# PLANNING AND ZONING BOARD STAFF REPORT

**Conklin Car Wash**

| Meeting | File No. | Application Type |
|---|---|---|
| November 17, 2025 | 2025-109 -SPR-LV4 (Site Plan)<br>2025-110-USE-PZB (Conditional Use) | Level 4 Site Plan & Conditional Use |
| **Property Owner / Applicant** | | **Authorized Agent** |
| Andella Holdings, LLC | | Bradley Miller, AICP-Urban Design Studio |

## Request

Provide a recommendation to the City Commission on a request for a Level 4 Site Plan Application with Architectural Elevations and Landscape Plan, including a Conditional Use (Resolution No. 210-25) to allow a 4,207 square foot automatic car wash at 14145 South Military Trail.

## Site Data & Information

**Location:** 14145 S. Military Trail

**PCN:** 12-42-46-14-03-002-0010

**Property Size:** 0.99 acres (43,109 square feet)

**Land Use Designation:** General Commercial (GC)

**Zoning District:** General Commercial (GC)

**Adjacent Zoning:**

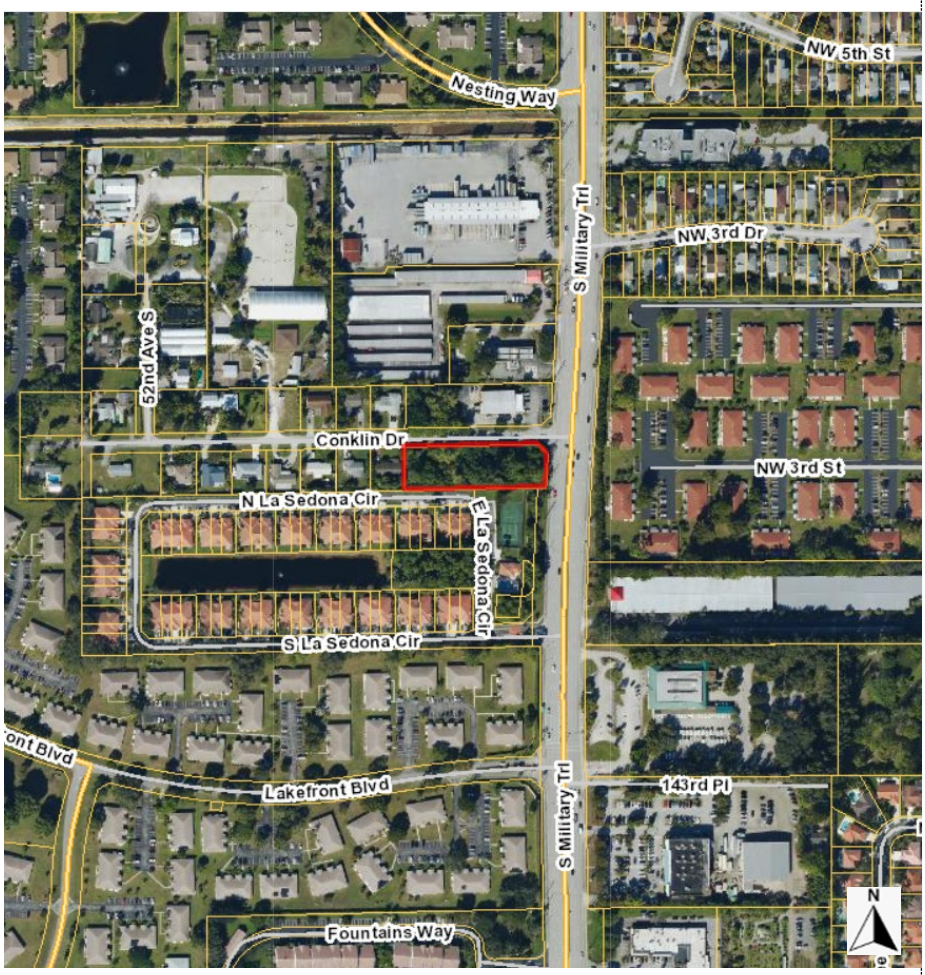
- **North:** Automotive Commercial (AC)
- **South:** Low Density Residential (RL)
- **East:** RL
- **West**: Low Density Residential (LR-3), Unincorporated Palm Beach County

**Existing Use:** Vacant

**Proposed Use:** 4,207 square foot automatic car wash

**Floor Area Ratio:**

- **Existing:** 0.00
- **Maximum Allowed:** 3.00
- **Proposed:** 0.10



## Background Information

The 0.99-acre vacant, undeveloped property located at 14145 South Military Trail is positioned at the southwest corner of South Military Trail and Conklin Drive, between Lake Ida Road and West Atlantic Avenue.

In 2006, the property was annexed into the City of Delray Beach and a subsequent Land Use Map (LUM) amendment to City land use Transitional (TRN) and a City rezoning to Special Activities District (SAD) zoning was granted for a 4-story, 70,200 SF self-storage facility.

In 2018, the City processed a request to amend the SAD in conjunction with a site plan approval for an automotive parts store (O'Reily Auto Parts). At that time, it was determined that applying the GC zoning district was more appropriate for the proposed use. Consequently, in 2020, the City initiated a LUM amendment for the property, from TRN to GC to ensure greater compatibility.

While the GC land use and zoning designation was approved, the site plan for the automotive parts store was ultimately withdrawn, and the property remained vacant.

Now before the Board, the applicant is seeking approval for a Level 4 Site Plan, including a Conditional Use, to establish a 4,207 square foot automatic car wash.

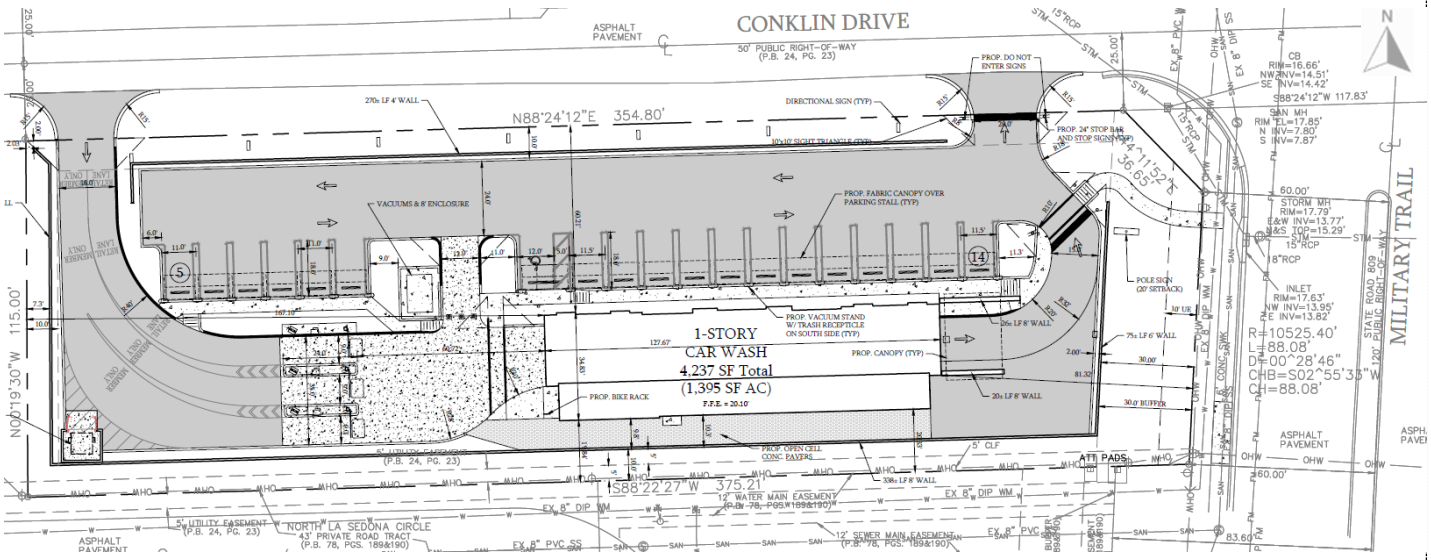


## Project Description & Request

The applicant, Fazio Consulting, LLC, is requesting approval of a Level 4 Site Plan (Level 2 Site Plan and Conditional Use) for an automatic car wash establishment. The proposed car wash features a one-story, 2,819 square-foot car wash tunnel equipped with 10 (15 hp) dryer blowers with silencers, two (30 hp) vacuum producers, and an air system blower. Additionally, there is a proposed 1,388 square-foot space attached to the wash tunnel containing mechanical equipment, storage, restrooms, a breakroom, and office space.


NORTHEAST BIRDEYE

The proposal includes 19 parking spaces, each equipped with high-power vacuums as an extension to the car wash service. The site is designed for efficient circulation with a one-way entry and exit system. Access begins at the western end of the property from Conklin Drive, proceeding south into three service lanes that curve east, leading to pay gates before the car wash tunnel. The car wash offers a membership plan and a one-time guest option, with menu boards available to select service levels. The one-tunnel car wash spans 128 feet in length and 34 feet in width, set 60 feet into the site from the property line adjacent to Conklin Drive. Customers can exit the property north onto Conklin Drive or park in one of the 19 spaces to utilize the vacuums. Site improvements include a perimeter wall, landscape buffering, drainage, water runoff tanks, and architectural elevations. No relief is associated with this conditional use and Level 4 site plan application.




**NOTE**: Any signage included in the renderings has not been reviewed for compliance with the LDR and is not included as part of the subject review and approval. A separate review and approval process is required for signage.

## Review and Analysis: Site Plan

**LDR Section 2.1.5(E)(5) - The Planning and Zoning Board – Board Recommendations**

*The Planning and Zoning Board shall review and make recommendations to the City Commission with respect to the following items, pursuant to the procedures and standards of the Land Development Regulations (LDR):*

*(e) Establishment of a Conditional Use.*

*(j) Level 4 Site Plan Applications, including any density or height increases, and associated relief such as waivers, variances, etc*

**LDR Section 2.4.10(A)(1)(d), Level 4**

*Applications include requests that could otherwise be classified as a Level 2 or Level 3 Site Plan application but have concurrent request requiring final action by the City Commission for one or more of the following:*

*1. Increase of height or density as part of a City workforce housing or incentive program.*

2. *Utilization of the Central Business District (CBD) Incentive Program.*
3. *Approval of Conditional Use.*
4. *Granting of an In-lieu of Parking Fee request.*
5. *Approval of Waiver(s) not otherwise authorized to other approving bodies.*

The proposed 4,207 square foot automatic car wash qualifies as a Level 2 Site Plan application based on the scope of new construction involving less than 15,000 square feet. However, in accordance with LDR Section 2.4.10(A)(1)(d), applications that include concurrent requests requiring City Commission approval, such as a Conditional Use, are elevated to a Level 4 Site Plan. Therefore, the subject application is being processed as a Level 4 Site Plan with Conditional Use, requiring review and recommendation by the Planning and Zoning Board, and final action by the City Commission pursuant to LDR Section 2.1.5(E)(5).

**LDR Section 2.4.10(A)(2)(d)5., Board Review**
*Level 4 Site Plan applications require review and recommendation by the Planning and Zoning Board and/or Historic Preservation Board prior to action by the City Commission.*

**LDR Section 2.4.10(A)(3), Required Findings**
*Site plan applications must demonstrate consistency with the Comprehensive Plan and compliance with the applicable provisions of the Land Development Regulations. The following specifically apply:*

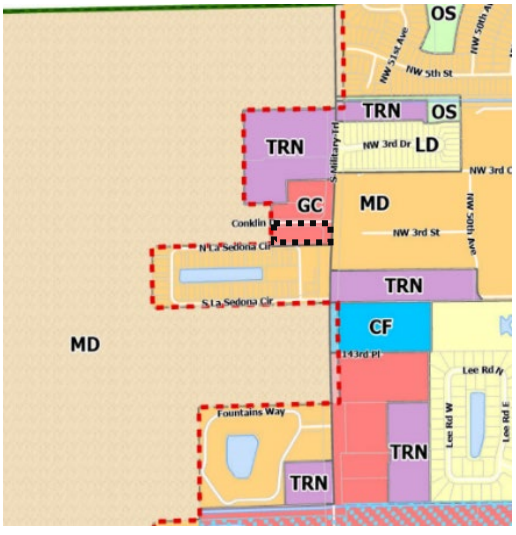
*(b) Level 2, Level 3, and Level 4 Site Plan applications must comply with the findings in Chapter 3, Performance Standards.*
*(c) Landscape plans must comply with Section 4.6.16, Landscape Regulations.*
*(d) Architectural elevations must comply with Section 4.6.18, Architectural Elevations and Aesthetics, and adopted Architectural Design Guidelines.*

Following the review of the Site Plan application, the Conditional Use request will be analyzed separately to assess operational characteristics, compliance with applicable zoning criteria, and potential impacts on surrounding properties.

**LDR Section 3.1.1, Required Findings**
*Prior to the approval of development applications, certain findings must be made in a form which is part of the official record. This may be achieved through information on the application, the staff report, or minutes. Findings shall be made by the body which has the authority to approve or deny the development application.* These findings relate to the following four areas:

(A) Land Use Map
(B) Concurrency
(C) Consistency
(D) Compliance with the LDR

**(A) Land Use Map.** *The resulting use of land or structures must be allowed in the zoning district within which the land is situated and said zoning must be consistent with the applicable land use designation as shown on the Land Use Map.*




The subject site is zoned GC, which is a preferred implementing district of the GC Land Use designation. Pursuant to the Always Delray Comprehensive Plan, the GC land use is intended to *support small parcels which are best suited for general retail and office uses*. The GC zoning district permits car wash establishments through the conditional use process. The review ensures that the request is evaluated not only for regulatory compliance but also for its broader compatibility with adjacent uses and long-range land use policy.

**(B) Concurrency.** *Concurrency as defined by Objective NDC 3.1 of the Neighborhoods, Districts, and Corridors Element of the adopted Comprehensive Plan must be met and a determination made that the public facility needs, including public schools, of the requested land use and/or*

*development application will not exceed the ability of the City and The School District of Palm Beach County to fund and provide, or to require the provision of, needed capital improvements in order to maintain the Levels of Service Standards established in Table CIE, Level of Service Standards, of the Capital Improvements Element of the adopted Comprehensive Plan of the City of Delray Beach.*

Water and Sewer. The Utilities Department reviewed the application and confirmed that adequate capacity is available to serve the proposed development. A sanitary sewer gravity main is located on the south side of the property. Additionally, a sand/oil interceptor is required, which is an underground tank used to capture and separate pollutants (e.g. sand, grit, oil, and grease) from wastewater before it enters the sanitary sewer system. The applicant also provided an email from Palm Beach County stating that a bleeder valve (used to release trapped air, drain water, or reduce pressure) is preferred to retention. If a bleeder valve is installed, a County permit will be required for the connection and work in the County's right-of-way. Final engineering plans must be coordinated with the Utilities Department to ensure compliance with adopted standards.

Solid Waste. The property is serviced by the Solid Waste Authority of Palm Beach County. There is sufficient capacity through the year 2054, and the current method of refuse collection is adequate to support the proposed expansion of use.

Drainage**.** The site currently has no drainage infrastructure. The proposed development will provide pretreatment and storage of the stormwater runoff per state and city requirements. The development's drainage system includes installation of pavement, curbs, grass swale, storm inlets, exfiltration trench, and conveyance piping. The site is currently designed to contain all runoff onsite through to the 25-year 3-day storm with only a 6" bleeder connected to an offsite catch basin.

Traffic. The traffic statement performed by Pinder Troutman Consulting, Inc, dated August 5, 2025, states that the automatic car wash is anticipated to generate approximately **166 daily trips**, including **12 AM peak hour trips** and **14 PM peak hour trips.** Additionally, a TPS letter was issued by the Palm Beach County Traffic Division, concluding that the project is consistent with the adopted Level of Service standards and does not require additional mitigation. The review found no significant impact on adjacent roadway segments or intersections. No roadway/intersection improvements are necessary.

The queuing area for vehicles is discussed further under the analysis for LDR Section 3.2.3, Standards for site plan action.

Schools. Commercial development is not subject to school concurrency evaluation.

**(C) Consistency**. *A finding of overall consistency may be made even though the action will be in conflict with some individual performance standards contained within Article 3.2, provided that the approving body specifically finds that the beneficial aspects of the proposed project (hence compliance with some standards) outweighs the negative impacts of identified points of conflict.*

**Article 3.2, Performance Standards**

The following standards in Article 3.2 are applicable:

- **LDR Section 3.2.1, Basis for Determining Consistency**
- **LDR Section 3.2.3, Standards for site plan and/or plat actions**
- **LDR Section 3.2.4, Standards for Specific Areas or Purposes**

**LDR Section 3.2.1. Basis for Determining Consistency.**

The following Comprehensive Plan objectives and policies are relevant to the Conditional Use and Level 4 request:

**Neighborhoods, Districts, and Corridors Element**
Policy NDC 1.1.2 *Provide a complementary mix of land uses, including residential, office, commercial, industrial, recreational, and community facilities, with design characteristics that provide: Similar uses, intensity, height, and development patterns facing each other, especially in residential neighborhoods, Uses that meet the daily needs of residents, Public open spaces that are safe and attractive.*

Policy NDC 1.1.14 *Continue to require that property be developed or redeveloped or accommodated, in a manner so that the use, intensity and density are appropriate in terms of soil, topographic, and other applicable physical considerations; affordable goods and encourage services; are complementary to and compatible with adjacent land uses; and fulfill remaining land use needs.*

Objective NDC 1.3 Mixed-Use Land Use Designations *Apply the mixed-use land use designations of Commercial Core, General Commercial, Transitional, Congress Mixed-Use, and Historic Mixed-Use to accommodate a wide range of commercial and residential housing opportunities appropriate in scale, intensity, and density for the diverse neighborhoods, districts, and corridors in the city.*

Policy NDC 1.3.10 *Use the General Commercial land use designation to accommodate a wide range of non-residential and mixed-use development, and limited stand-alone residential development, along major corridors and in certain districts in the city.*

Objective 2.3 Western Neighborhoods (West of Interstate-95) *Protect and enhance the residential neighborhoods located west of I-95, improve connectivity, and provide a mix of uses that meet daily needs of residents.*

*Policy NDC 2.3.2 Seek opportunities west of Interstate 95 to enhance and augment the street, sidewalk, and bicycle route network and require new development and redevelopment to provide pedestrian, bicycle, and vehicular interconnections to adjacent properties.*

Policy NDC 3.4.2 *Use the development review process to determine development, redevelopment, and adaptive reuse is consistent with and complementary to adjacent development, regardless of the implementing zoning designations for each land use designation (See Table NDC-1).*

**Mobility Element**

Policy MBL 2.5.8 *Continue to provide standards for new development and redevelopment in the Land Development Regulations to provide for safe traffic movements and reduce potential pedestrian-vehicular conflict points, including, but not limited to*

- *Location and design of driveway access and site circulation;*
- *Width and location of curb cuts;*
- *Width and location of median openings;*
- *Radii of curves and location of intersections of driveways and intersections on curves;*
- *Street lighting standards*
- *Traffic impact analysis*
- *Cross-access standards*
- *Minimum sidewalk widths*

**Economic Prosperity Element**

Policy ECP 3.1.6 *Promote both good job creation and business ownership opportunities when encouraging the development and diversification of industry clusters.*

Policy ECP 5.5.2 *Increase essential retail and consumer services and neighborhood based employment opportunities for residents.*

**LDR Section 3.2.3, Standards for site plan action.**

The following standards are applicable to the request:

*(A) Building design, landscaping, and lighting (glare) shall be such that they do not create unwarranted distractions or blockage of visibility as it pertains to traffic circulation.*

*(B) All development shall provide pedestrian, bicycle, and vehicular interconnections to adjacent properties, where possible, and include accessible routes from the entry points of publicly-accessible buildings to the sidewalk network in accordance with the Americans with Disabilities Act (ADA).*

*(F) Property shall be developed or redeveloped in a manner so that the use, intensity, and density are appropriate in terms of soil, topographic, and other applicable physical considerations; encourage affordable goods and services: are complementary to and compatible with adjacent land uses; and fulfill remaining land use needs.*

*(H) Consideration shall be given to the effect a development will have on the safety, livability, and stability of surrounding neighborhoods and residential areas. Factors such as but not limited to, noise, odors, dust, and traffic volumes and circulation patterns shall be reviewed and if found to result in a degradation of the-surrounding areas, the project shall be modified accordingly or denied.*

*(I) Development shall not be approved if traffic associated with such development would create a new high accident location, or exacerbate an existing situation causing it to become a high accident location, without such development taking actions to remedy the accident situation.*

*(K) Development shall not exceed the maximum limits established in the Table NDC-1, Land Use Designations: Density, Intensity, and Implementing Zoning Districts, of the Neighborhoods, Districts, and Corridors Element or specific standards established in the zoning districts that limit density (dwelling units per acre) or intensity (floor area ratio) and must adhere to whichever limit is lower. Development in areas included in density or incentive programs (i.e. workforce housing programs specified in Article 4.7-Family/Workforce Housing) may exceed the Standard density limit, up to the specified Revitalization/Incentive density established for the program: development in all other areas shall not exceed the Standard density.*

The Conditional Use request is accompanied by a Site Plan application, which requires full review of the Performance Standards in Article 3.2. The overall proposal was reviewed and analyzed for consistency with the Performance Standards highlighted above, consisting of policies from the Comprehensive Plan or principles of good planning practices and Standards for Site Plan Action.

The Comprehensive Plan and the Standards for Site Plan Action identify the importance of protecting and supporting neighborhoods located west of I-95 through enhanced **connectivity**, the introduction of **complementary mix of uses** that meet the daily needs of residents, and the promotion of **design characteristics** that are consistent with the existing scale, intensity and development patterns. These policies aim to limit urban sprawl by designing communities for pedestrian and transit users along the major corridors, encouraging mix of uses within neighborhoods to create vibrant and walkable communities, while fostering cohesive neighborhood character.

The surrounding use of the subject property consists of predominately residential with commercial to the north. When evaluating the proposal, the intensity of the project was the primary focus to understand and manage its potential impact on the surrounding community.

Table NDC-1 of the Comprehensive Plan enforces a maximum Floor Area Ratio (FAR) of 3.0 under the GC land use category. The proposed project proposes an FAR of 0.10. While the FAR is similar to that of adjacent single-family residential areas, land use intensity is not measured solely by FAR. Intensity can also be influenced by factors such as traffic generation, noise, lighting, pollution, building scale, and employment density. Although the proposed FAR is relatively low, potential impacts related to noise, operational activities, increased traffic, and neighborhood congestion raise concerns regarding compatibility and the overall quality of life for nearby residents.

Likewise, a traffic statement and stacking analysis was requested to determine the traffic generation and circulation performance of the proposed automatic car wash at the subject property. The main entrance of the proposal is situated on Conklin Drive, a local street. The proposal features two separate driveways to allow dedicated ingress and egress. According to the stacking analysis conducted by a professional traffic engineer, the circulation pattern ensures a continuous flow of traffic. This study, based on a worst-case scenario during a peak Saturday hour, assesses the time required to process one vehicle through the tunnel. The study concludes that 24 inbound vehicles arrive in 15-minute intervals, necessitating a total queue length of 224 feet for members (119 feet for the middle lane and 105 feet for the south lane) and 104 feet for retail customers in the north lane. The site plan delineates the required queueing for each lane, measured from the kiosk to the point of lane intersection. Additionally, the traffic statement concludes that the project generates fewer than 21 peak hour trips and has an insignificant impact on the area roadways, therefore, the proposal is in compliance with the Palm Beach County Traffic Performance Standards. While this operational approach supports the analysis, the proximity to residential areas and utilization of a local street shall require monitoring of viability of the analysis that all stacking will be contained on-site and generation of the vehicles will not impact the local street. The Board should consider if the proposal would increase the level of activity and adversely impact on the local roadway.

Furthermore, the Performance Standards employ planning techniques to facilitate interconnectivity among similar land uses, thereby reducing potential traffic conflicts along the primary roadway, promoting walkability and multimodal transportation corridors. However, due to the nature of the use and its surroundings, pedestrian or vehicle interconnection is not deemed appropriate to protect adjacent residential areas from potential adverse impacts. The site plan includes pedestrian access from South Military Trail and ADA

accessibility, meeting the minimum requirements for pedestrian access from the right-of-way. While this method is preferred to mitigate any adverse impacts, this project does not correspond to the overall vision of connectivity to create a cohesive mix of uses and enhance the development pattern that encourages walkability and alternative modes of transportation. The Board should consider if the aspects of the proposed project that comply with some of the standards outweigh the negative impacts that conflict with the City's long-term growth objectives and future development patterns.

The proposed use demonstrates general consistency with the City's adopted Comprehensive Plan policies related to commercial activity, circulation, and employment generation. While the project aligns with the broad objectives of accommodating diverse commercial uses that could meet some of the needs of the residents while providing safe traffic movements and contribute to local job creation, the project should be evaluated within the context of the City's long term growth objectives and future development patterns,

The performance standards incorporate good planning practices by requiring analysis of noise, odors, dust, and traffic volumes to prevent degradation of the surrounding area and to maintain the safety, livability, and stability of adjacent properties. A noise study was requested and submitted by the applicant. The submitted operational noise analysis concluded that noise levels at all 11 receptors do not exceed the City's exterior noise standard of 60 dBA when measured at the neighboring property line. A noise exposure map, provided in Attachment G of the noise study, illustrates noise contour lines and levels of dBA. Table B illustrates that the proposed unwanted sounds levels are contained within the site and do not cross the property line of adjacent land uses. Although Table B lists all receptors with noise levels below 60 dBA, two specific points of concern are receptor number R-5B, located at the southeast corner of the property, with an operational noise level of 59.4 dBA. The receptor is adjacent to an amenity area belonging to the Sierra Vista residential community to the south. Additionally, receptor number R-9B at the northwest corner of the property has an operational noise level of 56.4 dBA. This receptor directly abuts a single-family residence to the west.

**Figure 1. Attachment G: Noise exposure map**

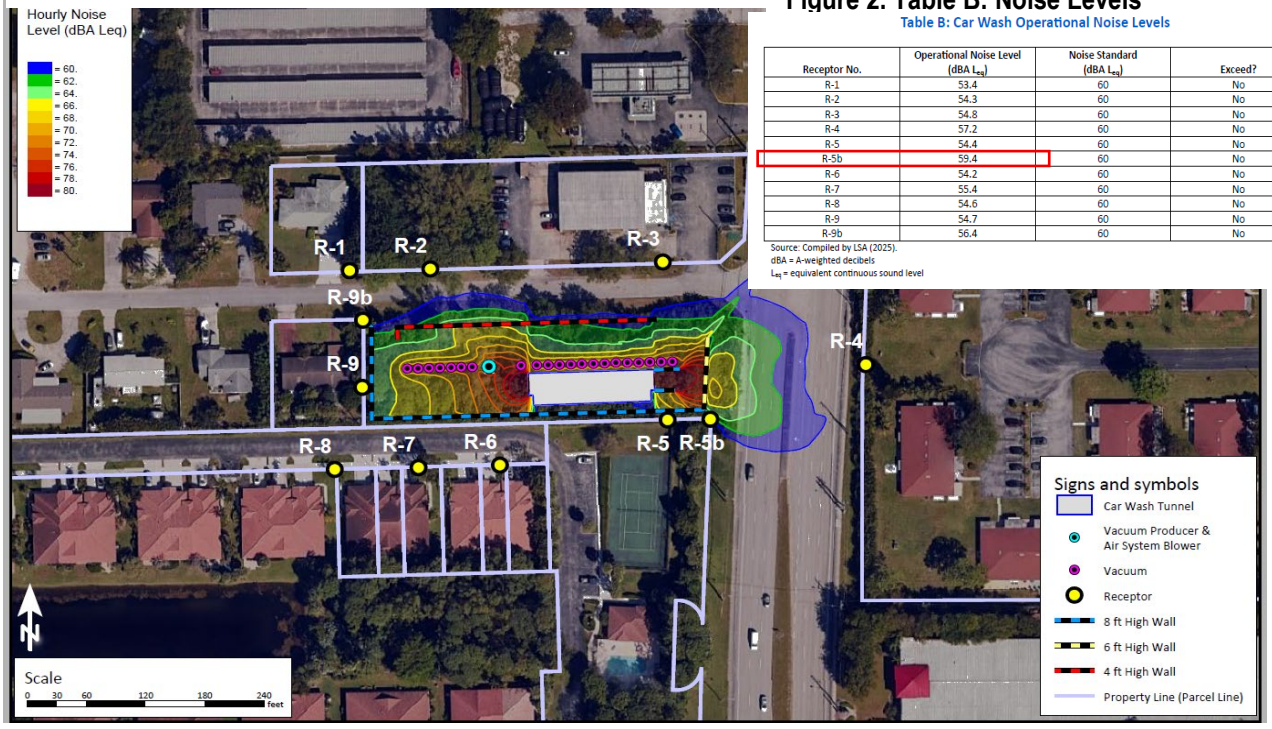



**Figure 2. Table B: Noise Levels**

Table B: Car Wash Operational Noise Levels

| Receptor No. | Operational Noise Level (dBA $L_{eq}$) | Noise Standard (dBA $L_{eq}$) | Exceed? |
|---|---|---|---|
| R-1 | 53.4 | 60 | No |
| R-2 | 54.3 | 60 | No |
| R-3 | 54.8 | 60 | No |
| R-4 | 57.2 | 60 | No |
| R-5 | 54.4 | 60 | No |
| R-5b | 59.4 | 60 | No |
| R-6 | 54.2 | 60 | No |
| R-7 | 55.4 | 60 | No |
| R-8 | 54.6 | 60 | No |
| R-9 | 54.7 | 60 | No |
| R-9b | 56.4 | 60 | No |

Source: Compiled by LSA (2025).
dBA = A-weighted decibels
$L_{eq}$ = equivalent continuous sound level

In evaluating the proposal, the Board should consider whether the proposed use and development intensity is compatible with the surrounding land uses, meet community needs without adversely impacting adjacent properties, and advance the overall vision and policy and objectives of the City.

Compatibility and potential impacts on the neighborhood are further discussed in the Conditional Use analysis of this report.

**LDR Section 3.2.4, Standards for Specific Areas or Purposes**

The property is not located within a flood prone zone area, a Wellfield Protection Zone, an environmentally sensitive area, on the barrier island, or a historic district. The property is not an individually designated site or in an historic district.

**(D) Compliance with the LDR.** *Whenever an item is identified elsewhere in the LDR, it shall specifically be addressed by the body taking final action on a land development application/request. Such items are found in Section 2.4.5 and in special regulation portions of individual zoning district regulations.*

This section evaluates the application's compliance with applicable provisions of the LDR as they relate to the site plan review. Staff's analysis is outlined below.

**Section 4.4.9. - General Commercial (GC) District**
The purpose and intent of the GC District is to provide basic regulations for **small parcels** which are best suited for **general retail and office uses** and to be applied primarily along arterial and collector streets. Uses may be conducted singularly or in combination within the same structure.

The subject property is a small vacant parcel located on a County designated Principal Arterial, providing direct access to regional transportation routes.

**LDR Section 4.4.9, General Commercial - 4.3.4(K) – Development Standards Matrix**

| **Standard/Regulation** | **Review** | |
|---|---|---|
| **Minimum** | **Required:** | **Proposed:** |
| **Lot Size** | 0 sf | 43,109 sf |
| **Lot Width** | 0 feet | 88.08 feet |
| **Lot Depth** | 0 feet | 354.80 feet |
| **Lot Frontage** | 0 feet | 88.08 feet |
| **Open Space** | 25% (10,777.25 sf) | 32% (13,908.80 sf) |
| **Maximum** | | |
| **Height** | 48 feet | 33 feet |
| **Minimum Setbacks** | | |
| **Front (East)** | 10 feet<br>*Special Landscape Setback of 30 feet | 81.3 feet |
| **Side Street (North)** | 10 feet | 60.2 feet |
| **Side Interior (South)** | 10 feet | 19.8 feet |
| **Rear (West)** | 10 feet | 167.1 feet |

**Article 4.6 – Supplemental District Regulations**

| **Regulation** | **Review** | |
|---|---|---|
| **4.6.4., Special district boundary treatment** | **Required:** | **Proposed:** |
| **Rear and side abutting residentially zoned property without any separation** | 10 feet building setback and a solid 6-foot-high finished masonry wall | 19.8 feet setback and a solid 8-foot-high finished masonry wall |
| **4.6.5., Walls, Fences, And Hedges.** | **Required:** | **Proposed:** |
| **Height restrictions** | **Front & Side Street:** Max. 6 feet<br>**Interior Side & Rear:** Max. 8 feet | **Front:** 6 feet<br>**Side Street:** 4 feet<br>**Interior Side & Rear:** 8 feet |
| **4.6.9, Off-Street Parking** | **Required:** | **Proposed:** |
| **Parking Spaces** | **4.5 spaces per 1,000 sf:** 19 Spaces | Total 19 Spaces<br>(18 Standard, 1 ADA) |
| **Bicycle Parking** | **Type I spaces:** 2 spaces minimum | 2 (Type I) spaces |

| | |
|---|---|
| **4.6.8, Lighting** | Illumination spillover is limited to the maximum degree feasible given the minimum illumination requirements for street lighting, off-street parking illumination, and lighting at the building and garage entrance. |

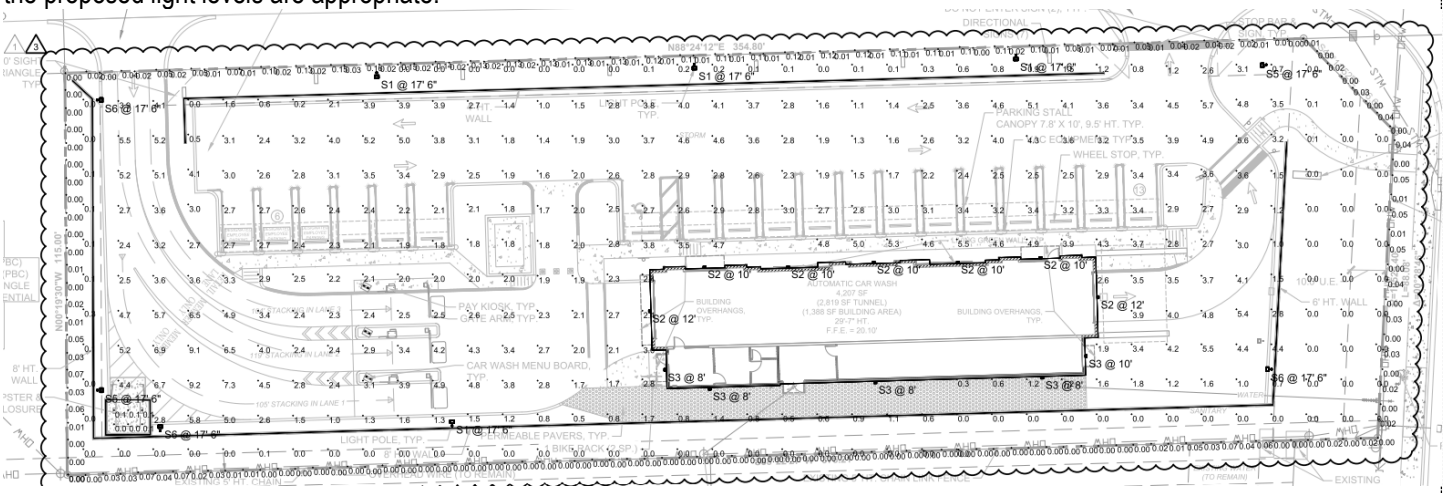
**Section 4.6.6. - Commercial and industrial uses to operate within a building**
*Certain conditional uses that are allowed within commercial, industrial, and mixed use districts can be characterized as outside uses. Such operations may be conducted outside when it is specifically determined through the conditional use process that the outside aspects of the use are appropriate. Conditions may be applied to mitigate visual and other impacts.*

All services associated with the automatic car wash will be conducted within the enclosed building, except for the use of free vacuums, which are located outside, accessible from the 19 parking spaces. Activities associated with outside conditional uses are allowed **when it is specifically determined through the conditional use process that the outside aspects of the use are appropriate**. The outdoor vacuums must be specifically considered and approved by the Board. Conditions may be applied to mitigate visual and other impacts.

**LDR Section 4.6.8, Lighting**
*Artificial lighting used to illuminate premises shall be directed in such a way to minimize light spillover on adjacent properties and reduce urban glow.*

The LDR requires all perimeter exterior lighting to be full cutoff luminaries to minimize spillover on adjacent properties. Maximum allowable illumination at the property line of any adjoining parcel or public right-of-way is 0.25 horizontal and vertical foot-candles measured at six feet above grade level.

The proposed photometric plan indicates that all site lighting will be full cutoff luminaries. All perimeter exterior lighting will follow a lighting schedule. Factoring in the perimeter wall and landscaping, the lighting is measured at 0.00-0.05 footcandles along all property lines, which is generally equivalent to the light level of a full moon on a clear night. While the proposed photometric plan complies with the City's standards, the site's location being immediately adjacent to residential should garner additional consideration as to whether the proposed light levels are appropriate.




## Review & Analysis: Architectural Elevations

**LDR Section 2.4.10(A)(3)(d), Findings**
*Architectural Elevations, including modifications to existing building facades, require an overall determination of consistency with the objectives and standards of Section 4.6.18, Architectural Elevations and Aesthetics, and any adopted architectural design guidelines and standards, as applicable.*

***LDR Section* 4.6.18. - Architectural elevations and aesthetics - *Minimum requirement***
*The requirements contained in this Section are minimum aesthetic standards for all site development, buildings, structures, or alterations except for single family development. It is required that all site development, structures, buildings, or alterations to same, show proper design concepts, express honest design construction, and be appropriate to surroundings*

There are five subsections for consideration in **LDR Section 4.6.18**:

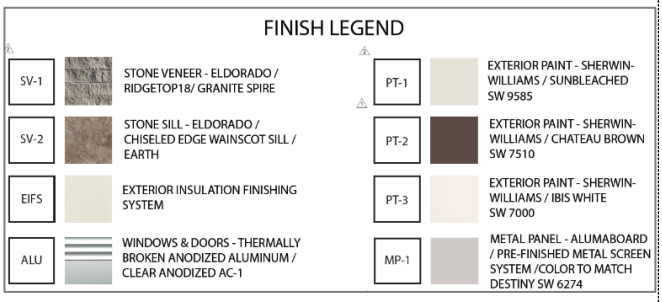
*(A) Minimum requirements;*
*(B) Building and structure requirements;*
*(C) Exterior space;*
*(D) Parking lots and vehicular use areas, and*
*(E) Criteria for board action.*

**(E) Criteria for Board Action.**

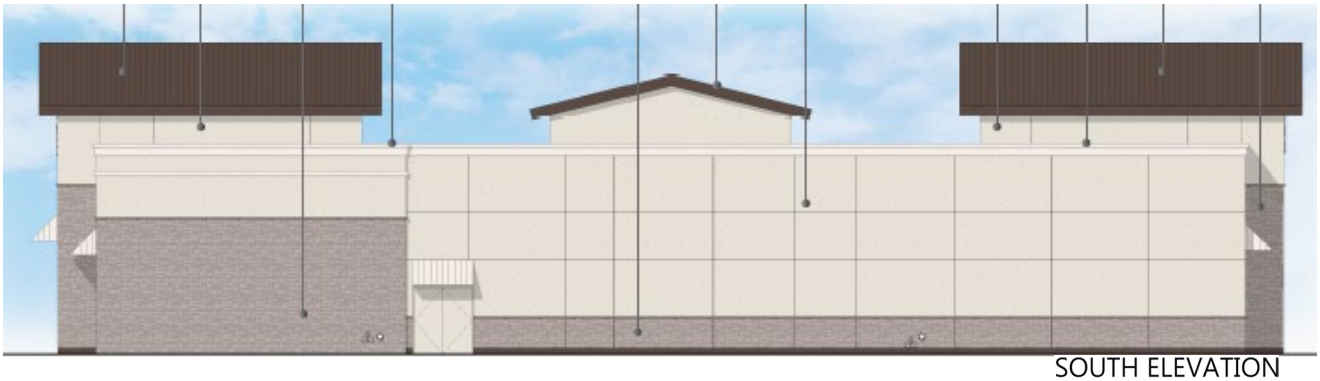
*The following criteria shall be considered by the Board in the review of plans for building permits. If the following criteria are not met, the application shall be disapproved.*

*(1) The plan or the proposed structure is in conformity with good taste, good design, and in general contributes to the image of the City as a place of beauty, spaciousness, harmony, taste, fitness, broad vistas, and high quality.*
*(2) The proposed structure, or project, is in its exterior design and appearance of quality such as not to cause the nature of the local environment or evolving environment to materially depreciate in appearance and value.*
*(3) The proposed structure, or project, is in harmony with the proposed developments in the general area, with the Comprehensive Plan, and with the supplemental criteria which may be set forth for the Board from time to time.*

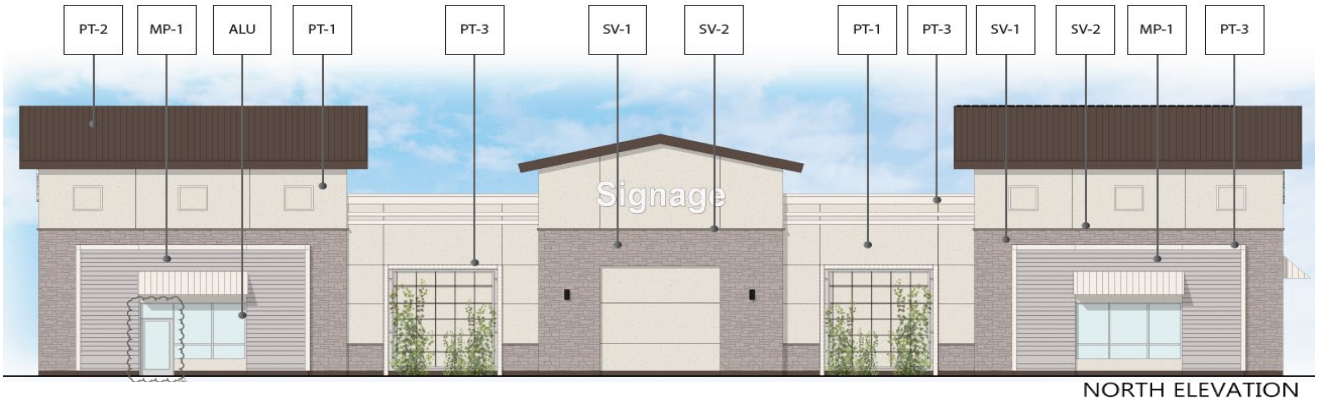
The proposed elevations provided below have been reviewed for compliance with Section 4.6.18 – Architectural Standards. The building's design incorporates neutral earth tones, varying materials, a staggered roofline, and ornamental detailing, making it generally compatible with the surrounding commercial and residential development. The north elevation, which faces Conklin Drive, proposes two trellises to create a point of interest in lieu of glazing due to the need to soundproof the building. A combination of smooth stucco, alumaboard paneling, and stone veneer treatment creates contrast in colors and materials along the front façade. The south elevation is fully enclosed, with no glazing, but still provides material variation. While the southern border abuts a multi-family residential neighborhood, the primarily blank façade is buffered with an eight-foot masonry wall and lush landscaping, including a Firebush hedge, Red Tip Cocoplum hedge, Silver Buttonwoods, Spanish Stoppers, and Crape Myrtles.




Overall, the proposed architecture is generally conforming with good taste, good design, and is compatible with the materials, colors, and scale of nearby development. Further, the quality of the design and materials used are not anticipated to deprecate in appearance and value.



SOUTH ELEVATION



NORTH ELEVATION



WEST ELEVATION



EAST ELEVATION

## Review & Analysis: Landscape Plan

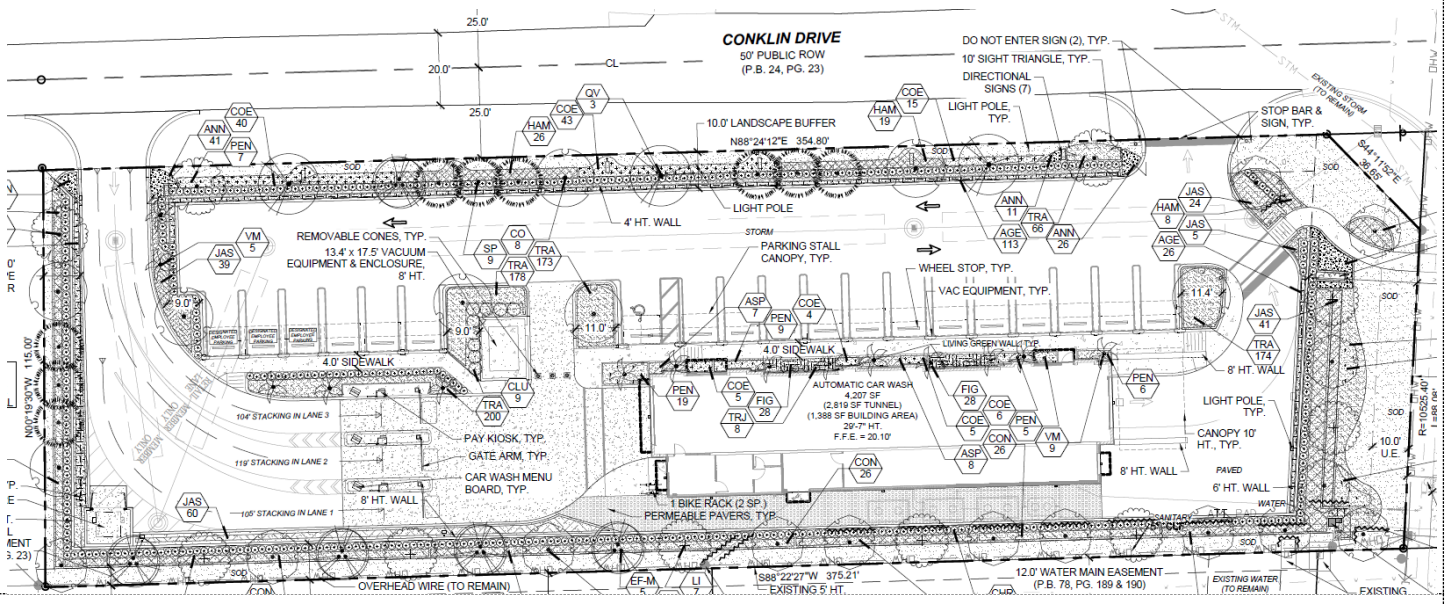
**LDR Section 2.4.10(A)(3)(c), Findings**

*Landscape Plans, including modifications to existing landscaping, shall be consistent with Section 4.6.16, Landscape Regulations.*

The landscaping plan for the proposed development has been evaluated for consistency with LDR Section 4.6.16. The project incorporates a lush and substantial landscape design along the perimeter of the site (image below and attached as full size).

The proposed development will provide and exceed the minimum buffering and landscaping around its perimeter. On the east perimeter, along South Military Trail, a required 30-foot special landscape buffer is provided with a 6-foot masonry wall, fully landscaped with Crape Myrtle and Spanish Stopper trees, layered with Penta and Minima Jasmine shrubs and ground cover. The perimeter buffer continues with an 8-foot-high masonry wall along the south and west property to include a 10-foot landscape buffer lined with Spanish Stopper, Crape Myrtle, and Southern Live Oaks, layered with various shrubs and ground cover. On the north perimeter along Conklin Drive, a 10-foot landscape buffer is provided to include a 4-foot-high masonry wall, heavily landscaped with three Southern Live Oaks, eight Green Buttonwood trees, two Pink Tabebuias, nine Sabal Palmetto, and one Spanish Stopper.

The proposal includes mitigation for the removal of a total of 64-inch DBH, replacing with a total of 105-inch DBH, and removal of five Slash Pines to be replaced one-for-one with Spanish Stopper. The Arborist Report, attached, reviews the conditions of the existing trees and proposed trees to be removed, many being invasive plant species. Overall, the proposed site improvements comply with the City's landscape requirements for properties within the GC zoning district.




## Review & Analysis: Conditional Use

**LDR Section 2.4.6(A)(1), Establishment of a Conditional Use: General**

*The City Commission, by motion, after review and recommendation for approval by the Planning and Zoning Board may approve or reject a request for a Conditional Use*.

**LDR Section 2.4.6(A)(4), Conditions**

*Conditions may be imposed pursuant to Article 2.2. In addition, limitations on the hours of operation and/or the longevity of the use may be imposed.*

If the Board provides a recommendation of approval, the request will be scheduled for an upcoming City Commission meeting. However, if the Board votes to deny the request, the application will not move forward in the review process to the City Commission. The final action by City Commission can impose conditions if there are concerns with the request or limitations on the hours of operation or the longevity of the use.

The Board's recommendation to the City Commission must take into consideration the two required findings below when evaluating the conditional use. Each finding below is further explained to apply each finding to the conditional use request.

**LDR Section 2.4.6(A)(5), Findings**

*In addition to provisions of Chapter 3, the City Commission must make findings that establishing the conditional use:*

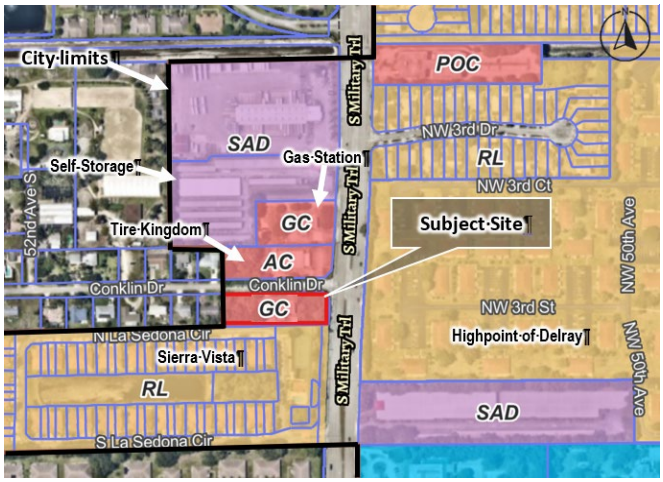
| ***a) Will not have a significantly detrimental effect upon the stability of the neighborhood within which it will be located*** |
|---|
| Stability of the neighborhood generally refers to the continued viability and enjoyment of existing uses. In this case, the continued enjoyment of the residential neighborhood without external disruptions such as noise, traffic, safety, and aesthetics shall be considered to determine positive findings to establish a conditional use. Conditions of approval to further mitigate these impacts could potentially aid in the stability of the neighborhood. |

Based upon best planning practices, the Comprehensive Plan policies and zoning regulations, to evaluate whether the proposed car wash would have significant detrimental effect on the stability of the area or hinder development or redevelopment of nearby properties, the Board must consider:

- Compatibility With Surrounding Land Uses
- Separation and Buffering from Residential Uses
- Noise Control and Operational Impacts
- Lighting and Visual Intrusion
- Traffic Generation and Circulation
- Visual Character and Site Design
- Consistency with the Comprehensive Plan

The subject property directly abuts residential property to the west and south. Across Conklin Drive to the north is an automotive-retail/service store (Tire Kingdom), and across South Military Trail to the east is the High Point of Delray residential community. The surrounding zoning, land use, and uses are outlined in Figure 2 and the table below:

**Figure 2.** Project Location & Land Use




| Adjacent Zoning, Land Use, and Use | | | |
|---|---|---|---|
| **Direction** | **Zoning Designation** | **Land Use** | **Use** |
| **North** | Automotive Commercial (AC) | General Commercial (GC) | Tire Kingdom |
| **South** | Low Density Residential (RL) | Medium Density (MD) | Sierra Vista Development |
| **East** | S Military Trail (120 foot ROW)<br>Low Density Residential (RL) | Low Density Residential (RL) | High Point of Delray |
| **West** | Unincorporated Palm Beach County - Agricultural Residential (AR) | Low Residential, 3 du/ac (LR-3) | Single Family Residential |

***b) Will not hinder development or redevelopment of nearby properties***

This finding is about land use compatibility and economic development potential. Determination must be made to whether allowing the conditional use would interfere with or discourage the ability of adjacent land uses to develop or redevelop in accordance with the Comprehensive Plan and Land Development Regulations.

**Compatibility and Neighborhood Context**

The site lies along a major commercial corridor (S. Military Trail), which is a County designated Principal Arterial road. Meanwhile, the adjacent single-family to the west and south introduces a sensitive boundary. The intent of the GC zoning district is generally for small parcels suited for **general retail and office** uses and to be applied primarily along arterial roadway to activate the corridor. A range of commercial activities is anticipated in the GC zoning, including offices, general retail and restaurants. Among these, offices and retail uses are generally considered the most appropriate transitional uses when located adjacent to residential neighborhoods because they generate lower noise levels, predictable hours of operation, produce limited light and glare, and create visual compatibility with residential scale and design.

While a car wash establishment is an anticipated use in the GC zoning district, an automatic car is inherently more operationally intense, particularly related to noise, light, and traffic. These characteristics can produce auditory and visual impacts that require mitigation to achieve compatibility. The Board should consider whether the use is appropriate in its context and if adequate mitigation measures have been implemented such as buffers, walls, limits of hours, and proper site design.

**Noise Control and Operational Impacts**

Automatic car washes create periodic noise from the car wash tunnel, vacuums, blowers and vehicle queuing. The most significant risk to stability arises from acoustic and visual intrusion into nearby homes, particularly on the west and south property lines. The development is subject to the City's noise ordinance, which limits sound levels to 60 dB or less when measured at any point on neighboring property lines. The noise study submitted by the applicant concludes that the use will not exceed 60 dB limit. However, careful consideration should be given to the noise exposure map and Table B (discussed above), as it depicts areas where projected noise levels approach the established threshold, potentially affecting adjacent residential properties.

The applicant has incorporated several sound buffering measures to mitigate noise impacts to adjacent residences. The site design includes an 8-foot masonry wall with landscape screening along the southern and western boundaries, as well as 8-foot-high block walls just north and south of the exit of the car wash tunnel. The tunnel exit is oriented toward the major roadway to direct noise away from residential areas and is supplemented by a 6-foot-high wall with landscaping. Along the northern property line, abutting Conklin Drive, a 4-foot-high masonry wall with landscape is proposed to provide additional screening. Furthermore, the applicant proposes to install silencers on the dryers and the vacuum producers will be surrounded by a 6-foot-high wall. The proposed hours of operation are from 7:00 am until 9:00 pm daily. The Board should consider whether these soundproofing measures are sufficient to mitigate potential noise impacts or whether additional attenuation is warranted to ensure that noise levels remain below the 60 dB threshold established by the City's noise ordinance.

**Lighting and Visual Intrusion**

Typically, car washes use bright lighting for safety purposes and signage. The concern of lighting is the uncontrolled glare that can intrude into the nearby residences. The city lighting standards require all perimeter exterior lighting to be full cutoff luminaries and no more than 0.25 footcandle to minimize spillover on adjacent properties. Likewise, to further decrease urban glow, no illumination shall be directed upwards. All proposed lighting are directed downwards and are full cut off luminaries with lighting measured at 0.00-0.05 footcandles along all property lines. The proposed light poles along the western edge are 17 feet, 6 inches high while three Pink Tabebuia trees and three Sabal Palmettos at 16 feet in height are proposed along the western perimeter buffer. The Board should consider if the minimum lighting standards are adequate to mitigate any potential visual intrusion to adjacent residences or additional measures shall be implemented.

**Traffic Generation and Circulation**

Overall, the traffic analysis concludes that the proposed automatic car wash ensures a continuous flow of traffic and the required queuing of vehicles is maintained on-site. Likewise, the proposal is designed to include an emergency bypass lane in anticipation of a customer needing to exit the site in an emergency. Although the traffic statement concludes the proposed use will not impact the roadways, the Board should consider if the proposal would increase the level of activity and adversely impact on the local neighborhood street.

**Visual Character and Site Design**

While the operational characteristics of an automatic car wash is more intense, when designed thoughtfully, a car wash can function as a transitional use under certain conditions. In terms of visual cohesiveness, the concern is to maintain visual compatibility and harmony within the neighborhood context. The proposed development exhibits architectural and visual characteristics that contribute to a compatible transition between commercial and residential. The building modest height, articulated façade, and use of neutral materials provides a residentially scaled architectural expression consistent with surrounding development. Likewise, the building placement not only affects the functionality of the site but also can determine cohesiveness with adjacent land uses. The proposed orientation of the tunnel is setback away from the western edge with buffers separating the residential use at the most extent possible way while the positioning of the exit which accommodates the blowers towards the roadway demonstrates thoughtful site design. However, the operations outside of the building, specifically the vacuum spaces in front of the building adjacent to Conklin Drive, may represent visual incompatibility with the adjacent residential development. While the building design is compatible with nearby residences in material, color and scale, the vacuums and above canopy shelter in front of the façade disrupts the site's visual harmony and weakens its cohesive appearance. The Board shall further consider whether the use by its nature and building placement would discourage enjoyment of the residential neighborhood and effect the stability of the surrounding area.

