

STORMWATER MANAGEMENT REPORT

for

Pierre Delray Site 2

Bonita Springs, Florida

Prepared for:

Zyscovich

Prepared by



BOHLER
E N G I N E E R I N G

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Table of Contents

| | |
|---|-----------|
| Executive Summary..... | Section 1 |
| Results & Conclusion..... | Section 2 |
| Location Map | Section 3 |
| Post-Development Drainage Calculations | Section 4 |
| - Land-use Breakdown, Soil-Storage, & Storm Water Runoff Calculations | |
| - Water-Quality Calculations | |
| - Stage-Storage Tabulation | |

Appendices:

| | |
|---|------------|
| SFWMD Rainfall Maps..... | Appendix A |
| FEMA Flood Insurance Map | Appendix B |
| Site Plan | Appendix C |
| ADS Storm Tech Underground Chamber Plans..... | Appendix D |
| Cascade Flood Routing..... | Appendix E |
| Basin Map | Appendix F |
| Basin Pre vs. Post Calculations..... | Appendix G |

Section 1

Executive Summary

Executive Summary

Site Description

The subject site is located on the southwest corner of East Atlantic Avenue and SE 3rd Avenue within the City of Delray Beach in Palm Beach County, Florida. The proposed site is approximately 0.43 acres in area. The project proposes to develop the site with a multi-use tenant building including a 3-story parking garage along with associated paver areas & landscaping. This site is currently doesn't have a South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP).

Existing Conditions & Hydrology

The existing site consists of a 0.43-acre parking lot to provide parking for the nearby SunTrust and other surrounding establishments. Currently, the existing site sheet flows storm runoff to an existing storm inlet located approximately 250 feet east of the site on East Atlantic Ave. The storm water enters the storm inlet then eventually discharges runoff into the Intracoastal Waterway east of the proposed site.

Proposed Conditions & Hydrology

The proposed development for the site includes a 15,808 sq.-ft. mixed-use building with a garage including accompanying drive isles, parking, and landscaping. The project site intends to propose a new underground storage chamber vaulted system to treat water quality and capture storm water runoff. The proposed underground storage vaulted system will capture the required water quality volume and the runoff difference in acre-feet of the pre vs. post 10-year 1-day storm event that the proposed project will generate. See table below for the calculations of required storage in the vaulted system.

Groundwater Elevation

The ground water table is approximately ten feet (10') below the existing ground surface. A water table elevation of 5.00' NAVD was used for calculations.

Floodplain

This site is located within FEMA Flood Map 12099C0979F and is in Flood Zone "X".

Vertical Datum

All elevations are based on North American Vertical Datum of 1988 (NAVD 88).

Methodology

The purpose of this report is to demonstrate that the proposed storm water management system is in substantial compliance with the regulations set forth by the City of Delray Beach, Palm Beach County, and South Florida Water Management District (SFWMD). The peak stage elevation and volume were calculated by comparing the design storm runoff to the stage-storage relationship for the site. A "glass wall" peak stage analysis was used to compute the 10-year/ 24-hour design storm volume. Based off the required volume and space allowed underground on the proposed site, StormTech was able to design a

60' x 20' x 4' underground storage system supplying 4,800 cubic feet of storage to supply the proposed site.

10-Year/24-Hour Post-Development Design Storm Peak Volume

| Design Storm | Rainfall Depth (In.) | Volume (Ac.-Ft.) |
|-------------------|-------------------------|---------------------|
| 10-Year / 24-Hour | 8.87 | 0.30 |

Storage Calculations for Underground Vault System

Post-Condition Runoff Volume: 0.30 Ac.-Ft

Pre-Condition Runoff Volume: 0.27 Ac.-Ft

Difference between post and pre-condition volume: **0.03 Ac.-Ft**

Water Quality storage required: **0.06 Ac.-Ft**

Water Quality storage provided: **0.09 Ac.-Ft**

Total storage volume required to be held onsite: 0.09 Ac.-Ft

Total storage volume being held onsite: 0.09 Ac.-Ft

100-Year 3-Day Flood Study

The proposed finish floor elevation (FFE) of the building is 15.52' NAVD, and because this is less than 18" above the adjacent crown of road along both frontages, a drainage investigation must be performed to show the proposed FFE (15.52') is above the 100-year 3-day peak stage elevation. In order to conduct this investigation, a stormwater map was created using lidar elevation points for areas surrounding our project area. See appendix F for basin map. The basin area is approximately 9.74 acres consisting of 3.54 acres of building area, 5.66 acres of impervious area, and 0.54 acres of pervious area.

A stage-storage analysis was created to compare the 100-year 3-day storm peak stage elevation to the proposed FFE of the building. For the FFE to be less than 18" above the adjacent crown of road along both frontages and be accepted, the FFE must be above the 100-year 3-day storm event. After running calculations for the pre-conditions, it was determined the existing peak stage was 15.28' NAVD. With the proposed building being accounted for the post-conditions, it was determined the proposed peak stage elevation was 15.27' NAVD. See appendix G for calculations.

In an event the 100-year 3-day storm occurs, water will stage up within the basin, then escape through lower elevation areas of the basin boundary before the building on our project site location can be subject to flooding. After investigation of the 100-year 3-day storm event, it was confirmed the building FFE (15.52'NAVD) is above the 100-year storm peak stage.

Section 2

Results & Conclusion

Results & Conclusion

The project shows conformance to City of Delray Beach, Palm Beach County, and South Florida Water Management District (SFWMD) criteria as seen in the post-development calculations. The site provides the water quality requirements and will retain the difference of the 10-year 1-day storm volume on site within the proposed underground storage chamber. Water quality is met through the proposed underground storage chamber before discharging off site. The required water quality storage is 0.06 acre-feet which the proposed project is providing 0.09 acre-feet with the weir elevation being at 15.34'. The weir elevation is at 15.34' to capture the water quality volume and the difference of the post vs. pre 10-year 1-day storm event. The runoff that occurs in post condition is being diverted to the same drainage system as the pre-condition on W. Atlantic Ave. The proposed finished floor elevation (15.52') is below the 9.74-acre basin post 100-year 3 day storm elevation (15.27'). Lastly, with the difference of the 10-year 1-day storm event being captured in the proposed underground storage chamber and routed to the same drainage system as pre-condition, the proposed development will not negatively impact the existing site and infrastructure.

| Pre vs. Post 10-Yr 24-Hr Storm | | |
|---------------------------------------|-----------------------|--------------|
| | Volume (Ac-Ft) | Stage |
| Pre | 0.27 | 16.58 |
| Post | 0.30 | 15.13 |

| Basin Pre vs. Post 100-Yr 72-Hr Storm | | | |
|--|------------|-------------|------------------|
| | Pre | Post | Prop. FFE |
| Stage (Ft) | 15.28 | 15.27 | 15.52 |

| Water Quality (WQ) Requirements | | | |
|--|----------------------------------|-------------------------|----------------------------------|
| Required (Ac-FT) | Stage at Required WQ (Ft) | Provided (Ac-FT) | Stage at Provided WQ (Ft) |
| 0.06 | 14.00 | 0.09 | 15.34 |

Section 3

Location Map



Section 4

Post-Development Drainage Calculations



Storm Water Management Calculations - Onsite

| SITE DATA | | |
|--|---|--------------|
| Total Site Area (A_T)= | 0.43 Acres | 100% |
| Total Building Area (A_B)= | 0.36 Acres | 84% |
| Total Canopy Area (A_C)= | 0.00 Acres | 0% |
| Total Pavement/Sidewalk Area = | 0.05 Acres | 12% |
| Total Landscape Area (A_P)= | 0.02 Acres | 5% |
| SOIL STORAGE CALCULATIONS | | |
| Average Pervious Elevation = | 16.7 Ft. +/- NAVD | |
| Seasonal High Water Table = | 5.00 Ft. NAVD | |
| Depth to water table= | 11.70 Ft. | |
| Soil Storage Type | Coastal | |
| From SFWMD Manual for to W.T. (Comp S) = | 8.18 In. | |
| Compute overall soilstorage for site.= | 0.37 In. | |
| | $S = (\text{Comp S}) \times [A_P / A_T];$ | |
| Compute CN value for site= | 96 | |
| | $CN = 1000 / (S + 10)$ | |
| COMPUTE 100-Year, 72-Hour Runoff Volume for Proposed Site | | |
| Rainfall (P_{100-72}), | 18.40 In. | |
| $Q_{100-72} = (P_{100-72} - 0.2S^2) / (P_{100-72} + 0.8S) =$ | 17.96 In. | |
| Compute volume generated by storm | | |
| | $V = (P_{100-72} / 12) \times A_T =$ | 0.65 Ac.-Ft. |
| COMPUTE 25-Year, 72-Hour Runoff Volume for Proposed Site | | |
| Rainfall (P_{25-72}), | 13.40 In. | |
| $Q_{25-72} = (P_{25-72} - 0.2S^2) / (P_{25-72} + 0.8S) =$ | 12.96 In. | |
| Compute volume generated by storm | | |
| | $V = (P_{25-72} / 12) \times A_T =$ | 0.47 Ac.-Ft. |
| COMPUTE 10-Year, 24-Day Runoff Volume for Proposed Site | | |
| Rainfall (P_{10-24}), | 8.87 In. | |
| $Q_{10-24} = (P_{10-24} - 0.2S^2) / (P_{10-24} + 0.8S) =$ | 8.44 In. | |
| Compute volume generated by storm | | |
| | $V = (P_{10-24} / 12) \times A_T =$ | 0.31 Ac.-Ft. |
| DESIGN CRITERIA | | |
| Broward County 100-Year Flood Elevation | 6.50 Ft. NAVD | |



Water Quality Calculations - Onsite

SITE DATA

| | | |
|---|------------|--------|
| Total Site Area (A_T)= | 0.43 Acres | (100%) |
| Total Building/Canopy (A_B)= | 0.36 Acres | (84%) |
| Total Pavement/Sidewalk + Building (A_L)= | 0.05 Acres | (12%) |
| Total Green (A_P)= | 0.02 Acres | (5%) |

Compute Water Quality Requirements

-Compute first inch of runoff over entire site

$$\begin{aligned} WQ_1 &= 1 \text{ Inch} \times A_T \times (1 \text{ Ft.}/12 \text{ In.}) \\ &= 1/12 \times 0.43 \text{ Acres} \\ &= 0.04 \text{ Ac.-Ft.} \quad \text{or} = 0.43 \text{ Ac.-In.} \end{aligned}$$

-Compute 2.5" x % of Imperviousness

A) Calculate site area for W.Q. Imperviousness

$$\begin{aligned} A_S &= A_T - (A_B + A_L) \\ &= 0.43 - (0.36 + 0) \\ &= 0.07 \text{ Acres} \end{aligned}$$

B) Calculate Imperviousness Area for W.Q.

$$\begin{aligned} A_{IMP} &= A_S - A_P \\ &= 0.07 - 0.02 \\ &= 0.05 \text{ Acres} \end{aligned}$$

C) Calculate percent imperviousness

$$\begin{aligned} \%_{IMP} &= (A_{IMP} / A_S) \times 100 \\ &= (0.05 / 0.07) \times 100 \\ &= 71\% \end{aligned}$$

D) Calculate 2.5 inches times the percent imperviousness

$$\begin{aligned} V_{2.5} &= 2.5 \text{ in.} \times \%_{IMP} \\ &= 2.5 \text{ in.} \times 0.71 \\ &= 1.78 \text{ in.} \end{aligned}$$

E) Calculate W.Q. volume required

$$\begin{aligned} WQ_{2.5} &= V_{2.5} \times (A_T - A_L) \\ &= 1.78 \times (0.43 - 0) \\ &= 0.06 \text{ Ac.-Ft.} \quad \text{or} = 0.72 \text{ Ac.-In.} \end{aligned}$$

-Determine W.Q. required for site

$$WQ = 0.06 \text{ Ac.-Ft.} \quad \text{or} = 0.72 \text{ Ac.-In.}$$

Since the 0.72 ac-in is greater than the 0.48 ac-in computed for 2.5 Inches times percent imperviousness the volume of 0.72 ac-in controls.



