32 NW 13TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 27+40 TO STA. 30+56
PGD-33 ROOSEVELT AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-34 ROOSEVELT AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 18+40
PGD-35 ROOSEVELT AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 18+40 TO STA. 20+84
PGD-36 NW 12TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 30+44 TO STA. 34+00
PGD-37 NW 12TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 34+00 TO STA. 36+38
PGD-38 NW 11TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 30+37 TO STA. 33+80
PGD-39 NW 11TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 33+80 TO STA. 35+92
PGD-40 NW 10TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 23+00 TO STA. 27+60
PGD-41 NW 10TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 27+60 TO STA. 32+20
PGD-42 NW 10TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 32+20 TO STA. 36+80
PGD-43 NW 10TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 36+80 TO STA. 40+92
PGD-44 ALLEY 8 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-45 ALLEY 8 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 16+79
PGD-46 NW 9TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 23+00 TO STA. 27+80
PGD-47 NW 9TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 27+80 TO STA. 30+44
PGD-48 ALLEY 10 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-49 ALLEY 10 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 16+80
PGD-50 NW 8TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 23+00 TO STA. 27+20
PGD-51 NW 8TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 27+20 TO STA. 31+60
PGD-52 NW 8TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 31+60 TO STA. 36+20
PGD-53 NW 6TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 36+20 TO STA. 38+97
PGD-54 ALLEY 12 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 20+00 TO STA. 25+02
PGD-55 NW 7TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 23+00 TO STA. 27+00
PGD-56 NW 7TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 27+00 TO STA. 31+00
PGD-57 NW 7TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 31+00 TO STA. 35+60
PGD-58 NW 7TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 35+60 TO STA. 37+24
PGD-59 ALLEY 14 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 60+00 TO STA. 61+74
PGD-60 ALLEY 13 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 10+00 TO STA. 14+00
PGD-61 ALLEY 13 - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 14+00 TO STA. 17+38
PGD-62 NW 6TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 23+00 TO STA. 27+00
PGD-63 NW 6TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 27+00 TO STA. 31+40
PGD-64 NW 6TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 31+40 TO STA. 35+20
PGD-65 NW 6TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 35+20 TO STA. 39+00
PGD-66 NW 5TH AVENUE - PAVING, GRADING & DRAINAGE PLAN AND PROFILE STA. 100+00 TO STA. 101+00

CIVIL - WATER, SEWER & RECLAIM UTILITIES

WSR-1 LEE STREET WATER, SEWER, AND RECLAIM UTILITIES STA 10+00 TO STA. 14+00
WSR-2 LEE STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 16+71
WSR-3 PROSPECT STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-4 PROSPECT STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 16+71
WSR-5 NW 3RD TERRACE WATER, SEWER, AND RECLAIM UTILITIES STA. 45+30 TO STA. 50+00
WSR-6 NW 8TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 13+93
WSR-7 COMMUNITY CENTER - EASEMENT WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 11+50
WSR-8 NW 4TH STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 33+57 TO STA. 37+20
WSR-9 NW 4TH STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 37+20 TO STA. 41+00
WSR-10 NW 4TH STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 41+00 TO STA. 45+00
WSR-11 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 9+38 TO STA. 13+00
WSR-12 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 13+00 TO STA. 17+60
WSR-13 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 17+60 TO STA. 22+20
WSR-14 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 22+20 TO STA. 26+00
WSR-15 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 26+00 TO STA. 30+60
WSR-16 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 30+60 TO STA. 35+00
WSR-17 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 35+00 TO STA. 39+60
WSR-18 NW 3RD STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 39+60 TO STA. 44+00
WSR-19 NW 15TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 13+00
WSR-20 NW 15TH STREET WATER, SEWER, AND RECLAIM UTILITIES STA. 13+00 TO STA. 14+77
WSR-21 LINCOLN LANE WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 13+00
WSR-22 LINCOLN LANE WATER, SEWER, AND RECLAIM UTILITIES STA. 13+00 TO STA. 16+94
WSR-23 ALLEY 1 WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-24 ALLEY 1 WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 17+00
WSR-25 WASHINGTON AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-26 WASHINGTON AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 16+53
WSR-27 NW 14TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 20+45 TO STA. 24+40
WSR-28 NW 14TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 24+40 TO STA. 27+45
WSR-29 ALLEY 2 WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-30 ALLEY 2 WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 17+01
WSR-31 NW 13TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 23+55 TO STA. 27+40
WSR-32 NW 13TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 27+40 TO STA. 30+56
WSR-33 ROOSEVELT AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-34 ROOSEVELT AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 18+40
WSR-35 ROOSEVELT AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 18+40 TO STA. 20+84
WSR-36 NW 12TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 30+44 TO STA. 34+00
WSR-37 NW 12TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 34+00 TO STA. 36+38
WSR-38 NW 11TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 30+37 TO STA. 33+80
WSR-39 NW 11TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 33+80 TO STA. 35+92
WSR-40 NW 10TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 23+00 TO STA. 27+60
WSR-41 NW 10TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 27+60 TO STA. 32+20
WSR-42 NW 10TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 32+20 TO STA. 36+80
WSR-43 NW 10TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 36+80 TO STA. 40+92
WSR-44 ALLEY 8 WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-45 ALLEY 8 WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 16+79
WSR-46 NW 9TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 23+00 TO STA. 27+80
WSR-47 NW 9TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 27+80 TO STA. 30+44
WSR-48 ALLEY 10 WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-49 ALLEY 10 WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 16+80
WSR-50 NW 8TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 23+00 TO STA. 27+20
WSR-51 NW 8TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 27+20 TO STA. 31+60
WSR-52 NW 8TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 31+60 TO STA. 36+20
WSR-53 NW 6TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 36+20 TO STA. 38+97
WSR-54 ALLEY 12 WATER, SEWER, AND RECLAIM UTILITIES STA. 20+00 TO STA. 25+02
WSR-55 NW 7TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 23+00 TO STA. 27+00
WSR-56 NW 7TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 27+00 TO STA. 31+00
WSR-57 NW 7TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 31+00 TO STA. 35+60
WSR-58 NW 7TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 35+60 TO STA. 37+24
WSR-59 ALLEY 14 WATER, SEWER, AND RECLAIM UTILITIES STA. 60+00 TO STA. 61+74
WSR-60 ALLEY 13 WATER, SEWER, AND RECLAIM UTILITIES STA. 10+00 TO STA. 14+00
WSR-61 ALLEY 13 WATER, SEWER, AND RECLAIM UTILITIES STA. 14+00 TO STA. 17+38
WSR-62 NW 6TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 23+00 TO STA. 27+00
WSR-63 NW 6TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 27+00 TO STA. 31+40
WSR-64 NW 6TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 31+40 TO STA. 35+20
WSR-65 NW 6TH AVENUE WATER, SEWER, AND RECLAIM UTILITIES STA. 35+20 TO STA. 39+00

CIVIL - ROADWAY CROSS SECTIONS

CS-1 - CS-4 NW 3RD STREET - ROADWAY CROSS SECTIONS 1, 2, 3 & 4
CS-5 NW 15TH AVENUE - ROADWAY CROSS SECTIONS
CS-6 LINCOLN LANE - ROADWAY CROSS SECTIONS
CS-7 WASHINGTON AVENUE - ROADWAY CROSS SECTIONS
CS-8 NW 14TH AVENUE - ROADWAY CROSS SECTIONS
CS-9 LEE STREET - ROADWAY CROSS SECTIONS
CS-10 PROSPECT STREET - ROADWAY CROSS SECTIONS
CS-11 NW 13TH AVENUE - ROADWAY CROSS SECTIONS
CS-12 ROOSEVELT AVENUE - ROADWAY CROSS SECTIONS
CS-13 NW 12TH AVENUE - ROADWAY CROSS SECTIONS
CS-14 NW 3RD TERRACE - ROADWAY CROSS SECTIONS
CS-15 NW 11TH AVENUE - ROADWAY CROSS SECTIONS
CS-16 - CS-18 NW 10TH AVENUE - ROADWAY CROSS SECTIONS 1 & 2
CS-19 NW 9TH AVENUE - ROADWAY CROSS SECTIONS
CS-20 - CS-22 NW 8TH AVENUE - ROADWAY CROSS SECTIONS 1, 2 & 3
CS-23 - CS-24 NW 7TH AVENUE - ROADWAY CROSS SECTIONS 1 & 2
CS-25 - CS-26 NW 6TH AVENUE - ROADWAY CROSS SECTIONS 1 & 2

CIVIL - SIGNING AND PAVEMENT MARKING

SM-1 LEE STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+71
SM-2 PROSPECT STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+71
SM-3 NW 3RD TERRACE - SIGNAGE & PAVEMENT MARKING PLANS STA. 45+30 TO STA. 50+00
SM-4 NW 8TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+26
SM-5 NW 4TH STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 33+57 TO STA. 41+00
SM-6 NW 4TH STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 41+00 TO STA. 45+00
SM-7 NW 3RD STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 9+38 TO STA. 17+60
SM-8 NW 3RD STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 17+60 TO STA. 26+00
SM-9 NW 3RD STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 26+00 TO STA. 35+00
SM-10 NW 3RD STREET - SIGNAGE & PAVEMENT MARKING PLANS STA. 35+00 TO STA. 44+00
SM-11 NW 15TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 14+77
SM-12 LINCOLN LANE - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+94
SM-13 ALLEY 1 - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 17+00
SM-14 WASHINGTON AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+53
SM-15 NW 14TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 20+45 TO STA. 27+45
SM-16 ALLEY 2 - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 17+01
SM-17 NW 13TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 23+55 TO STA. 30+56
SM-18 ROOSEVELT AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 19+40
SM-19 ROOSEVELT AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 19+40 TO STA. 20+84
SM-20 NW 12TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 30+44 TO STA. 36+38
SM-21 NW 11TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 30+37 TO STA. 35+92
SM-22 NW 10TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 23+00 TO STA. 32+20
SM-23 NW 10TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 32+20 TO STA. 40+92
SM-24 ALLEY 8 - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+79
SM-25 NW 9TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 23+00 TO STA. 30+44
SM-26 ALLEY 10 - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 16+80
SM-27 NW 8TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 23+00 TO STA. 31+60
SM-28 NW 8TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 31+60 TO STA. 38+97
SM-29 ALLEY 12 - SIGNAGE & PAVEMENT MARKING PLANS STA. 20+00 TO STA. 25+02
SM-30 NW 7TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 23+00 TO STA. 31+00
SM-31 NW 7TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 31+00 TO STA. 37+24
ALLEY 14 - SIGNAGE & PAVEMENT MARKING PLANS STA. 60+00 TO STA. 61+74
SM-32 ALLEY 13 - SIGNAGE & PAVEMENT MARKING PLANS STA. 10+00 TO STA. 17+38
SM-33 NW 6TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 23+00 TO STA. 31+40
SM-34 NW 6TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STA. 31+40 TO STA. 39+00
SM-35 NEIGHBORHOOD SIGN LOCATION PLAN

CIVIL - WATER, SEWER, RWM, PGD & MISCELLANEOUS DETAILS

D-1 ROADWAY AND TRAFFIC DETAILS - SHEET 1
D-2 ROADWAY AND TRAFFIC DETAILS - SHEET 2
D-3 ROAWAY AND TRAFFIC DETAILS - SHEET 3
D-4 GENERAL UTILITY DETAILS AND STORMWATER DRAINAGE DETAILS
D-5 STORMWATER DRAINAGE DETAILS - SHEET 1
D-6 STORMWATER DRAINAGE DETAILS - SHEET 2
D-7 STORMWATER DRAINAGE DETAILS - SHEET 3
D-8 PRESSURE PIPE DETAILS AND POTABLE WATER DISTRIBUTION DETAILS
D-9 POTABLE WATER DISTRIBUTION DETAILS
D-10 RECLAIMED WATER DISTRIBUTION DETAILS - SHEET 1
D-11 RECLAIMED WATER DISTRIBUTION DETAILS - SHEET 2
D-12 WASTEWATER COLLECTION / TRANSMISSION DETAILS
D-13 MISCELLANEOUS DETAILS

VOLUME 2-ELECTRICAL

DRAWING TITLE

ELECTRICAL

E-01 ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS
E-02 ELECTRICAL KEYMAP PLAN- PHASE 1
E-03 LIGHTING SCHEDULE - 1
E-04 LIGHTING SCHEDULE - 2
E-05 LIGHTING DETAILS
E-06 LEE STREET PHOTOMETRIC SITE PLANS
E-07 PROSPECT STREET PHOTOMETRIC SITE PLANS
E-08 N.W 3RD TERRACE PHOTOMETRIC SITE PLANS
E-09 N.W. 8TH COURT PHOTOMETRIC SITE PLANS
E-10 N.W. 4TH STREET PHOTOMETRIC SITE PLANS
E-11 N.W. 4TH STREET PHOTOMETRIC SITE PLAN
E-12 N.W. 3RD STREET PHOTOMETRIC SITE PLANS
E-13 N.W. 3RD STREET PHOTOMETRIC SITE PLANS
E-14 N.W. 3RD STREET PHOTOMETRIC SITE PLANS
E-15 N.W. 3RD STREET PHOTOMETRIC SITE PLANS
E-16 N.W. 15TH AVENUE PHOTOMETRIC SITE PLANS
E-17 LINCOLN AVENUE PHOTOMETRIC SITE PLANS
E-18 DEPOT AVE PHOTOMETRIC PLANS
E-19 ALLEY 1 PHOTOMETRIC SITE PLANS
E-20 WASHINGTON AVENUE PHOTOMETRIC SITE PLANS
E-21 N.W. 14TH AVENUE PHOTOMETRIC SITE PLANS
E-22 ALLEY 2 PHOTOMETRIC SITE PLANS
E-23 N.W. 13TH AVENUE PHOTOMETRIC SITE PLANS
E-24 ROOSEVELT AVENUE PHOTOMETRIC SITE PLANS
E-25 ROOSEVELT AVENUE PHOTOMETRIC SITE PLANS
E-26 N.W. 12TH AVENUE PHOTOMETRIC SITE PLANS
E-27 N.W. 11TH AVENUE PHOTOMETRIC SITE PLANS
E-28 N.W. 10TH AVENUE PHOTOMETRIC SITE PLANS
E-29 N.W. 10TH AVENUE PHOTOMETRIC SITE PLANS
E-30 ALLEY 8 PHOTOMETRIC SITE PLAN
E-31 N.W. 9TH AVENUE PHOTOMETRIC SITE PLANS
E-32 ALLEY 10 PHOTOMETRIC SITE PLAN
E-33 N.W. 8TH AVENUE PHOTOMETRIC SITE PLANS
E-34 N.W. 8TH AVENUE PHOTOMETRIC SITE PLANS
E-35 ALLEY 12 PHOTOMETRIC SITE PLAN
E-36 N.W. 7TH AVENUE PHOTOMETRIC SITE PLANS
E-37 N.W. 7TH AVENUE PHOTOMETRIC SITE PLANS
E-38 ALLEY 14 PHOTOMETRIC SITE PLAN
E-39 ALLEY 13 PHOTOMETRIC SITE PLANS
E-40 N.W

GENERAL NOTES

DEFINITIONS

1. CITY – THE CITY OF DELRAY BEACH
2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION

PROCEDURE

1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER, SEWER OR DRAINAGE CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.
2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
3. A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91.
4. ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
7. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.
8. PRIOR TO ANY SANITARY OR WATER MAIN TESTING, UNDER EXISTING OR FUTURE PAVEMENT, THE ROCK BASE SHALL BE FINISHED AND PRIMED OR FIRST LIFT OF PAVEMENT PLACED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
11. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE.
12. CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.
13. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.
14. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.
15. PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO CITY OF DELRAY BEACH, FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICALS (LATEST REVISION) UNLESS SHOWN OTHERWISE.
16. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY. AS THE WORK PROGRESSES, THE ENGINEER OF RECORD (OR THEIR REPRESENTATIVE) SHALL RECORD ON ONE SET OF DRAWINGS THE LOCATION INCLUDING STATION AND OFFSET WITH SUFFICIENT DIMENSIONS AND DISTANCES TO ADEQUATELY DESCRIBE THE LOCATION OF THE IMPROVEMENT FROM THE BASELINE. ELEVATIONS ARE TO BE PROVIDED AT THE TOP OF PIPE AT INCREMENTS OF EVERY 100 FEET ON ALL WATER AND FORCE MAINS. STATIONING IS REQUIRED ON ALL VALVES, FITTINGS, WATER AND SEWER SERVICES AND FIRE HYDRANTS. THE LENGTHS OF THE WATER SERVICES LINES AND SEWER LATERALS MUST BE NOTED ON GRAVITY SEWER LINES, ELEVATIONS AND STATIONING ARE TO BE INDICATED ON ALL MANHOLE RIMS AND INVERTS. THE DISTANCE BETWEEN MANHOLES IS TO BE SHOWN ON BOTH THE PLAN AND PROFILE SHEETS UNLESS PLAN VIEW AND PROFILE VIEW ARE ON THE SAME SHEET. PAVING & DRAINAGE AS-BUILT DRAWINGS SHALL INCLUDE RIM ELEVATIONS, INVERT ELEVATIONS, PIPE SIZES, CONTROL STRUCTURE DIMENSIONS AS WELL AS, AS-BUILT ELEVATIONS AS EVERY LOCATION A PROPOSED ELEVATION IS INDICATED ON THE CONSTRUCTION PLAN. ADEQUATE AS-BUILT ELEVATIONS SHALL BE PROVIDED ON EMBANKMENTS TO DETERMINE COMPLIANCE WITH MAXIMUM SLOPE REQUIREMENTS.
17. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.
18. CONTRACTOR SHALL NOTIFY (811) 48 HOURS IN ADVANCE OF CONSTRUCTION.
19. GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE.
20. CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION.
21. EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.
22. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.
23. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
24. PRIOR TO AND DURING CONSTRUCTION OF ALL SITES, THE PERMITEE SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDED IN A POLLUTION PREVENTION PLAN PROVIDED TO THE CITY OF DELRAY BEACH.
25. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.
26. ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKINGS STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING.
27. EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS.
28. CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITH THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY.
29. SITE INFORMATION BASED ON A SURVEY PREPARED BY: CRAIG A. SMITH & ASSOCIATES. AND DENNIS J. LEAVY & ASSOCIATES, INC.
30. RELOCATION OF ANY UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES.
31. CONTRACTOR TO LOCATED AND PROTECT EXISTING IRRIGATION SYSTEMS AND RESTORE ANY DAMAGED SYSTEMS TO OPERATIONAL CONDITIONS. EXTEND THE EXISTING IRRIGATION SYSTEMS IN FRONT OF THE PROPOSED SIDEWALK. ALL COST TO BE INCLUDED IN PAY ITEM IRRIGATION ALLOWANCE.

GENERAL INFORMATION

1. AT&T TELEPHONE, FLORIDA POWER AND LIGHT, CABLE TV, GAS, ETC. ARE TAKEN FROM FIELD INSPECTIONS AND SKETCHES PROVIDED BY UTILITIES AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS AND CONFIRM LOCATIONS OF UTILITIES NO LESS THAN TWO FULL BUSINESS DAYS BEFORE DIGGING. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION WHERE CROSSING OR PARALLELING OF EXISTING UTILITIES OCCUR. ANY DAMAGE RESULTING FROM THE CONTRACTORS OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

EROSION CONTROL NOTES:

1. CUT AND FILL SLOPES TO BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SILT FENCES TO BE USED WHERE NECESSARY.
2. CONSTRUCTION VEHICLE ACCESS ROUTES SHALL BE SWEPT CLEAN OF SEDIMENT, CONCRETE AND OTHER CONSTRUCTION MATERIALS AS NEEDED.
3. ALL BERMS, DIKES AND SPOIL PILES SUBJECT TO EROSION MUST BE STABILIZED OR CONTAINED TO PREVENT EROSION AND RUNOFF FROM THE PROJECT.
4. ALL EXISTING STORM SEWER INLET GRATES TO BE COVERED WITH FILTER FABRIC DURING CONSTRUCTION.

EXISTING UTILITY LINETYPE LEGEND

CATV	EXISTING BURIED CABLE TELEVISION
CATV FO	EXISTING BURIED CABLE TELEVISION FIBER OPTIC
COMM	EXISTING BURIED COMMUNICATION
E	EXISTING BURIED ELECTRIC
E FO	EXISTING BURIED ELECTRIC FIBER OPTIC
<E>	EXISTING BURIED ELECTRIC DUCT
FO	EXISTING BURIED FIBER OPTIC
G	EXISTING BURIED GAS MAIN (<12")
GS GS GS	EXISTING BURIED GAS SERVICE
IRR IRR	EXISTING BURIED IRRIGATION
FM	EXISTING BURIED SANITARY FORCE MAIN (<12")
FM (ABD)	EXISTING BURIED ABANDONED SANITARY FORCE MAIN (<12")
RAW WM	EXISTING BURIED RAW WATER MAIN (<12")
RWM	EXISTING BURIED RECLAIMED WATER MAIN (<12")
RWS	EXISTING BURIED RECLAIMED WATER SERVICE
SAN	EXISTING BURIED SANITARY SEWER (<12")
SL SL SL	EXISTING BURIED SANITARY SEWER LATERAL
STM	EXISTING BURIED STORM DRAINAGE (<12")
T T	EXISTING BURIED TELEPHONE
<T>	EXISTING BURIED TELEPHONE DUCT
T FO	EXISTING BURIED TELEPHONE FIBER OPTIC
T (RIP)	EXISTING BURIED TELEPHONE (RETIRED IN PLACE)
TRAF	EXISTING BURIED TRAFFIC SIGNAL
TRAF FO	EXISTING BURIED TRAFFIC FIBER OPTIC SIGNAL
UNK	EXISTING BURIED UNKNOWN UTILITY
W	EXISTING BURIED WATER MAIN (<12")
WM (ABD)	EXISTING BURIED ABANDONED WATER MAIN (<12")
WS WS WS	EXISTING BURIED WATER SERVICE
	EXISTING BURIED WATER, SEWER AND STORM (≥12")

UTILITY CONTACTS

CITY OF DELRAY BEACH WATER/SEWER
HASSAN HADJIMIRY, P.E.
UTILITIES DIRECTOR
434 S. SWINTON AVENUE
DELRAY BEACH, FL 33444
TEL. (561) 243-7328

PALM BEACH COUNTY TRAFFIC OPERATIONS SUPERINTENDENT
MARCELINO ALICEA
SUPERINTENDENT
2300 NORTH JOG ROAD
WEST PALM BEACH, FL 33411
TEL. (561) 684-4030

FIBERNET DIRECT FLORIDA, LLC
DANNY HASKETT
OSPE ASSOCIATE PROJECT MANAGER
1601 NW 136th AVENUE, SUITE A-200
SUNRISE, FL 33323
TEL. (786) 610-7073

FLORIDA POWER & LIGHT
ROBERT WEESE
SENIOR CUSTOMER ADVISOR
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (561) 640-2209

GLADYS REYES
REPRESENTATIVE, LED LIGHTING SOLUTIONS
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (407) 844-8862

FLORIDA PUBLIC UTILITIES CORP.
PETER BONO
ENGINEERING TECHNICIAN
P.O. BOX 3395
WEST PALM BEACH, FL 33402
TEL. (561) 838-1841

AT&T
GARCIA RAMNON
ENGINEER, OSP PLNG & ENGINEER DESIGN
120 NORTH K STREET, ROOM 328
LAKE WORTH, FL 33460
TEL. (561) 236-6730

XFINITY
STEVEN ROSA
SENIOR FIELD COORDINATOR
3960 RCA BLVD., SUITE 6002
PALM BEACH GARDEN, FL 33401
TEL. (561) 454-5851

NOTE:
IT IS THE INTENT THAT THE EXISTING POWER POLES AND FPL/COMCAST/AT&T BOXES WILL BE RELOCATED PRIOR TO START OF CONSTRUCTION

REPORT OF SURVEY:

1. THE SURVEY DEPICTED HEREON HAS BEEN CLASSIFIED AS A TOPOGRAPHIC SURVEY, AS DEFINED IN RULE 5J-17.050 OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AS AMENDED.
2. THIS SURVEY HAS BEEN PREPARED IN THE OFFICE OF DENNIS J. LEAVY & ASSOCIATES, INC. LOCATED AT: 460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FLORIDA, WHOSE CERTIFICATE OF AUTHORIZATION NUMBER IS LB #6599, AND THE CERTIFYING SURVEYOR'S (DAVID A. BOWER) LICENSE NUMBER IS LS #5888.
3. THE SURVEY SKETCH SHOWN HEREON DOES NOT NECESSARILY CONTAIN ALL OF THE INFORMATION OBTAINED OR DEVELOPED BY THE UNDERSIGNED SURVEYOR IN HIS FIELD WORK, OFFICE WORK, OR RESEARCH.
4. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
5. THIS IS NOT A BOUNDARY SURVEY
6. THIS SURVEY DOES NOT ADDRESS ENVIRONMENTAL MATTERS, JURISDICTIONAL BOUNDARIES OR HAZARDOUS WASTE CONCERNS SHOULD ANY OF THE FOREGOING EXIST.
7. THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN SHOWN HEREON AND DO NOT DETERMINE SUB SURFACE CONDITIONS.
8. THE UNDERSIGNED MAKES NO REPRESENTATIONS OR GUARANTEES AS TO THE INFORMATION REFLECTED HEREON PERTAINING TO EASEMENTS, RIGHTS OF WAY, SETBACK LINES, AGREEMENTS AND OTHER MATTERS, AND FURTHER, THIS INSTRUMENT IS NOT INTENDED TO REFLECT OR SET FORTH ALL SUCH MATTERS. SUCH INFORMATION SHOULD BE OBTAINED AND CONFIRMED BY OTHERS THROUGH APPROPRIATE TITLE VERIFICATION. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY AND/OR EASEMENTS OF RECORD.
9. THIS SURVEY DOES NOT MEET THOSE STANDARDS ESTABLISHED BY THE AMERICAN LAND TITLE ASSOCIATION.
10. UNDERGROUND APPARENT USE AND/OR IMPROVEMENTS HAVE NOT BEEN SHOWN UNLESS OTHERWISE NOTED.
11. THIS INSTRUMENT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT THE WRITTEN CONSENT OF DENNIS J. LEAVY & ASSOCIATES INC.
12. DATE OF FIELD SURVEY: JANUARY 5TH, 2022, AS RECORDED IN FIELD BOOK 516, PAGES 02 THROUGH 07 AND FIELD BOOK 517, PAGE 03.
13. THIS SURVEY LIES IN SECTION 17, TOWNSHIP 46 SOUTH, RANGE 43 EAST, CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA.
14. BY GRAPHIC PLOTTING ONLY THE SUBJECT PROPERTY LIES WITHIN ZONE X, AS SHOWN ON THE U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP, MAP NUMBER: 12099C0979F, COMMUNITY: CITY OF DELRAY BEACH, NUMBER: 125102, PANEL 0979, SUFFIX: F, EFFECTIVE DATE: OCTOBER 5, 2017.
15. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE RELATIONSHIPS BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. IN ALL CASES, DIMENSIONS SHOWN SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER SCALED POSITIONS.
16. MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED.
17. ALL DATES SHOWN WITHIN THE REVISION BLOCK HEREON ARE FOR INTEROFFICE FILING USE ONLY, AND IN NO WAY AFFECT THE DATE OF THE FIELD SURVEY STATED HEREIN.
18. BENCHMARKS OF ORIGIN: PER THE N.W. NEIGHBORHOOD DRAINAGE IMPROVEMENTS CITY OF DELRAY BEACH PROJECT NO: 17-020 SURVEY, PREPARED FOR THE CITY OF DELRAY BEACH (CAS 19-2068), BY CRAIG A. SMITH & ASSOCIATES, DATED 06-04-20.
19. ELEVATIONS REFERENCED HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

PLAT LEGEND:

(P1)	ATLANTIC PINES (P.B. 13, PG. 77, P.B.C.R.)
(P2)	WHIDDEN'S SUBDIVISION OF SW 1/4 OF SE 1/4 OF NW 1/4 OF SEC 17, T46, R43, FLORIDA (P.B. 2, PG. 58, P.B.C.R.)
(P3)	MAP OF THE TOWN OF LINTON (DELRAY BEACH), FLORIDA (P.B. 1, PG. 3, P.B.C.R.)
(P4)	MONROE SUBDIVISION (P.B. 14, PG. 67, P.B.C.R.)