**Consistency with the Comprehensive Plan**

While the project aligns with the broad objectives of accommodating diverse commercial uses that could meet some of the needs of the residents and contribute to local job creation, while providing safe traffic movements, the project should be evaluated within the context of the City's long term growth objectives and future development patterns.

As mentioned earlier, the Comprehensive Plan and the Performance Standards identify the importance of protecting and supporting neighborhoods located west of I-95 through enhanced connectivity, the introduction of complementary mix of uses that meet the daily needs of residents, and the promotion of design characteristics that are consistent with the existing scale, intensity and development patterns. These policies aim to limit urban sprawl by designing communities for pedestrian and transit users along the major corridors, encouraging mix of uses within neighborhoods to create vibrant and walkable communities, while fostering cohesive neighborhood character. The Board shall consider whether the proposed use and development intensity is compatible with the surrounding land uses, meets community needs without adversely impacting adjacent properties, and advances the overall vision and policy and objectives of the City.

## Summary of Board Considerations

- Whether the proposed use and development intensity are compatible with the surrounding land uses, meets community needs without adversely impacting adjacent properties, and meets the overall vision and policies of the Always Delray Comprehensive Plan.
- Whether the use is appropriate in its context and if adequate mitigation measures have been implemented such as buffers, walls, limits of hours, and proper site design.
- Whether these soundproofing measures are sufficient to mitigate potential noise impacts or whether additional attenuation is warranted to ensure that noise levels remain below the 60 dB threshold established by the City's noise ordinance.
- Whether the minimum lighting standards are adequate to mitigate any potential visual intrusion to adjacent residences or additional measures shall be implemented.
- Whether the proposal would increase the level of activity and adversely impact on the local neighborhood street.
- Whether the use by its nature and building placement would discourage enjoyment of the residential neighborhood and effect the stability of the surrounding area.

## Options for Board Action

**A.** Recommend **approval** of a Level 4 Site Plan Application with Architectural Elevations and Landscape Plan, and including a Conditional Use (Resolution No. 210-25) to allow a 4,207 square foot automatic car wash at 14145 South Military Trail, by finding that the request and approval thereof is consistent with the Comprehensive Plan and meets criteria set forth in Section 2.4.6(A)(5), and the Land Development Regulations.

**B.** Recommend **approval as amended** of a Level 4 Site Plan Application with Architectural Elevations and Landscape Plan, and including a Conditional Use (Resolution No. 210-25) to allow a 4,207 square foot automatic car wash at 14145 South Military Trail, by finding that the request and approval thereof is consistent with the Comprehensive Plan and meets criteria set forth in Section 2.4.6(A)(5), and the Land Development Regulations.

**C.** **Deny** a Level 4 Site Plan Application with Architectural Elevations and Landscape Plan, and including a Conditional Use (Resolution No. 210-25) to allow a 4,207 square foot automatic car wash at 14145 South Military Trail, by finding that the request and approval thereof is not consistent with the Comprehensive Plan and does not meet criteria set forth in the Land Development Regulations.

**D.** **Continue with direction**.

## Public and Courtesy Notices

| | |
|---|---|
| _X_ Courtesy notices were sent at least 7 calendar days prior to meeting to the following neighborhood groups and homeowner associations:<br><br>• Pine Trail South | _X_ Public Notice was posted at the property 7 calendar days prior to the meeting.<br>_X_ Public Notice was mailed to property owners within a 500' radius 10 days prior to the meeting.<br>_X_ Public Notice was posted to the City's website 10 calendar days prior to the meeting. |

| | |
|---|---|
| Sierra Vista is in close proximity to the subject property, but does not have an active HOA listing with the City. | _X_ Public Notice was posted in the main lobby at City Hall 10 working days prior to the meeting.<br>_X_ Agenda was posted at least 7 calendar days prior to meeting. |

| Technical Advisory Committee (TAC) Timeline | | |
|---|---|---|
| Review No. | Submittal Date | TAC Comments Transmitted |
| 1 | 01/30/2025 | 03/06/2025 |
| 2 | 05/14/2025 | 06/10/2025 |
| 3 | 08/13/2025 | 09/02/2025 |
| 4 | 09/17/2025 | 10/03/2025 |
| **Extensions Requested by the Applicant** | | |
| 1 | 04/25/2025 | |
| 2 | 08/05/2025 | |

# CONKLIN CAR WASH
# JUSTIFICATION STATEMENT

urban design studio

Urban Design
Land Planning
Landscape Architecture

**Request(s):** Conditional Use & Site Plan (Level 4) Application
**Submittal:** January 23, 2025
**Resubmittal:** April 24, 2025
**Resubmittal:** May 13, 2025
**Resubmittal:** August 6, 2025

## OVERVIEW OF REQUEST & PROPERTY INTRODUCTION

On behalf of Fazio Consulting, LLC ("Applicant"), Urban Design Studio ("UDS") has prepared and hereby respectfully submits this application to request Conditional Use and Level 4 Site Plan Approval to allow an Automatic Car Wash use on a 0.99-acre site ("Subject Property").

The Subject Property is located on the southwest corner of S. Military Trail and Conklin Drive, approximately 0.40-miles south of Lake Ida Road and identified in the Palm Beach County Property Appraisers records under property control number 12-42-46-14-03-002-0010, with a physical address of 14145 S. Military Trail.

The Subject Property has a future land use designation of General Commercial ("GC") and located within the General Commercial ("GC") zoning district. The site is currently vacant and has no current zoning approvals. The purpose of this application is to request Conditional Use and Level 4 Site Plan approval for a one (1) story, 4,207 square foot ("SF") automatic car wash use.

| **Project Information** | |
|---|---|
| Applicant | Fazio Consulting, Inc. |
| Owner | Andella Holdings, LLC |
| Agent/Planner | Urban Design Studio – Bradley Miller / Ailish Villalobos |
| Site Location | SW corner of S. Military Trail and Conklin Drive, approximately 0.40-miles south of Lake Ida Road |
| Property Control Number | 12-42-46-14-03-002-0010, 14145 S. Military Trail |
| Size | 0.99-AC (43,109 SF) |
| Existing Use | Vacant Commercial |
| Proposed Use | Automatic Car Wash – One Tunnel |
| Proposed Intensity | 4,207 SF (2,819 SF tunnel & 1,388 SF bldg. area) / 0.10 FAR |

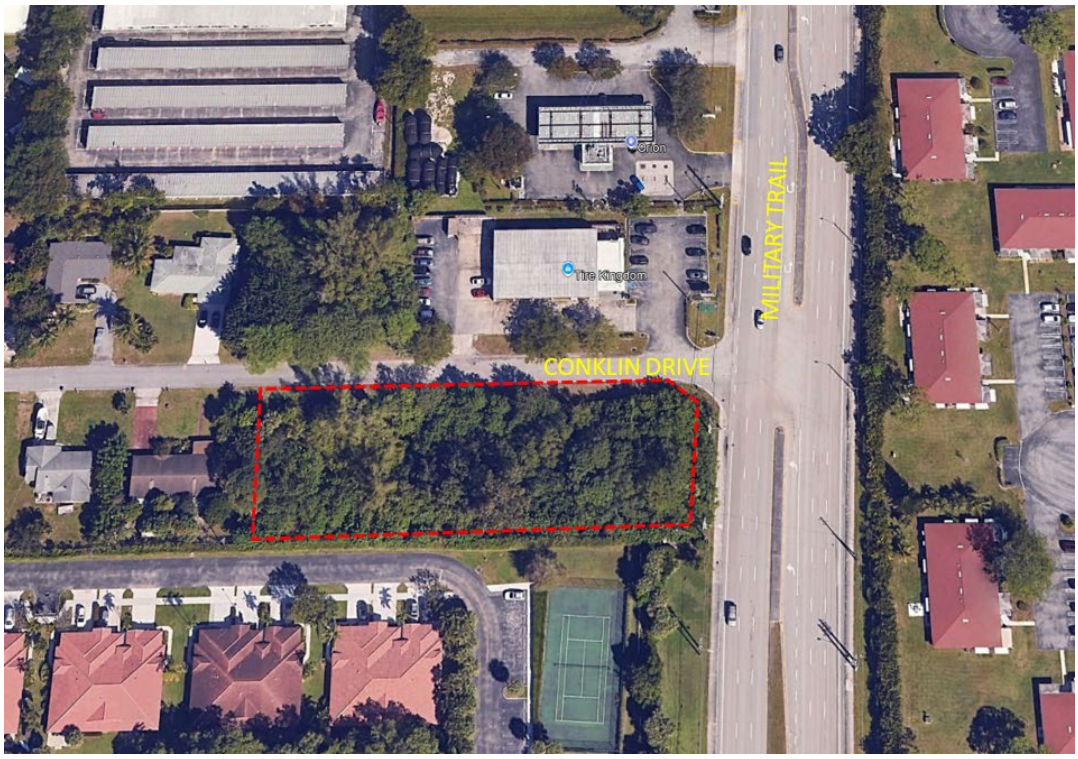
## SURROUNDING USES

North: Developed general commercial use (Tire Kingdom) in the Automotive Commercial ("AC") zoning district with a GC future land use designation.

South: Developed Multi-Family Residential community (Sierra Vista) in the Low Density Residential ("RL") zoning district with a Medium Density ("MD") future land use designation.

East: S. Military Trail 120' right-of-way ("ROW)" followed by developed Multi-family Residential (High Point of Delray) zoned Residential Low ("RL") with a Medium Density ("MD") future land use designation.

West: Developed Single Family Residential, located within limits of unincorporated Palm Beach County, zoned Agricultural Residential ("AR") with a Low Residential, 3 units per acre ("LR-3") future land use designation.




## PROJECT DETAILS

The subject site is and has historically been a commercially zoned, consistent with several properties' property along the Military Trail corridor to the north and closer to Atlantic Avenue. The site is presently overgrown with a mix of invasive and non-invasive vegetation which will be cleared and re-planted with new landscape and screening with the proposed development plan.

The proposed carwash development includes a 4,207 SF one-story building consisting of one automatic car wash tunnel. Access to the subject site is provided on Conklin Drive, a 50-foot public right-of-way, with the primary frontage established as Military Trail. The carwash building is proposed at 29'-7" feet in height which is below the maximum 48'-0" allowance within the GC zoning district. The building façade provides for modern design principals with coastal-inspired elements, creating a clean and contemporary aesthetic suitable for the vibrant and growing community of Delray Beach. The structure features a mix of textured stone veneer and horizontal siding, giving it both visual interest and durability. Also provided along the north elevation are two living wall features. A neutral color palette contemplates the surrounding natural environment, while modern metal canopies and large windows provide a welcoming, functional storefront experience. Provided with this application are building elevations and renderings prepared by a.23 Studios.

The building exceeds minimum setback requirements (see table below) and is oriented in an east/west direction to accommodate the length of the carwash tunnel and allow for maximum stacking of cars within the site, along with the most efficient circulation of cars through the site with a one-way entry to the car wash tunnel from the west driveway and one-way exit from the car wash tunnel and the east driveway.

| Setback | Required | Provided |
|---|---|---|
| Front (Military Trail) | 10' | 81.3' |
| Side Street | 10' | 60.2' |
| Side Interior | 10' | 19.8' |
| Rear | 10' | 167.1' |

The one-tunnel carwash building will be screened by a masonry wall and landscaping on the east, west, south and north sides of the property. Pursuant to LDR Section 4.6.4(A)(2)(a), the Subject Site requires a 10-foot landscape buffer on the north, west and south property lines, with a 6-foot-high wall required within the west and south sides. Provided is a 10-landscape buffer on the north, west and south property lines, with an 8-foot-high masonry wall provided on the west and south sides and a 4-foot-high masonry wall provided on the north side. The wall will further buffer the commercial zoned property from the residential zoned property and the placement of the wall is set into the property to allow for substantial landscaping on the exterior side of the wall facing the residentially zoned properties. The east property line runs along Military Trail right-of-way ("ROW") and has a special landscape buffer. LDR Section 4.3.4(H)(6)(b)6, requires that properties along Military Trail provide a special landscape setback that is the lesser distance of either 30-feet or 10% of the lot depth. As such, a 30-foot-wide landscape buffer is required and provided. While a wall is not required within this landscape buffer, a 6-foot-high masonry wall is provided along a portion of this buffer to provide additional screening and sound mitigation on the east side of the property.

The carwash use hours of operation are anticipated to be 7am-9pm, daily, with 2-3 employees estimated on-site per shift. There are three proposed queuing lanes within the site, each lane meets and exceeds the 100-foot minimum stacking distance requirement per LDR Section 4.6.9(D)(3)(c)(3). Two lanes will be designated for members only and one lane will be designated for retail. The members only lanes are an equivalent of a fast pass lane where there is no payment processed. The Customer pulls up, license plate recognition reads the tag, and

the lift gate opens. The processing time is roughly 3-4 seconds for these customers. The retail lane is designated for retail Customers that are greeted by a Staff Member and a transaction is tendered. The processing time is roughly 1 minute for these customers. Staff is also present to help any customer in normal operation, or in the case of an emergency. Staff can open the gate manually allowing a vehicle to pull forward to utilize the by-pass lane, which is located prior to a car entering the car wash tunnel.

The pay-station also includes software that links the pay-stations together and they communicate with one another, creating a virtual queue opening for only 1 car to proceed to the tunnel at a time. Loop sensers in the ground detect vehicle progress, keeping gates closed until the vehicle has pulled up far enough to allow another vehicle to pull forward and proceed through the car wash tunnel. This process continually repeats itself and controls the distribution of cars from three lanes down to one lane.

Provided within the Traffic Statement, prepared by PTC Transportation Consultants, is a queuing analysis which confirms adequate storage is provided on-site for the proposed car wash operation and the proposed location of the bypass lane, after the pay stations and with an Attendant present during operating hours at the pay stations, is the quickest escape route with no back up maneuvers and no disruption of traffic flow.

Code does not provide for a specified parking ratio for Automatic Car Wash uses. As confirmed with Staff, the Automatic Car Wash is classified as a General Commercial use and pursuant to Section 4.6.9(3)(a) is required to provide parking at a rate of 4.5 spaces per 1,000 SF which includes retail floor area, associated warehouse and storage floor area, and employee and management facilities. The proposed building includes 1,388 SF of building area (under air) and the open-air automatic car wash tunnel includes 2,819 SF. Based on the parking ratio for General Commercial use, the overall 4,207 SF area is to be applied for the Automatic Car Wash, which requires 19 parking spaces. The proposed plan provides for 19 parking spaces, including 1 handicap space and 3 spaces designated for employee parking. Each space is vacuum accessible for patrons to vacuum their cars after exiting the automated car wash tunnel, should they choose. Terminal landscape islands are provided in accordance with LDR Section 4.6.16(H)(3)(i).

Two (2) Type 1 bicycle parking spaces are provided in accordance with Table 4.6.9(C)-1, for new non-residential uses. The bicycle parking spaces (rack) are located at the southwest corner of the carwash building, and under the building overhang for weather protection.

A dumpster enclosure is located in the southwest portion of the site. Garbage collection will be coordinated for pick up during off-business hours with the garbage truck entering and exiting the site from the west entry point. Provided as an exhibit with this application is communication from Waste Management acknowledging the dumpster location and collection logistics along with a Garbage Truck Movement Exhibit (sheet C-800).

The Site Plan indicates a proposed free-standing sign along Military Trail, along with proposed directional signage locations along Conklin Drive. Typical sign details are provided on the Site Plan and Engineering Detail sheets; however, it is understood that signage will be processed under a separate permit following Site Plan approval.

A lighting plan is provided with this application in accordance with LDR Section 4.6.8. The proposed new light poles within the site does not create spill over onto adjacent properties.

Although not a requirement of this application, the applicant recognizes the typical concerns of noise of the car wash use and therefore has provided a sound study which confirms that the proposed construction will comply with the City's noise regulations.

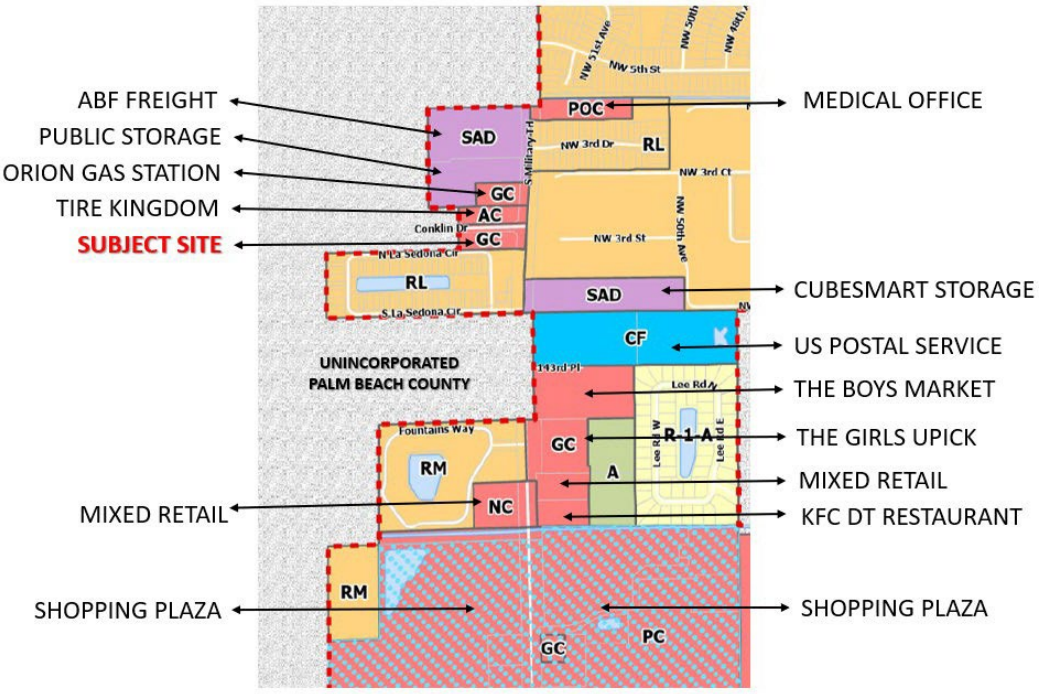
It should be noted, that the proposed development plan does not request any relief (variances or waivers) to regulations and is in compliance with LDR Section 4.3.4 base district development standards for the GC zoning district.

## CONDITIONAL USE STANDARDS

The application requests conditional use approval for an Automatic Car Wash. Pursuant to Section 2.4.6(A)(5), in addition to provisions of Chapter 3, the City Commission must make findings that establishing the conditional use will not:

**a) Have a significantly detrimental effect upon the stability of the neighborhood within which it will be located.**

**Response:** As shown in the map below, this property is within the boundary of the City of Delray Beach in an area of non-residential uses to the north and a portion of the Sierra Vista residential community and recreational amenities to the south, along the frontage of the 6-lane Military Trail arterial roadway. To the west is the Rockland Park residential subdivision, platted since 1953. The subject site was originally located within the boundary of unincorporated Palm Beach County, with approvals granted in 1980 for a rezoning from Agricultural District to Specialized Commercial via County Resolution R-1980-0836, along with a Special Exception to allow a Funeral Home via County Resolution R-1980-0837. The property was subsequently annexed into the City of Delray Beach, and although it consists of lots of the Rockland Park recorded plat, with a future land use designation of Transitional (TRN) and within the Special Activities District (SAD) zoning district. In 2020, the property was approved for a land use map amendment from TRN to General Commercial (GC) and a rezoning from SAD to GC. This site is infill development, surrounded by stable, established residential and non-residential areas. The proposed use is an allowed use subject to the Conditional Use standards. The information submitted with this application demonstrates that the proposed use meets or exceeds all relevant regulations of the GC zoning district. It complies with Palm Beach County's traffic impact requirements, adheres to engineering design standards for traffic flow, and includes significant landscaping and an 8-foot-high masonry wall to provide attenuation between the proposed car wash and adjacent residential areas. This application also provides a supportive noise study confirming that the car wash will be designed and constructed to comply with all City noise regulations. Once this application is approved, additional permits will be needed to meet all engineering and building code regulations before construction begins. The purpose of this process and the information provided is to demonstrate that the proposed car wash will <u>not</u> have a significantly detrimental effect on the stability of the neighborhood.




**b) Hinder development or redevelopment of nearby properties.**

***Response:*** *As indicated above, this property is an undeveloped infill site that was designated for commercial use by unincorporated Palm Beach County in 1980 and subsequently the City of Delray Beach upon annexation. The property was approved for a land use map amendment from Transitional (TRN) to General Commercial (GC) and a rezoning from Special Activities District (SAD) to GC in 2020. The approval of this Conditional Use application will allow for the continuation of permitting and development of this remaining parcel along Military Trail. It in no way will hinder redevelopment of nearby properties which all are currently developed and established with non-residential and residential uses. In fact, not approving this application, would be considered a hindrance of development on this remaining infill parcel of land.*

## Review Criteria for Site Plan Approval

According to LDR Section 2.4.5 (F): New application for development of vacant land, or for modification of a developed property when no valid site plan of record exists, and which requires full review of Performance Standards found in Section 3.1.1. Following are the standards for Site Plan Actions in Section 3.2.3 and a response as to how each is addressed by this application.

**A. Building design, landscaping, and lighting (glare) shall be such that they do not create unwarranted distractions or blockage of visibility as it pertains to traffic circulation.**

**Response**: The design ensures clear visibility along Military Trail and Conklin Drive

Avenue as per Code. The car queuing area exceeds code requirements to minimize traffic conflicts on Conklin Drive. Refer to the full plan set for additional building details, landscape plans, and the photometric plan.

**B. Separation of different forms of transportation shall be encouraged. This includes pedestrians, bicyclists and vehicles in a manner consistent with policies found under Objectives D-1 and D-2 of the Transportation Element**.

**Response:** The design provides for and an internal sidewalk through the site. with a walkway connection from the subject property to the existing sidewalk along Military Trail, where there is an active Palm Tran bus route that spans through the County. Additionally, bicycle parking is provided on the west side of the carwash building, which provides a convenient and safe space for bicycle storage under the building canopy.

**C. Open space enhancements as described in policies found under Objective B-1, of the Open Space and Recreation Element are appropriately addressed.**

**Response:** The proposed redevelopment plan exceeds open space requirements, with 25% (10,777 SF) required and 32% (13,908 SF) provided. The proposed new building has been designed, located and oriented with the intention to maximize open space, landscaping buffers/screening, foundation planting and parking on the 0.99-acre site.

**D. The City shall evaluate the effect that any street widening or traffic circulation modification may have upon an existing neighborhood. If it is determined that the widening or modification will be detrimental and result in a degradation of the neighborhood, the project shall not be permitted.**

**Response:** There is no anticipated need to widen Conklin Drive or Military Trail based on the proposed development of the site.

**E. Development of vacant land which is zoned for residential purposes shall be planned in a manner which is consistent with adjacent development regardless of zoning designations**.

**Response:** This site, when it was annexed, was designated by the City of Delray for a future land use designation of General Commercial and is zoned General Commercial; criteria not applicable.

**F. Vacant property shall be developed in a manner so that the future use and intensity are appropriate in terms of soil, topographic and other applicable physical considerations; complementary to adjacent land uses and fulfills remaining land use needs.**

**Response:** The subject site is a vacant infill property in which the City designated for future commercial use and the related intensity that is regulated by the City Code. The proposed car wash has been designed, located and oriented with the consideration of soil, topographic and other physical considerations (such as building height, setbacks and landscape/open space requirements) to complement and protect impacts on

surrounding uses. The plans and documents submitted with this application demonstrate the appropriateness of this use for an automatic car wash.

**G. Redevelopment and the development of new land shall result in the provision of a variety of housing types which shall continue to accommodate the diverse markup of the City's demographic profile, and meet the housing needs identified in the Housing Element. This shall be accomplished through the implementation of policies under Object B-2 of the Housing Element.**

**Response**: Not applicable to this application.

**H. The City shall consider the effect that the proposal will have on the stability of nearby neighborhoods. Factors such as noise, odors, dust, traffic volumes and circulation patterns shall be reviewed in terms of their potential to negatively impact the safety, habitability and stability of residential areas. If it is determined that a proposed development will result in a degradation of any neighborhood, the project shall be modified accordingly or denied.**

**Response:** The surrounding uses of this property consist of non-residential businesses, multifamily residential homes and single-family residential homes which have been established for many years. Likewise, the subject property has been designated for commercial use by unincorporated Palm Beach County in 1980, and subsequently the City of Delray Beach upon annexation. In 2020, the property was approved for a land use map amendment from Transitional (TRN) to General Commercial (GC) and a rezoning from Special Activities District (SAD) to GC. Development of any commercial use on this property will naturally be a change for the area, however no different than some of the other commercial uses developed in this area. The applicant has taken the potential effects of noise, odors, dust, traffic volumes and circulation patterns into consideration for the proposed design. A sound study is provided that demonstrates that the car wash will comply with the noise levels of the Code. Excess on-site queuing space is part of the design to keep traffic off of Conklin Drive. The current car washes are also designed with environmental safe guards and recycling efforts which are regulated not only by the City, but also other state and federal agencies. The traffic volumes have been prepared by the applicants traffic engineer and the study will be thoroughly reviewed and evaluated by the City and Palm Beach County Traffic Engineering Division to address any traffic impacts on the roads. The applicant has made every effort to consider the effects of the development on the neighborhood and has designed accordingly, exceeding many City code regulations.

**I. Development shall not be approved if traffic associated with such development would create a new high accident location or exacerbate an existing situation causing it to become a high accident location, without such development taking actions to remedy the accident situation.**

**Response:** This property is designated for commercial use; however, it is currently undeveloped. Naturally, any type of commercial development proposed for this site will alter the traffic conditions of Conklin Drive. The applicant took this into consideration and designed the site to provide excessive on-site queuing, substantial landscape and an 8-

foot wall separating the car wash from adjacent residential uses, a traffic study and queuing analysis was conducted to demonstrate that the use does not adversely impact traffic capacity of the roadways; plus, a sound study to show that the car wash can be designed to comply with the noise levels of the City's Code of Ordinances. Although this development will be a change to the current conditions of the area, it has been designed and is being proposed with consideration of the potential impacts and without request of any variances or waivers from the Code.

**J.** Tot lots and recreational areas, serving children from toddlers to teens, shall be a feature of all new housing developments as part of the design to accommodate households having a range of ages. This requirement may be waived or modified for residential developments located in the downtown area, and for infill projects having fewer than 25 units.

**Response:** Not applicable to this application.

## CONCLUSION

In conclusion, this is an established commercial property and a proposed use that is allowed by the commercial designation and has sufficiently addressed the standards for Conditional Use approval. On behalf of the Applicant, Urban Design Studio requests consideration of this application for Conditional Use and Level 4 Site Plan Approval to allow an Automatic Car Wash use on the Subject Property.

We appreciate your input and recommendation on proceeding forward with the approval of the development plan package. Should you require any additional information, please contact Bradley Miller or Ailish Villalobos or via email bmiller@udsflorida.com or avillalobos@udsflorida.com.

## DEVELOPMENT TEAM

OWNER / APPLICANT:
**FAZIO CONSULTING, LLC**
50 LIBERTY DRIVE, SUITE 9F
BOSTON, FL 02110

ARCHITECT:
**A.23 STUDIOS**
711 E. 9TH STREET
TUCSON, AZ 85719

TRAFFIC ENGINEER:
**PINDER TROUTMAN CONSULTATING, INC.**
601 HERITAGE DRIVE, SUITE 493
JUPITER, FL 33458
(561) 296-9698

IRRIGATION:
**PARKER YANNETTE DESIGN GROUP, INC.**
4425 MILITARY TRAIL, SUITE 202
JUPITER, FL 33458
(561) 747-5069

LANDSCAPE ARCHITECT & PLANNER:
**URBAN DESIGN STUDIO**
610 CLEMATIS STREET, SUITE CU02
WEST PALM BEACH, FL 33401
(561) 366-1100

SURVEYOR:
**PERIMETER SURVEYING & MAPPING**
947 CLINT MOORE ROAD
BOCA RATON, FL 33487
(561) 241-9988

CIVIL ENGINEER:
**KEEN ENGINEERING INC.**
7280 PALMETTO PARK RD., SUITE 105
BOCA RATON, FL 33433
(561) 325-6700

## NOTES

1. THIS PLAN IS BASED ON A SURVEY PREPARED BY PERIMETER SURVEYING & MAPPING DATED 10-11-2024.
2. THIS PLAN IS SUBJECT TO APPLICABLE ZONING AND DEVELOPMENT REGULATIONS.
3. ALL PLANS SUBMITTED FOR PERMITTING SHALL MEET THE CITY'S CODES AND THE APPLICABLE BUILDING CODES IN EFFECT AT THE TIME OF PERMIT APPLICATION.
4. ALL ABOVE GROUND MECHANICAL EQUIPMENT SUCH AS, BUT NOT LIMITED TO, EXTERIOR UTILITY BOZES, METERS, AND TRANSFORMERS SHALL BE VISUALLY SCREENED.
5. CURB CUT REQUIRED WHERE ACCESS AISLE MEETS SIDEWALK.
6. ALL UTILITIES ARE AVAILABLE AND WILL BE PROVIDED BY THE APPROPRIATE AGENCIES.
7. ALL PLANS SUBMITTED FOR SPECIFIC PERMITS SHALL MEET THE CITY'S CODE REQUIREMENTS AT TIME OF APPLICATION. THESE PERMITS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: SITE LIGHTING, PAVING, DRAINAGE, CURBING LANDSCAPING AND IRRIGATION AND SIGNAGE. PERMITS REQUIRED FROM OTHER PERMITTING AGENCIES SUCH AS FDOT, PBC, SFWMD, DERM, LWDD, FDEP, AND ANY OTHERS, SHALL BE INCLUDED WITH THE PERMIT REQUEST.
8. ALL STRIPING AND SIGNAGE SHALL CONFORM TO THE ENGINEERING DESIGN HANDBOOK & CONSTRUCTION STANDARDS.
9. THE DRAINAGE SYSTEM SHALL CONFORM TO ENGINEERING DESIGN HANDBOOK & CONSTRUCTION STANDARDS.

## LEGAL DESCRIPTION

LOTS 1 THROUGH 4, INCLUSIVE, BLOCK 2, "ROCKLAND PARK", AS PER THE PLAT THEREOF ON FILE IN TH EOFFICE OF THE CLERK OF COURT IN AND FOR PALM BEACH COUNTY, FLORIDA, AS RECORDED IN PLAT BOOK 24, PAGE 23.

LESS THE FOLLOWING:

A PORTION OF LOT 1, AS DESCRIBED IN THE RIGHT-OF-WAY DEED RECORDED IN OFFICIAL RECORDS BOOK 3362, PAGE 9, PALM BEACH COUNTY RECORDS.

ALSO LESS THE FOLLOWING:

A PORTION OF LOT 1, AS DESCRIBED IN THE RIGHT-OF-WAY WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 5692, PAGE 1978, PALM BEACH COUNTY RECORDS.

SAID LANDS SITUATE IN THE CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA AND CONTAIN 43,109 QUARE FEET (0.990 ACRES), MORE OR LESS.

## SITE DATA

### APPLICATION DATA

| | |
|---|---|
| APPLICATION NAME | CONKLIN CAR WASH |
| PROPERTY CONTROL NUMBER | 12-42-46-14-03-002-0010 |
| EXISTING FUTURE LAND USE | GENERAL COMMERCIAL (GC) |
| EXISTING ZONING DISTRICT | GENERAL COMMERCIAL (GC) |
| OVERLAY(S) | N/A |
| EXISTING USE | VACANT COMMERCIAL |
| PROPOSED USE | AUTOMATIC CAR WASH |
| SITE AREA | 0.99-AC (43,109 SF) |
| GROSS FLOOR AREA (BLDG A) | 4,207 SF |
| CAR WASH TUNNEL: 2,819 SF | |
| BUILDING AREA: 1,388 SF | |
| FLOOR AREA RATIO | 0.10 |
| BUILDING COVERAGE | 4,207 SF (10%) |
| LOT COVERAGE | 43,109 SF (100%) |
| BUILDING COVERAGE | 4,207 SF (10%) |
| OPEN SPACE | 13,908.80 SF (32%) |
| PAVING PERCENTAGE | 24,993.20 SF (58%) |
| DRIVE AISLES: 22,647.56 SF | |
| WALKWAYS: 2,345.64 SF | |
| OPEN SPACE REQUIREMENT (MIN. 25% OF TOTAL SITE AREA = 0.25 X 43,109 SF) | 10,777 SF |
| OPEN SPACE PROVIDED | 13,908.80 SF (32%) |
| MAX. BUILDING HEIGHT | 48'-0" |
| PROPOSED BUILDING HEIGHT | 29'-7" |

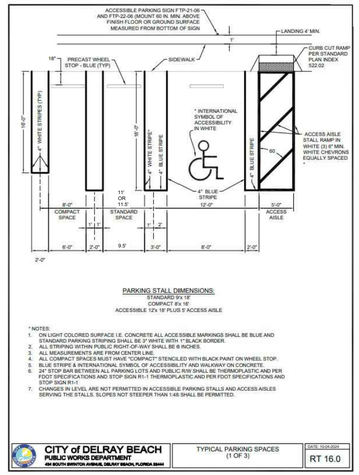
### PARKING DATA

| | |
|---|---|
| PARKING REQUIRED | 19 SPACES |
| GENERAL COMMERCIAL @ 4.5 SP PER 1,000 SF GFA 4,207 SF @ 4.5 SP/1,000 SF = 19 | |
| PARKING PROVIDED | 19 SPACES |
| STANDARD | 18 |
| HANDICAP (REQUIRED/PROVIDED) | 1 |
| BICYCLE PARKING (REQUIRED/PROVIDED) | 1 |
| LOADING SPACES (REQUIRED/PROVIDED) | 0 |

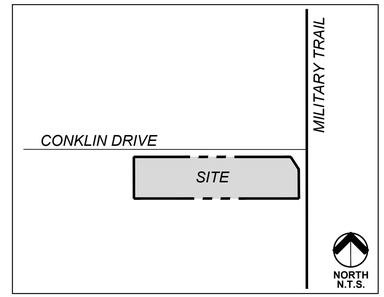
## PROPERTY DEVELOPMENT REGULATIONS

| GC ZONING DISTRICT | MINIMUM LOT DIMENSIONS | | | | MAX. LOT COVERAGE | MIN. FAR | MAX. HEIGHT | SETBACKS/SEPARATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SIZE | WIDTH | DEPTH | FRONTAGE | | | | FRONT | SIDE | SIDE STREET | REAR |
| REQUIRED | 0 | 0 | 0 | 0 | N/A | N/A | 48' | 10' | 10' | 10' | 10' |
| PROVIDED | 0.99-AC | 375.21' | 115' | 354.80' | N/A | N/A | 33'-0" | 81.3 | 19.8 | 60.2' | 167.1' |

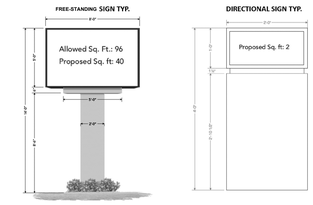
## PARKING DETAIL



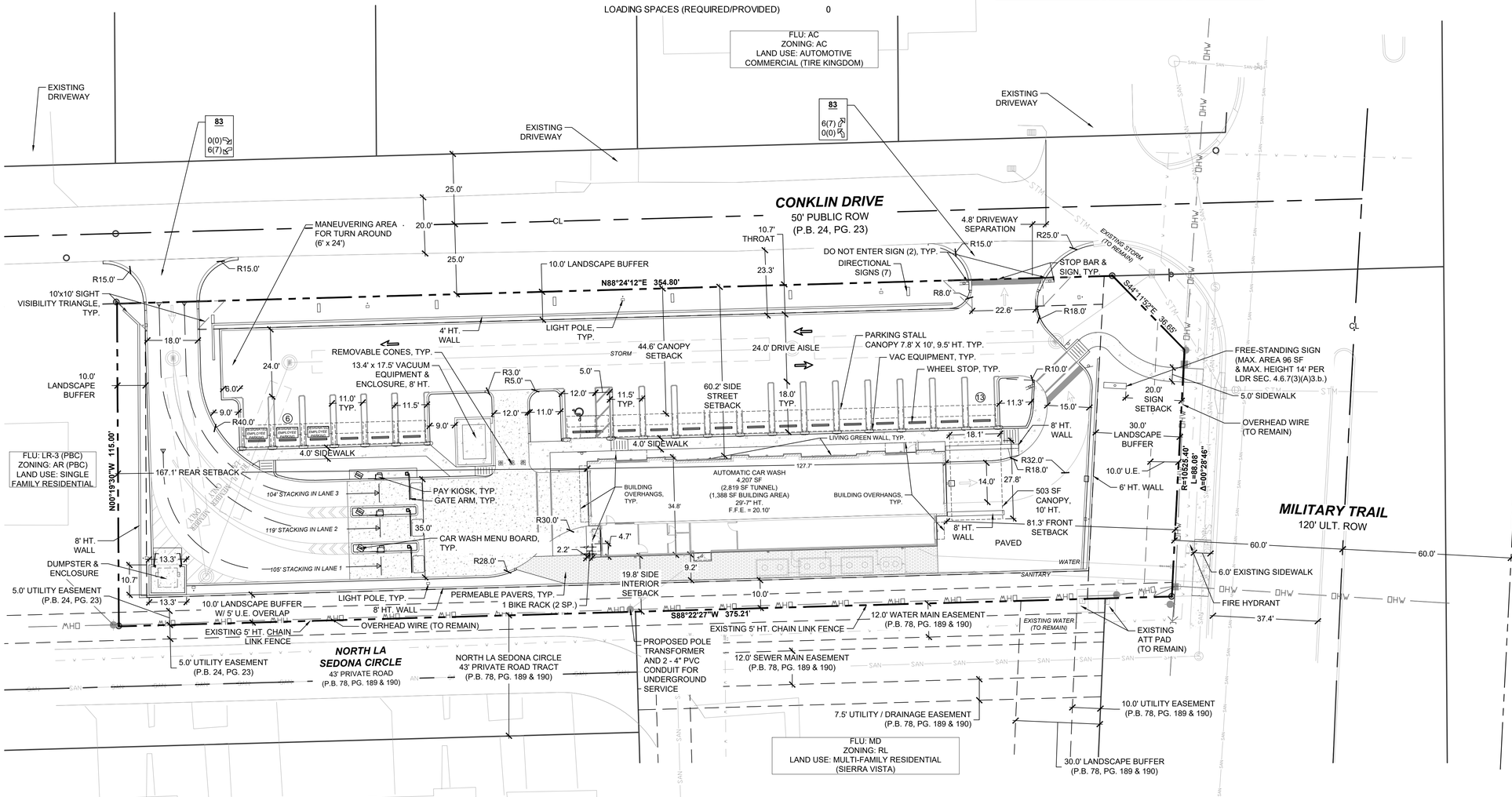

## LOCATION MAP




## SIGN DETAILS




NOTE: SINAGE TO BE PROVIDED IN ACCORANCE WITH CODE AND TO BE REVIEWED AT TIME OF PERMITTING FOR FINAL APPROVAL.




# Conklin Car Wash
# 14145 S. Military Trail
## City of Delray Beach, Florida
## Site Plan

H:\JOBS\Conklin Drive\Car Wash_24-054\Fazio Enterprises Inc_DD_000\Drawings\Site Plan\2024-09-03_SP_Resubmittal.dwg

| | |
|---|---|
| Date: | JAN. 2024 |
| Project No.: | 24-054.000 |
| Designed By: | JEV |
| Drawn By: | JEV |
| Checked By: | AV |

**Revision Dates:**
01-21-2025 SUBMITTAL
05-07-2025 RESUBMITTAL
08-06-2025 RESUBMITTAL
09-17-2025 RESUBMITTAL

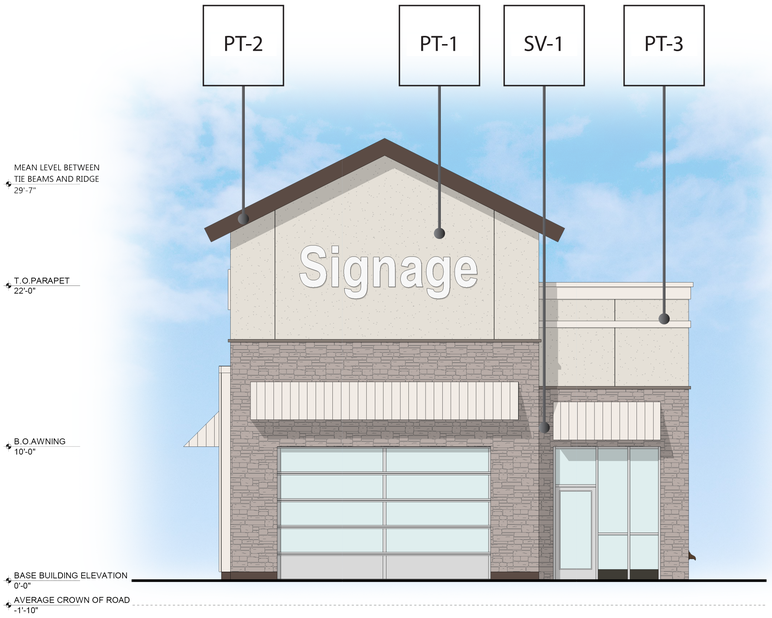
**SP-1**
of 1


urban design studio
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Land Planning
Landscape Architecture
610 Clematis Street, Suite CU02
West Palm Beach, FL 33401
561.366.1100 FAX 561.366.1111
www.udsflorida.com
#LA0001739



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1 A3.0 WEST ELEVATION
SCALE: 3/16" = 1'-0"




2 A3.0 NORTH ELEVATION
SCALE: 3/16" = 1'-0"

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACR.

# FINISH LEGEND

| | | |
|---|---|---|
| SV-1 |  | STONE VENEER - ELDORADO / RIDGETOP18/ GRANITE SPIRE |
| SV-2 |  | STONE SILL - ELDORADO / CHISELED EDGE WAINSCOT SILL / EARTH |
| EIFS |  | EXTERIOR INSULATION FINISHING SYSTEM |
| ALU |  | WINDOWS & DOORS - THERMALLY BROKEN ANODIZED ALUMINUM / CLEAR ANODIZED AC-1 |
| PT-1 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / SUNBLEACHED SW 9585 |
| PT-2 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |
| PT-3 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / IBIS WHITE SW 7000 |
| MP-1 | | METAL PANEL - ALUMABOARD / PRE-FINISHED METAL SCREEN SYSTEM /COLOR TO MATCH DESTINY SW 6274 |

STATE OF FLORIDA
ISMAIL BURAK BEKAR
AR100345
REGISTERED ARCHITECT
Expires 02.28.27

Revisions
1. CITY COMMENT 04.08.2025
2. CITY COMMENT 07.29.2025
3. CITY COMMENT 09.15.2025

# EXTERIOR ELEVATIONS

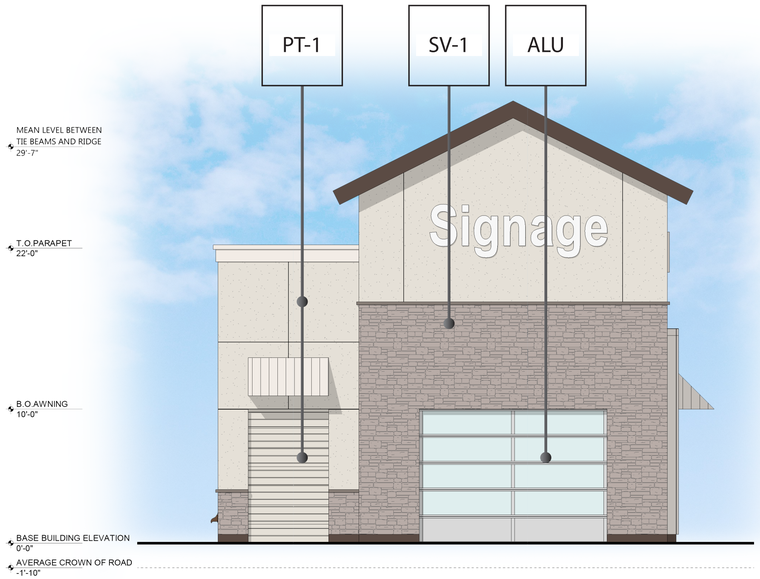
Conklin Car Wash
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Delray, FL 33484


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711 East 9th Street, Tucson, AZ 85719
Tucson, Arizona 85719
520.903.2323 phone
WWW.a23studios.com

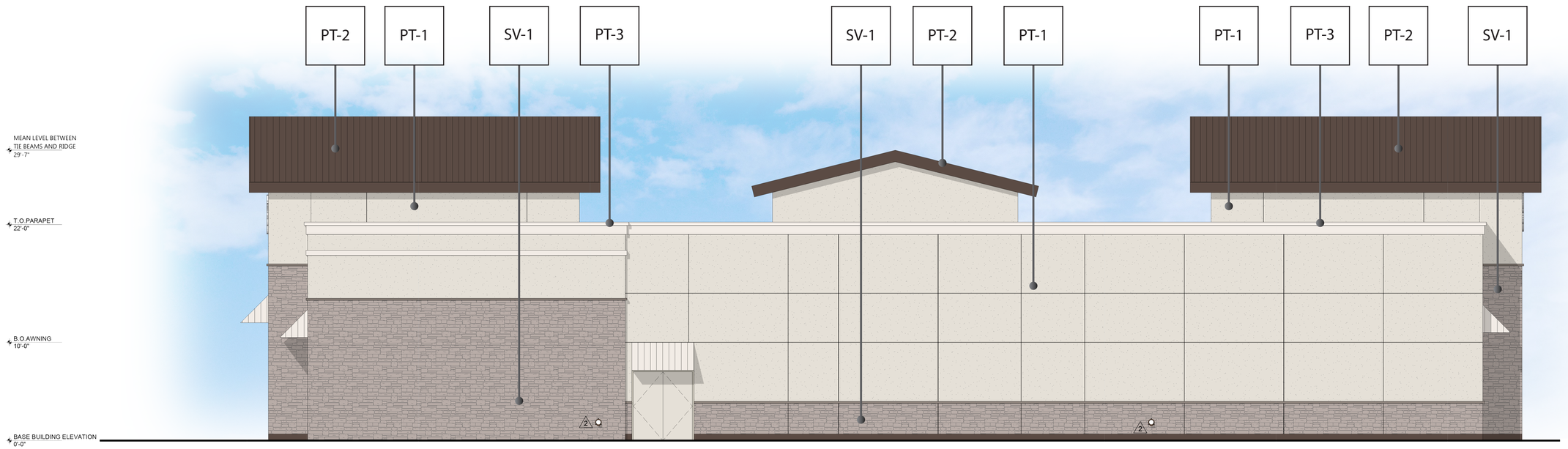

Project 24099
Date 04.04.2025
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1 A3.1 EAST ELEVATION
SCALE: 3/16" = 1'-0"




2 A3.1 SOUTH ELEVATION
SCALE: 3/16" = 1'-0"

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# FINISH LEGEND

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|---|---|---|
| SV-1 |  | STONE VENEER - ELDORADO / RIDGETOP18/ GRANITE SPIRE |
| SV-2 |  | STONE SILL - ELDORADO / CHISELED EDGE WAINSCOT SILL / EARTH |
| EIFS |  | EXTERIOR INSULATION FINISHING SYSTEM |
| ALU |  | WINDOWS & DOORS - THERMALLY BROKEN ANODIZED ALUMINUM / CLEAR ANODIZED AC-1 |

| | | |
|---|---|---|
| PT-1 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / SUNBLEACHED SW 9585 |
| PT-2 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |
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# EXTERIOR ELEVATIONS

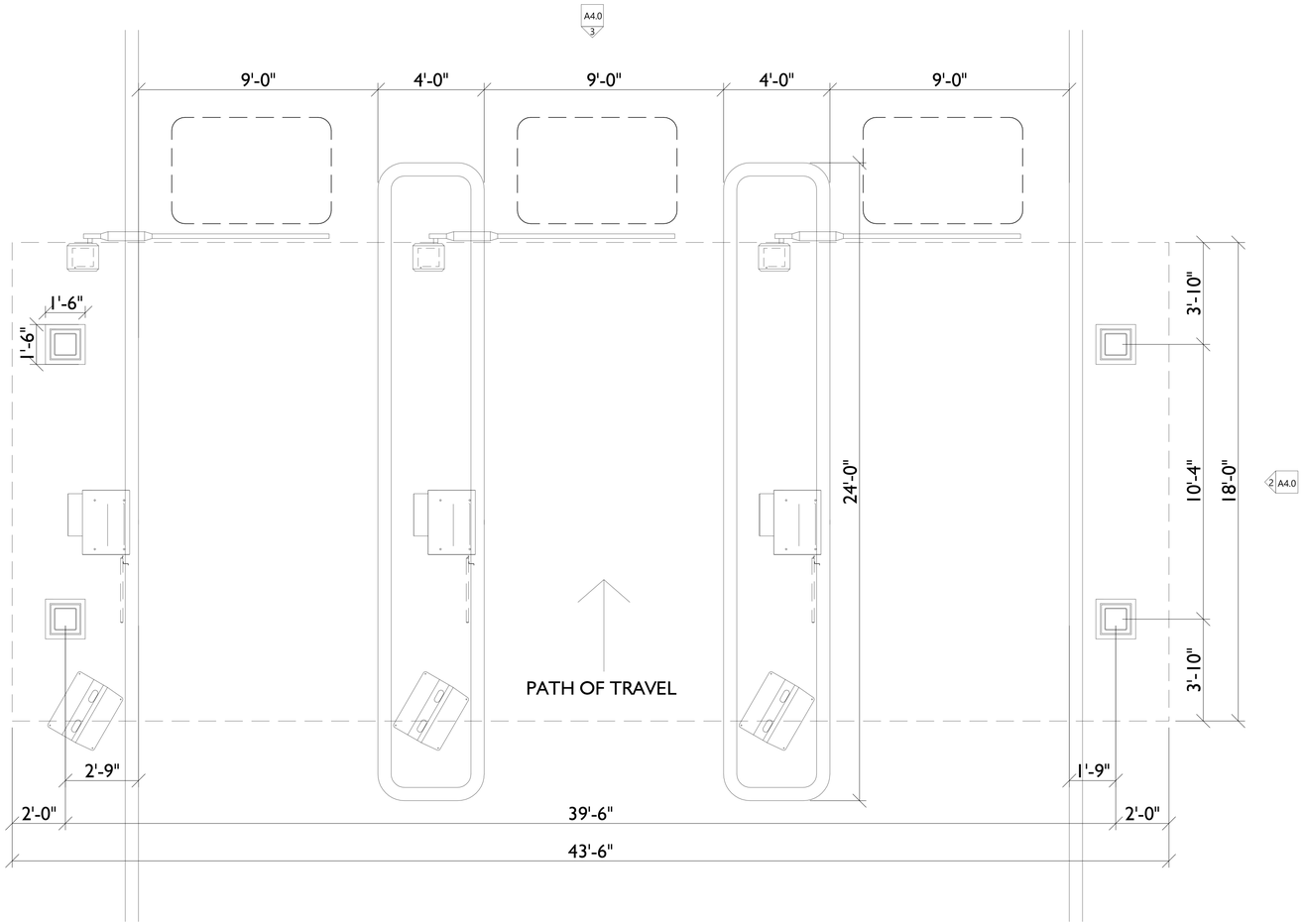
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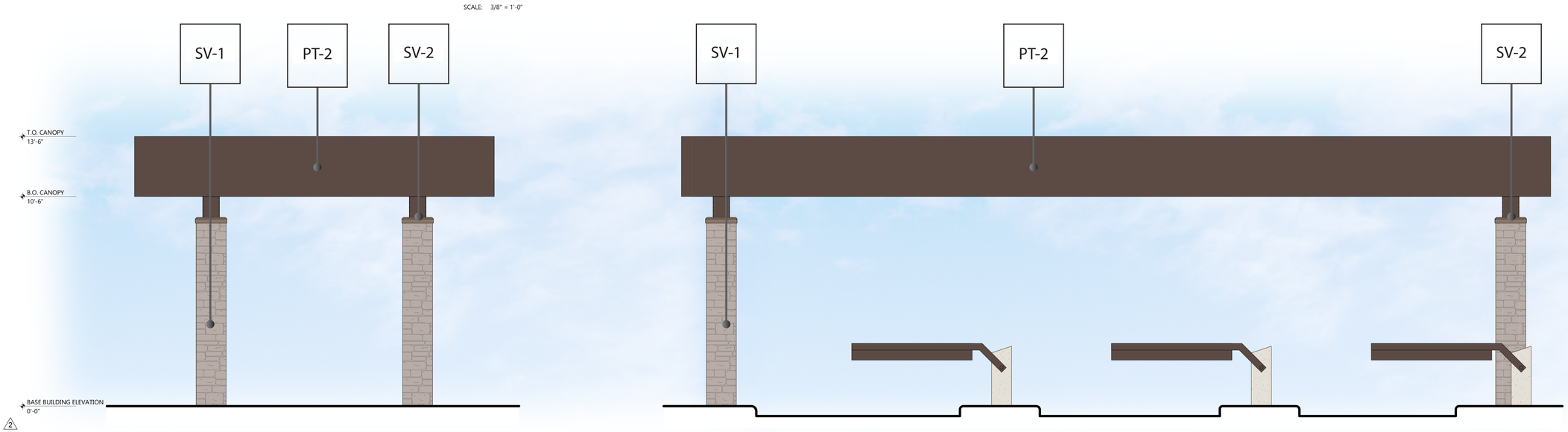



POS CANOPY PLAN

SCALE: 3/8" = 1'-0"

# FINISH LEGEND

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|---|---|---|
| SV-1 | | STONE VENEER - ELDORADO / RIDGETOP18/ GRANITE SPIRE |
| SV-2 | | STONE SILL - ELDORADO / CHISELED EDGE WAINSCOT SILL / EARTH |
| PT-2 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |




2 / A4.0 POS CANOPY ELEVATION

SCALE: 3/8" = 1'-0"

3 / A4.0 POS CANOPY FRONT ELEVATION

SCALE: 3/8" = 1'-0"

NOTE:
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STATE OF FLORIDA
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REGISTERED ARCHITECT
Expires 02.28.27

Revisions

| | | |
|---|---|---|
| 1 | CITY COMMENT | 04.08.2025 |
| 2 | CITY COMMENT | 07.29.2025 |

# CANOPY PLAN & ELEVATIONS

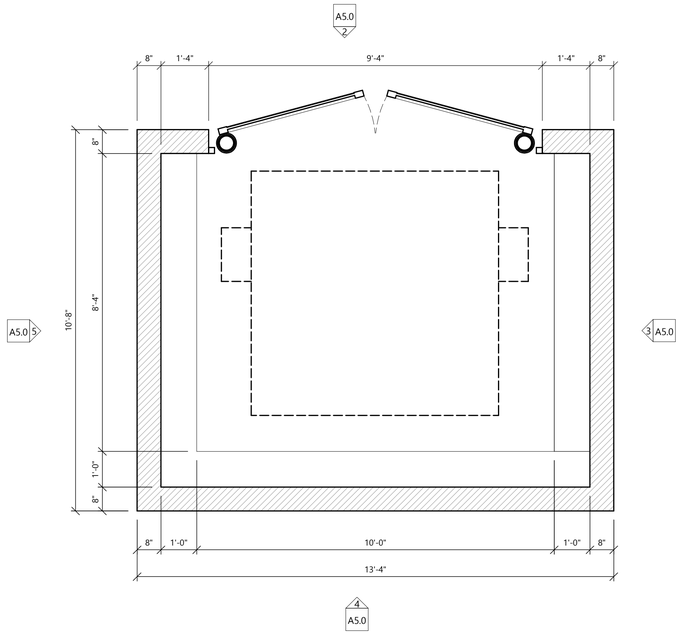
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| Date | 04.04.2025 |
| Scale | Noted |
| Sheet | |

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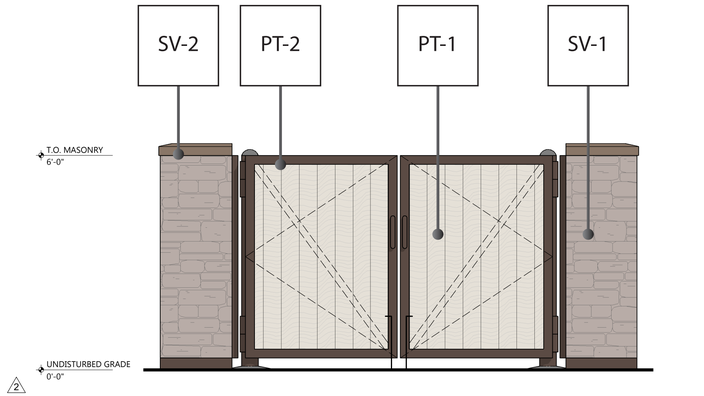

PLAN - DUMPSTER ENCLOSURE

SCALE: 1/2" = 1'-0"

# FINISH LEGEND

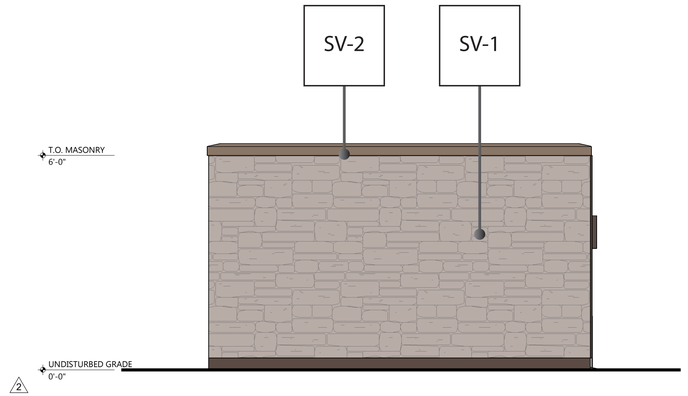
| | | |
|---|---|---|
| SV-1 | | STONE VENEER - ELDORADO / RIDGETOP18/ GRANITE SPIRE |
| SV-2 | | STONE SILL - ELDORADO / CHISELED EDGE WAINSCOT SILL / EARTH |
| EIFS | | EXTERIOR INSULATION FINISHING SYSTEM |

| | | |
|---|---|---|
| PT-1 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / SUNBLEACHED SW 9585 |
| PT-2 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |



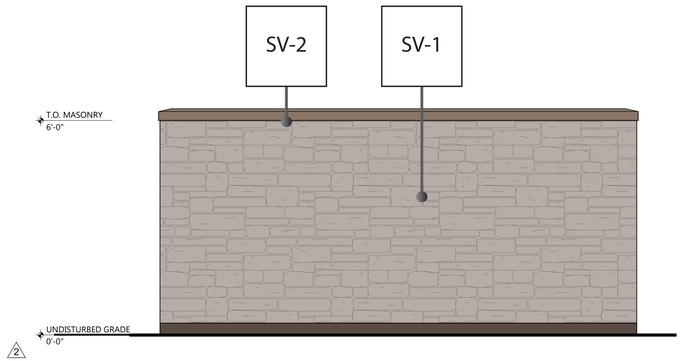

2 A5.0 ELEVATION - DOOR

SCALE: 1/2" = 1'-0"



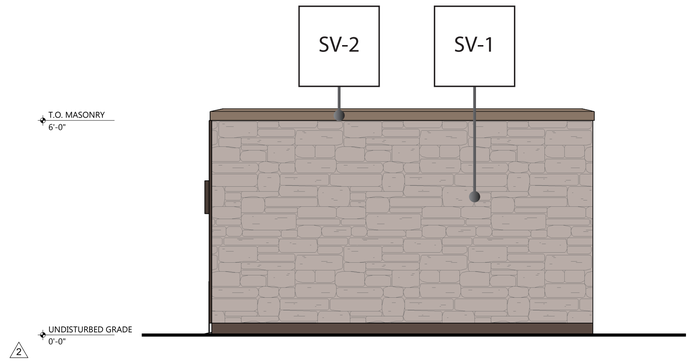

3 A5.0 ELEVATION - RIGHT

SCALE: 1/2" = 1'-0"



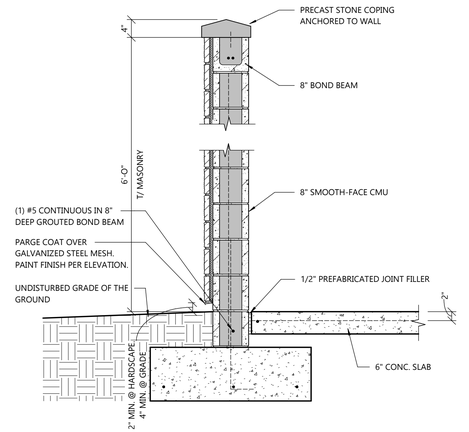

4 A5.0 ELEVATION - REAR

SCALE: 1/2" = 1'-0"




5 A5.0 ELEVATION - LEFT

SCALE: 1/2" = 1'-0"




2 6 A5.0 WALL SECTION

SCALE: 3/4" = 1'-0"

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACR.