Date: 11/21/2019
 Project: Pierre Delray Phase 2
 Project No: FLB190004

Calculated By: LJL
 Checked By: ARS

Post Stage-Storage Computations Onsite

| Basin | Landscape (Site) | Parking/Drive Isles | Hardscape | Building | UG Vaults | Total Area (Ac.) |
|--------------|------------------|---------------------|-----------------|-----------------|-----------------|-----------------------|
| Land Type | Pervious | Impervious | Impervious | Impervious | | |
| Area (Acres) | 0.02 | 0.05 | 0.00 | 0.36 | | 0.43 |
| Storage Type | Sloped | Sloped | Sloped | Flat | | |
| Start (Ft.) | 15.52 | 15.52 | 0.00 | 15.52 | | |
| End (Ft.) | 16.70 | 15.52 | 0.00 | 15.52 | | |
| Stage (Ft.) | Storage (Ac-Ft) | Storage (Ac-Ft) | Storage (Ac-Ft) | Storage (Ac-Ft) | Storage (Ac-Ft) | Total Storage (Ac-Ft) |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.04 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.06 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.07 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.08 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.09 |
| 16.00 | 0.00 | 0.02 | 0.00 | 0.17 | 0.09 | 0.29 |
| 16.50 | 0.01 | 0.05 | 0.00 | 0.36 | 0.09 | 0.50 |
| 17.00 | 0.02 | 0.08 | 0.00 | 0.54 | 0.09 | 0.72 |
| 17.50 | 0.03 | 0.10 | 0.00 | 0.72 | 0.09 | 0.94 |
| 18.00 | 0.04 | 0.13 | 0.00 | 0.90 | 0.09 | 1.15 |

| 10-Year, 24-Hour | |
|-------------------------------------|-------------------|
| Stage (Ft., NAVD) | Storage (Ac.-Ft.) |
| Volume Generated By Storm (Ac.-Ft.) | 0.31 |

Appendix A

SFWMD Rainfall Map

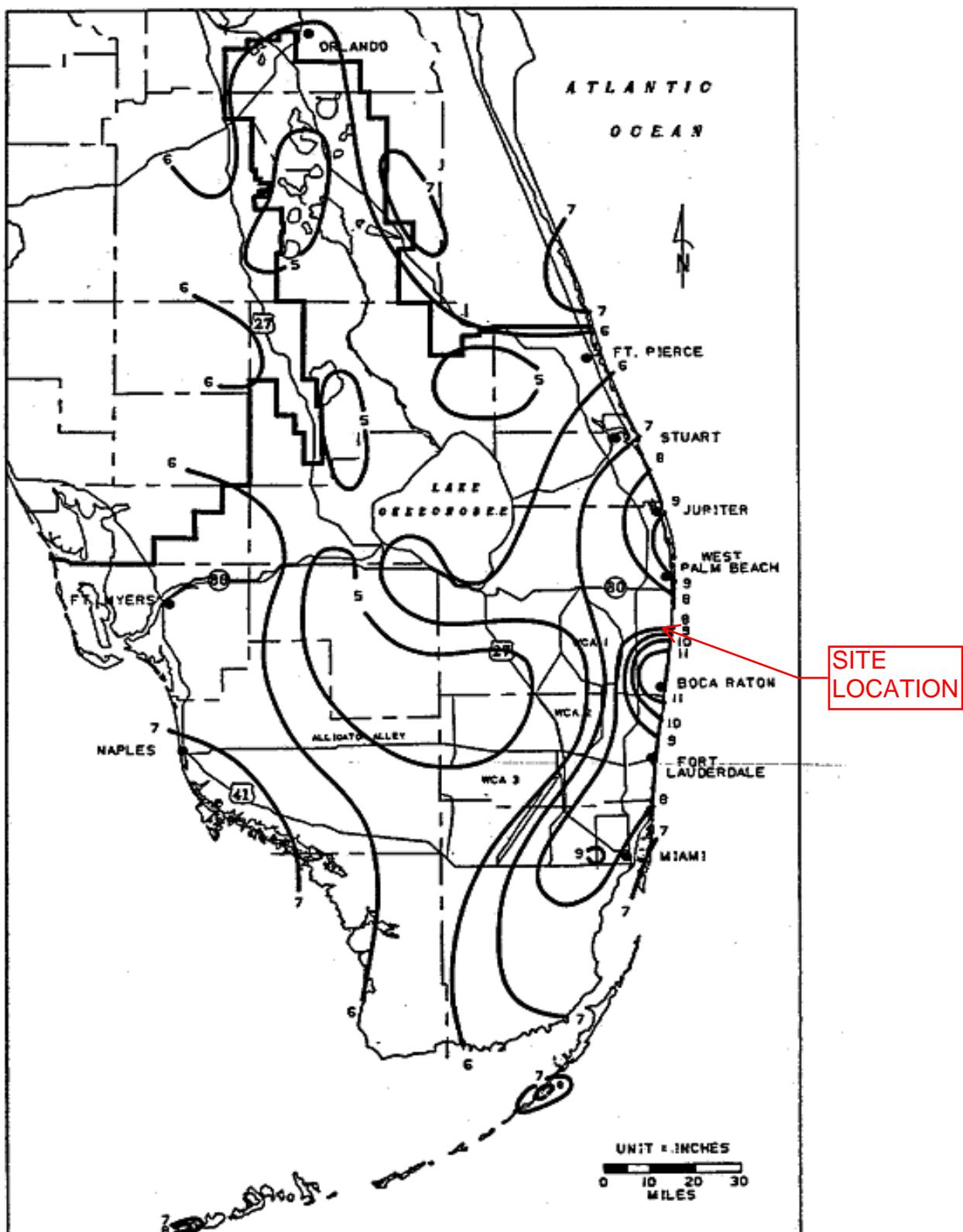


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

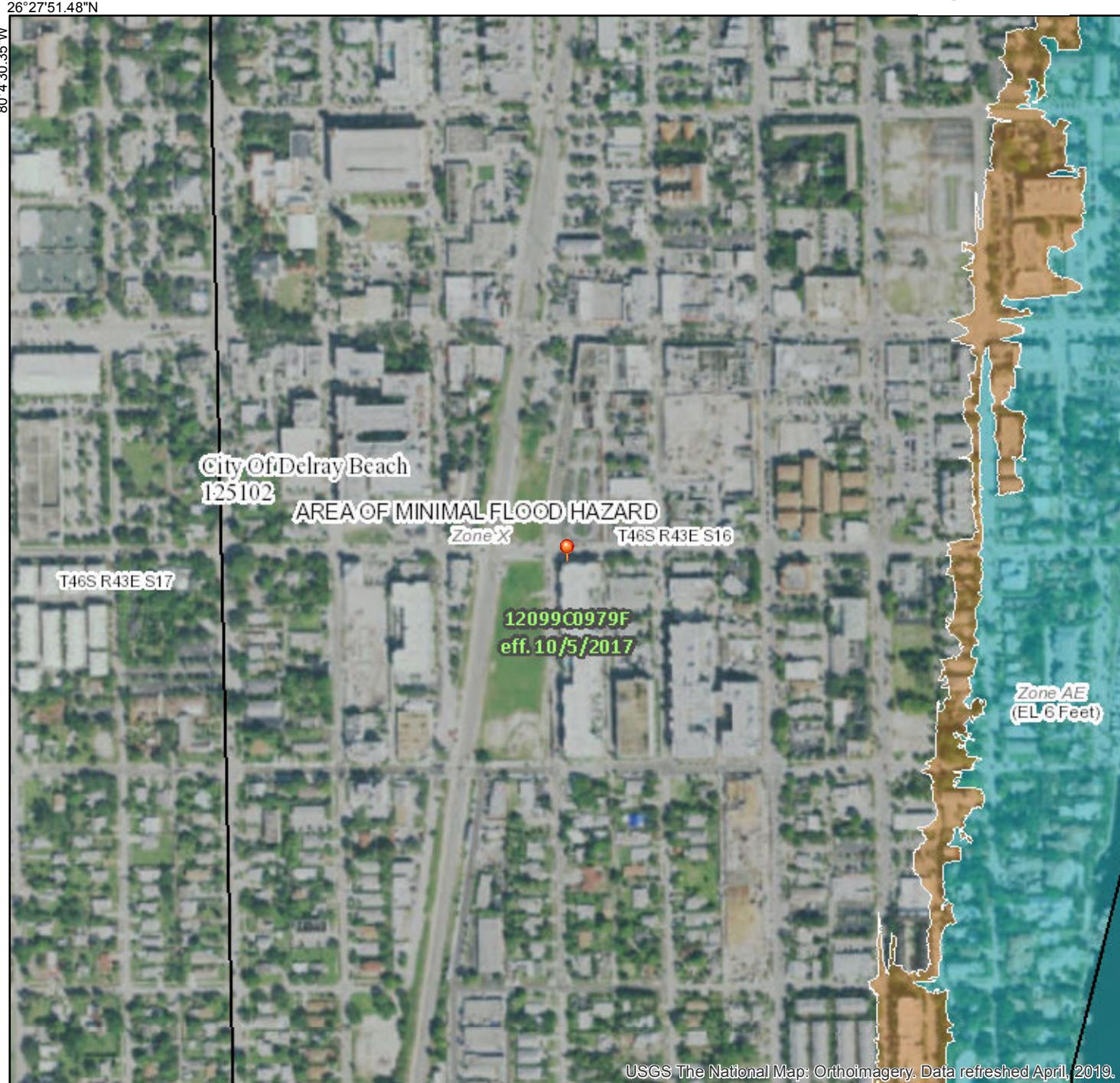
Appendix B

FEMA Flood Insurance Map

National Flood Hazard Layer FIRMette



FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- ||||| Levee, Dike, or Floodwall

- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation

- Coastal Transect
- ~~~ 513 ~~~ Base Flood Elevation Line (BFE)

- Limit of Study
- Jurisdiction Boundary

- Coastal Transect Baseline
- Profile Baseline

- Hydrographic Feature

- Digital Data Available

- No Digital Data Available

- Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

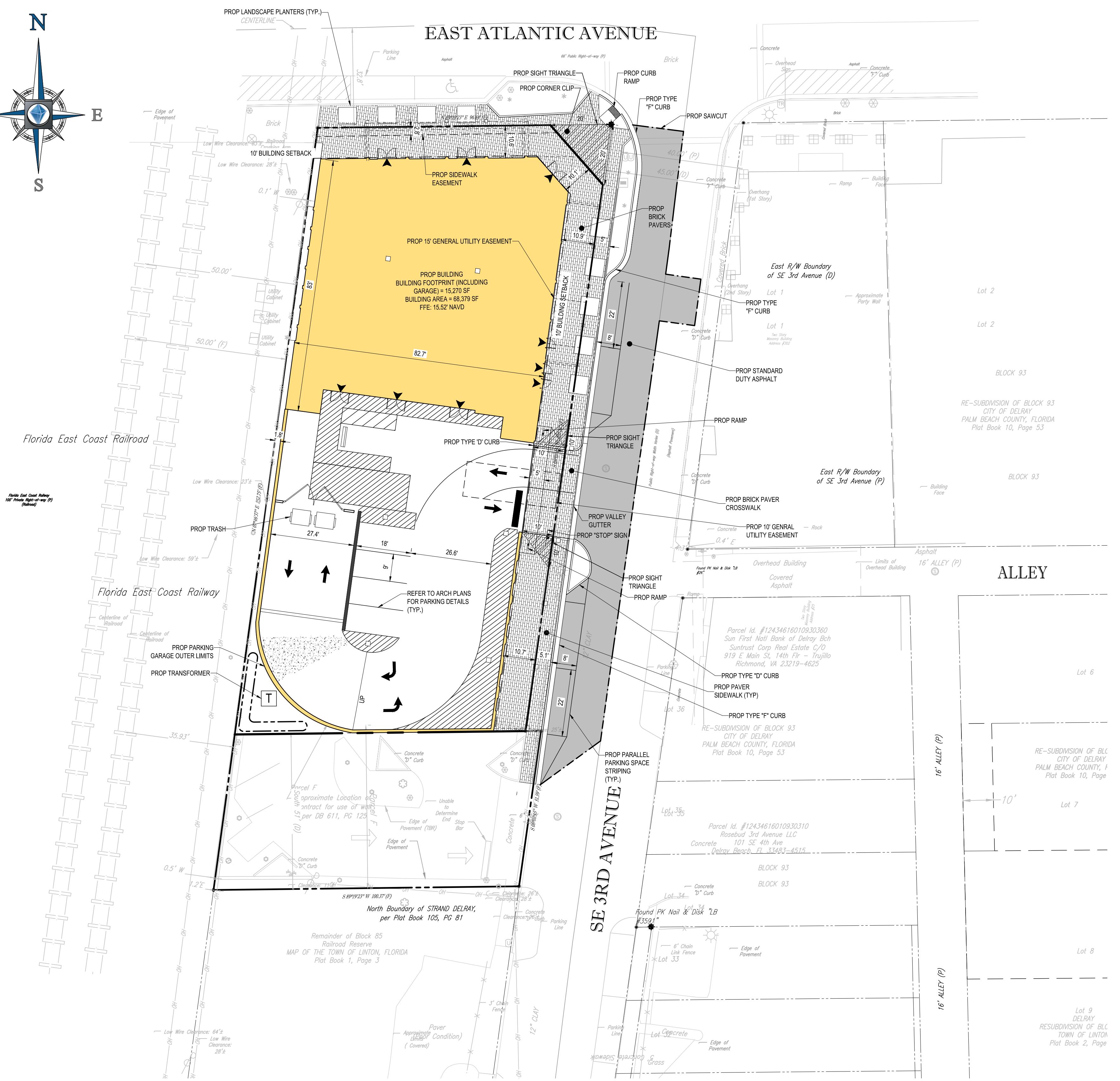
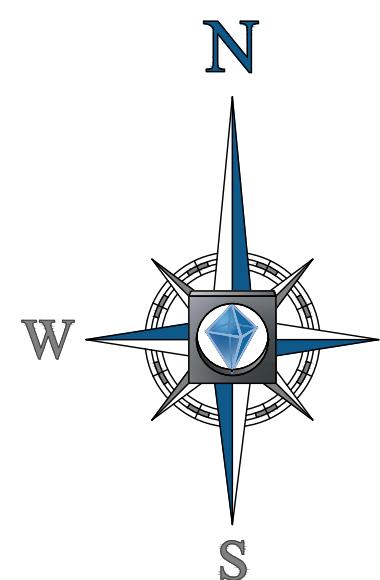
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/16/2019 at 8:58:00 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix C

Site Plan

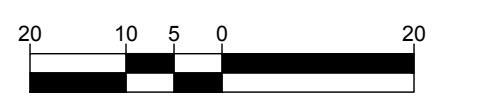


ADA ACCESSIBILITY NOTES:

- ALL HANDICAPPED PARKING SPACES AND ACCESS AISLES ADJACENT TO THE SIDEWALKS SHALL HAVE A MAXIMUM OF 2% SLOPE IN ALL DIRECTIONS (THIS INCLUDES RUNNING SLOPE AND CROSS SLOPE).
- SLOPES EXCEEDING 5% BUT LESS THAN 8% WILL REQUIRE A RAMP AND MUST CONFORM TO THE REQUIREMENTS FOR RAMP DESIGN (HANDRAILS, CURBS, LANDINGS). NO RAMP SHALL EXCEED AN 8% RUNNING SLOPE OR 2% CROSS SLOPE.
- IN THE CASE THAT A NEW SIDEWALK WILL BE CONSTRUCTED IN THE RW OF A SIDEWALK, THE NEW SIDEWALK SHALL BE STAKED OUT SO THAT THE CROSS SLOPE SHALL NOT EXCEED 2%. THIS STANDARD APPLIES TO CROSS WALKS IN THE DRIVEWAY AS WELL AND WILL REQUIRE SPECIAL ATTENTION DURING STAKING TO MAKE SURE THE 2% CROSS SLOPE IS MET IN THE CROSS WALK.
- IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THE HANDICAPPED PARKING SPACES, ACCESSIBLE ROUTES, AND SIDEWALKS/CROSSWALKS ARE CONSTRUCTED TO MEET ADA REQUIREMENTS.
- ANY REQUIREMENTS LISTED ABOVE THAT CAN NOT BE MET SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY. ANYTHING NOT BUILT TO THE ABOVE STANDARDS WILL REQUIRE REMOVAL AND REPLACEMENT OF THE NON COMPLIANT AREAS AT THE GENERAL CONTRACTOR'S COST.
- ALL CONSTRUCTION TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE FLORIDA ACCESSIBILITY CODE.

ELEVATIONS

| | |
|-------------------------------|--------|
| AVERAGE MEAN CROWN | 15.65 |
| 18" + AVERAGE MEAN CROWN | 17.15" |
| BASE BUILDING ELEVATION (BBE) | 17.15" |
| MAX BUILDING HEIGHT ELEVATION | 55.15" |



LEGEND:

| |
|----------------------------|
| EX LEASE LINE |
| EX ADJACENT BOUNDARY LINES |
| EX EASEMENT LINES |
| PROP BUILDING SETBACK |
| PROP TYPE "F" CURB |
| PROP TYPE "D" CURB |
| PROP STANDARD ASPHALT |
| PROP CONCRETE |
| PROP BRICK PAVERS |
| PROP SITE TRIANGLE |

| SITE DATA TABLE | | |
|-----------------------------|--|--|
| JURISDICTION | CITY OF DELRAY BEACH | |
| OVERLAY DISTRICT | CENTRAL BUSINESS DISTRICT (CBD) | |
| FUTURE LAND USE | COMMUNITY FACILITIES (CF) | |
| PROPOSED FUTURE LAND USE | COMMERCIAL CORE (CC) | |
| SITE AREA | 18,880 SF (0.43 AC) | |
| BUILDING AREA | <p>LEVEL 1: GROSS BUILDING AREA UNDER A/C: 6,189 SF PARKING: 3,479 SF PAVED: 3,013 SF SHAFT: 611 SF</p> <p>LEVEL 2: GROSS BUILDING AREA UNDER A/C: 7,571 SF PARKING: 3,524 SF PAVED: 612 SF SHAFT: 612 SF</p> <p>LEVEL 3: GROSS BUILDING AREA UNDER A/C: 6,266 SF PARKING: 9,353 SF PAVED: 612 SF SHAFT: 521 SF</p> <p>TOTAL: 68,379 SF</p> | |
| CURRENT ZONING | COMMUNITY FACILITIES (CF) | |
| PROPOSED USE | CENTRAL BUSINESS DISTRICT (CBD) | |
| MAX ALLOWED BUILDING HEIGHT | 38' (3 STORIES) | |
| PROVIDED BUILDING HEIGHT | 48' | |
| FRONT SETBACK | 10' MIN 15' MAX | |
| SIDE SETBACK | 0' | |
| REAR SETBACK | 10' | |
| REQUIRED PARKING | <p>LEVEL 1: RETAIL: 10.58 SPACES (1 SPACE/500 SF) LEVEL 2: OFFICE: 13.06 SPACES (1 SPACE/500 SF) LEVEL 3: OFFICE: 10.51 SPACES (1 SPACE/500 SF)</p> <p>TOTAL: 34.15 SPACES REQUIRED</p> | |
| PROVIDED PARKING | <p>LEVEL 1: 4 FULL PARKING SPACES 1 ADA PARKING SPACE</p> <p>LEVEL 2: 7 COMPACT PARKING SPACES 4 FULL PARKING SPACES 2 ADA PARKING SPACES</p> <p>LEVEL 3: 7 COMPACT PARKING SPACES 4 FULL PARKING SPACES 2 ADA PARKING SPACES</p> <p>TOTAL: 62 SPACES PROVIDED</p> | |
| REQUIRED BICYCLE PARKING | <p>PROFESSIONAL OFFICE: 7.47 SPACES (1 SPACE/2,000 SF)</p> <p>RETAIL/RESTAURANT/COMMERCIAL: 6.76 SPACES (1 SPACE/1,000 SF)</p> | |
| PROVIDED BICYCLE PARKING | 20 SPACES | |
| LOT COVERAGE | <p>CIVIC SPACES: 0 SF (0%) (OPEN) LANDSCAPE AREA: 597 SF (3.16%) TOTAL FLOOR AREA: 6,800 SF (36.07%) PARKING & PAVED AREA: 11,483 SF (60.82%) GROUND FLOOR AREA: 15,270 SF (80.88%) TOTAL LOT AREA: 18,880.02 SF (100%)</p> | |
| FEMA FLOOD ZONE | FLOOD ZONE: X | |

SITE NOTES:

- ALL DIMENSIONS SHOWN ARE SHOWN AT FACE OF CURB, UNLESS OTHERWISE NOTED. B/C INDICATES DIMENSION IS TO BACK OF CURB. NAVD - NOV 1.5'
- ALL SIGNS SHALL BE REVIEWED AND PERMITTED SEPARATELY.
- THE PROPERTY OWNED HEREON APPEARS TO LIE IN FLOOD ZONE "X" ACCORDING TO THE FLOOD INSURANCE RATE MAP, PANEL NUMBER 12099C0979F, OCTOBER 5, 2017, FOR PALM BEACH COUNTY, FLORIDA.
- ALL PARKING SPACES, EXCEPT MARKING STALLS, SHALL BE "ALKYD THERMOPLASTIC 90 MIL IN THICKNESS".
- SOD TO BE INSTALLED AT THE BACK OF ALL CURBS, PAVEMENT EDGES, SWALES AND DETENTION AREAS ON ALL AREAS SOUTH OF THE MAIN BUILDING AND HANGARS.
- IN THE EVENT THE PROJECT IS TERMINATED PRIOR TO CONSTRUCTION COMPLETION, THE PROJECT SHALL BE BROUGHT TO GRADE, SEEDED AND ALL DEBRIS AND MATERIALS SHALL BE HAULED OFF-SITE AND DUMPED AT A STATE OF FLORIDA APPROVED FACILITY.
- CONTRACTOR SHALL BE RESPONSIBLE THAT ALL ACCESSIBLE ROUTES MEET THE FLORIDA ACCESSIBILITY CODE PRIOR TO INSTALLING FINAL PAVEMENT AND CONCRETE.
- CONSTRUCTION PLAN APPROVAL DOES NOT EXEMPT THE CONTRACTOR FROM OBTAINING THE REQUIRED BUILDING, ELECTRICAL, PLUMBING AND MECHANICAL PERMITS. THESE INCLUDE BUT ARE NOT LIMITED TO ANY STRUCTURE, SIGN, WALL, ENCLOSURE OR SCREENING, ETC.
- ALL SIGNS WILL BE REVIEWED UNDER A SEPARATE PERMIT.
- ALL CONSTRUCTION AND RESTORATION WORK WITHIN BROWARD COUNTY RIGHT OF WAY SHALL COMPLY WITH THE LATEST EDITION OF THE DESIGN STANDARDS AND THE FDOT DESIGN STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION.
- ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER, OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS, LD 1.1 & LD 1.2.

BOHLER
ENGINEERING
LAND SURVEYING
CONSULTING ENGINEERING
SUSTAINABLE DESIGN
PROGRAM MANAGEMENT
TRANSPORTATION SERVICES

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| REV | DATE | COMMENT | DRAWN BY | CHECKED BY |
|-----|------|---------|----------|------------|
| | | | | |



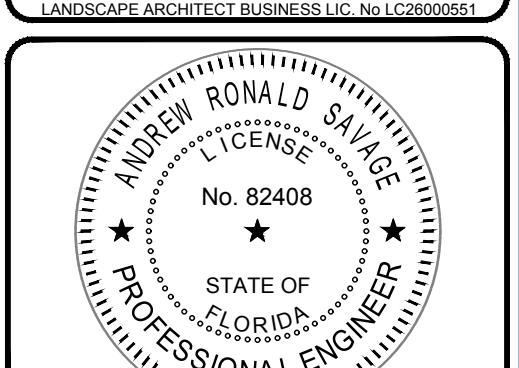
ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.: FLB190004
DRAWN BY: L JL
CHECKED BY: AS
DATE: 03/16/2020
CAD I.D.: FLB190004-SSP-0

PROJECT:
PIERRE DELRAY PHASE 2 - SPRAB SITE PLAN PACKAGE (AKA NEW MXU BUILDING)

PROPOSED DEVELOPMENT
SWC SE 3RD AVE. & ATLANTIC AVE.
PALM BEACH COUNTY
DELRAY BEACH, FL

BOHLER
ENGINEERING
2256 GLADES ROAD, SUITE 305E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-0280
Fax: (561) 571-0281
FLORIDA BUSINESS CERT. OF AUTH. No. 30780
LANDSCAPE ARCHITECT BUSINESS LIC. NO. L2600591



SHEET TITLE:
SITE PLAN
SHEET NUMBER:
C-301
REVISION 0 - 03/16/2020

Appendix D

ADS StormTech Underground Chamber Plan

| PROJECT INFORMATION | |
|----------------------------|---|
| ENGINEERED PRODUCT MANAGER | EPM NAME EPM NUMBER EPM EMAIL |
| ADS SALES REP | SALES NAME SALES NUMBER SALES EMAIL |
| PROJECT NO. | |



ADVANCED DRAINAGE SYSTEMS, INC.

PIERRE DELRAY SITE 2 DELRAY BEACH, FL

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SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPAKTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT

48 STORMTECH SC-740 CHAMBERS
 10 STORMTECH SC-740 END CAPS
 6 STONE ABOVE (in)
 6 STONE BELOW (in)
 40 % STONE VOID
 INSTALLED SYSTEM VOLUME (CF)
 (PERIMETER STONE INCLUDED)
 (COVER STONE INCLUDED)
 (BASE STONE INCLUDED)
 1934 SYSTEM AREA (SF)
 209.10 SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
 MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
 MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
 MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):
 MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
 TOP OF STONE:
 TOP OF SC-740 CHAMBER:
 12" x 12" TOP MANIFOLD INVERT:
 12" BOTTOM CONNECTION INVERT:
 24" ISOLATOR ROW INVERT:
 BOTTOM OF SC-740 CHAMBER:
 UNDERDRAIN INVERT:
 BOTTOM OF STONE:

22.02
 16.02
 15.52
 15.52
 15.52
 14.52
 14.02
 12.56
 11.62
 11.53
 11.52
 11.02
 11.02

| *INVERT ABOVE BASE OF CHAMBER | | | | |
|-------------------------------|----------------|--|---------|-------------|
| PART TYPE | ITEM ON LAYOUT | DESCRIPTION | INVERT* | MAX FLOW |
| PREFABRICATED END CAP | A | 24" BOTTOM PREFABRICATED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR ROWS | 0.10" | |
| MANIFOLD | B | 12" X 12" TOP, ADS N-12 | 12.50" | |
| PIPE CONNECTION | C | 12" BOTTOM CONNECTION | 1.20" | |
| NYLOPLAST (INLET W/ ISO ROW) | D | 30" DIAMETER (24" SUMP MIN) | | 5.7 CFS IN |
| NYLOPLAST (OUTLET) | E | 30" DIAMETER (DESIGN BY ENGINEER) | | 2.0 CFS OUT |
| UNDERDRAIN | F | 6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN | | |

PIERRE DELRAY SITE 2
 DELRAY BEACH, FL

DATE: LL
 PROJECT #: N/A
 CHECKED: N/A

REV DRW CHK DESCRIPTION

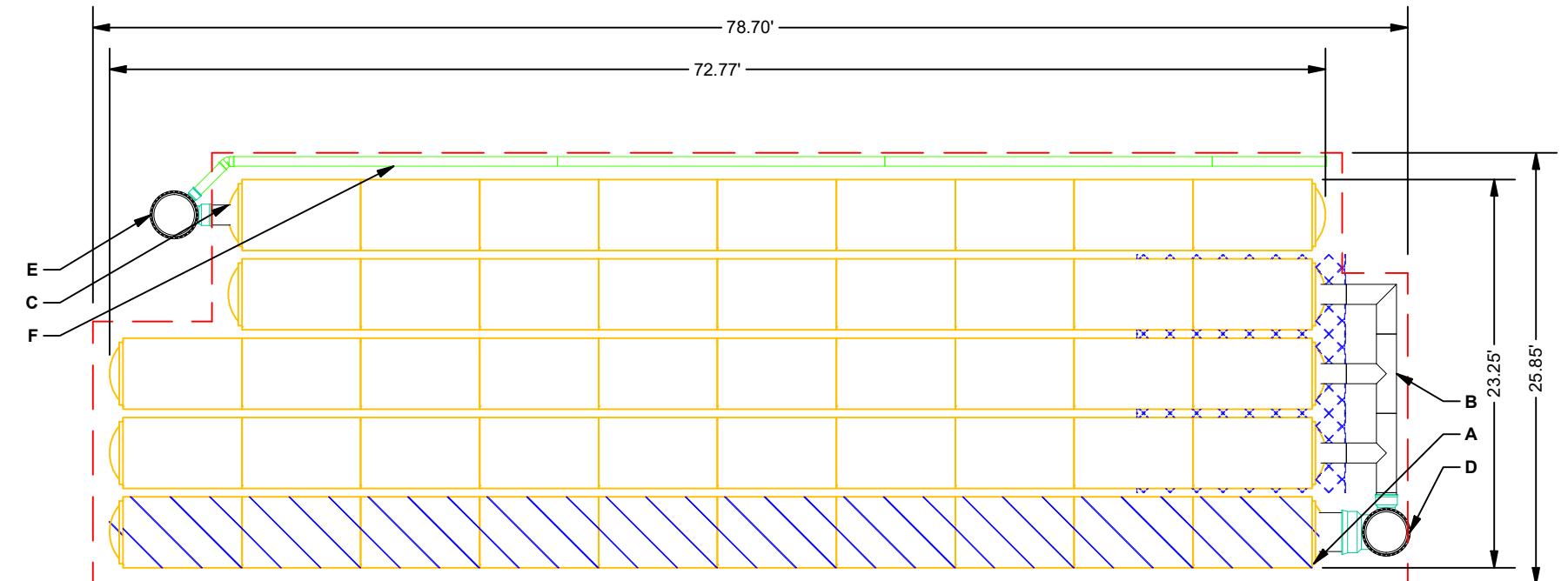
StormTech
 Detention, Retention, Water Quality
 70 INWOOD ROAD, SUITE 3 | ROCKY HILL, CT 06067
 860-528-8188 | 888-392-2654 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
 HILLIARD, OH 43026
 1-800-733-7473

ADS
 ADVANCED DRAINAGE SYSTEMS, INC.
 0' 10' 20'

SHEET

2 OF 6



NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE.
- DUUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE IN SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- NOT FOR CONSTRUCTION



ISOLATOR ROW
 (SEE DETAIL)



PLACE MINIMUM 12.50' OF ADS GEOSYNTHETICS 315WTK WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS



BED LIMITS

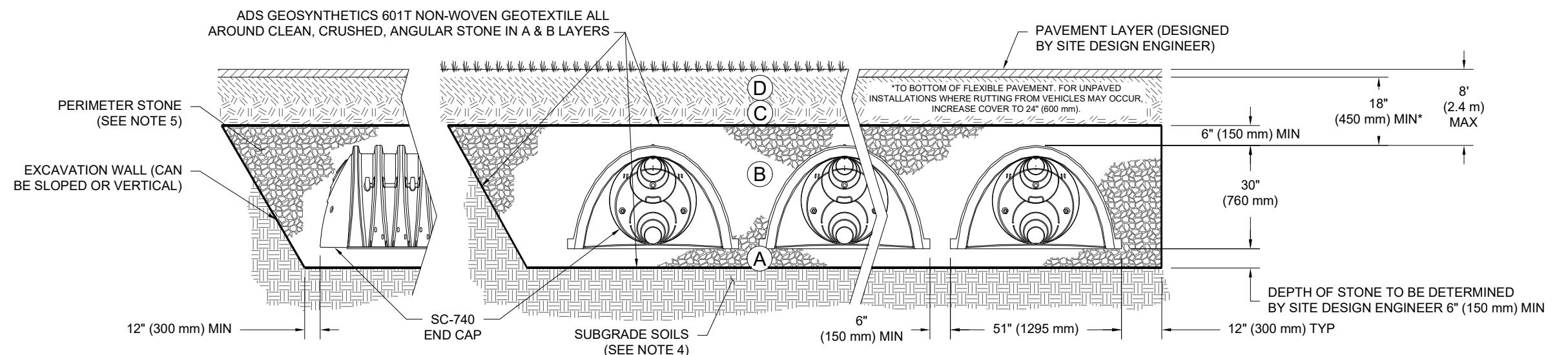
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ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

| MATERIAL LOCATION | | DESCRIPTION | AASHTO MATERIAL CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|-------------------|--|---|--|---|
| D | | FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. | ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. | N/A |
| C | | INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 |
| B | | EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | CLEAN, CRUSHED, ANGULAR STONE | AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57 |
| A | | FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | CLEAN, CRUSHED, ANGULAR STONE | AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57 |

PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

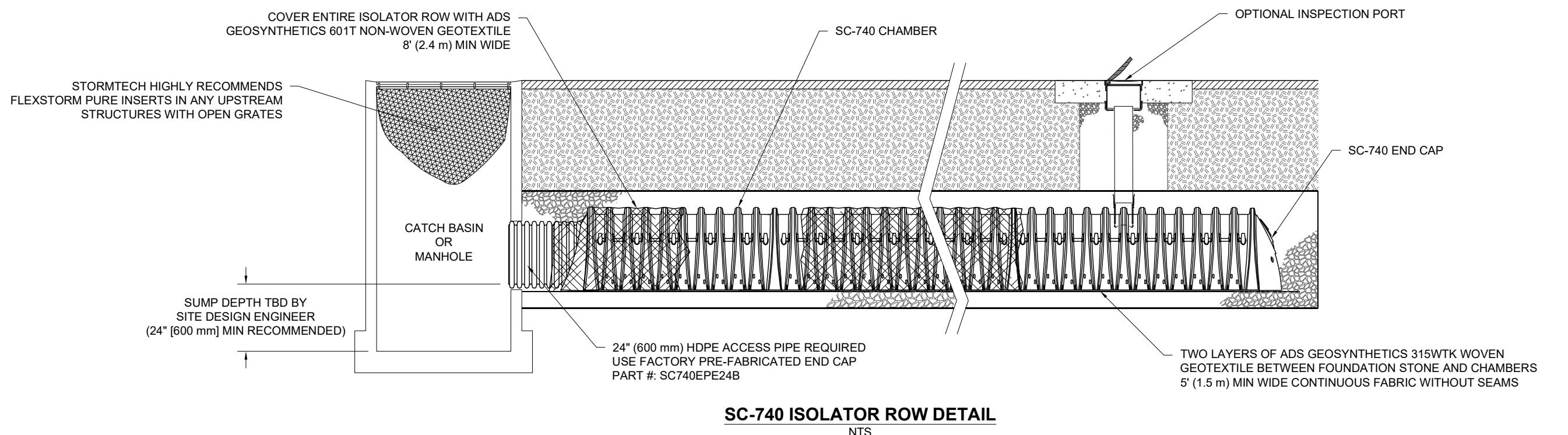
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2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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| PIERRE DELRAY SITE 2 DELRAY BEACH, FL | | | |
| DATE: | DRAWN: LL | | |
| PROJECT #: | CHECKED: N/A | | |
| REV | DRW | CHK | DESCRIPTION |
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StormTech
Retention-Runoff-Water Quality
70 INWOOD ROAD, SUITE 3 | ROCKY HILL, CT 06067
860-528-8188 | 888-392-2684 | WWW.STORMTECH.COM

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|--|
| 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473 ADVANCED DRAINAGE SYSTEMS, INC. |
| ADS |

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INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT

- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- ALL ISOLATOR ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS

- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- VACUUM STRUCTURE SUMP AS REQUIRED

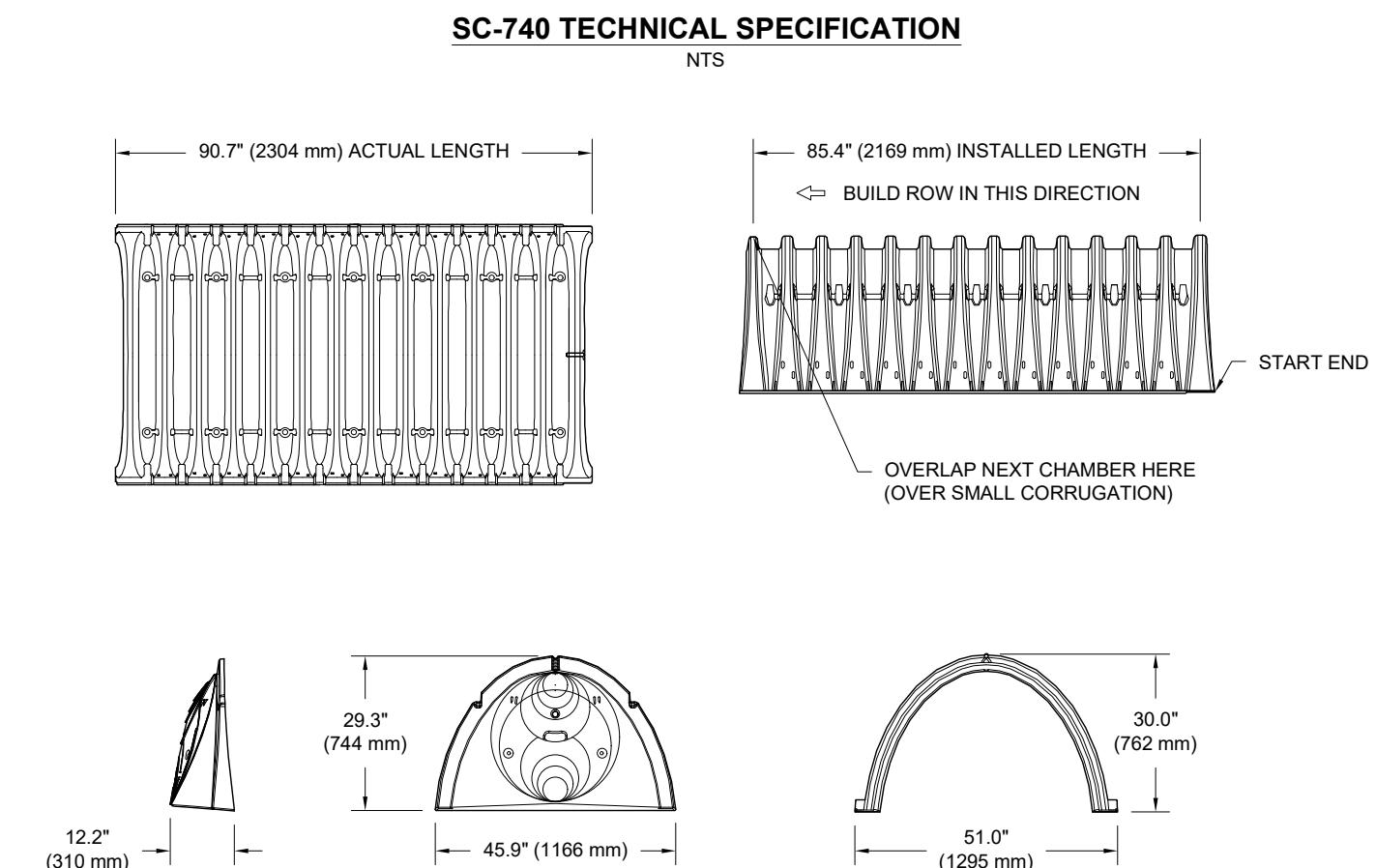
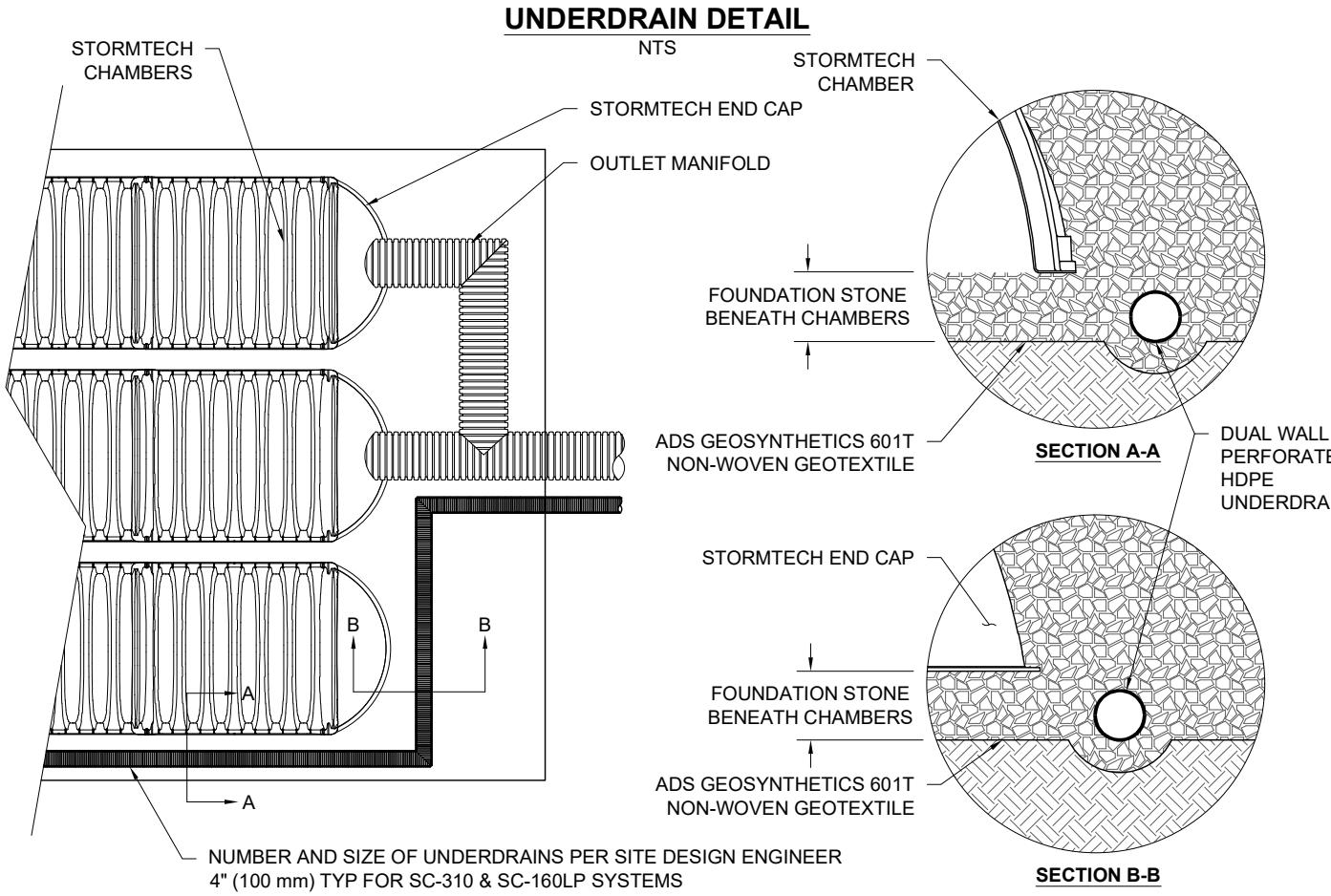
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

| | | | | |
|--|--|--|-----------|--------------|
| 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473 ADVANCED DRAINAGE SYSTEMS, INC. | StormTech [®] Detention, Retention, Water Quality 70 INWOOD ROAD, SUITE 3 ROCKY HILL, CT 06067 860-528-8188 888-392-2684 WWW.STORMTECH.COM | PIERRE DELRAY SITE 2 DELRAY BEACH, FL | | |
| | | DATE: LL | DRAWN: LL | checked: N/A |
| 4 | SHEET 6 OF 6 | | | |



NOMINAL CHAMBER SPECIFICATIONS

| | | |
|---------------------------------|-----------------------|------------------------------|
| SIZE (W X H X INSTALLED LENGTH) | 51.0" X 30.0" X 85.4" | (1295 mm X 762 mm X 2169 mm) |
| CHAMBER STORAGE | 45.9 CUBIC FEET | (1.30 m ³) |
| MINIMUM INSTALLED STORAGE* | 74.9 CUBIC FEET | (2.12 m ³) |
| WEIGHT | 75.0 lbs. | (33.6 kg) |

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

| PART # | STUB | A | B | C |
|-----------------------------|--------------|----------------|----------------|--------------|
| SC740EPE06T / SC740EPE06TPC | 6" (150 mm) | 10.9" (277 mm) | 18.5" (470 mm) | --- |
| SC740EPE06B / SC740EPE06BPC | | | --- | 0.5" (13 mm) |
| SC740EPE08T / SC740EPE08TPC | 8" (200 mm) | 12.2" (310 mm) | 16.5" (419 mm) | --- |
| SC740EPE08B / SC740EPE08BPC | | | --- | 0.6" (15 mm) |
| SC740EPE10T / SC740EPE10TPC | 10" (250 mm) | 13.4" (340 mm) | 14.5" (368 mm) | --- |
| SC740EPE10B / SC740EPE10BPC | | | --- | 0.7" (18 mm) |
| SC740EPE12T / SC740EPE12TPC | 12" (300 mm) | 14.7" (373 mm) | 12.5" (318 mm) | --- |
| SC740EPE12B / SC740EPE12BPC | | | --- | 1.2" (30 mm) |
| SC740EPE15T / SC740EPE15TPC | 15" (375 mm) | 18.4" (467 mm) | 9.0" (229 mm) | --- |
| SC740EPE15B / SC740EPE15BPC | | | --- | 1.3" (33 mm) |
| SC740EPE18T / SC740EPE18TPC | 18" (450 mm) | 19.7" (500 mm) | 5.0" (127 mm) | --- |
| SC740EPE18B / SC740EPE18BPC | | | --- | 1.6" (41 mm) |
| SC740EPE24B* | 24" (600 mm) | 18.5" (470 mm) | --- | 0.1" (3 mm) |

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

| | | | |
|---|--|-----------|--------------|
| 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473 | PIERRE DELRAY SITE 2 DELRAY BEACH, FL | | |
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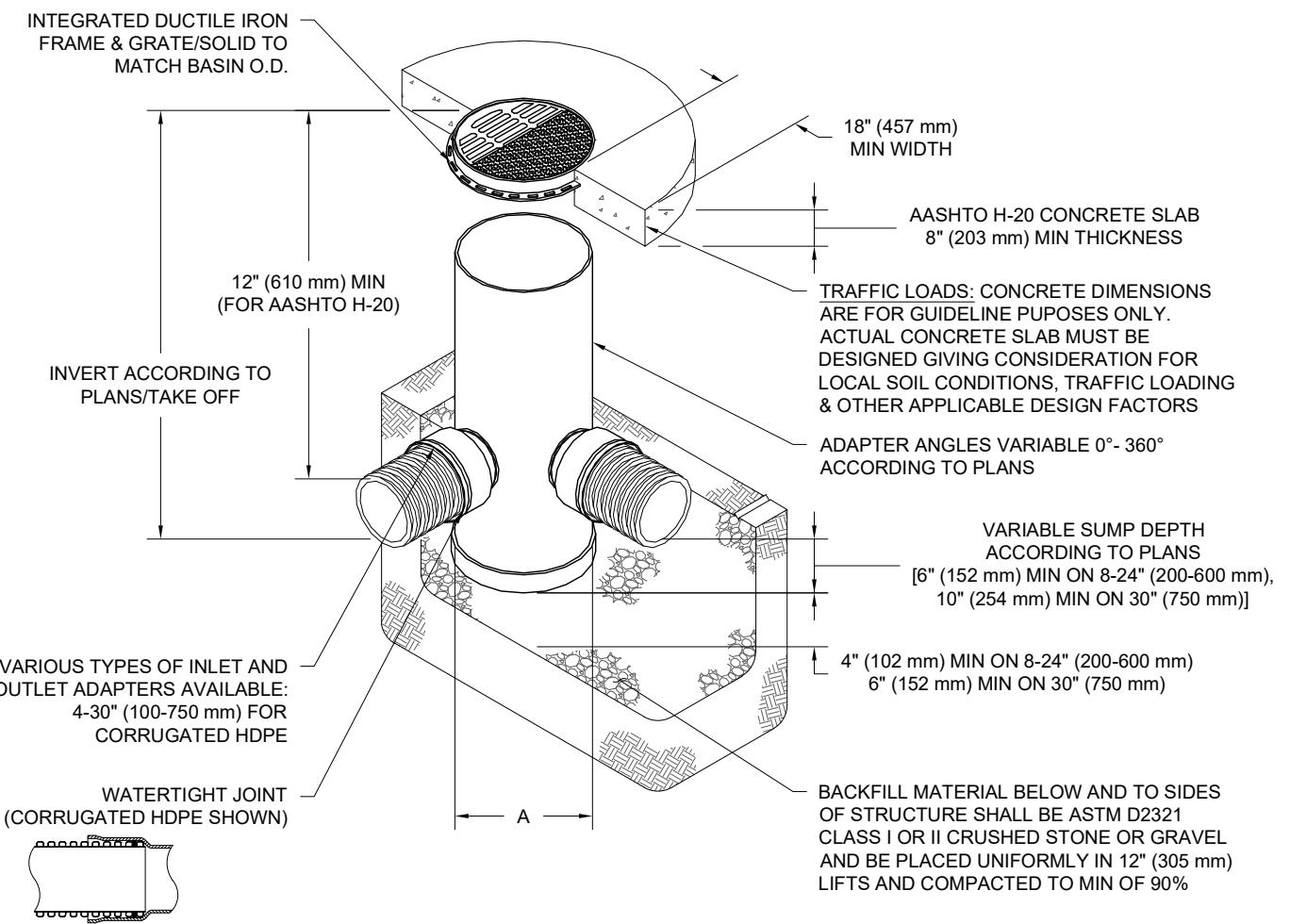
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Retention-Runoff-Water Quality
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ADS
ADVANCED DRAINAGE SYSTEMS, INC.

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NYLOPLAST DRAIN BASIN

NTS



NOTES

1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST-US.COM
6. TO ORDER CALL: 800-821-6710

| A | PART # | GRATE/SOLID COVER OPTIONS | | |
|--------------|--------|---------------------------|----------------------|-------------------|
| 8" (200 mm) | 2808AG | PEDESTRIAN LIGHT DUTY | STANDARD LIGHT DUTY | SOLID LIGHT DUTY |
| 10" (250 mm) | 2810AG | PEDESTRIAN LIGHT DUTY | STANDARD LIGHT DUTY | SOLID LIGHT DUTY |
| 12" (300 mm) | 2812AG | PEDESTRIAN AASHTO H-10 | STANDARD AASHTO H-20 | SOLID AASHTO H-20 |
| 15" (375 mm) | 2815AG | PEDESTRIAN AASHTO H-10 | STANDARD AASHTO H-20 | SOLID AASHTO H-20 |
| 18" (450 mm) | 2818AG | PEDESTRIAN AASHTO H-10 | STANDARD AASHTO H-20 | SOLID AASHTO H-20 |
| 24" (600 mm) | 2824AG | PEDESTRIAN AASHTO H-10 | STANDARD AASHTO H-20 | SOLID AASHTO H-20 |
| 30" (750 mm) | 2830AG | PEDESTRIAN AASHTO H-20 | STANDARD AASHTO H-20 | SOLID AASHTO H-20 |

| | | | | | | |
|---|---|-----|-----|-----|-------------|--|
| 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473 | 3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com | REV | DRW | CHK | DESCRIPTION | PIERRE DELRAY SITE 2 DELRAY BEACH, FL |
| | | | | | DATE: LL | PROJECT #: N/A |

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.



Nyloplast

Appendix E

Cascade Flood Routing

Project Name: Pierre Delray Site 2

Reviewer: L JL

Project Number: FLB190004