SYMBOL LEGEND:

BENCHMARK
CATCH BASIN
CLEAN OUT
CONCRETE POWER POLE
CUT POST
GUIDE WIRE AND ANCHOR
MAILBOX
PALM WITH TRUNK DIAMETER
SANITARY MANHOLE
SIGN
TELEPHONE WIRE
TREE WITH TRUNK DIAMETER
WOOD POST
WOOD POWER POLE
WOOD POWER POLE WITH LIGHT

LEGEND:

(C)	CALCULATED
E	EAST
EL	ELEVATION
LB	LICENSED BUSINESS
LS	LICENSED SURVEYOR
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO.	NUMBER
O.R.B.	OFFICIAL RECORDS BOOK
OHW	OVERHEAD WIRE
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
S	SOUTH
W	WEST

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

DATED: JANUARY 5TH, 2022, AND JANUARY 18TH, 2022

FOR THE FIRM BY: _____
ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SURVEY PREPARED BY:

DENNIS J. LEAVY & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FL 33411
PHONE: (561) 753-0650 EMAIL: SURVEY@DJLASURVEY.NET

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP				
DRAWN BY	AS/DP/HS				
CHECKED BY	SJP/MMRT				
DATE	10/2023	REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 1

GENERAL NOTES, SURVEY NOTES AND SURVEY LEGEND

PROJECT NO. 2017-020
DRAWING NO. G-3
FILE ID. 210336_G03.dwg

Acad Version : R24.1s (LMS Tech) User Name : sgrossinger Date/Time : Thu, 19 Oct 2023 - 5:57pm Path/Name : P:\DELRAY\210336 - NW Neighb Design\00 Misc\210336_Working Folder\PHASE 1\210336_G03.dwg Current Plotstyle : ByColor Layout Tab: G-3

GENERAL ABBREVIATIONS

ABRV	DESCRIPTION
A/C	AIR CONDITION PAD
ACP	ASBESTOS CEMENT PIPE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
B.C.R.	BROWARD COUNTY RECORDS
B/L	BASELINE
BOTT	BOTTOM
(C)	CALCULATED
CAS	CRAIG A. SMITH & ASSOCIATES
℄	CENTER LINE
CONC	CONCRETE
D	DEED/DESCRIPTION
DB	DEED BOOK
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEV	ELEVATION
EOW	EDGE OF WATER
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FF	FINISHED FLOOR
FND	FOUND
FPL	FLORIDA POWER & LIGHT
GFF	GARAGE FINISHED FLOOR
HDPE	HIGH DENSITY POLYETHYLENE
I.E.	INVERT ELEVATION
IR	IRON ROD
IR&C	IRON ROD AND CAP
IP	IRON PIPE
L	ARC LENGTH
LB	LICENSED BUSINESS
LF	LINEAR FEET
(M)	MEASURED

ABRV	DESCRIPTION
NTS	NOT TO SCALE
ORB	OFFICIAL RECORDS BOOK
O / S	OFF SET
(P)	PLAT
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PC	POINT OF CURVE
PCP	PERMANENT CONTROL POINT
PGS	PAGES
PHDPE	PERFORATED HIGH DENSITY POLYETHYLENE
PI	POINT OF INTERSECTION
PK&D	PK NAIL AND DISK
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PRM	PERMANENT REFERENCE MARKER
PSM	PROFESSIONAL SURVEYOR AND MAPPER
PT	POINT OF TANGENCY
PVC	POLY VINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
RGE	RANGE
R/W	RIGHT-OF-WAY LINE
SEC	SECTION
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF PIPE
TWP	TOWNSHIP
TYP	TYPICAL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
△	DELTA

STANDARD LINETYPES

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BASELINE	BTC BTC	BURIED TRAFFIC CONTROL
	PARCEL LINE	<C> <C>	COMMUNICATIONS DUCTBANK CL
	BOUNDARY LINE	<F> <F>	FIBER OPTIC DUCTBANK CL
	EASEMENT LINE		OVERHEAD WIRE
	LOT LINE	BE	BURIED ELECTRIC
	RIGHT OF WAY LINE	SL	BURIED STREET LIGHTING
	CENTER LINE	<E> <E>	ELECTRICAL DUCTBANK CENTER LINE
	SECTION LINE	FM	FORCE MAIN
	LANDSCAPE LINE		SANITARY SEWER
	EDGE OF WATER	SNS SNS	SANITARY SERVICE
	RR TRACKS	VS	VACUUM SEWER
	PLAT LINE	SD	STORM DRAIN
	CURB & GUTTER	FIRE FIRE	FIRE LINE
X X X X	FENCE LINE	RWL RWL	RAW WATER LINE
	GUARD RAIL	WL	WATER LINE MAIN
UNK UNK	UNKNOWN UTILITY	WLC WLC	WATER LINE CHILLED
	ABANDONED UTILITY	WS	WATER SERVICE
NFVU	NON FIELD VERIFIED UTILITY		IRRIGATION LINE
BCTV BCTV	BURIED CABLE TV		GAS LINE ABOVE GROUND
BCL BCL	BURIED COMMUNICATIONS LINE	BG	BURIED GAS LINE
FOC FOC	FIBER OPTIC CABLE	GS	BURIED GAS SERVICE LINE
BT	BURIED TELEPHONE	FUEL	FUEL LINE

GENERAL SYMBOL LEGEND

	SYM.	DESCRIPTION
CONTROL		AERIAL TARGET
		BENCH MARK
		CONCRETE MONUMENT
		IRON PIPE
		IRON ROD
	ND	NAIL & DISC
		CAS CONTROL POINT
		IRON ROD AND CAP
		X CUT
	DH	DRILL HOLE
PIPE FITTINGS		11.25° PIPE BEND
		22.5° PIPE BEND
		45° PIPE BEND
		90° PIPE BEND
		CROSS PIPE FITTING
		TEE PIPE FITTING
		WYE PIPE FITTING
		REDUCER PIPE FITTING
ELECTRICAL	EMH	ELECTRIC MANHOLE
	EMTR	ELECTRIC MOTOR
		ELECTRICAL OUTLET
		GROUND LIGHT
	EJB	ELECTRIC JUNCTION BOX
	EM	ELECTRIC METER
	LPB	LIGHT POLE BOX
	TCB	TRAFFIC CONTROL BOX
	ER	ELECTRICAL RISER
	T FPL	TRANSFORMER
	CW	CROSSWALK POST
UTILITY POLES		GUY WIRE
		GUY POLE
		LIGHT POLE
		CONCRETE POWER POLE
		CONCRETE UTILITY POLE
		METAL POWER POLE
		METAL UTILITY POLE
		WOOD UTILITY POLE
		WOOD POWER POLE
		MAST ARM POLE
SAN SWR	CO	CLEAN OUT
	SMH	SANITARY MANHOLE
	SO	STUB OUT
	S	STAND PIPE
	SV	SEWER VALVE
	GRND	GRINDER
STORM	CB	CATCH BASIN
	SDMH	STORM DRAIN MANHOLE
	YD	YARD DRAIN
	DR	DRAIN
		CURB INLET
		CURB INLET W/ MANHOLE
		CURB INLET W/ GRATE
		CI W/ MANHOLE & GRATE

	SYM.	DESCRIPTION
GAS / FUEL	GM	GAS METER
	GMH	GAS MANHOLE
	GSV	GAS VALVE
	MW	MONITORING WELL
	VEP	VAPOR EXTRACTION POINT
	GSP	FUEL PUMP DISPENSER
	GASM	GAS MARKER
	VTP	VENT PIPE
	VBG	GAS VALVE BOX
	FCAP	FUEL FILL CAP
TELE / TV	PJB	TELEPHONE JUNCTION BOX
	PR	TELEPHONE RISER
	TMH	TELEPHONE MANHOLE
	FIBO	FIBER OPTIC CABLE MARKER
	CATV	CATV RISER
	TM	TELEPHONE MARKER
WATER / IRRIGATION		BACKFLOW PREVENTOR
	BO	BLOW OFF
	ARV	AIR RELEASE VALVE
	SP	SAMPLE POINT
	FH	FIRE HYDRANT
	SIA	SIAMESE CONNECTION
	WM	WATER METER
	WV	WATER VALVE
		WATER SPIGOT
	ICV	IRRIGATION CONTROL VALVE
	IM	IRRIGATION METER
	SPR	SPRINKLER
TREES	12	CITRUS TREE (TRC)
		CYPRESS TREE (TRCY)
	12	GENERIC TREE (TRG)
	12	OAK TREE (TRO)
	12	PINE TREE (TRP)
	12	PALM TREE (TRPL)
		MANGROVE (TRMG)
MISCELLANEOUS	GPR	GROUND PENETRATING RADAR
		BORING HOLE
	M	METER (UNKNOWN)
		BOLLARD
		COLUMN
	MB	MAIL BOX
	FP	FLAG POLE
		HANDICAP MARKER
	MH	MANHOLE (UNKNOWN)
		SATELLITE DISH
		SIGN
	PM	PARKING METER
		POST
	UB	UTILITY BOX
	UR	UTILITY RISER
		CEMETERY HEAD STONE
	HH	HAND HOLE
		GATE POST
	TC	TRASH CAN
	NPB	NEWSPAPER BOX
	BR	BIKE RACK
	PP	PAY PHONE

HATCH PATTERNS

	CONCRETE		DIRT
	BRICK PAVERS		ASPHALT

SURVEY PREPARED BY:

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	10/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 1

SYMBOLS AND SURVEY LEGEND

PROJECT NO. 2017-020

DRAWING NO. G-4

FILE ID. 210336_G04.dwg

Acad Version : R24.1s (LMS Tech)
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Current Plotstyle : ByColor
Layout Tab: G-4

SURVEYOR'S NOTES:

1. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

2. NO SEARCH OF THE PUBLIC RECORDS WAS UNDERTAKEN FOR EASEMENTS, RIGHTS OF WAYS, RESTRICTIONS OR OTHER RECORDED OR EVIDENCE OF UNRECORDED DOCUMENTS BY THIS FIRM THOUGH A LIMITED SEARCH OF THE PALM BEACH COUNTY PROPERTY APPRAISER'S WEBSITE WAS PERFORMED FOR VARIOUS DEED AND PLAT INFORMATION. RIGHTS OF WAYS WERE SEARCHED FOR OWNERSHIP BY: STATEWIDE LAND TITLE, INC. UNDER CUSTOMER FILE NO. "CITY OF DELRAY BEACH, NW NEIGHBORHOOD IMPROVEMENTS RFQ 2018-054". A "BEST FIT" APPROACH WAS TAKEN FOR VARIOUS INTERIOR STREETS WITHIN THE LIMITS OF THE PROJECT. THE RIGHT OF WAY INFORMATION SHOWN FOR ATLANTIC AVENUE (STATE ROAD NO. 806) IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030-2505 (DATED: 04-21-09) AND 93030 – 2506 (DATED: 07-09-09). THE RIGHT OF WAY INFORMATION SHOWN FOR INTERSTATE 95 IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93220-2411 (LAST REVISED 11-01-99). THE RIGHT OF WAY INFORMATION SHOWN FOR LAKE IDA ROAD IS PER THE PALM BEACH COUNTY RIGHT OF WAY ACQUISITION MAP – PALM BEACH COUNTY PROJECT NUMBER: 90502 (DATED: 10-90). BENCHMARK INFORMATION LISTED ALONG SWINTON AVENUE IS PER THE PROJECT NETWORK CONTROL SHEETS PREPARED UNDER FINANCIAL PROJECT ID: 438389-1-52-01.

3. THE INTENT OF THIS "MAP OF SPECIFIC PURPOSE SURVEY" IS TO AID IN THE DESIGN OF INFRASTRUCTURE IMPROVEMENTS WITHIN THE CORRIDORS SHOWN HEREON. THIS IS NOT A BOUNDARY SURVEY.

4. THERE MAY BE UNDERGROUND "FOOTINGS", DRAINAGE, UTILITIES, ETC. NOT SHOWN OR INDICATED HEREON. UTILITY SURFACE MARKINGS SHOWN HEREON WERE LOCATED AS PROVIDED BY THE CRAIG A. SMITH & ASSOCIATES UTILITY LOCATES DEPARTMENT.

5. BASELINES SHOWN HEREON WERE DETERMINED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AS SHOWN ALONG ATLANTIC AVENUE (STATE ROAD NO. 806), LAKE IDA ROAD AND THE SURVEYOR ALONG ALL APPLICABLE INTERIOR ROADS AND ALLEYS. BASELINES HAVE NOT BEEN ESTABLISHED IN THE FIELD.

6. HORIZONTAL COORDINATES SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE GRID SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT). CAS STATIC POINTS 1 AND 2, AS ADJUSTED BY THE FLROIDA DEPARTMENT OF TRANSPORTATION (LISTED BELOW) WERE USED AS REDUNDANT CHECKS FOR THE DURATION OF THE PROJECT. A BEARING OF N 89° 19' 21" E WAS HELD ALONG THE SURVEY BASELINE OF ATLANTIC AVENUE (STATE ROAD 806) FROM STATION 320+52.07 TO STATION 347+00 PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030 – 2506 (DATED: 07-09-09). ALL OTHER BEARINGS ARE RELATIVE THERETO. ELEVATIONS SHOWN HEREON ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 AND VERIFIED UTILIZING VARIOUS FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) BENCHMARKS (BM) (AS LISTED BELOW). HORIZONTAL AND VERTICAL DATA FOR CRAIG A. SMITH & ASSOCIATES (CAS) CONTROL POINTS (CP) ESTABLISHED FOR THE PROJECT ARE ALSO LISTED BELOW:

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1	774626.90	959380.00	18.47	ND RLS 2963
CAS 2	775917.00	959403.40	19.40	PK AVIRON
CAS 3	775227.20	957388.10	17.03	MND LB 3110
CAS 4	775230.40	957774.30	17.66	MND LB 3110
CAS 5	775209.10	958046.40	17.48	MND LB 3110
CAS 6	775209.00	958385.60	18.12	MND LB 3110
CAS 7	775252.40	959035.30	19.11	MND LB 3110
CAS 8	775874.40	959026.50	19.27	MND LB 3110
CAS 9	775214.60	959437.80	18.40	MND EGI
CAS 10	775909.00	958731.60	18.86	MND LB 3110
CAS 11	775255.70	958750.30	16.22	MND LB 3110
CAS 12	775871.00	958362.20	18.64	MND LB 3110
CAS 13	775901.50	958035.70	18.81	MND LB 3110
CAS 14	775864.90	957743.20	19.91	MND LB 3110
CAS 15	775888.90	957399.30	18.17	MND LB 3110
CAS 16	774497.10	957397.80	15.87	MND LB 3300
CAS 17	774501.30	957782.00	15.61	IRC
CAS 18	774552.20	958074.90	15.51	MND LB 3110
CAS 19	774606.10	958441.30	15.28	MND LB 3110
CAS 20	774561.80	958808.40	17.00	MND LB 3110
CAS 21	774519.10	959104.40	16.28	MND MGI
CAS 22	776572.70	959398.20	19.44	MND LB 3110
CAS 23	776544.40	959010.50	19.09	MND LB 3110
CAS 24	776565.80	958710.00	19.53	MND LB 3110
CAS 25	776565.90	958376.20	17.63	MND LB 3110
CAS 26	776559.20	958015.80	18.58	MND LB 3110

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 27	776528.00	957721.80	17.88	MND LB 3110
CAS 28	776549.40	957384.90	17.56	MND LB 3110
CAS 29	776924.50	959004.50	19.82	MND LB 3110
CAS 30	776945.40	958679.10	17.87	MND HSQ GROUP LB 7924
CAS 31	777270.60	958693.70	16.57	MND LB 3110
CAS 32	777337.00	958344.10	16.62	MND LB 3110
CAS 33	777317.20	957665.90	15.34	MND LB 3110
CAS 34	777302.70	957361.80	16.98	MND LB 3110
CAS 35	777276.40	957016.90	18.06	MND LB 3110
CAS 36	777274.60	956697.80	14.87	MND LB 3110
CAS 37	776594.90	956724.70	14.98	MND LB 3110
CAS 38	776528.90	956705.40	15.01	MND LB 3110
CAS 39	776599.90	956377.10	14.57	MND LB 3110
CAS 40	776571.40	956060.40	14.07	MND LB 3110
CAS 41	776567.80	955738.40	13.89	MND LB 3110
CAS 42	776560.80	955492.30	13.13	MND LB 3110
CAS 43	776575.90	955216.00	13.19	MND LB 3110
CAS 44	776595.60	955026.00	13.66	PK
CAS 45	776590.70	954693.10	14.39	PK
CAS 46	775890.20	954719.30	15.38	MND LB 3110
CAS 47	775213.40	954714.50	16.81	MND LB 3110
CAS 48	775201.90	955074.20	17.86	MND LB 3110
CAS 49	775225.40	955408.80	17.22	MND LB 3110
CAS 50	775194.40	955752.70	15.74	MND LB 3110
CAS 51	774501.70	955773.30	16.24	MND LB 3110
CAS 52	774501.90	956064.80	15.66	PKD AVIROM ASSOC
CAS 53	774492.10	956453.40	17.62	MND LB 3110
CAS 54	774489.90	956793.40	15.22	MND LB 3300
CAS 55	774501.90	957116.90	15.71	MND LB 3110
CAS 56	775252.00	956090.90	16.46	MND LB 3110
CAS 57	775208.50	956432.20	15.22	MND LB 3110
CAS 58	775213.70	956727.30	14.64	MND LB 3110
CAS 59	775189.70	957055.60	15.57	MND LB 3110
CAS 60	777600.10	956084.40	14.32	MND LB 3110
CAS 61	777618.30	955187.90	14.68	MND LB 3110
CAS 62	777095.80	955235.80	11.72	MND LB 3110
CAS 63	777331.40	958034.80	16.48	MND LB 3110
CAS 64	775853.90	957047.70	16.05	MND LB 3110
CAS 65	776532.70	957042.60	16.87	PK
CAS 66	777417.40	957195.70	18.46	MND OSO LB 353
CAS 67	775886.40	956716.10	14.52	MND LB 3110
CAS 68	775910.20	956394.50	17.97	ND
CAS 69	775910.10	956394.60	17.93	ND
CAS 70	775906.10	956057.80	16.06	MND CAS
CAS 71	777140.20	956037.10	12.88	PK AVIROM
CAS 72	777146.50	955747.90	12.21	MND LB 3110
CAS 73	777117.20	955484.40	11.78	MND LB 3110
CAS 74	776848.40	955239.90	12.03	MND HSQ GROUP LB 7924
CAS 75	775914.10	955709.80	16.59	MND CAS
CAS 76	775880.40	955036.90	17.44	MND LB 3110
CAS 77	774724.00	955082.90	17.71	MND LB 3110
CAS 78	776609.30	954303.40	17.13	MND LB 3110
CAS 79	777292.00	954293.60	12.36	MND LB 3110
CAS 80	774713.20	955371.20	17.28	MND LB 3110
CAS 81	777445.60	956726.80	16.13	MND LB 3110
CAS 82	777089.30	954557.00	17.53	PKD
CAS 83	776839.10	954560.50	16.57	PKD
CAS 84	776588.80	954564.00	14.75	NAIL CONC
CAS 85	774903.80	954720.80	19.48	MND LB 3110
CAS 86	776160.80	954368.30	14.49	PK

PRIMARY CONTROL POINTS

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1 (STATIC)	774626.90	959380.00	18.72'	MND LB 3110
CAS 2 (STATIC)	775917.08	959403.39	19.22'	MND LB 3110
FDOT C02	774589.66	957386.84	15.79'	FDOT BRASS DISK
PNC-BM M02	774507.52	958398.40	15.06'	FDOT BRASS DISK
PNC-BM C3	774556.99	959460.96	18.59'	FDOT BRASS DISK
BLC-4	775265.00	959479.79	17.99'	FDOT BRASS DISK
BLC-5	777371.16	959300.96	20.23'	FDOT BRASS DISK

7. ALL SYMBOLS ARE SHOWN FOR REPRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE.

8. FINISHED FLOOR AND ELEVATIONS SHOWN HEREON, IF ANY, WERE TAKEN AT THE DOORWAY THRESHOLD. NO SEARCH WAS PERFORMED FOR ANY LOWER "SUNKEN" FLOORS OR HIGHER RAISED FLOORS WITHIN ANY STRUCTURE.

16. THE ACCURACY OF THIS SURVEY IS PREMISED ON THE EXPECTED USE OF THE SURVEY. THE EXPECTED USE/PREMISE OF THIS SURVEY IS THE DESIGN OF NEIGHBORHOOD IMPROVEMENTS, WHICH MAY CONSIST OF IMPROVEMENTS TO OR ADDITIONS OF ROADWAYS, DRAINAGE, LIGHTING, ETC. TRIMBLE R2 AND R8 GNSS INSTRUMENTS WITH TRIMBLE TSC-3 DATA COLLECTION WERE UTILIZED TO ESTABLISH HORIZONTAL CONTROL AND LOCATE UTILITY SURFACE MARKS AND MISC. FEATURES HORIZONTALLY. A TOPCON ES-102 INSTRUMENT WITH RANGER (TDS) DATA COLLECTION WAS UTILIZED TO COLLECT DATA IN BOTH THE HORIZONTAL AND VERTICAL PLANES. CLOSED LEVEL LOOPS WERE PERFORMED USING TOPCON GTS 2 LEVELS TO TRANSFER ELEVATIONS FROM KNOWN BENCHMARKS AND THROUGHOUT THE PROJECT.

17. THE DIGITAL DATA PROVIDED IS INTENDED TO BE VIEWED AT A SCALE OF 1" = 20' OR SMALLER.

18. ALL DISTANCES AND ELEVATIONS SHOWN HEREON ARE IN ACCORD WITH THE UNITED STATES STANDARD USING FEET AND DECIMALS THEREOF.

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

FOR THE FIRM BY: _____

ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SURVEY PREPARED BY:

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CERTIFICATE. NO. LB0003110

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	10/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 1

SURVEY NOTES AND SITE BENCHMARKS

PROJECT NO. 2017-020

DRAWING NO. G-5

FILE ID. 210336_G05.dwg

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Current Plotstyle : ByColor Layout Tab: G-5

NOTE:
REFER TO SHEET G-5 FOR THE SURVEY NOTES AND CONTROL POINTS

NORTH
N.T.S.