STATE OF FLORIDA
ISMAIL BURAK BEKA
AR100345
REGISTERED ARCHITECT

Expires 02.28.27

Revisions

| | | |
|---|---|---|
| 1 | CITY COMMENT | 04.08.2025 |
| 2 | CITY COMMENT | 07.29.2025 |

DUMPSTER ENCLOSURE

Conklin Car Wash
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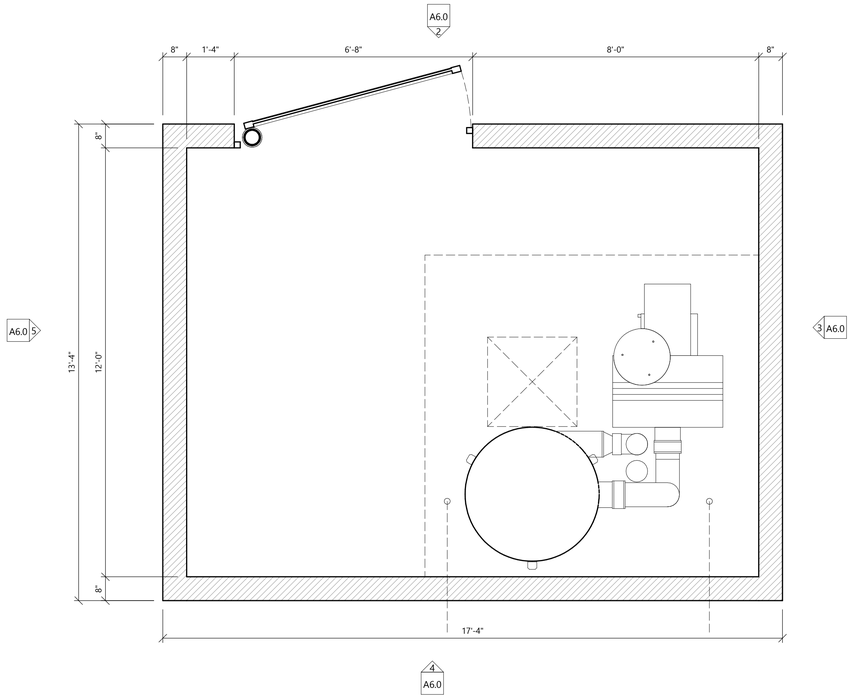
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# FINISH LEGEND

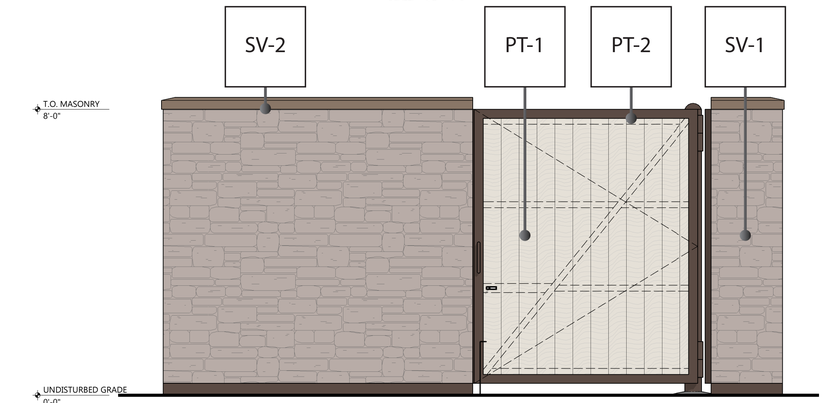
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|---|---|---|
| SV-1 |  | STONE VENEER - ELDORADO / RIDGETOP18/ GRANITE SPIRE |
| SV-2 |  | STONE SILL - ELDORADO / CHISELED EDGE WAINSCOT SILL / EARTH |
| EIFS |  | EXTERIOR INSULATION FINISHING SYSTEM |

| | | |
|---|---|---|
| PT-1 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / SUNBLEACHED SW 9585 |
| PT-2 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |



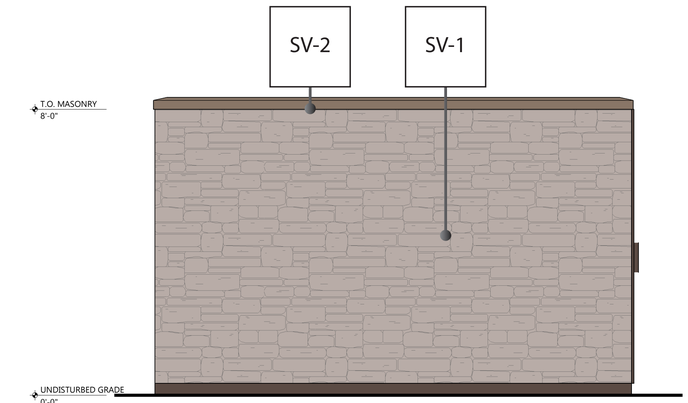

PLAN - VACUUM ENCLOSURE

SCALE: 1/2" = 1'-0"



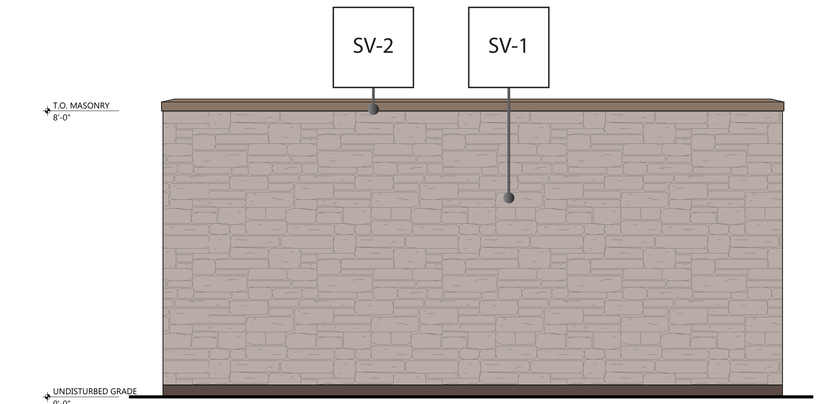

2 A6.0 ELEVATION - DOOR

SCALE: 1/2" = 1'-0"



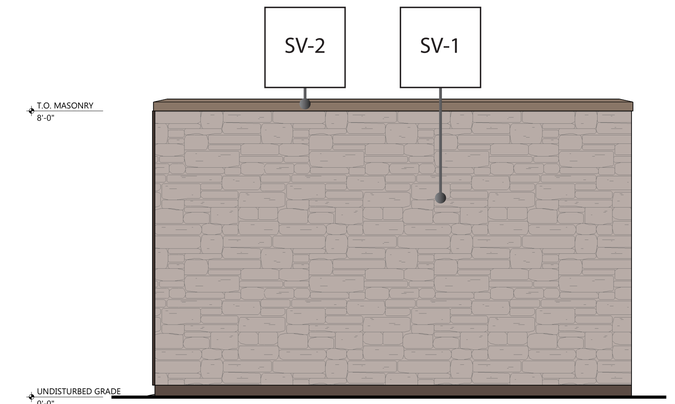

3 A6.0 ELEVATION - RIGHT

SCALE: 1/2" = 1'-0"



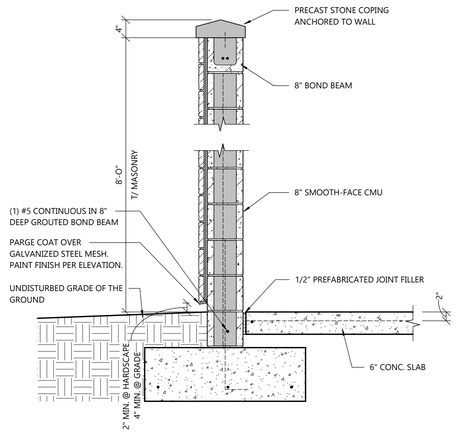

4 A6.0 ELEVATION - REAR

SCALE: 1/2" = 1'-0"




5 A6.0 ELEVATION - LEFT

SCALE: 1/2" = 1'-0"




6 A6.0 WALL SECTION

SCALE: 3/4" = 1'-0"

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACR.

STATE OF FLORIDA
ISMAIL BURAK BEKAR
AR100345
REGISTERED ARCHITECT

Expires 02.28.27

Revisions

| | | |
|---|---|---|
| 1 | CITY COMMENT | 04.08.2025 |
| 2 | CITY COMMENT | 07.29.2025 |

# VACUUM ENCLOSURE

Conklin Car Wash
14145 S. Military Trail.
Delray, FL 33484

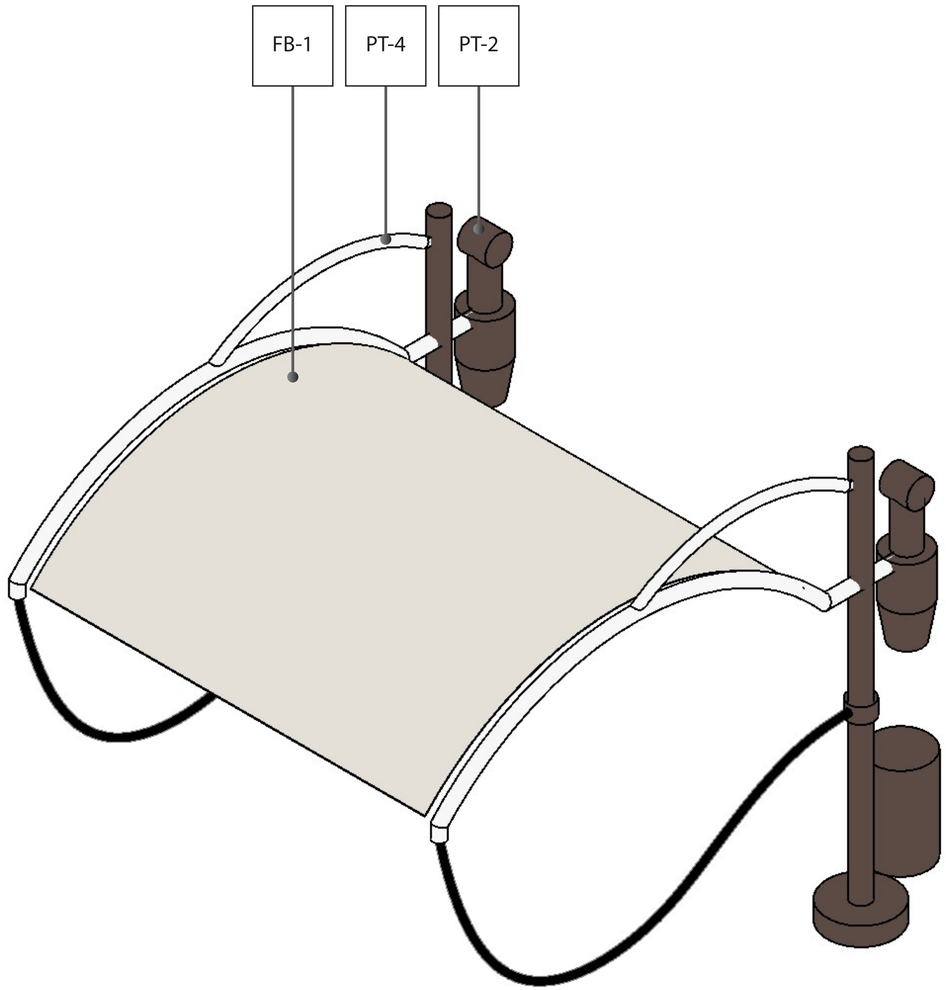

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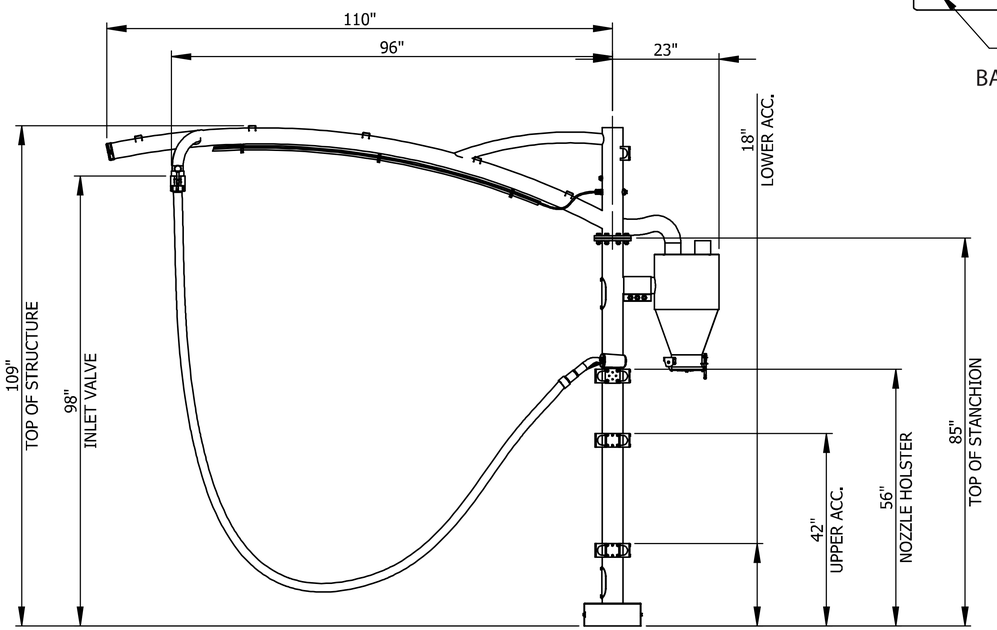

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| Project | 24099 |
| Date | 04.04.2025 |
| Scale | Noted |
| Sheet | A6.0 |

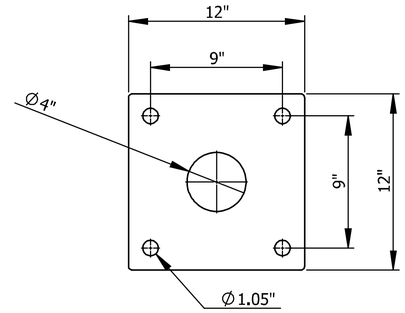
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# FINISH LEGEND

| | | |
|---|---|---|
| FB-1 | | CANOPY FABRIC - COLOR TO MATCH SHERWIN-WILLIAMS / SUNBLEACHED SW 9585 |
| PT-2 | | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |
| PT-4 | | EXTERIOR PAINT - CARDINAL / WHITE HAMMER WH260 |




BASE PLATE

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACR.

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Revisions
3 CITY COMMENT 09.15.2025

# VACUUM STATION

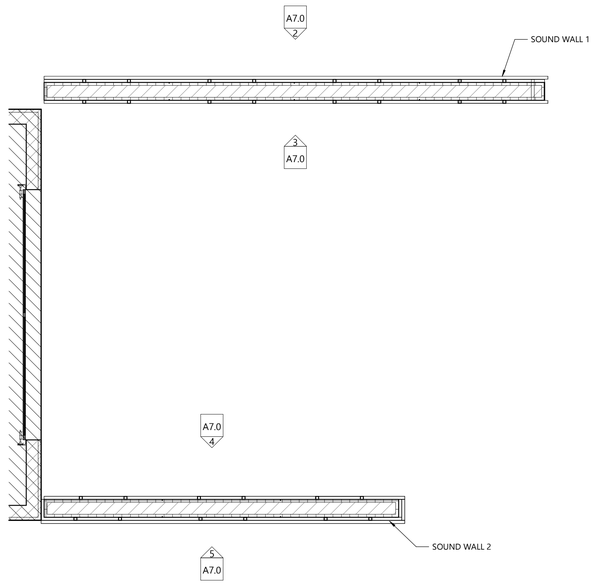
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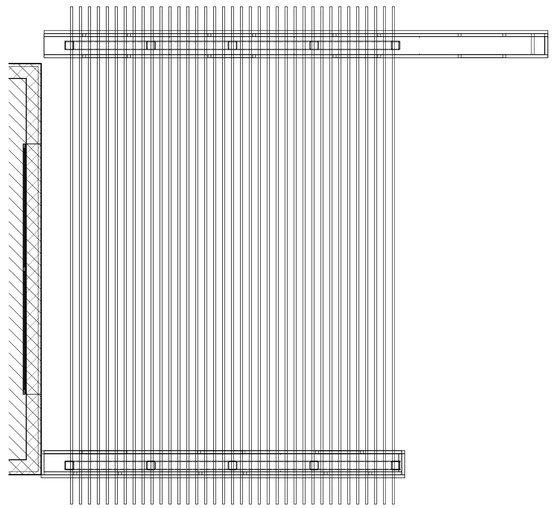

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Date 04.04.2025
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FLOOR PLAN
SCALE: 1/4" = 1'-0"



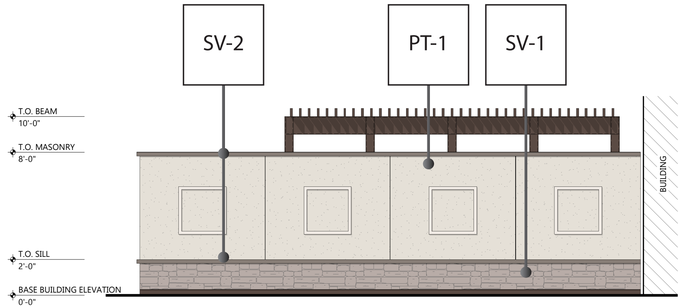
ROOF PLAN
SCALE: 1/4" = 1'-0"

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACR.

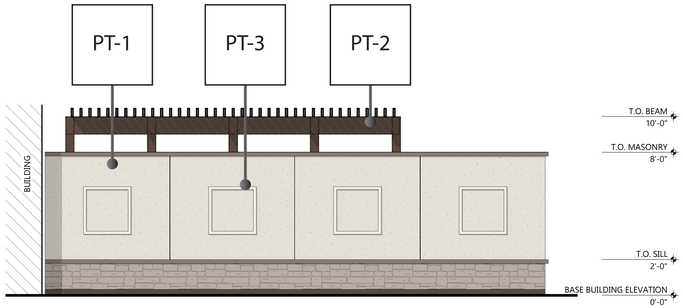
# FINISH LEGEND

| | | |
|---|---|---|
| SV-1 |  | STONE VENEER - ELDORADO / RIDGETOP18/ GRANITE SPIRE |
| SV-2 |  | STONE SILL - ELDORADO / CHISELED EDGE WAINSCOT SILL / EARTH |
| EIFS |  | EXTERIOR INSULATION FINISHING SYSTEM |

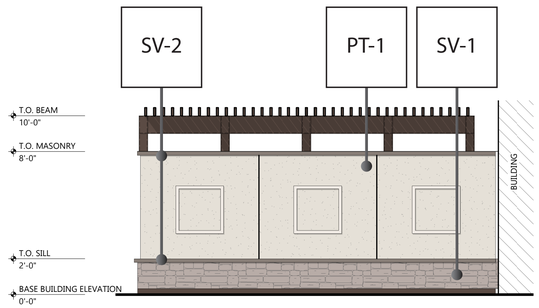
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|---|---|---|
| PT-1 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / SUNBLEACHED SW 9585 |
| PT-2 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / CHATEAU BROWN SW 7510 |
| PT-3 |  | EXTERIOR PAINT - SHERWIN-WILLIAMS / IBIS WHITE SW 7000 |



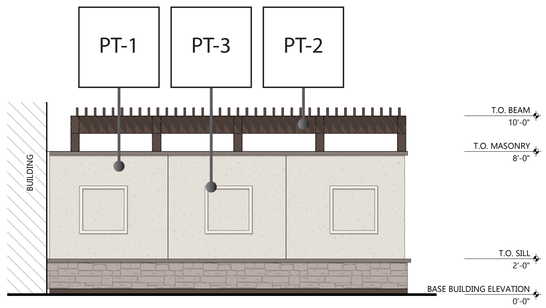

2 A7.0 SOUND WALL 1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"




3 A7.0 SOUND WALL 1 REAR ELEVATION
SCALE: 1/4" = 1'-0"




4 A7.0 SOUND WALL 2 FRONT ELEVATION
SCALE: 1/4" = 1'-0"




5 A7.0 SOUND WALL 2 REAR ELEVATION
SCALE: 1/4" = 1'-0"

2

STATE OF FLORIDA
ISMAIL BURAK BEKAR
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Revisions
1 CITY COMMENT 04.08.2025
2 CITY COMMENT 07.29.2025

# SOUND WALL

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VIEW FROM NORTHEAST

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# RENDERS

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NORTHWEST BIRDEYE




VIEW FROM ENTRY




VIEW FROM NORTHWEST




NORTHEAST BIRDEYE

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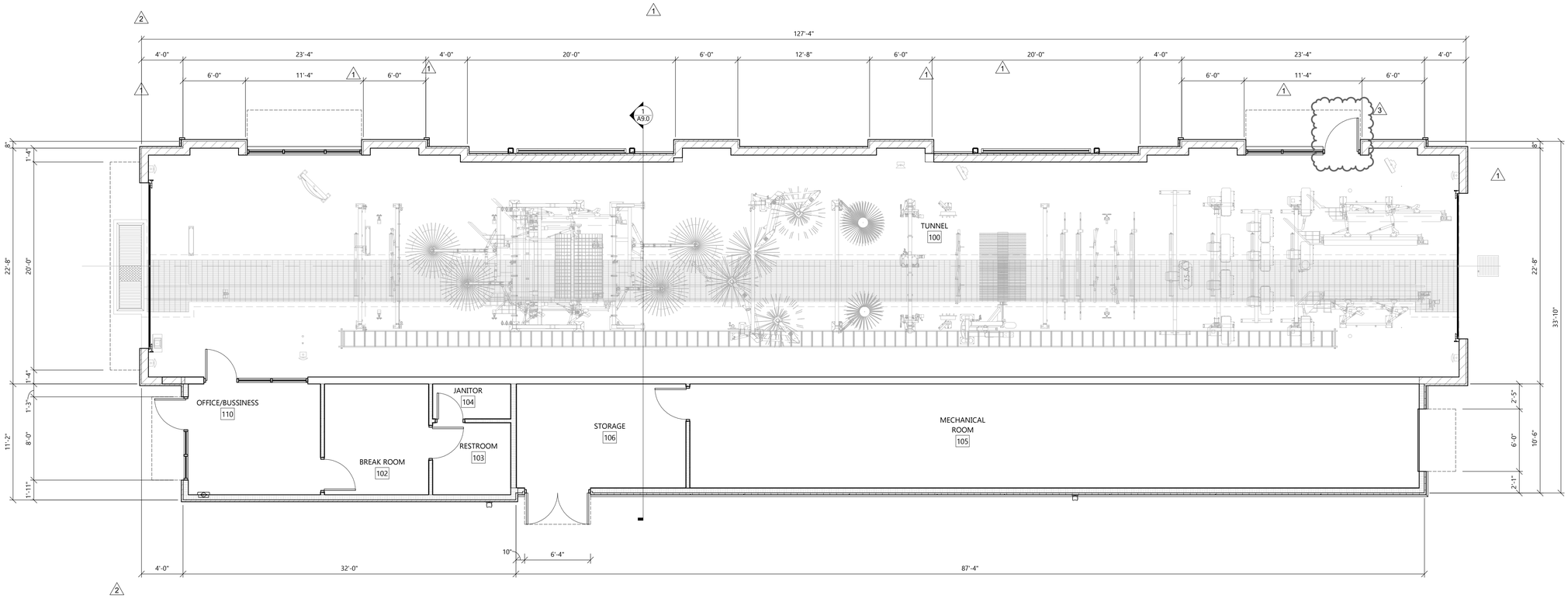
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| Sheet | A8.1 |

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## PLAN LEGEND

WALL CONSTRUCTION

- CONCRETE MASONRY WALL
- STUD FRAMED WALL




NORTH

## FLOOR PLAN

SCALE: 3/16" = 1'-0"

0' 5' 10'

NOTE:
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# FLOOR PLAN

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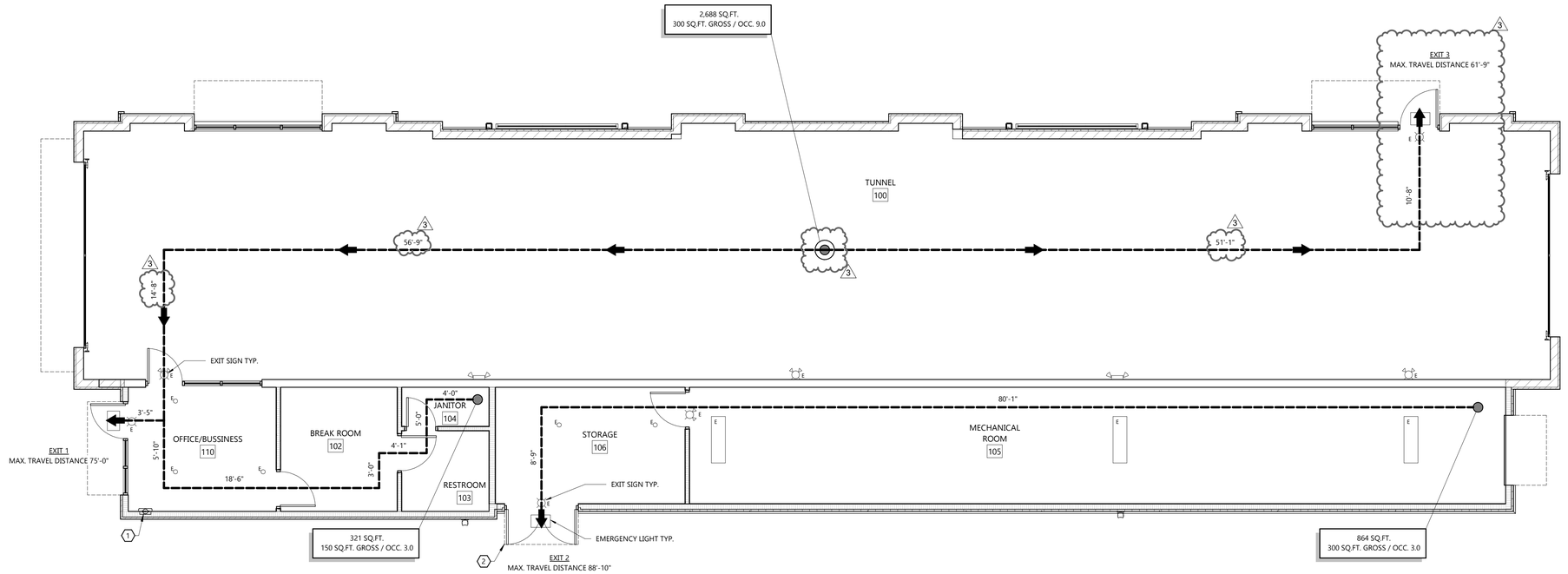
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## LIFE SAFETY PLAN KEYNOTES

- (X) MATERIAL TAG (LETTERED KEYNOTE)
  - SEE A5 SHEETS
- (1) FIRE EXTINGUISHER, CABINET
  - SEE RESPONSIBILITY MATRIX A0.2
- (2) PROVIDE PANIC HARDWARE FOR EGREESS DOORS.
  - SEE DOOR HARDWARE SETS A8.0




NORTH

## FLOOR PLAN

SCALE: 3/16" = 1'-0"

0' 5' 10'

NOTE:
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| | | |
|---|---|---|
| 2 | CITY COMMENT | 07.29.2025 |
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# LIFE SAFETY PLAN

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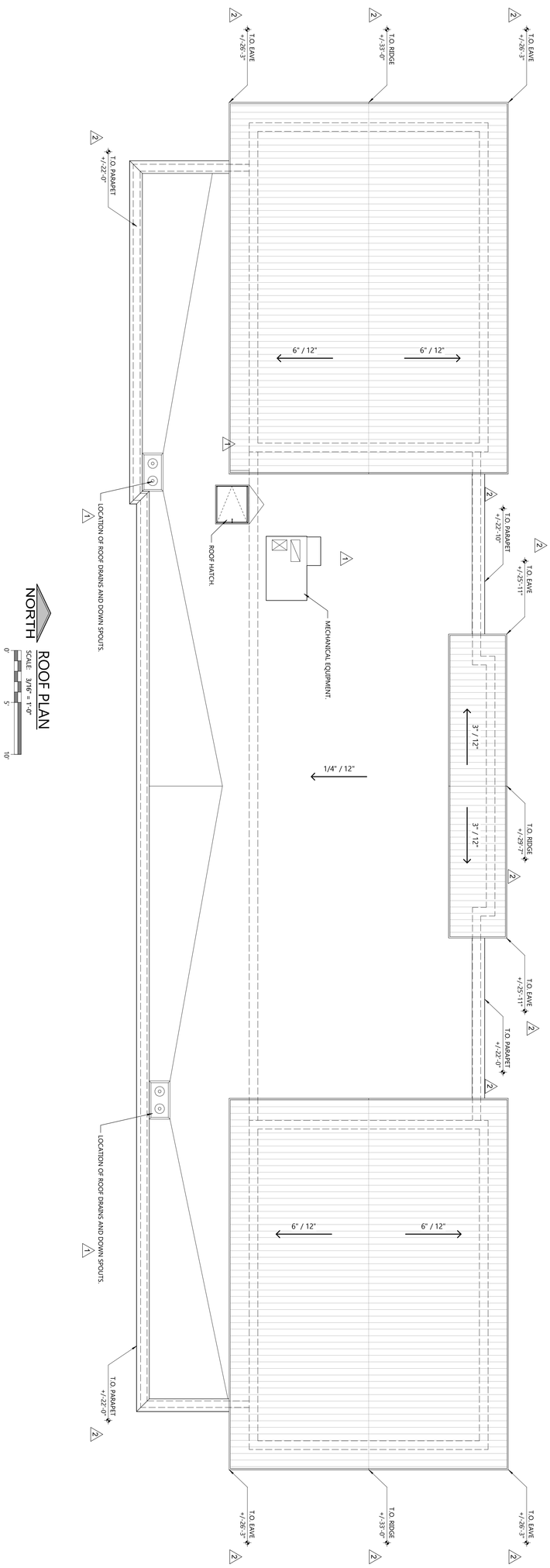
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NOTE:
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NORTH

ROOF PLAN
SCALE 3/16" = 1'-0"
0 5 10


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# ROOF PLAN

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Date 04.04.2025
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Sheet A2.0

## BUILDING MATERIALS AND COLOR SAMPLE FORM

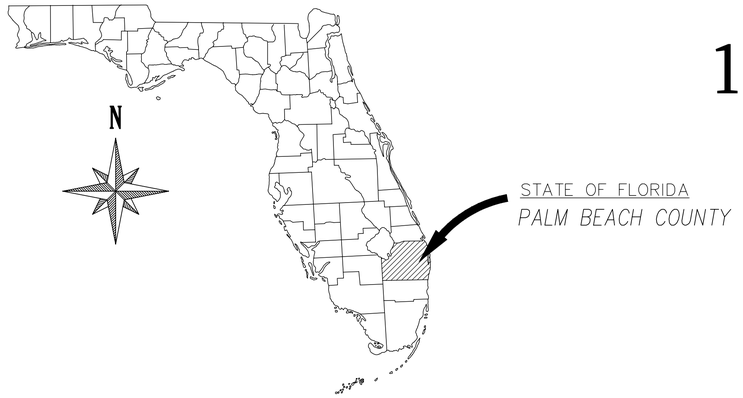
NOTE THE TYPE OF MATERIAL AND COLOR SPECIFICATION PROPOSED INCLUDING TYPES OF FINISHES. CAN ATTACH IMAGES OR PHOTOS OF MATERIALS.
**ATTACH PAINT COLOR SAMPLES WITH DETAILS OF MANUFACTURER**

2

2

| ROOF | WALLS |
|---|---|
| STANDING SEAM METAL ROOF COLOR: SHERWIN WILLIAMS - CHATEAU BROWN SW 7510  | EIFS COLOR: SHERWIN WILLIAMS - SUNBLEACHED SW 9585  |
| **FASCIA** | **TRIM/OTHER** |
| PRE-FINISHED CONCEALED FASTENER METAL FASCIA COLOR: TO MATCH ROOF  | EIFS COLOR: SHERWIN WILLIAMS - IBIS WHITE SW 7000  |
| **WINDOWS** | **SHUTTERS/AWNINGS** |
| THERMALLY BROKEN ANODIZED ALUMINUM / CLEAR ANODIZED AC-1  | PRE-ENGINEERED ALUMINUM AWNING COLOR: SHERWIN WILLIAMS - IBIS WHITE SW 7000  |
| **RAILINGS** | **~~FENCE~~ WALLS** |
| N/A | METAL PANEL - ALUMABOARD / PRE-FINISHED METAL SCREEN SYSTEM COLOR: COLOR TO MATCH SW 6274  |
| **COLUMNS** | **OTHER** |
| N/A | STONE 1: ELDORADO COLOR: REDGETOP 18/ GRANITE SPIRE STONE 2: ELDORADO COLOR: CHISELED EDGE WAINSCOT SILL / EARTH  |

# SITE WORK PLANS
## FOR
# 14145 S MILITARY TRAIL




## PROJECT TEAM:

**ARCHITECT**
A.23 STUDIOS
711 EAST 9TH STREET
TUCSON, AZ 85719
PHONE: 520.245.4010
CONTACT:

**CIVIL ENGINEER**
KEEN ENGINEERING, INC.
7280 W. PALMETTO PARK RD., SUITE 105
BOCA RATON, FLORIDA 33433
PHONE: 561.325.6700
CONTACT: ERIK WILCZEK, P.E.

**SURVEYOR**
PERIMETER SURVEY AND MAPPING
947 CLINT MOORE ROAD
BOCA RATON, FLORIDA 33487
PHONE: 561.241.9988
CONTACT: JEFF HODAPP

## DESCRIPTION

LOTS 1 THROUGH 4, INCLUSIVE, BLOCK 2, "ROCKL;AND PARK", AS PER THE PALT THEREOF ON FILE IN THE OFFICE OF THE CLERK OF COURT IN AND FOR PALM BEACH COUNTY, FLOIRDA, AS RECORDED IN PALT BOOK 24, PAGE 23.

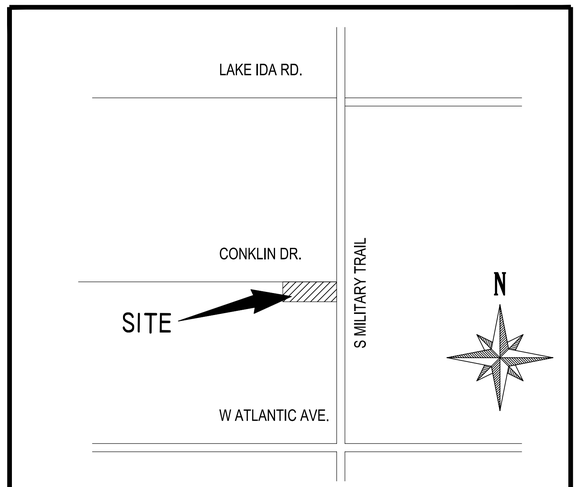
LESS THE FOLLOWING:

A PORTION OF LOT 1, AS DESCRIBED IN THE RIGHT-OF-WAY DEED RECORDED IN OFFICIAL RECORDS BOOK 3362. PAGE 9, PALM BEACH COUNTY RECORDS.

ALSO LESS THE FOLLOWING:

A PORTION OF LOT 1, AS DESCRIBED IN THE RIGHT-OF-WAY WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 5692. PAGE 1978, PALM BEACH COUNTY RECORDS.

SAID LANDS SITUATE INT HE CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA AND CONTAIN 43109 SQUARE FEET (0.990 ACRES), MORE OR LESS.




SECTION 14 TOWNSHIP 46 SOUTH,
RANGE 42 EAST
LOCATION MAP
NOT TO SCALE

## Sheet Index


| | |
|---|---|
| C-100 | CIVIL COVER SHEET |
| C-101 | GENERAL NOTES |
| C-105 | SITE DETAILS |
| C-200 | PAVING, GRADING, AND DRAINAGE PLAN |
| C-201 | PAVING, GRADING, AND DRAINAGE DETAILS |
| C-202 | PAVING, GRADING, AND DRAINAGE DETAILS |
| C-300 | WATER AND SEWER PLAN |
| C-301 | UTILITY DETAILS |
| C-400 | PAVEMENT MARKING AND SIGNAGE PLANS |
| C-500 | DEMOLITION PLAN |
| C-501 | DEMOLITION NOTES |
| C-600 | SWPP AND CONSTRUCTION PARKING & STAGING PLAN |
| C-601 | SWPP NOTES |
| C-700 | COMPOSITE UTILITY PLAN |
| C-800 | GARBAGE TRUCK EXHIBIT |


This item has been digitally signed and sealed by ERIK WILCZEK, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER 58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

14145 S MILITARY TRAIL
PALM BEACH COUNTY, FL
DELRAY BEACH

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

CIVIL
COVER SHEET

SHEET NUMBER
C-100

Plotted By:Erik Wilczek Layout:Cover Sheet September 09, 2025 12:01:23pm \\keen\Keen\Public\VC\019 Jeffs Express\019-04 14145 S Military Trail Delray Beach\CAD\C-100 COVER SHEET.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Keen Engineering, Inc. shall be without liability to Keen Engineering, Inc.

# GENERAL NOTES AND SPECIFICATIONS

## I. APPLICABLE CODES

1. ALL WORK AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THE LOCAL, STATE, AND NATIONAL CODES AND REGULATORY REQUIREMENTS, AS APPLICABLE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.
3. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING SITE IMPROVEMENTS, FEATURES AND CONDITIONS SHOWN ON THE DRAWINGS WERE OBTAINED FROM THE SURVEY PREPARED BY PERIMETER SURVEYING & MAPPING, INC.
4. BENCHMARK LOCATION AND ELEVATION ARE AS REPRESENTED BY SURVEYOR AT THE TIME OF SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT TIME OF CONSTRUCTION.
5. THE CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO SURVEY MARKERS DURING CONSTRUCTION. ANY SURVEY MARKERS DAMAGED DURING CONSTRUCTION WILL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
6. EXISTING ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). BENCHMARKS USED ARE THOSE IDENTIFIED ON THE TOPOGRAPHIC BOUNDARY SURVEY.
7. PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES.
8. EXISTING UTILITIES TO BE ADJUSTED IN ACCORDANCE WITH PROPOSED GRADES AND REQUIREMENTS OF UTILITY OWNERS, AS REQUIRED.
9. EXISTING STRUCTURES, TREES, UTILITIES AND OTHER IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE SUCH AS BUILDING SEWERS, DRAINS, WATER OR GAS PIPES, CONDUITS, POLES, WALLS, COLUMNS, ETC., WHETHER OR NOT SHOWN ON THE PLANS, ARE TO BE CAREFULLY PROTECTED FROM DAMAGE. IF DAMAGE OCCURS FROM WORK PERFORMED UNDER THIS CONTRACT, THE CONTRACTOR SHALL PROMPTLY REPAIR THE DAMAGED ITEM(S) TO THE CONDITION OF THE ITEM(S) PRIOR TO THE DAMAGE. THIS WORK SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.
11. CONTRACTOR SHALL PRESERVE ALL STREET SIGNS, PARKING METERS, BENCHES, TRAFFIC CONTROL SIGNS, ETC. WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL REINSTALL THESE OR DELIVER SAID PUBLIC PROPERTY TO THE RESPECTIVE OWNER.
12. THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH ANY OTHER UTILITY AND BUILDING TRADES WORKING ON THIS OR ADJACENT PROJECT.
13. ALL DITCH EXCAVATIONS SHALL BE PERFORMED IN FULL COMPLIANCE WITH THE PROVISIONS OF THE FLORIDA TRENCH SAFETY ACT. IT IS THE CONTRACTOR'S SOLE RESPONSIBLE FOR COMPLIANCE WITH THE STATE OF FLORIDA TRENCH SAFETY ACT.
14. THE CONTRACTOR SHALL TAKE SPECIAL NOTE OF SOIL CONDITIONS THROUGHOUT THIS PROJECT. ANY SPECIAL SHORING, SHEETING OR OTHER PROCEDURES NECESSARY TO PROTECT ADJACENT PROPERTY, EITHER PUBLIC OR PRIVATE, DURING EXCAVATION OF SUBSOIL MATERIAL OR DURING THE FILLING OF ANY AREA, OR FOR ANY OPERATION DURING CONSTRUCTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

## II. SHOP DRAWINGS

PRIOR TO FABRICATION OR CONSTRUCTION, SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD FOR APPROVAL OF THE FOLLOWING ITEMS AS APPLICABLE:

1. DRAINAGE:
   - A. DRAINAGE INLETS, CATCH BASINS, MANHOLES AND STRUCTURES, INCLUDING TOP/BOTTOM SLABS, FRAMES, GRATES, RIMS AND POLLUTANT RETARDANT BAFFLES
   - B. TRENCH OR SLOT DRAINS INCLUDING CHANNELS, ANCHORS, GRATES, OUTLETS, ETC.
   - C. DRAINAGE WELL STRUCTURES, CASING AND GRATES
   - D. DRAINAGE PIPE AND FITTINGS
   - E. CLEANOUTS
   - F. EXFILTRATION TRENCH FILTER FABRIC
2. WATER DISTRIBUTION
   - A. PIPE AND FITTINGS
   - B. VALVES AND AIR RELEASE VALVES
   - C. FIRE HYDRANTS
   - D. BACKFLOW PREVENTION DEVICES
   - E. METER VAULTS
   - F. TAPPING SLEEVES AND CORPORATION STOPS
3. SANITARY SEWER:
   - A. MANHOLES, INCLUDING STRUCTURES, TOP/BOTTOM SLABS, FRAMES AND RIMS
   - B. PIPE AND FITTINGS
   - C. CLEANOUTS
   - D. VALVES AND AIR RELEASE VALVES
   - E. PUMP STATION AND ALL RELATED EQUIPMENT
4. ASPHALT MIX
   - A. SUBGRADE AND LIMEROCK BASE SECTIONS TO BE INCLUDED

## III. PRECONSTRUCTION RESPONSIBILITIES

1. THE INFORMATION PROVIDED IN THESE PLANS IS TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY AND ALL INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
2. TWO (2) BUSINESS DAYS BEFORE BEGINNING CONSTRUCTION IN THE AREA, THE CONTRACTOR SHALL NOTIFY SUNSHINE STATE CALL ONE OF FLORIDA, INC. AT 1-800-432-4770 AND ANY OTHER UTILITY COMPANIES WHICH MIGHT BE AFFECTED.
3. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER, AND THE ENGINEER OF RECORD.
4. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A TRAFFIC CONTROL PLAN THAT ADDRESSES THE MAINTENANCE OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC IN A SAFE AND REASONABLY ADEQUATE MANNER AROUND THE WORK SITE. PRIOR TO COMMENCING WITH ANY ACTIVITIES AT THE JOB SITE, THE CONTRACTOR SHALL OBTAIN APPROVAL FOR THE TRAFFIC CONTROL PLAN FROM ALL AGENCIES HAVING JURISDICTION.
5. THE CONTRACTOR SHALL APPLY FOR AND PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, TAXES, ROYALTIES & FEES, AND GIVE ALL NOTICES NECESSARY TO COMPLETE THIS PROJECT.
6. THE CONTRACTORS SHALL COORDINATE WITH UTILITY COMPANIES TO ARRANGE FOR ANY REMOVAL, RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK, IF APPLICABLE.
7. THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL LOCATE AND EXPOSE ALL EXISTING UTILITIES TO BE CONNECTED SUFFICIENTLY AHEAD OF CONSTRUCTION TO ALLOW REDESIGN BY THE ENGINEER IF SUCH UTILITIES ARE FOUND TO BE DIFFERENT THAN THOSE SHOWN ON PLANS.

## IV. INSPECTION AND TESTING

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER OF RECORD VIA TELEPHONE AND EMAIL AT LEAST TWO BUSINESS DAYS PRIOR TO THE FOLLOWING:
   - a. FINISHED PAVEMENT - PRIOR TO PLACEMENT OF ANY FINISHED ASPHALT, CONCRETE AND/OR BRICK PAVING.
   - b. SUBSTANTIAL COMPLETION
   - c. FINAL INSPECTION

   REGARDLESS OF WHETHER OR NOT THE ABOVE ARE WITNESSED BY OTHERS, IF THE CONTRACTOR FAILS TO NOTIFY THE ENGINEER OF RECORD AT LEAST 2 BUSINESS DAYS PRIOR AND THESE ARE COMPLETED WITHOUT THE ENGINEER OF RECORD PRESENT, THE CONTRACTOR SHALL AGAIN EXPOSE THE WORK AND REPEAT ALL TESTS AS REQUESTED BY THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE CONTRACT. OTHERWISE, THE ENGINEER OF RECORD RESERVES THE RIGHT TO REFUSE ISSUANCE OF ANY CERTIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CALLING FOR ANY TESTING AND INSPECTIONS REQUIRED BY CITY, COUNTY, STATE AND FEDERAL AGENCIES HAVING JURISDICTION OVER THE CONTRACTOR'S WORK.

## V. TEMPORARY FACILITIES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE ACCESS ENTRANCE TO ADJACENT PROPERTIES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION.
4. ALL EXISTING DRAINAGE INLETS, DRAINAGE DITCHES AND WATER BODIES ABUTTING THE PROJECT SHALL BE PROTECTED FROM DEBRIS, SILT AND SOIL EROSION (REFER TO EROSION CONTROL PLAN AND DETAILS). EROSION CONTROL MEASURES SHALL BE CAREFULLY MAINTAINED UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE.
5. THE CONTRACTOR SHALL PROVIDE ALL WARNING SIGNALS, SIGNS, LIGHTS AND FLAG PERSONS AS NECESSARY FOR THE MAINTENANCE OF TRAFFIC WITHIN PUBLIC RIGHT-OF-WAYS IN ACCORDANCE WITH M.U.T.C.D., DELRAY BEACH , AND FDOT.
6. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED/SHIELDED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
7. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN AND BARRICADED/SHIELDED DURING NIGHTTIME HOURS WITHOUT THE EXPRESS PERMISSION OF THE DELRAY BEACH, AND/OR FDOT.

## VI. PROJECT CLOSE OUT:

1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEANUP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEPT BROOM CLEAN.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS/HER WORK, EQUIPMENT AND/OR EMPLOYEES TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS AS DETERMINED BY THE ENGINEER OR MUNICIPALITY HAVING JURISDICTION.
3. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, FENCES, MAILBOXES, SIGNS AND ANY OTHER IMPROVEMENTS REMOVED DURING CONSTRUCTION WITH THE SAME TYPE OF MATERIAL AND TO THE CONDITION WHICH EXISTED PRIOR TO THE BEGINNING OF OPERATIONS.
4. WHERE MATERIAL OR DEBRIS HAVE WASHED OR FLOWED INTO, OR HAVE BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION AS DETERMINED BY THE ENGINEER.
5. ALL DISPOSAL OF EXCESS AND UNSUITABLE EXCAVATED MATERIAL, DEMOLITION, VEGETATION, RUBBISH AND DEBRIS SHALL BE MADE OUTSIDE THE LIMITS OF CONSTRUCTION AT A LEGAL DISPOSAL SITE PROVIDED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE, WITH THE PRIOR APPROVAL OF THE ENVIRONMENTAL ENGINEER. MATERIAL CLEARED FROM THE SITE SHALL NOT BE DEPOSITED ON ADJACENT AND/OR NEARBY PROPERTY.
6. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
7. DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON HIS SET OF CONSTRUCTION DRAWINGS THE EXACT LOCATION, LENGTH AND ELEVATION OF ANY EXISTING FACILITIES NOT FOUND TO BE EXACTLY AS SHOWN ON THE PLANS, AND ANY NEW FACILITIES NOT BUILT EXACTLY ACCORDING TO PLANS.
8. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILT GRADES AND LOCATIONS OF FINISHED PAVEMENT, SIDEWALKS, CURBS, DRAINAGE STRUCTURES, AND ALL PHYSICAL IMPROVEMENTS. SUCH GRADES SHALL BE OBTAINED BY A LICENSED SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF FLORIDA, AND SHALL DOCUMENT THE INTENT OF THE PROPOSED GRADES SHOWN ON THE PLANS. THIS SHALL BE DONE AT NO COST TO THE OWNER.
9. CONTRACTOR TO REPLACE ALL FOUND PIPES WITH NAIL AND DISKS.

## VII. STORM DRAINAGE

1. EXISTING CATCH BASIN GRATES AND MANHOLE RIM ELEVATIONS AS SHOWN ON PLANS SHALL BE ADJUSTED TO CONFORM TO NEW OR EXISTING GRADES, AS REQUIRED.
2. ALL ONSITE STORM DRAINAGE MATERIALS AND INSTALLATION SHALL CONFORM TO THE APPLICABLE DELRAY BEACH AND FDOT SPECIFICATIONS.
3. ALL PRECAST CONCRETE DRAINAGE CATCH BASINS AND MANHOLES SHALL BE AS MANUFACTURED BY U.S. PRECAST CORPORATION OR APPROVED EQUAL.
4. ALL METAL FRAMES, GRATES AND RIMS FOR PRECAST CONCRETE STORM DRAINAGE MANHOLES AND CATCH BASINS SHALL BE AS MANUFACTURED BY U.S. FOUNDRY OR APPROVED EQUAL.
5. PROVIDE A MINIMUM PROTECTIVE COVER OF 24 INCHES OVER STORM SEWER AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL PROTECT COMPLETED DRAINAGE STRUCTURES AND EXFILTRATION TRENCH SYSTEMS FROM CONTAMINATION OF SILT AND CONSTRUCTION DEBRIS. PLACE PLYWOOD ON, OR FILTER FABRIC BETWEEN, THE FRAME AND INLET GRATE UNTIL CONSTRUCTION OPERATIONS ARE FINISHED.
7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MINIMUM PERIMETER GRADE AS SHOWN ON THE PLANS AND TO CONFIRM ALL RETENTION/DETENTION AREAS AND SLOPES PRIOR TO PLACING SOD OR SEEDING.
8. ALL ASBUILT AND RECORD DRAWINGS SHALL BE PROVIDED ELECTRONICALLY BY A LICENSED SURVEYOR USING THE DESIGN DRAWINGS AS BACKGROUND. MINIMUM REQUIRED ASBUILT INFORMATION FOR STORM DRAINAGE:
   - A. TOP ELEVATION OF EACH STRUCTURE FRAME AND COVER/GRATE (INCLUDING HEADWALLS, ETC.).
   - B. INVERT ELEVATIONS OF EACH PIPE ENTERING AND LEAVING EACH STRUCTURE.
   - C. INVERT IF MITERED END SECTIONS.
   - D. LENGTH OF ALL INSTALLED PIPES AND STUB-OUTS.
   - E. LENGTH, WIDTH, AND DEPTH OF EXFILTRATION TRENCHING.
   - F. CROSS SECTION AND BOTTOM ELEVATION OF ALL SWALES, DETENTION, AND RETENTION AREAS.

## IX. PAVING AND GRADING

1. ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED, UNLESS OTHERWUSE NOTED.
2. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.
3. WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT WITH THE PROPOSED PAVEMENT.
4. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE ENGINEER PRIOR TO ANY EXCAVATION.
5. CONTRACTOR TO STRIP TOPSOIL AND ORGANIC MATERIAL FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
6. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN AND CONFORM TO ALL REQUIREMENTS WITHIN THE GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
7. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL AGENCY HAVING JURISDICTION OR TO FDOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE AGENCY HAVING JURISDICTION ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
8. ALL CUT OR FILL SLOPES SHALL BE 4 FT HORIZONTAL TO 1 FT VERTICAL OR FLATTER UNLESS OTHERWISE SHOWN.
9. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED, AND MAINTAINED UNTIL A GOOD STAND OF GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
10. ALL ASBUILT AND RECORD DRAWINGS SHALL BE PROVIDED ELECTRONICALLY BY A LICENSED SURVEYOR USING THE DESIGN DRAWINGS AS BACKGROUND. MINIMUM REQUIRED ASBUILT INFORMATION FOR PAVEMENT:
    - A. TOP OF SUBGRADE AT PROPOSED GRADE SHOT LOCATIONS. IN LIEU OF SUBGRADE SURVEY SHOTS, THE CONTRACTOR CAN PROVIDE STRING LINE DEPTH VERIFICATION.
    - B. TOP OF ROCK AT PROPOSED GRADE SHOTS.
    - C. RETENTION/DETENTION BASIN BOTTOM ELEVATION AND CROSS SECTIONS AT MIN. 100' INTERVALS.
    - D. FINAL PAVEMENT ELEVATIONS WITH SUFFICIENT GRADES TO ESTABLISH ADA COMPLIANCE.