Period Begin: Jan 01, 2000;0000 hr End: Jan 16, 2000;0000 hr Duration: 360 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

Method: Santa Barbara Unit Hydrograph

Rainfall Distribution: SFWMD - 24 hr

Design Frequency: 10 year

1 Day Rainfall: 8.87 inches

Area: 0.43 acres

Ground Storage: 1.11 inches

Time of Concentration: 0.17 hours

Initial Stage: 5 ft NGVD

PRE

| Stage (ft NGVD) | Storage (acre-ft) |
|--------------------|----------------------|
| 13.00 | 0.00 |
| 13.50 | 0.00 |
| 14.00 | 0.00 |
| 14.50 | 0.00 |
| 15.00 | 0.00 |
| 15.50 | 0.01 |
| 16.00 | 0.09 |
| 16.50 | 0.24 |
| 17.00 | 0.45 |
| 17.50 | 0.67 |
| 18.00 | 0.89 |

Offsite Receiving Body: Offsite1

| Time (hr) | Stage (ft NGVD) |
|--------------|--------------------|
| 0.00 | 5.00 |
| 10.00 | 5.00 |
| 9999.00 | 5.00 |

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

| Struc | Max (cfs) | Time (hr) | Min (cfs) | Time (hr) |
|-------|-----------|-----------|-----------|-----------|
| | | | | |
| | | | | |
| | | | | |

BASIN MAXIMUM AND MINIMUM STAGES

| Basin | Max (ft) | Time (hr) | Min (ft) | Time (hr) |
|---------|----------|-----------|----------|-----------|
| Basin 1 | 16.58 | 25.40 | 5.00 | 0.00 |

BASIN WATER BUDGETS (all units in acre-ft)

| Basin | Total Runoff | Structure Inflow | Structure Outflow | Initial Storage | Final Storage | Residual |
|---------|--------------|------------------|-------------------|-----------------|---------------|----------|
| Basin 1 | 0.27 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 |

Project Name: Pierre Delray Site 2

Reviewer: L JL

Project Number: FLB190004

Period Begin: Jan 01, 2000;0000 hr End: Jan 16, 2000;0000 hr Duration: 360 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

Method: Santa Barbara Unit Hydrograph

Rainfall Distribution: SFWMD - 24 hr

Design Frequency: 10 year

1-Day Rainfall: 8.87 inches

Area: 0.43 acres

Ground Storage: 0.37 inches

Time of Concentration: 0.17 hours

Initial Stage: 5 ft NGVD

POST

| Stage (ft NGVD) | Storage (acre-ft) |
|--------------------|----------------------|
| 12.52 | 0.01 |
| 13.02 | 0.03 |
| 13.52 | 0.04 |
| 14.02 | 0.06 |
| 14.52 | 0.07 |
| 15.02 | 0.08 |
| 15.52 | 0.09 |

Offsite Receiving Body: Offsite1

| Time (hr) | Stage (ft NGVD) |
|--------------|--------------------|
| 0.00 | 5.00 |
| 10.00 | 5.00 |
| 9999.00 | 5.00 |

Structure: 1

From Basin: Basin 1

To Basin: Offsite1

Structure Type: Gravity

Weir: Broad Crested, Crest Elev = 15.2 ft NGVD, Length = 1.5 ft, Weir Coef = 3.28

Bleeder: Circular, Invert Elev = 12.8 ft NGVD, Diameter = 0.5 ft

Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6

Pipe: None

| Time (hr) | Cumulative Rainfall (in) | Instant Runoff (cfs) | Current Discharge (cfs) | Cumulative Discharge (acre-ft) | Head Stage (ft NGVD) | Water Stage (ft NGVD) |
|--------------|--------------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------|-----------------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 |
| 1.00 | 0.09 | 0.00 | 0.00 | 0.00 | 12.52 | 5.00 |
| 2.00 | 0.18 | 0.01 | 0.00 | 0.00 | 12.54 | 5.00 |
| 3.00 | 0.28 | 0.03 | 0.00 | 0.00 | 12.58 | 5.00 |
| 4.00 | 0.40 | 0.04 | 0.00 | 0.00 | 12.64 | 5.00 |
| 5.00 | 0.55 | 0.05 | 0.00 | 0.00 | 12.74 | 5.00 |
| 6.00 | 0.74 | 0.07 | 0.01 | 0.00 | 12.87 | 5.00 |
| 7.00 | 0.96 | 0.09 | 0.06 | 0.00 | 12.96 | 5.00 |
| 8.00 | 1.22 | 0.11 | 0.10 | 0.01 | 13.00 | 5.00 |
| 9.00 | 1.52 | 0.13 | 0.12 | 0.02 | 13.03 | 5.00 |
| 10.00 | 1.89 | 0.16 | 0.16 | 0.03 | 13.06 | 5.00 |
| 11.00 | 2.39 | 0.24 | 0.22 | 0.05 | 13.12 | 5.00 |
| 12.00 | 5.82 | 2.44 | 1.22 | 0.10 | 14.72 | 5.00 |
| 13.00 | 6.80 | 0.31 | 0.79 | 0.19 | 13.76 | 5.00 |
| 14.00 | 7.26 | 0.18 | 0.20 | 0.22 | 13.10 | 5.00 |
| 15.00 | 7.54 | 0.12 | 0.12 | 0.23 | 13.03 | 5.00 |
| 16.00 | 7.81 | 0.12 | 0.12 | 0.24 | 13.02 | 5.00 |
| 17.00 | 7.97 | 0.07 | 0.08 | 0.25 | 12.98 | 5.00 |
| 18.00 | 8.12 | 0.07 | 0.07 | 0.26 | 12.97 | 5.00 |
| 19.00 | 8.28 | 0.07 | 0.07 | 0.26 | 12.97 | 5.00 |

| Time (hr) | Cumulative Rainfall (in) | Instant Runoff (cfs) | Current Discharge (cfs) | Cumulative Discharge (acre-ft) | Head Stage (ft NGVD) | Water Stage (ft NGVD) |
|--------------|--------------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------|-----------------------------|
| 20.00 | 8.44 | 0.07 | 0.07 | 0.27 | 12.97 | 5.00 |
| 21.00 | 8.55 | 0.05 | 0.05 | 0.27 | 12.95 | 5.00 |
| 22.00 | 8.66 | 0.05 | 0.05 | 0.28 | 12.94 | 5.00 |
| 23.00 | 8.76 | 0.05 | 0.05 | 0.28 | 12.94 | 5.00 |
| 24.00 | 8.87 | 0.05 | 0.05 | 0.29 | 12.94 | 5.00 |
| 25.00 | 8.87 | 0.00 | 0.02 | 0.29 | 12.89 | 5.00 |
| 26.00 | 8.87 | 0.00 | 0.01 | 0.29 | 12.86 | 5.00 |
| 27.00 | 8.87 | 0.00 | 0.01 | 0.29 | 12.85 | 5.00 |
| 28.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.84 | 5.00 |
| 29.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.83 | 5.00 |
| 30.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.83 | 5.00 |
| 31.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.82 | 5.00 |
| 32.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.82 | 5.00 |
| 33.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.82 | 5.00 |
| 34.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.82 | 5.00 |
| 35.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.82 | 5.00 |
| 36.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 37.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 38.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 39.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 40.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 41.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 42.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 43.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 44.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 45.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 46.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 47.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 48.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 49.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 50.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 51.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 52.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 53.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 54.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.81 | 5.00 |
| 55.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 56.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 57.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 58.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 59.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 60.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 61.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 62.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 63.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 64.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 65.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 66.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 67.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 68.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 69.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 70.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 71.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 72.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 73.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 74.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 75.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 76.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 77.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 78.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 79.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 80.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 81.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 82.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 83.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 84.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 85.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 86.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 87.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 88.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 89.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |

| Time (hr) | Cumulative Rainfall (in) | Instant Runoff (cfs) | Current Discharge (cfs) | Cumulative Discharge (acre-ft) | Head Stage (ft NGVD) | Water Stage (ft NGVD) |
|--------------|--------------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------|-----------------------------|
| 90.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 91.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 92.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 93.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 94.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 95.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 96.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 97.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 98.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 99.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 100.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 101.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 102.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 103.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 104.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 105.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 106.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 107.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 108.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 109.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 110.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 111.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 112.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 113.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 114.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 115.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 116.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 117.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 118.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 119.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 120.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 121.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 122.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 123.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 124.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 125.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 126.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 127.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 128.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 129.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 130.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 131.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 132.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 133.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 134.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 135.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 136.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 137.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 138.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 139.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 140.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 141.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 142.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 143.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 144.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 145.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 146.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 147.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 148.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 149.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 150.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 151.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 152.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 153.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 154.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 155.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 156.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 157.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 158.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 159.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |

| Time (hr) | Cumulative Rainfall (in) | Instant Runoff (cfs) | Current Discharge (cfs) | Cumulative Discharge (acre-ft) | Head Stage (ft NGVD) | Water Stage (ft NGVD) |
|--------------|--------------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------|-----------------------------|
| 160.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 161.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 162.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 163.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 164.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 165.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 166.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 167.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 168.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 169.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 170.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 171.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 172.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 173.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 174.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 175.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 176.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 177.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 178.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 179.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 180.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 181.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 182.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 183.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 184.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 185.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 186.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 187.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 188.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 189.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 190.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 191.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 192.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 193.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 194.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 195.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 196.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 197.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 198.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 199.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 200.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 201.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 202.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 203.