SURVEY PREPARED BY:

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REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 1

HORIZONTAL CONTROL PLANS

PROJECT NO. 2017-020
DRAWING NO. G-6
FILE ID. 210336_G06.dwg

Acad Version : R24.1s (LMS Tech)
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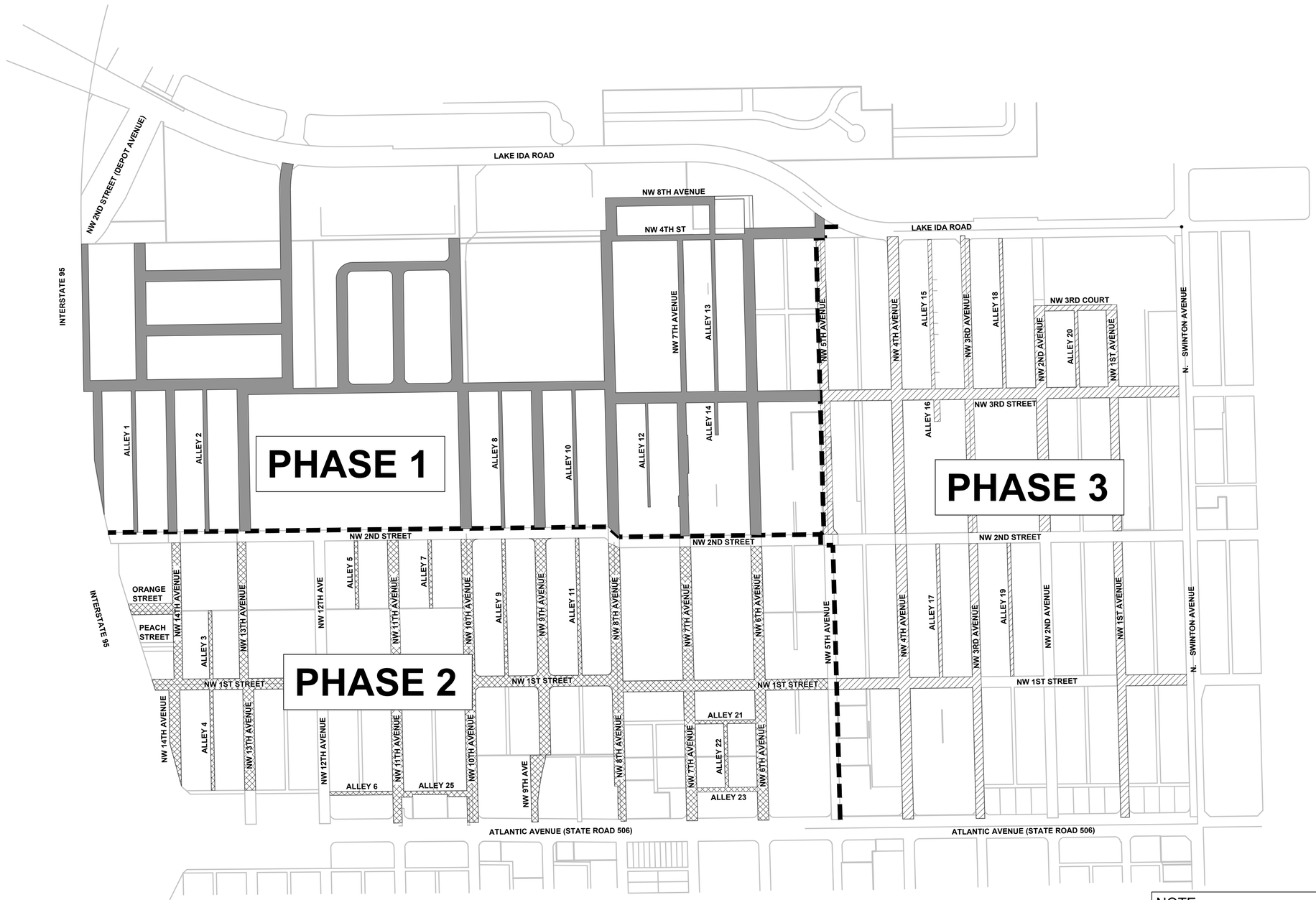

NOTE:
MINOR ADJUSTMENTS BY THE CONTRACTOR WILL BE CONSIDERED DURING SHOP DRAWINGS SUBMITTAL PERIOD FOR CONSTRUCTABILITY PURPOSES

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DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	10/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 1

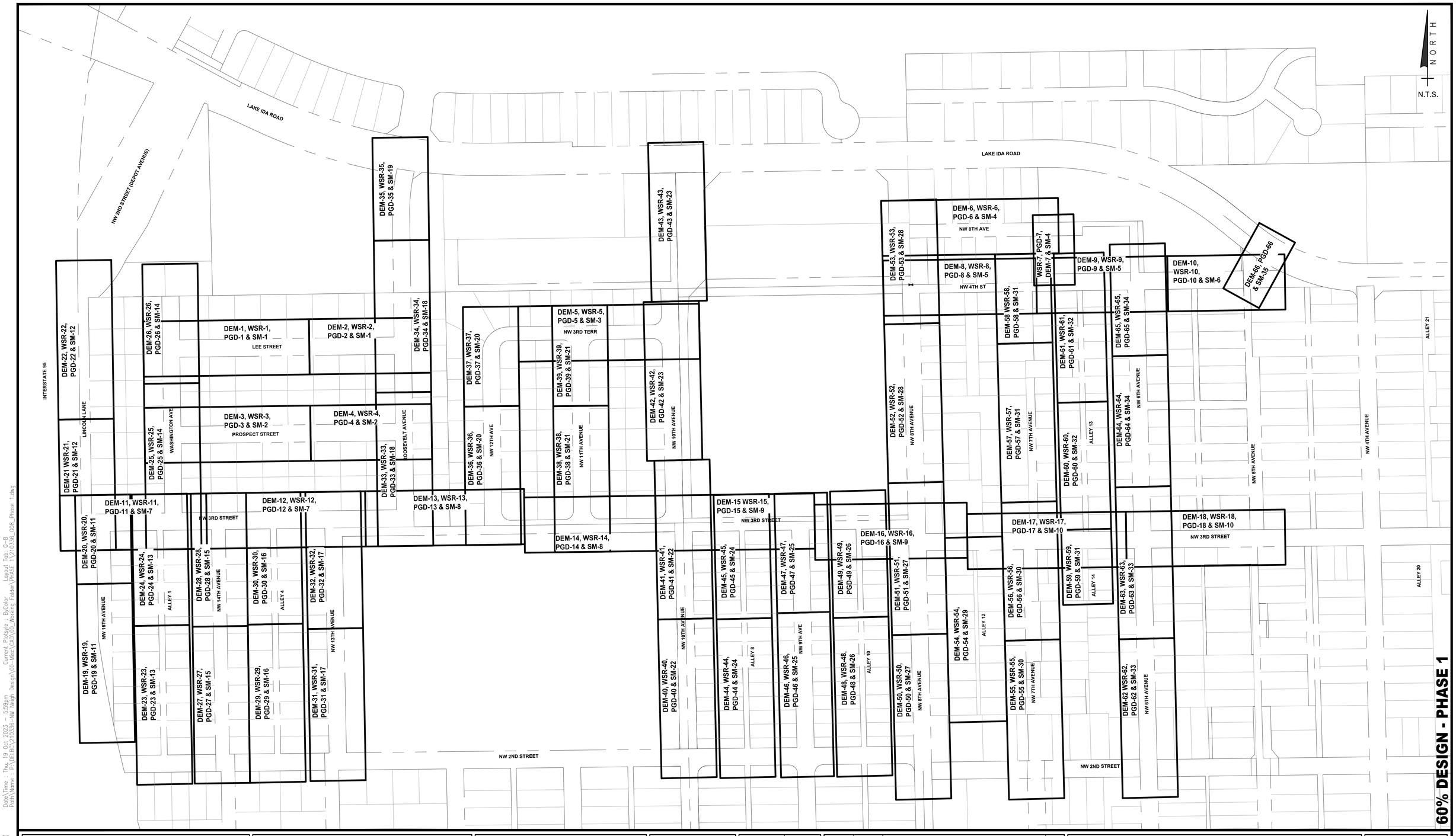
PHASING PLAN

PROJECT NO. 2017-020

DRAWING NO. G-7

FILE ID. 210336_G07.dwg

Acad Version - R24.1s (LMS Tech) User Name - sprossinger
Date\Time - Thu, 19 Oct 2023 - 5:58pm Path\Name - P:\DELRAY\210336 - NW Neigh Design\00 Misc (CAD)\02_Working Folder\Phase 1\210336_G07.dwg Current Plotstyle - ByColor Layout Tab: G-7



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REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 1

KEY MAP PLAN

PROJECT NO. 2017-020

DRAWING NO. G-8

FILE ID. 210336_G08_Phase 1.dwg

Acad Version : R24.1s (LMS Tech)
User Name: sgrossinger
Date\Time : Thu, 19 Oct 2023 - 5:59pm
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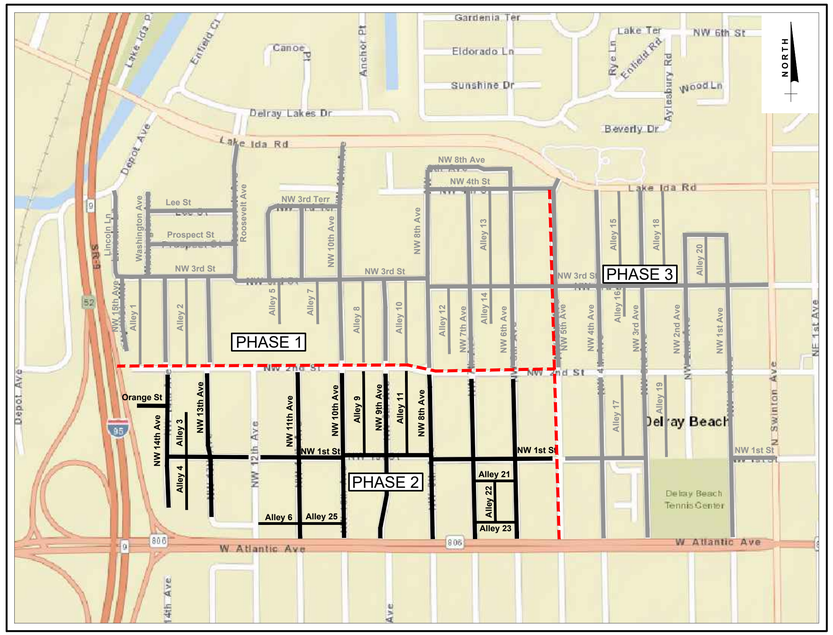
Current Plotstyle : ByColor
Layout Tab: G-8

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS - PHASE 2
VOLUME 1 - CIVIL
CITY PROJECT No. 2017-020



S 8 & 17, TWP 46S, RNG 43E

= LIMITS OF PROJECT AREA

= PHASING LINE

PROJECT LOCATION MAP

N.T.S.

CITY OFFICIALS

MAYOR	SHELLY PETROLIA
VICE MAYOR	RYAN BOYLSTON
DEPUTY VICE MAYOR	ROB LONG
COMMISSIONER	ADAM FRANKEL
COMMISSIONER	ANGELA BURNS

CRA OFFICIALS

CHAIR	ADAM FRANKEL
VICE CHAIR	ANGELA BURNS
DEPUTY VICE CHAIR	SHELLY PETROLIA
COMMISSIONER	RYAN BOYLSTON
COMMISSIONER	ROB LONG

GOVERNING STANDARD PLANS:
Florida Department of Transportation, FY 2022-23 Standard PLans for Road and Bridge Construction and application Interim Revision (IRs)

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

GOVERNING STANDARD SPECIFICATIONS:
Florida Department of Transportation, July 2022 Standard Specifications for Road and Bridge Construction at the following website:
http://www.fdot.gov/programmanagement/implemented/SpecBooks

POSTED SPEED LIMIT
ATLANTIC AVENUE - 30 MPH
NORTHWEST NEIGHBORHOOD - 25 MPH

60% DESIGN - PHASE 2
FEBRUARY 2024

VOLUME 1 - CIVIL
VOLUME 2 - ELECTRICAL
VOLUME 3 - LANDSCAPE AND IRRIGATION

CITY of DELRAY BEACH
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477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

CITY OF DELRAY BEACH
OSCEOLA PARK NEIGHBORHOOD IMPROVEMENTS
PHASE 2

TITLE SHEET AND LOCATION MAP

PROJECT NO. 2017-020
DRAWING NO. G-1
FILE ID. 210336_G01.dwg

Acad Version : R24.1s (LMS Tech) Date\Time : Wed, 14, Feb, 2024 – 3:24pm Current Plotstyle : ByColor Layout Tab: G-1A – VOLUME 1
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DRAWING LIST

VOLUME 1 - CIVIL
VOLUME 2 - ELECTRICAL
VOLUME 3 - LANDSCAPE AND IRRIGATION

VOLUME 1 - CIVIL

DRAWING	TITLE
	GENERAL
G-1	TITLE SHEET AND LOCATION MAP
G-2	DRAWING LIST & FDOT GENERAL NOTES
G-3	KEY MAP PLAN
G-4	GENERAL NOTES, SURVEY NOTES AND SURVEY LEGEND
G-5	SYMBOLS AND SURVEY LEGEND
G-6	SURVEY NOTES AND SITE BENCHMARKS
G-7	HORIZONTAL CONTROL DETAILS
G-8	PHASING PLAN
	CIVIL - DEMOLITION PLAN
DEM-1	ORANGE STREET PLAN AND PROFILE STATION 10+00 TO STATION 12+17
DEM-2	NW 1ST STREET PLAN AND PROFILE STATION 12+23 TO STATION 16+00
DEM-3	NW 1ST STREET PLAN AND PROFILE STATION 16+00 TO STATION 21+60
DEM-4	NW 1ST STREET PLAN AND PROFILE STATION 21+60 TO STATION 24+80
DEM-5	NW 1ST STREET PLAN AND PROFILE STATION 24+80 TO STATION 29+40
DEM-6	NW 1ST STREET PLAN AND PROFILE STATION 29+40 TO STATION 34+00
DEM-7	NW 1ST STREET PLAN AND PROFILE STATION 34+00 TO STATION 38+60
DEM-8	NW 1ST STREET PLAN AND PROFILE STATION 38+60 TO STATION 43+00
DEM-9	NW 14TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 13+20
DEM-10	NW 14TH AVENUE PLAN AND PROFILE STATION 13+20 TO STATION 17+40
DEM-11	NW 14TH AVENUE PLAN AND PROFILE STATION 17+40 TO STATION 20+45
DEM-12	ALLEY 4 PLAN AND PROFILE STATION 10+00 TO STATION 14+96
DEM-13	ALLEY 3 PLAN AND PROFILE STATION 10+00 TO STATION 13+38
DEM-14	NW 13TH AVENUE PLAN AND PROFILE STATION 11+60 TO STATION 15+80
DEM-15	NW 13TH AVENUE PLAN AND PROFILE STATION 15+80 TO STATION 20+00
DEM-16	NW 13TH AVENUE PLAN AND PROFILE STATION 20+00 TO STATION 23+55
DEM-17	NW 12TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 19+40
DEM-18	NW 12TH AVENUE PLAN AND PROFILE STATION 19+40 TO STATION 12+56
DEM-19	ALLEY 5 PLAN AND PROFILE STATION 10+00 TO STATION 13+39
DEM-20	ALLEY 6 PLAN AND PROFILE STATION 13+40 TO STATION 17+00
DEM-21	ALLEY 25 PLAN AND PROFILE STATION 17+00 TO STATION 20+20
DEM-22	NW 11TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-23	NW 11TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+80
DEM-24	NW 11TH AVENUE PLAN AND PROFILE STATION 17+80 TO STATION 21+60
DEM-25	NW 11TH AVENUE PLAN AND PROFILE STATION 21+60 TO STATION 23+59
DEM-26	ALLEY 7 PLAN AND PROFILE STATION 10+00 TO STATION 13+39
DEM-27	NW 10TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 13+80
DEM-28	NW 10TH AVENUE PLAN AND PROFILE STATION 13+80 TO STATION 17+40
DEM-29	NW 10TH AVENUE PLAN AND PROFILE STATION 17+40 TO STATION 21+20
DEM-30	NW 10TH AVENUE PLAN AND PROFILE STATION 21+20 TO STATION 23+59
DEM-31	ALLEY 9 PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-32	ALLEY 9 PLAN AND PROFILE STATION 14+00 TO STATION 16+80
DEM-33	NW 9TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-34	NW 9TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+60
DEM-35	NW 9TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
DEM-36	NW 9TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+64
DEM-37	ALLEY 11 PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-38	ALLEY 11 PLAN AND PROFILE STATION 14+00 TO STATION 16+80
DEM-39	NW 8TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-40	NW 8TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+60
DEM-41	NW 8TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
DEM-42	NW 8TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+72
DEM-43	NW 7TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-44	NW 7TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+60
DEM-45	NW 7TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
DEM-46	NW 7TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+25
DEM-47	ALLEY 21 PLAN AND PROFILE STATION 50+00 TO STATION 53+27
DEM-48	ALLEY 23 PLAN AND PROFILE STATION 30+00 TO STATION 33+27
DEM-49	ALLEY 22 PLAN AND PROFILE STATION 40+00 TO STATION 43+11
DEM-50	NW 6TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 14+00
DEM-51	NW 6TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+60
DEM-52	NW 6TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
DEM-53	NW 6TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+25
DEM-54	NW 2ND STREET PLAN AND PROFILE STATION 31+00 TO STATION 34+60
	TYPICAL SECTIONS
TS-1	TYPICAL SECTION DRAWINGS - SHEET 1
TS-2	TYPICAL SECTION DRAWINGS - SHEET 2
TS-3	TYPICAL SECTION DRAWINGS - SHEET 3
TS-4	TYPICAL SECTION DRAWINGS - SHEET 4
TS-5	TYPICAL SECTION DRAWINGS - SHEET 5
	CIVIL - PAVING, GRADING & DRAINAGE
PGD-1	ORANGE STREET PLAN AND PROFILE STATION 10+00 TO STATION 12+17
PGD-2	NW 1ST STREET PLAN AND PROFILE STATION 12+23 TO STATION 16+00
PGD-3	NW 1ST STREET PLAN AND PROFILE STATION 16+00 TO STATION 21+60
PGD-4	NW 1ST STREET PLAN AND PROFILE STATION 21+60 TO STATION 24+80
PGD-5	NW 1ST STREET PLAN AND PROFILE STATION 24+80 TO STATION 29+40
PGD-6	NW 1ST STREET PLAN AND PROFILE STATION 29+40 TO STATION 34+00
PGD-7	NW 1ST STREET PLAN AND PROFILE STATION 34+00 TO STATION 38+60
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PGD-9	NW 14TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 13+20
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PGD-31	ALLEY 9 PLAN AND PROFILE STATION 10+00 TO STATION 14+00
PGD-32	ALLEY 9 PLAN AND PROFILE STATION 14+00 TO STATION 16+80
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PGD-38	ALLEY 11 PLAN AND PROFILE STATION 14+00 TO STATION 16+80
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PGD-40	NW 8TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+60
PGD-41	NW 8TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
PGD-42	NW 8TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+72
PGD-43	NW 7TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 14+00
PGD-44	NW 7TH AVENUE PLAN AND PROFILE STATION 14+00 TO STATION 17+60
PGD-45	NW 7TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
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PGD-49	ALLEY 22 PLAN AND PROFILE STATION 40+00 TO STATION 43+11
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PGD-52	NW 6TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
PGD-53	NW 6TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+25
PGD-54	NW 2ND STREET PLAN AND PROFILE STATION 31+00 TO STATION 34+60
	CIVIL - WATER, SEWER & RECLAIM UTILITIES
WSR-1	ORANGE STREET PLAN AND PROFILE STATION 10+00 TO STATION 12+17
WSR-2	NW 1ST STREET PLAN AND PROFILE STATION 12+23 TO STATION 16+00
WSR-3	NW 1ST STREET PLAN AND PROFILE STATION 16+00 TO STATION 21+60
WSR-4	NW 1ST STREET PLAN AND PROFILE STATION 21+60 TO STATION 24+80
WSR-5	NW 1ST STREET PLAN AND PROFILE STATION 24+80 TO STATION 29+40
WSR-6	NW 1ST STREET PLAN AND PROFILE STATION 29+40 TO STATION 34+00
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WSR-17	NW 12TH AVENUE PLAN AND PROFILE STATION 10+00 TO STATION 19+40
WSR-18	NW 12TH AVENUE PLAN AND PROFILE STATION 19+40 TO STATION 23+57
WSR-19	ALLEY 5 PLAN AND PROFILE STATION 10+00 TO STATION 13+39
WSR-20	ALLEY 6 PLAN AND PROFILE STATION 13+40 TO STATION 17+00
WSR-21	ALLEY 25 PLAN AND PROFILE STATION 17+00 TO STATION 20+20
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WSR-52	NW 6TH AVENUE PLAN AND PROFILE STATION 17+60 TO STATION 21+00
WSR-53	NW 6TH AVENUE PLAN AND PROFILE STATION 21+00 TO STATION 23+25
WSR-54	NW 2ND STREET PLAN AND PROFILE STATION 31+00 TO STATION 34+60
	CROSS SECTIONS
CS-1	ORANGE STREET CROSS SECTIONS
CS-2	NW 1ST STREET ROADWAY CROSS SECTIONS - SHEET 1
CS-3	NW 1ST STREET ROADWAY CROSS SECTIONS - SHEET 2
CS-4	NW 1ST STREET ROADWAY CROSS SECTIONS - SHEET 3
CS-5	NW 1ST STREET ROADWAY CROSS SECTIONS - SHEET 4
CS-6	NW 14TH STREET ROADWAY CROSS SECTIONS - SHEET 1
CS-7	NW 14TH STREET ROADWAY CROSS SECTIONS - SHEET 2
CS-8	NW 13TH STREET ROADWAY CROSS SECTIONS - SHEET 1
CS-9	NW 13TH STREET ROADWAY CROSS SECTIONS - SHEET 2
CS-10	NW 11TH STREET ROADWAY CROSS SECTIONS - SHEET 1
CS-11	NW 11TH STREET ROADWAY CROSS SECTIONS - SHEET 2
CS-12	NW 10TH STREET ROADWAY CROSS SECTIONS - SHEET 1
CS-13	NW 10TH STREET ROADWAY CROSS SECTIONS - SHEET 2
CS-14	NW 9TH AVENUE ROADWAY CROSS SECTIONS - SHEET 1
CS-15	NW 9TH AVENUE ROADWAY CROSS SECTIONS - SHEET 2
CS-16	NW 8TH AVENUE ROADWAY CROSS SECTIONS - SHEET 1
CS-17	NW 8TH AVENUE ROADWAY CROSS SECTIONS - SHEET 2
CS-18	NW 7TH AVENUE ROADWAY CROSS SECTIONS - SHEET 1
CS-19	NW 7TH AVENUE ROADWAY CROSS SECTIONS - SHEET 2
CS-20	NW 6TH AVENUE ROADWAY CROSS SECTIONS - SHEET 1
CS-21	NW 6TH AVENUE ROADWAY CROSS SECTIONS - SHEET 2
	SIGNING AND PAVEMENT MARKING
SM-1	ORANGE STREET - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 12+17 NW 1ST STREET - SIGNAGE & PAVEMENT MARKING PLANS STATION 12+23 TO STATION 16+00
SM-2	NW 1ST STREET - SIGNAGE & PAVEMENT MARKING PLANS STATION 16+00 TO STATION 24+80
SM-3	NW 1ST STREET - SIGNAGE & PAVEMENT MARKING PLANS STATION 24+80 TO STATION 34+00
SM-4	NW 1ST STREET - SIGNAGE & PAVEMENT MARKING PLANS STATION 34+00 TO STATION 43+00
SM-5	NW 14TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+40
SM-6	NW 14TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+40 TO STATION 20+45 ALLEY 4 - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 14+96
SM-7	ALLEY 3 - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 13+38 NW 13TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 11+60 TO STATION 15+80
SM-8	NW 13TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 15+80 TO STATION 23+55
SM-9	ALLEY 6 - SIGNAGE & PAVEMENT MARKING PLANS STATION 13+40 TO STATION 17+00 ALLEY 25 - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+00 TO STATION 20+20
SM-10	ALLEY 5 - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 13+39 ALLEY 7 - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 13+39
SM-11	NW 11TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+80
SM-12	NW 11TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+80 TO STATION 23+59
SM-13	NW 10TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+40
SM-14	NW 10TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+40 TO STATION 23+59
SM-15	ALLEY 9 - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 16+80
SM-16	NW 9TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+60
SM-17	NW 9TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+60 TO STATION 23+64
SM-18	ALLEY 11 - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 16+80
SM-19	NW 8TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+60
SM-20	NW 8TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+60 TO STATION 23+72
SM-21	NW 7TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+60
SM-22	NW 7TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+60 TO STATION 23+25
SM-23	ALLEY 21 - SIGNAGE & PAVEMENT MARKING PLANS STATION 50+00 TO STATION 53+27 ALLEY 23 - SIGNAGE & PAVEMENT MARKING PLANS STATION 30+00 TO STATION 33+27
SM-24	ALLEY 22 - SIGNAGE & PAVEMENT MARKING PLANS STATION 40+00 TO STATION 43+11
SM-25	NW 6TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+60
SM-26	NW 6TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+60 TO STATION 23+25
SM-27	NW 12TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 10+00 TO STATION 17+80
SM-28	NW 12TH AVENUE - SIGNAGE & PAVEMENT MARKING PLANS STATION 17+80 TO STATION 23+59
SM-29	SIGNAL LOOP REPLACEMENT NW 10TH AVENUE & NW 8TH AVENUE
SM-30	NEIGHBORHOOD SIGN LOCATION PLAN
	DETAILS
D-1	ROADWAY AND TRAFFIC DETAILS - SHEET 1
D-2	ROADWAY AND TRAFFIC DETAILS - SHEET 2
D-3	ROADWAY AND TRAFFIC DETAILS - SHEET 3
D-4	GENERAL UTILITY DETAILS AND STORMWATER DRAINAGE DETAILS
D-5	STORMWATER DRAINAGE DETAILS - SHEET 1
D-6	STORMWATER DRAINAGE DETAILS - SHEET 2
D-7	STORMWATER DRAINAGE DETAILS - SHEET 3
D-8	PRESSURE PIPE DETAILS AND POTABLE WATER DISTRIBUTION DETAILS
D-9	POTABLE WATER DISTRIBUTION DETAILS
D-10	RECLAIMED WATER DISTRIBUTION DETAILS - SHEET 1
D-11	RECLAIMED WATER DISTRIBUTION DETAILS - SHEET 2
D-12	WASTEWATER COLLECTION/TRANSMISSION DETAILS
D-13	MISCELLANEOUS DETAILS