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LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

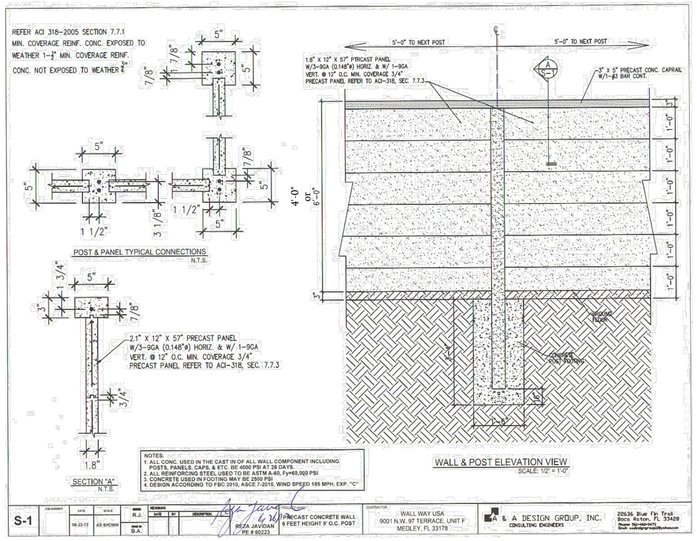
14145 S MILITARY TRAIL
DELRAY BEACH
PALM BEACH COUNTY, FL

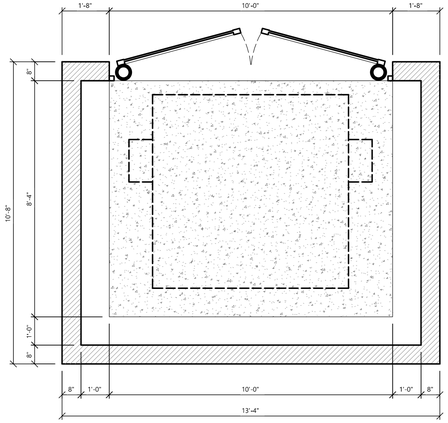
GENERAL NOTES

SHEET NUMBER C-101

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

Plotted By:Erik Wilczek Layout:C-101 GENERAL NOTES September 09, 2025 12:01:25pm \\Keen\Keen\Public\K\019 Jeffs Express\019-04 14145 S Military Trail Delray Beach\CAD\C-101 GENERAL NOTES.dwg
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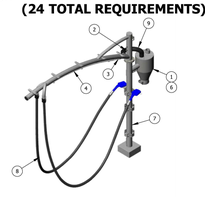

DUMPSTER ENCLOSURE

N.T.S

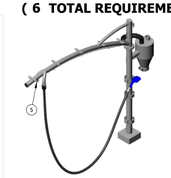
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## L3 ARCH - DOUBLE DROP ASSEMBLY - 712-7982
## (24 TOTAL REQUIREMENTS)



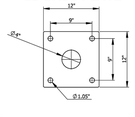
## L3 ARCH - SINGLE DROP ASSEMBLY - 712-7981
## ( 6 TOTAL REQUIREMENTS)

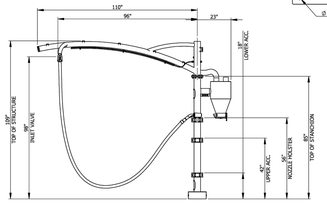


| ITEM NO. | PART NUMBER | DESCRIPTION | 712-7981/QTY. | 712-7982/QTY. |
|---|---|---|---|---|
| 1 | 370-35301 | SS MINI SEPARATOR - 14X35 - REAR POST MOUNT - OH - ARCH | 1 | 1 |
| 2 | 418-00001 | STRAIN RELIEF CORD GRIP - PLASTIC - FOR 0.20 - 0.472 | 1 | 1 |
| 3 | 418-10001 | 10' LED POWER CORD FOR USE TO 3 LEDS W/ P/N 431-XXXXX | 1 | 1 |
| 4 | 431-XXXXX | 8" LED 3500 LUMENS TE AC INTEGRATED DRIVER | 1 | 1 |
| 5 | 522-34421 | ARM, 3" SCH 40 PIPE, 42" LONG | 1 | 1 |
| 6 | 522-34422 | STEEL COUPLING, 3" SCH 40 PIPE, 3.5IN OD X 6IN | 1 | 1 |
| 7 | 712-7800 | L3 ARCH FLANGED FINAL ASSEMBLY - METAL CANOPY | 1 | 1 |
| 8 | 802-11006 | VACUUM HOSE KIT 1-ON X 1-OFF - FOR DETAILS REFER TO INVOICE | 2 | 2 |
| 9 | 848-34104 | HOSE VACUUM 3IN - FOR DETAILS REFER TO INVOICE | 1 | 1 |

NOTES: UNLESS OTHERWISE SPECIFIED
1. COLORS AND ACCESSORIES REFLECTED ARE FOR REPRESENTATION PURPOSES ONLY. REFER TO INVOICE FOR SPECIFIC REQUIREMENTS.

### L3 BASE PLATE




NOTES:
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SONNY'S The CarWash Factory
3001 Hiatus Road, Tamarac, FL 33321 | (800) 327-6723 | SonnysDirect.com

L3 ARCH FINAL ASSEMBLY
712-7981/712-7982 - SS MINI SEPARATOR - OH
WEIGHT: 289 lbs. DATE: 1/16/2024 SCALE: NTS REV: A
WV-008

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**GENERAL STRUCTURAL NOTES:**

**CODE:**

INTERNATIONAL BUILDING CODE, 2018 EDITION.

**LOADS:**

SEISMIC: NOT CRITICAL.
WIND: 115-MPH (EXP. C)
FABRIC DEAD LOAD: 1-PSF
ROOF LIVE LOAD: 5-PSF

**FOUNDATIONS:**

SEE SOILS REPORT BY: NOVA GEOTECHNICAL, G-17-152
DESIGN SOIL BEARING PRESSURE: 2000 PSF

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL

**CONCRETE:**

MINIMUM 28 DAY STRENGTH TO BE 3000 PSI
MAXIMUM SLUMP: 5 IN. TYPE II -V
MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED

**REINFORCING:**

ASTM A-615 GRADE 60 (Fy = 60 KSI)
CLEAR CONCRETE COVERAGE AS FOLLOWS:
CAST AGAINST EARTH.....3 IN

**STRUCTURAL STEEL:**

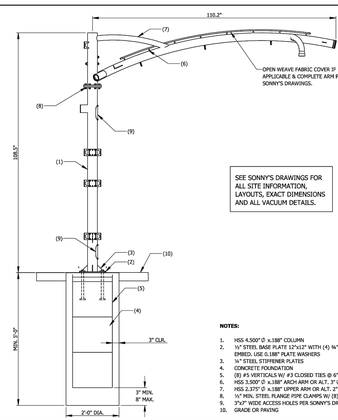
FABRICATED AND ROLLED SHAPES U.N.O. ASTM A36 (Fy = 36 KSI)
ROUND HSS .. ASTM A500 (Fy = 42 KSI)
PIPE: ASTM A53 GR. B
DETAILING,FABRICATION AND CONSTRUCTION PER LATEST AISC MANUAL
FINISH: PER SONNY'S
ANCHOR BOLTS TO BE ASTM A36 EQUIV. OR F1554-36
PIPE FLANGE BOLTS TO BE GRADE 5 EQUAL

**WELDING:**

PER LATEST AWS STANDARDS BY CERTIFIED WELDERS
USE E70 SERIES UNLESS NOTED OTHERWISE

**DISCLAIMER:**

THE INFORMATION ON THIS PAGE HAS BEEN DESIGNED AND ANALYZED BY A STRUCTURAL ENGINEER, HOWEVER, THIS INFORMATION IS PROVIDED FOR REFERENCE ONLY. STRUCTURAL ENGINEERING SHOULD BE COMPLETED BY A LICENSED STRUCTURAL ENGINEER IN THE MUNICIPALITY OF THE JOB SITE. THIS INFORMATION IS NOT TO BE USED ON OTHER PROJECTS WITHOUT OUR CONSENT.




SEE SONNY'S DRAWINGS FOR ALL SITE INFORMATION, LAYOUTS, EXACT DIMENSIONS AND ALL VACUUM DETAILS.

**NOTES:**

1. HSS 4.500"Ø x.188" COLUMN
2. ¾" STEEL BASE PLATE 12"x12" WITH (4) ¾"Ø HEAVY HEX A36 BOLTS W/ 12" MIN. EMBED. USE 0.188" PLATE WASHERS
3. ¼" STEEL STIFFENER PLATES
4. CONCRETE FOUNDATION
5. (8) #5 VERTICALS W/ #3 CLOSED TIES @ 6" O.C. AND (2) TIES @ TOP
6. HSS 3.500" Ø x.188" ARCH ARM OR ALT. 3"Ø STD PIPE (3.5" O.D.)
7. HSS 2.375" Ø x.188" UPPER ARM OR ALT. 2"Ø STD PIPE (2.375" O.D.)
8. ½" MIN. STEEL FLANGE PIPE CLAMPS W/ (8) ½" Ø, 8 BOLTS
9. 3"x5" WIDE ACCESS HOLES PER SONNY'S DRAWINGS
10. GRADE OR PAVING

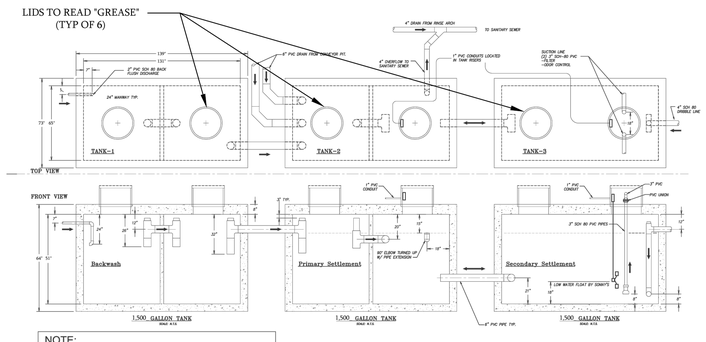
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SONNY'S The CarWash Factory
3001 Hiatus Road, Tamarac, FL 33321 | (800) 327-6723 | SonnysDirect.com

STRUCTURAL FOOTING DETAIL
712-7XXX - L3 ARCH FINAL ASSEMBLY
WEIGHT: lbs. DATE: 1/15/2024 SCALE: NTS REV: A
WV-009

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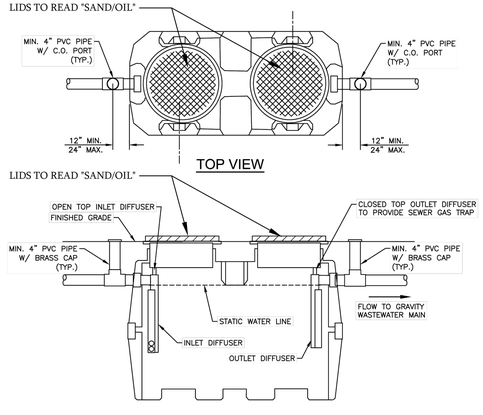



NOTE:
1. Pressure Test All Suction Lines Upon Installation @ 10-15 PSI max.
2. Keep pressure on Suction Lines for the entire DURATION of construction.
3. Pressure should NOT drop more than 2 PSI.
4. Watch for problems when excavating driveways.
5. If reclaim tanks are located more than 60 feet away from reclaim unit, then increase suction line to 3" sch 80 PVC.
6. Placement of suction lines is critical
7. Do NOT put screens on the suction lines
8. ANY QUESTIONS CONTACT SONNY'S.

## RECLAMATION AND TANK DETAIL

N.T.S

NOTE:
1. ALL UNDERGROUND TANKS AND PIPING BY CONTRACTOR
2. PIPE LOCATIONS SHOULD BE USED FOR ANY TANK.
3. ALL INTERNAL TANK PLUMBING TO BE 6" sch 40 PVC UNLESS NOTED OTHERWISE
4. ALL TANK BOTTOMS SHOULD BE LEVEL
5. THIS DRAWING IS TO SHOW TANK HOLDING CAPACITY AND PIPING RELATIONSHIPS ONLY. THEY ARE NOT INTENDED TO ADDRESS TANK STRUCTURE ENGINEERING.




## SAND/OIL SEPARATOR

N.T.S

NOTES:

1. **INSPECTION PORTS (CLEANOUTS) ARE REQUIRED TO BE INSTALLED AT EACH END OF ANY TYPE OF INTERCEPTOR WITH PORTS TO REMAIN ACCESSIBLE TO FOR UTILITY INSPECTION AND SAMPLING.**
2. **THE INTERCEPTOR PORTS (CLEANOUTS) SHALL BE LOCATED OUTSIDE AND IN A NON-TRAFFIC AREA WHEREVER POSSIBLE. IF INSTALLED IN A TRAFFIC AREA, MINI-MANHOLES ARE REQUIRED TO BE INSTALLED ON ALL PORTS (CLEANOUTS). THE SURFACE SURROUNDING THE INTERCEPTOR SHALL BE SLOPED TO DRAIN STORM WATER AWAY FROM THE INTERCEPTOR.**

LICENSED PROFESSIONAL

ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

14145 S MILITARY TRAIL
DELRAY BEACH
PALM BEACH COUNTY, FL

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

SITE DETAILS

SHEET NUMBER
C-105

SECTION 14 TOWNSHIP 46 SOUTH, RANGE 42 EAST
LOCATION MAP
NOT TO SCALE

## REPAIR AND RESTORATION

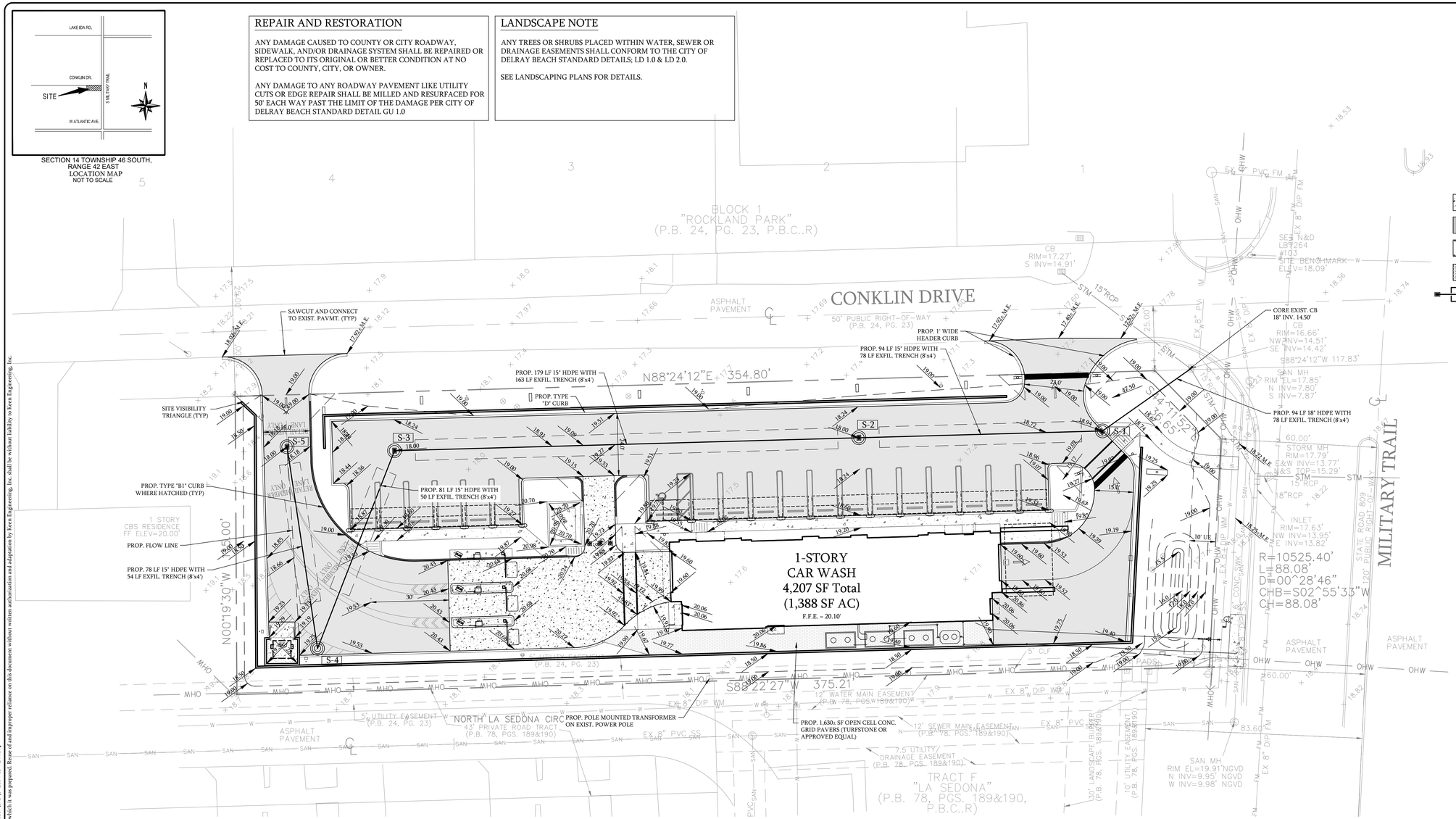
ANY DAMAGE CAUSED TO COUNTY OR CITY ROADWAY, SIDEWALK, AND/OR DRAINAGE SYSTEM SHALL BE REPAIRED OR REPLACED TO ITS ORIGINAL OR BETTER CONDITION AT NO COST TO COUNTY, CITY, OR OWNER.

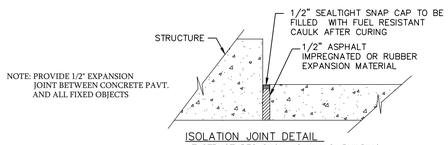
ANY DAMAGE TO ANY ROADWAY PAVEMENT LIKE UTILITY CUTS OR EDGE REPAIR SHALL BE MILLED AND RESURFACED FOR 50' EACH WAY PAST THE LIMIT OF THE DAMAGE PER CITY OF DELRAY BEACH STANDARD DETAIL GU 1.0

## LANDSCAPE NOTE

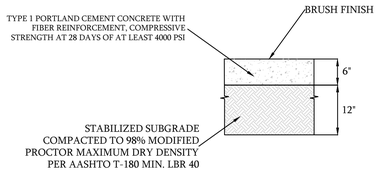
ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.0 & LD 2.0.

SEE LANDSCAPING PLANS FOR DETAILS.


CONKLIN DRIVE
50' PUBLIC RIGHT-OF-WAY (P.B. 24, PG. 23)
N88°24'12"E 354.80'
S88°22'27"W 375.21
N00°19'30"W 345.00'
BLOCK 1 "ROCKLAND PARK" (P.B. 24, PG. 23, P.B.C.,R)
MILITARY TRAIL
STATE ROAD 809
120' PUBLIC RIGHT-OF-WAY
1-STORY CAR WASH 4,207 SF Total (1,388 SF AC)
F.F.E. = 20.10'
1 STORY CBS RESIDENCE FF ELEV=20.00'
NORTH LA SEDONA CIRC
43' PRIVATE ROAD TRACT (P.B. 78, PGS. 189&190)
TRACT F "LA SEDONA" (P.B. 78, PGS. 189&190, P.B.C.,R)
SAWCUT AND CONNECT TO EXIST. PAVMT. (TYP)
SITE VISIBILITY TRIANGLE (TYP)
PROP. TYPE "B1" CURB WHERE HATCHED (TYP)
PROP. FLOW LINE
PROP. 78 LF 15" HDPE WITH 54 LF EXFIL. TRENCH (8'x4')
PROP. 179 LF 15" HDPE WITH 163 LF EXFIL. TRENCH (8'x4')
PROP. TYPE "D" CURB
PROP. 81 LF 15" HDPE WITH 50 LF EXFIL. TRENCH (8'x4')
PROP. 1' WIDE HEADER CURB
PROP. 94 LF 15" HDPE WITH 78 LF EXFIL. TRENCH (8'x4')
PROP. 94 LF 18" HDPE WITH 78 LF EXFIL. TRENCH (8'x4')
CORE EXIST. CB 18" INV. 14.50'
PROP. POLE MOUNTED TRANSFORMER ON EXIST. POWER POLE
PROP. 1,630± SF OPEN CELL CONC. GRID PAVERS (TURFSTONE OR APPROVED EQUAL)
S-1
S-2
S-3
S-4
S-5
CB RIM=17.27' S INV=14.91'
CB RIM=16.66' NW INV=14.51' SE INV=14.42'
SAN MH RIM EL=17.85' N INV=7.80' S INV=7.87'
STORM MH RIM=17.79 E&W INV=13.77' N&S INV=15.29'
INLET RIM=17.63' NW INV=13.95' SE INV=13.82
SITE BENCHMARK ELEV=18.09'
R=10525.40' L=88.08' D=00^28'46" CHB=S02^55'33"W CH=88.08'
SAN MH RIM EL=19.91'NGVD N INV=9.95' NGVD W INV=9.98' NGVD
12' WATER MAIN EASEMENT (P.B. 78, PGS. 189&190)
12' SEWER MAIN EASEMENT (P.B. 78, PGS. 189&190)
7.5' UTILITY/ DRAINAGE EASEMENT (P.B. 78, PGS. 189&190)
5' UTILITY EASEMENT (P.B. 24, PG. 23)
30' LANDSCAPE BUFFER (P.B. 78, PGS. 189&190)
10' UTILITY EASEMENT (P.B. 78, PGS. 189&190)
ASPHALT PAVEMENT
CONCRETE SIDEWALK
EX 8" DIP WM
EX 8" PVC SS
EX 8" DIP FM
EX 6" PVC FM
EX 8" PVC FM
EX 18" RCP STM
EX 15" RCP STM
EX 24" RCP STM
EX 30" RCP STM
EX 36" RCP STM
EX 42" RCP STM
EX 48" RCP STM
EX 54" RCP STM
EX 60" RCP STM
EX 72" RCP STM
EX 84" RCP STM
EX 96" RCP STM
EX 108" RCP STM
EX 120" RCP STM
EX 132" RCP STM
EX 144" RCP STM
EX 156" RCP STM
EX 168" RCP STM
EX

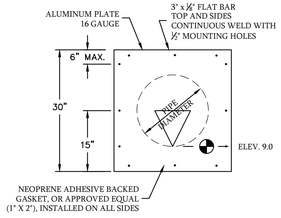



ISOLATION JOINT DETAIL
AT STRUCTURES SUCH AS WALLS, BUILDING CANOPY COLUMNS, ETC.

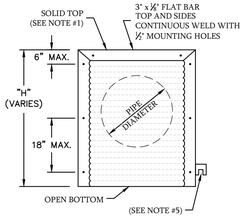



NOTE: TO BE CONSTRUCTED PER FDOT SPECIFICATIONS (SECTIONS 350) AND GEOTECHNICAL ENGINEERING REPORT

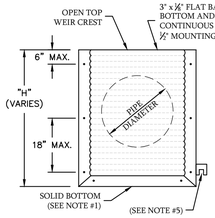
HEAVY DUTY CONCRETE
N.T.S



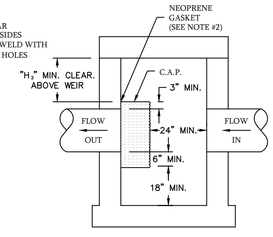

FRONT VIEW
BLEEDER DETAIL




FRONT VIEW
P.R.B. DETAIL




FRONT VIEW
WEIR DETAIL



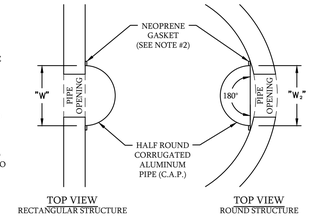

SIDE VIEW

WEIR SIZE PER PLAN

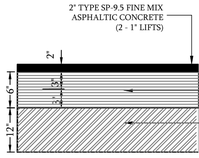
| PIPE DIAM. | W (IN) | $W_2$ (IN) | T (GAUGE) | $H_2$ (IN) |
|---|---|---|---|---|
| 15" | 21" | 21" | 16 | 6 |
| 18" | 24" | 24" | 16 | 7 |
| 21" | 30" | 30" | 16 | 8 |
| 24" | 30" | 36" | 16 | 10 |
| 30" | 36" | 42" | 14 | 13 |
| 36" | 42" | 48" | 14 | 16 |
| 42" | 48" | 54" | 14 | 20 |
| 48" | 54" | 60" | 14 | 23 |
| 54" | 60" | 66" | 14 | 26 |

"W" RECTANGULAR STRUCTURE
"$W_2$" ROUND STRUCTURE

NOTES:
1. ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE OPENING AT THE TOP FOR THE BAFFLE OR BOTTOM FOR WEIR.
2. NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1" x 2") SHALL BE INSTALLED ON THE SIDES AND TOP OF ALL BAFFLES OR BOTTOM OF WEIRS.
3. POLLUTION RETARDANT BAFFLE OR HALF PIPE WEIR TO BE FASTENED IN PLACE WITH ¼" x 4" STAINLESS STEEL "RED HEADS", OR APPROVED EQUAL.
4. FIBERGLASS BAFFLES AND WEIRS ARE NOT PERMITTED.
5. MOUNTING BRACKETS MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.



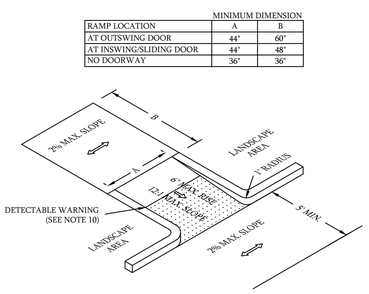

POLLUTION RETARDANT BAFFLE (PRB) AND WEIR DETAILS
N.T.S




ASPHALT PAVEMENT DETAIL
N.T.S.

NOTE:

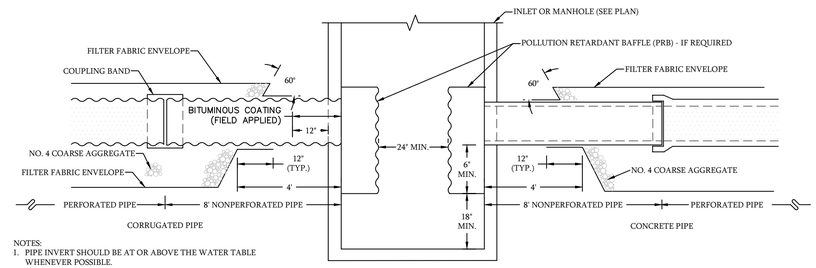
BITUMINOUS ASPHALT COARSE MAY BE INSTALLED IN TWO SEPARATE LIFTS TO ALLOW MOBILIZATION OF EQUIPMENT. THE SECOND LIFT OF ASPHALT SHALL NOT BE PLACED UNTIL ALL OTHER WORK ON THE SITE HAS BEEN COMPLETED. UPON COMPLETION OF SECOND LIFT OF ASPHALT, ANY SCRATCHES GOUGES, OR LOSS OF AGGREGATE WILL NOT BE ACCEPTED. CONTRACTOR TO REMEDY ALL HOLES, BLEMISHES, ETC. PRIOR TO THE UNIFORM INSTALLATION OF SECOND LIFT. AFTER SECOND LIFT OF ASPHALT IS INSTALLED, TRAFFIC ROLLING IS REQUIRED.




| | MINIMUM DIMENSION | |
|---|---|---|
| RAMP LOCATION | A | B |
| AT OUTSWING DOOR | 44" | 60" |
| AT INSWING/SLIDING DOOR | 44" | 48" |
| NO DOORWAY | 36" | 36" |

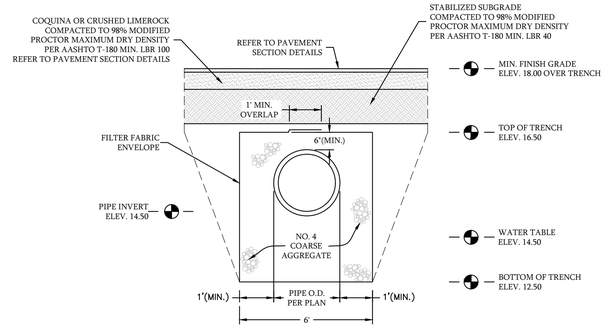
ACCESSIBLE RAMPS
N.T.S

NOTES:
1. ALL ACCESSIBLE COMPONENTS CONSTRUCTED AS PART OF THESE PLANS SHALL COMPLY WITH THE FLORIDA BUILDING CODE.
2. ACCESSIBLE ROUTE TO ACCESSIBLE SPACES, BUILDING ENTRANCES, AND PUBLIC STREETS SHALL NOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE.
3. CHANGE IN ELEVATION WITHIN THE ACCESSIBLE ROUTE IS NOT TO EXCEED ½" WITHOUT A CURB RAMP.
4. UNLESS OTHERWISE SHOWN ON THE PLANS, THE MINIMUM CLEAR ROUTE SHALL BE 36" WIDE WITH A 60"x60" PASSING SPACE EVERY 200 FEET.
5. ACCESSIBLE ROUTES THROUGH PLANTERS SHALL BE LEVEL WITH THE SURROUNDING PAVEMENT OR PROVIDE CURB RAMPS AT EACH END WITH A MINIMUM 48" LEVEL LANDING IN BETWEEN.
6. THE ACCESSIBLE ROUTE IN FRONT OF PULL-IN PARKING SHALL BE A MINIMUM OF 44" WIDE AND NOT REDUCED BY VEHICLE OVERHANGS, CURBING, SIGN POSTS, OR OTHER OBSTRUCTIONS.
7. ANY WALK THAT CROSSES OR ADJOINS A VEHICULAR WAY NOT SEPARATED BY CURBS, RAILINGS, OR OTHER ELEMENTS SHALL BE DEFINED BY A CONTINUOUS 36" WIDE DETECTABLE WARNING.
8. SPECIAL RAMP RULES APPLY FOR ANY RISE GREATER THAN 6" INCLUDING BUT NOT LIMITED TO RESTRICTION ON SLOPE, TOTAL RISE BETWEEN LANDINGS, AND USE OF HANDRAILS, PER F.B.C 11-4.8.
9. PUBLIC SIDEWALK CURB RAMPS CONSTRUCTED WITHIN A PUBLIC RIGHT-OF-WAY, IN ABSENCE OF LOCAL ROADWAY GUIDELINES, SHALL MEET THE REQUIREMENTS OF F.D.O.T INDEX 304.
10. CURB RAMPS SHALL HAVE A DETECTABLE WARNING EXTENDING 3' WIDE.
11. DETECTABLE WARNINGS: SEE DETAIL SHEET




NOTES:
1. PIPE INVERT SHOULD BE AT OR ABOVE THE WATER TABLE WHENEVER POSSIBLE.
2. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT CONTAMINATION OF THE TRENCH WITH SAND, SILT AND FOREIGN MATERIALS.
3. THE 12" DIAMETER WEEP HOLE SHALL BE ELIMINATED, WHEN THE BOTTOM OF THE INLET IS BELOW THE NORMAL WATER TABLE, UNLESS OTHERWISE SHOWN IN THE PLANS.

LONGITUDINAL SECTION




TYPICAL CROSS SECTION

EXFILTRATION TRENCH
N.T.S

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Keen Engineering, Inc. shall be without liability to Keen Engineering, Inc.

This item has been digitally signed and sealed by ERIK WILCZEK, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

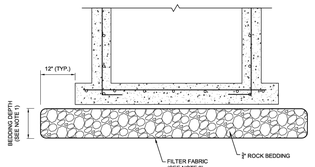
PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

14145 S MILITARY TRAIL
DELRAY BEACH
PALM BEACH COUNTY, FL

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

PAVING, GRADING & DRAINAGE DETAILS

SHEET NUMBER
C-201



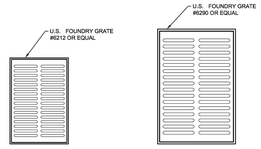

NOTES:

1. BEDDING DEPTH SHALL BE 10" UNDER DRAINAGE STRUCTURES AND 18" UNDER SANITARY STRUCTURES.
2. ROCK SHALL BE WRAPPED IN FILTER FABRIC THAT MEETS THE REQUIREMENTS OF F.D.O.T. SPECIFICATION SECTION 985.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

STANDARD BEDDING DETAIL | DATE: 10-04-2024 | D 4.0

| INLET TYPE | DIMENSIONS A | DIMENSIONS B | GRATE TYPE | MAX. PIPE SIZE WALL A | MAX. PIPE SIZE WALL B |
|---|---|---|---|---|---|
| 'C' | 2'-0" | 3'-1" | U.S. FOUNDRY No. 6212 | 15" R.C.P. | 24" R.C.P. |
| 'E' | 3'-0" | 4'-5" | U.S. FOUNDRY No. 6290 | 24" R.C.P. | 36" R.C.P. |




TYPE "C"



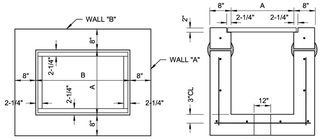

TYPE "E"

NOTES:

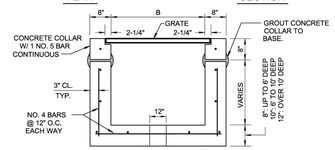
1. ALL GRATES SHALL BE SUITABLE FOR H-20 LOADING (HIGHWAY TRAFFIC LOADS)
2. WHEN INSTALLED IN PAVEMENT OR WITHIN 6' OF PAVEMENT USE U.S.F. 4160-6210

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPE C & E INLET GRATE DETAIL | DATE: 10-04-2024 | D8.0




PLAN SECTION




SECTION * SEE TYPICAL BACKFILL DETAIL GU 2.0

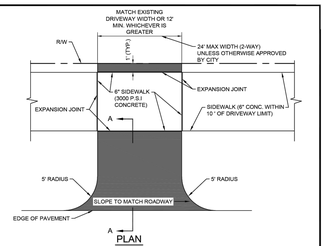
| INLET TYPE | DIMENSIONS A | DIMENSIONS B | GRATE TYPE | MAX. PIPE SIZE WALL A | MAX. PIPE SIZE WALL B |
|---|---|---|---|---|---|
| 'C' | 2'0" | 3'1" | U.S. FOUNDRY NO. 6212 | 15" R.C.P. | 24" R.C.P. |
| 'E' | 3'0" | 4'6" | U.S. FOUNDRY NO. 6290 | 24" R.C.P. | 36" R.C.P. |

NOTES:

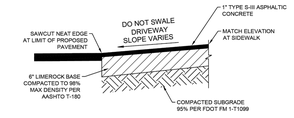
1. INLET TO BE PRECAST WITH CLASS 'A' 4000 P.S.I. CONCRETE.
2. ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".
3. 12" DIAMETER WEEP HOLE REQUIRED ON ALL STRUCTURES WHICH HAVE A BOTTOM ELEVATION ABOVE THE WATER TABLE EXCEPT IN WELLFIELDS.
4. 18" SUMP REQUIRED IN ALL DRAINAGE STRUCTURES.
5. SEE BEDDING DETAIL D 3.0
6. ALL STRUCTURES TO BE 4 SIDED ANGLE SHOULDERS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPE C & E INLET DETAIL | DATE: 10-04-2024 | D9.0




PLAN




SECTION A-A

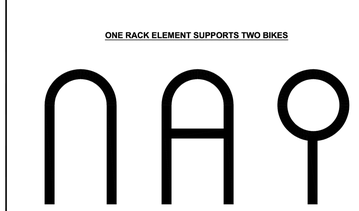
NOTES:

1. THIS DETAIL IS SHOWN WITH PROPOSED SIDEWALK.
2. IF THERE IS AN EXISTING SIDEWALK, THE SIDEWALK SHALL BE EVALUATED FOR THICKNESS AND IF FOUND NOT TO BE 6" THICK IT MUST BE REPLACED WITHIN THE LIMITS OF THE DRIVEWAY AND 10' ON EITHER SIDE.
3. IF THERE IS NO SIDEWALK, EXISTING OR PROPOSED, THE DRIVEWAY APRON SHALL BE CONSTRUCTED WITH THE GEOMETRY SHOWN HEREON UP TO THE PROPERTY LINE.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

ASPHALT DRIVEWAY APRON | DATE: 10-04-2024 | RT 24.0

**ONE RACK ELEMENT SUPPORTS TWO BIKES**

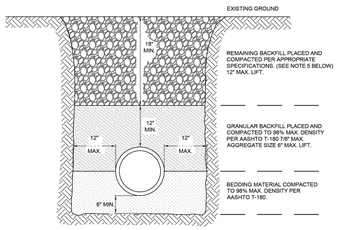


**INVERTED "U"** **"A"** **POST AND LOOP**

THE LOCATION OF THE BICYCLE RACK SHOULD BE SUCH THAT IT IS VISIBLE AND IS COMPLIANT WITH THE CURRENT VERSION OF THE PROPOSED ACCESSIBILITY, GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG) PREFERABLY ON THE APPROACH SIDE OF THE BUILDING OR STRUCTURE PARKING IS EXPECTED, AT LEAST 50% OF THE BICYCLE PARKING SPOTS SHOULD BE COVERED BY AN OVERHANG OR ACTUAL STORAGE FACILITY. UPPER ELEMENTS OF THE BICYCLE RACK SHOULD NOT PROTRUDE, CREATING AN OBSTACLE FOR A BLIND TRAVELER. THE COLOR OF THE BICYCLE RACK IS 3275 ENGINEERING GRADE/COLOR BLUE.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

BICYCLE RACK | DATE: 10-04-2024 | RT 35.0

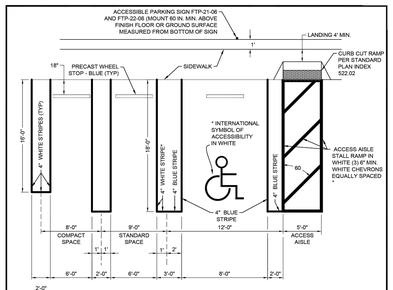



NOTES:

1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED OFF SITE AND DISPOSED IN A PROPER LANDFILL; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH
3. APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
4. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
5. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
6. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE PER (AASHTO T-180)
7. COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS. CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL BACKFILL DETAIL | DATE: 10-04-2024 | GU 2.0



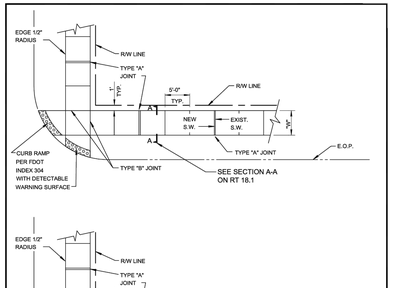

PARKING STALL DIMENSIONS:
STANDARD 9'x 18'
COMPACT 8'x 16'
ACCESSIBLE 12'x 18' PLUS 5' ACCESS AISLE

* NOTES:

1. ON LIGHT COLORED SURFACE I.E. CONCRETE ALL ACCESSIBLE MARKINGS SHALL BE BLUE AND STANDARD PARKING STRIPING SHALL BE 3" WHITE WITH 1" BLACK BORDER.
2. ALL STRIPING WITHIN PUBLIC RIGHT-OF-WAY SHALL BE 6 INCHES.
3. ALL MEASUREMENTS ARE FROM CENTER LINE.
4. ALL COMPACT SPACES MUST HAVE "COMPACT" STENCILED WITH BLACK PAINT ON WHEEL STOP.
5. BLUE STRIPE & INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WALKWAY ON CONCRETE.
6. 24" STOP BAR BETWEEN ALL PARKING LOTS AND PUBLIC R/W SHALL BE THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1 THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1
7. CHANGES IN LEVEL ARE NOT PERMITTED IN ACCESSIBLE PARKING STALLS AND ACCESS AISLES SERVING THE STALLS. SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

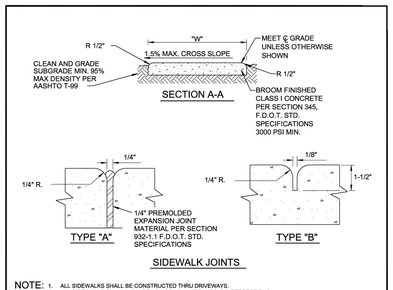
TYPICAL PARKING SPACES (1 OF 3) | DATE: 10-04-2024 | RT 16.0




PLAN

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SIDEWALK CONSTRUCTION DETAIL | DATE: 10-04-2024 | RT 18.0




SECTION A-A

TYPE "A" TYPE "B"

SIDEWALK JOINTS

NOTE:

1. ALL SIDEWALKS SHALL BE CONSTRUCTED THRU DRIVEWAYS.
2. ALL SIDEWALKS SHALL INCLUDE ADA COMPLIANT RAMPS @ INTERSECTIONS.
3. ALL SIDEWALKS SHALL INCLUDE CROSS SLOPE AND RUNNING SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.
4. CURB RAMP DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP AND 24" DEEP.
5. SIDEWALK SHALL BE 9" THICK FOR 2' AT THE CONNECTION TO ROADWAYS WITH A 6" TRANSITION TO 6" FOR THE REMAINDER OF THE REQUIRED 10'.

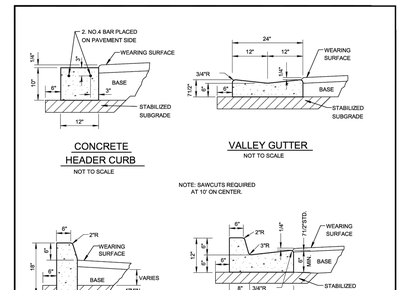
| TABLE OF SIDEWALK THICKNESS - "T" | |
|---|---|
| GENERAL AREAS | 4" |
| WITHIN 10' OF CROSS-STREETS, AT DRIVEWAYS & OTHER AREAS | 6" |

| TABLE OF SIDEWALK WIDTHS - "W" | |
|---|---|
| SINGLE-FAMILY AREAS | 5' |
| MULTI-FAMILY AREAS | 5' |
| OTHER AREAS AS SPECIFIED BY THE CITY. | |

| TABLE OF SIDEWALK JOINTS | |
|---|---|
| TYPE | LOCATION |
| "A" | P.C. AND P.T. OF CURVES JUNCTION OF EXISTING & NEW SIDEWALKS & EVERY 30' |
| "B" | 5'-0" CENTER TO CENTER ON SIDEWALKS SCORED DURING PLACEMENT OR SAWCUT WITHIN 24 HOURS OF PLACEMENT. |
| "A" | WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES. |

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

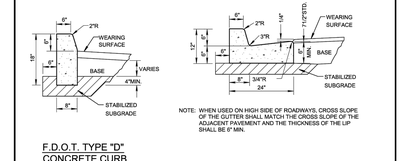
SIDEWALK CONSTRUCTION | DATE: 10-04-2024 | RT 18.1




CONCRETE HEADER CURB
NOT TO SCALE

VALLEY GUTTER
NOT TO SCALE

NOTE: SAWCUTS REQUIRED AT 10' ON CENTER.




NOTE: WHEN USED ON HIGH SIDE OF ROADWAYS, CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6" MIN.

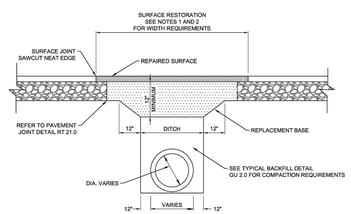
F.D.O.T. TYPE "D" CONCRETE CURB
NOT TO SCALE

F.D.O.T. TYPE "F" CONCRETE CURB AND GUTTER
NOT TO SCALE

NOTES: 1. ROADWAY SUBGRADE SHALL IN ALL CASES EXTEND BELOW CURBING.
2. SAWCUTS AT 10' ON CENTER SHALL BE MADE WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

CURB AND GUTTER SECTIONS | DATE: 10-04-2024 | RT 19.0



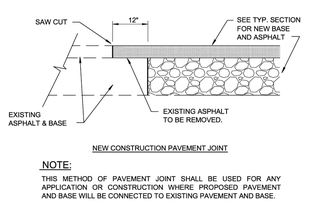

SECTION - WHERE APPLICABLE

NOTES:

1. FOR COMMERCIAL PROJECTS THAT DAMAGE THE ROADWAY SURFACE THE ROADWAY SHALL BE MILLED AND RESURFACED 50' IN EACH DIRECTION FROM THE DAMAGED AREA. MILLING AND RESURFACING SHALL BE FOR THE FULL LANE WIDTH OF ANY DAMAGED LANE.
2. FOR RESIDENTIAL PROJECTS THAT DAMAGE THE ROADWAY SURFACE THE ROADWAY SHALL BE MILLED AND RESURFACED FOR THE WIDTH OF THE RESIDENTIAL PROPERTY (MIN. 50' REPAIR LENGTH). MILLING AND RESURFACING SHALL BE FOR THE FULL LANE WIDTH OF ANY DAMAGED LANE.
3. MILLING DEPTH SHALL BE 1" AND RESURFACING SHALL BE 1" TYPE S-III ASPHALTIC CONCRETE.
4. BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180. MAX LIFT THICKNESS SHALL BE 6".
5. 24" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
6. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
7. ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
8. SURFACE MATERIAL SHALL BE S-III ASPHALTIC CONCRETE (FOR TRENCH REPAIR, THICKNESS SHOULD BE TWICE THE THICKNESS OF THE ADJACENT EXISTING ASPHALT).
9. ANY PAVEMENT CUTS SHALL BE COLD PATCHED AT THE END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
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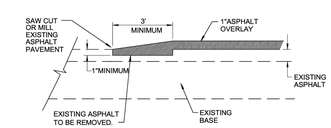
PAVEMENT REPAIR DETAIL | DATE: 10-04-2024 | GU 1.0




NEW CONSTRUCTION PAVEMENT JOINT

NOTE:

THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.




NEW OVERLAY PAVEMENT JOINT

NOTE:

THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT WILL BE CONNECTED TO EXISTING PAVEMENT.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT JOINT DETAIL | DATE: 10-04-2024 | RT 21.0

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LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

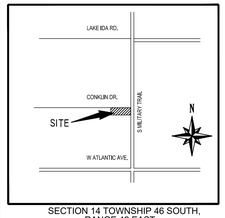
14145 S MILITARY TRAIL
DELRAY BEACH PALM BEACH COUNTY, FL

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-0700
CA#31195

PAVING, GRADING & DRAINAGE DETAILS

SHEET NUMBER C-202

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SECTION 14 TOWNSHIP 46 SOUTH, RANGE 42 EAST
LOCATION MAP
NOT TO SCALE

## LANDSCAPE NOTE

ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.0 & LD 2.0.

SEE LANDSCAPING PLANS FOR DETAILS.

N

0 20 40
SCALE FEET

## LEGEND

- PROPOSED EASEMENT
- EXISTING EASEMENT
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER

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BLOCK 1
"ROCKLAND PARK"
(P.B. 24, PG. 23, P.B.C..R)

CONKLIN DRIVE
50' PUBLIC RIGHT-OF-WAY
(P.B. 24, PG. 23)

1 STORY
CBS RESIDENCE
FF ELEV=20.00'
5

PROP. WAY FINDING SIGN (TYP)

PROP. LIGHT POLE AND FIXTURE (TYP)

PROP. 60± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.

PROP. 1,500 GAL RECLAIM WATER TANKS (3) AND 750 GAL SAND/OIL SEPARATOR TANK BY SONNY'S (OR APPROVED EQUAL)

PROP. 33±LF OF 2 - 4" PVC CONDUIT FOR UNDERGROUND CABLE AND ELEC. SERVICE

1-STORY
CAR WASH
4,207 SF Total
(1,388 SF AC)
F.F.E. = 20.10'

PROP. SCREEN WALL

EX. FIRE HYDRANT TYP.

PROP. POLE MOUNTED TRANSFORMER

NORTH LA SEDONA CIRCLE
43' PRIVATE ROAD TRACT
(P.B. 78, PGS. 189&190)

TRACT F
"LA SEDONA"
(P.B. 78, PGS. 189&190, P.B.C..R)

5' UTILITY EASEMENT (P.B. 24, PG. 23)

12' WATER MAIN EASEMENT (P.B. 78, PGS. 189&190)

12' SEWER MAIN EASEMENT (P.B. 78, PGS. 189&190)

7.5' UTILITY/DRAINAGE EASEMENT (P.B. 78, PGS. 189&190)

30' LANDSCAPE BUFFER (P.B. 78, PGS. 189&190)

10' UTILITY EASEMENT (P.B. 78, PGS. 189&190)

CB
RIM=17.27'
S INV=14.91'

EX. 4" PVC FM

EX. 8" DIP FM

SET P.K. N&D
LB#264
#103
SITE BENCHMARK
ELEV=18.09'

CB
RIM=16.66'
NW INV=14.51'
SE INV=14.42'

SAN MH
RIM EL=17.85'
N INV=7.80'
S INV=7.87'

60.00'
STORM MH
RIM=17.79'
E&W INV=13.77'
N&S TOP=15.29'
18"RCP

INLET
RIM=17.63'
NW INV=13.95'
E INV=13.82'

EX. 8" DIP WM

EX. 8" PVC SS

EX. 8" DIP SAN

EX. 8" DIP FM

SAN MH
RIM EL=19.91'NGVD
N INV=9.95' NGVD
W INV=9.98' NGVD

STATE ROAD 809
(MILITARY TRAIL)
PUBLIC RIGHT-OF-WAY

ASPHALT PAVEMENT

PROP. 95± LF 2" P.E (SDR 9)

PROP. IRRIGATION PUMP/WELL (SEE IRRIGATION PLANS FOR DETAIL)

PROP. 8"x6" TAPPING SLEEVE & 6" GATE VALVE, 6' 90° BEND, 5± LF 6" DIP WM AND HYDRANT PER CITY DETAIL

PROP. 2" CURB STOP, 2" METER AND 2" RPZ- BFP PER CITY DETAIL

PROP. 2" TAP, SADDLE, AND 2" CORP. STOP PER CITY DETAIL. NEW TAP MIN. 18" FROM EX. TAPS/FITTINGS

PROP. 12"x6" PVC SEWER TAP @ INV. 8.27± REPAIR 6' SIDEWALK AS NECESSARY

PROP. 10± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.

CROSSING #1:
EXIST. 8" DIP WM BOTTOM ELEV.= 14.50± NAVD
PROP. 6" PVC SAN. TOP ELEV.= 8.84± NAVD

PROP. 6' C.O. (W/ HEXAGON MINI MANHOLE) INV.= 8.63 (LOCATE ON PRIVATE SIDE W/IN 18" OF ROW LINE)

PROP. 70± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.

PROP. 6' C.O. (W/ METAL MINI MANHOLE, S ON LID) INV.= 13.70

PROP. 24± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.

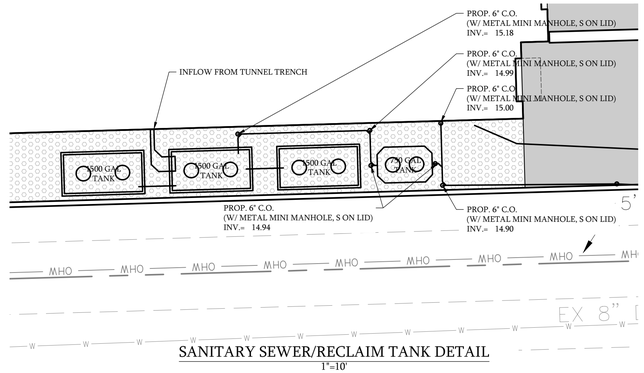
NOTE:
MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 5 FEET BETWEEN THE WATER SERVICE LINE AND THE SANITARY SEWER LATERAL.

## GENERAL NOTES

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
3. SANITARY SEWER LATERALS SHALL BE 6" PVC SDR 26
4. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
5. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3 FT. OF COVER ON ALL WATER MAINS.
6. EXISTING UTILITIES' SIZE AND MATERIAL SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR PRIOR TO INSTALLATION OF ANY NEW LINES. CONTRACTOR TO REPAIR EXISTING UTILITY LINES AS NECESSARY TO MAINTAIN PROPER SEWER SYSTEM FUNCTION.
7. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
8. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES (CITY OF DELRAY BEACH) WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
9. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
10. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
11. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
12. CLEANOUT AT ROW (END OF CITY RESPONSIBILITY) ONLY IN A HEXAGON MINI MANHOLE. ALL OTHER PRIVATE CLEANOUTS BEYOND ROW CLEANOUT TO BE IN A ROUND METAL MINI MANHOLE WITH LETTER "S" ON THE LID.
13. ALL SAND/OIL INTERCEPTORS MUST HAVE A MINIMUM 4" CLEANOUT ON BOTH THE ENTRY AND EXIT LINES. ALL MANHOLE LIDS FOR GREASE TRAP TO SAY "SAND/OIL".
14. ALL GREASE TRAPS MUST HAVE A MINIMUM 4" CLEANOUT ON BOTH THE ENTRY AND EXIT LINES. ALL MANHOLE LIDS FOR GREASE TRAP TO SAY "GREASE".

## CITY OF DELRAY BEACH NOTES

1. ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER, OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY O DELRAY BEACH STANDARD DETAILS; LD 1.1 & LD 1.2. PLEASE REFER TO THE LANDSCAPE PLANS FOR DETAILS.
2. NO PROPOSED IMPROVEMENTS, BUILDINGS OR ANY KIND OF CONSTRUCTION CAN BE PLACED ON OR WITHIN ANY WATER, SEWER OR DRAINAGE EASEMENTS, UNLESS APPROVED BY THE CITY OF DELRAY BEACH CITY ENGINEER.
3. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10 FEET FROM ANY EXISTING OR PROPOSED WATER, SEWER OR DRAINAGE FACILITIES, UNLESS APPROVED BY THE CITY OF DELRAY BEACH CITY ENGINEER.
4. THE CITY OF DELRAY BEACH UTILITIES DIVISION AT (561) 243-7312 MUST BE GIVEN AT LEAST 48 HOURS NOTIFICATION PRIOR TO ANY SHUT-DOWN AND/OR REMOVAL OF EXISTING WATER MAIN OR SANITARY SEWER LINES.
5. PRIOR TO ANY SANITARY SEWER SERVICE CONNECTION, REMOVAL AND/OR ABANDONMENT, THE EXISTING SEWER LINE WILL BE TELEVISED AND CD SUBMITTED TO CITY OF DELRAY BEACH UTILITIES DIVISION. ENSURE THE CITY'S NUMBERING SYSTEM IS USED TO IDENTIFY MANHOLES.