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 204.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 205.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 206.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 207.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 208.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 209.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 210.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 211.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 212.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 213.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 214.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 215.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 216.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 217.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 218.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 219.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 220.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 221.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 222.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 223.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 224.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 225.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 226.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 227.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 228.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 229.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |

| Time (hr) | Cumulative Rainfall (in) | Instant Runoff (cfs) | Current Discharge (cfs) | Cumulative Discharge (acre-ft) | Head Stage (ft NGVD) | Water Stage (ft NGVD) |
|--------------|--------------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------|-----------------------------|
| 230.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 231.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 232.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 233.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 234.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 235.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 236.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 237.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 238.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 239.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 240.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 241.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 242.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 243.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 244.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 245.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 246.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 247.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 248.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 249.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 250.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 251.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 252.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 253.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 254.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 255.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 256.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 257.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 258.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 259.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 260.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 261.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 262.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 263.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 264.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 265.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 266.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 267.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 268.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 269.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 270.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 271.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 272.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 273.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 274.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 275.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 276.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 277.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 278.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 279.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 280.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 281.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 282.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 283.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 284.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 285.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 286.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 287.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 288.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 289.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 290.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 291.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 292.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 293.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 294.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 295.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 296.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 297.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 298.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 299.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |

| Time (hr) | Cumulative Rainfall (in) | Instant Runoff (cfs) | Current Discharge (cfs) | Cumulative Discharge (acre-ft) | Head Stage (ft NGVD) | Water Stage (ft NGVD) |
|--------------|--------------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------|-----------------------------|
| 300.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 301.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 302.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 303.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 304.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 305.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 306.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 307.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 308.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 309.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 310.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 311.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 312.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 313.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 314.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 315.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 316.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 317.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 318.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 319.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 320.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 321.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 322.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 323.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 324.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 325.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 326.