VOLUME 2 - ELECTRICAL

VOLUME 3 - LANDSCAPE AND IRRIGATION

60% DESIGN - PHASE 2

Always call 811 two full business days before you dig
Sunshine811.com

CITY of DELRAY BEACH
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20 NORTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
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BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	12/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 2

DRAWING LIST

PROJECT NO. 2017-020
DRAWING NO. G-2
FILE ID. 210336_G02.dwg

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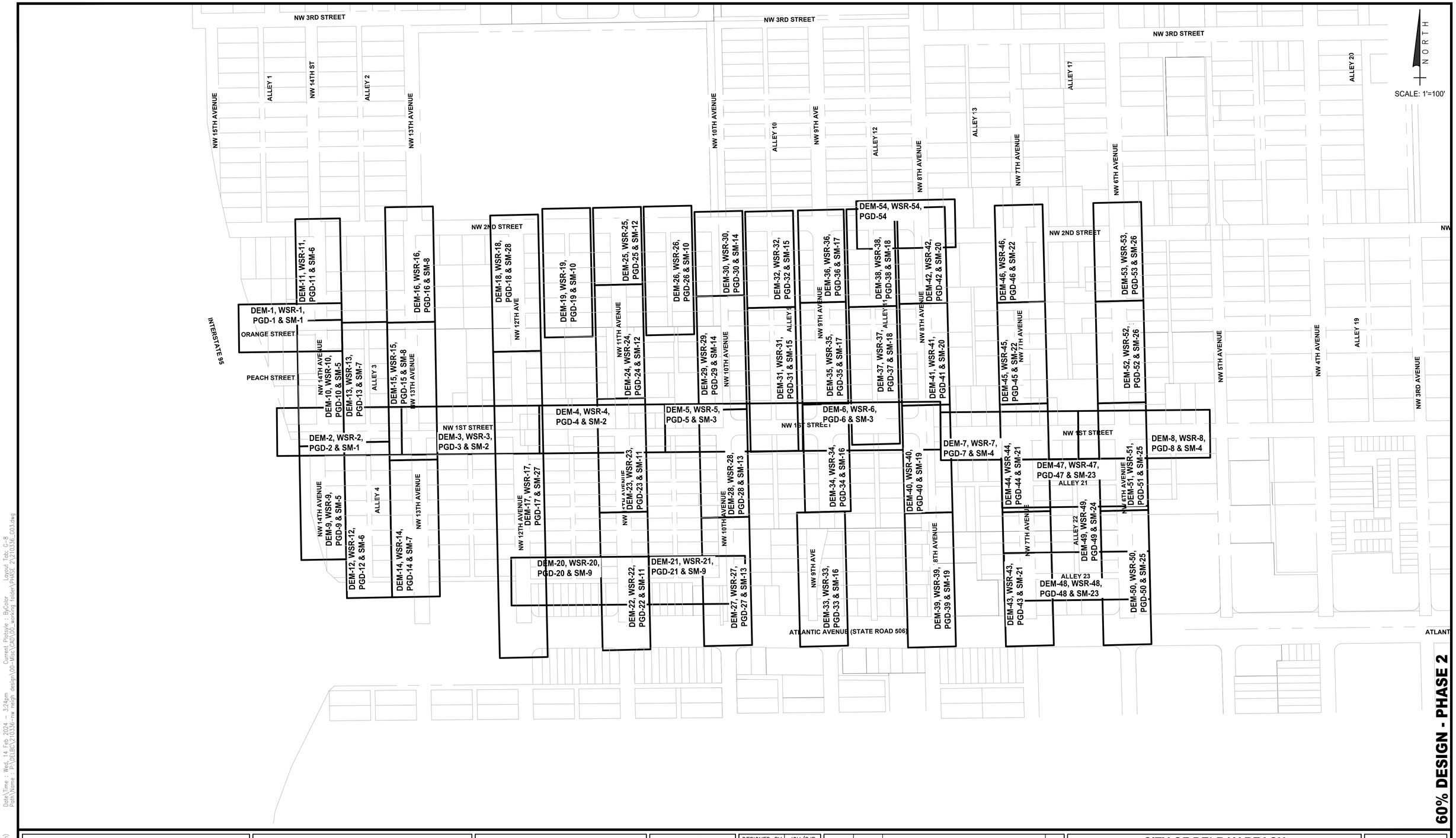

60% DESIGN - PHASE 2

CITY of DELRAY BEACH
PUBLIC WORKS
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7322 Fax: (561) 243-7314

CITY of DELRAY BEACH
COMMUNITY REDEVELOPMENT AGENCY
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CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 2

KEY MAP PLAN

PROJECT NO. 2017-020

DRAWING NO. G-3

FILE ID. 210336_G03.dwg

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GENERAL NOTES

DEFINITIONS

1. CITY – THE CITY OF DELRAY BEACH
2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION

PROCEDURE

1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER, SEWER OR DRAINAGE CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.
2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
3. A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91.
4. ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
7. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.
8. PRIOR TO ANY SANITARY OR WATER MAIN TESTING, UNDER EXISTING OR FUTURE PAVEMENT, THE ROCK BASE SHALL BE FINISHED AND PRIMED OR FIRST LIFT OF PAVEMENT PLACED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
11. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE.
12. CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.
13. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.
14. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.
15. PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO CITY OF DELRAY BEACH, FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICALS (LATEST REVISION) UNLESS SHOWN OTHERWISE.
16. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY. AS THE WORK PROGRESSES, THE ENGINEER OF RECORD (OR THEIR REPRESENTATIVE) SHALL RECORD ON ONE SET OF DRAWINGS THE LOCATION INCLUDING STATION AND OFFSET WITH SUFFICIENT DIMENSIONS AND DISTANCES TO ADEQUATELY DESCRIBE THE LOCATION OF THE IMPROVEMENT FROM THE BASELINE. ELEVATIONS ARE TO BE PROVIDED AT THE TOP OF PIPE AT INCREMENTS OF EVERY 100 FEET ON ALL WATER AND FORCE MAINS. STATIONING IS REQUIRED ON ALL VALVES, FITTINGS, WATER AND SEWER SERVICES AND FIRE HYDRANTS. THE LENGTHS OF THE WATER SERVICES LINES AND SEWER LATERALS MUST BE NOTED ON GRAVITY SEWER LINES, ELEVATIONS AND STATIONING ARE TO BE INDICATED ON ALL MANHOLE RIMS AND INVERTS. THE DISTANCE BETWEEN MANHOLES IS TO BE SHOWN ON BOTH THE PLAN AND PROFILE SHEETS UNLESS PLAN VIEW AND PROFILE VIEW ARE ON THE SAME SHEET. PAVING & DRAINAGE AS-BUILT DRAWINGS SHALL INCLUDE RIM ELEVATIONS, INVERT ELEVATIONS, PIPE SIZES, CONTROL STRUCTURE DIMENSIONS AS WELL AS, AS-BUILT ELEVATIONS AS EVERY LOCATION A PROPOSED ELEVATION IS INDICATED ON THE CONSTRUCTION PLAN. ADEQUATE AS-BUILT ELEVATIONS SHALL BE PROVIDED ON EMBANKMENTS TO DETERMINE COMPLIANCE WITH MAXIMUM SLOPE REQUIREMENTS.
17. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.
18. CONTRACTOR SHALL NOTIFY (811) 48 HOURS IN ADVANCE OF CONSTRUCTION.
19. GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE.
20. CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION.
21. EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.
22. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.
23. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
24. PRIOR TO AND DURING CONSTRUCTION OF ALL SITES, THE PERMITEE SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDED IN A POLLUTION PREVENTION PLAN PROVIDED TO THE CITY OF DELRAY BEACH.
25. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.
26. ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKINGS STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING.
27. EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS.
28. CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITH THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY.
29. SITE INFORMATION BASED ON A SURVEY PREPARED BY: CRAIG A. SMITH & ASSOCIATES. AND DENNIS J. LEAVY & ASSOCIATES, INC.
30. RELOCATION OF ANY UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES.
31. CONTRACTOR TO LOCATED AND PROTECT EXISTING IRRIGATION SYSTEMS AND RESTORE ANY DAMAGED SYSTEMS TO OPERATIONAL CONDITIONS. EXTEND THE EXISTING IRRIGATION SYSTEMS IN FRONT OF THE PROPOSED SIDEWALK. ALL COST TO BE INCLUDED IN PAY ITEM IRRIGATION ALLOWANCE.

GENERAL INFORMATION

1. AT&T TELEPHONE, FLORIDA POWER AND LIGHT, CABLE TV, GAS, ETC. ARE TAKEN FROM FIELD INSPECTIONS AND SKETCHES PROVIDED BY UTILITIES AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS AND CONFIRM LOCATIONS OF UTILITIES NO LESS THAN TWO FULL BUSINESS DAYS BEFORE DIGGING. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION WHERE CROSSING OR PARALLELING OF EXISTING UTILITIES OCCUR. ANY DAMAGE RESULTING FROM THE CONTRACTORS OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

EROSION CONTROL NOTES:

1. CUT AND FILL SLOPES TO BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SILT FENCES TO BE USED WHERE NECESSARY.
2. CONSTRUCTION VEHICLE ACCESS ROUTES SHALL BE SWEPT CLEAN OF SEDIMENT, CONCRETE AND OTHER CONSTRUCTION MATERIALS AS NEEDED.
3. ALL BERMS, DIKES AND SPOIL PILES SUBJECT TO EROSION MUST BE STABILIZED OR CONTAINED TO PREVENT EROSION AND RUNOFF FROM THE PROJECT.
4. ALL EXISTING STORM SEWER INLET GRATES TO BE COVERED WITH FILTER FABRIC DURING CONSTRUCTION.

EXISTING UTILITY LINETYPE LEGEND

CATV	EXISTING BURIED CABLE TELEVISION
CATV FO	EXISTING BURIED CABLE TELEVISION FIBER OPTIC
COMM	EXISTING BURIED COMMUNICATION
E	EXISTING BURIED ELECTRIC
E FO	EXISTING BURIED ELECTRIC FIBER OPTIC
<E>	EXISTING BURIED ELECTRIC DUCT
FO	EXISTING BURIED FIBER OPTIC
G	EXISTING BURIED GAS MAIN (<12")
GS GS GS	EXISTING BURIED GAS SERVICE
IRR IRR	EXISTING BURIED IRRIGATION
FM	EXISTING BURIED SANITARY FORCE MAIN (<12")
FM (ABD)	EXISTING BURIED ABANDONED SANITARY FORCE MAIN (<12")
RAW WM	EXISTING BURIED RAW WATER MAIN (<12")
RWM	EXISTING BURIED RECLAIMED WATER MAIN (<12")
RWS	EXISTING BURIED RECLAIMED WATER SERVICE
SAN	EXISTING BURIED SANITARY SEWER (<12")
SL SL SL	EXISTING BURIED SANITARY SEWER LATERAL
STM	EXISTING BURIED STORM DRAINAGE (<12")
T T	EXISTING BURIED TELEPHONE
<T>	EXISTING BURIED TELEPHONE DUCT
T FO	EXISTING BURIED TELEPHONE FIBER OPTIC
T (RIP)	EXISTING BURIED TELEPHONE (RETIRED IN PLACE)
TRAF	EXISTING BURIED TRAFFIC SIGNAL
TRAF FO	EXISTING BURIED TRAFFIC FIBER OPTIC SIGNAL
UNK	EXISTING BURIED UNKNOWN UTILITY
W	EXISTING BURIED WATER MAIN (<12")
WM (ABD)	EXISTING BURIED ABANDONED WATER MAIN (<12")
WS WS WS	EXISTING BURIED WATER SERVICE
S S S	EXISTING BURIED WATER, SEWER AND STORM (≥12")

UTILITY CONTACTS

CITY OF DELRAY BEACH WATER/SEWER
HASSAN HADJIMIRY, P.E.
UTILITIES DIRECTOR
434 S. SWINTON AVENUE
DELRAY BEACH, FL 33444
TEL. (561) 243-7328

PALM BEACH COUNTY TRAFFIC OPERATIONS SUPERINTENDENT
MARCELINO ALICEA
SUPERINTENDENT
2300 NORTH JOG ROAD
WEST PALM BEACH, FL 33411
TEL. (561) 684-4030

FIBERNET DIRECT FLORIDA, LLC
DANNY HASKETT
OSPE ASSOCIATE PROJECT MANAGER
1601 NW 136th AVENUE, SUITE A-200
SUNRISE, FL 33323
TEL. (786) 610-7073

FLORIDA POWER & LIGHT
ROBERT WEESE
SENIOR CUSTOMER ADVISOR
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (561) 640-2209

GLADYS REYES
REPRESENTATIVE, LED LIGHTING SOLUTIONS
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (407) 844-8862

FLORIDA PUBLIC UTILITIES CORP.
PETER BONO
ENGINEERING TECHNICIAN
P.O. BOX 3395
WEST PALM BEACH, FL 33402
TEL. (561) 838-1841

AT&T
GARTH BEDWARD
SR. SPECIALIST – OSP DESIGN ENGINEER
120 NORTH K STREET, ROOM 3D-05
LAKE WORTH, FL 33460
TEL. (561) 540-9263

XFINITY
STEVEN ROSA
SENIOR FIELD COORDINATOR
3960 RCA BLVD., SUITE 6002
PALM BEACH GARDEN, FL 33401
TEL. (561) 454-5851

NOTE:
IT IS THE INTENT THAT THE EXISTING POWER POLES AND FPL/COMCAST/AT&T BOXES WILL BE RELOCATED PRIOR TO START OF CONSTRUCTION

FDOT GENERAL NOTES

(in reference to work within S. Federal Hwy ROW)

ASSET MAINTENANCE

Permittee will coordinate (i.e. pre-construction meeting, inspections, final acceptance of work, etc.) with Shawn Dolan of Louis Berger at 202-734-1736 or email sdolan@louisberger.com

Coordination will include a Pre-Construction meeting. Certification acceptance and final approval is contingent upon conformity of all work completed according to this permit and the restoration of the Right of Way.

This permit is valid only for work proposed within the D.O.T. right-of-way. Certification acceptance and final approval is contingent upon conformity of all work completed according to this permit and the restoration of the Right of Way.

All materials and construction within the Florida Department of Transportation Design (F.D.O.T.) right-of-way shall conform to the "latest version of FDOT Standard Plans for Road and Bridge Construction and latest version of the Standard Specifications for Road and Bridge Construction".

All maintenance Of Traffic M.O.T. for this project will be in compliance with the Departments current edition of the FDOT Standard Plans for Road and Bridge Construction Indices, (102-600 series) and the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). The Operations Engineer or his designee reserves the right to direct the removal/relocation/modification of any traffic devices(s) at the permittee's sole expense. Special attention will be given to Indices 102-611, 102-612, 102-613, and 102-660.

All thermoplastic traffic stripes, markings and signage will be installed per the FDOT Standard Plans for Road and Bridge Construction.

Permittee will restore swale area adjacent to property/project limits (4:1 or flatter) as directed by the Department's Operation Engineer or their designee.

It is the Permittee' s responsibility to obtain final acceptance of permitted work (completed) and the restoration of the Right-of-Way from the F.D.O.T. prior to usage.

Permittee will provide the necessary densities in accordance with Section 125-8 of the FDOT Standard Specifications for Road & Bridge Construction (latest edition) prior to final acceptance by the F.D.O.T.

Permittee will restore the Right of Way as a minimum, to its original condition or better in accordance w/F.D.O.T.'s latest Standard Specifications for Road & Bridge Construction or as directed by the Resident Operations Engineer.

During the removal/installation of any curb and gutter section, the permittee will be responsible for any damage done to the abutting asphalt. The damaged asphalt repair will be in accordance with the current specifications and/or as directed by the Resident Operations Engineer.

All public sidewalk curb ramps will meet the FDOT Standard Plans for Road and Bridge Construction (current edition) Index No. 522-002 Curb/Ramp inspections required prior to installation of concrete.

Permittee shall provide the Producer's Certification (Delivery Ticket) for the NS CONCRETE-2500 PSI (used for Sidewalk, Curb & Gutter, Ditch Pavement and Traffic Separator) prior to final acceptance by the Department. The delivery ticket shall certify the concrete was batched, delivered and placed in accordance with Section 347 of the F.D.O.T.'s Standard Specifications for Road and Bridge Construction (current edition).

Signs will be installed in accordance with FDOT Standard Plans for Road and Bridge Construction 700-010 and 700-101 and all other indices for single and multiple column ground signs.

Removal/installation of sidewalk will be in accordance with Standard Plans for Road and Bridge Construction Index 522-001.

Sodded areas will be in accordance with FDOT Standard Plans for Road and Bridge Construction Index 570-010 and sections 162, 981, 982, 983, 987 of the F.D.O.T.'s Standard Specifications for Road and Bridge Construction, latest edition. All disturbed areas will be sodded within one (1) week of installation of said permitted work.

Ownership of all suitable excavated materials within the FDOT R/W, as determined by the F.D.O.T., shall remain in the Department until a final acceptance of the permitted project is fulfilled. Excavated materials shall be hauled by the contractor, at their cost & expense from the site to the Palm Beach Operations Center, 7900 W Forest Hill Blvd or stockpiled in those areas as directed by the DOT, including asphalt millings.

Restricted hours of operation for lane closures will be from 9:00am to 4:00 pm, (Monday-Friday), unless otherwise approved by the Operations Engineer, or designee. MOT shall be picked up by 4:00 pm and not start before 9:00 am.

Contractors performing permitted work activities within S. Federal Hwy ROW shall provide proof of a proper state contractor's license, certificate of liability insurance and MOT Cert with 24/7 contact number and email prior to any commencement of permitted work.

Prior to any work within S. Federal Hwy requiring lane closures, mobile operations or traffic pacing operations, the contractor shall submit a request to the CEI and the Department that includes the time, location, and description of work being performed. The lane closure request shall be submitted to the CEI and Department a minimum of 2 weeks prior to the proposed closure date and must be approved by the CEI and Department before work requiring the closure may begin within the FDOT Right of Way. URL address: https://LCIS.dot.state.fl.us.

Permittee will construct the first five feet of the driveway connection adjacent to edge of pavement (E.O.P) from the travel lane consisting of 15"-limerock based on compacted sub soil and 3" of SP 12.5 asphalt. Grade from E.O.P. will be at 6% to the center of swale.

60% DESIGN - PHASE 2

Always call 811 two full business days before you dig
Sunshine811.com

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PUBLIC WORKS
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COMMUNITY REDEVELOPMENT AGENCY
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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
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DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	12/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 2

GENERAL NOTES AND FDOT GENERAL NOTES

PROJECT NO. 2017-020
DRAWING NO. G-4
FILE ID. 210336_G04.dwg

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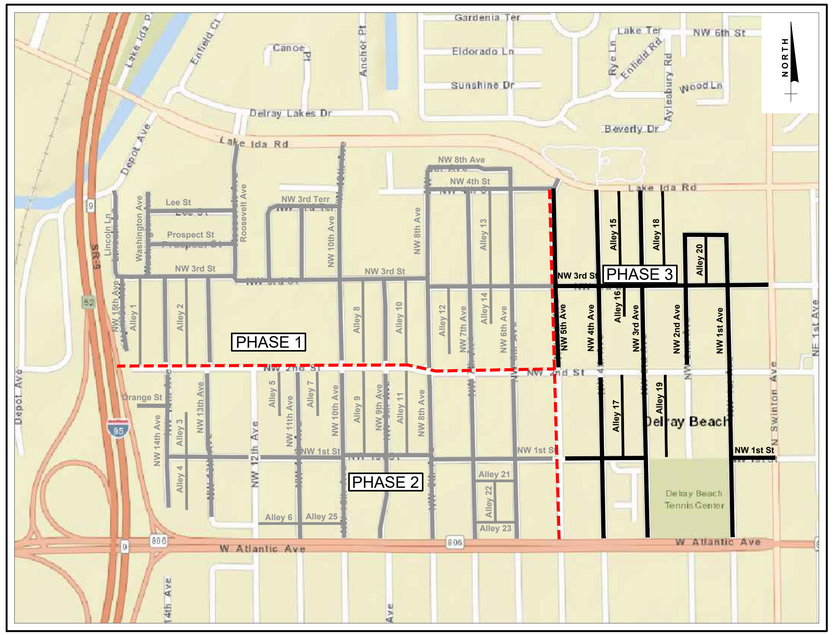
CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS - PHASE 3
VOLUME 1 - CIVIL
CITY PROJECT No. 2017-020



S 8 & 17, TWP 46S, RNG 43E
= LIMITS OF PROJECT AREA
= PHASING LINE

PROJECT LOCATION MAP
N.T.S.

CITY OFFICIALS

MAYOR	SHELLY PETROLIA
VICE MAYOR	RYAN BOYLSTON
DEPUTY VICE MAYOR	ROB LONG
COMMISSIONER	ADAM FRANKEL
COMMISSIONER	ANGELA BURNS

CRA OFFICIALS

CHAIR	ADAM FRANKEL
VICE CHAIR	ANGELA BURNS
DEPUTY VICE CHAIR	SHELLY PETROLIA
COMMISSIONER	RYAN BOYLSTON
COMMISSIONER	ROB LONG

GOVERNING STANDARD PLANS:
Florida Department of Transportation, FY 2019-20 Standard PLans for Road and Bridge Construction and application Interim Revision (IRs)

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

GOVERNING STANDARD SPECIFICATIONS:
Florida Department of Transportation, July 2019 Standard Specifications for Road and Bridge Construction at the following website:
http://www.fdot.gov/programmanagement/implemented/SpecBooks

POSTED SPEED LIMIT
ATLANTIC AVENUE - 30 MPH
NORTHWEST NEIGHBORHOOD - 25 MPH
LAKE IDA ROAD - 35 MPH

60% DESIGN - PHASE 3
JUNE 2024

VOLUME 1 - CIVIL
VOLUME 2 - ELECTRICAL
VOLUME 3 - LANDSCAPE AND IRRIGATION

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M. REBECCA TRAVIS, P.E.
No. 40988

CITY OF DELRAY BEACH
OSCEOLA PARK NEIGHBORHOOD IMPROVEMENTS
PHASE 3

TITLE SHEET AND LOCATION MAP

PROJECT NO. 2017-020
DRAWING NO. G-1
FILE ID. 210336_G01_Phase 3.dwg

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DRAWING LIST
VOLUME 1 - CIVIL
VOLUME 2 - ELECTRICAL
VOLUME 3 - LANDSCAPE AND IRRIGATION

VOLUME 1 - CIVIL

DRAWING TITLE

GENERAL

G-1 TITLE SHEET AND LOCATION MAP
G-2 DRAWING LIST
G-3 KEY MAP PLAN
G-4 GENERAL NOTES AND FDOT GENERAL NOTES
G-5 SURVEY NOTES, SYMBOLS, AND SURVEY LEGEND
G-6 SURVEY NOTES AND SITE BENCHMARKS
G-7 HORIZONTAL CONTROL PLAN
G-8 PHASING PLAN

CIVIL - DEMOLITION PLAN

DEM-1 NW 3RD COURT - DEMOLITION PLAN STATION 10+00 TO STATION 13+32
DEM-2 NW 3RD STREET - DEMOLITION PLAN STATION 43+00 TO STATION 47+60
DEM-3 NW 3RD STREET - DEMOLITION PLAN STATION 47+60 TO STATION 52+00
DEM-4 NW 3RD STREET - DEMOLITION PLAN STATION 52+00 TO STATION 56+20
DEM-5 NW 3RD STREET - DEMOLITION PLAN STATION 56+20 TO STATION 60+00
DEM-6 NW 1ST STREET - DEMOLITION PLAN STATION 43+00 TO STATION 47+40
DEM-7 NW 1ST STREET - DEMOLITION PLAN STATION 47+40 TO STATION 52+40
DEM-8 NW 1ST STREET - DEMOLITION PLAN STATION 56+00 TO STATION 60+00
DEM-9 NW 5TH AVENUE - DEMOLITION PLAN STATION 22+40 TO STATION 27+00
DEM-10 NW 5TH AVENUE - DEMOLITION PLAN STATION 27+00 TO STATION 31+00
DEM-11 NW 5TH AVENUE - DEMOLITION PLAN STATION 31+00 TO STATION 34+80
DEM-12 NW 5TH AVENUE - DEMOLITION PLAN STATION 34+80 TO STATION 38+00
DEM-13 NW 4TH AVENUE - DEMOLITION PLAN STATION 10+00 TO STATION 14+00
DEM-14 NW 4TH AVENUE - DEMOLITION PLAN STATION 14+00 TO STATION 18+60
DEM-15 NW 4TH AVENUE - DEMOLITION PLAN STATION 18+60 TO STATION 22+80
DEM-16 NW 4TH AVENUE - DEMOLITION PLAN STATION 22+80 TO STATION 27+20
DEM-17 NW 4TH AVENUE - DEMOLITION PLAN STATION 27+20 TO STATION 31+20
DEM-18 NW 4TH AVENUE - DEMOLITION PLAN STATION 31+20 TO STATION 35+20
DEM-19 NW 4TH AVENUE - DEMOLITION PLAN STATION 35+20 TO STATION 37+38
DEM-20 ALLEY 17 - DEMOLITION PLAN STATION 10+00 TO STATION 14+00
DEM-21 ALLEY 17 - DEMOLITION PLAN STATION 14+00 TO STATION 16+63
DEM-22 ALLEY 16 - DEMOLITION PLAN STATION 70+00 TO STATION 71+29
DEM-23 ALLEY 15 - DEMOLITION PLAN STATION 80+00 TO STATION 83+00
DEM-24 ALLEY 15 - DEMOLITION PLAN STATION 83+00 TO STATION 87+52
DEM-25 NW 3RD AVENUE - DEMOLITION PLAN STATION 10+00 TO STATION 14+00
DEM-26 NW 3RD AVENUE - DEMOLITION PLAN STATION 14+00 TO STATION 18+40
DEM-27 NW 3RD AVENUE - DEMOLITION PLAN STATION 18+40 TO STATION 22+60
DEM-28 NW 3RD AVENUE - DEMOLITION PLAN STATION 22+60 TO STATION 26+80
DEM-29 NW 3RD AVENUE - DEMOLITION PLAN STATION 26+80 TO STATION 30+80
DEM-30 NW 3RD AVENUE - DEMOLITION PLAN STATION 30+80 TO STATION 34+80
DEM-31 NW 3RD AVENUE - DEMOLITION PLAN STATION 34+80 TO STATION 37+40
DEM-32 ALLEY 19 - DEMOLITION PLAN STATION 10+00 TO STATION 14+00
DEM-33 ALLEY 19 - DEMOLITION PLAN STATION 14+00 TO STATION 16+62
DEM-34 ALLEY 18 - DEMOLITION PLAN STATION 10+00 TO STATION 13+00
DEM-35 ALLEY 18 - DEMOLITION PLAN STATION 13+00 TO STATION 17+53
DEM-36 NW 2ND AVENUE - DEMOLITION PLAN STATION 23+00 TO STATION 27+40
DEM-37 NW 2ND AVENUE - DEMOLITION PLAN STATION 27+40 TO STATION 31+60
DEM-38 NW 2ND AVENUE - DEMOLITION PLAN STATION 31+60 TO STATION 33+74
DEM-39 ALLEY 20 - DEMOLITION PLAN STATION 10+00 TO STATION 13+87
DEM-40 NW 1ST AVENUE - DEMOLITION PLAN STATION 10+00 TO STATION 13+60
DEM-41 NW 1ST AVENUE - DEMOLITION PLAN STATION 13+60 TO STATION 18+00
DEM-42 NW 1ST AVENUE - DEMOLITION PLAN STATION 18+00 TO STATION 22+40
DEM-43 NW 1ST AVENUE - DEMOLITION PLAN STATION 22+40 TO STATION 27+00
DEM-44 NW 1ST AVENUE - DEMOLITION PLAN STATION 27+00 TO STATION 30+20
DEM-45 NW 1ST AVENUE - DEMOLITION PLAN STATION 30+20 TO STATION 33+75