SANITARY SEWER/RECLAIM TANK DETAIL
1"=10'

LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019.04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

PALM BEACH COUNTY, FL

# 14145 S MILITARY TRAIL

# WATER AND SEWER PLAN

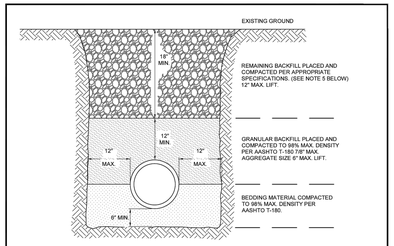
DELRAY BEACH

KEEN Engineering Inc.
7280 W PALMETTO PARK RD. SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700 CA#31195

SHEET NUMBER
C-300

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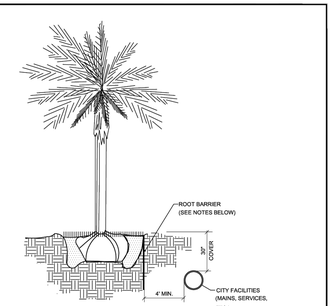
Printed By:Erik Wilczek Layout:C-300 UTILITY PLAN September 09, 2025 12:02:07pm \\user\Users\Projects\2019 Jets Express\2019-04 14145 S Military Trail Delray Beach\CAD\C-300 WATER AND SEWER PLAN.dwg




NOTES:

1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED OFF SITE AND DISPOSED IN A PROPER LANDFILL. BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH
3. APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
4. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
5. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
6. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE PER (AASHTO T-180)
7. COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS. CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

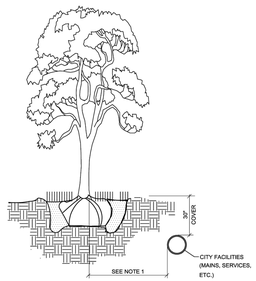
| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | TYPICAL BACKFILL DETAIL | DATE: 10-04-2024 GU 2.0 |
|---|---|---|




NOTES:

1. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL CITY FACILITIES.
2. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
3. ROOT BARRIERS SHALL BE MYREKA BIO-BARRIER 36" "APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS", FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
4. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

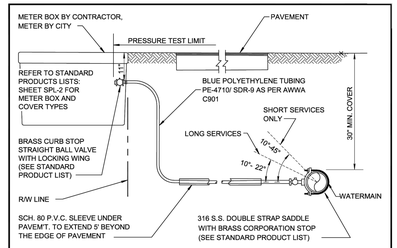
| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | TYPICAL TREE WITH ROOT BARRIER | DATE: 10-04-2024 LD 1.0 |
|---|---|---|




NOTES:

1. THIS DISTANCE SHALL BE 10' MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

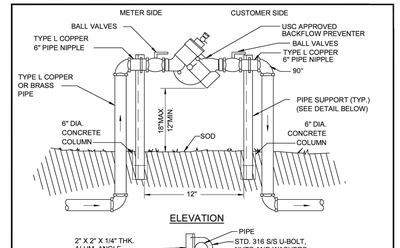
| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | TYPICAL TREE WITHOUT ROOT BARRIER | DATE: 10-04-2024 LD 2.0 |
|---|---|---|




NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" ON CENTER.
2. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
3. ALL METERS REQUIRE A LOCKING BRASS CURB STOP WITH LOCK WING (1"MIN.).
4. NO FITTINGS BETWEEN CORPORATION STOP AND BRANCH ASSEMBLY.
5. MAXIMUM SERVICE LENGTH IS 100' TO METER.
6. CASING PIPE I.D. SHALL BE SERVICE O.D. PLUS 1" MINIMUM.
7. MINIMUM BEND RADIUS ON SERVICES SHALL BE 14" ON ALL SERVICES BEHIND METER.
8. METER SIZE WILL BE DETERMINED BY PUBLIC UTILITIES DEPT. UPON APPLICATION FOR SERVICE.
9. ALL VALVES TO BE BALL VALVES.
10. METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
11. ALL SERVICES UNDER ROADWAYS ARE TO BE INSTALLED BY TRENCHLESS METHOD, UNLESS OTHERWISE APPROVED.
12. ALL EXISTING SERVICES TO BE FIELD VERIFIED BY BUILDER/CONTRACTOR/ DEVELOPER; IF EXISTING SERVICE IS GALVANIZED, BUILDER/CONTRACTOR/ DEVELOPER SHALL REPLACE WITH POLYETHYLENE PIPING FROM MAIN TO THE METER.
13. ALL WATER SERVICE SHALL BE A MINIMUM OF 2".
14. WATER METERS SHALL BE LOCATED OUTSIDE ANY DRIVEWAYS BY 2'

| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | TYPICAL URBAN/REDEVELOPMENT AREA SERVICE CONNECTION | DATE: 10-04-2024 PW 12.0 |
|---|---|---|




NOTES:

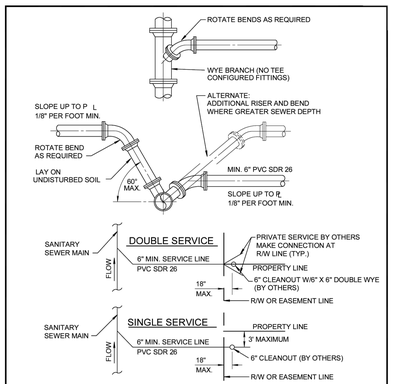
1. FOR ALL SERVICES LESS THAN OR EQUAL TO 2" DIA.
2. ABOVE GRADE PIPING SHALL BE BRASS OR TYPE "L" COPPER OR BRASS TUBING.
3. ALL COPPER JOINTS SHALL BE MADE WITH 95/5 SOLDER.
4. USC APPROVED RPZ BACKFLOW PREVENTER IS REQUIRED IN ACCORDANCE WITH CITY OF DELRAY BEACH CODE OF ORDINANCES TITLE V, CHAPTER 52.83.
5. USC APPROVED RPZ BACKFLOW PREVENTER IS REQUIRED FOR ALL COMMERCIAL PROPERTIES AND ALL RESIDENTIAL PROPERTIES WITH FIRE SPRINKLER SYSTEMS.

| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | REDUCED PRESSURE ZONE BACKFLOW PREVENTER | DATE: 10-04-2024 PW 16.0 |
|---|---|---|

## GRAVITY SEWER NOTES

1. MANHOLES SHALL BE INSPECTED BY THE ENGINEER BEFORE PLACEMENT AND SURFACE TREATMENT.
2. ALL OPENINGS IN PRECAST MANHOLES SHALL BE CAST AT TIME OF MANUFACTURE. CONNECTIONS TO EXISTING MANHOLES SHALL BE CORE ENTRY ONLY.
3. ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE.
4. (PVC) GRAVITY SEWER PIPE SHALL CONFORM TO ASTM D 3034, SDR 26, LATEST REVISIONS, WITH PUSH ON RUBBER GASKET JOINTS.
5. (DIP) GRAVITY SEWER PIPE SHALL BE CLASS 350, 401 EPOXY LINED OR AS OTHERWISE APPROVED BY UTILITIES DEPARTMENT.
6. NO SERVICE CONNECTIONS, WYES, SERVICES OR VALVES WILL BE PERMITTED IN RESIDENTIAL DRIVEWAYS.
7. MANHOLE FRAMES SHALL BE ATTACHED TO THE PRECAST STRUCTURE WITH A MINIMUM OF TWO 3/4" 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS. FRAMES SHALL BE SEALED WITH A MINIMUM OF TWO 1/2" BEADS OF RAM-NEK CAULKING.
8. TRENCHES SHALL BE DE-WATERED TO ENABLE PIPE AND APPURTENANCES TO BE INSTALLED FREE OF WATER ON UNDISTURBED SOIL. IF UNSUITABLE SUBSURFACE MATERIAL IS ENCOUNTERED, EXCAVATE EXTRA 6" AND BACKFILL WITH 3/4" GRAVEL.
9. PVC SHALL BE LAID IN STRICT CONFORMANCE TO MANUFACTURER'S SPEC (JOHNS MANVILLE RING TITE PVC PIPE INSTALLATION GUIDE OR EQUAL). BACKFILLING OF UTILITY TRENCHES WILL NOT BE ALLOWED UNTIL INSPECTED BY THE ENGINEER.
10. BACKFILL MATERIAL FOR SEWER MAIN AND LINES SHALL BE NON-COHESIVE, NON PLASTIC MATERIAL FREE OF ALL DEBRIS, LUMPS AND ORGANIC MATTER. BACKFILL MATERIAL PLACED WITHIN ONE (1) FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO (2) INCHES IN DIAMETER, (1" FOR PVC PIPE) AND NO STONES LARGER THAN SIX (6) INCHES IN DIAMETER WILL BE PERMITTED IN ANY BACKFILL.
11. ALL EXCAVATION IN EXISTING RIGHT OF WAY SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH DAY TO PERMIT PEDESTRIAN AND VEHICULAR TRAFFIC PRIOR TO THE CONTRACTOR LEAVING THE SITE.
12. WHERE SEWER IS NOT WITHIN PUBLIC R/W, IT IS TO BE LOCATED IN A 12' UTILITY EASEMENT. CITY MAINTENANCE RESPONSIBILITY IS MANHOLE TO MANHOLE ONLY.
13. UPON COMPLETION OF THE WORK AND PRIOR TO PLACEMENT OF ASPHALT A VISUAL INSPECTION BY THE ENGINEER SHALL BE MADE OF THE COMPLETED SYSTEM ALONG WITH A LOW PRESSURE AIR TEST. AFTER ROCK BASE FINISHED & PRIMED, OR 1ST LIFT OF ASPHALT PLACED, AFTER ALL OTHER TESTING HAS BEEN COMPLETED, A CD VIDEO RECORDING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, BEFORE THE LENGTHS ARE ACCEPTED FOR MAINTENANCE.
14. EACH LINE SEGMENT SHALL BE LAMPED TO DETERMINE PROPER ROUNDNESS.
15. COMPLETE "AS BUILT" INFORMATION RELATIVE TO MANHOLES, VALVES, SERVICES FITTINGS, PIPE LENGTHS, INVERTS AND SLOPES SHALL BE ACCURATELY RECORDED & SUBMITTED TO THE ENGINEER CITY SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.
16. AT THE END OF THE ONE (1) YEAR WARRANTY PERIOD THE DEVELOPER/CONTRACTOR WILL T.V. INSPECT, AIR TEST EVERY JOINT, AND CHECK MANHOLE JOINTS AND CONNECTIONS TO DETERMINE IF REPAIRS ARE NECESSARY BEFORE THE WARRANTY BOND IS RELEASED.
17. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10-FEET FROM ANY EXISTING OR PROPOSED SANITARY SEWER FACILITY.
18. ANY PIPE INTRODUCED INTO AN EXISTING MANHOLE MUST HAVE CARBOLINE BITUMASTIC 300M OR APPROVED EQUAL APPLIED EXTERNALLY WITHIN A MINIMUM 2-FOOT RADIUS OF OPENING AND THE ENTIRE MANHOLE MUST HAVE SEWPER COAT OR APPROVED EQUAL APPLIED INTERNALLY.
19. ANY REHABILITATION TO AN EXISTING MANHOLE MUST BE INTERNALLY STRIPPED AND LINED WITH SEWPER COAT OR APPROVED EQUAL.

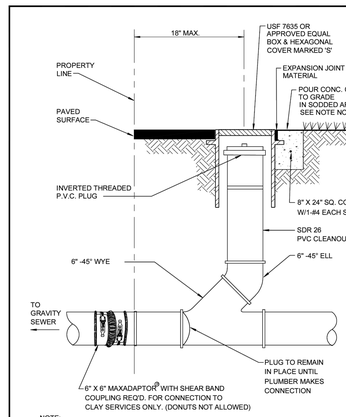
| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | GRAVITY SEWER NOTES | DATE: 10-04-2024 WW 1.0 |
|---|---|---|




NOTE:

1. SERVICE LATERALS SHALL TERMINATE INSIDE PROPERTY LINE A DEPTH OF 3 FEET AND MARKED WITH A 2"X 4" TREATED STAKE.
2. CLEANOUT INSTALLATION SHALL BE PROPERTY OWNERS RESPONSIBILITY AND SHALL BE INSTALLED BY LICENSED PLUMBER.
3. SEE DETAIL PW 2.0 FOR SEPARATION REQUIREMENTS.

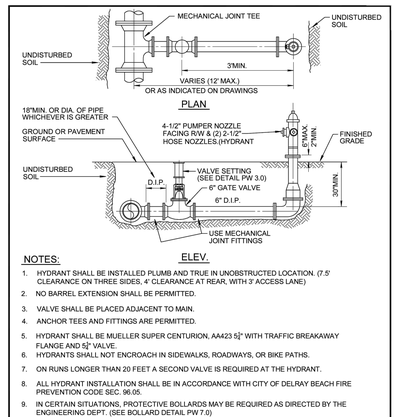
| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | SEWER SERVICE CONNECTION | DATE: 10-04-2024 WW 8.0 |
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NOTE:

1. ALL SANITARY SEWER LATERALS AND CLEANOUT TO BE MINIMUM 6" DIAMETER IN SIZE UNLESS OTHERWISE PREVIOUSLY APPROVED BY THE DEPARTMENT.
2. MINIMUM DEPTH OF SERVICE LATERAL SHALL BE 3 FEET.

| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | TYPICAL CLEANOUT | DATE: 10-04-2024 WW 10.0 |
|---|---|---|




NOTES:

1. HYDRANT SHALL BE INSTALLED PLUMB AND TRUE IN UNOBSTRUCTED LOCATION. (7.5' CLEARANCE ON THREE SIDES, 4' CLEARANCE AT REAR, WITH 3' ACCESS LANE)
2. NO BARREL EXTENSION SHALL BE PERMITTED.
3. VALVE SHALL BE PLACED ADJACENT TO MAIN.
4. ANCHOR TEES AND FITTINGS ARE PERMITTED.
5. HYDRANT SHALL BE MUELLER SUPER CENTURION, AA423 5¼" WITH TRAFFIC BREAKAWAY FLANGE AND 5¼" VALVE.
6. HYDRANTS SHALL NOT ENCROACH IN SIDEWALKS, ROADWAYS, OR BIKE PATHS.
7. ON RUNS LONGER THAN 20 FEET A SECOND VALVE IS REQUIRED AT THE HYDRANT.
8. ALL HYDRANT INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF DELRAY BEACH FIRE PREVENTION CODE SEC. 96.05.
9. IN CERTAIN SITUATIONS, PROTECTIVE BOLLARDS MAY BE REQUIRED AS DIRECTED BY THE ENGINEERING DEPT. (SEE BOLLARD DETAIL PW 7.0)
10. FIRE HYDRANTS INSTALLED BUT NOT YET IN SERVICE SHALL BE COVERED WITH A BURLAP, OR PLASTIC SACK, OR HAVE OUT OF SERVICE RING IN PLACE.
11. ALL HYDRANT LEADS GREATER THAN 20-FEET MUST HAVE AUTOMATIC FLUSHER INSTALLED AT HYDRANT END (KUPFERLE #9400-WC STANDARD).
12. REMOVE CHAINS FROM HYDRANT AND PAINT. COORDINATE WITH UTILITY STAFF FOR CORRECT COLORS.
13. NO THRUST BLOCKS SHALL BE PERMITTED.

| CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444 | TYPICAL FIRE HYDRANT INSTALLATION | DATE: 10-04-2024 PW 6.0 |
|---|---|---|

Plotted By:Erik Wilczek Layout:MTR-05 September 09, 2025 12:02:12pm \\keen\Keen\Public\K\2019 Jerks Signed\019-04 14145 S Military Trail Delray Beach\CAD\C-301 UTILITY DETAILS.dwg
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ERIK J. WILCZEK
FL LICENSE NUMBER 58216

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| No. | REVISIONS | DATE | BY |
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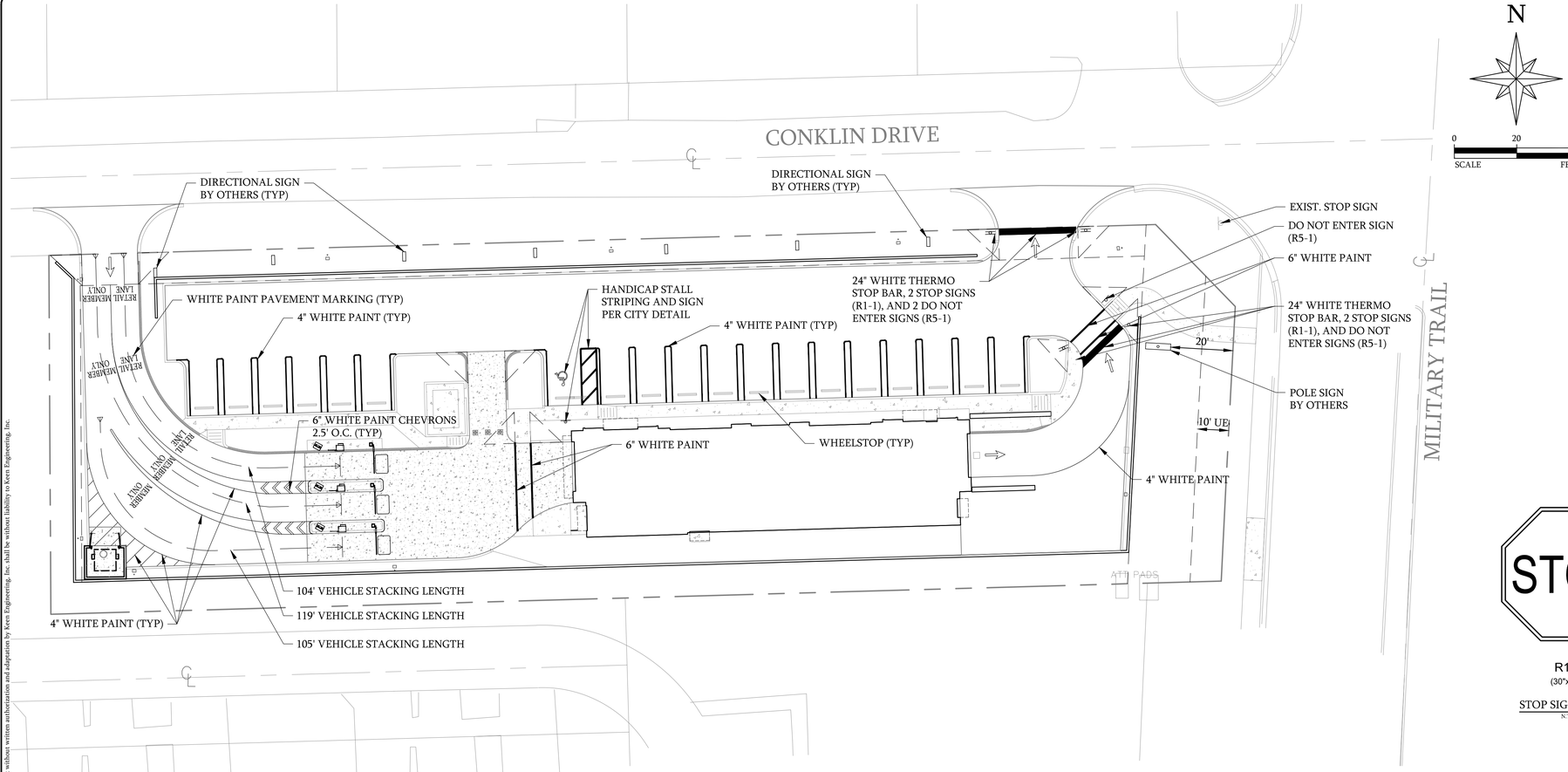
PROJECT # 019.04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

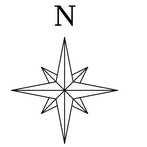
14145 S MILITARY TRAIL
DELRAY BEACH PALM BEACH COUNTY, FL

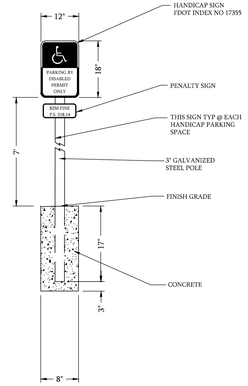
UTILITY DETAILS

SHEET NUMBER C-301

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700 CA#31195



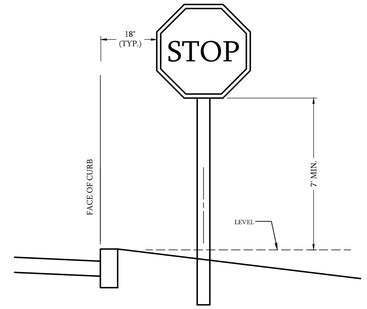




HANDICAP SIGN
N.T.S.




R1-1
(30"x30")

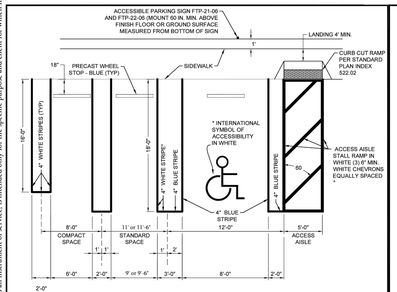
STOP SIGN DETAIL
N.T.S.




SIGN ADJACENT TO PAVEMENT WITH CURB

STOP SIGN LOCATION DETAIL
N.T.S.

PAVEMENT MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CITY OF DELRAY BEACH, AND PALM BEACH COUNTY TYPICAL T-P-13.

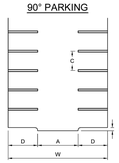



PARKING STALL DIMENSIONS:
STANDARD 9'x 18' MIN. (11' or 11'-6" TYP.)
COMPACT 8'x 16'
ACCESSIBLE 12'x 18' PLUS 5' ACCESS AISLE

* NOTES:
1. ON LIGHT COLORED SURFACE I.E. CONCRETE ALL ACCESSIBLE MARKINGS SHALL BE BLUE AND STANDARD PARKING STRIPING SHALL BE 3" WHITE WITH 1" BLACK BORDER.
2. ALL STRIPING WITHIN PUBLIC RIGHT-OF-WAY SHALL BE 6 INCHES.
3. ALL MEASUREMENTS ARE FROM CENTER LINE.
4. ALL COMPACT SPACES MUST HAVE "COMPACT" STENCILED WITH BLACK PAINT ON WHEEL STOP.
5. BLUE STRIPE & INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WALKWAY ON CONCRETE.
6. 24" STOP BAR BETWEEN ALL PARKING LOTS AND PUBLIC R/W SHALL BE THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1 THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1.
7. CHANGES IN LEVEL ARE NOT PERMITTED IN ACCESSIBLE PARKING STALLS AND ACCESS AISLES SERVING THE STALLS. SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.



90° PARKING




| | | |
|---|---|---|
| A | AISLE | 24.0' |
| S | STALL WIDTH | 9.0' * |
| D | STALL DEPTH | 18.0' |
| W | MODULE WIDTH | 60.0' |

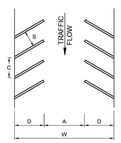
* COMPACT CAR SPACES -8.0'
ACCESSIBLE SPACES -12.0' SEE RT 16 THROUGH RT 16.2

PARALLEL




| | | |
|---|---|---|
| C | STALL LENTH | 22.0' |
| S | STALL WIDTH | 8.0' * |

60° AND 45° PARKING




| | | 60° | 45° |
|---|---|---|---|
| A | AISLE * | 17.0' | 15.0' |
| C | STALL LENGTH | 10.5' | 12.5' |
| S | STALL WIDTH | 9.0' | 9.0' |
| D | STALL DEPTH | 20.0' | 19.0' |
| W | MODULE WIDTH | 57.0' | 53.0' |
| ACCESIBLE SPACES | C | 14.0' | 17.0' |
| | D | 21.5' | 21.0' |
| | S | 12.0' | 12.0' |

* FOR TWO WAY FLOW A=24.0'

NOTE:
REFER TO TYPICAL PARKING SPACE DETAIL RT 16.0 THROUGH RT 16.2 FOR STRIPING INFORMATION AND ACCESSIBLE PARKING DIMENSIONS.

STOP BAR BETWEEN PARKING LOT & PUBLIC R/W MUST BE THERMOPLASTIC.



## PAVEMENT MARKING SPECIFICATIONS

All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City and shall conform to the requirements of F.D.O.T. and the manual on uniform traffic control devices, (MUTCD).

### PERMANENT MARKINGS

Installation:
- All markings shall be installed by the extruded method.
- Markings shall be free of weaves, bows, drips, drags, and other degrading items.
- Chalk shall be used for all layout markings

Materials:
- All materials shall be alkyd or hydrocarbon thermoplastic meeting all FDOT specifications.

Thickness:
- All markings shall be installed to yield 90 mils of material measured above the pavement surface.

Spheres:
- Reflective glass sheres are to be applied to all stripes and markings per FDOT specifications.

Alternate Material:
- STAYMARK marking tape, or equivalent may be used, as approved or directed by the City.

Layout:
- Layout shall be made using marking chalk.
- It is recommended that marking layout be inspected by the City prior to the placement of final markings.

### TEMPORARY MARKINGS

Temporary markings may be used only as specified in this section, or as approved or directed by the City.

Final Pavement Surface:
- Only foil backed marking tape is allowed.
- All tape shall be totally removed concurrent with permanent marking placement.

Other Pavement Surfaces:
- Intermediate pavement surfaces may be marked with FDOT approved materials, designs, and specifications.



### ALL PAVEMENT MARKINGS

All paved surfaces shall be properly marked prior to the hours of darkness.

### RAISED PAVEMENT MARKERS

- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.
- R.P.M.s shall be a 4 x 4 type class "B" marker meeting F.D.O.T. specifications and shall be approved by the City prior to use.
- R.P.M.'s shall be installed using alkyd thermoplastic on asphalt and epoxy on concrete.

### OTHER NOTES

- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public right-of-way.



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LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

PALM BEACH COUNTY, FL

# 14145 S MILITARY TRAIL

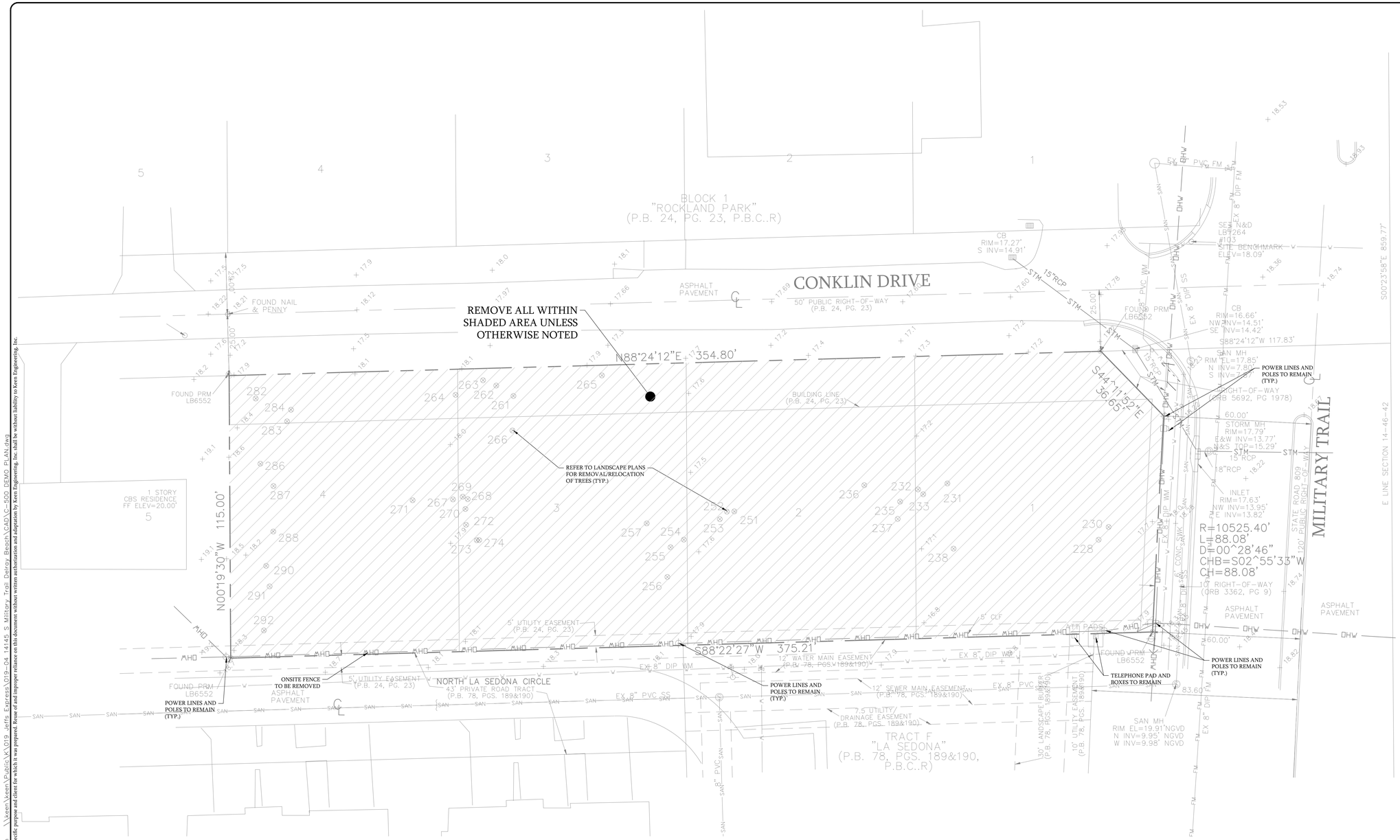
DELRAY BEACH

# PAV'T MARKING AND SIGNAGE PLAN

SHEET NUMBER
C-400

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

Printed By:Erik Wilczek Layout:C-400 PAVEMENT MARKING AND SIGNAGE PLAN September 09, 2025 12:20:22pm \\user\Users\Projects\2019 Jobs\Keenan\2019-04 14145 S Military Trail Delray Beach\CAD\C-400 PAVEMENT MARKING AND SIGNAGE PLAN.dwg
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## NOTES

1. ANY ONSITE LIGHT POLES TO BE REMOVED MUST HAVE THEIR SOURCE OF POWER TERMINATED AT THE SITE. CONTRACTOR TO CONFIRM NO POWER/LIGHTNING INTERRUPTIONS TO THE SURROUNDING PROPERTIES/PARCELS PRIOR TO PERFORMING WORK.
2. THE INTENT OF THE DEMOLITION PLAN IS TO DEPICT ALL EXISTING FEATURES THAT ENCUMBER THE PROPOSED CONSTRUCTION AREA AND ARE SCHEDULED FOR REMOVAL SOME INCIDENTAL ITEMS MAY HAVE BEEN INADVERTENTLY OMITTED FROM THE PLAN. THE CONTRACTOR IS ENCOURAGED TO THOROUGHLY INSPECT THE SITE AS WELL AS REVIEW THE PLANS AND SPECIFICATIONS PRIOR TO SUBMITTING PRICING. CONTRACTOR WILL NOT RECEIVE ADDITIONAL COMPENSATION FOR INCIDENTAL ITEMS NOT SHOWN ON THIS DEMOLITION PLAN.
3. DEWATERING SHOULD BE ANTICIPATED AND INCLUDED IN THE CONTRACTOR'S BID.
4. REFER TO THE SWPPP FOR INLET PROTECTION AND EROSION AND SEDIMENT CONTROL.
5. CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO EXISTING CONCRETE OR ASPHALT TO REMAIN IF DAMAGED DURING CONSTRUCTION.
6. REFER TO THE LANDSCAPE PLANS FOR REMOVAL/RELOCATION OF LANDSCAPING AND IRRIGATION.
7. EXISTING WATER AND SEWER SERVICE DISCOVERED DURING CONSTRUCTION SHALL BE REMOVED AND CAPPED AT THE MAINS.
8. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD PRIOR TO REMOVING ANY ITEMS NOT SPECIFICALLY IDENTIFIED ON THIS PLAN.

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ERIK J. WILCZEK
FL LICENSE NUMBER
58216

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PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

14145 S MILITARY TRAIL
DELRAY BEACH PALM BEACH COUNTY, FL

KEEN Engineering Inc.
7280 W PALMETTO PARK RD. SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

DEMOLITION PLAN

SHEET NUMBER C-500

Plotted By:Erik Wilczek Layout:C-500 DEMO Plan September 09, 2025 12:02:32pm \\keen\Keen Public\K\019 Jeffs Express\019-04 14145 S Military Trail Delray Beach\CAD\C-500 DEMO PLAN.dwg
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# CIVIL RELATED DEMOLITION NOTES AND SPECIFICATIONS:

SHOULD ANY SECTION OF THESE DEMOLITION NOTES BE IN DIRECT CONFLICT WITH THE PROVISIONS OR TECHNICAL SPECIFICATIONS CONTAINED IN THE CONTRACT DOCUMENT FOR THIS PROJECT, THE INTENT OF THE CONTRACT DOCUMENT SHALL GOVERN.

## I. GENERAL

1. EXISTING CONDITIONS, UTILITIES, STRUCTURES AND OTHER IMPROVEMENTS, AS SHOWN ON THE DEMOLITION DRAWINGS, WERE TAKEN FROM THE SURVEY, AND FROM INFORMATION PROVIDED BY UTILITY COMPANIES. AN ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING STRUCTURES, UTILITIES, DRIVES, WALKS, ETC., IN THEIR APPROXIMATE LOCATION. OTHERS MAY EXIST AND MAY BE FOUND UPON VISITING THE SITE. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE ALL FACILITIES AND TO DETERMINE THEIR EXTENT. IF SUCH FACILITIES OBSTRUCT THE PROGRESS OF THE WORK AND ARE NOT INDICATED TO BE REMOVED OR RELOCATED, THEY SHALL BE REMOVED OR RELOCATED ONLY AS DIRECTED BY THE OWNER, ARCHITECT, OR ENGINEER OF RECORD, AT NO ADDITIONAL COST TO THE OWNER.

2. SOME ITEMS TO BE REMOVED MAY NOT BE DEPICTED ON THE TOPOGRAPHIC SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE FULL EXTENT OF ITEMS TO BE REMOVED. IF ANY ITEMS ARE IN QUESTION, THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL OF SAID ITEMS.

3. ORGANIZE AND PERFORM DEMOLITION WORK TO AVOID DAMAGE TO CONSTRUCTION INTENDED TO REMAIN, INCLUDING TREES (SEE LANDSCAPE PLANS FOR DETAILS).

4. DEMOLITION AND REMOVAL OPERATIONS SHALL BE CONDUCTED IN AN EXPEDIENT MANNER, WITH PRECAUTIONS TAKEN TO PREVENT THE DEMOLITION SITE FROM BEING A NUISANCE.

5. PERFORM REMOVAL AND DEMOLITION IN ACCORDANCE WITH DEMOLITION SCHEDULE (REFER TO SECTION IV.) AND TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING ADJACENT BUILDINGS, FURNISHINGS, AND EQUIPMENT. NOTIFY THE ENGINEER OF ANY CONDITIONS THAT MAY AFFECT THE SAFETY OF OCCUPANTS OF ADJACENT BUILDINGS, THE NORMAL USE OF THESE FACILITIES, OR THE PHYSICAL CONDITION OF THE STRUCTURES.

6. ALL EXISTING UTILITIES OUTSIDE THE PROPERTY BOUNDARIES ARE TO REMAIN, UNLESS OTHERWISE NOTED.

7. PRIOR TO DEMOLITION ACTIVITIES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL AFFECTED UTILITY COMPANIES IN ORDER TO COORDINATE THE DEACTIVATION OF ALL EXISTING UTILITY LINES WITHIN THE PROPERTY. ONCE ALL ONSITE UTILITIES HAVE BEEN DEACTIVATED, ALL LINES SHALL BE CUT AND CAPPED INSIDE THE PROPERTY LINE, AND REMOVED (UNLESS OTHERWISE INDICATED).

8. THE CONTRACTOR SHALL USE EXTREME CAUTION IN REMOVING ANY STRUCTURES AND UTILITIES ABOVE AND BELOW GRADE TO PREVENT DAMAGE TO EXISTING UTILITIES WHICH ARE TO REMAIN IN SERVICE. ANY DAMAGE TO EXISTING PIPELINES, UTILITIES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, IN A MANNER ACCEPTABLE TO THE PARTY IN OWNERSHIP OF THE DAMAGED PROPERTY. THE CONTRACTOR SHALL REPORT ANY EXISTING DAMAGE PRIOR TO BEGINNING WORK. IN THE EVENT OF ACCIDENTAL DISRUPTION OF UTILITIES OR THE DISCOVERY OF PREVIOUSLY UNKNOWN UTILITIES, STOP WORK IMMEDIATELY AND NOTIFY THE AFFECTED UTILITY COMPANY AND THE ENGINEER. DO NOT CONTINUE WORK UNTIL THE UTILITY COMPANY, ENGINEER, AND CONTRACTOR AGREE ON A PLAN TO CORRECT THE SITUATION OR IDENTIFY THE UTILITY SERVICE LINE.

9. EXISTING WORK NOT SPECIFIED FOR REMOVAL WHICH IS TEMPORARILY REMOVED, DAMAGED, EXPOSED, OR IN ANY WAY DISTURBED OR ALTERED BY THE CONTRACTORS ACTIVITIES SHALL BE REPAIRED, PATCHED OR REPLACED, SOLELY AT THE CONTRACTOR'S EXPENSE, TO THE ENGINEER'S AND OWNER'S SATISFACTION.

10. TITLE AND RESPONSIBILITY TO MATERIALS AND EQUIPMENT TO BE REMOVED, EXCEPT SALVAGEABLE EQUIPMENT TO BE RETAINED BY THE OWNER, IS VESTED TO THE CONTRACTOR UPON RECEIPT OF NOTICE TO PROCEED. THE OWNER WILL NOT BE RESPONSIBLE FOR THE CONDITION, LOSS OR DAMAGE TO SUCH MATERIALS AND EQUIPMENT AFTER THE ISSUANCE OF THE NOTICE TO PROCEED.

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO:
    - A. PROTECT ALL EXISTING STRUCTURAL AND VEGETATIVE ELEMENTS TO REMAIN DURING DEMOLITION UNLESS OTHERWISE SPECIFIED.
    - B. IF APPLICABLE, PATCH AND REPAIR ALL SURFACES WITHIN THE PUBLIC R/W AFFECTED BY DEMOLITION
    - C. SAW-CUT IN NEAT, STRAIGHT LINES, EXISTING CONC. OR ASPHALT PAVEMENT.
    - D. REMOVE ALL EXISTING IRRIGATION LINES WITHIN THE LIMITS OF DEMOLITION UNLESS OTHERWISE NOTED.
    - E. NO ELECTRIC POLES, STREET LIGHTS, WATER METERS/VALVES, FIRE HYDRANTS ETC. WILL BE REMOVED WITHIN THE ROADWAY RIGHT-OF-WAY, UNLESS OTHERWISE NOTED ON THE DEMOLITION PLANS.
    - F. REFER TO LANDSCAPE PLANS FOR VERIFICATION OF ALL EXISTING TREES TO BE REMOVED, RELOCATED OR TO REMAIN.
    - G. MAINTAIN ALL EXISTING SURVEY REFERENCES AND MARKERS IN PLACE, OTHERWISE THEY SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

## II. DESCRIPTION

1. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, ETC., NECESSARY AND INCIDENTAL TO THE COMPLETION OF ALL SITE DEMOLITION AND CLEARING WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING THE LEGAL TRANSPORT AND OFF-SITE DISPOSAL OF DEMOLITION DEBRIS.

2. ALL SITE WORK INCLUDES , BUT IS NOT LIMITED TO THE FOLLOWING:
    - A. FULL-DEPTH REMOVAL OF EXISTING SIDEWALKS, DRIVES, CURBS, AND PAVEMENT.
    - B. FULL DEPTH REMOVAL OF EXISTING BUILDING FOUNDATIONS, UNDERGROUND UTILITIES AND RELATED STRUCTURES.
    - C. CLEARING SITE OF VEGETATION AND TREES AS NOTED ON THE LANDSCAPE PLANS.
    - D. CLEARING SITE OF DEMOLITION DEBRIS.
    - E. REMOVAL FROM SITE AND DISPOSAL OF ALL EXCESS AND UNUSABLE MATERIAL.
    - F. COORDINATION WITH ALL UTILITY COMPANIES/OWNERS PRIOR TO DEACTIVATION OF EXISTING UTILITIES.

## III. APPLICABLE CODES

1. DEMOLITION AND TRANSPORTATION OF DEBRIS SHALL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND REGULATIONS GOVERNING THESE OPERATIONS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY PERMITS, BONDS, LICENSES, ETC., REQUIRED FOR DEMOLITION AND CLEARING WORK.

2. ANY WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PALM BEACH COUNTY AND CITY OF DELRAY BEACH PUBLIC WORKS DEPARTMENT, AND OTHER GOVERNMENTAL AGENCIES WHO MAY HAVE JURISDICTION OF THE PUBLIC RIGHT-OF-WAY. SAID WORK SHALL NOT BEGIN UNTIL THE CONTRACTOR HAS OBTAINED ALL PERMITS AND NOTIFIED ALL THE GOVERNING AUTHORITIES.

## IV. SEQUENCING AND SCHEDULING

1. AREAS ADJACENT TO DEMOLITION AND REMOVAL WORK MAY BE OCCUPIED AND THEIR ACTIVITIES CANNOT BE INTERRUPTED OR DISTURBED DURING NORMAL WORKING HOURS. DEMOLITION SCHEDULE SHALL BE COORDINATED WITH ALL ADJACENT PROPERTY OWNERS AND ANY OTHER PARTIES WHOSE DAILY ACTIVITIES WOULD BE AFFECTED BY THE DEMOLITION WORK.

2. COORDINATE WITH APPLICABLE UTILITY COMPANIES FOR UTILITY LINE REMOVAL, CAPPING AND UTILITY SHUTDOWNS NECESSITATED BY REMOVAL WORK.

## V. ENVIRONMENTAL PROTECTION

1. CONTROL AMOUNT OF DUST RESULTING FROM CONSTRUCTION OR DEMOLITION TO PREVENT SPREAD OF DUST TO OTHER BUILDINGS AND TO AVOID CREATION OF A NUISANCE IN SURROUNDING AREAS. USE OF WATER TO CONTROL DUST WILL NOT BE PERMITTED WHEN IT WILL RESULT IN, OR CREATE, HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS FLOODING.

2. NOISE PRODUCING ACTIVITIES SHALL BE HELD TO A MINIMUM. INTERNAL COMBUSTION ENGINES AND COMPRESSORS, ETC., SHALL BE EQUIPPED WITH MUFFLERS TO REDUCE NOISE TO A MINIMUM. CONTRACTOR SHALL COMPLY WITH ALL NOISE ABATEMENT ORDINANCES.

3. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED.

4. DISPOSAL OF DEMOLISHED MATERIALS BY BURNING IS NOT PERMITTED.

5. ALL CLEARING SHALL BE PERFORMED IN A MANNER SUCH AS TO PREVENT ANY WASH-OFF OF SOILS AND DEBRIS FROM THE SITE INTO PUBLIC RIGHT-OF-WAY WATER BODIES, AND/OR STORM DRAINAGE SYSTEMS. APPROPRIATE SEDIMENTATION PONDS, DIKES, COLLARS, AND FILTER MEDIA SHALL BE EMPLOYED TO INSURE COMPLIANCE WITH THESE REQUIREMENTS. WHERE A SPECIFIC STATUTE GOVERNS THESE PROCEDURES, SUCH STATUTE SHALL BE COMPLIED WITH IN ITS ENTIRETY.

6. AT ALL TIMES DURING THE CLEARING OPERATION, THE EXPOSED AREAS OF SUBGRADE SHALL BE MAINTAINED IN A CONDITION COMPATIBLE WITH POSITIVE DRAINAGE OF THE WORK AREA. NO WATER WILL BE PERMITTED TO STAND IN OPEN EXCAVATIONS. ALL STORMWATER RUNOFF SHALL BE CONTAINED WITHIN THE SITE. FAILURE TO MAINTAIN SUCH DRAINAGE SHALL BE CONSIDERED ADEQUATE CAUSE TO ORDER TEMPORARY SUSPENSION OF THE WORK.

7. IF IT SHOULD BECOME NECESSARY TO STOP WORK FOR INDEFINITE PERIODS, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE OR DETERIORATION OF THE WORK ALREADY PERFORMED, PROVIDE SUITABLE AND FUNCTIONAL DRAINAGE BY OPENING DITCHES, FILTER DRAINS, TEMPORARY CUT-OFF LINES, ETC., AND ERECT TEMPORARY PROTECTIVE STRUCTURES WHERE NECESSARY. ALL EMBANKMENTS SHALL BE BACK-BLADED AND SUITABLY SEALED TO PROTECT AGAINST ADVERSE WEATHER CONDITIONS.

8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS WHEN REMOVING ABANDONED AND DE-ENERGIZED MATERIALS. IF ASBESTOS PIPES ARE ENCOUNTERED, THE CONTRACTOR WILL TAKE ALL NECESSARY ABATEMENT STEPS AS REQUIRED BY GOVERNING REGULATIONS TO SAFELY REMOVE AND DISPOSE OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF SAID MATERIALS.

9. THE CONTRACTOR SHALL SECURE THE WORK AREA WITH FENCING OR OTHER MEANS AS APPROVED BY THE OWNER.

## VI. TRAFFIC MAINTENANCE

1. THE CONTRACTOR SHALL FOLLOW FDOT MAINTENANCE OF TRAFFIC PROCEDURES DURING DEMOLITION IN PUBLIC RIGHT-OF-WAYS AND PRIVATE DRIVEWAYS, PEDESTRIANS PATHS, AND ROADWAYS (INDEX 600 SERIES), AND PREPARE AND OBTAIN APPROVAL OF SUCH MAINTENANCE OF TRAFFIC PLAN FROM THE APPROPRIATE REGULATORY AGENCY.

2. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING, SHORING, TEMPORARY CROSSOVER FOR PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING GUARDRAILS, LAMPS, WARNING SIGNS AND FLAGS AS REQUIRED BY AGENCIES HAVING JURISDICTION, AND SHALL NOT REMOVE THESE UNTIL THE NEED FOR PROTECTION CEASES.

3. THE CONTRACTOR MAY NOT CLOSE ANY SIDEWALKS WITHOUT PROVIDING ALTERNATE ROUTES IN ACCORDANCE WITH FDOT INDEX 660 AND OBTAINING APPROVAL FROM THE GOVERNING JURISDICTIONAL AGENCY.

4. THE CONTRACTOR SHALL CONDUCT REMOVAL OPERATIONS SO THAT TRAFFIC IS MAINTAINED ALONG EXISTING STREETS AND WALKS. ALL PUBLIC PAVED STREETS AND WALKWAYS MUST BE KEPT FREE OF DEBRIS. THE CONTRACTOR MUST REMOVE MATERIAL AND OTHER MATTER TRACKED OR FALLEN ONTO TRAFFIC SURFACES.

## VII. CLEAN UP

1. REMOVE DEMOLISHED CONSTRUCTION MATERIALS AND RELATED DEBRIS FROM THE SITE ON A REGULAR BASIS. ACCUMULATION OF DEBRIS ON THE SITE WILL NOT BE PERMITTED. SELLING OF SALVAGEABLE MATERIALS IS NOT PERMITTED AT THE SITE.

2. REMOVE MATERIALS, INCLUDING DEBRIS AND DUST, AND DISPOSE OF LEGALLY OFF SITE. NO DEBRIS SHALL BE BURNED OR BURIED ON THE SITE AS A MEANS OF DISPOSAL. USE METHODS APPROVED BY THE REGULATORY AGENCIES PRIOR TO BEGINNING CLEANUP OPERATIONS. USE OF BLOWERS TO DISTRIBUTE DUST WILL NOT BE PERMITTED.

3. MATERIAL DESIGNATED FOR REMOVAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND ANY SALVAGE VALUE THERE FROM WILL ACCRUE TO THE CONTRACTOR.

This item has been digitally signed and sealed by ERIK WILCZEK, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

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PROJECT # 019-04
DATE 01-21-2025
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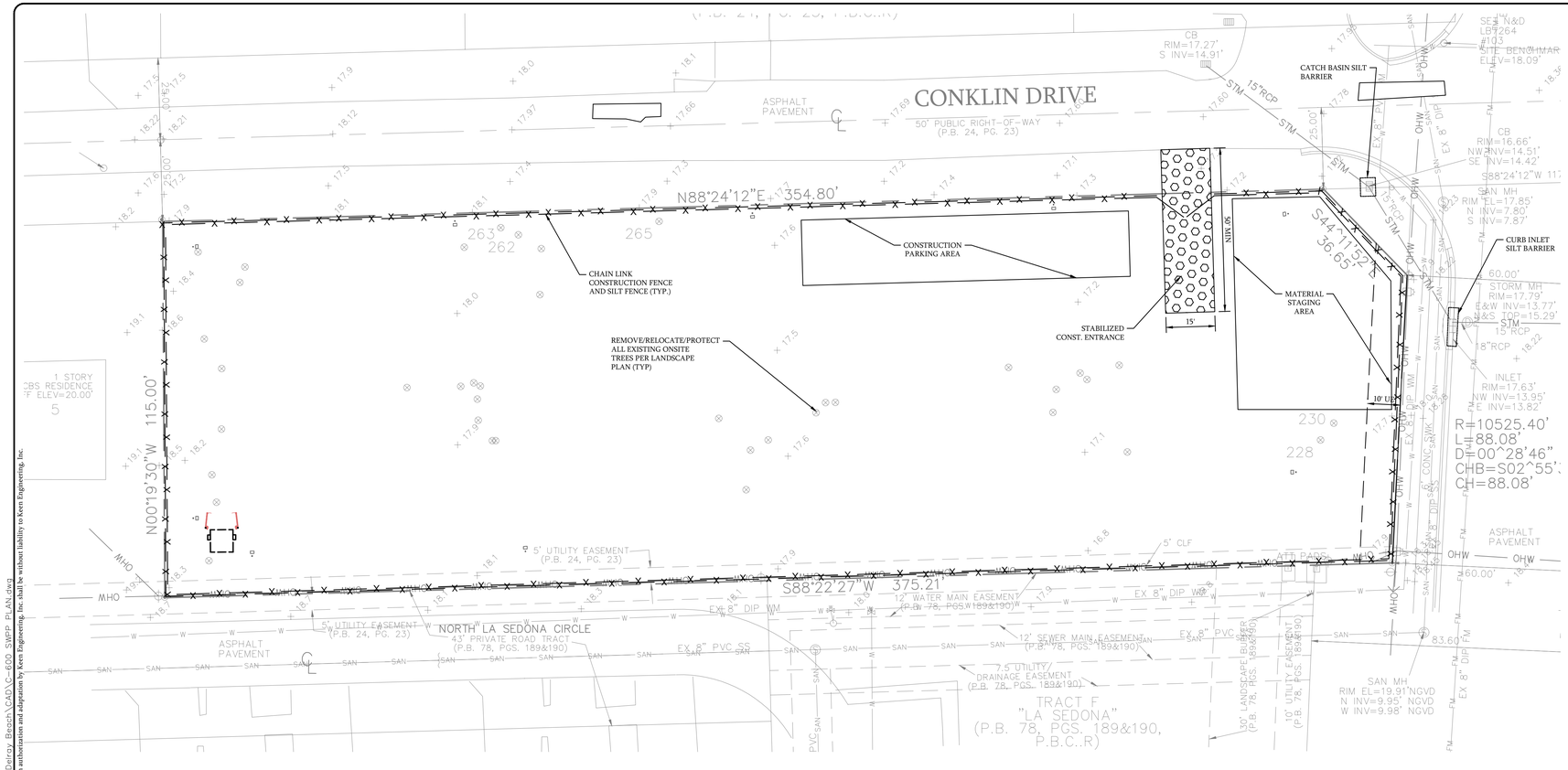
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PALM BEACH COUNTY, FL

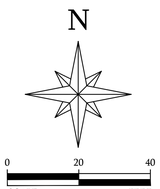
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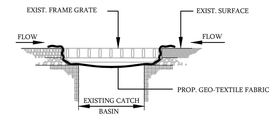
DEMOLITION NOTES

SHEET NUMBER
C-501

Plotted By:Erik Wilczek Layout:C-501 DEMOLITION NOTES September 09, 2025 12:02:35pm \\Keen\Keen\Public\K\019 Jeffs Express\019-04 14145 S Military Trail Delray Beach\CAD\C-501 DEMO NOTES.dwg
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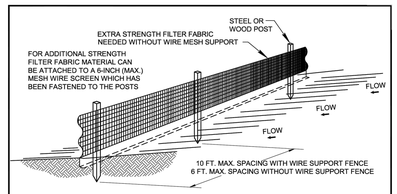




## CATCH BASIN SILT BARRIER DETAIL
N.T.S.

NOTES:

1. CONTRACTOR SHALL PERFORM DAILY INSPECTIONS OF GEO-TEXTILE FABRIC BARRIER AND AS NECESSARY REPLACE OR REPAIR AS REQUIRED. SPECIFICALLY AFTER STORM EVENTS AND LARGE RAINFALL EVENTS.
2. SEDIMENTATION AND DEBRIS THAT ARE REMOVED FROM BARRIERS SHALL BE LEGALLY DISPOSED OF AT AN AUTHORIZED OFF-SITE DISPOSAL FACILITY.

This item has been digitally signed and sealed by ERIK WILCZEK, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.




NOTES:

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES.
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES. WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
7. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
8. ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
9. ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDEP.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SILT FENCE INSTALLATION DETAIL (SHEET 1 of 2)

DATE: 10-04-2024
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### MAINTENANCE

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION. (SUITABLE FOR PARKING STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

* It should be noted that the measures identified on this plan are only suggested BMP(s). The contractor shall provide pollution prevention and erosion control measures as necessary to conform to current City, FDEP, and SFWMD codes and specifications.

### SEQUENCE OF CONSTRUCTION

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL SILT FENCE
2. DEMOLISH EXISTING STRUCTURES, (IF APPLICABLE)
3. CONSTRUCT AND STABILIZE SEDIMENT BASIN AND DRAINAGE SWALES WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL CONTROL DEVICES LISTED ABOVE)
4. INSTALL AND STABILIZE ANY NECESSARY HYDRAULIC CONTROL STRUCTURES (DIKES, CHECK DAMS, OUTLET TRAPS, ETC.)
5. PREPARE CLEARING AND GRUBBING OF THE SITE, (IF APPLICABLE)
6. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES
7. PERFORM MASS GRADING, ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS
8. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE AS REQUIRED BY GENERIC PERMIT

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMPS. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

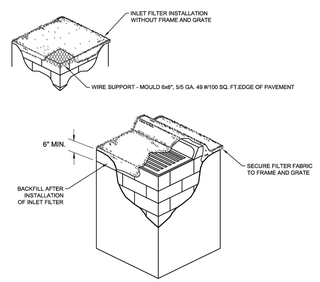
CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS NECESSARY FOR CONSTRUCTION

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENT SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION.
2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
3. INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY, OR AFTER EACH RAINFALL EVENT. REPAIR, AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
4. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
6. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
7. DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
8. ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
9. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
10. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
11. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE CITY OF DELRAY BEACH.
12. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

EROSION CONTROL NOTES DETAIL

DATE: 10-04-2024
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NOT TO SCALE

NOTES:

1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.

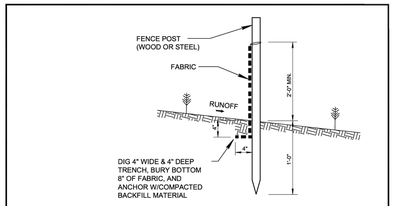
A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

STORM WATER WILL REACH THE SEDIMENT TRAP VIA CURB CUTS ADJACENT TO EACH SIDE OF THE INLET STRUCTURE. THESE OPENINGS SHALL BE AT LEAST 12 INCHES IN LENGTH. STORM WATER MAY ALSO REACH THE BASIN VIA OVERLAND FLOW LAND AREA BEHIND THE CURB. THE CURB CUTS SHALL BE REPAIRED WHEN THE SEDIMENT TRAP IS REMOVED.

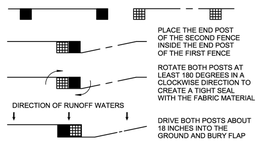
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PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

INLET FILTER DETAIL

DATE: 10-04-2024
D10.0




SILT FENCE SECTION
NOT TO SCALE

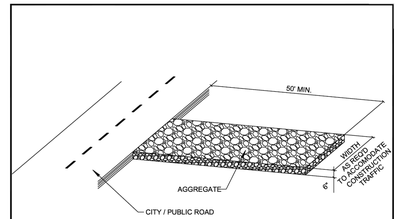



ATTACHING TWO SILT FENCES
NOT TO SCALE

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SILT FENCE INSTALLATION DETAIL (SHEET 2 OF 2)

DATE: 10-04-2024
D 12.1




NOTE:
A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AND CONTAIN AN AGGREGATE LAYER (FDOT AGGREGATE NO.1), AT LEAST 6-INCHES THINK. IT MUST EXTEND TO THE WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

STABILIZED CONSTRUCTION ENTRANCE DETAIL

DATE: 10-04-2024
D 13.0

LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
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PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

# SWPP AND CONSTRUCTION PARKING & STAGING PLAN

14145 S MILITARY TRAIL
DELRAY BEACH
PALM BEACH COUNTY, FL

SHEET NUMBER
C-600

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561.325.6700
CA#31195

Plotted By:Erik Wilczek Layout:C-600 SWPP Plan September 09, 2025 12:02:46pm \\keen\Keen\Public\EW\019 Jeffs Express\019-04 14145 S Military Trail Delray Beach\CAD\C-600 SWPP PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Keen Engineering, Inc. shall be without liability to Keen Engineering, Inc.

## BEST MANAGEMENT PRACTICES (BMPS):

THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH APPROPRIATE CONDITIONS OF THE MUNICIPAL LAND DEVELOPMENT REGULATIONS, THE RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP), CHAPTER 17-25, F.A.C., THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), CHAPTER 40D-4, F.A.C. AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) DOCUMENT NO. EPA 832/R-92-005 (SEPTEMBER 1992). THE PLAN ADDRESSES THE FOLLOWING:

A. PREVENT LOSS OF SOIL DURING CONSTRUCTION BY STORMWATER RUNOFF AND/OR WIND EROSION, INCLUDING PROTECTING TOPSOIL BY STOCKPILING FOR REUSE.