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 327.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 328.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 329.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 330.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 331.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 332.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 333.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 334.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 335.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 336.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 337.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 338.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 339.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 340.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 341.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 342.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 343.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 344.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 345.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 346.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 347.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 348.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 349.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 350.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 351.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 352.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 353.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 354.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 355.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 356.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 357.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 358.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 359.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |
| 360.00 | 8.87 | 0.00 | 0.00 | 0.29 | 12.80 | 5.00 |

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

| Struc | Max (cfs) | Time (hr) | Min (cfs) | Time (hr) |
|-------|-----------|-----------|-----------|-----------|
| 1 | 1.36 | 12.20 | 0.00 | 0.00 |

BASIN MAXIMUM AND MINIMUM STAGES

| Basin | Max (ft) | Time (hr) | Min (ft) | Time (hr) |
|---------|----------|-----------|----------|-----------|
| Basin 1 | 15.13 | 12.20 | 5.00 | 0.00 |

BASIN WATER BUDGETS (all units in acre-ft)

| Basin | Total Runoff | Structure Inflow | Structure Outflow | Initial Storage | Final Storage | Residual |
|---------|--------------|------------------|-------------------|-----------------|---------------|----------|
| Basin 1 | 0.30 | 0.00 | 0.29 | 0.01 | 0.02 | 0.00 |

Appendix F

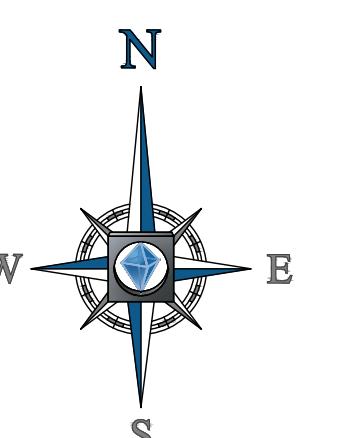
Basin Map



BASIN MAP
ZYSCOVICH
ARCHITECTS
DELRAY BEACH, FL 33483 | PLAN REV. A



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Appendix G

Basin Pre Vs. Post Calculations



Pre Storm Water Management Calculations - Drainage Basin

| SITE DATA | | |
|---|---------------|------|
| Total Site Area (A _T)= | 9.74 Acres | 100% |
| Total Building Area (A _B)= | 3.54 Acres | 36% |
| Total Canopy Area (A _C)= | 0.00 Acres | 0% |
| Total Pavement/Sidewalk Area + Building Area (A _I)= | 5.66 Acres | 58% |
| Total Landscape Area (A _P)= | 0.54 Acres | 6% |
| SOIL STORAGE CALCULATIONS | | |
| Average Pervious Elevation = | 15.5 Ft. +/- | NAVD |
| Seasonal High Water Table = | 9.50 Ft. | NAVD |
| Depth to water table= | 6.00 Ft. | |
| Soil Storage Type | Coastal | |
| From SFWMD Manual for to W.T. (Comp S) = | 8.18 In. | |
| Compute overall soilstorage for site.= | 0.45 In. | |
| S=(Comp S)x[A _P /A _T]; | | |
| Compute CN value for site= | 96 | |
| CN=1000/(S+10) | | |
| COMPUTE 100-Year, 72-Hour Runoff Volume for Drainage Basin | | |
| Rainfall (P ₁₀₀₋₇₂), | 18.00 In. | |
| Q ₁₀₀₋₇₂ = (P ₁₀₀₋₇₂ -0.2S ²)/(P ₁₀₀₋₇₂ +0.8S) = | 17.47 In. | |
| Compute volume generated by storm | | |
| V = (P ₁₀₀₋₇₂ /12)xA _T = | 14.18 Ac.-Ft. | |



Date: 9/17/2019
 Project: Pierre Delray Phase 2
 Project No: FLB190004
 Calculated By: L JL
 Checked By: ARS

Pre Stage-Storage Computations Drainage Basin

| Basin | Landscape (Site) | Parking/Drive Isles | Building | Total Area (Ac.) |
|--------------|------------------|---------------------|-----------------|-----------------------|
| Land Type | Pervious | Impervious | Impervious | |
| Area (Acres) | 0.54 | 5.66 | 3.54 | 9.74 |
| Storage Type | Sloped | Sloped | Sloped | |
| Start (Ft.) | 13.10 | 12.60 | 12.10 | |
| End (Ft.) | 15.50 | 15.00 | 15.50 | |
| Stage (Ft.) | Storage (Ac-Ft) | Storage (Ac-Ft) | Storage (Ac-Ft) | Total Storage (Ac-Ft) |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.08 | 0.08 |
| 13.00 | 0.00 | 0.19 | 0.42 | 0.61 |
| 13.50 | 0.02 | 0.96 | 1.02 | 1.99 |
| 14.00 | 0.09 | 2.31 | 1.88 | 4.28 |
| 14.50 | 0.22 | 4.26 | 3.00 | 7.48 |
| 15.00 | 0.41 | 6.79 | 4.38 | 11.58 |
| 15.50 | 0.65 | 9.62 | 6.02 | 16.29 |
| 16.00 | 0.92 | 12.45 | 7.79 | 21.16 |
| 16.50 | 1.19 | 15.28 | 9.56 | 26.03 |
| 17.00 | 1.46 | 18.11 | 11.33 | 30.90 |
| 17.50 | 1.73 | 20.94 | 13.10 | 35.77 |
| 18.00 | 2.00 | 23.77 | 14.87 | 40.64 |

| 100-Year, 72-Hour | |
|-------------------------------------|-------------------|
| Stage (Ft., NAVD) | Storage (Ac.-Ft.) |
| 15.00 | 11.58 |
| 15.50 | 16.29 |
| Volume Generated By Storm (Ac.-Ft.) | 14.18 |
| Peak Stage (Ft., NAVD) | 15.28 |



Post Storm Water Management Calculations - Drainage Basin

| SITE DATA | | |
|---|--|---------------|
| Total Site Area (A _T)= | 9.74 Acres | 100% |
| Total Building Area (A _B)= | 3.55 Acres | 36% |
| Total Canopy Area (A _C)= | 0.00 Acres | 0% |
| Total Pavement/Sidewalk Area + Building Area (A _I)= | 5.66 Acres | 58% |
| Total Landscape Area (A _P)= | 0.54 Acres | 6% |
| SOIL STORAGE CALCULATIONS | | |
| Average Pervious Elevation = | 15.5 Ft. +/- | NAVD |
| Seasonal High Water Table = | 9.50 Ft. | NAVD |
| Depth to water table= | 6.00 Ft. | |
| Soil Storage Type | Coastal | |
| From SFWMD Manual for to W.T. (Comp S) = | 8.18 In. | |
| Compute overall soilstorage for site.= | 0.45 In. | |
| | S=(Comp S)x[A _P /A _T]; | |
| Compute CN value for site= | 96 | |
| | CN=1000/(S+10) | |
| COMPUTE 100-Year, 72-Hour Runoff Volume for Drainage Basin | | |
| Rainfall (P ₁₀₀₋₇₂), | 18.00 In. | |
| Q ₁₀₀₋₇₂ = (P ₁₀₀₋₇₂ -0.2S ²)/(P ₁₀₀₋₇₂ +0.8S) = | 17.47 In. | |
| Compute volume generated by storm | | |
| | V = (P ₁₀₀₋₇₂ /12)xA _T = | 14.18 Ac.-Ft. |



Post Stage-Storage Computations Drainage Basin

| Basin | Landscape (Site) | Parking/Drive Isles | Building | Total Area (Ac.) |
|--------------|------------------|---------------------|-----------------|-----------------------|
| Land Type | Pervious | Impervious | Impervious | |
| Area (Acres) | 0.54 | 5.66 | 3.55 | 9.75 |
| Storage Type | Sloped | Sloped | Sloped | |
| Start (Ft.) | 13.10 | 12.60 | 12.10 | |
| End (Ft.) | 15.50 | 15.00 | 15.50 | |
| Stage (Ft.) | Storage (Ac-Ft) | Storage (Ac-Ft) | Storage (Ac-Ft) | Total Storage (Ac-Ft) |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.08 | 0.08 |
| 13.00 | 0.00 | 0.19 | 0.42 | 0.61 |
| 13.50 | 0.02 | 0.96 | 1.02 | 2.00 |
| 14.00 | 0.09 | 2.31 | 1.88 | 4.29 |
| 14.50 | 0.22 | 4.26 | 3.00 | 7.48 |
| 15.00 | 0.41 | 6.79 | 4.39 | 11.59 |
| 15.50 | 0.65 | 9.62 | 6.03 | 16.30 |
| 16.00 | 0.92 | 12.45 | 7.80 | 21.18 |
| 16.50 | 1.19 | 15.28 | 9.58 | 26.05 |
| 17.00 | 1.46 | 18.11 | 11.35 | 30.92 |
| 17.50 | 1.73 | 20.94 | 13.12 | 35.80 |
| 18.00 | 2.00 | 23.77 | 14.90 | 40.67 |

| 100-Year, 72-Hour | |
|--|-------------------|
| Stage (Ft., NAVD) | Storage (Ac.-Ft.) |
| 15.00 | 11.59 |
| 15.50 | 16.30 |
| Volume Generated By Storm (Ac.-Ft.) | 14.18 |
| Peak Stage (Ft., NAVD) | 15.27 |