TYPICAL SECTION DRAWINGS

TS-1 TYPICAL ROADWAY SECTIONS - SHEET 1
TS-2 TYPICAL ROADWAY SECTIONS - SHEET 2
TS-3 TYPICAL ROADWAY SECTIONS - SHEET 3
TS-4 TYPICAL ROADWAY SECTIONS - SHEET 4

CIVIL - PAVING, GRADING & DRAINAGE

PGD-1 NW 3RD COURT - PLAN AND PROFILE STATION 10+00 TO STATION 13+32
PGD-2 NW 3RD STREET - PLAN AND PROFILE STATION 43+00 TO STATION 47+60
PGD-3 NW 3RD STREET - PLAN AND PROFILE STATION 47+60 TO STATION 52+00
PGD-4 NW 3RD STREET - PLAN AND PROFILE STATION 52+00 TO STATION 56+20
PGD-5 NW 3RD STREET - PLAN AND PROFILE STATION 56+20 TO STATION 60+00
PGD-6 NW 1ST STREET - PLAN AND PROFILE STATION 43+00 TO STATION 47+40
PGD-7 NW 1ST STREET - PLAN AND PROFILE STATION 47+40 TO STATION 52+40
PGD-8 NW 1ST STREET - PLAN AND PROFILE STATION 56+00 TO STATION 60+00
PGD-9 NW 5TH AVENUE - PLAN AND PROFILE STATION 22+40 TO STATION 27+00
PGD-10 NW 5TH AVENUE - PLAN AND PROFILE STATION 27+00 TO STATION 31+00
PGD-11 NW 5TH AVENUE - PLAN AND PROFILE STATION 31+00 TO STATION 34+80
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PGD-13 NW 4TH AVENUE - PLAN AND PROFILE STATION 10+00 TO STATION 14+00
PGD-14 NW 4TH AVENUE - PLAN AND PROFILE STATION 14+00 TO STATION 18+60
PGD-15 NW 4TH AVENUE - PLAN AND PROFILE STATION 18+60 TO STATION 22+80
PGD-16 NW 4TH AVENUE - PLAN AND PROFILE STATION 22+80 TO STATION 27+20
PGD-17 NW 4TH AVENUE - PLAN AND PROFILE STATION 27+20 TO STATION 31+20
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PGD-20 ALLEY 17 - PLAN AND PROFILE STATION 10+00 TO STATION 14+00
PGD-21 ALLEY 17 - PLAN AND PROFILE STATION 14+00 TO STATION 16+63
PGD-22 ALLEY 16 - PLAN AND PROFILE STATION 70+00 TO STATION 71+29
PGD-23 ALLEY 15 - PLAN AND PROFILE STATION 80+00 TO STATION 83+00
PGD-24 ALLEY 15 - PLAN AND PROFILE STATION 83+00 TO STATION 87+52
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PGD-26 NW 3RD AVENUE - PLAN AND PROFILE STATION 14+00 TO STATION 18+40
PGD-27 NW 3RD AVENUE - PLAN AND PROFILE STATION 18+40 TO STATION 22+60
PGD-28 NW 3RD AVENUE - PLAN AND PROFILE STATION 22+60 TO STATION 26+80
PGD-29 NW 3RD AVENUE - PLAN AND PROFILE STATION 26+80 TO STATION 30+80
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PGD-31 NW 3RD AVENUE - PLAN AND PROFILE STATION 34+80 TO STATION 37+40
PGD-32 ALLEY-19 - PLAN AND PROFILE STATION 10+00 TO STATION 14+00
PGD-33 ALLEY 19 - PLAN AND PROFILE STATION 14+00 TO STATION 16+62
PGD-34 ALLEY 18- PLAN AND PROFILE STATION 10+00 TO STATION 13+00
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PGD-37 NW 2ND AVENUE - PLAN AND PROFILE STATION 27+40 TO STATION 31+60
PGD-38 NW 2ND AVENUE - PLAN AND PROFILE STATION 31+60 TO STATION 33+74
PGD-39 ALLEY 20 - PLAN AND PROFILE STATION 10+00 TO STATION 13+87
PGD-40 NW 1ST AVENUE - PLAN AND PROFILE STATION 10+00TO STATION 13+60
PGD-41 NW 1ST AVENUE - PLAN AND PROFILE STATION 13+60 TO STATION 18+00
PGD-42 NW 1ST AVENUE - PLAN AND PROFILE STATION 18+00 TO STATION 22+40
PGD-43 NW 1ST AVENUE - PLAN AND PROFILE STATION 22+40 TO STATION 27+00
PGD-44 NW 1ST AVENUE - PLAN AND PROFILE STATION 27+00 TO STATION 30+60
PGD-45 NW 1ST AVENUE - PLAN AND PROFILE STATION 30+60 TO STATION 33+75

CIVIL - WATER, SEWER & RECLAIM UTILITIES

WSR-1 NW 3RD COURT - PLAN AND PROFILE STATION 10+00 TO STATION 13+32
WSR-2 NW 3RD STREET - PLAN AND PROFILE STATION 43+00 TO STATION 47+60
WSR-3 NW 3RD STREET - PLAN AND PROFILE STATION 47+60 TO STATION 52+00
WSR-4 NW 3RD STREET - PLAN AND PROFILE STATION 52+00 TO STATION 56+20
WSR-5 NW 3RD STREET - PLAN AND PROFILE STATION 56+20 TO STATION 60+00
WSR-6 NW 1ST STREET - PLAN AND PROFILE STATION 43+00 TO STATION 47+40
WSR-7 NW 1ST STREET - PLAN AND PROFILE STATION 47+40 TO STATION 52+40
WSR-8 NW 1ST STREET - PLAN AND PROFILE STATION 56+00 TO STATION 60+00
WSR-9 NW 5TH AVENUE - PLAN AND PROFILE STATION 22+40 TO STATION 27+00
WSR-10 NW 5TH AVENUE - PLAN AND PROFILE STATION 27+00 TO STATION 31+00
WSR-11 NW 5TH AVENUE - PLAN AND PROFILE STATION 31+00 TO STATION 34+80
WSR-12 NW 5TH AVENUE - PLAN AND PROFILE STATION 34+80 TO STATION 38+00
WSR-13 NW 4TH AVENUE - PLAN AND PROFILE STATION 10+00 TO STATION 14+00
WSR-14 NW 4TH AVENUE - PLAN AND PROFILE STATION 14+00 TO STATION 18+60
WSR-15 NW 4TH AVENUE - PLAN AND PROFILE STATION 18+60 TO STATION 22+80
WSR-16 NW 4TH AVENUE - PLAN AND PROFILE STATION 22+80 TO STATION 27+20
WSR-17 NW 4TH AVENUE - PLAN AND PROFILE STATION 27+20 TO STATION 31+20
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WSR-44 NW 1ST AVENUE - PLAN AND PROFILE STATION 27+00 TO STATION 30+60
WSR-45 NW 1ST AVENUE - PLAN AND PROFILE STATION 30+60 TO STATION 33+75

CROSS SECTIONS

CS-1 NW 3RD COURT - ROADWAY CROSS SECTIONS
NW 3RD STREET - ROADWAY CROSS SECTIONS 1
CS-2 NW 3RD STREET - ROADWAY CROSS SECTIONS 2
CS-3 NW 1ST STREET - ROADWAY CROSS SECTIONS
CS-4 - CS-5 NW 5TH AVENUE - ROADWAY CROSS SECTIONS 1 & 2
CS-6 - CS-8 NW 4TH AVENUE - ROADWAY CROSS SECTIONS 1, 2 & 3
CS-9 - CS-11 NW 3RD AVENUE - ROADWAY CROSS SECTIONS 1, 2 & 3
CS-12 NW 2ND AVENUE - ROADWAY CROSS SECTIONS
CS-13 - CS-15 NW 1ST AVENUE - ROADWAY CROSS SECTIONS 1, 2 & 3

DETAILS

D-1 ROADWAY AND TRAFFIC DETAILS - SHEET 1
D-2 ROADWAY AND TRAFFIC DETAILS - SHEET 2
D-3 ROADWAY AND TRAFFIC DETAILS - SHEET 3
D-4 ROADWAY AND TRAFFIC DETAILS - SHEET 4
D-5 GENERAL UTILITY DETAILS AND STORMWATER DRAINAGE DETAILS
D-6 STORMWATER DRAINAGE DETAILS - SHEET 1
D-7 STORMWATER DRAINAGE DETAILS - SHEET 2
D-8 STORMWATER DRAINAGE DETAILS - SHEET 3
D-9 PRESSURE PIPE DETAILS
D-10 POTABLE WATER DISTRIBUTION DETAILS - SHEET 1
D-11 POTABLE WATER DISTRIBUTION DETAILS - SHEET 2
D-12 RECLAIMED WATER DISTRIBUTION DETAILS - SHEET 1
D-13 RECLAIMED WATER DISTRIBUTION DETAILS - SHEET 2
D-14 WASTEWATER COLLECTION/TRANSMISSION DETAILS
D-15 MISCELLANEOUS DETAILS

CIVIL - SIGNING AND PAVEMENT MARKING

SM-1 NW 3RD COURT - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 13+32
SM-2 NW 3RD STREET - SIGNAGE AND PAVEMENT MARKING STATION 43+00 TO STATION 52+00
SM-3 NW 3RD STREET - SIGNAGE AND PAVEMENT MARKING STATION 52+00 TO STATION 60+00
SM-4 NW 1ST STREET - SIGNAGE AND PAVEMENT MARKING STATION 43+00 TO STATION 52+40
SM-5 NW 1ST STREET - SIGNAGE AND PAVEMENT MARKING STATION 56+00 TO STATION 60+00
SM-6 NW 5TH AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 22+40 TO STATION 31+00
SM-7 NW 5TH AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 31+00 TO STATION 38+00
SM-8 NW 4TH AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 18+60
SM-9 NW 4TH AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 18+60 TO STATION 27+20
SM-10 NW 4TH AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 27+20 TO STATION 35+20
SM-11 NW 4TH AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 35+20 TO STATION 37+38
SM-12 ALLEY 19 - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 16+63
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SM-16 NW 3RD AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 26+80 TO STATION 34+80
SM-17 NW 3RD AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 34+80 TO STATION 37+40
SM-18 ALLEY 22 - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 16+62
SM-19 ALLEY 23 - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 17+53
SM-20 NW 2ND AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 23+00 TO STATION 31+60
SM-21 NW 2ND AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 31+60 TO STATION 33+74
ALLEY 24 - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 13+87
SM-22 NW 1ST AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 10+00 TO STATION 18+00
SM-23 NW 1ST AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 18+00 TO STATION 27+00
SM-24 NW 1ST AVENUE - SIGNAGE AND PAVEMENT MARKING STATION 27+00 TO STATION 33+75
SM-25 NEIGHBORHOOD SIGN LOCATION PLAN

VOLUME 2 - ELECTRICAL

VOLUME 3 - LANDSCAPE AND IRRIGATION

60% DESIGN - PHASE 3

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	06/2024

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 3

DRAWING LIST

PROJECT NO. 2017-020
DRAWING NO. G-2
FILE ID. 210336_G02-Phase 3.dwg

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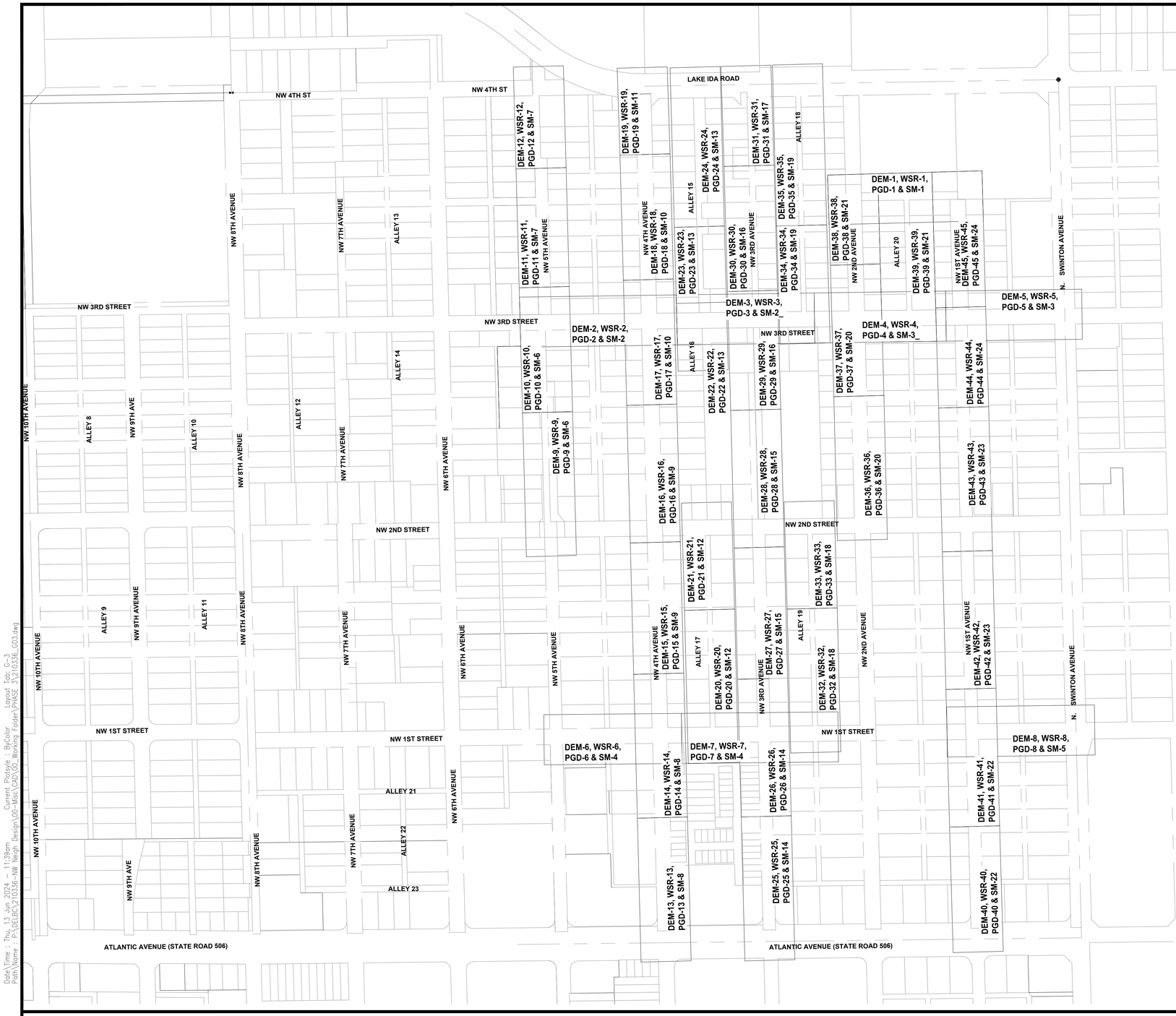
User Name - hstauffer



NORTH

SCALE: 1'=100'

60% DESIGN - PHASE 3

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REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 3

KEY MAP PLAN

PROJECT NO. 2017-020

DRAWING NO. G-3

FILE ID. 210336_G03.dwg

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Date\Time : Thu, 13 Jun 2024 — 11:39am
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Layout Tab: G-3
Current Plotstyle : ByColor

GENERAL NOTES

DEFINITIONS

1. CITY – THE CITY OF DELRAY BEACH
2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION

PROCEDURE

1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER, SEWER OR DRAINAGE CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.
2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
3. A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91.
4. ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
7. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.
8. PRIOR TO ANY SANITARY OR WATER MAIN TESTING, UNDER EXISTING OR FUTURE PAVEMENT, THE ROCK BASE SHALL BE FINISHED AND PRIMED OR FIRST LIFT OF PAVEMENT PLACED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
11. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE.
12. CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.
13. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.
14. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.
15. PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO CITY OF DELRAY BEACH, FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICALS (LATEST REVISION) UNLESS SHOWN OTHERWISE.
16. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY. AS THE WORK PROGRESSES, THE ENGINEER OF RECORD (OR THEIR REPRESENTATIVE) SHALL RECORD ON ONE SET OF DRAWINGS THE LOCATION INCLUDING STATION AND OFFSET WITH SUFFICIENT DIMENSIONS AND DISTANCES TO ADEQUATELY DESCRIBE THE LOCATION OF THE IMPROVEMENT FROM THE BASELINE. ELEVATIONS ARE TO BE PROVIDED AT THE TOP OF PIPE AT INCREMENTS OF EVERY 100 FEET ON ALL WATER AND FORCE MAINS. STATIONING IS REQUIRED ON ALL VALVES, FITTINGS, WATER AND SEWER SERVICES AND FIRE HYDRANTS. THE LENGTHS OF THE WATER SERVICES LINES AND SEWER LATERALS MUST BE NOTED ON GRAVITY SEWER LINES, ELEVATIONS AND STATIONING ARE TO BE INDICATED ON ALL MANHOLE RIMS AND INVERTS. THE DISTANCE BETWEEN MANHOLES IS TO BE SHOWN ON BOTH THE PLAN AND PROFILE SHEETS UNLESS PLAN VIEW AND PROFILE VIEW ARE ON THE SAME SHEET. PAVING & DRAINAGE AS-BUILT DRAWINGS SHALL INCLUDE RIM ELEVATIONS, INVERT ELEVATIONS, PIPE SIZES, CONTROL STRUCTURE DIMENSIONS AS WELL AS, AS-BUILT ELEVATIONS AS EVERY LOCATION A PROPOSED ELEVATION IS INDICATED ON THE CONSTRUCTION PLAN. ADEQUATE AS-BUILT ELEVATIONS SHALL BE PROVIDED ON EMBANKMENTS TO DETERMINE COMPLIANCE WITH MAXIMUM SLOPE REQUIREMENTS.
17. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.
18. CONTRACTOR SHALL NOTIFY (811) 48 HOURS IN ADVANCE OF CONSTRUCTION.
19. GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE.
20. CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION.
21. EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.
22. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.
23. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
24. PRIOR TO AND DURING CONSTRUCTION OF ALL SITES, THE PERMITEE SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDED IN A POLLUTION PREVENTION PLAN PROVIDED TO THE CITY OF DELRAY BEACH.
25. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.
26. ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKINGS STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING.
27. EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS.
28. CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITH THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY.
29. SITE INFORMATION BASED ON A SURVEY PREPARED BY: CRAIG A. SMITH & ASSOCIATES. AND DENNIS J. LEAVY & ASSOCIATES, INC.
30. RELOCATION OF ANY UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES.
31. CONTRACTOR TO LOCATED AND PROTECT EXISTING IRRIGATION SYSTEMS AND RESTORE ANY DAMAGED SYSTEMS TO OPERATIONAL CONDITIONS. EXTEND THE EXISTING IRRIGATION SYSTEMS IN FRONT OF THE PROPOSED SIDEWALK. ALL COST TO BE INCLUDED IN PAY ITEM IRRIGATION ALLOWANCE.

GENERAL INFORMATION

1. AT&T TELEPHONE, FLORIDA POWER AND LIGHT, CABLE TV, GAS, ETC. ARE TAKEN FROM FIELD INSPECTIONS AND SKETCHES PROVIDED BY UTILITIES AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS AND CONFIRM LOCATIONS OF UTILITIES NO LESS THAN TWO FULL BUSINESS DAYS BEFORE DIGGING. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION WHERE CROSSING OR PARALLELING OF EXISTING UTILITIES OCCUR. ANY DAMAGE RESULTING FROM THE CONTRACTORS OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

EROSION CONTROL NOTES:

1. CUT AND FILL SLOPES TO BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SILT FENCES TO BE USED WHERE NECESSARY.
2. CONSTRUCTION VEHICLE ACCESS ROUTES SHALL BE SWEPT CLEAN OF SEDIMENT, CONCRETE AND OTHER CONSTRUCTION MATERIALS AS NEEDED.
3. ALL BERMS, DIKES AND SPOIL PILES SUBJECT TO EROSION MUST BE STABILIZED OR CONTAINED TO PREVENT EROSION AND RUNOFF FROM THE PROJECT.
4. ALL EXISTING STORM SEWER INLET GRATES TO BE COVERED WITH FILTER FABRIC DURING CONSTRUCTION.

EXISTING UTILITY LINETYPE LEGEND

CATV	EXISTING BURIED CABLE TELEVISION
CATV FO	EXISTING BURIED CABLE TELEVISION FIBER OPTIC
COMM	EXISTING BURIED COMMUNICATION
E	EXISTING BURIED ELECTRIC
E FO	EXISTING BURIED ELECTRIC FIBER OPTIC
<E>	EXISTING BURIED ELECTRIC DUCT
FO	EXISTING BURIED FIBER OPTIC
G	EXISTING BURIED GAS MAIN (<12")
GS GS GS	EXISTING BURIED GAS SERVICE
IRR IRR	EXISTING BURIED IRRIGATION
FM	EXISTING BURIED SANITARY FORCE MAIN (<12")
FM (ABD)	EXISTING BURIED ABANDONED SANITARY FORCE MAIN (<12")
RAW WM	EXISTING BURIED RAW WATER MAIN (<12")
RWM	EXISTING BURIED RECLAIMED WATER MAIN (<12")
RWS	EXISTING BURIED RECLAIMED WATER SERVICE
SAN	EXISTING BURIED SANITARY SEWER (<12")
SL SL SL	EXISTING BURIED SANITARY SEWER LATERAL
STM	EXISTING BURIED STORM DRAINAGE (<12")
T T	EXISTING BURIED TELEPHONE
<T>	EXISTING BURIED TELEPHONE DUCT
T FO	EXISTING BURIED TELEPHONE FIBER OPTIC
T (RIP)	EXISTING BURIED TELEPHONE (RETIRED IN PLACE)
TRAF	EXISTING BURIED TRAFFIC SIGNAL
TRAF FO	EXISTING BURIED TRAFFIC FIBER OPTIC SIGNAL
UNK	EXISTING BURIED UNKNOWN UTILITY
W	EXISTING BURIED WATER MAIN (<12")
WM (ABD)	EXISTING BURIED ABANDONED WATER MAIN (<12")
WS WS WS	EXISTING BURIED WATER SERVICE
S S S	EXISTING BURIED WATER, SEWER AND STORM (≥12")

UTILITY CONTACTS

CITY OF DELRAY BEACH WATER/SEWER
HASSAN HADJIMIRY, P.E.
UTILITIES DIRECTOR
434 S. SWINTON AVENUE
DELRAY BEACH, FL 33444
TEL. (561) 243-7328

PALM BEACH COUNTY TRAFFIC OPERATIONS SUPERINTENDENT
MARCELINO ALICEA
SUPERINTENDENT
2300 NORTH JOG ROAD
WEST PALM BEACH, FL 33411
TEL. (561) 684-4030

FIBERNET DIRECT FLORIDA, LLC
DANNY HASKETT
OSPE ASSOCIATE PROJECT MANAGER
1601 NW 136th AVENUE, SUITE A-200
SUNRISE, FL 33323
TEL. (786) 610-7073

FLORIDA POWER & LIGHT
ROBERT WEESE
SENIOR CUSTOMER ADVISOR
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (561) 640-2209

GLADYS REYES
REPRESENTATIVE, LED LIGHTING SOLUTIONS
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (407) 844-8862

FLORIDA PUBLIC UTILITIES CORP.
PETER BONO
ENGINEERING TECHNICIAN
P.O. BOX 3395
WEST PALM BEACH, FL 33402
TEL. (561) 838-1841

AT&T
GARTH BEDWARD
SR. SPECIALIST – OSP DESIGN ENGINEER
120 NORTH K STREET, ROOM 3D-05
LAKE WORTH, FL 33460
TEL. (561) 540-9263

XFINITY
STEVEN ROSA
SENIOR FIELD COORDINATOR
3960 RCA BLVD., SUITE 6002
PALM BEACH GARDEN, FL 33401
TEL. (561) 454-5851

NOTE:
IT IS THE INTENT THAT THE EXISTING POWER POLES AND FPL/COMCAST/AT&T BOXES WILL BE RELOCATED PRIOR TO START OF CONSTRUCTION

FDOT GENERAL NOTES

(in reference to work within I-95 and ATLANTIC BOULEVARD)

ASSET MAINTENANCE

Permittee will coordinate (i.e. pre-construction meeting, inspections, final acceptance of work, etc.) with Shawn Dolan of Louis Berger at 202-734-1736 or email sdolan@louisberger.com

Coordination will include a Pre-Construction meeting. Certification acceptance and final approval is contingent upon conformity of all work completed according to this permit and the restoration of the Right of Way.