B. SEDIMENTION PROTECTION OF STORM SEWER OR RECEIVING STREAM.

C. PREVENT POLLUTING THE AIR WITH DUST AND PARTICULATE MATTER. THE VARIOUS TECHNIQUES OR ACTIONS IDENTIFIED UNDER EACH SECTION INDICATE THE APPROPRIATE SITUATION WHEN THE TECHNIQUES SHOULD BE EMPLOYED. ALSO IDENTIFIED IS A CROSS-REFERENCE TO A DIAGRAM OR FIGURE REPRESENTING THE TECHNIQUE. IT SHOULD BE NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BMP(S). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS. CONTRACTOR SHALL PREPARE REQUIRED NPDES DOCUMENTATION AND OBTAIN PERMIT PRIOR TO COMMENCEMENT OF CONSTRUCTION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE THE REQUIRED NPDES DOCUMENT AND OBTAIN THE NPDES PERMIT. ALL COST ASSOCIATED WITH SUCH WORK SHALL BE DEEMED INCIDENTAL TO THE PROJECT LUMP SUM COST.

## GENERAL EROSION CONTROL NOTES:

A. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING, THE STANDARD DETAILS, THE NPDES PERMIT (TO BE OBTAINED BY CONTRACTOR) AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THIS DRAWING AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP) IN ALL CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. FUEL SPILLS AND LEAKS PREVENTION
2. PREVENT/REDUCE VEHICLE AND EQUIPTMENT WASHING AND STEAM CLEANING
3. VEHICLE AND EQUIPTMENT MAINTENANCE AND REPAIR
4. PROPER OUTDOOR LOADING/UNLOADING OF MATERIALS
5. PREVENT/REDUCE OUTDOOR STORAGE OF RAW MATERIALS, PRODUCTS, AND BY-PRODUCTS
6. SOLID WASTE MANAGEMENT
7. HAZARDOUS WASTE MANAGEMENT
8. CONCRETE WASTE MANAGEMENT
9. SANDBLASTING WASTE MANAGEMENT
10. STRUCTURE CONSTRUCTION AND PAINTING
11. SPILL PREVENTION AND CONTROL
12. CONTAMINATED SOIL MANAGEMENT
13. SANITARY/SEPTIC WASTE MANAGEMENT
14. SOIL EROSION CONTROL
15. STORM WATER TURBIDITY MANAGEMENT

ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMPS) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. CONTRACTOR MUST MAINTAIN ALL PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS ON SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING THOSE PORTIONS OF THE SITE NECESSARY TO IMPLEMENT PERIMETER CONTROL MEASURES. CLEARING AND GRUBBING FOR THE REMAINING PORTIONS OF THE PROPOSED SITE SHALL COMMENCE ONCE PERIMETER CONTROLS ARE IN PLACE. PERIMETER CONTROLS SHALL BE ACTIVELY MAINTAINED UNTIL SAID AREAS HAVE BEEN STABILIZED AND SHALL BE REMOVED ONCE FINAL STABILIZATION IS COMPLETE.

H. GENERAL EROSION CONTROL BMPS SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND POTENTIAL LAKE SLOPE CAVE-INS. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED AS SOON AS POSSIBLE DURING CONSTRUCTION.

I. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

J. TOPSOIL CANNOT BE STOCKPILED INSIDE THE PROPERTY FOR REFUSE.

K. SURFACE WATER QUALITY SHALL BE MAINTAINED BY EMPLOYING THE FOLLOWING BMP'S IN THE CONSTRUCTION PLANNING AND CONSTRUCTION OF ALL IMPROVEMENTS.

## STORM WATER EROSION CONTROL PRACTICES:

A. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

B. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

C. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.

D. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES.

E. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:

1. IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
2. STORMWATER INLETS SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED AS SOON AS PRACTICAL DURING THE VARIOUS STAGES OF INLET CONSTRUCTION. SILT BARRIERS SHALL REMAIN IN PLACE UNTIL SODDING AROUND INLETS IS COMPLETE.
3. A TEMPORARY SEDIMENT TRAP SHOLD BE CONSTRUCTED TO DETAIN SEDIMENT-LADEN RUNOFF FROM DISTURBED AREAS.

F. SILT BARRIERS, ANY SILT WHICH ACCUMULATES BEHIND THE BARRIERS, AND ANY FILL USED TO ANCHOR THE BARRIERS SHALL BE REMOVED PROMPTLY AFTER THE END OF THE MAINTENANCE PERIOD SPECIFIED FOR THE BARRIERS.

G. SLOPES OF BANKS OF RETENTION/DETENTION PONDS SHALL BE CONSTRUCTED NOT STEEPER THAN 3H:1V FROM TOP OF BANK TO TWO FEET BELOW NORMAL WATER LEVEL, AS APPLICABLE.

H. SOD SHALL BE PLACED FOR A 2-FOOT WIDE STRIP ADJOINING ALL CURBING AND AROUND ALL INLETS. SOD SHALL BE PLACED BEFORE SILT BARRIERS ARE REMOVED.

I. WHERE REQUIRED TO PREVENT EROSION FROM SHEET FLOW ACROSS BARE GROUND FROM ENTERING A LAKE OR SWALE, A TEMPORARY SEDIMENT SUMP SHALL BE CONSTRUCTED.

J. FILTER FABRIC SHOULD BE USED FOR STORM DRAIN INLET PROTECTION BEFORE FINAL STABILIZATION.

## WIND EROSION CONTROL PRACTICES:

A. WIND EROSION SHALL BE CONTROLLED BY EMPLOYING THE FOLLOWING METHODS AS NECESSARY AND APPROPRIATE:

1. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IT MAY BE NECESSARY TO LIMIT CONSTRUCTION VEHICLE SPEED IF BARE EARTH HAS NOT BEEN EFFECTIVELY WATERED. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.
2. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED (SEE PERMANENT STABALIZATION PRACTICES FOR DETAILS). THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN. CLEARED SITE DEVELOPMENT AREAS NOT CONTINUALLY SCHEDULED FOR CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH HAY OR OVERSEEDED AND PERIODICALLY WATERED SUFFICIENTLY TO STABILIZE THE TEMPORARY GROUNDCOVER (SEE TEMPORARY STABALIZATION PRACTICES FOR DETAILS).
3. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS SHOULD INCLUDE ERECTION OF DUST CONTROL FENCES. A 6-FT GEOTEXTILE FILTER FIBER SHOULD BE HANGING AGAINST THE EXISTING CHAIN LINK FENCE AND GATE.

B. ALL DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

## SPILL CONTROL PRACTICES:

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

A. SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.

B. THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.

C. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ONSITE AND READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

D. ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

E. WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.

F. TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.

G. AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

H. THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

## STABILIZATION PRACTICES:

A. TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASE FOR AT LEAST 21 DAYS, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 14 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

B. PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND THE PROPER FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY.

C. STABILIZATION WILL BE INITIATED ON ALL DISTURBED AREAS WITHIN 14 DAYS OF WORK CEASING, UNLESS CONSTRUCTION ACTIVITY WILL RESUME IN THAT AREA WITHIN 21 DAYS AFTER WORK STOPPAGE. THE TEMPORARY SEDIMENT SUMP SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON THE GROUND DRAINING TO THE SUMP.

D. CONTRACTOR TO ENSURE THAT EXISTING VEGETATION ON OR ADJACENT TO THE PROPOSED SITE IS PRESERVED AND DISTURBED PORTIONS OF THE SITE ARE STABILIZED. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.

E. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

## STRUCTURAL PRACTICES:

A. EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

B. SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.

## WASTE DISPOSAL:

A. WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

B. HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

C. SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.

D. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

## OFFSITE TRACKING:

A. STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE MAJOR ROAD CONNECTED TO THE PROJECT SHALL BE CLEANED ONCE A DAY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK RESULTING FROM CONSTRUCTION TRAFFIC. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.

B. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATION PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES, HAY BALES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OF OIL, GREASE OR LUBRICANTS. CONTRACTORS SHALL HAVE AVAILABLE, AND SHALL USE, ABSORBENT FILTER PADS TO CLEAN UP SPILLS AS SOON AS POSSIBLE AFTER OCCURRENCE.

C. ALL WASH WATER FROM CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC. SHALL BE DETAINED ON SITE AND SHALL BE PROPERLY TREATED OR DISPOSED.

D. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

E. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

## MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

A. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.

C. THE SILT FENCE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.

D. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

E. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

F. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 10% AND AFTER CONSTRUCTION IS COMPLETE.

G. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION.

H. DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

I. A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.

J. ALL REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.

K. THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

## SPILL PREVENTION AND CONTROL:

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

A. GOOD HOUSEKEEPING

1. SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.
2. STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.
3. ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.
4. ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.
5. PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.
6. ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

B. HAZARDOUS PRODUCTS

1. MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.
2. PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

C. PRODUCT SPECIFIC PRACTICES

1. PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.
2. THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
3. PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.
4. CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

This item has been digitally signed and sealed by ERIK WILCZEK, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

LICENSED PROFESSIONAL
ERIK J. WILCZEK
FL LICENSE NUMBER
58216

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

PROJECT # 019-04
DATE 01-21-2025
SCALE AS NOTED
DESIGNED BY EW
DRAWN BY TZ
CHECKED BY EW

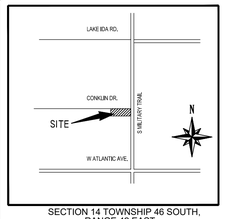
14145 S MILITARY TRAIL
DELRAY BEACH PALM BEACH COUNTY, FL

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700
CA#31195

POLLUTION PREVENTION NOTES

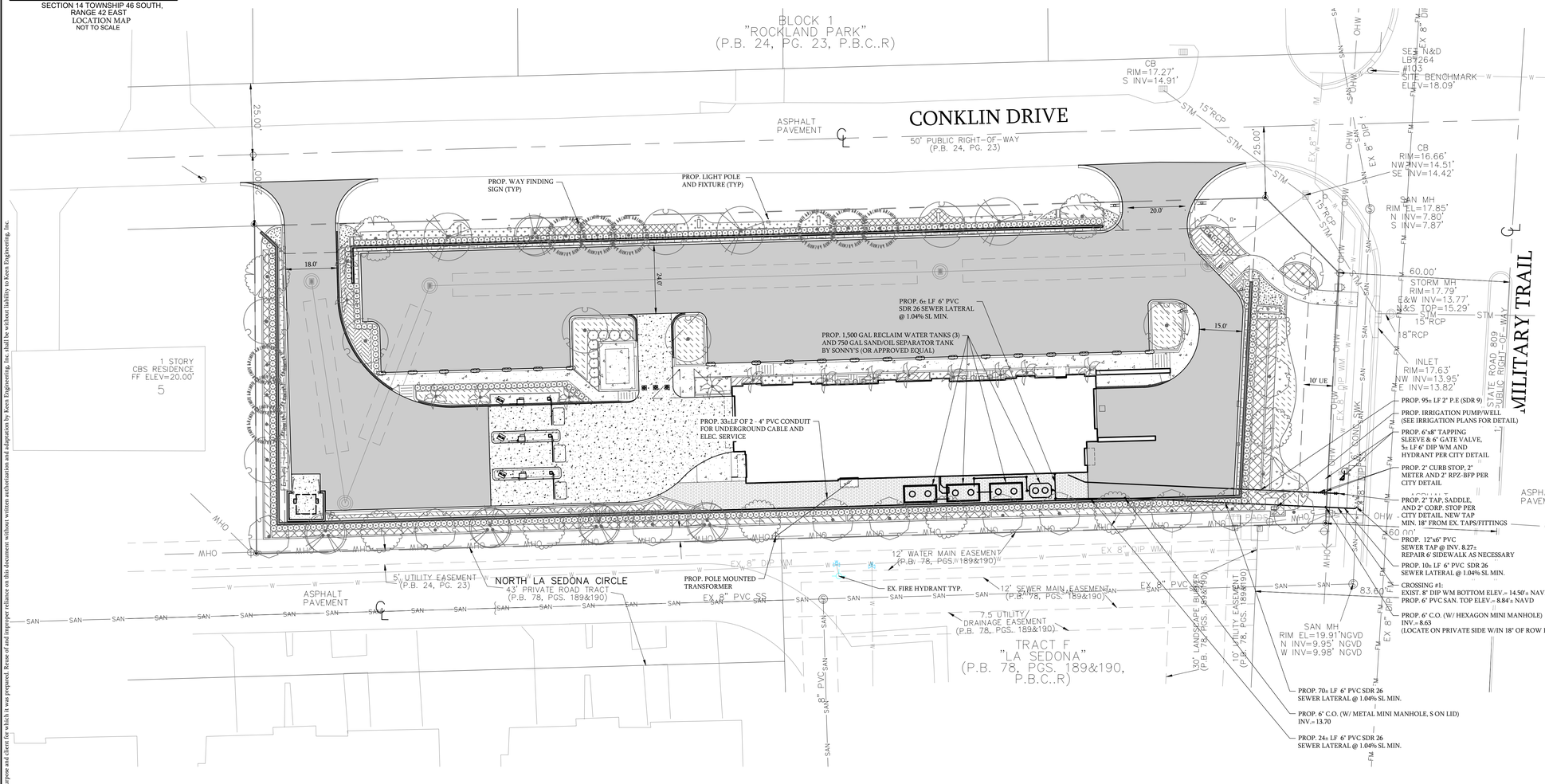
SHEET NUMBER C-601

Plotted By:Erik Wilczek Layout:C-601 September 08, 2025 12:02:51pm \\User\Users\Public\Keen Express\019-04 14145 S Military Trail Delray Beach\CAD\C-601 POLLUTION PREVENTION NOTES.dwg
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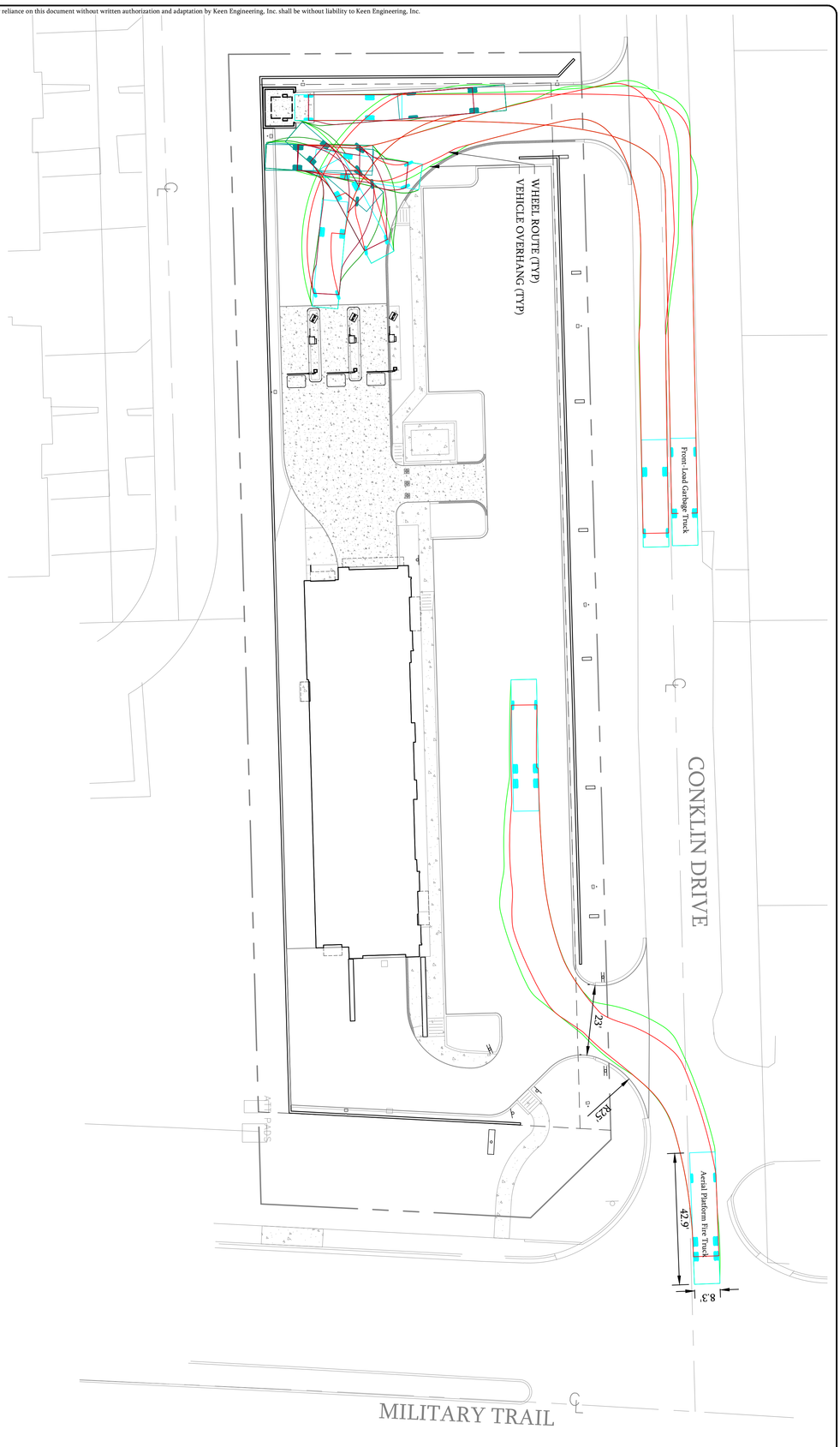

SECTION 14 TOWNSHIP 46 SOUTH, RANGE 42 EAST
LOCATION MAP
NOT TO SCALE

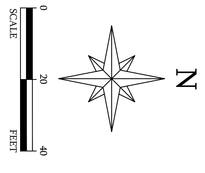
# COMPOSITE UTILITY PLAN


BLOCK 1
"ROCKLAND PARK"
(P.B. 24, PG. 23, P.B.C..R)
CONKLIN DRIVE
50' PUBLIC RIGHT-OF-WAY
(P.B. 24, PG. 23)
ASPHALT PAVEMENT
25.00'
PROP. WAY FINDING SIGN (TYP)
PROP. LIGHT POLE AND FIXTURE (TYP)
20.0'
18.0'
24.0'
15.0'
1 STORY
CBS RESIDENCE
FF ELEV=20.00'
5
PROP. 6± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.
PROP. 1,500 GAL RECLAIM WATER TANKS (3) AND 750 GAL SAND/OIL SEPARATOR TANK BY SONNY'S (OR APPROVED EQUAL)
PROP. 33±LF OF 2 - 4" PVC CONDUIT FOR UNDERGROUND CABLE AND ELEC. SERVICE
CB
RIM=17.27'
S INV=14.91'
STM 15"RCP
SEE N&D
LS#264
#103
SITE BENCHMARK
ELEV=18.09'
CB
RIM=16.66'
NW INV=14.51'
SE INV=14.42'
SAN MH
RIM EL=17.85'
N INV=7.80'
S INV=7.87'
60.00'
STORM MH
RIM=17.79'
E&W INV=13.77'
S&S TOP=15.29'
18"RCP
INLET
RIM=17.63'
NW INV=13.95'
E INV=13.82'
STATE ROAD 809
PUBLIC RIGHT-OF-WAY
MILITARY TRAIL
10' UE
PROP. 95± LF 2" P.E (SDR 9)
PROP. IRRIGATION PUMP/WELL (SEE IRRIGATION PLANS FOR DETAIL)
PROP. 6"x8" TAPPING SLEEVE & 6" GATE VALVE, 5± LF 6" DIP WM AND HYDRANT PER CITY DETAIL
PROP. 2" CURB STOP, 2" METER AND 2" RPZ-BFP PER CITY DETAIL
PROP. 2" TAP, SADDLE, AND 2" CORP. STOP PER CITY DETAIL. NEW TAP MIN. 18" FROM EX. TAPS/FITTINGS
PROP. 12"x6" PVC SEWER TAP @ INV. 8.27± REPAIR 6' SIDEWALK AS NECESSARY
PROP. 10± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.
CROSSING #1:
EXIST. 8" DIP WM BOTTOM ELEV.= 14.50'± NAVD
PROP. 6" PVC SAN. TOP ELEV.= 8.84'± NAVD
PROP. 6" C.O. (W/ HEXAGON MINI MANHOLE) INV.= 8.63
(LOCATE ON PRIVATE SIDE W/IN 18" OF ROW LINE)
ASPHALT PAVEMENT
60.00'
83.60'
SAN MH
RIM EL=19.91'NGVD
N INV=9.95' NGVD
W INV=9.98' NGVD
PROP. 70± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.
PROP. 6' C.O. (W/ METAL MINI MANHOLE, S ON LID) INV.= 13.70
PROP. 24± LF 6" PVC SDR 26 SEWER LATERAL @ 1.04% SL MIN.
NOTE:
MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 5 FEET BETWEEN THE WATER SERVICE LINE AND THE SANITARY SEWER LATERAL.
5' UTILITY EASEMENT
(P.B. 24, PG. 23)
NORTH LA SEDONA CIRCLE
43' PRIVATE ROAD TRACT
(P.B. 78, PGS. 189&190)
PROP. POLE MOUNTED TRANSFORMER
EX. FIRE HYDRANT TYP.
12" WATER MAIN EASEMENT
(P.B. 78, PGS.189&190)
12" SEWER MAIN EASEMENT
(P.B. 78, PGS. 189&190)
7.5 UTILITY/ DRAINAGE EASEMENT
(P.B. 78, PGS. 189&190)
TRACT F
"LA SEDONA"
(P.B. 78, PGS. 189&190, P.B.C.R)
30' LANDSCAPE BUFFER (P.B. 78, PGS. 189&190)
10' UTILITY EASEMENT (P.B. 78, PGS. 189&190)
EX 8" PVC SAN
EX 8" DIP WM
EX 8" PVC SS
EX 8" DIP FM
EX 6" DIP WM
EX 8" PVC SAN
EX 8" DIP FM
EX 6" DIP FM
EX 8" PVC SAN
EX 8" DIP WM
EX 8" PVC SAN
EX 8

Plotted By:Erik Wilczek Layout:C-800 TRUCK EXHIBIT September 09, 2025 12:03:04pm \\keen\keen\Public\K\019 Jeffs Express\019-04 14145 S Military Trail Delray Beach\CAD\C-800 TRUCK EXHIBIT.dwg

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This item has been digitally signed and sealed by ERIK WILCZEK, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

SHEET NUMBER C-800

# TRUCK EXHIBIT

KEEN Engineering Inc.
7280 W PALMETTO PARK RD., SUITE 105, BOCA RATON, FL 33433
PHONE: 561-325-6700 CA#31195

14145 S MILITARY TRAIL

DELRAY BEACH PALM BEACH COUNTY,FL

| | |
|---|---|
| PROJECT # | 019-04 |
| DATE | 01-21-2025 |
| SCALE | AS NOTED |
| DESIGNED BY | EW |
| DRAWN BY | TZ |
| CHECKED BY | EW |

| No. | REVISIONS | DATE | BY |
|---|---|---|---|

LICENSED PROFESSIONAL

ERIK J. WILCZEK

FL LICENSE NUMBER 58216

# Conklin Car Wash

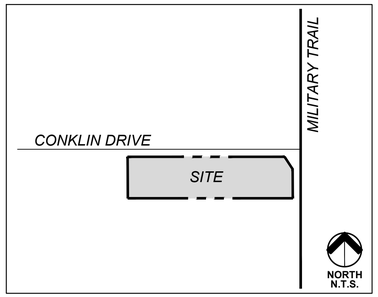
## Landscape Plan
## City of Delray Beach, Florida

*NOTE: These Landscape Plans have been prepared to satisfy City of Delray Beach zoning requirements and to conceptually reflect landscape requirements for the site. They are not to be utilized for construction drawings until final engineering and architectural plans are available. These drawings are not to be used for Building Permit application until these plans are finalized.*

### SHEET INDEX


COVER SHEET & PLANT SCHEDULE ..... LA-1
TREE DISPOSITION PLAN & CHART ..... LA-2
LANDSCAPE PLAN ..... LA-3
PLANTING DETAILS ..... LA-4
PLANTING SPECIFICATIONS ..... LA-5


### LOCATION MAP



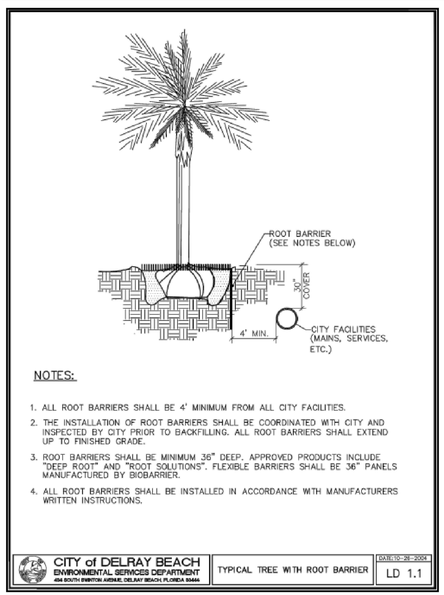

### SITE DATA

| | |
|---|---|
| APPLICATION NAME | FAZIO CONSULTING, LLC |
| PROPERTY CONTROL NUMBER | 12-42-46-14-03-002-0010 |
| EXISTING FUTURE LAND USE | GENERAL COMMERCIAL (GC) |
| EXISTING ZONING DISTRICT | GENERAL COMMERCIAL (GC) |
| OVERLAY(S) | N/A |
| EXISTING USE | VACANT COMMERCIAL |
| PROPOSED USE | AUTOMATIC CAR WASH |
| SITE AREA | 0.99-AC (43,109 SF) |

### LANDSCAPE TABULAR DATA

| | |
|---|---|
| TOTAL PAVED AREA FOR PARKING AND ACCESS: | 22,243.16 SF |
| REQUIRED INTERIOR LANDSCAPING:<br>(NO LESS THAN 10% OF TOTAL PAVED AREA @ 22,243.16 SF) | 2,224.32 SF |
| INTERIOR LANDSCAPING PROVIDED: | 13,908.80 SF |
| NUMBER OF INTERIOR TREES REQUIRED:<br>(1 INTERIOR TREE PER 125 SF OF REQUIRED INTERIOR LANDSCAPING) | 18 |
| NUMBER OF INTERIOR TREES PROVIDED: | 18 |
| PERIMETER LANDSCAPE SPACE PROVIDED:<br>(MIN. 5' DEPTH x LENGTH @ 890 LF ALONG CENTERLINE) | 4,450 SF |
| NUMBER OF PERIMETER TREES REQUIRED:<br>(ADJ TO COMM/IND. = 1 PERIMETER TREE PER 30 LF OF PERIMETER LANDSCAPE SPACE @ 307 LF)<br>NORTH BUFFER: 307 LF / 30 = 10 TREES<br>(ADJ TO RES. = 1 PERIMETER TREE PER 25 LF OF PERIMETER LANDSCAPE SPACE @ 583 LF)<br>WEST BUFFER: 109 LF / 25 = 4 TREES<br>SOUTH BUFFER: 363 LF / 25 = 15 TREES<br>EAST BUFFER: 115 LF / 25 = 5 TREES | 34 |
| NUMBER OF PERIMETER TREES PROVIDED:<br>(3 PALMS = 1 CANOPY TREE) | 34 |
| FOUNDATION PLANTING TREES REQUIRED:<br>(CHRISTMAS PALM = 1 TREE PER 20 LF OF BUILDING FACADE @ 127 LF) | 6 |
| FOUNDATION PLANTING TREES PROVIDED: | 6 |
| FOUNDATION PLANTING SHRUBS & GROUNDCOVER PROVIDED: | 93 |
| NUMBER OF TREE SPECIES REQUIRED:<br>(22 REQUIRED TREES) | 3 |
| NUMBER OF TREE SPECIES PROVIDED: | 7 |

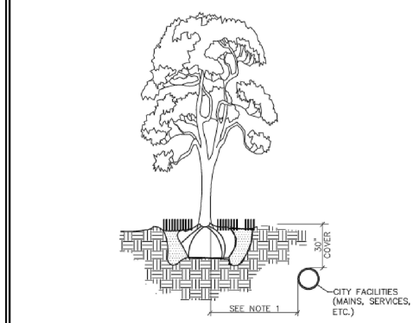
### CITY OF DELRAY BEACH STANDARD ROOT BARRIER DETAILS




NOTES:

1. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL CITY FACILITIES.
2. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
3. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
4. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

CITY of DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
TYPICAL TREE WITH ROOT BARRIER
DATE: 10-26-2004
LD 1.1




NOTES:

1. THIS DISTANCE SHALL BE 10' MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

CITY of DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
TYPICAL TREE WITHOUT ROOT BARRIER
DATE: 10-26-2004
LD 1.2

### PLANT SCHEDULE

1) DROUGHT TOLERANT RATING BASED UPON SFWMD WATERWISE PUBLICATION - SOUTH FLORIDA EDITION.
2) ALL PLANT MATERIAL SPECIFICATIONS AND CONTAINER SIZES LISTED IN THE PROJECT PLANT SCHEDULE ARE REQUIRED MINIMUMS. CONTRACTOR MAY EXCEED THE REQUIRED MINIMUM SPECIFICATION AND CONTAINER SIZE BASED ON MATERIAL AVAILABILITY.
3) ALL PLANT MATERIAL SHALL MEET AND ADHERE TO LATEST EDITION OF FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS. ALL PLANT MATERIAL SHALL BE FLORIDA # 1 OR BETTER.THE LANDSCAPE ARCHITECT OR OWNER/OWNER'S REPRESENTATIVE HAVE THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING THESE STANDARDS.
4) QUANTITIES ON PLANT SCHEDULE ARE FOR CONVENIENCE ONLY. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON LANDSCAPE PLANS.

| SYMBOL | CODE | QTY | BOTANICAL / COMMON NAME | NATIVE | DROUGHT TOLERANT |
|---|---|---|---|---|---|
| TREES | | | | | |
| | CO | 8 | Conocarpus erectus / Green Buttonwood<br>Min. 16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy | Yes | Very |
| | EF | 14 | Eugenia foetida / Spanish Stopper<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy | No | Very |
| | LI | 7 | Lagerstroemia 'Natchez' / Crape Myrtle<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy | No | Very |
| | QV | 3 | Quercus virginiana / Southern Live Oak<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy | Yes | Very |
| | TH | 3 | Tabebuia heterophylla / Pink Tabebuia<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy | No | Very |
| MITIGATION TREES | | | | | |
| | EF-M | 5 | Eugenia foetida / Spanish Stopper<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy | No | Very |
| PALM TREES | | | | | |
| | SP | 9 | Sabal palmetto / Cabbage Palmetto<br>16' Ht. 8' C.T. Min., Single Straight Trunk, Hurricane Cut, No Scarred Trunks | Yes | Very |
| | VM | 14 | Veitchhia montgomeriana / Montgomery Palm<br>Min. 12' Ct. 16' O.A. Ht. Single Trunk, Full Head, No Scarred Trunks | No | Moderate |
| SHRUBS | | | | | |
| | CHR | 467 | Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum<br>24" Ht. 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base | Yes | Very |
| | CLU | 9 | Clusia guttifera / Small Leaf Clusia<br>6' HT. x 3' SPR., 36" O.C., Full and Dense to Base | Yes | Yes |
| VINE | | | | | |
| | TRJ | 8 | Trachelospermum jasminoides / Chinese Star Jasmine<br>36" Ht Runners., 3' O.C., espalier to living green wall with stainless steel eye hooks, | No | Yes |
| SHRUB AREAS | | | | | |
| | COE | 118 | Conocarpus erectus / Green Buttonwood<br>Min. 24" Ht. x 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base | Yes | Very |
| | CON | 105 | Conocarpus erectus `Sericeus` / Silver Buttonwood<br>Min. 24" Ht. x 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base | Yes | Very |
| | HAM | 198 | Hamelia patens / Firebush<br>Min. 24" Ht. x 24" Spr. 30" O.C., Full and Dense Shrub, Full to Base | Yes | Very |
| | JAS | 169 | Jasminum volubile / Wax Jasmine<br>Min. 24" Ht. x 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base | No | Moderate |
| GROUND COVERS | | | | | |
| | ANN | 197 | Annuals / Seasonal Annuals<br>Min. 4" Pots, Full Flowering When Installed, 12" O.C. | No | Moderate |
| | AGE | 210 | Arachis glabrata / Perennial Peanut<br>6" Ht. x 12" Spr., 18" O.C., Full to Edge of Pot | No | No |
| | ASP | 15 | Asparagus densiflorus `Myers` / Myers Asparagus<br>Min. 15" Ht. x 18" Spr.,24" O.C., Full and Dense Shrub, Full to Edge of Pot | No | Moderate |
| | FIG | 56 | Ficus microcarpa 'Green Island' / Green Island Indian Laurel Fig<br>18" Ht. x 18" Spr., 18" O.C., Full and Dense | No | |
| | PEN | 73 | Pentas lanceolata / Penta (pink)<br>Min. 15" Ht. x 18" Spr.,24" O.C., Full and Dense Shrub, Full to Edge of Pot | No | Moderate |
| | TRA | 1,025 | Trachelospermum asiaticum `Minima` / Minima Jasmine<br>Min. 12" Ht. x 12" Spr. 12" O.C., Full and Dense Shrub, Full to Edge of Pot | No | Moderate |
| SOD AND MULCH | | | | | |
| | MULCH | 7,955 sf | Shredded Melaleuca / Mulch<br>Free of Foreign Materials and Weeds, Minimum Depth After Settling Shall be 3"; *Quantity to be Verified in the Field | N/A | N/A |
| | SOD | 4,778 | Stenotaphrum secundatum `Floritam` / Floritam St. Augustine Sod<br>Laid tightly and flat, sanded and rolled to provide a uniform flat lawn | No | Moderate |

ROOT BARRIER
36" DEPTH MIN., INSTALLED PER MANUFACTURER'S SPECS.
(SEE DETAIL ON SHEET LA-1 AND LA-4)

### GENERAL NOTES

1) STREETSCAPE LANDSCAPE PLANS (STREET TREES AND PLANTINGS WITHIN ROW) ARE A SEPARATE DOCUMENT.
2) SEE ENGINEERING PLANS PREPARED BY OTHERS FOR CONFIGURATION, HEIGHT AND SLOPE OF BERMS.
3) DETAILING OF FOCAL POINTS AND HARDSCAPE ARE A SEPARATE DOCUMENT. SEE PLANS PREPARED BY OTHERS FOR THESE DETAILS.

### LANDSCAPE NOTES

1) BASE INFORMATION OBTAINED FROM KEEN ENGINEERING DATED 09-04-2025.
2) ALL INVASIVE SPECIES WILL BE ERADICATED FROM SITE AS REQUIRED BY CODE.
3) ALL LANDSCAPE MATERIAL SHALL CONFORM TO THE MOST RECENT STANDARDS AS OUTLINED BY THE "GRADES AND STANDARDS FOR NURSERY PLANTS" PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANT MATERIAL SHALL BE FLORIDA #! OR BETTER.
4) SIGHT TRIANGLES SHALL BE PROVIDED AND MAINTAINED BY OWNER CLEAR OF VEGETATION TO PROVIDE UNOBSTRUCTED VISIBILITY BETWEEN 30 INCHES AND 8 FEET ABOVE GRADE.
5) UTILITY EASEMENTS SHALL NOT ENCROACH INTO LANDSCAPE BUFFERS MORE THAN 5 FEET OR AS PERMITTED BY CODE.
6) FDOT TYPE "D" OR "F" CURB OR WHEEL STOPS TO BE PROVIDED ALONG ALL LANDSCAPE AREAS, INCLUDING DRIVE AISLES AND PARKING SPACES.
7) ALL INSTALLATION WORK SHALL BE CARRIED OUT IN A PROFESSIONAL MANNER IN ACCORDANCE WITH STANDARD NURSERY AND INSTALLATION PRACTICES.
8) ALL LANDSCAPE AREAS SHALL BE SODDED, MULCHED OR OTHERWISE COVERED WITH GROUND COVER PER THESE PLANS AS LABELED.
9) TREES SHOWN ON THIS PLAN ARE GRAPHIC REPRESENTATION ONLY. TREE SPACING IS BASED ON DESIGN REQUIREMENTS AND TREES SHOWN ON THESE PLANS ATTEMPT TO ACCOMPLISH THAT SPACING WHILE MAINTAINING THE REQUIRED SETBACKS FROM UTILITIES. TREES MAY BE FIELD ADJUSTED TO AVOID CONFLICTS WITH DRIVEWAYS AND UNDERGROUND UTILITIES.
10) CONTRACTOR TO COORDINATE PLANTING OPERATIONS WITH ALL UNDERGROUND UTILITY PROVIDERS AND CALL "SUNSHINE DIG" / 811 TO FLAG UTILITY LOCATIONS PRIOR TO COMMENCING PLANTING OPERATIONS FOR ANY PORTION OF THE SITE. IF "SUNSHINE DIG" / 811 DOES NOT LOCATE ALL UNDERGROUND UTILITIES ON-SITE, THE CONTRACTOR IS RESPONSIBLE FOR SECURING THESE SERVICES FROM A PRIVATE PROVIDER.
11) LANDSCAPE CONTRACTOR TO HAND DIG PLANTING HOLES FOR TREES AND/OR SHRUBS WITHIN FIVE (5') OF ALL FP&L EASEMENTS.
12) GROUND MOUNTED MECHANICAL EQUIPMENT TO BE SCREENED PER THESE PLANS INCLUDING AS-BUILT EQUIPMENT LOCATIONS AT TIME OF LANDSCAPE INSTALLATION. CONTRACTOR TO NOTIFY OWNER / OWNER'S REPRESENTATIVE OF ADDITIONAL REQUIRED PLANT MATERIAL QUANTITIES AT TIME OF LANDSCAPE INSTALLATION FOR ADDITIONAL MECHANICAL EQUIPMENT OR RELOCATED EQUIPMENT THAT MAY REQUIRE ADDITIONAL LANDSCAPE SCREENING.
13) PLANTINGS ADJACENT TO OVERHEAD LINES TO COMPLY WITH FP&L's "RIGHT TREE IN THE RIGHT PLACE" GUIDELINES FOR MINIMUM SEPARATIONS TO OVERHEAD LINES.

### UTILITY SETBACK NOTES

1) ALL SETBACK DIMENSIONS SHOWN ON THE PLANS ARE TO BE MET AT THE TIME OF INSTALLATION.
2) TREES ARE TO BE INSTALLED WITH A TEN FOOT (10') SEPARATION FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS, OR WITH A MINIMUM SEVEN FOOT (7') SETBACK IF INSTALLED WITH A ROOT BARRIER SYSTEM. REFER TO THE "ROOT BARRIER" DETAIL ON THE PLANTING DETAILS SHEET FOR INSTALLATION REQUIREMENTS. HOWEVER IN NO CASE SHALL A TREE ENCROACH INTO A UE WITHOUT PRIOR UTILITY PROVIDER APPROVAL AND ONLY SOD CAN BE INSTALLED WITHIN 5' OF ANY WATER METER AND WITHIN 7.5' OF ANY FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL AND UTILITY PROVIDER.
3) TREES ARE TO BE INSTALLED WITH A TEN FOOT (10') SEPARATION FROM ANY DRAINAGE OR STORM SEWER INFRASTRUCTURE, OR WITH A MINIMUM SEVEN FOOT (7') SETBACK IF INSTALLED WITH A ROOT BARRIER SYSTEM. REFER TO THE "ROOT BARRIER" ON THE PLANTING DETAILS SHEET FOR INSTALLATION REQUIREMENTS.
4) WHERE REQUIRED, ROOT BARRIER TO BE INSTALLED WITH A MINIMUM 5' SEPARATION TO THE EDGE OF ALL UNDERGROUND UTILITIES AND INFRASTRUCTURE.
5) TREES SHALL BE PLANTED WITH A MIN. 2' SEPARATION BETWEEN ANY ROOT BARRIER (MEASURED FROM THE CENTER OF THE TREE).

### LANDSCAPE EXCAVATION & BACKFILL NOTES

1) TREE AND SHRUB PLANTING BEDS WHICH FALL WITHIN OR NEAR ROADWAY AREAS SHALL BE COMPLETELY EXCAVATED AND BACK-FILLED WITH TOPSOIL. ALL SHELL-ROCK OR OTHER BASE MATERIALS, AND ALL SUBSOIL AND DEBRIS, SHALL BE COMPLETELY REMOVED FROM BENEATH SUCH PLANTING AREAS, TO A MINIMUM DEPTH OF 36". UPON COMPLETION OF EXCAVATION, LANDSCAPE ARCHITECT OR OWNER SHALL INSPECT THE EXCAVATED AREA PRIOR TO BACKFILLING WITH TOPSOIL.
2) ALL TREE AND/OR SHRUB PLANTING AREAS WITHIN 8' OF BUILDING FOUNDATIONS, AND ANY OTHER PLANTING AREAS WHERE SIGNIFICANT BURIED CONSTRUCTION DEBRIS IS ENCOUNTERED, SHALL BE COMPLETELY EXCAVATED TO A MINIMUM DEPTH OF 36". UPON COMPLETION OF EXCAVATION, LANDSCAPE ARCHITECT OR OWNER SHALL INSPECT THE EXCAVATED AREA PRIOR TO BACKFILLING WITH TOPSOIL.

### MULCH NOTES

1) MULCH SHALL BE GRADE A PREMIUM NATURAL MULCH, OR APPROVED EQUAL, FREE OF FOREIGN MATERIALS AND WEED SEEDS. MINIMUM DEPTH AFTER SETTLING SHALL BE THREE (3") INCHES.

### DEVELOPMENT TEAM


OWNER / APPLICANT:
**FAZIO CONSULTING, LLC**
50 LIBERTY DRIVE, SUITE 9F
BOSTON, FL 02110

LANDSCAPE ARCHITECT & PLANNER:
**URBAN DESIGN STUDIO**
610 CLEMATIS STREET, SUITE CU02
WEST PALM BEACH, FL 33401
(561) 366-1100

ARCHITECT:
**A.23 STUDIOS**
711 E. 9TH STREET
TUCSON, AZ 85719

SURVEYOR:
**PERIMETER SURVEYING & MAPPING**
947 CLINT MOORE ROAD
BOCA RATON, FL 33487
(561) 241-9988

TRAFFIC ENGINEER:
**PINDER TROUTMAN CONSULTATING, INC.**
601 HERITAGE DRIVE, SUITE 493
JUPITER, FL 33458
(561) 296-9698

CIVIL ENGINEER:
**KEEN ENGINEERING INC.**
7280 PALMETTO PARK RD., SUITE 105
BOCA RATON, FL 33433
(561) 325-6700

IRRIGATION:
**PARKER YANETTE DESIGN GROUP, INC.**
4425 MILITARY TRAIL, SUITE 202
JUPITER, FL 33458
(561) 747-5069


811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
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**Conklin Car Wash**
**14145 S. Military Trail**
**City of Delray Beach, Florida**
**Landscape Plan & Plant Schedule - Cover Sheet**

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NORTH
0 10' 20' 40'
Scale: 1" = 20'-0"

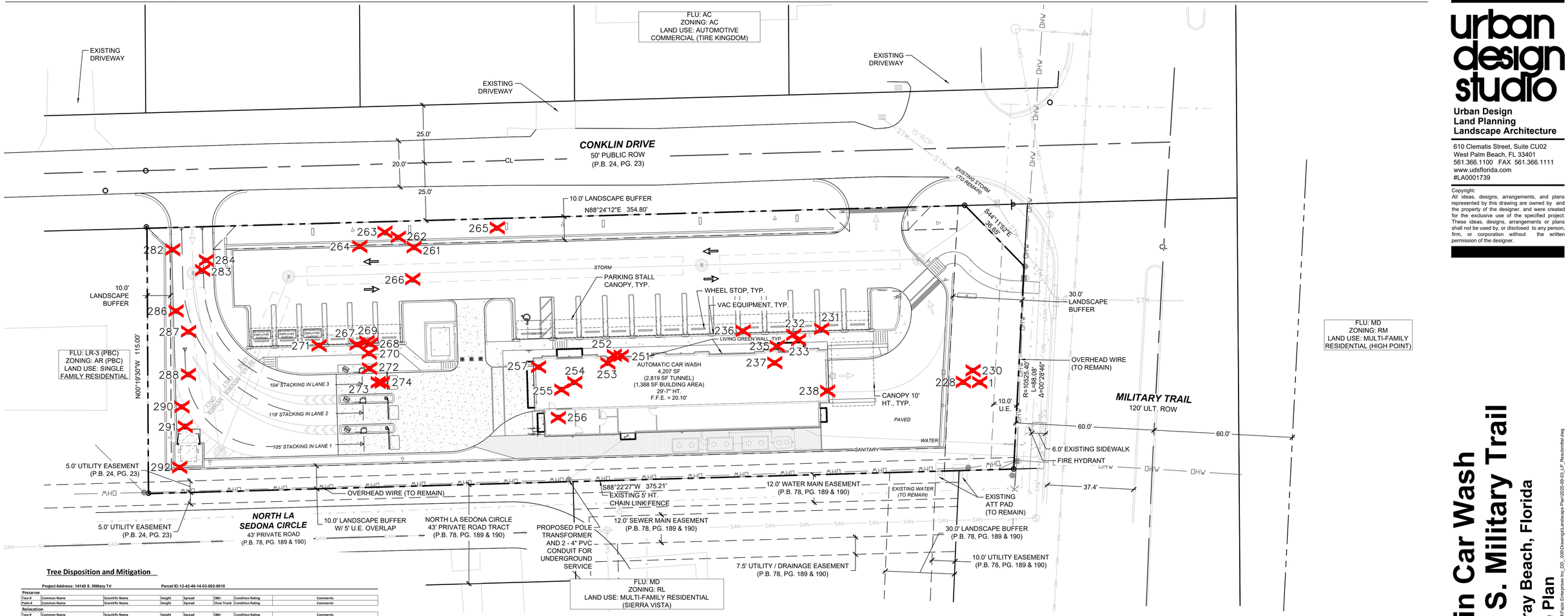
| | |
|---|---|
| Date: | JAN. 2025 |
| Project No.: | 24-054.000 |
| Designed By: | JEV/LMB |
| Drawn By: | JEV/LMB |
| Checked By: | AV/RD |

**Revision Dates:**
01-21-2025 SUBMITTAL
05-12-2025 RESUBMITTAL
08-06-2025 RESUBMITTAL
09-17-2025 RESUBMITTAL

SUBMITTAL

**LA-1**
of 5

# TREE DISPOSITION PLAN




## Tree Disposition and Mitigation

**Project Address: 14145 S. Military Trl** **Parcel ID:12-42-46-14-03-002-0010**

**Preserve**

| Tree # / Palm # | Common Name | Scientific Name | Height | Spread | DBH / Clear Trunk | Condition Rating | Comments |
|---|---|---|---|---|---|---|---|

**Relocation**

| Tree # / Palm # | Common Name | Scientific Name | Height | Spread | DBH / Clear Trunk | Condition Rating | Comments |
|---|---|---|---|---|---|---|---|

**Removal**

| Tree # | Common Name | Scientific Name | Height | Spread | DBH | Condition Rating < 50% | Comments |
|---|---|---|---|---|---|---|---|
| 228 | Slash Pine | Pinus elliottii | 60 | 48 | 24 | 45 | Co-canopy, forest form, large dead branched |
| 230 | Slash Pine | Pinus elliottii | 60 | 48 | 23.75 | 45 | Co-canopy, forest form, large dead branched |
| 231 | Slash Pine | Pinus elliottii | 50 | 24 | 12 | 30 | Forest form |
| 232 | Slash Pine | Pinus elliottii | 0 | 0 | 0 | 0 | Dead-no mitigation required |
| 233 | Slash Pine | Pinus elliottii | 50 | 28 | 14 | 30 | Forest form |
| 235 | Slash Pine | Pinus elliottii | 50 | 21 | 10.75 | 30 | Forest form |
| 237 | Live Oak | Quercus virginiana | 0 | 0 | 0 | 0 | Did not locate-no mitigation required |
| 238 | Live Oak | Quercus virginiana | 0 | 0 | 0 | 0 | Did not locate-no mitigation required |
| 251 | Java Plum | Syzigium cumini | 0 | 0 | 0 | 0 | Category 1 Invasive - no mitigation required |
| 252 | Java Plum | Syzigium cumini | 0 | 0 | 0 | 0 | Category 1 Invasive - no mitigation required |
| 253 | Java Plum | Syzigium cumini | 0 | 0 | 0 | 0 | Category 1 Invasive - no mitigation required |
| 254 | Java Plum | Syzigium cumini | 0 | 0 | 0 | 0 | Category 1 Invasive - no mitigation required |
| 255 | Java Plum | Syzigium cumini | 0 | 0 | 0 | 0 | Category 1 Invasive - no mitigation required |
| 256 | Java Plum | Syzigium cumini | 0 | 0 | 0 | 0 | Category 1 Invasive - no mitigation required |
| | | | | | | | |
| | | | | | | **Condition Rating ≥ 50%** | |
| 236 | Slash Pine | Pinus elliottii | 50 | 30 | 15.5 | 60 | Forest form |
| 260 | Strangler Fig | Ficus aurea | 45 | 30 | 15.5 | 60 | |
| 282 | Mango | Mangifera indica | 25 | 20 | 10 | 70 | |
| 290 | Slash Pine | Pinus elliottii | 50 | 48 | 23 | 60 | |

**Trees with Condition Rating < 50% to be Removed:** **5 trees**
**Total DBHs of Trees with Condition Rating ≥ 50% to be Removed:** **64 DBH inches / # of Trees**

| Palm # | Common Name | Scientific Name | Height | Spread | Clear Trunk | Condition Rating < 50% | Comments |
|---|---|---|---|---|---|---|---|
| 257 | Foxtaile Palm | Ptychosperma elegans | 3 | | | 0 | Too small-no mitigation required |
| 260 | Coin Plant | | | | | | Not a tree-no mitigation required |
| | | | | | | | |
| | | | | | | **Condition Rating ≥ 50%** | |
| 1 | Cabbage Palm | Sabal palmetto | 25 | 18 | 23 | 80 | |
| 266 | Cabbage Palm | Sabal palmetto | 11 | 18 | 9 | 70 | |
| 267 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 268 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 269 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 270 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 271 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 272 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 273 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 274 | Alexander Palm | Archontophoenix alexandrae | 12 | 12 | 10 | 70 | |
| 283 | Cabbage Palm | Sabal palmetto | 29 | 18 | 26 | 70 | |
| 284 | Cabbage Palm | Sabal palmetto | 29 | 18 | 26 | 70 | |
| 286 | Areca Palm | Dypsis lutescens | 16 | | | 70 | |
| 287 | Areca Palm | Dypsis lutescens | 16 | | | 70 | |
| 288 | Areca Palm | Dypsis lutescens | 16 | | | 70 | |
| 289 | Areca Palm | Dypsis lutescens | 16 | | | 70 | |
| 291 | Areca Palm | Dypsis lutescens | 16 | | | 70 | |

**Total Numbers of Palms with Condition Rating < 50% to be Removed:** **0 Palms**
**Total Heights of Palms with Condition Rating ≥ 50% to be Removed:** **164' CT in height / # of Palms**

### Mitigation

**Tree Replacement Calculations ***

| New Trees | Caliper (CAL) | Calipers Provided |
|---|---|---|
| 5 of Spanish Stoppers (Tree-for-Tree) | | |
| | 64" DBH Removed | 105" DBH Provided |

**Tree - for - Tree Basis:** 5
**Total DBHs of Trees :** **64" Removed/105" Provided**

**Palm Replacement Calculations ****

| New Palms | Overall Height | Clear Trunk |
|---|---|---|

**Palm-for-Palm Basis:** 0
**Total Heights of Palms** **164' CT Removed/240' CT Provided**

### Requirements of Vegetation Removal (Sec. 4.6.19 (E)(5)

*** TREE**
*Staff recommends at least 4" CAL trees for mitigation as required.
**Trees with condition rating of ≥ 50%: Total DBHs of trees shall be replaced with equivalent # of CAL inches of replacement trees.**
**Trees with condition rating of < 50%: Required to be mitigated on a tree-for-tree basis (16' OH X 6' ST X 8' CT X 7' SPR for others & 12' OH for SF & Duplex)**
**** Palm**
**Palms with condition rating of ≥ 50%: Replaced with one palm of equal overall heights (OH) or 16 ft OH, whichever is greater**
**Palms with condition rating of < 50%: Required to be mitigated on a palm-for-palm basis (16' OH X 8 CT for others & 12' OH X 6' CT for SF & Duplex)**

| In Lieu Fee for TREE (Sec. 4.6.19.(E)(5)(d)) | | | example for 16 inch DBH |
|---|---|---|---|
| DBH 0 to 8" | $450 | 8 | $3,600 |
| DBH 9" to 12" | $650 | 4 | $2,600 |
| DBH 13" to 18" | $850 | 4 | $3,400 |
| DBH 19" and greater | $1,000 | | $9,600 |

**Example:** In-lieu-fee for a 21" DBH tree: ($450 × 8") + ($650 × 4") + ($850 × 6") + ($1,000 × 3") = $3,600 + $2,600 + $5,100 + $3,000 = $14,300

For trees with a condition rating of between 0 percent and 49 percent, the in-lieu fee shall be calculated at 50 percent of the above escalating scale.
Trees and palms with a condition < 50 % are exempt from DBH/caliper inch-for-inch replacement, but are required to be mitigated on a tree-for-tree or palm-for-palm basis.

**In-lieu-fee for a palm: $75 per one foot grey trunk or clear trunk**

## MITIGATION DATA

*MITIGATION TREE FOR TREE BASIS : 5 TREES REQUIRED/5 SPANISH STOPPERS PROVIDED*
*MITIGATION INCHES FOR CANOPY TREES REQUIRED: 64" DBH REQUIRED/105" DBH PROVIDED*
*MITIGATION FOR PALMS: 164' CT REMOVED/240' CT PROVIDED*

*MITIGATION NOTES:*
*(A) REMOVED PALMS WITH LESS THAN 8' CT DO NOT NEED TO BE MITIGATED, PER SECTION 4.6.19.D*
*(B) THE TOTAL DBH OF ALL REMOVED TREES WITH A CONDITION RATING 50% OR GREATER SHALL BE REPLACED WITH AN EQUAL NUMBER OF CALIPER INCHES INSTALLED AT A MINIMUM SIZE AS PER SECTION 4.6.16*
*(C) REMOVED TREES AND PALMS WITH A CONDITION RATING LESS THAN 50% SHALL BE MITIGATED ON A TREE-FOR-TREE OR PALM-FOR-PALM BASIS PER SECTION 4.6.19.E.6.A*

## LEGEND

✕ TREE / PALM TO BE REMOVED

## NOTES

1) BASE INFORMATION OBTAINED FROM PERIMETER SURVEYING & MAPPING DATED 10-11-2024.

2) ALL TREES AND PALMS PROPOSED FOR REMOVAL SHALL COMPLY WITH LAND DEVELOPMENT REGULATIONS SECTION 4.6.19.E

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# Conklin Car Wash
## 14145 S. Military Trail
City of Delray Beach, Florida
Landscape Plan

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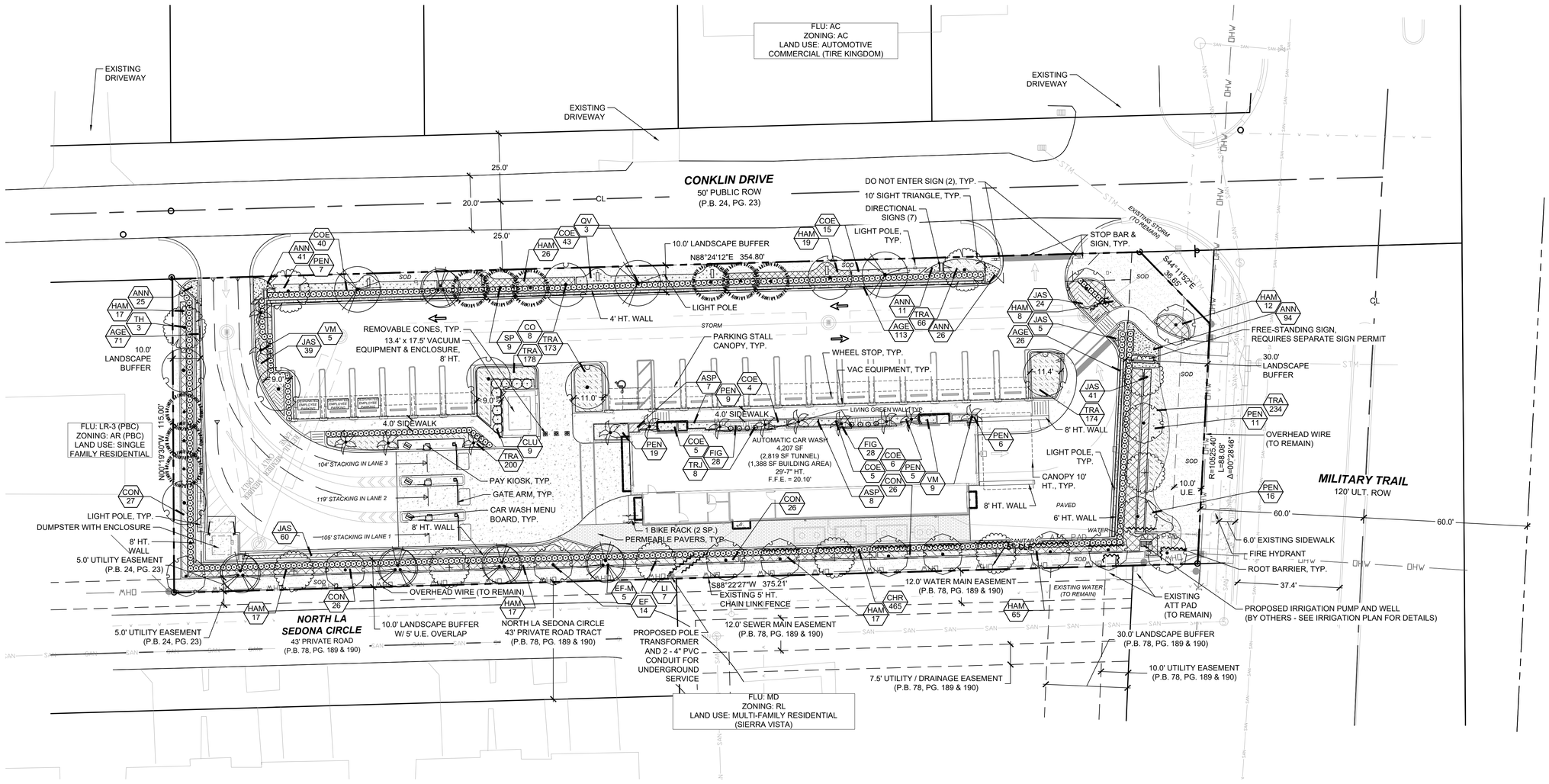
NORTH
0 10' 20' 40'
Scale: 1" = 20'-0"

| | |
|---|---|
| Date: | JAN. 2025 |
| Project No.: | 24-054.000 |
| Designed By: | JEV/LMB |
| Drawn By: | JEV/LMB |
| Checked By: | AV/RD |

**Revision Dates:**
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05-12-2025 RESUBMITTAL
08-06-2025 RESUBMITTAL
09-17-2025 RESUBMITTAL

SUBMITTAL

LA-2
of 5




## PLANT LEGEND

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| **TREES** | | |
| | CO | Conocarpus erectus / Green Buttonwood<br>Min. 16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy |
| | EF | Eugenia foetida / Spanish Stopper<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy |
| | LI | Lagerstroemia 'Natchez' / Crape Myrtle<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy |
| | QV | Quercus virginiana / Southern Live Oak<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy |
| | TH | Tabebuia heterophylla / Pink Tabebuia<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy |
| **MITIGATION TREES** | | |
| | EF-M | Eugenia foetida / Spanish Stopper<br>16` Ht. x 7` Spr., 3" DBH., 8' C.T., Single Straight Trunk, Full Canopy |
| **PALM TREES** | | |
| | SP | Sabal palmetto / Cabbage Palmetto<br>16' Ht. 8' C.T. Min., Single Straight Trunk, Hurricane Cut, No Scarred Trunks |
| | VM | Veitchhia montgomeriana / Montgomery Palm<br>Min. 12' Ct. 16' O.A. Ht. Single Trunk, Full Head, No Scarred Trunks |
| **SHRUBS** | | |
| | CHR | Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum<br>24" Ht. 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base |
| | CLU | Clusia guttifera / Small Leaf Clusia<br>6' HT. x 3' SPR., 36" O.C., Full and Dense to Base |
| **VINE** | | |
| | TRJ | Trachelospermum jasminoides / Chinese Star Jasmine<br>36" Ht Runners., 3' O.C., espalier to living green wall with stainless steel eye hooks, |
| **SHRUB AREAS** | | |
| | COE | Conocarpus erectus / Green Buttonwood<br>Min. 24" Ht. x 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base |
| | CON | Conocarpus erectus `Sericeus` / Silver Buttonwood<br>Min. 24" Ht. x 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base |
| | HAM | Hamelia patens / Firebush<br>Min. 24" Ht. x 24" Spr. 30" O.C., Full and Dense Shrub, Full to Base |
| | JAS | Jasminum volubile / Wax Jasmine<br>Min. 24" Ht. x 24" Spr. 24" O.C., Full and Dense Shrub, Full to Base |
| **GROUND COVERS** | | |
| | ANN | Annuals / Seasonal Annuals<br>Min. 4" Pots, Full Flowering When Installed, 12" O.C. |
| | AGE | Arachis glabrata / Perennial Peanut<br>6" Ht. x 12" Spr., 18" O.C., Full to Edge of Pot |
| | ASP | Asparagus densiflorus `Myers` / Myers Asparagus<br>Min. 15" Ht. x 18" Spr.,24" O.C., Full and Dense Shrub, Full to Edge of Pot |
| | FIG | Ficus microcarpa 'Green Island' / Green Island Indian Laurel Fig<br>18" Ht. x 18" Spr., 18" O.C., Full and Dense |
| | PEN | Pentas lanceolata / Penta (pink)<br>Min. 15" Ht. x 18" Spr.,24" O.C., Full and Dense Shrub, Full to Edge of Pot |
| | TRA | Trachelospermum asiaticum ` Minima` / Minima Jasmine<br>Min. 12" Ht. x 12" Spr. 12" O.C., Full and Dense Shrub, Full to Edge of Pot |
| **SOD AND MULCH** | | |
| | MULCH | Shredded Melaleuca / Mulch<br>Free of Foreign Materials and Weeds, Minimum Depth After Settling Shall be 3"; *Quantity to be Verified in the Field |
| | SOD | Stenotaphrum secundatum `Floritam` / Floritam St. Augustine Sod<br>Laid tightly and flat, sanded and rolled to provide a uniform flat lawn |

ROOT BARRIER
36" DEPTH MIN., INSTALLED PER MANUFACTURER'S SPECS.
(SEE DETAIL ON SHEET LA-1 AND LA-4)

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# Conklin Car Wash
## 14145 S. Military Trail
### City of Delray Beach, Florida
### Landscape Plan

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Plotted: 9/3/2025 By: Alexander Vidal
Xrefs: Boundary_Survey.dwg, Civil_Plan.dwg, Color_Site_Plan.dwg, Elevations.dwg, Floor_Plan.dwg, Roof_Plan.dwg, Site_Plan.dwg, Survey.dwg, Tree_Survey.dwg, Utility_Plan.dwg
Xrefs: Boundary_Survey.dwg, Civil_Plan.dwg, Color_Site_Plan.dwg, Elevations.dwg, Floor_Plan.dwg, Roof_Plan.dwg, Site_Plan.dwg, Survey.dwg, Tree_Survey.dwg, Utility_Plan.dwg
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NORTH
0 10' 20' 40'
Scale: 1" = 20'-0"

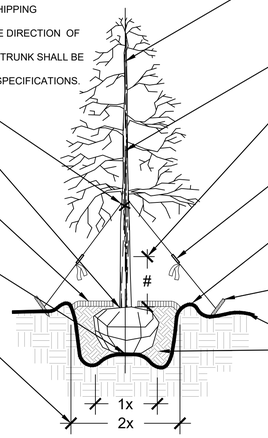
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|---|---|
| **Date:** | JAN. 2025 |
| **Project No.:** | 24-054.000 |
| **Designed By:** | JEV/LMB |
| **Drawn By:** | JEV/LMB |
| **Checked By:** | AV/RD |

**Revision Dates:**
01-21-2025 SUBMITTAL
05-12-2025 RESUBMITTAL
08-06-2025 RESUBMITTAL
09-17-2025 RESUBMITTAL

SUBMITTAL

**LA-3**
of 5

NOTES:
1. ALL TREES SHALL MEET FLORIDA #1 OR BETTER STANDARDS.
2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE TREE AND ROOT BALL.
3. ANY PRUNING SHALL BE COMPLETED AT THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.
4. NO NAILS SHALL BE DRIVEN INTO TREE AND TRUNK SHALL BE FREE OF ANY MAJOR SCARS.
5. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.

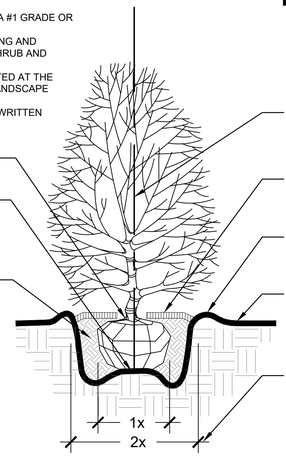



PLASTIC HOSE OR (2) PLY 3/4" RUBBER TUBE TO PROTECT TRUNK FROM GUY WIRE.
TOP OF ROOT BALL SHALL SIT 2" ABOVE THE FINISHED GRADE. (ALLOW FOR SETTLING)
MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING. MULCH SHOULD NOT BE IN DIRECT CONTACT WITH THE TRUNK. (SEE WRITTEN SPECIFICATIONS)
ROOT BALLS GREATER THAN 2' IN DIAMETER SHALL SIT ON A MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOT BALLS SMALLER THAN 2' IN DIAMETER MAY SIT ON COMPACTED EARTH.
DIAMETER OF EXCAVATED HOLE SHALL BE AT LEAST TWICE THE WIDTH OF THE ORIGINAL ROOT BALL OR CONTAINER. (SEE WRITTEN SPECIFICATIONS)

TREES SHALL BE PLANTED IN A VERTICAL POSITION AND ORIENTED TO GIVE THE BEST POSSIBLE APPEARANCE. DO NOT CUT OUT TERMINAL LEADER SELECTIVELY PRUNE TREE CROWN
USE A PLUM LINE TO ASSURE THE TREE IS PROPERLY PLANTED UPRIGHT BEFORE BACKFILLING AND TAMPING.
TREE CALIPER SHALL BE MEASURED 6" ABOVE GRADE FOR TREES UP TO 4" IN CALIPER AND MEASURED 12" ABOVE GRADE FOR TREES OVER 4" IN CALIPER.
#12 GALVANIZED STEEL GUY WIRE WITH TURNBUCKLE AND CONSPICUOUS COLOR SAFETY FLAGS.
CREATE A 6" HIGH CIRCULAR WATERING BASIN AROUND THE TREE BASE AT LEAST AS WIDE AS THE ROOT BALL IN DIAMETER.
2" x 4" x 24" GUY WIRE STAKE MADE OF PRESSURE TREATED HARDWOOD
FINISHED GRADE
TREE PLANTING PIT TO BE FULLY EXCAVATED AND BACKFILLED WITH TOPSOIL. TAMP FILL AS IT IS ADDED. WHEN HOLE IS 2/3 FILLED, WATER THOROUGHLY, RELEASE ANY AIR POCKETS, THEN COMPLETE FILLING. TAMP AND WATER THOROUGHLY AGAIN. (SEE WRITTEN SPECIFICATIONS)

## TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. ALL SHRUBS SHALL MEET FLORIDA #1 GRADE OR BETTER STANDARDS.
2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE SHRUB AND ROOT BALL.
3. ANY PRUNING SHALL BE COMPLETED AT THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.
4. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.

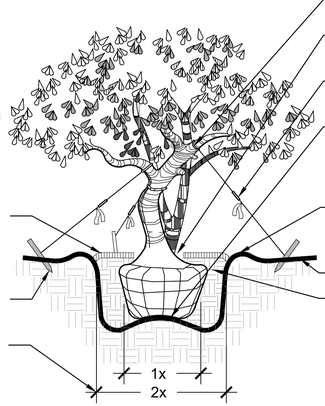



TOP OF ROOT BALL SHALL SIT 1" ABOVE THE FINISHED GRADE. (ALLOW FOR SETTLING)
ROOT BALLS GREATER THAN 2' IN DIAMETER SHALL SIT ON A MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOT BALLS SMALLER THAN 2' IN DIAMETER MAY SIT ON COMPACTED EARTH.
SHRUB PLANTING PIT TO BE FULLY EXCAVATED AND BACKFILLED WITH TOPSOIL. TAMP FILL AS IT IS ADDED. WHEN HOLE IS 2/3 FILLED, WATER THOROUGHLY, RELEASE ANY AIR POCKETS, THEN COMPLETE FILLING. TAMP AND WATER THOROUGHLY AGAIN. (SEE WRITTEN SPECIFICATIONS)

SHRUBS SHALL BE PLANTED IN A VERTICAL POSITION AND ORIENTED TO GIVE THE BEST POSSIBLE APPEARANCE
MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING. MULCH SHOULD NOT BE IN DIRECT CONTACT WITH THE SHRUB BASE. (SEE WRITTEN SPECIFICATIONS)
CREATE A 4" HIGH CIRCULAR WATERING BASIN AROUND THE SHRUB BASE AT LEAST AS WIDE AS THE ROOT BALL IN DIAMETER.
FINISHED GRADE
DIAMETER OF EXCAVATED HOLE SHALL BE AT LEAST TWICE THE WIDTH OF THE ORIGINAL ROOT BALL OR CONTAINER. (SEE WRITTEN SPECIFICATIONS)

## LARGE SHRUB PLANTING DETAIL
NOT TO SCALE

NOTES:
1. ALL TREES SHALL MEET FLORIDA #1 OR BETTER STANDARDS.
2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE TREE AND ROOT BALL.
3. ANY PRUNING SHALL BE COMPLETED AT THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.
4. NO NAILS SHALL BE DRIVEN INTO TREE AND TRUNK SHALL BE FREE OF ANY MAJOR SCARS.
5. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.

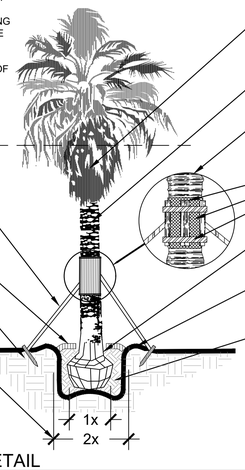



MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING. MULCH SHOULD NOT BE IN DIRECT CONTACT WITH THE TRUNK. (SEE WRITTEN SPECIFICATIONS)
2" x 4" x 24" GUY WIRE STAKE MADE OF PRESSURE TREATED HARDWOOD
DIAMETER OF EXCAVATED HOLE SHALL BE AT LEAST TWICE THE WIDTH OF THE ORIGINAL ROOT BALL OR CONTAINER. (SEE WRITTEN SPECIFICATIONS)

PLASTIC HOSE OR (2) PLY 3/4" RUBBER TUBE TO PROTECT TRUNK FROM GUY WIRE.
TOP OF ROOT BALL SHALL SIT 2" ABOVE THE FINISHED GRADE. (ALLOW FOR SETTLING)
#12 GALVANIZED STEEL GUY WIRE WITH TURNBUCKLE AND CONSPICUOUSLY COLORED SAFETY FLAGS.
ROOT BALLS GREATER THAN 2' IN DIAMETER SHALL SIT ON A MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOT BALLS SMALLER THAN 2' IN DIAMETER MAY SIT ON COMPACTED EARTH.
CREATE A 6" HIGH CIRCULAR WATERING BASIN AROUND THE TREE BASE AT LEAST AS WIDE AS THE ROOT BALL IN DIAMETER.
FINISHED GRADE
TREE PLANTING PIT TO BE FULLY EXCAVATED AND BACKFILLED WITH TOPSOIL. TAMP FILL AS IT IS ADDED. WHEN HOLE IS 2/3 FILLED, WATER THOROUGHLY, RELEASE ANY AIR POCKETS, THEN COMPLETE FILLING. TAMP AND WATER THOROUGHLY AGAIN. (SEE WRITTEN SPECIFICATIONS)

## IRREGULAR & MULTI-STEM TREE PLANTING DETAIL
NOT TO SCALE

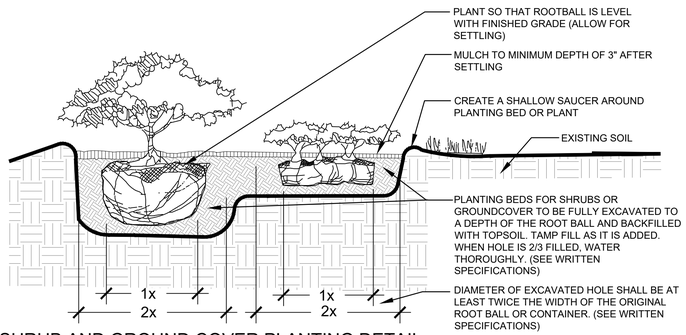
NOTES:
1. ALL PALMS SHALL MEET FLORIDA #1 GRADE STANDARDS OR BETTER
2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE PALM AND ROOT BALL.
3. NO NAILS SHALL BE DRIVEN INTO PALM AND TRUNK SHALL BE FREE OF ANY MAJOR SCARS.
4. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.




TRIM ONLY THOSE FRONDS WHICH HANG BELOW LEVEL OF TREE HEART
MINIMUM 3 (2"x4") WOOD BRACES
MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING. MULCH SHOULD NOT BE IN DIRECT CONTACT WITH THE TRUNK. (SEE WRITTEN SPECIFICATIONS)
2" x 4" x 24" STAKE MADE OF PRESSURE TREATED HARDWOOD
FINISHED GRADE
DIAMETER OF EXCAVATED HOLE SHALL BE AT LEAST TWICE THE WIDTH OF THE ORIGINAL ROOT BALL OR CONTAINER. (SEE WRITTEN SPECIFICATIONS)

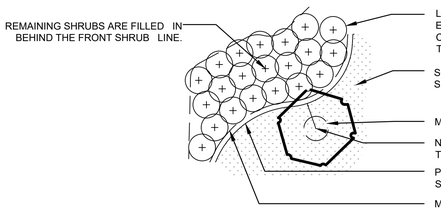
USE A PLUM LINE TO ASSURE PALM IS PROPERLY PLANTED UPRIGHT BEFORE BACKFILLING AND TAMPING.
TRUNK DIAMETER SHALL BE CONSISTENT WITHOUT ABRUPT CHANGES, LOOSE SHEATHES, HOLES, OR CAVITIES.
SECURE BATTENS W/ 2-3/4" HIGH CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. HEIGHT OF BATTENS SHALL BE LOCATED PROPORTIONATELY TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
5 (2" x 4 " x 16") WOOD BATTENS.
5 LAYERS OF BURLAP TO WRAP TRUNK.
STEEL BANDS (3/4"; H.C.S.)
TOP OF ROOT BALL SHALL SIT 2" ABOVE THE FINISHED GRADE. (ALLOW FOR SETTLING)
CREATE A 6" HIGH CIRCULAR WATERING BASIN AROUND THE PALM BASE AT LEAST AS WIDE AS THE ROOT BALL IN DIAMETER.
PALM PLANTING PIT TO BE FULLY EXCAVATED AND BACKFILLED WITH TOPSOIL. TAMP FILL AS IT IS ADDED. WHEN HOLE IS 2/3 FILLED, WATER THOROUGHLY, RELEASE ANY AIR POCKETS, THEN COMPLETE FILLING. TAMP AND WATER THOROUGHLY AGAIN. (SEE WRITTEN SPECIFICATIONS)

## PALM PLANTING DETAIL
NOT TO SCALE



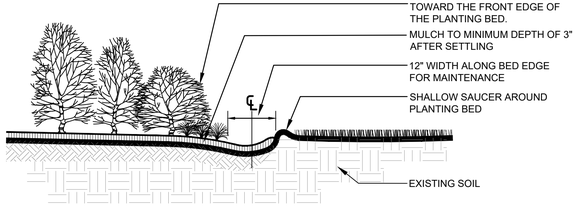

PLANT SO THAT ROOTBALL IS LEVEL WITH FINISHED GRADE (ALLOW FOR SETTLING)
MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING
CREATE A SHALLOW SAUCER AROUND PLANTING BED OR PLANT
EXISTING SOIL
PLANTING BEDS FOR SHRUBS OR GROUNDCOVER TO BE FULLY EXCAVATED TO A DEPTH OF THE ROOT BALL AND BACKFILLED WITH TOPSOIL. TAMP FILL AS IT IS ADDED. WHEN HOLE IS 2/3 FILLED, WATER THOROUGHLY. (SEE WRITTEN SPECIFICATIONS)
DIAMETER OF EXCAVATED HOLE SHALL BE AT LEAST TWICE THE WIDTH OF THE ORIGINAL ROOT BALL OR CONTAINER. (SEE WRITTEN SPECIFICATIONS)

## SHRUB AND GROUND COVER PLANTING DETAIL
NOT TO SCALE



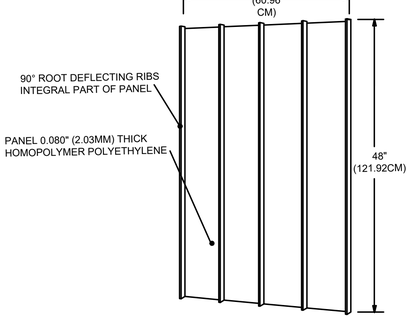
REMAINING SHRUBS ARE FILLED IN BEHIND THE FRONT SHRUB LINE.
LAYOUT OF SHRUBS AT THE PLANTING EDGE IS DONE FIRST TO ESTABLISH A CONTINUOUS LINE. BEST FACE OF SHRUB TO FACE FRONT OF PLANTING BED.
SOD. USE ROLLER TO SMOOTH SURFACE.
MULCH RING
NO TREE TO BE PLANTED CLOSER THAN 4' TO BED EDGE.
PLANTING BED EDGE CUT CLEAN AND STRAIGHT
MAINTAIN 12" ALONG BED EDGE; SEE PLANTING BED EDGE DETAIL.

## SHRUB & GROUNDCOVER LAYOUT DETAIL
NOT TO SCALE




BEST "FACE" OF PLANT TO BE TOWARD THE FRONT EDGE OF THE PLANTING BED.
MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING
12" WIDTH ALONG BED EDGE FOR MAINTENANCE
SHALLOW SAUCER AROUND PLANTING BED
EXISTING SOIL

## PLANTING BED EDGE DETAIL
NOT TO SCALE




90° ROOT DEFLECTING RIBS INTEGRAL PART OF PANEL
PANEL 0.080" (2.03MM) THICK HOMOPOLYMER POLYETHYLENE

UB 48-2 SPECIFICATIONS
48" DEEPROOT TREE ROOT BARRIER

SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING HARDSCAPES, AND LANDSCAPES. ASSEMBLED IN 2 FOOT (61 CM) LONG MODULES TO CREATE VARYING LENGTHS FOR LINEAR APPLICATION DIRECTLY BESIDE A HARDSCAPE ELEMENT, ADJACENT TO ONE SIDE OF A TREE, OR FOR LARGE PERIMETER SURROUND APPLICATIONS WITH A MINIMUM 8 FOOT (2.43 M) DIAMETER USING 12 PANELS.

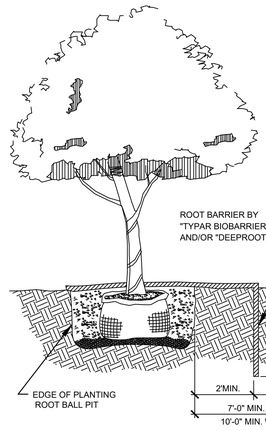
A. MATERIALS
1. THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE EITHER PRODUCT UB 48-2 AS MANUFACTURED BY DEEPROOT PARNTERS, L.P., 81 LANGTON STREET, SUITE 4, SAN FRANCISCO, CA 94103 (800.458.7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, EXTRUDE PANELS, OF 0.80" (2.03MM) WALL THICKNESS IN MODULES 24" (61CM) LONG 48" (122 CM) DEEP; MANUFACTURED WITH HOMOPOLYMER POLYETHYLENE WITH ADDED ULTRAVIOLET INHIBITORS; RECYCLABLE. EACH 2 FOOT (61CM) SECTION SHALL HAVE:

NOT LESS THAN 4 MOLDED INTEGRAL VERTICAL ROOT DIRECTING RIBS OF A MINIMUM 0.080" (2.03MM) THICKNESS PROTRUDING 1/2" (12.7MM) AT 90° FROM INTERIOR OF THE BARRIER PANEL, SPACED 6" (154 MM) APART.
SEE PANEL DRAWING.

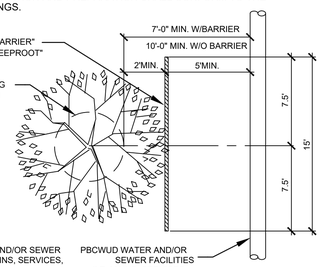
AN INTEGRATED JOINING SYSTEM PROVIDING FOR INSTANT ASSEMBLY BY SLIDING ONE PANEL INTO ANOTHER.

B. CONSTRUCTION AND INSTALLATION
1. THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE NUMBER OF PANELS AND IN THE MANNER SHOWN ON THE DRAWINGS. THE VERTICAL ROOT DIRECTING RIB SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP EDGE SHALL BE 1/2" TO 1" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE JOINED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE OR WHERE SPECIFIED TO FORM A CIRCLE AROUND THE ROOT BALL.

2. EXCAVATION AND PREPARATION SHALL CONFORM TO THE DRAWINGS.




SECTION

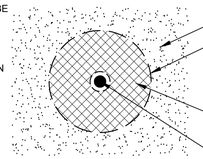



PLAN

NOTES:
1. TREES SHOWN ON THIS PLAN ARE FOR GRAPHIC REPRESENTATION ONLY. TREE SPACING IS BASED ON DESIGN REQUIREMENTS AND THE TREES SHOWN ON THESE PLANS ATTEMPT TO ACCOMPLISH THAT SPACING WHILE MAINTAINING THE REQUIRED SETBACKS FROM UTILITIES. TREES MAY BE FIELD ADJUSTED TO AVOID CONFLICTS WITH DRIVEWAYS AND UNDERGROUND UTILITIES. IN ANY CASE THE TREES SHALL BE LOCATED IN THE FIELD IN ACCORDANCE WITH THE PLANTING DETAILS SHOWN HEREON.
2. TREES ARE TO BE INSTALLED WITH A TEN FOOT (10') SEPARATION FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS. IF A TEN FOOT (10') SEPARATION CANNOT BE ACHIEVED, THE TREE CAN BE INSTALLED WITH A ROOT BARRIER SYSTEM. HOWEVER, IN NO CASE SHALL A TREE ENCROACH INTO A PBCUE WITHOUT PRIOR DEPARTMENT APPROVAL.
3. ONLY SOD CAN BE INSTALLED WITHIN 7.5' MINIMUM OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL AND THE DEPARTMENT
4. SOD ONLY SHALL BE INSTALLED WITHIN 5.0' MINIMUM OF ANY DEPARTMENT WATER METER.
5. WHEN INSTALLING A SOLID ROOT BARRIER PANEL SYSTEM THE PANEL RIBS MUST FACE THE TREE ROOT BALL.

## ROOT BARRIER DETAIL
NOT TO SCALE

NOTES:
1. MULCH RINGS SHALL BE PROVIDED FOR ALL TREES AND PALMS PLANTED IN SODDED AREAS OR AS OTHERWISE NOTED ON LANDSCAPE PLAN.

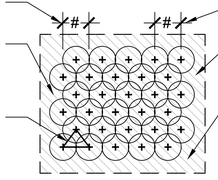


SOD
- MULCH RING SHALL BE CUT INTO A 'PERFECT' CIRCLE'.
- EDGES TO BE WELL-FORMED AND CRISP WITH VERTICALLY STRAIGHT CUTS.
- MULCH RING SHALL MEASURE 5' IN DIAMETER OR EXTEND TO THE EDGE OF THE DRIP LINE, WHICHEVER IS GREATER.

MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING. MULCH SHOULD NOT BE IN DIRECT CONTACT WITH THE TRUNK. (SEE WRITTEN SPECIFICATIONS)
TREE OR PALM TRUNK

## MULCH RING IN SOD DETAIL
NOT TO SCALE

SPREAD OF PLANT
CLEAN TOPSOIL OF ANY ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIAL DETRIMENTAL TO PLANT GROWTH
TYPICAL TRIANGULAR SPACING OF PLANTS TO INSURE FULL COVERAGE BY GROUNDCOVER.



ON CENTER SPACING
ROTARY-TILL SOIL THOROUGHLY TO A DEPTH OF 6", PLOWING OR DICING IS NOT AN ACCEPTABLE SUBSTITUTE.
MULCH TO MINIMUM DEPTH OF 3" AFTER SETTLING. (SEE WRITTEN SPECIFICATIONS)

## GROUND COVERS & ROOTED CUTTING PLANTING DETAIL
NOT TO SCALE

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# Conklin Car Wash
# 14145 S. Military Trail
## City of Delray Beach, Florida
## Planting Details

H:\PBS\Conklin Drive Car Wash_24-054\Fabb Enterprises Inc_DD_000\Drawings\Landscape Plan\2025-09-03_LP_Resubmittal.dwg

| | |
|---|---|
| **Date:** | JAN. 2025 |
| **Project No.:** | 24-054.000 |
| **Designed By:** | JEV/LMB |
| **Drawn By:** | JEV/LMB |
| **Checked By:** | AV/RD |

**Revision Dates:**
01-21-2025 SUBMITTAL
05-12-2025 RESUBMITTAL
08-06-2025 RESUBMITTAL
09-17-2025 RESUBMITTAL

SUBMITTAL

**LA-4**
**of 5**

**SECTION 02950**
**TREES, SHRUBS AND GROUND COVER**

**PART I - GENERAL**
By bidding on this project and/or signing a contract for landscape work, the Contractor acknowledges that he/she has read and understood these specifications in their entirety, that he/she has inspected the site, and that he/she will abide by all plans, specifications, and conditions found herein. Any perceived conflicts or concerns within the specifications or on the plant list, including unavailability of materials, are to be brought to the attention of the Landscape Architect prior to bid submission.

**1.01 WORK INCLUDED**
A. Contractor shall obtain or ensure that all necessary permits have been granted to the Owner for work on the Owner's properties or in any adjacent easements prior to commencement of work.
B. All planting and construction work shall be executed as shown on the provided drawings, schedules, and specifications.
C. Any additional work or materials required to install landscape elements as called for on the plans, specifications or plant list shall be provided and installed by the Contractor.
D. Finish Grade Elevations: 2 inch below top of pathway edging.
E. The Contractor shall be entirely responsible for all work until final acceptance by the Owner. The Contractor shall protect all materials and work against injury and shall provide and maintain all necessary guards for the protection of the public. He shall be held responsible for any negligence during the execution of the work.

**1.02 QUALITY ASSURANCE**
A. All work specified herein shall be performed by a single firm specializing in landscape work. The Landscape Architect and the Owner retain the right to approve any proposed subcontractors prior to awarding the contract.
B. Ship landscape materials with certificates of inspection required by governing authorities. Comply with all regulations applicable to landscape materials.
C. Package standard products with manufacturers certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable.
D. Provide trees, palms, shrubs and groundcover grown in a recognized nursery in accordance with good horticultural practice. Materials must be healthy and vigorous, free of disease, insects, eggs, larvae, and defects such as decay, rot, knots, sun scald, injuries, abrasions, and poor or unusual form. No collected material will be permitted unless specific written approval is granted.
E. Do not make substitutions. If specified landscape material is not available at time of planting, submit proof of non-availability and provide a list of proposed equivalent material. Once authorized, adjustments to the contract will be made. Owner is not financially responsible for unauthorized substitutions.
F. Plant materials of larger size than specified may be used if acceptable to Landscape Architect and if sizes of root balls are increased proportionately. Installation of larger sizes will not increase contract amount unless specifically authorized by Owner.
G. Owner and Landscape Architect reserve the right to inspect, approve or reject at any time plant materials or work either at the nursery or at the site which does not meet the condition in the plans, plant list or specifications.
H. The Contractor shall be responsible for planting the landscape in complete accordance with all applicable codes, ordinances, and laws. Any modification made to conform with said codes, laws and ordinances, after the bid is awarded, shall be completed at the Contractor's expense at no additional cost to the Owner.

**1.03 SUBMITTALS**
A. Certification: Submit certificates of inspections as required by governmental authorities, and manufacturers or vendor's certified analysis for soil amendments and fertilizer materials. Submit other data substantiating that materials comply with specified requirements.
B. Submit seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentage of purity, germination, and weed seed for each grass seed species.
C. Planting Schedule: Submit planting schedule showing schedule dates for each type of planting in each area of site.
D. Maintenance Instructions: Submit typewritten procedures for maintenance of landscape work, through final acceptance.

**1.04 DELIVERY, STORAGE AND HANDLING**
A. Packaged Materials: Deliver packaged materials in original containers showing manufacturer's guaranteed weight analysis and name of manufacturer. Protect materials from damage and deterioration during delivery and storage.
B. Trees, shrubs, and ground covers: Provide freshly dug trees, palms, and shrubs. Do not prune prior to delivery. All plants shall be handled and stored so that they are adequately protected from drying out, from sun or wind burn, and from any other injury at all times. Any plant determined to be wilted or burned may be rejected at any time, whether in the ground or not. Plants shall be handled only by their containers or root balls, not by stems or trunks. Trees that are scraped or scarred during delivery, storage, or planting will be rejected. The on-site storage area shall be approved prior to the delivery of any plant materials. Do not bend or bind plants in such a manner as to damage bark, break branches, or destroy natural shape. Provide protective covering during delivery.
C. Deliver plant materials after preparations for planting are complete, and plant immediately. Roots or balls of all plants shall be adequately protected at all times from sun and/or wind. Balled and burlapped (B&B) plants that cannot be planted immediately upon delivery shall be set on the ground and protected by having soil, wet peat, or other acceptable material covering the roots or balls keeping them moist.
D. Do not remove container grown stock from containers until planting time.
E. Label at least one tree, one palm and one shrub of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name, if requested by Owner.
F. Sod: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.

**1.05 JOB CONDITIONS**
A. Proceed with and complete landscape work as rapidly as portions of site become available.
B. Utilities: Determine location of overhead and underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Forty eight (48) hours prior to digging, call the appropriate Utility Authority to have all utilities identified and marked in order to avoid conflicts.
C. Protection of Existing Structures: All existing buildings, walks, walls, paving, piping, and other items of construction and planting already completed or established shall be protected from damage. All damage resulting from negligence shall be repaired or replaced, including but not limited to marks on pavers and cracks within existing walkways caused by the Contractor. The Owner may, at his discretion have any damage repaired by others and subsequently costs back-charged to the Contractor.
D. Protection of Existing Plant Material: The Contractor shall be responsible for all unauthorized cutting or damage to existing trees or shrubs caused by careless operation of equipment, stockpiling of materials, etc. This shall include compaction by driving or parking inside the drip-line of any tree, or spilling of oil, gasoline, or other deleterious materials within the drip-line of any tree. No materials shall be burned.
E. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.

**PART II - PRODUCTS**
**2.01 TOPSOIL**
A. The Contractor is required to obtain a soil sample and perform a soil analysis test to determine the existing soil composition and conclude whether it complies with the composition criteria below.
B. Where topsoil does not meet the specified limits within the project site, it shall be furnished. Throughout all parts of site where finish grades and contour lines differ from existing contour lines, bring to finish grade contours shown on "Grading Plan."
C. Topsoil shall be friable, fertile soil with representative characteristics of local soils. It shall be free of heavy clay, marl, stone, extraneous lime, plant roots, refuse and/or solid waste, sticks, brush, construction demolition debris, and any other deleterious materials. There shall be no noxious weeds or weed seeds (i.e., nut grass, Bermuda grass and the like). In no case shall there be more than five percent (5%) by dry weight of clay lumps or stones larger than 1". It shall test in the pH range of 6.0 to 7.2 and shall contain no substance that will impede plant growth. The Contractor shall have topsoil laboratory-tested at his expense and approved by Landscape Architect or Owner prior to material delivery.

Topsoil shall conform to the following specifications:

| COMPONENTS | DRY WEIGHT MEASURE | PARTICLE SIZE |
|---|---|---|
| Organic Matter | 2% - 7% | |
| Silt/Clay | 2% - 10% | < 0.074 mm |
| Sand | 85% - 98% | 0.075 - 3.00 mm |
| Gravel | 0% - 5% | 4.75 mm - 1 inch |

The analysis shall also show the following ranges:

| | |
|---|---|
| Soluble salt | .2 - 1.0mmmhos/cm |
| Nitrogen | 25-150 PPM |
| Phosphorus | 26 - 39 PPM |
| Potassium | 50 - 250 PPM |
| Calcium | 500 - 2500 PPM |
| Magnesium | 50 - 500 PPM |
| Iron | 2.5 - 25 PPM |
| Manganese | 2.5 - 25 PPM |
| Zinc | 2.5 - 25 PPM |
| Copper | 1.3 - 5 PPM |
| Boron | 0.5 - 1.5 PPM |
| Sulphur | 15 - 200 PPM |
| Chlorine | less than 100 PPM |
| Sodium | less than 10 |
| Nematodes | none |

**2.02 SOIL AMENDMENTS AND FERTILIZERS**
A. Peat Moss: Peat moss shall be a commercial, baled sphagnum material, free of woody material, minerals, or foreign matter, with a pH range of 3.0 - 5.5.
B. Sand: Sand shall be clean, sharp, and free of all deleterious material.
C. Lime: Natural limestone (Dolomite) containing not less than 85% of total carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.
D. Humus Soil Conditioner: Consisting of yard trimmings and biosolids co-compost.
E. Fertilizer: Fertilizer shall be a commercial grade, granular, slow release "pre-plant" type fertilizer.
1. Fertilizer shall be delivered to the site in the original unopened container, bearing the manufacturer's guaranteed analysis. Any opened, caked, or damaged fertilizer will be rejected.
2. Tree, palm, shrub and grass fertilizer shall be "UF (University of Florida) Formulated" product 8-2-12 or 8-2-13 with minor elements as an all-purpose fertilizer, or equal, and applied according to the manufacturer's direction.
3. Application of fertilizer shall be consistent with the current recommendations of the Green Industries - Best Management Practices.
4. Fertilizer shall be applied by an individual who has successfully completed the GI-BMP program and holds a current Urban Fertilizer License or as required by the State and Local Ordinances.

**2.03 WATER**
A. All water necessary for planting and maintenance shall be of satisfactory quality to sustain adequate growth of plants and shall not contain harmful, natural or man-made elements detrimental to plants.

**2.04 OTHER LANDSCAPE PRODUCTS**
A. Mulch: Mulch shall be shredded Melaleuca, Eucalyptus, Grade "A" Pine Bark Nuggets, or approved equal, free of foreign materials and weed seeds. Minimum depth after settling shall be 3".
B. Guying and Bracing: Tree guying and bracing shall be the responsibility of the Contractor in accordance with the planting details to insure stability and maintain plants in an upright position.
C. Anti-desiccant: Anti-desiccant shall be "Wiltpruf" or equal, if specified on plans.
D. Tree Wound Paint: Tree wound paint shall be an asphaltic base paint containing an antibacterial agent, specially prepared for tree surgery work.
E. Super Absorbent Polymer: "Terra Sorb" or approved equal as packaged in 3 oz. Handy Pac composed of synthetic acriamide copolymer, potassium, acrylate. Particle size of 1.0 mm to 3.0 mm and absorption rate of 300 times its weight in water, if specified on plans.

Apply dry, using the following amounts:
1. For trees and palms up to 36" diameter root ball, use one 3 oz. Handy Pac.
2. For trees and palms over 36" diameter root ball use two 3 oz.
3. Handy Pacs. Broadcast throughout planting hole and backfill as per manufacturers specifications.

For container grown plants:

| Container Size | Application Rate |
|---|---|
| 1 Gallon | 1 Handy Pac / 9 Containers |
| 3 Gallons | 1 Handy Pac / 4 Containers |
| 7-10 Gallons | 1 Handy Pac / 2 Containers |
| 20 Gallons | 1 Handy Pac / 1 Container |

**2.05 PLANT MATERIAL**
A. Plant list is part of this specification section. The Contractor shall be responsible for furnishing and installing all plant materials shown on the drawings and plant list. In case of conflict between the two documents, the drawings shall rule.
B. Quality: Trees, palms, shrubs, and other plants shall be Florida #1 or better as defined in the latest edition of Grades and Standards for Nursery Plants, Florida Department of Agriculture and Consumer Services. Multi-trunked trees will not be accepted unless they are specifically specified in the planting plans. All plants shall have a normal habit of growth and shall be sound, healthy, and vigorous. Trees shall have normal well-developed branching structures and vigorous root systems that are not root or container bound.

1. Balled and burlapped plants (BB or b&b) shall be dug with firm, natural balls of earth, of sufficient depth and diameter to include the fibrous and feeding roots. Plants with cracked, dry, or broken balls will not be accepted, nor will plants with root balls of insufficient size.
2. All plants, other than those collected on site, shall be nursery grown in accordance with good horticultural practices and under climatic conditions similar to the site for at least two years. Transplanting or root pruning shall have taken place during growth.

C. Size: Plant sizes shown in the plant list are minimums. When a plant size is given by height and spread or by container size, all specifications are minimums to be met or exceeded. All trees and shrubs shall be measured when their branches are in a normal position. Spread dimensions specified refer to the main body of the plant and not from extreme branch tip to tip. Height is measured from the soil line to the average height of the canopy. Measurement does not include any terminal growth; the container or root ball is also not included.

Unless otherwise specified, the determining measurement for trees shall be caliper, which shall be measured 6" above the ground for trees up to 4" in caliper, and 12" above the ground for trees over 4" caliper.

**2.06 GRASS MATERIALS**
A. Types: Sod type shall be as specified on the provided landscape plan and associated plant schedule.
B. Dimensions: The sod shall be taken up in commercial size rectangles, preferably 12-inch x 24-inch.
C. Measurement: Sod shall be measured on the basis of square footage. Contractor shall be responsible for complete coverage based on the square footage shown on plans; therefore, Contractor shall factor in cutting and shrinkage of materials.
D. The sod shall be sufficiently thick to provide a dense stand of live grass. The sod shall be live, fresh and uninjured, at the time of planting. It shall be a soil mat of sufficient thickness, at least 2" thick, adhering firmly to the roots to withstand all necessary handling. It shall be free of weeds and other grasses. It shall be planted as soon as possible after being dug, and shall be shaded and kept moist from the time it is dug until it is planted. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.

**2.07 REJECTION, SUBSTITUTION, AND RELOCATION**
A. All plants not conforming to the requirements herein specified shall be considered defective and such plants shall be marked as rejected and removed from the site whether in the ground or not, at the Contractor's expense. Such removal shall take place immediately and new plants shall be brought in as replacements. The plant materials must meet all applicable inspections required by law.
B. The Owner or Landscape Architect also reserves the right to require that plants be relocated after installation if their initial installation does not conform to the plans or the intent of the plans, or if the original location poses an unforeseen threat to other facilities, human life, health, or safety, or to site utilities. Such relocation shall be at the Contractor's expense.

**PART III - EXECUTION**
**3.01 GENERAL**
A. Proceed with and complete landscape work as rapidly as portions of the site become available.
B. No planting shall be done until all operations in conjunction with the installation of the sprinkler system have been completed, final grades have been established, planting areas have been properly graded and prepared.
C. Adverse Conditions: When conditions potentially detrimental to plant growth are encountered during work, such as rubble or refuse fill, adverse drainage conditions, or obstructions, notify Owner or Landscape Architect before planting.
D. Work Scheduling: Work is to be scheduled to establish a logical sequence of steps for completion of each type and phase of landscape work, in such a way as to correspond with, and avoid damage and conflict with, other disciplines on site.
E. Coordination with Sod/Lawn: Plant trees, palms, and shrubs only after final grades are established, and prior to sodding or lawn establishment. If such planting must be done after lawn work, protect lawn/sod areas during planting and promptly repair any resulting damage.
F. Timing:
1. Planting work shall not be started until the final subgrade has been established, berms have been constructed and fine finished grading completed.
2. Under no conditions shall work be done if weather or soil conditions are not satisfactory.
G. Clean-up:
1. At all times during the construction and installation, the site shall be maintained in a clean, orderly and safe condition. Streets and pavements shall be kept clean. Materials and equipment for planting work shall be limited to the quantity required for the particular phase of work currently underway on the job site.
2. Protect landscape work and materials from damage due to landscape installation and maintenance operations, operations by other contractors and trades, and trespassers. Maintain protection during installation, Maintenance and Establishment periods. Treat, repair or replace damaged landscape work as directed.

**3.02 SOIL PREPARATION**
A. Grading and soil preparation work shall be performed only during periods when best results can be obtained. If the moisture content of the soil is high enough that work would damage soil structure, grading and tilling operations shall be suspended.

B. Before mixing in soil amendments, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth. Apply Herbicide for weed control as needed.
C. Mix specified soil amendments and fertilizers with topsoil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
D. For planting beds, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.

1. Mix lime with dry soil prior to mixing of fertilizer.
2. Prevent lime from contacting roots of acid-loving plants.

E. Unless drawings indicate otherwise, berms shall not exceed a 3:1 slope. Berms near buildings or in potentially troublesome drainage situations shall be checked for correct drainage by the project Engineer or Owner prior to planting.
F. Tree and shrub planting beds which fall within or near parking lot areas shall be completely excavated and back-filled with topsoil. All shell-rock or other base materials, and all subsoil and debris, shall be completely removed from beneath such planting areas, to a minimum depth of 24".
G. All tree and/or shrub planting areas within 36" of building foundations, and any other planting areas where significant buried construction debris is encountered, shall be excavated to a minimum depth of 24" and backfilled with topsoil as specified elsewhere in these specifications.

**3.03 TILLING**
A. Before mixing, clean soil of roots, plants, clay lumps, stones in excess of 1" in diameter, and other extraneous or potentially harmful materials.
B. After all soil conditioning (and topsoil if called for on plans) has been spread at specified rates, the areas to be planted should be thoroughly rotary-tilled to a depth of six (6) inches. Plowing or dicing is not an acceptable substitute for rotary-tilling.

1. If the sprinkler system is installed after grading and tilling is completed, the backfill shall be refilled in the affected areas.
2. When the subsoil, grading, topsoil addition, soil conditioning, and tilling have been accomplished, all areas so treated shall be compacted and settled by application of heavy irrigation to a minimum depth of twelve (12) inches. Erosion scars shall be repaired.

**3.04 FINE FINISH GRADING**
A. When preliminary grading has been completed and the soil has dried sufficiently to be readily worked, all lawn and planting areas shall be graded to the elevations indicated on the Engineering Plans. The top four (4) inches shall be completely free of stones larger than one (1) inch. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given. Positive drainage away from buildings shall always be maintained. Surface drainage shall be directed as indicated on the drawings by remodeling surfaces to facilitate the natural run-off of water. All depressions where water will stand, all voids, erosion, settled trenches and excavations, and all ridges and rises shall be amended and/or removed leaving a smooth, even finish grade. If additional amended topsoil is required to accomplish the intent of this specification, it shall be according to the foregoing specifications for topsoil.

1. All area shall be graded so that the final grades are 2" below adjacent paved areas, sidewalks, valve boxes, mowing strips, clean-outs, drains, etc., with appropriate adjustments for varying sod thicknesses. The intent is for water always to drain away from paving into lawn/sod areas.
2. Eliminating all erosion scars prior to beginning planting.
3. The Owner and/or his representative shall approve all final finish grades prior to planting.

B. Prior to fine grading or the installation of plant material the Contractor shall obtain certification that the project area is at the grade levels proposed by the Civil Engineer or Landscape Architect from a licensed Surveyor. The Contractor shall fine grade the lawn and planting areas to bring the rough grade up to final finished grade allowing for thickness of sod and/or mulch depth.

**3.05 PLANTING TREES AND PALMS**
A. Layout individual tree locations and areas for multiple plantings. Stake all locations and outline areas, then secure Landscape Architect's acceptance before the start of planting work.
B. Prior to preparation of tree pits, ascertain the location of all electrical cables, all conduits, all utility lines, oil tanks and supply lines, so that proper precautions may be taken not to disturb or damage any existing conditions. Properly maintain and protect existing utilities. Should such underground or overhead obstructions be encountered that interfere with planting, the Contractor will inform the Landscape Architect or Owner's representative and shall be consulted as to the adjustment of the location of plants to clear such obstruction or the relocation of the obstruction.
C. Tree pit locations shall be staked by the Contractor and approved by the Owner or Landscape Architect before digging. Pits shall be excavated to the depth and width indicated and all subsoil removed.
D. Protect all areas from excessive compaction by foot traffic or machinery when bringing trees to the planting area.
E. All excavated holes shall have vertical sides with roughened surfaces and shall be of a size that is at least twice the width of the original plant container or ball. In all cases the holes shall be large enough to permit handling and planting without damage to the roots or root ball.
F. Excess soil shall be removed or utilized as directed by Owner or the Owner's representative. If the excess soil will not be used, it is the responsibility of the Contractor to remove and dispose of the discarded soil off site in an acceptable manner.
G. Tree pits shall be backfilled with a topsoil mixture as specified elsewhere in these specifications Palm tree pits will be backfilled with a mixture of up to 95% sand and 5% organic material.
H. Add fertilizer to tree pits as specified elsewhere in these specifications.
I. Set balled and burlapped stock on a layer of 50% native soil and 50% topsoil compacted to a 6" depth. Loosen burlap from top of sides of the ball but no burlap shall be pulled from underneath. Remove non-organic binding material (if any) from tree ball. Immediately cut any damaged roots with clean shears. Using a plumb to assure that the tree is properly upright, begin filling the hole and tamping the fill material. When the hole is 2/3 filled, water thoroughly and probe with a stick to be sure that no air pockets remain. Re-plumb, complete filling the hole, re-tamp, and water again.
J. Set container-grown stock as above, taking care not to damage roots when removing the container
K. During planting, do not cover the top of the root ball with the soil mixture. All rope, wires, burlap mesh etc., shall be removed from the root ball. No synthetic burlap is allowed on any plant material. Remove burlap is unacceptable for rootballs. Trees shall be planted so that the top of the root ball is 2" above final grade. Allow for settling. Any trees resting deeper or higher must be either reset or replaced at the discretion of the Owner or Landscape Architect; such work shall be at the Contractor's expense.
L. Create a watering saucer around each tree at least as wide as the root ball in diameter formed by a circular ridge of soil at least 6" high.
M. Each planting basin shall be mulched to a minimum depth of 3" (after settling). Mulch shall not be applied until the tree has been thoroughly watered and two days have elapsed. Mulch should be placed so that it is not in direct contact with trunks.
N. All trees are to be staked or guyed per these specifications. All stakes shall be painted a conspicuous color or shall be flagged for visibility and public safety; guy wires shall be flagged.
O. Palms shall be planted per above specifications.

**3.06 PLANTING SHRUBS, VINES, AND GROUND COVERS**
A. The locations of all plants, bed outlines and all other areas to be planted shall be clearly marked with agricultural gypsum or landscape marking paint then approved by the Owner or Landscape Architect before any holes are dug.
B. No planting shall be done until the area concerned has been satisfactorily prepared in accordance with these specifications.
C. No more plants shall be distributed in the planting area on any work day than can be planted and watered in that day.
D. Unless otherwise indicated, all plants shall be planted in pits, centered as called for on the plant list, and set in 24" depth of topsoil as specified elsewhere in these specifications to such depth that the soil line of the plants will match the surrounding grade after settling. Plants shall be planted in a vertical position and oriented to give the best possible appearance or relationship to adjacent structures or features. Remove all inorganic containers or binding. All damaged roots shall be cut away cleanly. Planting soil shall be placed and compacted carefully to fill all voids and avoid root injury. When the hole is 2/3 filled, water thoroughly. The hole shall then be filled to finish grade and a shallow saucer shall be formed around each bed. After settling, soil shall be added as needed to bring the hole to grade level.
E. Azaleas and other ericaceous and acid-loving plants shall be backfilled with a mixture of 20% topsoil and 80% acid peat. They shall be set so that the bases of the plants are slightly higher than they grew in the container or nursery after settling. At no time shall lime in any form be brought into contact with the plants or their roots. Mulch with pine straw unless noted otherwise.
F. Add fertilizer to plants as outlined in section 2.02.
G. Vines shall be planted in pits containing at least 2 cubic feet of prepared topsoil. They shall be planted in the same manner as shrubs, and shall be mulched. Vine stems shall be fastened to walls, trellises, etc. as specified in the drawings.
H. Groundcover plants shall be laid out in their proposed planting locations without being removed from their containers after the soil is properly prepared per these specifications. Planting methodology is the same as for other shrubs.
I. Any plants which, after settling, rest significantly higher or even slightly lower than they grew in the nursery or container are subject to resetting or replacement at the discretion of the OWNER or Landscape Architect. Such work shall be at the Contractor's expense.
J. If called for in the plans, landscape edging shall be installed as specified.
K. All planting beds and individual plantings shall be mulched with a minimum of 3" (after settling) of mulch as specified in this document. Mulch shall be free of weed seeds and other foreign matter.

**3.07 ANNUAL AND SEASONAL COLOR BEDS**
A. Beds shall be mounded to a height 6" on top of the existing grade and composed of 50% topsoil and 50% compost.
B. Soil shall be covered with ½" - 1" deep layer of Pine Fines Mulch or comparable product.

**3.08 PRUNING**
A. All pruning shall be done in the presence of, and with the approval of, the Owner or Landscape Architect. Only clean, sharp tools designed for the purpose shall be used. The goal of pruning is always to preserve and enhance the natural character of the plant. Pruning shall be done per modern horticultural practice (see National Arborist Standards, latest edition).
B. Pruning shall be limited to the minimum necessary to remove injured twigs, branches, and fronds, to compensate for root loss suffered during digging and transplanting, and to thin and shape shrubs and trees. In no case shall more than 1/3 of the branching structure be removed. Damaged, scarred, frayed, split, or skinned twigs, branches, or limbs shall be pruned back to the next sound outside lateral bud, branch or limb. The terminal bud or leader shall never be removed.
C. Prune trees and shrubs to retain required height and spread. Remove the minimal amount of wood necessary on flowering trees and shrubs. Remove only dead or dying fronds from palms. Cuts over 3/4" in diameter shall be treated with tree wound paint; all exposed living tissue shall be covered.
D. Existing Trees: If indicated on drawings, Contractor shall prune and thin existing trees on site. The use of climbing spurs is prohibited. All diseased, dead branches and those interfering with healthy plant growth shall be removed. Also, remove root suckers, low branches, and any others as directed by the Owner or Landscape Architect. Cuts shall be flush with the trunk or limb and shall be painted with tree paint. Remove any nails, wires, etc. fastened to the tree.

**3.09 PLANTERS - DECORATIVE OR STRUCTURAL**
A. If specified, landscaping in planters shall be installed using the following method:

1. Install 4" deep layer of fine crushed stone in bottom of planter.
2. Install filter fabric over stone layer. Turn up edges of fabric all around.
3. Install planting soil mix over filter fabric to within 3½" of top for planter. Do not compact planting soil.
4. Install plant material as specified elsewhere in these specifications.
5. Install 3" of mulch over planting soil.

**3.10 SODDING NEW LAWNS**
A. The Contractor shall sod all areas indicated and noted on the drawings. No sodding shall occur until areas to be sodded are cleared of any rough grass, weeds and debris, the ground brought to an even grade and specified amendments have been added. See details for specific amendments as per sod type.
B. Whenever a suitable area has been graded and is ready for sodding the Contractor shall, when directed by the Landscape Architect, proceed at once with the sodding of the available areas. Sodding shall be incorporated into the project at the earliest practical time in the life of the contract. No sod which has been cut for more than seventy two (72) hours shall be used unless specifically authorized by the Landscape Architect or Owner after his careful inspection thereof. Any sod which is not planted within twenty four (24) hours after cutting shall be stacked in an approved manner and maintained properly moistened.
C. The sod shall be placed on the prepared surface, with edges in close contact, and shall be firmly and smoothly embedded by light tamping with appropriate tools. Sod shall be rolled with 1,000 lbs. roller unless waived by the Landscape Architect or Owner.
D. Where sodding is used in drainage ditches, sod panels shall be set in a staggered pattern, such as to avoid a continuous seam along the line of flow. Offsets of individual strips shall not exceed six (6) inches. At the inside of the curbs, sod shall abut squarely and evenly.
E. On areas where the sod may slide, due to height and slope, the Landscape Architect or Owner may direct that the sod be pegged, with pegs driven through the sod blocks into firm earth, at suitable intervals.
F. Any pieces of sod which, after placing, show an appearance of extreme dryness shall be removed from the work.
G. Where placement of new sod abuts existing sodded areas, new sod must be placed in such a manner as to produce an even transition to existing sodded areas.
H. It shall be the responsibility of the Contractor to bring the sod edge in a neat, clean manner to the edge of all paving and shrub areas.