This permit is valid only for work proposed within the D.O.T. right-of-way. Certification acceptance and final approval is contingent upon conformity of all work completed according to this permit and the restoration of the Right of Way.

All materials and construction within the Florida Department of Transportation Design (F.D.O.T.) right-of-way shall conform to the "latest version of FDOT Standard Plans for Road and Bridge Construction and latest version of the Standard Specifications for Road and Bridge Construction".

All maintenance Of Traffic M.O.T. for this project will be in compliance with the Departments current edition of the FDOT Standard Plans for Road and Bridge Construction Indices, (102-600 series) and the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). The Operations Engineer or his designee reserves the right to direct the removal/relocation/modification of any traffic devices(s) at the permittee's sole expense. Special attention will be given to Indices 102-611, 102-612, 102-613, and 102-660.

All thermoplastic traffic stripes, markings and signage will be installed per the FDOT Standard Plans for Road and Bridge Construction.

Permittee will restore swale area adjacent to property/project limits (4:1 or flatter) as directed by the Department's Operation Engineer or their designee.

It is the Permittee' s responsibility to obtain final acceptance of permitted work (completed) and the restoration of the Right-of-Way from the F.D.O.T. prior to usage.

Permittee will provide the necessary densities in accordance with Section 125-8 of the FDOT Standard Specifications for Road & Bridge Construction (latest edition) prior to final acceptance by the F.D.O.T.

Permittee will restore the Right of Way as a minimum, to its original condition or better in accordance w/F.D.O.T.'s latest Standard Specifications for Road & Bridge Construction or as directed by the Resident Operations Engineer.

During the removal/installation of any curb and gutter section, the permittee will be responsible for any damage done to the abutting asphalt. The damaged asphalt repair will be in accordance with the current specifications and/or as directed by the Resident Operations Engineer.

All public sidewalk curb ramps will meet the FDOT Standard Plans for Road and Bridge Construction (current edition) Index No. 522-002 Curb/Ramp inspections required prior to installation of concrete.

Permittee shall provide the Producer's Certification (Delivery Ticket) for the NS CONCRETE-2500 PSI (used for Sidewalk, Curb & Gutter, Ditch Pavement and Traffic Separator) prior to final acceptance by the Department. The delivery ticket shall certify the concrete was batched, delivered and placed in accordance with Section 347 of the F.D.O.T.'s Standard Specifications for Road and Bridge Construction (current edition).

Signs will be installed in accordance with FDOT Standard Plans for Road and Bridge Construction 700-010 and 700-101 and all other indices for single and multiple column ground signs.

Removal/installation of sidewalk will be in accordance with Standard Plans for Road and Bridge Construction Index 522-001.

Sodded areas will be in accordance with FDOT Standard Plans for Road and Bridge Construction Index 570-010 and sections 162, 981, 982, 983, 987 of the F.D.O.T.'s Standard Specifications for Road and Bridge Construction, latest edition. All disturbed areas will be sodded within one (1) week of installation of said permitted work.

Ownership of all suitable excavated materials within the FDOT R/W, as determined by the F.D.O.T., shall remain in the Department until a final acceptance of the permitted project is fulfilled. Excavated materials shall be hauled by the contractor, at their cost & expense from the site to the Palm Beach Operations Center, 7900 W Forest Hill Blvd or stockpiled in those areas as directed by the DOT, including asphalt millings.

Restricted hours of operation for lane closures will be from 9:00am to 4:00 pm, (Monday-Friday), unless otherwise approved by the Operations Engineer, or designee. MOT shall be picked up by 4:00 pm and not start before 9:00 am.

Contractors performing permitted work activities within S. Federal Hwy ROW shall provide proof of a proper state contractor's license, certificate of liability insurance and MOT Cert with 24/7 contact number and email prior to any commencement of permitted work.

Prior to any work within S. Federal Hwy requiring lane closures, mobile operations or traffic pacing operations, the contractor shall submit a request to the CEI and the Department that includes the time, location, and description of work being performed. The lane closure request shall be submitted to the CEI and Department a minimum of 2 weeks prior to the proposed closure date and must be approved by the CEI and Department before work requiring the closure may begin within the FDOT Right of Way. URL address: https://LCIS.dot.state.fl.us.

Permittee will construct the first five feet of the driveway connection adjacent to edge of pavement (E.O.P) from the travel lane consisting of 15"-limerock based on compacted sub soil and 3" of SP 12.5 asphalt. Grade from E.O.P. will be at 6% to the center of swale.

Always call 811 two full business days before you dig
Sunshine811.com

60% DESIGN - PHASE 3

CITY of DELRAY BEACH
PUBLIC WORKS
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7322 Fax: (561) 243-7314

CITY of DELRAY BEACH
COMMUNITY REDEVELOPMENT AGENCY
20 NORTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 276-8640 Fax: (561) 276-8558

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL

M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	06/2024

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 3

GENERAL NOTES AND FDOT GENERAL NOTES

PROJECT NO. 2017-020

DRAWING NO. G-4

FILE ID. 210336_G04.dwg

Acad Version : R24.1s (LMS Tech) User Name : hstoffer Date\Time : Thu, 13 Jun 2024 - 11:39pm Path\Name : P:\DELBCV\210336-NW Neighb Design\00-Miles\CAD\00 Working Folder\PHASE 3\210336_G04.dwg Current Pictcyle : ByColor Layout Tab: G-3

REPORT OF SURVEY:

1. THE SURVEY DEPICTED HEREON HAS BEEN CLASSIFIED AS A TOPOGRAPHIC SURVEY, AS DEFINED IN RULE 5J-17.050 OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AS AMENDED.
2. THIS SURVEY HAS BEEN PREPARED IN THE OFFICE OF DENNIS J. LEAVY & ASSOCIATES, INC. LOCATED AT: 460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FLORIDA, WHOSE CERTIFICATE OF AUTHORIZATION NUMBER IS LB #6599, AND THE CERTIFYING SURVEYOR'S (DAVID A. BOWER) LICENSE NUMBER IS LS #5888.
3. THE SURVEY SKETCH SHOWN HEREON DOES NOT NECESSARILY CONTAIN ALL OF THE INFORMATION OBTAINED OR DEVELOPED BY THE UNDERSIGNED SURVEYOR IN HIS FIELD WORK, OFFICE WORK, OR RESEARCH.
4. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
5. THIS IS NOT A BOUNDARY SURVEY
6. THIS SURVEY DOES NOT ADDRESS ENVIRONMENTAL MATTERS, JURISDICTIONAL BOUNDARIES OR HAZARDOUS WASTE CONCERNS SHOULD ANY OF THE FOREGOING EXIST.
7. THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN SHOWN HEREON AND DO NOT DETERMINE SUB SURFACE CONDITIONS.
8. THE UNDERSIGNED MAKES NO REPRESENTATIONS OR GUARANTEES AS TO THE INFORMATION REFLECTED HEREON PERTAINING TO EASEMENTS, RIGHTS OF WAY, SETBACK LINES, AGREEMENTS AND OTHER MATTERS, AND FURTHER, THIS INSTRUMENT IS NOT INTENDED TO REFLECT OR SET FORTH ALL SUCH MATTERS. SUCH INFORMATION SHOULD BE OBTAINED AND CONFIRMED BY OTHERS THROUGH APPROPRIATE TITLE VERIFICATION. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY AND/OR EASEMENTS OF RECORD.
9. THIS SURVEY DOES NOT MEET THOSE STANDARDS ESTABLISHED BY THE AMERICAN LAND TITLE ASSOCIATION.
10. UNDERGROUND APPARENT USE AND/OR IMPROVEMENTS HAVE NOT BEEN SHOWN UNLESS OTHERWISE NOTED.
11. THIS INSTRUMENT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT THE WRITTEN CONSENT OF DENNIS J. LEAVY & ASSOCIATES INC.
12. DATE OF FIELD SURVEY: JANUARY 5TH, 2022, AS RECORDED IN FIELD BOOK 516, PAGES 02 THROUGH 07 AND FIELD BOOK 517, PAGE 03.
13. THIS SURVEY LIES IN SECTION 17, TOWNSHIP 46 SOUTH, RANGE 43 EAST, CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA.
14. BY GRAPHIC PLOTTING ONLY THE SUBJECT PROPERTY LIES WITHIN ZONE X, AS SHOWN ON THE U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP, MAP NUMBER: 12099C0979F, COMMUNITY: CITY OF DELRAY BEACH, NUMBER: 125102, PANEL 0979, SUFFIX: F, EFFECTIVE DATE: OCTOBER 5, 2017.
15. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE RELATIONSHIPS BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. IN ALL CASES, DIMENSIONS SHOWN SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER SCALED POSITIONS.
16. MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED.
17. ALL DATES SHOWN WITHIN THE REVISION BLOCK HEREON ARE FOR INTEROFFICE FILING USE ONLY, AND IN NO WAY AFFECT THE DATE OF THE FIELD SURVEY STATED HEREIN.
18. BENCHMARKS OF ORIGIN: PER THE N.W. NEIGHBORHOOD DRAINAGE IMPROVEMENTS CITY OF DELRAY BEACH PROJECT NO: 17-020 SURVEY, PREPARED FOR THE CITY OF DELRAY BEACH (CAS 19-2068), BY CRAIG A. SMITH & ASSOCIATES, DATED 06-04-20.
19. ELEVATIONS REFERENCED HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

PLAT LEGEND:

(P1)	ATLANTIC PINES (P.B. 13, PG. 77, P.B.C.R.)
(P2)	WHIDDEN'S SUBDIVISION OF SW 1/4 OF SE 1/4 OF NW 1/4 OF SEC 17, T46, R43, FLORIDA (P.B. 2, PG. 58, P.B.C.R.)
(P3)	MAP OF THE TOWN OF LINTON (DELRAY BEACH), FLORIDA (P.B. 1, PG. 3, P.B.C.R.)
(P4)	MONROE SUBDIVISION (P.B. 14, PG. 67, P.B.C.R.)

SYMBOL LEGEND:

BENCHMARK
CATCH BASIN
CLEAN OUT
CONCRETE POWER POLE
CUT POST
GUIDE WIRE AND ANCHOR
MAILBOX
PALM WITH TRUNK DIAMETER
SANITARY MANHOLE
SIGN
TELEPHONE WIRE
TREE WITH TRUNK DIAMETER
WOOD POST
WOOD POWER POLE
WOOD POWER POLE WITH LIGHT

LEGEND:

(C)	CALCULATED
E	EAST
EL	ELEVATION
LB	LICENSED BUSINESS
LS	LICENSED SURVEYOR
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO.	NUMBER
O.R.B.	OFFICIAL RECORDS BOOK
OHW	OVERHEAD WIRE
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
S	SOUTH
W	WEST

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

DATED: JANUARY 5TH, 2022, AND JANUARY 18TH, 2022

FOR THE FIRM BY: _____
ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SURVEY PREPARED BY:

DENNIS J. LEAVY & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FL 33411
PHONE: (561) 753-0650 EMAIL: SURVEY@DJLASURVEY.NET

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SURVEY PREPARED BY:

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

GENERAL ABBREVIATIONS

ABRV	DESCRIPTION
A/C	AIR CONDITION PAD
ACP	ASBESTOS CEMENT PIPE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
B.C.R.	BROWARD COUNTY RECORDS
B/L	BASELINE
BOTT	BOTTOM
(C)	CALCULATED
CAS	CRAIG A. SMITH & ASSOCIATES
℄	CENTER LINE
CONC	CONCRETE
D	DEED/DESCRIPTION
DB	DEED BOOK
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEV	ELEVATION
EOW	EDGE OF WATER
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FF	FINISHED FLOOR
FND	FOUND
FPL	FLORIDA POWER & LIGHT
GFF	GARAGE FINISHED FLOOR
HDPE	HIGH DENSITY POLYETHYLENE
I.E.	INVERT ELEVATION
IR	IRON ROD
IR&C	IRON ROD AND CAP
IP	IRON PIPE
L	ARC LENGTH
LB	LICENSED BUSINESS
LF	LINEAR FEET
(M)	MEASURED

ABRV	DESCRIPTION
NTS	NOT TO SCALE
ORB	OFFICIAL RECORDS BOOK
O / S	OFF SET
(P)	PLAT
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PC	POINT OF CURVE
PCP	PERMANENT CONTROL POINT
PGS	PAGES
PHDPE	PERFORATED HIGH DENSITY POLYETHYLENE
PI	POINT OF INTERSECTION
PK&D	PK NAIL AND DISK
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PRM	PERMANENT REFERENCE MARKER
PSM	PROFESSIONAL SURVEYOR AND MAPPER
PT	POINT OF TANGENCY
PVC	POLY VINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
RGE	RANGE
R/W	RIGHT-OF-WAY LINE
SEC	SECTION
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF PIPE
TWP	TOWNSHIP
TYP	TYPICAL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
△	DELTA

STANDARD LINETYPES

SYMBOL	DESCRIPTION
	BASELINE
	PARCEL LINE
	BOUNDARY LINE
	EASEMENT LINE
	LOT LINE
	RIGHT OF WAY LINE
	CENTER LINE
	SECTION LINE
	LANDSCAPE LINE
	EDGE OF WATER
	RR TRACKS
	PLAT LINE
	CURB & GUTTER
X X X X	FENCE LINE
	GUARD RAIL
UNK UNK	UNKNOWN UTILITY
	ABANDONED UTILITY
NFVU	NON FIELD VERIFIED UTILITY
BCTV BCTV	BURIED CABLE TV
BCL BCL	BURIED COMMUNICATIONS LINE
FOC FOC	FIBER OPTIC CABLE
BT	BURIED TELEPHONE

SYMBOL	DESCRIPTION
BTC BTC	BURIED TRAFFIC CONTROL
<C> <C>	COMMUNICATIONS DUCTBANK CL
<F> <F>	FIBER OPTIC DUCTBANK CL
	OVERHEAD WIRE
BE	BURIED ELECTRIC
SL	BURIED STREET LIGHTING
<E> <E>	ELECTRICAL DUCTBANK CENTER LINE
FM	FORCE MAIN
	SANITARY SEWER
SNS SNS	SANITARY SERVICE
VS	VACUUM SEWER
SD	STORM DRAIN
FIRE FIRE	FIRE LINE
RWL RWL	RAW WATER LINE
WL	WATER LINE MAIN
WLC WLC	WATER LINE CHILLED
WS	WATER SERVICE
	IRRIGATION LINE
	GAS LINE ABOVE GROUND
BG	BURIED GAS LINE
GS	BURIED GAS SERVICE LINE
FUEL	FUEL LINE

GENERAL SYMBOL LEGEND

	SYM.	DESCRIPTION
CONTROL		AERIAL TARGET
		BENCH MARK
		CONCRETE MONUMENT
		IRON PIPE
		IRON ROD
	ND	NAIL & DISC
		CAS CONTROL POINT
		IRON ROD AND CAP
		X CUT
	DH	DRILL HOLE
PIPE FITTINGS		11.25° PIPE BEND
		22.5° PIPE BEND
		45° PIPE BEND
		90° PIPE BEND
		CROSS PIPE FITTING
		TEE PIPE FITTING
		WYE PIPE FITTING
		REDUCER PIPE FITTING
ELECTRICAL	EMH	ELECTRIC MANHOLE
	EMTR	ELECTRIC MOTOR
		ELECTRICAL OUTLET
		GROUND LIGHT
	EJB	ELECTRIC JUNCTION BOX
	EM	ELECTRIC METER
	LPB	LIGHT POLE BOX
	TCB	TRAFFIC CONTROL BOX
	ER	ELECTRICAL RISER
	T FPL	TRANSFORMER
	CW	CROSSWALK POST
UTILITY POLES		GUY WIRE
		GUY POLE
		LIGHT POLE
		CONCRETE POWER POLE
		CONCRETE UTILITY POLE
		METAL POWER POLE
		METAL UTILITY POLE
		WOOD UTILITY POLE
		WOOD POWER POLE
		MAST ARM POLE
SAN SWR	CO	CLEAN OUT
	SMH	SANITARY MANHOLE
	SO	STUB OUT
	S	STAND PIPE
	SV	SEWER VALVE
	GRND	GRINDER
STORM	CB	CATCH BASIN
	SDMH	STORM DRAIN MANHOLE
	YD	YARD DRAIN
	DR	DRAIN
		CURB INLET
		CURB INLET W/ MANHOLE
		CURB INLET W/ GRATE
		CI W/ MANHOLE & GRATE

	SYM.	DESCRIPTION
GAS / FUEL	GM	GAS METER
	GMH	GAS MANHOLE
	GSV	GAS VALVE
	MW	MONITORING WELL
	VEP	VAPOR EXTRACTION POINT
	GSP	FUEL PUMP DISPENSER
	GASM	GAS MARKER
	VTP	VENT PIPE
	VBG	GAS VALVE BOX
	FCAP	FUEL FILL CAP
TELE / TV	PJB	TELEPHONE JUNCTION BOX
	PR	TELEPHONE RISER
	TMH	TELEPHONE MANHOLE
	FIBO	FIBER OPTIC CABLE MARKER
	CATV	CATV RISER
	TM	TELEPHONE MARKER
WATER / IRRIGATION		BACKFLOW PREVENTOR
	BO	BLOW OFF
	ARV	AIR RELEASE VALVE
	SP	SAMPLE POINT
	FH	FIRE HYDRANT
	SIA	SIAMESE CONNECTION
	WM	WATER METER
	WV	WATER VALVE
		WATER SPIGOT
	ICV	IRRIGATION CONTROL VALVE
	IM	IRRIGATION METER
	SPR	SPRINKLER
TREES	12	CITRUS TREE (TRC)
		CYPRESS TREE (TRCY)
	12	GENERIC TREE (TRG)
	12	OAK TREE (TRO)
	12	PINE TREE (TRP)
	12	PALM TREE (TRPL)
		MANGROVE (TRMG)
MISCELLANEOUS	GPR	GROUND PENETRATING RADAR
		BORING HOLE
	M	METER (UNKNOWN)
		BOLLARD
		COLUMN
	MB	MAIL BOX
	FP	FLAG POLE
		HANDICAP MARKER
	MH	MANHOLE (UNKNOWN)
		SATELLITE DISH
		SIGN
	PM	PARKING METER
		POST
	UB	UTILITY BOX
	UR	UTILITY RISER
		CEMETERY HEAD STONE
	HH	HAND HOLE
		GATE POST
	TC	TRASH CAN
	NPB	NEWSPAPER BOX
	BR	BIKE RACK
	PP	PAY PHONE

HATCH PATTERNS

	CONCRETE		DIRT
	BRICK PAVERS		ASPHALT

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	06/2024

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 3

SURVEY NOTES, SYMBOLS, AND SURVEY LEGEND

PROJECT NO. 2017-020
DRAWING NO. G-5
FILE ID. 210336_G05.dwg

Acad Version : R24.1s (LMS Tech)
User Name : hstauffer
Date\Time : Thu, 13 Jun 2024 - 11:40am
Path\Name : P:\DEI&C\210336-NW Neighb Design\00-Misc\CAD\00 Working Folder\PHASE 3\210336_G05.dwg
Current Plotstyle : ByColor
Layout Tab: G-4

SURVEYOR'S NOTES:

1. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

2. NO SEARCH OF THE PUBLIC RECORDS WAS UNDERTAKEN FOR EASEMENTS, RIGHTS OF WAYS, RESTRICTIONS OR OTHER RECORDED OR EVIDENCE OF UNRECORDED DOCUMENTS BY THIS FIRM THOUGH A LIMITED SEARCH OF THE PALM BEACH COUNTY PROPERTY APPRAISER'S WEBSITE WAS PERFORMED FOR VARIOUS DEED AND PLAT INFORMATION. RIGHTS OF WAYS WERE SEARCHED FOR OWNERSHIP BY: STATEWIDE LAND TITLE, INC. UNDER CUSTOMER FILE NO. "CITY OF DELRAY BEACH, NW NEIGHBORHOOD IMPROVEMENTS RFQ 2018-054". A "BEST FIT" APPROACH WAS TAKEN FOR VARIOUS INTERIOR STREETS WITHIN THE LIMITS OF THE PROJECT. THE RIGHT OF WAY INFORMATION SHOWN FOR ATLANTIC AVENUE (STATE ROAD NO. 806) IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030-2505 (DATED: 04-21-09) AND 93030 – 2506 (DATED: 07-09-09). THE RIGHT OF WAY INFORMATION SHOWN FOR INTERSTATE 95 IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93220-2411 (LAST REVISED 11-01-99). THE RIGHT OF WAY INFORMATION SHOWN FOR LAKE IDA ROAD IS PER THE PALM BEACH COUNTY RIGHT OF WAY ACQUISITION MAP – PALM BEACH COUNTY PROJECT NUMBER: 90502 (DATED: 10-90). BENCHMARK INFORMATION LISTED ALONG SWINTON AVENUE IS PER THE PROJECT NETWORK CONTROL SHEETS PREPARED UNDER FINANCIAL PROJECT ID: 438389-1-52-01.

3. THE INTENT OF THIS "MAP OF SPECIFIC PURPOSE SURVEY" IS TO AID IN THE DESIGN OF INFRASTRUCTURE IMPROVEMENTS WITHIN THE CORRIDORS SHOWN HEREON. THIS IS NOT A BOUNDARY SURVEY.

4. THERE MAY BE UNDERGROUND "FOOTINGS", DRAINAGE, UTILITIES, ETC. NOT SHOWN OR INDICATED HEREON. UTILITY SURFACE MARKINGS SHOWN HEREON WERE LOCATED AS PROVIDED BY THE CRAIG A. SMITH & ASSOCIATES UTILITY LOCATES DEPARTMENT.

5. BASELINES SHOWN HEREON WERE DETERMINED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AS SHOWN ALONG ATLANTIC AVENUE (STATE ROAD NO. 806), LAKE IDA ROAD AND THE SURVEYOR ALONG ALL APPLICABLE INTERIOR ROADS AND ALLEYS. BASELINES HAVE NOT BEEN ESTABLISHED IN THE FIELD.

6. HORIZONTAL COORDINATES SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE GRID SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT). CAS STATIC POINTS 1 AND 2, AS ADJUSTED BY THE FLROIDA DEPARTMENT OF TRANSPORTATION (LISTED BELOW) WERE USED AS REDUNDANT CHECKS FOR THE DURATION OF THE PROJECT. A BEARING OF N 89° 19' 21" E WAS HELD ALONG THE SURVEY BASELINE OF ATLANTIC AVENUE (STATE ROAD 806) FROM STATION 320+52.07 TO STATION 347+00 PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030 – 2506 (DATED: 07-09-09). ALL OTHER BEARINGS ARE RELATIVE THERETO. ELEVATIONS SHOWN HEREON ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 AND VERIFIED UTILIZING VARIOUS FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) BENCHMARKS (BM) (AS LISTED BELOW). HORIZONTAL AND VERTICAL DATA FOR CRAIG A. SMITH & ASSOCIATES (CAS) CONTROL POINTS (CP) ESTABLISHED FOR THE PROJECT ARE ALSO LISTED BELOW:

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1	774626.90	959380.00	18.47	ND RLS 2963
CAS 2	775917.00	959403.40	19.40	PK AVIRON
CAS 3	775227.20	957388.10	17.03	MND LB 3110
CAS 4	775230.40	957774.30	17.66	MND LB 3110
CAS 5	775209.10	958046.40	17.48	MND LB 3110
CAS 6	775209.00	958385.60	18.12	MND LB 3110
CAS 7	775252.40	959035.30	19.11	MND LB 3110
CAS 8	775874.40	959026.50	19.27	MND LB 3110
CAS 9	775214.60	959437.80	18.40	MND EGI
CAS 10	775909.00	958731.60	18.86	MND LB 3110
CAS 11	775255.70	958750.30	16.22	MND LB 3110
CAS 12	775871.00	958362.20	18.64	MND LB 3110
CAS 13	775901.50	958035.70	18.81	MND LB 3110
CAS 14	775864.90	957743.20	19.91	MND LB 3110
CAS 15	775888.90	957399.30	18.17	MND LB 3110
CAS 16	774497.10	957397.80	15.87	MND LB 3300
CAS 17	774501.30	957782.00	15.61	IRC
CAS 18	774552.20	958074.90	15.51	MND LB 3110
CAS 19	774606.10	958441.30	15.28	MND LB 3110
CAS 20	774561.80	958808.40	17.00	MND LB 3110
CAS 21	774519.10	959104.40	16.28	MND MGI
CAS 22	776572.70	959398.20	19.44	MND LB 3110
CAS 23	776544.40	959010.50	19.09	MND LB 3110
CAS 24	776565.80	958710.00	19.53	MND LB 3110
CAS 25	776565.90	958376.20	17.63	MND LB 3110
CAS 26	776559.20	958015.80	18.58	MND LB 3110

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 27	776528.00	957721.80	17.88	MND LB 3110
CAS 28	776549.40	957384.90	17.56	MND LB 3110
CAS 29	776924.50	959004.50	19.82	MND LB 3110
CAS 30	776945.40	958679.10	17.87	MND HSQ GROUP LB 7924
CAS 31	777270.60	958693.70	16.57	MND LB 3110
CAS 32	777337.00	958344.10	16.62	MND LB 3110
CAS 33	777317.20	957665.90	15.34	MND LB 3110
CAS 34	777302.70	957361.80	16.98	MND LB 3110
CAS 35	777276.40	957016.90	18.06	MND LB 3110
CAS 36	777274.60	956697.80	14.87	MND LB 3110
CAS 37	776594.90	956724.70	14.98	MND LB 3110
CAS 38	776528.90	956705.40	15.01	MND LB 3110
CAS 39	776599.90	956377.10	14.57	MND LB 3110
CAS 40	776571.40	956060.40	14.07	MND LB 3110
CAS 41	776567.80	955738.40	13.89	MND LB 3110
CAS 42	776560.80	955492.30	13.13	MND LB 3110
CAS 43	776575.90	955216.00	13.19	MND LB 3110
CAS 44	776595.60	955026.00	13.66	PK
CAS 45	776590.70	954693.10	14.39	PK
CAS 46	775890.20	954719.30	15.38	MND LB 3110
CAS 47	775213.40	954714.50	16.81	MND LB 3110
CAS 48	775201.90	955074.20	17.86	MND LB 3110
CAS 49	775225.40	955408.80	17.22	MND LB 3110
CAS 50	775194.40	955752.70	15.74	MND LB 3110
CAS 51	774501.70	955773.30	16.24	MND LB 3110
CAS 52	774501.90	956064.80	15.66	PKD AVIROM ASSOC
CAS 53	774492.10	956453.40	17.62	MND LB 3110
CAS 54	774489.90	956793.40	15.22	MND LB 3300
CAS 55	774501.90	957116.90	15.71	MND LB 3110
CAS 56	775252.00	956090.90	16.46	MND LB 3110
CAS 57	775208.50	956432.20	15.22	MND LB 3110
CAS 58	775213.70	956727.30	14.64	MND LB 3110
CAS 59	775189.70	957055.60	15.57	MND LB 3110
CAS 60	777600.10	956084.40	14.32	MND LB 3110
CAS 61	777618.30	955187.90	14.68	MND LB 3110
CAS 62	777095.80	955235.80	11.72	MND LB 3110
CAS 63	777331.40	958034.80	16.48	MND LB 3110
CAS 64	775853.90	957047.70	16.05	MND LB 3110
CAS 65	776532.70	957042.60	16.87	PK
CAS 66	777417.40	957195.70	18.46	MND OSO LB 353
CAS 67	775886.40	956716.10	14.52	MND LB 3110
CAS 68	775910.20	956394.50	17.97	ND
CAS 69	775910.10	956394.60	17.93	ND
CAS 70	775906.10	956057.80	16.06	MND CAS
CAS 71	777140.20	956037.10	12.88	PK AVIROM
CAS 72	777146.50	955747.90	12.21	MND LB 3110
CAS 73	777117.20	955484.40	11.78	MND LB 3110
CAS 74	776848.40	955239.90	12.03	MND HSQ GROUP LB 7924
CAS 75	775914.10	955709.80	16.59	MND CAS
CAS 76	775880.40	955036.90	17.44	MND LB 3110
CAS 77	774724.00	955082.90	17.71	MND LB 3110
CAS 78	776609.30	954303.40	17.13	MND LB 3110
CAS 79	777292.00	954293.60	12.36	MND LB 3110
CAS 80	774713.20	955371.20	17.28	MND LB 3110
CAS 81	777445.60	956726.80	16.13	MND LB 3110
CAS 82	777089.30	954557.00	17.53	PKD
CAS 83	776839.10	954560.50	16.57	PKD
CAS 84	776588.80	954564.00	14.75	NAIL CONC
CAS 85	774903.80	954720.80	19.48	MND LB 3110
CAS 86	776160.80	954368.30	14.49	PK

PRIMARY CONTROL POINTS

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1 (STATIC)	774626.90	959380.00	18.72'	MND LB 3110
CAS 2 (STATIC)	775917.08	959403.39	19.22'	MND LB 3110
FDOT C02	774589.66	957386.84	15.79'	FDOT BRASS DISK
PNC-BM M02	774507.52	958398.40	15.06'	FDOT BRASS DISK
PNC-BM C3	774556.99	959460.96	18.59'	FDOT BRASS DISK
BLC-4	775265.00	959479.79	17.99'	FDOT BRASS DISK
BLC-5	777371.16	959300.96	20.23'	FDOT BRASS DISK

7. ALL SYMBOLS ARE SHOWN FOR REPRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE.

8. FINISHED FLOOR AND ELEVATIONS SHOWN HEREON, IF ANY, WERE TAKEN AT THE DOORWAY THRESHOLD. NO SEARCH WAS PERFORMED FOR ANY LOWER "SUNKEN" FLOORS OR HIGHER RAISED FLOORS WITHIN ANY STRUCTURE.

16. THE ACCURACY OF THIS SURVEY IS PREMISED ON THE EXPECTED USE OF THE SURVEY. THE EXPECTED USE/PREMISE OF THIS SURVEY IS THE DESIGN OF NEIGHBORHOOD IMPROVEMENTS, WHICH MAY CONSIST OF IMPROVEMENTS TO OR ADDITIONS OF ROADWAYS, DRAINAGE, LIGHTING, ETC. TRIMBLE R2 AND R8 GNSS INSTRUMENTS WITH TRIMBLE TSC-3 DATA COLLECTION WERE UTILIZED TO ESTABLISH HORIZONTAL CONTROL AND LOCATE UTILITY SURFACE MARKS AND MISC. FEATURES HORIZONTALLY. A TOPCON ES-102 INSTRUMENT WITH RANGER (TDS) DATA COLLECTION WAS UTILIZED TO COLLECT DATA IN BOTH THE HORIZONTAL AND VERTICAL PLANES. CLOSED LEVEL LOOPS WERE PERFORMED USING TOPCON GTS 2 LEVELS TO TRANSFER ELEVATIONS FROM KNOWN BENCHMARKS AND THROUGHOUT THE PROJECT.

17. THE DIGITAL DATA PROVIDED IS INTENDED TO BE VIEWED AT A SCALE OF 1" = 20' OR SMALLER.

18. ALL DISTANCES AND ELEVATIONS SHOWN HEREON ARE IN ACCORD WITH THE UNITED STATES STANDARD USING FEET AND DECIMALS THEREOF.

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

FOR THE FIRM BY: _____
ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SURVEY PREPARED BY:

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE NO. LB0003110

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	06/2024

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 3

SURVEY NOTES AND SITE BENCHMARKS

PROJECT NO. 2017-020
DRAWING NO. G-6
FILE ID. 210336_G06.dwg

Date\Time - Thu, 13 Jun 2024 - 11:40am Current Plotstyle - ByColor Layout Tab: C-5
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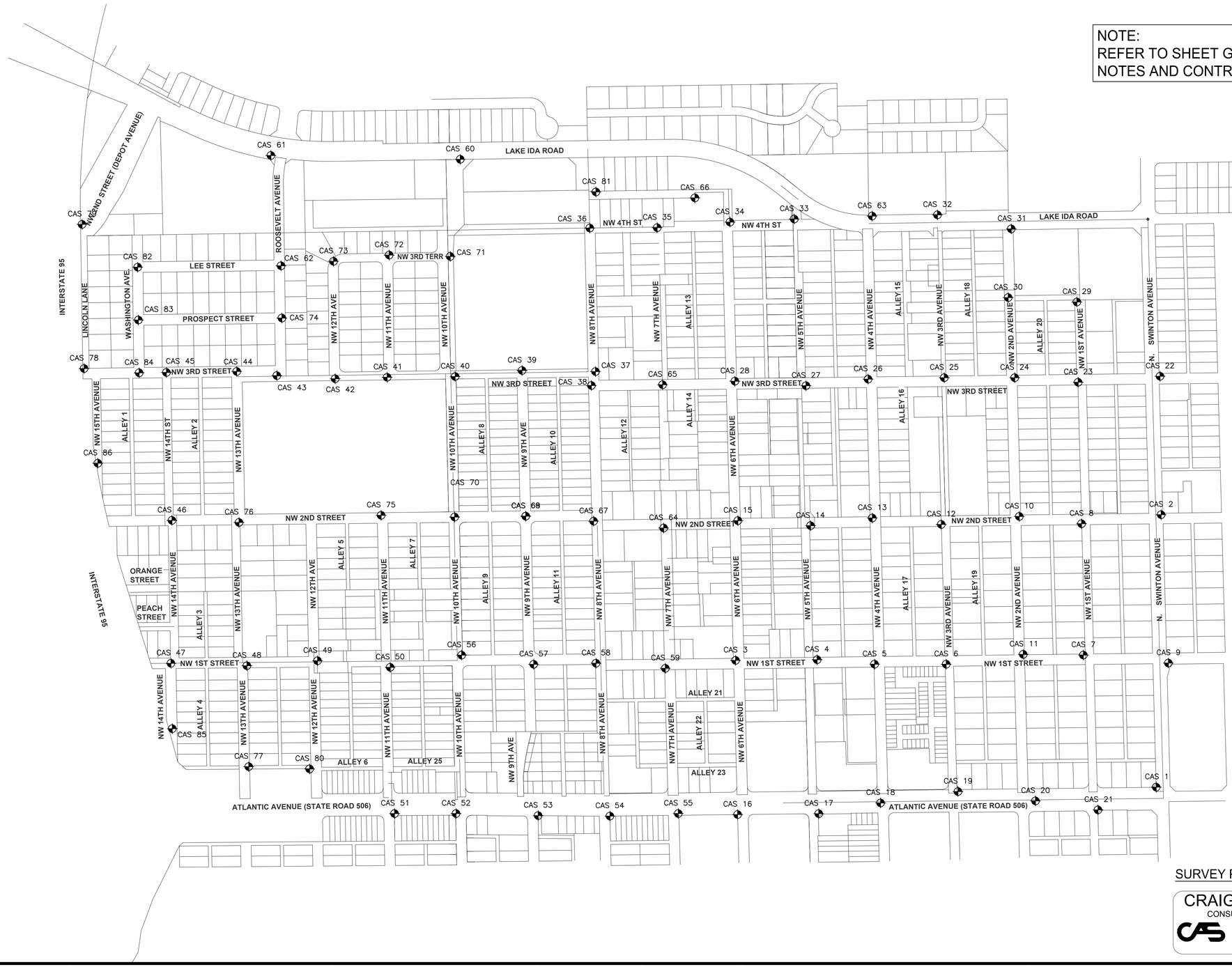
Acad Version - R24.1s (LMS Tech)
User Name - hstauffer

NOTE:
REFER TO SHEET G-6 FOR THE SURVEY NOTES AND CONTROL POINTS

NORTH

SCALE: 1"=250'



SURVEY PREPARED BY:

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No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	06/2024

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 3

HORIZONTAL CONTROL PLAN

PROJECT NO. 2017-020

DRAWING NO. G-7

FILE ID. 210336_G07.dwg

Acad Version : R24.1s (LMS Tech)
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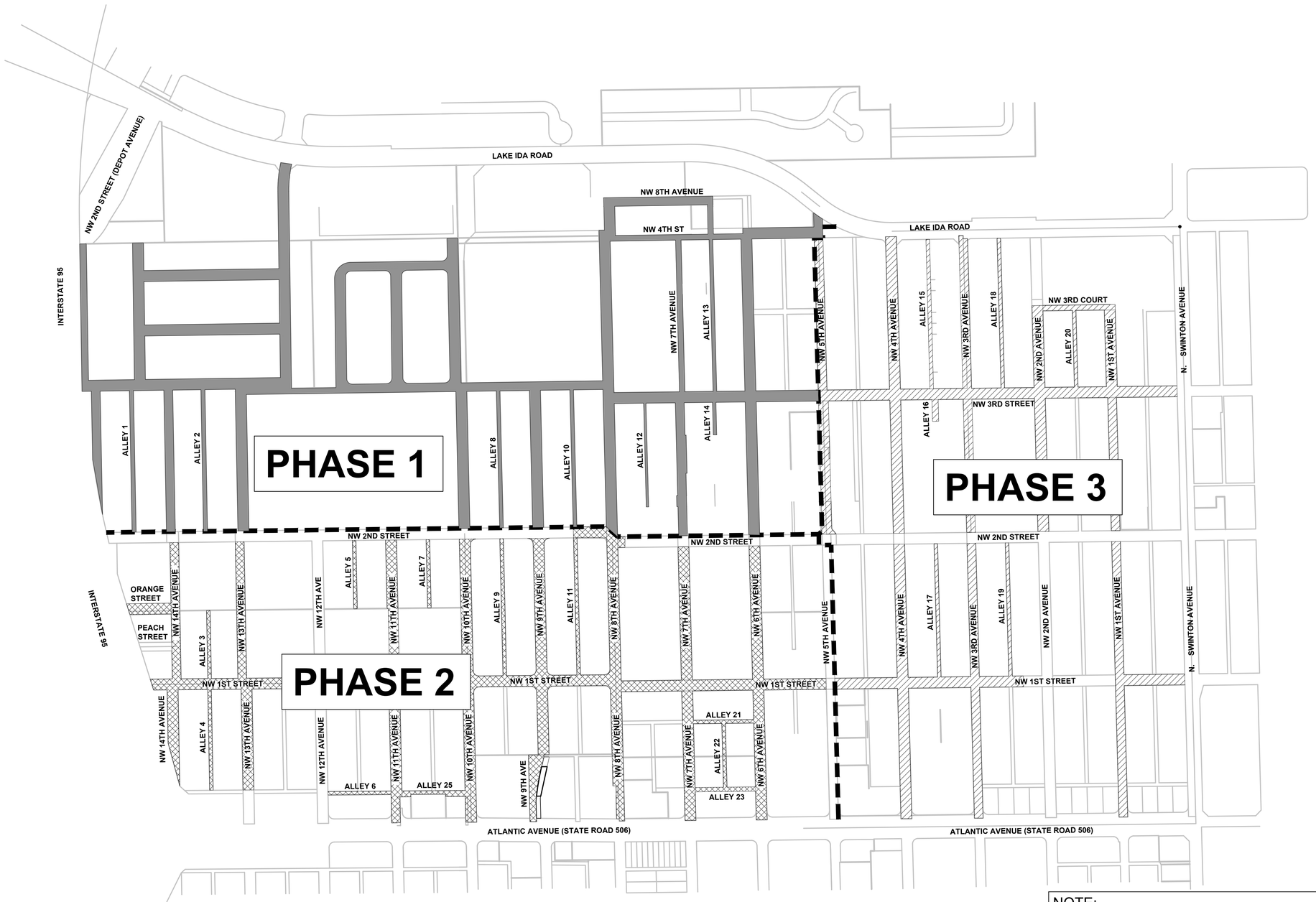
Layout Tab: G-6



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DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	06/2024

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 3

PHASING PLAN

PROJECT NO. 2017-020

DRAWING NO. G-8

FILE ID. 210336_G08.dwg

Acad Version: - R24.1s (LMS Tech)
User Name: - kstauffer
Date\Time: - Thu, 13 Jun 2024 - 11:40am Current Plotstyle: - ByColor Layout Tab: G-7
Path\Name: - P:\DELBCH\210336-NW Neigh Design\00-Misc\CAD\00_Working Folder\PHASE 3\210336_G08.dwg

REPORT OF SURVEY:

1. THE SURVEY DEPICTED HEREON HAS BEEN CLASSIFIED AS A TOPOGRAPHIC SURVEY, AS DEFINED IN RULE 5J-17.050 OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AS AMENDED.
2. THIS SURVEY HAS BEEN PREPARED IN THE OFFICE OF DENNIS J. LEAVY & ASSOCIATES, INC. LOCATED AT: 460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FLORIDA, WHOSE CERTIFICATE OF AUTHORIZATION NUMBER IS LB #6599, AND THE CERTIFYING SURVEYOR'S (DAVID A. BOWER) LICENSE NUMBER IS LS #5888.
3. THE SURVEY SKETCH SHOWN HEREON DOES NOT NECESSARILY CONTAIN ALL OF THE INFORMATION OBTAINED OR DEVELOPED BY THE UNDERSIGNED SURVEYOR IN HIS FIELD WORK, OFFICE WORK, OR RESEARCH.
4. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
5. THIS IS NOT A BOUNDARY SURVEY
6. THIS SURVEY DOES NOT ADDRESS ENVIRONMENTAL MATTERS, JURISDICTIONAL BOUNDARIES OR HAZARDOUS WASTE CONCERNS SHOULD ANY OF THE FOREGOING EXIST.
7. THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN SHOWN HEREON AND DO NOT DETERMINE SUB SURFACE CONDITIONS.
8. THE UNDERSIGNED MAKES NO REPRESENTATIONS OR GUARANTEES AS TO THE INFORMATION REFLECTED HEREON PERTAINING TO EASEMENTS, RIGHTS OF WAY, SETBACK LINES, AGREEMENTS AND OTHER MATTERS, AND FURTHER, THIS INSTRUMENT IS NOT INTENDED TO REFLECT OR SET FORTH ALL SUCH MATTERS. SUCH INFORMATION SHOULD BE OBTAINED AND CONFIRMED BY OTHERS THROUGH APPROPRIATE TITLE VERIFICATION. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY AND/OR EASEMENTS OF RECORD.
9. THIS SURVEY DOES NOT MEET THOSE STANDARDS ESTABLISHED BY THE AMERICAN LAND TITLE ASSOCIATION.
10. UNDERGROUND APPARENT USE AND/OR IMPROVEMENTS HAVE NOT BEEN SHOWN UNLESS OTHERWISE NOTED.
11. THIS INSTRUMENT MAY NOT BE REPRODUCED IN PART OR WHOLE WITHOUT THE WRITTEN CONSENT OF DENNIS J. LEAVY & ASSOCIATES INC.
12. DATE OF FIELD SURVEY: JANUARY 5TH, 2022, AS RECORDED IN FIELD BOOK 516, PAGES 02 THROUGH 07 AND FIELD BOOK 517, PAGE 03.
13. THIS SURVEY LIES IN SECTION 17, TOWNSHIP 46 SOUTH, RANGE 43 EAST, CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA.
14. BY GRAPHIC PLOTTING ONLY THE SUBJECT PROPERTY LIES WITHIN ZONE X, AS SHOWN ON THE U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP, MAP NUMBER: 12099C0979F, COMMUNITY: CITY OF DELRAY BEACH, NUMBER: 125102, PANEL 0979, SUFFIX: F, EFFECTIVE DATE: OCTOBER 5, 2017.
15. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE RELATIONSHIPS BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. IN ALL CASES, DIMENSIONS SHOWN SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER SCALED POSITIONS.
16. MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED.
17. ALL DATES SHOWN WITHIN THE REVISION BLOCK HEREON ARE FOR INTEROFFICE FILING USE ONLY, AND IN NO WAY AFFECT THE DATE OF THE FIELD SURVEY STATED HEREIN.
18. BENCHMARKS OF ORIGIN: PER THE N.W. NEIGHBORHOOD DRAINAGE IMPROVEMENTS CITY OF DELRAY BEACH PROJECT NO: 17-020 SURVEY, PREPARED FOR THE CITY OF DELRAY BEACH (CAS 19-2068), BY CRAIG A. SMITH & ASSOCIATES, DATED 06-04-20.
19. ELEVATIONS REFERENCED HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

PLAT LEGEND:

(P1)	ATLANTIC PINES (P.B. 13, PG. 77, P.B.C.R.)
(P2)	WHIDDEN'S SUBDIVISION OF SW 1/4 OF SE 1/4 OF NW 1/4 OF SEC 17, T46, R43, FLORIDA (P.B. 2, PG. 58, P.B.C.R.)
(P3)	MAP OF THE TOWN OF LINTON (DELRAY BEACH), FLORIDA (P.B. 1, PG. 3, P.B.C.R.)
(P4)	MONROE SUBDIVISION (P.B. 14, PG. 67, P.B.C.R.)

SYMBOL LEGEND:

BENCHMARK
CATCH BASIN
CLEAN OUT
CONCRETE POWER POLE
CUT POST
GUIDE WIRE AND ANCHOR
MAILBOX
PALM WITH TRUNK DIAMETER
SANITARY MANHOLE
SIGN
TELEPHONE WIRE
TREE WITH TRUNK DIAMETER
WOOD POST
WOOD POWER POLE
WOOD POWER POLE WITH LIGHT

LEGEND:

(C)	CALCULATED
E	EAST
EL	ELEVATION
LB	LICENSED BUSINESS
LS	LICENSED SURVEYOR
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO.	NUMBER
O.R.B.	OFFICIAL RECORDS BOOK
OHW	OVERHEAD WIRE
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
S	SOUTH
W	WEST

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

DATED: JANUARY 5TH, 2022, AND JANUARY 18TH, 2022

FOR THE FIRM BY: _____
ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SURVEY PREPARED BY:

DENNIS J. LEAVY & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FL 33411
PHONE: (561) 753-0650 EMAIL: SURVEY@DJLASURVEY.NET

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SURVEY PREPARED BY:

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE. NO. LB0003110

GENERAL ABBREVIATIONS

ABRV	DESCRIPTION
A/C	AIR CONDITION PAD
ACP	ASBESTOS CEMENT PIPE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
B.C.R.	BROWARD COUNTY RECORDS
B/L	BASELINE
BOTT	BOTTOM
(C)	CALCULATED
CAS	CRAIG A. SMITH & ASSOCIATES
℄	CENTER LINE
CONC	CONCRETE
D	DEED/DESCRIPTION
DB	DEED BOOK
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEV	ELEVATION
EOW	EDGE OF WATER
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FF	FINISHED FLOOR
FND	FOUND
FPL	FLORIDA POWER & LIGHT
GFF	GARAGE FINISHED FLOOR
HDPE	HIGH DENSITY POLYETHYLENE
I.E.	INVERT ELEVATION
IR	IRON ROD
IR&C	IRON ROD AND CAP
IP	IRON PIPE
L	ARC LENGTH
LB	LICENSED BUSINESS
LF	LINEAR FEET
(M)	MEASURED

ABRV	DESCRIPTION
NTS	NOT TO SCALE
ORB	OFFICIAL RECORDS BOOK
O / S	OFF SET
(P)	PLAT
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PC	POINT OF CURVE
PCP	PERMANENT CONTROL POINT
PGS	PAGES
PHDPE	PERFORATED HIGH DENSITY POLYETHYLENE
PI	POINT OF INTERSECTION
PK&D	PK NAIL AND DISK
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PRM	PERMANENT REFERENCE MARKER
PSM	PROFESSIONAL SURVEYOR AND MAPPER
PT	POINT OF TANGENCY
PVC	POLY VINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
RGE	RANGE
R/W	RIGHT-OF-WAY LINE
SEC	SECTION
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF PIPE
TWP	TOWNSHIP
TYP	TYPICAL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
△	DELTA

STANDARD LINETYPES

SYMBOL	DESCRIPTION
	BASELINE
	PARCEL LINE
	BOUNDARY LINE
	EASEMENT LINE
	LOT LINE
	RIGHT OF WAY LINE
	CENTER LINE
	SECTION LINE
	LANDSCAPE LINE
	EDGE OF WATER
	RR TRACKS
	PLAT LINE
	CURB & GUTTER
X X X	FENCE LINE
□ □	GUARD RAIL
UNK UNK	UNKNOWN UTILITY
	ABANDONED UTILITY
NFVU	NON FIELD VERIFIED UTILITY
BCTV BCTV	BURIED CABLE TV
BCL BCL	BURIED COMMUNICATIONS LINE
FOC FOC	FIBER OPTIC CABLE
BT	BURIED TELEPHONE

SYMBOL	DESCRIPTION
BTC BTC	BURIED TRAFFIC CONTROL
<C> <C>	COMMUNICATIONS DUCTBANK CL
<F> <F>	FIBER OPTIC DUCTBANK CL
	OVERHEAD WIRE
BE	BURIED ELECTRIC
SL	BURIED STREET LIGHTING
<E> <E>	ELECTRICAL DUCTBANK CENTER LINE
FM	FORCE MAIN
	SANITARY SEWER
SNS SNS	SANITARY SERVICE
VS	VACUUM SEWER
SD	STORM DRAIN
FIRE FIRE	FIRE LINE
RWL RWL	RAW WATER LINE
WL	WATER LINE MAIN
WLC WLC	WATER LINE CHILLED
WS	WATER SERVICE
	IRRIGATION LINE
	GAS LINE ABOVE GROUND
BG	BURIED GAS LINE
GS	BURIED GAS SERVICE LINE
FUEL	FUEL LINE

GENERAL SYMBOL LEGEND

	SYM.	DESCRIPTION
CONTROL		AERIAL TARGET
		BENCH MARK
		CONCRETE MONUMENT
		IRON PIPE
		IRON ROD
	ND	NAIL & DISC
		CAS CONTROL POINT
		IRON ROD AND CAP
		X CUT
	DH	DRILL HOLE
PIPE FITTINGS		11.25° PIPE BEND
		22.5° PIPE BEND
		45° PIPE BEND
		90° PIPE BEND
		CROSS PIPE FITTING
		TEE PIPE FITTING
		WYE PIPE FITTING
		REDUCER PIPE FITTING
ELECTRICAL	EMH	ELECTRIC MANHOLE
	EMTR	ELECTRIC MOTOR
		ELECTRICAL OUTLET
		GROUND LIGHT
	EJB	ELECTRIC JUNCTION BOX
	EM	ELECTRIC METER
	LPB	LIGHT POLE BOX
	TCB	TRAFFIC CONTROL BOX
	ER	ELECTRICAL RISER
	FPL	TRANSFORMER
	CW	CROSSWALK POST
UTILITY POLES		GUY WIRE
		GUY POLE
		LIGHT POLE
		CONCRETE POWER POLE
		CONCRETE UTILITY POLE
		METAL POWER POLE
		METAL UTILITY POLE
		WOOD UTILITY POLE
		WOOD POWER POLE
		MAST ARM POLE
SAN SWR	CO	CLEAN OUT
	SMH	SANITARY MANHOLE
	SO	STUB OUT
		STAND PIPE
	SV	SEWER VALVE
	GRND	GRINDER
STORM	CB	CATCH BASIN
	SDMH	STORM DRAIN MANHOLE
	YD	YARD DRAIN
	DR	DRAIN
		CURB INLET
		CURB INLET W/ MANHOLE
		CURB INLET W/ GRATE
		CI W/ MANHOLE & GRATE

	SYM.	DESCRIPTION
GAS / FUEL	GM	GAS METER
	GMH	GAS MANHOLE
	GSV	GAS VALVE
	MW	MONITORING WELL
	VEP	VAPOR EXTRACTION POINT
	GSP	FUEL PUMP DISPENSER
	GASM	GAS MARKER
	VTP	VENT PIPE
	VBG	GAS VALVE BOX
	FCAP	FUEL FILL CAP
TELE / TV	PJB	TELEPHONE JUNCTION BOX
	PR	TELEPHONE RISER
	TMH	TELEPHONE MANHOLE
	FIBO	FIBER OPTIC CABLE MARKER
	CATV	CATV RISER
	TM	TELEPHONE MARKER
WATER / IRRIGATION		BACKFLOW PREVENTOR
	BO	BLOW OFF
	ARV	AIR RELEASE VALVE
	SP	SAMPLE POINT
	FH	FIRE HYDRANT
	SIA	SIAMESE CONNECTION
	WM	WATER METER
	WV	WATER VALVE
		WATER SPIGOT
	ICV	IRRIGATION CONTROL VALVE
	IM	IRRIGATION METER
	SPR	SPRINKLER
TREES	12	CITRUS TREE (TRC)
		CYPRESS TREE (TRCY)
	12	GENERIC TREE (TRG)
	12	OAK TREE (TRO)
	12	PINE TREE (TRP)
	12	PALM TREE (TRPL)
		MANGROVE (TRMG)
MISCELLANEOUS	GPR	GROUND PENETRATING RADAR
		BORING HOLE
	M	METER (UNKNOWN)
		BOLLARD
		COLUMN
	MB	MAIL BOX
	FP	FLAG POLE
		HANDICAP MARKER
	MH	MANHOLE (UNKNOWN)
		SATELLITE DISH
		SIGN
	PM	PARKING METER
		POST
	UB	UTILITY BOX
	UR	UTILITY RISER
		CEMETERY HEAD STONE
	HH	HAND HOLE
		GATE POST
	TC	TRASH CAN
	NPB	NEWSPAPER BOX
	BR	BIKE RACK
	PP	PAY PHONE

HATCH PATTERNS

CONCRETE
DIRT
BRICK PAVERS
ASPHALT

60% DESIGN - PHASE 2

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ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	12/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 2

SURVEY NOTES, SYMBOLS, AND SURVEY LEGEND

PROJECT NO. 2017-020
DRAWING NO. G-5
FILE ID. 210336_G05.dwg

Acad Version : R24.1s (LMS Tech)
User Name : hstauffer
Date\Time : Wed, 14 Feb 2024 - 3:46pm
Path\Name : P:\DELRAY\210336 NW Neigh Design\00-Misc\DOD\00_Working Folder\PHASE 2\210336_G05.dwg
Current Plotstyle : ByColor
Layout Tab: G-5

SURVEYOR'S NOTES:

1. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

2. NO SEARCH OF THE PUBLIC RECORDS WAS UNDERTAKEN FOR EASEMENTS, RIGHTS OF WAYS, RESTRICTIONS OR OTHER RECORDED OR EVIDENCE OF UNRECORDED DOCUMENTS BY THIS FIRM THOUGH A LIMITED SEARCH OF THE PALM BEACH COUNTY PROPERTY APPRAISER'S WEBSITE WAS PERFORMED FOR VARIOUS DEED AND PLAT INFORMATION. RIGHTS OF WAYS WERE SEARCHED FOR OWNERSHIP BY: STATEWIDE LAND TITLE, INC. UNDER CUSTOMER FILE NO. "CITY OF DELRAY BEACH, NW NEIGHBORHOOD IMPROVEMENTS RFQ 2018-054". A "BEST FIT" APPROACH WAS TAKEN FOR VARIOUS INTERIOR STREETS WITHIN THE LIMITS OF THE PROJECT. THE RIGHT OF WAY INFORMATION SHOWN FOR ATLANTIC AVENUE (STATE ROAD NO. 806) IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030-2505 (DATED: 04-21-09) AND 93030 – 2506 (DATED: 07-09-09). THE RIGHT OF WAY INFORMATION SHOWN FOR INTERSTATE 95 IS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93220-2411 (LAST REVISED 11-01-99). THE RIGHT OF WAY INFORMATION SHOWN FOR LAKE IDA ROAD IS PER THE PALM BEACH COUNTY RIGHT OF WAY ACQUISITION MAP – PALM BEACH COUNTY PROJECT NUMBER: 90502 (DATED: 10-90). BENCHMARK INFORMATION LISTED ALONG SWINTON AVENUE IS PER THE PROJECT NETWORK CONTROL SHEETS PREPARED UNDER FINANCIAL PROJECT ID: 438389-1-52-01.

3. THE INTENT OF THIS "MAP OF SPECIFIC PURPOSE SURVEY" IS TO AID IN THE DESIGN OF INFRASTRUCTURE IMPROVEMENTS WITHIN THE CORRIDORS SHOWN HEREON. THIS IS NOT A BOUNDARY SURVEY.

4. THERE MAY BE UNDERGROUND "FOOTINGS", DRAINAGE, UTILITIES, ETC. NOT SHOWN OR INDICATED HEREON. UTILITY SURFACE MARKINGS SHOWN HEREON WERE LOCATED AS PROVIDED BY THE CRAIG A. SMITH & ASSOCIATES UTILITY LOCATES DEPARTMENT.

5. BASELINES SHOWN HEREON WERE DETERMINED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AS SHOWN ALONG ATLANTIC AVENUE (STATE ROAD NO. 806), LAKE IDA ROAD AND THE SURVEYOR ALONG ALL APPLICABLE INTERIOR ROADS AND ALLEYS. BASELINES HAVE NOT BEEN ESTABLISHED IN THE FIELD.

6. HORIZONTAL COORDINATES SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE GRID SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT). CAS STATIC POINTS 1 AND 2, AS ADJUSTED BY THE FLROIDA DEPARTMENT OF TRANSPORTATION (LISTED BELOW) WERE USED AS REDUNDANT CHECKS FOR THE DURATION OF THE PROJECT. A BEARING OF N 89° 19' 21" E WAS HELD ALONG THE SURVEY BASELINE OF ATLANTIC AVENUE (STATE ROAD 806) FROM STATION 320+52.07 TO STATION 347+00 PER THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP – STATE PROJECT NUMBER 93030 – 2506 (DATED: 07-09-09). ALL OTHER BEARINGS ARE RELATIVE THERETO. ELEVATIONS SHOWN HEREON ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 AND VERIFIED UTILIZING VARIOUS FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) BENCHMARKS (BM) (AS LISTED BELOW). HORIZONTAL AND VERTICAL DATA FOR CRAIG A. SMITH & ASSOCIATES (CAS) CONTROL POINTS (CP) ESTABLISHED FOR THE PROJECT ARE ALSO LISTED BELOW:

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1	774626.90	959380.00	18.47	ND RLS 2963
CAS 2	775917.00	959403.40	19.40	PK AVIRON
CAS 3	775227.20	957388.10	17.03	MND LB 3110
CAS 4	775230.40	957774.30	17.66	MND LB 3110
CAS 5	775209.10	958046.40	17.48	MND LB 3110
CAS 6	775209.00	958385.60	18.12	MND LB 3110
CAS 7	775252.40	959035.30	19.11	MND LB 3110
CAS 8	775874.40	959026.50	19.27	MND LB 3110
CAS 9	775214.60	959437.80	18.40	MND EGI
CAS 10	775909.00	958731.60	18.86	MND LB 3110
CAS 11	775255.70	958750.30	16.22	MND LB 3110
CAS 12	775871.00	958362.20	18.64	MND LB 3110
CAS 13	775901.50	958035.70	18.81	MND LB 3110
CAS 14	775864.90	957743.20	19.91	MND LB 3110
CAS 15	775888.90	957399.30	18.17	MND LB 3110
CAS 16	774497.10	957397.80	15.87	MND LB 3300
CAS 17	774501.30	957782.00	15.61	IRC
CAS 18	774552.20	958074.90	15.51	MND LB 3110
CAS 19	774606.10	958441.30	15.28	MND LB 3110
CAS 20	774561.80	958808.40	17.00	MND LB 3110
CAS 21	774519.10	959104.40	16.28	MND MGI
CAS 22	776572.70	959398.20	19.44	MND LB 3110
CAS 23	776544.40	959010.50	19.09	MND LB 3110
CAS 24	776565.80	958710.00	19.53	MND LB 3110
CAS 25	776565.90	958376.20	17.63	MND LB 3110
CAS 26	776559.20	958015.80	18.58	MND LB 3110

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 27	776528.00	957721.80	17.88	MND LB 3110
CAS 28	776549.40	957384.90	17.56	MND LB 3110
CAS 29	776924.50	959004.50	19.82	MND LB 3110
CAS 30	776945.40	958679.10	17.87	MND HSQ GROUP LB 7924
CAS 31	777270.60	958693.70	16.57	MND LB 3110
CAS 32	777337.00	958344.10	16.62	MND LB 3110
CAS 33	777317.20	957665.90	15.34	MND LB 3110
CAS 34	777302.70	957361.80	16.98	MND LB 3110
CAS 35	777276.40	957016.90	18.06	MND LB 3110
CAS 36	777274.60	956697.80	14.87	MND LB 3110
CAS 37	776594.90	956724.70	14.98	MND LB 3110
CAS 38	776528.90	956705.40	15.01	MND LB 3110
CAS 39	776599.90	956377.10	14.57	MND LB 3110
CAS 40	776571.40	956060.40	14.07	MND LB 3110
CAS 41	776567.80	955738.40	13.89	MND LB 3110
CAS 42	776560.80	955492.30	13.13	MND LB 3110
CAS 43	776575.90	955216.00	13.19	MND LB 3110
CAS 44	776595.60	955026.00	13.66	PK
CAS 45	776590.70	954693.10	14.39	PK
CAS 46	775890.20	954719.30	15.38	MND LB 3110
CAS 47	775213.40	954714.50	16.81	MND LB 3110
CAS 48	775201.90	955074.20	17.86	MND LB 3110
CAS 49	775225.40	955408.80	17.22	MND LB 3110
CAS 50	775194.40	955752.70	15.74	MND LB 3110
CAS 51	774501.70	955773.30	16.24	MND LB 3110
CAS 52	774501.90	956064.80	15.66	PKD AVIROM ASSOC
CAS 53	774492.10	956453.40	17.62	MND LB 3110
CAS 54	774489.90	956793.40	15.22	MND LB 3300
CAS 55	774501.90	957116.90	15.71	MND LB 3110
CAS 56	775252.00	956090.90	16.46	MND LB 3110
CAS 57	775208.50	956432.20	15.22	MND LB 3110
CAS 58	775213.70	956727.30	14.64	MND LB 3110
CAS 59	775189.70	957055.60	15.57	MND LB 3110
CAS 60	777600.10	956084.40	14.32	MND LB 3110
CAS 61	777618.30	955187.90	14.68	MND LB 3110
CAS 62	777095.80	955235.80	11.72	MND LB 3110
CAS 63	777331.40	958034.80	16.48	MND LB 3110
CAS 64	775853.90	957047.70	16.05	MND LB 3110
CAS 65	776532.70	957042.60	16.87	PK
CAS 66	777417.40	957195.70	18.46	MND OSO LB 353
CAS 67	775886.40	956716.10	14.52	MND LB 3110
CAS 68	775910.20	956394.50	17.97	ND
CAS 69	775910.10	956394.60	17.93	ND
CAS 70	775906.10	956057.80	16.06	MND CAS
CAS 71	777140.20	956037.10	12.88	PK AVIROM
CAS 72	777146.50	955747.90	12.21	MND LB 3110
CAS 73	777117.20	955484.40	11.78	MND LB 3110
CAS 74	776848.40	955239.90	12.03	MND HSQ GROUP LB 7924
CAS 75	775914.10	955709.80	16.59	MND CAS
CAS 76	775880.40	955036.90	17.44	MND LB 3110
CAS 77	774724.00	955082.90	17.71	MND LB 3110
CAS 78	776609.30	954303.40	17.13	MND LB 3110
CAS 79	777292.00	954293.60	12.36	MND LB 3110
CAS 80	774713.20	955371.20	17.28	MND LB 3110
CAS 81	777445.60	956726.80	16.13	MND LB 3110
CAS 82	777089.30	954557.00	17.53	PKD
CAS 83	776839.10	954560.50	16.57	PKD
CAS 84	776588.80	954564.00	14.75	NAIL CONC
CAS 85	774903.80	954720.80	19.48	MND LB 3110
CAS 86	776160.80	954368.30	14.49	PK

PRIMARY CONTROL POINTS

CP	NORTHING	EASTING	ELEVATION	DESCRIPTION
CAS 1 (STATIC)	774626.90	959380.00	18.72'	MND LB 3110
CAS 2 (STATIC)	775917.08	959403.39	19.22'	MND LB 3110
FDOT C02	774589.66	957386.84	15.79'	FDOT BRASS DISK
PNC-BM M02	774507.52	958398.40	15.06'	FDOT BRASS DISK
PNC-BM C3	774556.99	959460.96	18.59'	FDOT BRASS DISK
BLC-4	775265.00	959479.79	17.99'	FDOT BRASS DISK
BLC-5	777371.16	959300.96	20.23'	FDOT BRASS DISK

7. ALL SYMBOLS ARE SHOWN FOR REPRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE.

8. FINISHED FLOOR AND ELEVATIONS SHOWN HEREON, IF ANY, WERE TAKEN AT THE DOORWAY THRESHOLD. NO SEARCH WAS PERFORMED FOR ANY LOWER "SUNKEN" FLOORS OR HIGHER RAISED FLOORS WITHIN ANY STRUCTURE.

16. THE ACCURACY OF THIS SURVEY IS PREMISED ON THE EXPECTED USE OF THE SURVEY. THE EXPECTED USE/PREMISE OF THIS SURVEY IS THE DESIGN OF NEIGHBORHOOD IMPROVEMENTS, WHICH MAY CONSIST OF IMPROVEMENTS TO OR ADDITIONS OF ROADWAYS, DRAINAGE, LIGHTING, ETC. TRIMBLE R2 AND R8 GNSS INSTRUMENTS WITH TRIMBLE TSC-3 DATA COLLECTION WERE UTILIZED TO ESTABLISH HORIZONTAL CONTROL AND LOCATE UTILITY SURFACE MARKS AND MISC. FEATURES HORIZONTALLY. A TOPCON ES-102 INSTRUMENT WITH RANGER (TDS) DATA COLLECTION WAS UTILIZED TO COLLECT DATA IN BOTH THE HORIZONTAL AND VERTICAL PLANES. CLOSED LEVEL LOOPS WERE PERFORMED USING TOPCON GTS 2 LEVELS TO TRANSFER ELEVATIONS FROM KNOWN BENCHMARKS AND THROUGHOUT THE PROJECT.

17. THE DIGITAL DATA PROVIDED IS INTENDED TO BE VIEWED AT A SCALE OF 1" = 20' OR SMALLER.

18. ALL DISTANCES AND ELEVATIONS SHOWN HEREON ARE IN ACCORD WITH THE UNITED STATES STANDARD USING FEET AND DECIMALS THEREOF.

SURVEYORS CERTIFICATE:

I HEREBY CERTIFY THAT THE SURVEY CONTAINED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND MEETS APPLICABLE SECTIONS OF THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO QUALIFICATIONS NOTED HEREON.

FOR THE FIRM BY: _____
ROBERT D. KEENER
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION NO. 4846

FIELD DATE: 06-04-20

SURVEY PREPARED BY:

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL
BOCA RATON, FLORIDA 33486
(561) 314-4445
CERTIFICATE NO. LB0003110

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PUBLIC WORKS
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
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CITY of DELRAY BEACH
COMMUNITY REDEVELOPMENT AGENCY
20 NORTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 276-8640 Fax: (561) 276-8558

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
M. REBECCA TRAVIS, P.E.
No. 40988

DESIGNED BY	JGH/SJP
DRAWN BY	AS/DP/HS
CHECKED BY	JW/MRT
DATE	12/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS
PHASE 2

SURVEY NOTES AND SITE BENCHMARKS

PROJECT NO. 2017-020

DRAWING NO. G-6

FILE ID. 210336_G06.dwg

Date\Time - Wed, 14 Feb 2024 - 3:25pm Current Plotstyle - ByColor Layout Tab: G-5
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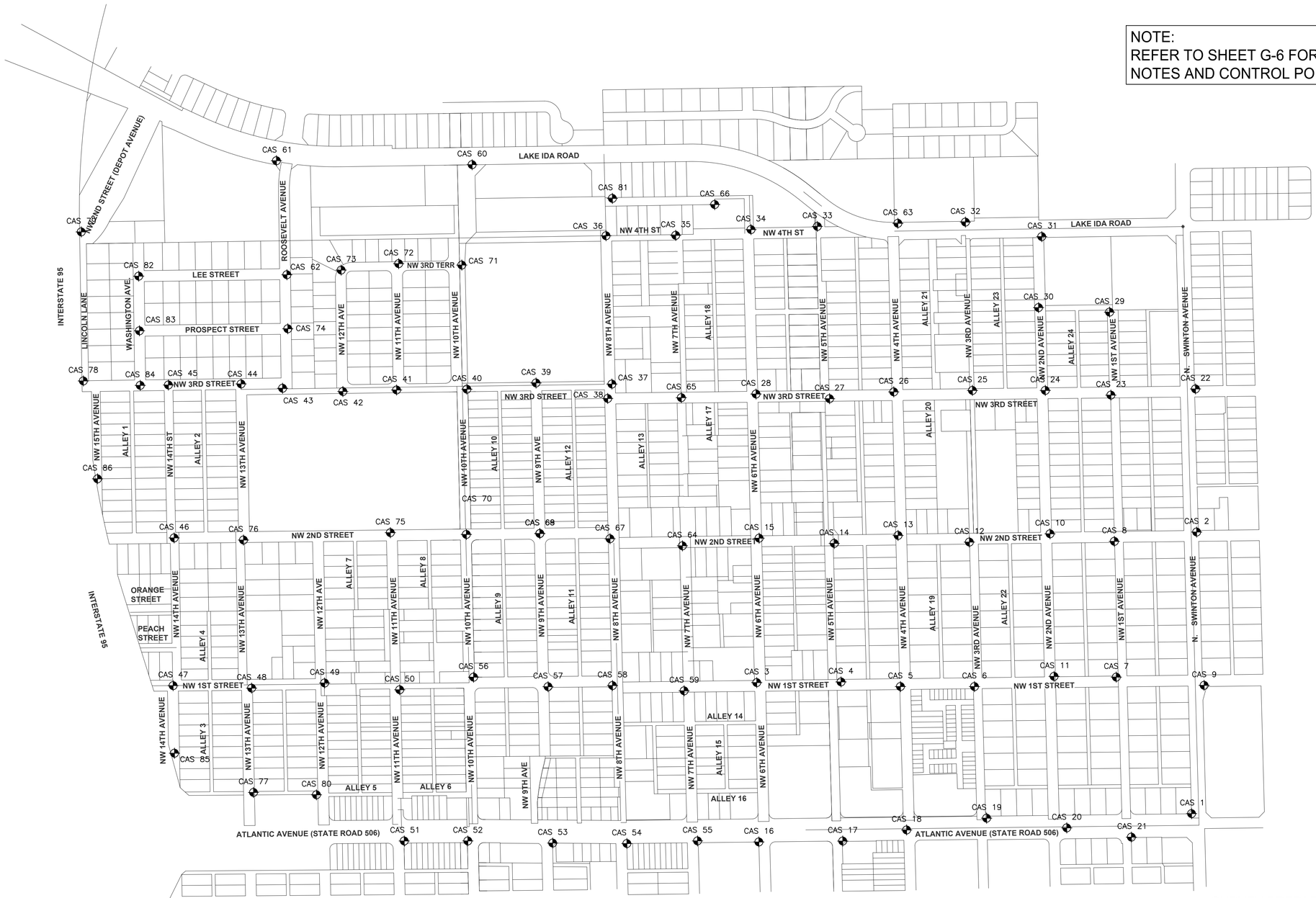
Acad Version - R24.1s (LMS Tech)
User Name - hstauffer

NOTE:
REFER TO SHEET G-6 FOR THE SURVEY NOTES AND CONTROL POINTS

NORTH

SCALE: 1"=250'



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DATE	12/2023

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 2

HORIZONTAL CONTROL PLAN

PROJECT NO. 2017-020

DRAWING NO. G-7

FILE ID. 210336_G07.dwg

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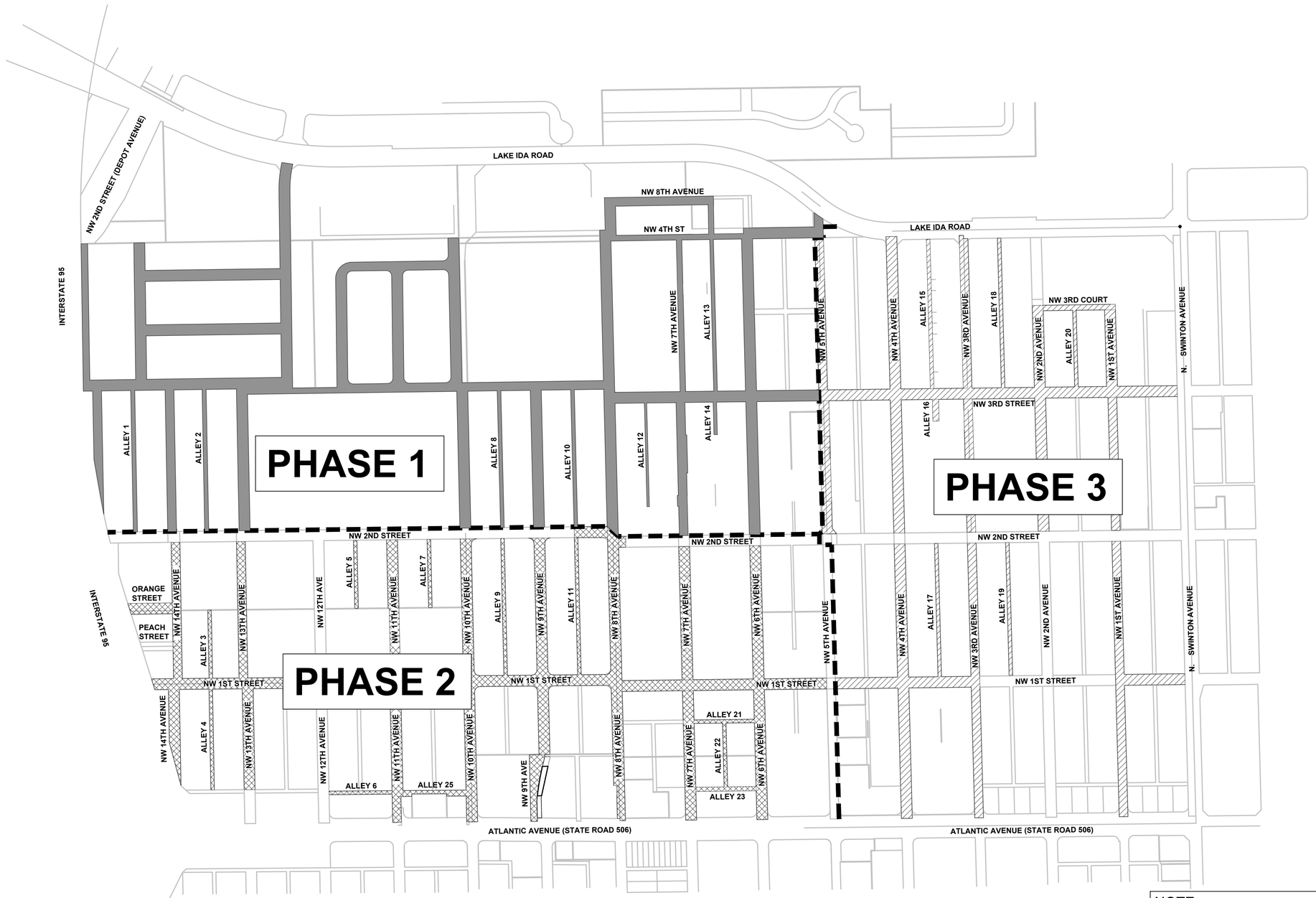

NOTE:
MINOR ADJUSTMENTS BY THE CONTRACTOR WILL BE CONSIDERED DURING SHOP DRAWINGS SUBMITTAL PERIOD FOR CONSTRUCTABILITY PURPOSES

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NORTHWEST NEIGHBORHOOD IMPROVEMENTS PHASE 2

PHASING PLAN

PROJECT NO. 2017-020

DRAWING NO. G-8

FILE ID. 210336_G08.dwg

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