**PART IV MAINTENANCE, ESTABLISHMENT AND WARRANTY PERIODS**
**4.01 MAINTENANCE AND ESTABLISHMENT PERIOD**
A. The Maintenance Period shall begin immediately after each plant is planted, and the Contractor shall continuously maintain all areas involved in this contract during the progress of the work.
B. The Establishment Period shall begin on the first day after all planting and installation of all landscape elements is completed and initially accepted. The Contractor shall continuously maintain all areas from initial acceptance until final acceptance by the Owner. The Establishment Period shall continue for not less than ninety (90) continuous calendar days. Hurricane cut Sabal Palms shall have an Establishment Period of not less than one hundred and eighty (180) continuous calendar days. The Establishment Period will end at the time the project is given final acceptance. An inspection shall be made by the Owner or Landscape Architect to accept the completed work and issue a determination of substantial completion. Inspections may be performed on all or partially completed phased work under the Contract, as directed by the Owner.
C. Maintenance of new plantings shall consist of, but not necessarily be limited to, pruning, watering, cultivating, weeding, mulching, tightening or replacing guys and stakes, resetting plants to proper grades or upright positions, furnishing and applying sprays as necessary to combat insects and disease, litter control, rolling, fertilizing and replanting.
D. Planting areas and plants shall be protected at all times against damage of any kind for the duration of the maintenance and establishment periods. If any plants are injured or damaged, they shall be treated or replaced as directed by the Owner or Landscape Architect at no additional cost. The Contractor is responsible for acts of vandalism or theft during the maintenance and establishment period unless this responsibility is assumed in writing by another party.
E. Restrict foot and vehicular traffic from all lawn and planting areas after seeding and planting operations. Erect signs and barriers if required and remove when lawn and plantings are well established and accepted by Owner.
F. The Contractor shall be responsible for maintaining adequate protection of the site. Areas damaged by the Landscape Contractor's men or equipment, or the men or equipment of his Subcontractor's, shall be repaired at the Landscape Contractor's expense.
G. The Contractor is responsible for keeping all plant materials adequately watered after installation even if the irrigation system is not operational. Plants shall receive a thorough watering immediately after planting. Afterwards, plants shall be watered during the maintenance and establishment periods per the requirements set forth in "Water Requirements for Landscape Plants" for Planted Grass, Ground Covers, Shrubs and Trees in Florida", distributed by South Florida Water Management District. In those areas where a permanent irrigation system will not be provided, the Contractor is responsible for implementing the Watering Program identified in the Landscape Plans.
H. The Landscape Contractor is responsible for keeping all plant materials adequately fertilized throughout the Maintenance and Establishment Periods. Fertilizer shall be applied at a rate to keep plant materials healthy. All fertilizer shall be done under the direction of a licensed fertilizer operator.
I. The Landscape Contractor shall control disease and pest infestations in the planting area. Upon approval, the Contractor shall implement the control measures, exercising extreme caution in using hazardous materials and taking all necessary steps to protect others on and near the job site. All disease and pest control shall be done under the direction of a licensed disease and pest control operator.
J. Herbicide Weed Control: All landscape areas shall be free of nut grass, torpedo grass, and other noxious weeds until final acceptance of work.

1. "Round-up" shall be applied to all planting areas as needed and determined on-site by the Owner for weed control. Apply per manufacturers specifications.
2. "Ronstar" pre-emergent or OWNER - approved equal, shall be applied 2 weeks before planting. Apply per manufacturers specifications.
3. Apply "Fusilade" in all areas where torpedo grass has emerged. Apply per manufacturers specifications.
4. Apply "Basagram" or "Marage" in all areas where nutgrass has emerged. Apply per manufacturers specifications.

K. Mowing of turf will commence ten (10) days after installation. The height of cut will be 3". After the first cut, the Contractor shall adjust the frequency of mowing so that at each operation no more than 1/3 of the grass blade is removed per cutting.
L. If the lawn surface becomes uneven or develops any low spots or gaps in the sod at any time during the maintenance or establishment periods, contractor to provide clean sand to fill all low spots and gaps to level the lawn surface. Roll the lawn immediately afterwards with a 1,000 lb. roller after thoroughly irrigating lawn. If required, level the lawn again, using the same procedure until a uniform level lawn surface is provided. Between the 15th and 20th day of the Establishment Period, the Contractor shall re-sod all spots or areas within the lawn where normal turf growth is not evident. Turf must be well established and free of bare spots and weeds to the satisfaction of the OWNER or Landscape Architect prior to final acceptance. All planted areas other than lawn shall be weeded at intervals of not more than ten (10) days.
M. Application of fertilizer to be done between the fortieth (40) and fiftieth (50) day of the establishment period. Landscape Architect or Owner are to be notified a minimum of forty eight (48) hours in advance.
N. Improper maintenance or poor condition of any planting at the time of the termination of the scheduled Establishment Period may cause postponement of the final acceptance of the contract. Any material found to be dead, missing, or in poor condition during the establishment period shall be replaced immediately. Maintenance shall be continued by the Contractor until the work is acceptable.
O. Inspection and Final Acceptance:

1. In all cases the Landscape Architect will perform an initial and final inspection at the beginning and end of the Establishment Period, respectively. It is the responsibility of the Contractor to notify the Owner or Landscape Architect of the beginning and end of this period and to submit a written request for an inspection ten (10) days in advance.
2. Following inspection(s), Landscape Architect will prepare a listing of outstanding items to be addressed prior to final acceptance. Final acceptance will be given once the outstanding items are completed, and the work performed to the satisfaction of the Landscape Architect and OWNER.
3. Any material that is 25% or more dying shall be considered dead and must be replaced at no charge. A tree shall be considered dead when the main leader has died or when 25% of the crown is dead. A tree that has suffered significant leaf drop but shows signs of life may be left for later re-inspection. Such trees shall be subject to removal and replacement at any time up to and including the first re-inspection, as requested by the Owner or Landscape Architect. The Warranty Period for such trees shall not begin until after the second re-inspection.

**4.02 WARRANTY PERIOD**
A. Unless a different agreement is reached in writing between the Owner and the Contractor, all trees and other plant material, including ground covers, installed under this agreement shall be guaranteed to live and grow, and shall be warranted against defects, death and unsatisfactory growth for a period of one (1) year from the day of final acceptance of contract work.
B. Non-living landscape elements shall also carry a one (1) year guarantee on materials, labor, and workmanship.
C. Material found to be dead or in poor condition within the Warranty Period shall be replaced by the Contractor within fifteen (15) days of written notification by the Owner's representative. The Owner or Landscape Architect shall be the sole judges as to the condition of the material.
D. Materials and labor involved in the replacing of materials shall be supplied by the Contractor at no additional cost to the Owner.
E. Soil Testing: Should plant materials show yellowing or other signs of soil and/or nutritional problems, the Owner or Landscape Architect may request soil testing and analysis. Such testing will be at the expense of the Contractor.
1. Soil problems (as revealed by testing) shall be corrected by application of corrective chemicals and nutrients, removal and replacement of soil, or other measures as agreed upon by all parties. All such measures shall be at the Contractor's expense unless clear evidence establishes that the soil problem is not pre-existing and is caused by factors beyond the Contractor's control.
F. Replacement and Conditions:
1. Materials will be replaced as many times as necessary to satisfy the OWNER'S representative and the specifications. All replacement costs will be the responsibility of the Contractor.
2. Replacements will be of the same size, species, and specifications as the original. No additional soil additives will be required unless significant amounts of soil mix are lost before or during replacement.
3. Plant losses due to abnormal weather conditions such as floods, excessive wind damage (on properly staked or guyed trees), severe freezing, or hail will not be the responsibility of the Contractor.
4. Deciduous materials will be guaranteed to break dormancy at the proper season. Materials planted during their normal dormant period will be guaranteed to resume normal growth at the proper time for that species.

**LANDSCAPE NOTES**
**GENERAL:**
1. All proposed material shall be Florida No. 1 or better as set forth in "Grades & Standards for Nursery Plants," Part 1&2, Florida Dept. of Agriculture and Consumer Services, latest edition. No deviations will be permitted.
2. By submitting a bid, the landscape contractor is responsible for providing the material specified on the plans. No substitutions will be accepted without prior written approval and acceptance by the Owner or his representative, or Landscape Architect.
3. Materials to be hand-selected at the discretion of the Owner or his representative, or Landscape Architect.
4. All work shall proceed in a professional manner in accordance with standard nursery and installation practice.
5. Quantities on plant list are for convenience only. Landscape Contractor is responsible for all plants shown on planting plans. When discrepancies occur between plant list and planting plans, the plans are to override the plant list in all cases. Contractor is responsible for confirming sod quantities and certifying such to the Owner or his representative.
6. Contractor is responsible for locating all underground utilities prior to digging. Notify the Owner or his representative, or the Landscape Architect immediately regarding discrepancies or conflicts.
7. Landscape Contractor to notify the Owner or his representative, or Landscape Architect at least three (3) working days prior to beginning any stage of work.
8. Owner or Landscape Architect to be immediately notified of any discrepancies found in field.
9. Owner or his representative, or Landscape Architect reserve the right to field adjust plant material on-site to avoid conflicts or discrepancies not anticipated in the planning process.
10. Existing plant material to be removed, except as noted.

**TREES & PALMS**
1. All trees, new and relocated, to be staked and guyed as detailed.
2. No double or multi-trunk trees unless otherwise specified.
3. Face of trees and palms to be located a minimum of 2'-0" off all sidewalks/bike paths or other paved surface, unless otherwise notated on plans.
4. Root suckers on Live Oaks are not acceptable.
5. All trees falling within grassed areas to have a mulch ring 3' in diameter, mulched 3" deep with no more than 1" deep directly adjacent to the trunk of the tree.

**PLANTING BEDS**
1. Groundcover and shrubs to be laid out in a uniform and consistent pattern.
2. All planting beds to receive mulch per plans.
3. Landscape Contractor is responsible for verifying that clean top soil, meeting the attached specifications, exists in each planting bed prior to planting. Contractor shall add or amend top soil if necessary. Tree pits shall be backfilled as noted in attached specifications. Excavate all shrub and groundcover beds as specified and backfill with planting soil per specifications.
4. All existing paving base material to be removed from planting areas and replaced with clean top soil prior to planting. Final grade within planting areas to be 2" below adjac

## IRRIGATION NOTES

IRRIGATION TO BE INSTALLED ACCORDING TO LOCAL CODES AND TO THE REGIONAL WATER MANAGEMENT DISTRICT RESTRICTIONS AND REGULATIONS. IRRIGATION PLAN DESIGNED TO MEET OR EXCEED THE FLORIDA BUILDING CODE APPENDIX F AND THE FLORIDA IRRIGATION SOCIETY STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS.

IRRIGATION PLAN IS TO BE USED AS A GENERAL GUIDE. CONTRACTOR TO ENSURE 100% HEAD TO HEAD COVERAGE OCCURS. IT IS UP TO THE CONTRACTOR TO MAKE ADJUSTMENTS WHEN THERE IS AN UNFORESEEN OBSTRUCTIONS. CONTRACTOR TO FAMILIARIZE THEMSELVES WITH SITE PLANTING/HARDSCAPE LOCATIONS, UTILITIES, AND GRADE DIFFERENCES. IF NOTICEABLE DIFFERENCES EXIST BETWEEN THE PLAN AND SITE CONDITIONS, CONTRACTOR TO MAKE ADJUSTMENTS AS NEEDED, OR COORDINATE WITH SITE OWNER FOR LAYOUT CHANGES.

IRRIGATION CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE START OF WORK. ANY ITEMS DAMAGED BY THE IRRIGATION INSTALL IS TO BE REPLACED/REPAIRED AT THE COST OF THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH OTHER CONTRACTORS IN REGARDS TO SLEEVE LOCATIONS FOR UNDER WALLS, ROADWAYS, OR PAVED AREAS.

IRRIGATION POINT OF CONNECTION (P.O.C.) IS TO BE A 2 HP PUMP PULLING FROM 3" WELL. PUMP TO MEET 22 GPM @ 120 T.D.H. DESIGN BASED OFF OF 22 GPM @ 50 PSI. CONTRACTOR TO CONFIRM P.O.C. MEETS OR EXCEEDS THESE SYSTEM REQUIREMENTS PRIOR TO THE START OF INSTALL. PUMP TO BE INSTALLED ON CONCRETE PAD, MIN. 3'X3'.

ALL PIPING SHOWN IS SCHEMATIC AND IS TO BE ADJUSTED AS NEEDED IN THE FIELD. PIPING IS DESIGNED TO HAVE WATER FLOW VELOCITIES OF 5'/SECOND OR LESS IN ORDER TO LIMIT FRICTION LOSS WITHIN THE SYSTEM. SMALLER PIPE SHALL NOT BE SUBSTITUTED, BUT LARGER PIPE UPGRADES ARE ALLOWED. MAINLINE PIPE TO BE SCHEDULE 40, AND ALL LATERAL LINE PIPE IS TO BE CLASS 200. ALL PIPE IS TO BE BURIED TO APPROPRIATE LEVELS FOUND ON DETAIL "F". FITTINGS ARE TO BE SCH. 40 PVC. WHEN APPLICABLE, KEEP ALL PIPE WITHIN GRASS AREAS AND AWAY FROM PROPOSED TREES. ANY PIPE INSTALLED AGAINST WALLS/HARDSCAPES ARE TO HAVE SUFFICIENT CLEARANCE TO ALLOW FOR FUTURE MAINTENANCE/REPAIRS. PIPE TO BE CEMENTED WITH GLUE AND PRIMER. GLUE TO BE GREY WELD-ON 711 AND PRIMER TO BE PURPLE WELD-ON P70, OR EQUALS.

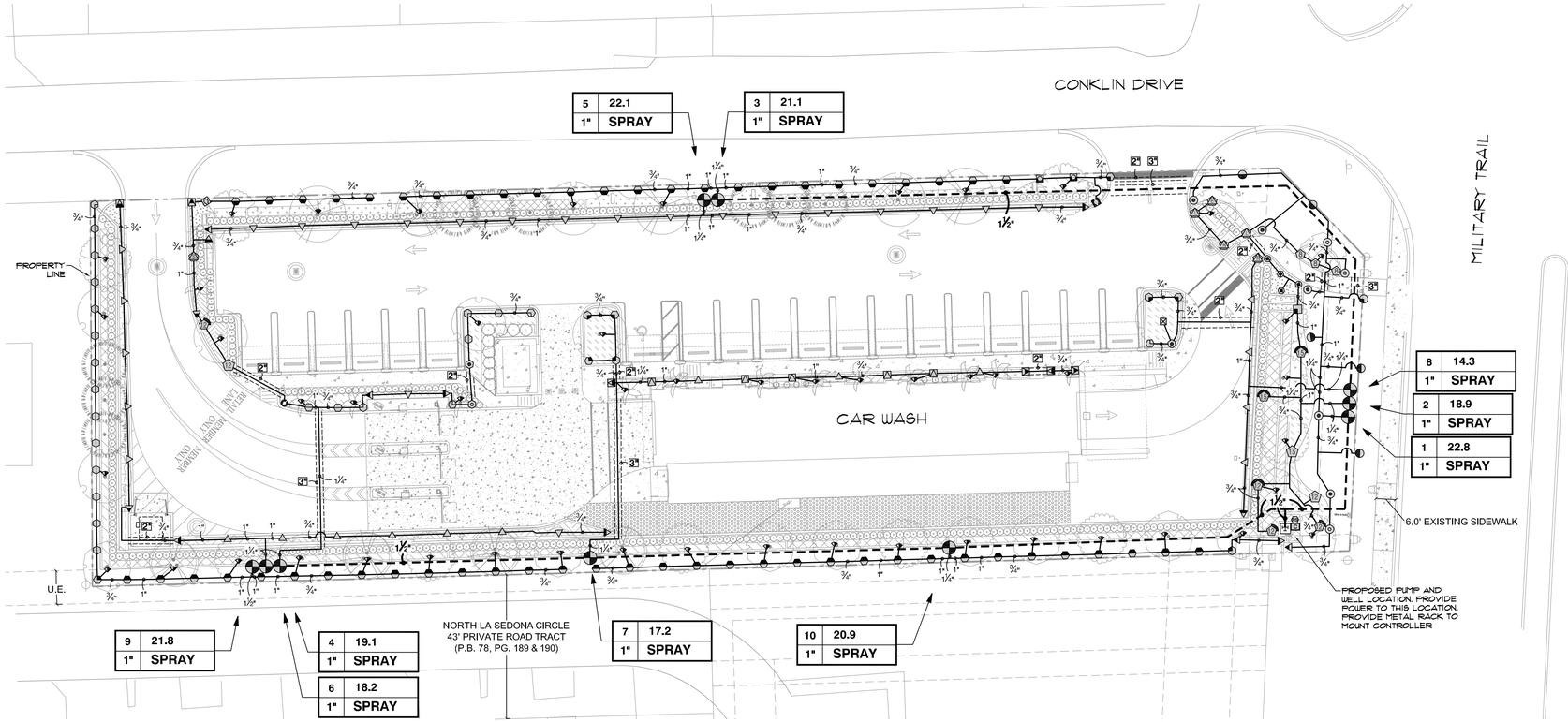
PIPE THAT IS LOCATED UNDER HARDSCAPE SHALL BE INSTALLED WITHIN A SCHEDULE 40 SLEEVE THAT IS TWO SIZES LARGER, OR AS CALLED OUT ON PLAN. SLEEVE IS TO BE A MINIMUM OF 24" DEEP AND EXTEND A MINIMUM OF 3' PAST THE HARDSCAPE. ALL MAINLINE CROSSINGS ARE TO INCLUDE A 2" SLEEVE FOR WIRE RUNS.

CONTROLLER ELECTRIC TO BE 120V, 20 AMP. PROVIDE RACK TO MOUNT CONTROLLER/ PSR. PUMP ELECTRIC TO BE 230V AND CONNECTED THROUGH A PSR. ALL ELECTRIC CONNECTIONS MADE ARE TO MEET NATIONAL ELECTRICAL CODE AND ARE TO BE INSTALLED BY A LICENSED ELECTRICIAN. CONTROLLER TO BE HARDWIRED TO POWER SOURCE AND ALL WIRES TO CONTROLLER ARE TO BE HOUSED WITHIN CONDUIT WITH CONNECTIONS MADE IN A JUNCTION BOX. EACH CONTROL WIRE IS TO BE LABELED WITH ZONE NUMBER AT THE CONTROLLER, JUNCTION BOX, EACH VALVE LOCATION, OR AT ANY SPLICE LOCATIONS. ANY SPLICES MADE TO THE WIRE PATH ARE TO BE HOUSED WITHIN A VALVE BOX AND MARKED ON SITE MAP.

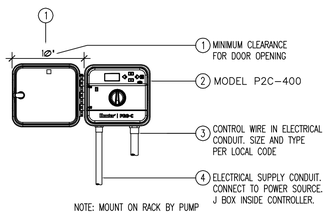
ZONE VALVES ARE TO BE PLACED WITHIN A RECTANGULAR VALVE BOX WITH GRAVEL AT THE BOTTOM. WHEN MULTIPLE VALVE BOXES ARE GROUPED TOGETHER, THEY SHOULD BE IN THE SAME ORIENTATION AND EVENLY ALIGNED. PLACE VALVE BOXES LEVEL TO THE GROUND AND IN MULCHED AREAS WHEN POSSIBLE.

ALL SPRAY EMITTERS SHALL BE PLACED TO AVOID OVER SPRAYING ONTO WALLS, ROADS, SIDEWALKS, OR OTHER STRUCTURES. SPRAY HEADS TO BE INSTALLED A MINIMUM OF 4" OFF CURBED ROADS OR SIDEWALKS, AND 12" OFF WALLS OR CURBLESS ROADS. INSTALL ALL HEADS LEVEL WITH GRADE WHEN IN GRASS/TURF AREAS. INSTALL 12" SPRAY HEADS AND STANDPIPES SO THEY SPRAY A MIN. 3" ABOVE THE PROPOSED SHRUB MATERIAL'S MAINTAINED HEIGHT. STANDPIPES ARE TO USE ¾" SCHEDULE 40 PIPE. ANY PVC PIPE ABOVE GROUND TO BE PAINTED BLACK OR DARK GREEN. DESIGN IS BASED ON 100% HEAD TO HEAD COVERAGE AND THE CONTRACTOR IS RESPONSIBLE TO ENSURE PROPER COVERAGE OCCURS. STAKE OUT HEADS PRIOR TO INSTALL AND ADJUST LAYOUT/NOZZLE TYPE TO FIELD CONDITIONS AS NEEDED TO PROVIDE PROPER COVERAGE. FLUSH LINES A MIN. OF 10 MINUTES PRIOR TO INSTALLING FILTERS/NOZZLES.

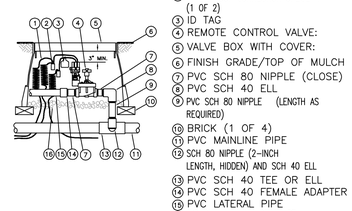
BUBBLERS ARE TO BE USED ON TREES AND PALMS. ALL FUNNY PIPE SHALL BE BURIED BELOW GRADE LEVEL AND STAKED JUST BELOW THE BUBBLER TO AVOID TRIPPING HAZARDS. ENSURE THAT ALL NEWLY PLANTED TREES WITH BUBBLERS HAVE A 4" HEIGHT SOIL BERM TO AVOID RUNOFF WATER.



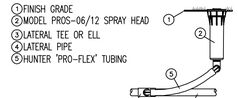

## IRRIGATION DETAILS



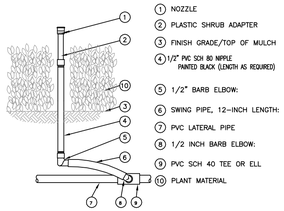

A HUNTER PRO-C CONTROLLER N.T.S.



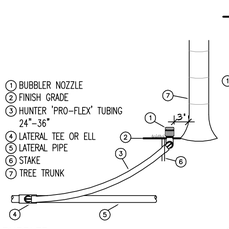

B REMOTE CONTROL VALVE N.T.S.



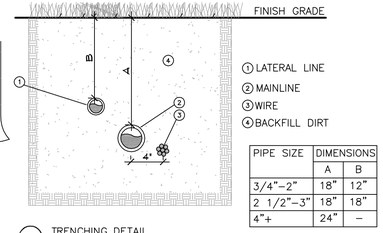

C 6"/12" POP UP SPRINKLER N.T.S.




D SHRUB ADAPTER ON RISER N.T.S.

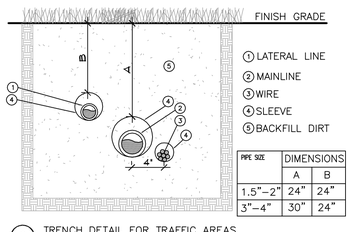



E BUBBLER N.T.S.



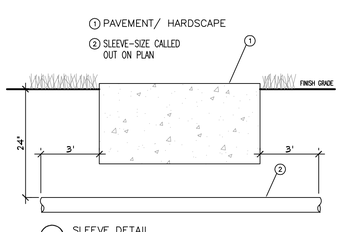

| PIPE SIZE | DIMENSIONS A | B |
|---|---|---|
| 3/4"-2" | 18" | 12" |
| 2 1/2"-3" | 18" | 18" |
| 4"+ | 24" | – |

F TRENCHING DETAIL N.T.S.

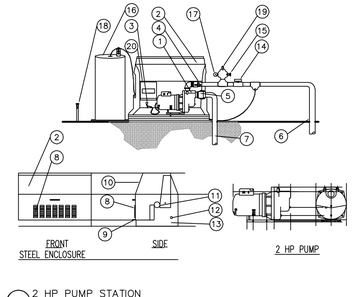



| PIPE SIZE | DIMENSIONS A | B |
|---|---|---|
| 1.5"-2" | 24" | 24" |
| 3"-4" | 30" | 24" |

G TRENCH DETAIL FOR TRAFFIC AREAS N.T.S.




H SLEEVE DETAIL N.T.S.




1 2-HP GOULDS PUMP
2 CLAM SHELL POWDER COATED STEEL ENCLOSURE
3 230 VOLT MAIN POWER PLUG WITH QUICK DISCONNECTING PIGGY-TAL CORD
4 QUICK DISCONNECTING COUPLING
5 QUICK DISCONNECTING COUPLING
6 1.5" DISCHARGE LINE
7 2" SUCTION LINE
8 COOLING LOUVRES
9 PADLOCK HASP
10 ENCLOSURE TOP COVER
11 INTAKE/DISCHARGE HOLE (BOTH SIDES)
12 #1" KNOCK OUT FOR 3/4" CONDUITS (BOTH SIDES)
13 ENCLOSURE BASE
14 BALL/BUTTERFLY VALVE
15 HOSE BIB
16 CHEMICAL INJECTION TANK (RID O RUST) (IF APPLICABLE)
17 1/4" PRESSURE GUAGE
18 HOSE BIB HOOKED UP TO CITY WATER LINE
19 PRESSURE RELIEF VALVE

I 2 HP PUMP STATION N.T.S.

## IRRIGATION SPECIFICATIONS

| SYMBOL | MANUFACTURER/MODEL | QTY |
|---|---|---|
| LCS RCS SST | Hunter PROS-06 Strip Series | 49 |
| Q H | Hunter PROS-06 8 Series | 23 |
| Q H | Hunter PROS-06 10 Series | 66 |
| Q H | Hunter PROS-06 15 Series | 6 |
| 4 6 8 10 12 15 | Hunter PROS-06 Adj Series | 12 |
| LCS RCS SS | Hunter PROS-12 Strip Series | 11 |
| Q T H F | Hunter PROS-12 10 Series | 2 |
| Q H TQ F | Hunter PROS-12 15 Series | 1 |
| 4 6 8 10 12 | Hunter PROS-12 Adj Series | 6 |
| LCS RCS SST | Hunter PROS-00 Strip Series | 6 |
| Q T H F | Hunter PROS-00 12 Series | 4 |
| Q T H F | Hunter PROS-00 15 Series | 2 |
| | Hunter PROS-00 Adj Series | 6 |
| 25 50 | Hunter PCN Bubbler | 52 |
| BUB | Irritrol 533 Bubbler | 1 |

| SYMBOL | MANUFACTURER/MODEL | QTY |
|---|---|---|
| | Hunter PGV-100G 1" | 10 |
| C | Hunter P2C-400 w/ (02) PCM-300 | 1 |
| RS | Hunter RAIN-CLIK | 1 |
| | 2 HP Pump (Goulds or similar) Point of Connection | 1 |
| | Irrigation Lateral Line: PVC Class 200 SDR 21 | - |
| | Irrigation Mainline: PVC Schedule 40 1 1/2" | 615 l.f. |
| | Pipe Sleeve: PVC Schedule 40 2" | 98 l.f. |
| | Pipe Sleeve: PVC Schedule 40 3" | 110 l.f. |



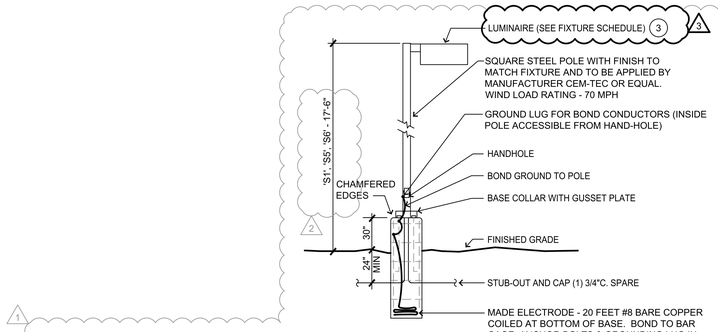

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Fax: (561) 747-2041
Email: mail@pydg.com
License #LA0001347

# CONKLIN CAR WASH
14145 S. MILITARY TRAIL
CITY OF DELRAY BEACH, FLORIDA
IRRIGATION PLAN, DETAILS, AND SPECIFICATIONS

DATE: 1.15.2025
DRAWN BY: TT
JOB NO.: 25-003
SCALE: 1" = 20'-0"
FILENAME: Conklin Car Wash

REVISIONS:
5.8.2025
7.18.2025
8.4.2025
9.10.2025

SHEET:
R-1

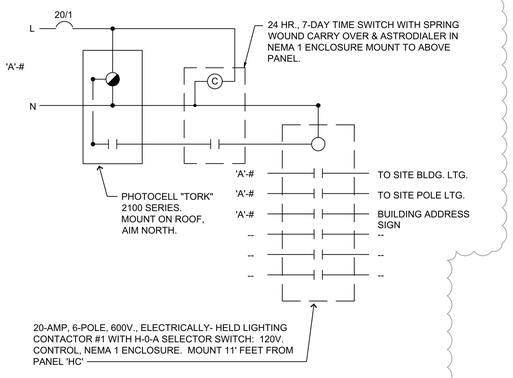



## POLE LIGHT FIXTURE 'S1', 'S5', & 'S6' DETAIL

N.T.S.

**NOTE:**

LIGHT FIXTURE DETAIL SHOWN FOR SCHEMATIC PURPOSES ONLY! GENERAL CONTRACTOR SHALL OBTAIN FINAL, ENGINEERED POLE BASE DETAIL FROM POLE MANUFACTURER OR STRUCTURAL ENGINEER PRIOR TO ANY WORK.

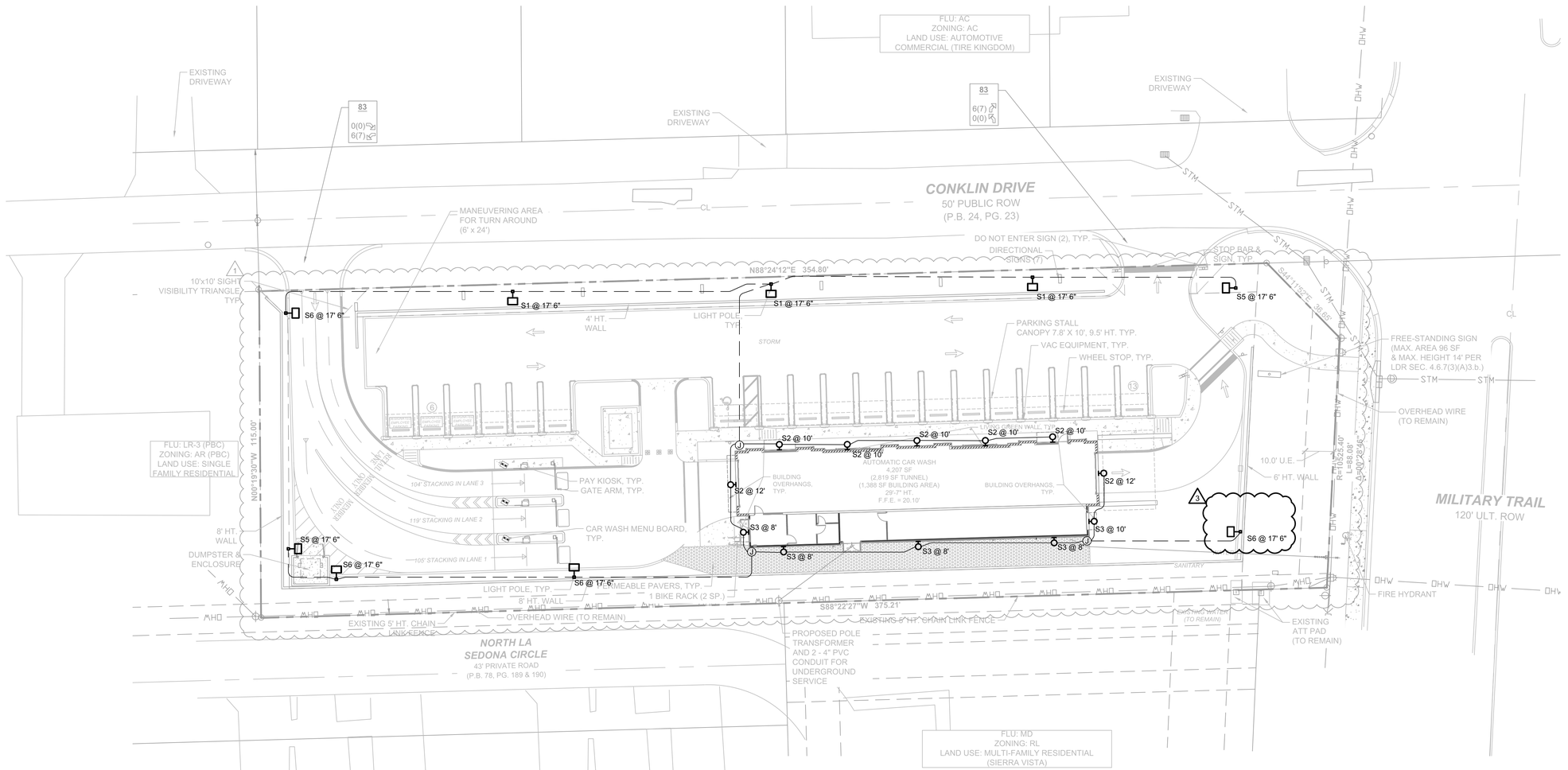



## SITE LIGHTING CONTROL DIAGRAM

N.T.S.

## KEYED NOTES:

1. ALL LIGHTING SHOWN AS PART OF THIS DESIGN WILL BE FULL CUTOFF.
2. ALL PERIMETER EXTERIOR LIGHTING WILL FOLLOW A LIGHTING SCHEDULE AND WILL BE SWITCH OFF AT TIMES MANDATED BY CITY, TOWN OR STATE AS SPECIFIED IN CITY OF DELRAY LIGHTING CODE, SECTION 4.6.8, TABLE #2 AND NOTE #4.
3. ALL PERIMETER EXTERIOR LIGHTING WILL WILL BE FULL CUTOFF LUMINARIES TO MINIMIZE SPILLOVER ON ADJACENT PROPERTIES.




## ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACT.

TIMOTHY R. O'FARRELL LICENSE NO. 90739 STATE OF FLORIDA PROFESSIONAL ENGINEER 9/15/25

**Revisions**

1 CITY OF DELRAY BEACH 04/08/25

3 CITY COMMENTS 09/15/25

# ELECTRICAL SITE PLAN

# Car Wash

14145 S. MILITARY TRAIL
Delray, FL 33484

711 East 9th Street
Tucson, Arizona 85719
520.903.2323 phone
www.a23studios.com

a.23 studios

| | |
|---|---|
| Project | 24099 |
| Date | 01.15.25 |
| Scale | Noted |
| Sheet | E1.0 |

**Job No. 24070**

mw engineering, llc
Electrical Consulting Engineering Group

Tim O'Farrell, P.E.
timo@mwegroup.com
o. 480.731.5050
www.mwengineeringllc.com
2001 W. Alameda Dr., Suite 102 Tempe, AZ 85282

| Schedule | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Symbol | Label | QTY | Manufacturer | Catalog | Description | Number Lamps | Lamp Output | LLF | Input Power |
| | S1 | 4 | LITHONIA | DSX0 LED P6 30K 70CRI BLC4 VOLTAGE MOUNTING FINISH | POLE MOUNT WITH TYPE 4 EXTREAM BACKLIGHT CONTROL OPTICS | 1 | 12352 | 0.9 | 137 |
| | S2 | 7 | LITHONIA | WDGE2 LED P2 30K 70CRI T2M VOLTAGE SRM FINISH | WALL MOUNT WITH TYPE 2 MEDIUM OPTICS | 1 | 2160 | 0.9 | 18.9815 |
| | S3 | 5 | LITHONIA | WDGE2 LED P0 30K 70CRI T2M VOLTAGE FINISH | WALL MOUNT WITH TYPE 2 MEDUIM OPTICS | 1 | 762 | 0.9 | 6.8946 |
| | S5 | 2 | LITHONIA | DSX0 LED P4 30K 70CRI RCCO VOLTAGE MOUNTING FINISH | POLE MOUNT WITH RIGHT CORNER CUTOFF OPTICS | 1 | 7838 | 0.9 | 93.04 |
| | S6 | 3 | LITHONIA | DSX0 LED P4 30K 70CRI LCCO VOLTAGE MOUNTING FINISH | POLE MOUNT WITH LEFT CORNER CUTOFF OPTICS | 1 | 7838 | 0.9 | 93.04 |

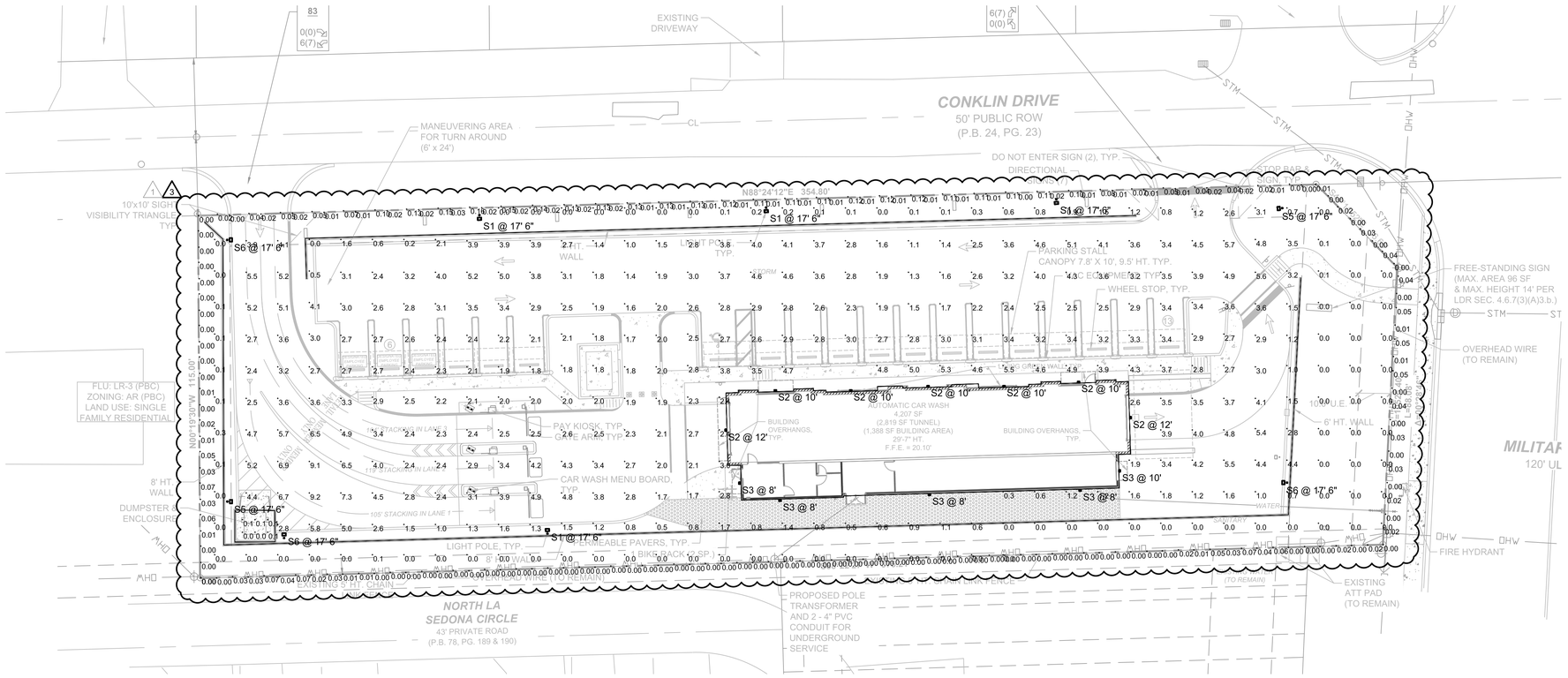
| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| DRIVE SURFACE @ 0' AFG | + | 3.2 fc | 9.2 fc | 1.0 fc | 9.2:1 | 3.2:1 |
| PROPERTY LINE HORIZONTAL @ 6' AFG | + | 0.01 fc | 0.04 fc | 0.00 fc | N/A | N/A |
| PROPERTY LINE VERTICAL - EAST @ 6' AFG | + | 0.03 fc | 0.05 fc | 0.01 fc | 5.0:1 | 3.0:1 |
| PROPERTY LINE VERTICAL - NORTH @ 6' AFG | + | 0.10 fc | 0.16 fc | 0.01 fc | 16.0:1 | 10.0:1 |
| PROPERTY LINE VERTICAL - SOUTH @ 6' AFG | + | 0.01 fc | 0.07 fc | 0.00 fc | N/A | N/A |
| PROPERTY LINE VERTICAL - WEST @ 6' AFG | + | 0.02 fc | 0.07 fc | 0.00 fc | N/A | N/A |
| SITE @ 0' AFG | + | 1.1 fc | 5.5 fc | 0.0 fc | N/A | N/A |
| TRASH ENCLOSURE @ 0' AFG | + | 0.1 fc | 0.1 fc | 0.0 fc | N/A | N/A |

NOTE
1. ALTERNATE LUMINAIRES REQUIRE PROJECT SPECIFIC POINT BY POINT PHOTOMETRY FOR REVIEW.

2. EXTERIOR LIGHT LEVELS MAY BE AFFECTED BY NEW OR EXISTING FOLIAGE OBSTRUCTION.

3. LUMINAIRE MOUNTING HEIGHT AS INDICATED.

4. LUMINAIRE MOUNTING COMPONENTS AS REQUIRED FOR INSTALLATION.




SITE LIGHTING PHOTOMETRICS

SCALE: 1" = 20'-0"

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACT.

R. O'FARRELL TIMOTHY LICENSE NO. 90739 STATE OF FLORIDA PROFESSIONAL ENGINEER 9/15/25

Revisions
1 CITY OF DELRAY BEACH 04/08/25
3 CITY COMMENTS 09/15/25

# SITE LIGHTING PHOTOMETRICS

## Car Wash
14145 S. MILITARY TRAIL
Delray, FL 33484


711 East 9th Street
Tucson, Arizona 85719
520.903.2323 phone
www.a23studios.com
a.23studios


| | |
|---|---|
| Project | 24099 |
| Date | 01.15.25 |
| Scale | Noted |
| Sheet | E1.1 |

Job No. 24070


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Tim O'Farrell, P.E.
timo@mwegroup.com
o. 480.731.5050
www.mwengineeringllc.com
2001 W. Alameda Dr., Suite 102 Tempe, AZ. 85282



# D-Series Size 0
## LED Area Luminaire

dsseries

| Catalog Number | |
|---|---|
| Notes | |
| Type | 'S1', 'S5', & 'S6' |

Hit the link or square on the page to go to the following website: www.acuitybrands.com/designselect

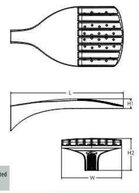
### Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications, with typical energy savings of 70% and expected service life of over 100,000 hours.

### Specifications

| | |
|---|---|
| EPA: | 0.44 ft² (0.04 m²) |
| Length: | 26.18" (66.5 cm) |
| Width: | 14.06" (35.7 cm) |
| Height H1: | 2.26" (5.7 cm) |
| Height H2: | 7.46" (18.9 cm) |
| Weight: | 23 lbs (10.4 kg) |




Design Select options indicated by this color background.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

## Ordering Information

**EXAMPLE:** DSX0 LED P6 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

| Series | LEDs | Color temperature[1] | Color Rendering Index[2] | Distribution | | Voltage | Mounting |
|---|---|---|---|---|---|---|---|
| DSX0 LED | **Forward optics**<br>P1 P5<br>P2 P6<br>P3 P7<br>P4<br>**Rotated optics**<br>P10[3] P12[3]<br>P11[3] P13[3] | (this section 70CRI only)<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>(this section 80CRI only, extended lead times apply)<br>27K 2700K<br>30K 3000K<br>35K 3500K<br>40K 4000K<br>50K 5000K | 70CRI<br>70CRI<br>70CRI<br>80CRI<br>80CRI<br>80CRI<br>80CRI<br>80CRI | AFR Automotive front row<br>T1S Type I short<br>T2M Type II medium<br>T3M Type III medium<br>T1LG Type II low glare[4]<br>T4M Type IV medium<br>T4LG Type IV low glare[4]<br>TFTM Forward Throw medium<br>T5M Type V medium<br>T5LG Type V low glare<br>T5VW Type V wide<br>BLC3 Type III backlight control[4]<br>BLC4 Type IV backlight control[4]<br>LCCO Left corner cutoff[5]<br>RCCO Right corner cutoff[5] | MVOLT (120V-277V)[6,7]<br>HVOLT (347V-480V)[6,7]<br>XVOLT (277V-480V)[6,7]<br>120[16,24]<br>208[16,24]<br>240[16,24]<br>277[16,24]<br>347[16,24]<br>480[16,24] | **Shipped included**<br>SPA Square pole mounting (#8 drilling, 3.5" min. SQ pole)<br>RPA Round pole mounting (#8 drilling, 3" min. RND pole)<br>SPA5 Square pole mounting (#5 drilling, 3" min. SQ pole)[1]<br>RPA5 Round pole mounting (#5 drilling, 3" min. RND pole)[1]<br>SPA8N Square narrow pole mounting (#8 drilling, 3" min. SQ pole)<br>WBA Wall bracket[18]<br>MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon) |

| Control options | Other options | Finish (required) |
|---|---|---|
| **Shipped installed**<br>NLTAIR2 PIRHN Hi-Light AIR gen 2 enabled with bi-level motion / ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc[11,16,19]<br>PIR High/low, motion/ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc[11,16,19]<br>PER NEMA twist-lock receptacle only (controls ordered separate)[20]<br>PERS Five-pin receptacle only (controls ordered separate)[11,20]<br>PER7 Seven-pin receptacle only (controls ordered separate)[20,21]<br>FAO Field adjustable output[1,16]<br>BL30 Bi-level switched dimming, 30%[11,16]<br>BL50 Bi-level switched dimming, 50%[11,16]<br>DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[11]<br>BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.<br>CCE Coastal Construction[11] | **Shipped installed**<br>HS Houseside shield (black finish standard)[10]<br>L90 Left-rotated optics[1]<br>R90 Right-rotated optics[1]<br>CCE Coastal Construction[11]<br>HA 50°C ambient operation[22]<br>BAA Buy America(n) Act and/or Build America Buy America Qualified.<br>SF Single fuse (120, 277, 347V)[23]<br>DF Double fuse (208, 240, 480V)[23]<br>**Shipped separately**<br>EGSR External Glare Shield (reversible, field install required, matches housing finish)<br>BSDB Bird Spikes (field install required) | DDBXD Dark bronze<br>DBLXD Black<br>DNAXD Natural Aluminum<br>DWHXD White<br>DSBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white |



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## Ordering Information

### Accessories
Ordered and shipped separately.

| | |
|---|---|
| DLL127F 1.5 JU | Photocell - SSL twist-lock (120-277V) [7] |
| DLL347F 1.5 CUL JU | Photocell - SSL twist-lock (347V) [7] |
| DLL480F 1.5 CUL JU | Photocell - SSL twist-lock (480V) [7] |
| DSHORT SBK | Shorting cap [7] |
| DLA8DDF/PV | House-side shield (enter package number P1–7, P10-13 in place of 4) |
| DSXRPA (FINISH) | Round pole adapter (#8 drilling, specify finish) |
| DSXRPA5 (FINISH) | Round pole adapter (#5 drilling (specify finish) |
| DSXRPA5/PBBW (FINISH) | Round pole adapter (#5 drilling (specify finish) |
| DSXRBS38 (FINISH) | External glare shield (specify finish) |
| DSXRBS38 (FINISH) | Bird spike deterrent bracket (specify finish) |

### NOTES

1 Rotated optics available with packages P10, P11, P12 and P13. Must be combined with option L90 or RPO.
2 SDK, 40K, and 50K available in 70CRI and 80CRI. 27K and 30K only available with 80CRI. Contact Technical Support for other possible combinations.
3 T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
6 HVOLT not available with package P1, P2 and P10 when combined with option NLTAIR2 PIRHN or option PIR.
7 XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
8 SPA5 and RPA5 not available with P1, P5, P10, P11, P12 and P13 (5" drilling).
9 SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
10 WBA cannot be combined with Type 5 distributions plus photocell (PER).
11 NLTAIR2 and PIRHN must be ordered together. For more information on nLight Air 2.
12 NLTAIR2 PIRHN not available with other controls including PIR, PER, PERS, PER7, FAO, BL30, BL50 and DMG. NLTAIR2 PIRHN not available with P1, P2 and P10 using MVOLT. NLTAIR2 PIRHN not available with P1, P2 and P10 using XVOLT. NLTAIR2 PIRHN not available with P1 using MVOLT.
13 PIR not available with NLTAIR2, PER, PERS, PER7, FAO, BL30, BL50 and DMG. PIR not available with P1, P2 and P10 using MVOLT. PIR not available with P1, P2 and P10 using XVOLT. PIR not available with P3.
14 PER/PERS/PER7 not available with NLTAIR2, PIR, BL30, BL50. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
15 FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PERS, PER7, BL30, BL50, or DMG.
16 BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PERS, PER7, FAO and DMG. BL30 or BL50 must specify 120 or 277V.
17 Not available with BL30, BL50, PER, PERS, PER7, FAO, DMG, PIR, PIRH.
18 Reference Motion Sensor Default Settings table on page 4 to see functionality.
19 Reference Controls Options table on page 4.
20 Option HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 CCE option not available with option BS and EGSR. Contact Technical Support for availability.
22 Option HA not available with performance packages P6, P7, P12 and P13.
23 Requires luminaire to be specified with PER, PERS or PER7 option. See Controls Table on page 4.
24 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF).

## Shield Accessories



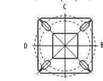
External Glare Shield (EGSR)



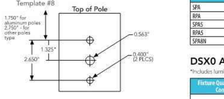
House Side Shield (HS)

## Drilling

**HANDHOLE ORIENTATION**
(from top of pole)




Template #8




### Tenon Mounting Slipfitter

| Tenon O.D. | Mounting | Single Unit | 2 @ 180 | 2 @ 90 | 3 @ 90 | 3 @120 | 4 @ 90 |
|---|---|---|---|---|---|---|---|
| 2-3/8" | RPA | AS3-5 190 | AS3-5 280 | AS3-5 290 | AS3-5 390 | AS3-5 320 | AS3-5 490 |
| 2-7/8" | RPA | AST25-190 | AST25-280 | AST25-290 | AST25-390 | AST25-320 | AST25-490 |
| 4" | RPA | AST35-190 | AST35-280 | AST35-290 | AST35-390 | AST35-320 | AST35-490 |

| Mounting Option | Drilling Template | Single | 2 @ 180 | 2 @ 90 | 3 @ 90 | 3 @ 120 | 4 @ 90 |
|---|---|---|---|---|---|---|---|
| Head Location | | Side B | Side B & D | Side B & C | Side B, C & D | Round Pole Only | Side A, B, C & D |
| Drill Nomenclature | #8 | DM19AS | DM28AS | DM29AS | DM39AS | DM33AS | DM49AS |
| Minimum Acceptable Outside Pole Dimension | | | | | | | |
| SPA | #8 | 3.5" | 3.5" | 3.5" | 3.5" | | 3.5" |
| RPA | #8 | 3" | 3" | 3" | 3" | 3" | 3" |
| SPA5 | #5 | 3" | 3" | 3" | 3" | 3" | 3" |
| RPA5 | #5 | 3" | 3" | 3" | 3" | 3" | 3" |
| SPA8N | #8 | 3" | 3" | 3" | 3" | | 3" |

### DSX0 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

| Fixture Quantity & Mounting Configuration | Single DM19 | 2 @ 180 DM28 | 2 @ 90 DM29 | 3 @ 90 DM39 | 3 @ 120 DM33 | 4 @ 90 DM49 |
|---|---|---|---|---|---|---|
| Mounting Type | | | | | | |
| DSX0 with SPA | 0.44 | 0.88 | 0.96 | 1.38 | — | 1.16 |
| DSX0 with SPA5, SPA8N | 0.51 | 1.02 | 1.06 | 1.26 | — | 1.78 |
| DSX0 with RPA, RPA5 | 0.51 | 1.02 | 1.06 | 1.26 | 1.24 | 1.79 |
| DSX0 with MA | 0.64 | 1.28 | 1.24 | 1.67 | 1.70 | 1.93 |



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# WDGE2 LED
## Architectural Wall Sconce
## Precision Refractive Optic

| Catalog Number | |
|---|---|
| Notes | |
| Type | 'S2' & 'S3' |

Hit the link or square on the page to go to the following website: www.acuitybrands.com/designselect

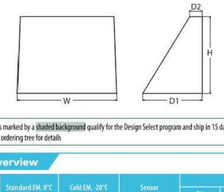
### Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

### Specifications

| | |
|---|---|
| Depth (D1): | 7" |
| Depth (D2): | 1.5" |
| Height: | 9" |
| Width: | 11.5" |
| Weight (without options) | 13.5 lbs |




design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

## WDGE LED Family Overview

| Luminaire | Optics | Standard EM, 0°C | Cold EM, -20°C | Sensor | Approximate Lumens (4000K, 80CRI) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | P0 | P1 | P2 | P3 | P4 | P5 | P6 |
| WDGE1 LED | Visual Comfort | 4W | -- | -- | 750 | 1,200 | 2,000 | -- | -- | -- | -- |
| WDGE2 LED | Visual Comfort | 10W | 18W | Standalone / nLight | -- | 1,200 | 2,000 | 3,000 | 4,500 | 6,000 | -- |
| WDGE2 LED | Precision Refractive | 10W | 18W | Standalone / nLight | 700 | 1,200 | 2,000 | 3,200 | 4,200 | -- | -- |
| WDGE3 LED | Precision Refractive | 15W | 18W | Standalone / nLight | -- | 7,500 | 8,500 | 10,000 | 12,000 | -- | -- |
| WDGE4 LED | Precision Refractive | | | Standalone / nLight | -- | 12,000 | 16,000 | 18,000 | 20,000 | 22,000 | 25,000 |

## Ordering Information

**EXAMPLE:** WDGE2 LED P3 40K 80CRI T3M MVOLT SRM DDBXD

| Series | Package | Color Temperature | CRI | Distribution | Voltage | Mounting |
|---|---|---|---|---|---|---|
| WDGE2 LED | P0[1]<br>P1[2]<br>P2[2]<br>P3[2]<br>P4[2] | 27K 2700K<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>AMB[3] Amber | 70CRI*<br>80CRI<br>LW[3] Limited Wavelength | T1S Type I Short<br>T2M Type II Medium<br>T3M Type III Medium<br>T4M Type IV Medium<br>TFTM Forward Throw Medium | MVOLT<br>347[4]<br>480[4] | **Shipped included**<br>SRM Surface mounting bracket<br>ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[5]<br>**Shipped separately**<br>AWS 3/8inch Architectural wall spacer[6]<br>PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available[7] |

| Options | | Finish |
|---|---|---|
| E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min)<br>E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, -20°C min)<br>PE Photocell, Button Type[8]<br>DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[9]<br>BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.<br>CCE Coastal Construction[11] | **Standalone Sensors/Controls**<br>PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.<br>PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.<br>PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.<br>PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operations.<br>**Networked Sensors/Controls**<br>NLTAIR2 PIR Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.<br>NLTAIR2 PIRH Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.<br>NLTAIREM2 PIR Embedded wireless controls by nLight with ULI924 listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.<br>NLTAIREM2 PIRH Embedded wireless controls by nLight with ULI924 listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.<br>See page 4 for out of box functionality | DDBXD Dark bronze<br>DBLXD Black<br>DNAXD Natural aluminum<br>DWHXD White<br>DSSTD Sandstone<br>DSBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white<br>DSSTXD Textured sandstone |

## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

| Performance Package | System Watts | Dist. Type | 27K (2700K, 80 CRI) | | | | | 30K (3000K, 80 CRI) | | | | | 40K (4000K, 80 CRI) | | | | | 50K (5000K, 80 CRI) | | | | | Amber (Limited Wavelength) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G |
| P0 | 7W | T1S | 636 | 92 | 0 | 0 | 0 | 666 | 97 | 0 | 0 | 0 | 699 | 101 | 0 | 0 | 1 | 691 | 100 | 0 | 0 | 1 | 712 | 47 | 0 | 0 | 1 |
| | | T2M | 662 | 96 | 0 | 0 | 0 | 693 | 101 | 0 | 0 | 0 | 728 | 106 | 0 | 0 | 0 | 719 | 104 | 0 | 0 | 0 | 741 | 48 | 0 | 0 | 0 |
| | | T3M | 662 | 96 | 0 | 0 | 0 | 693 | 101 | 0 | 0 | 0 | 728 | 106 | 0 | 0 | 0 | 719 | 104 | 0 | 0 | 0 | 741 | 48 | 0 | 0 | 0 |
| | | T4M | 648 | 94 | 0 | 0 | 0 | 679 | 98 | 0 | 0 | 0 | 712 | 103 | 0 | 0 | 0 | 704 | 102 | 0 | 0 | 0 | 726 | 47 | 0 | 0 | 0 |
| | | TFTM | 652 | 95 | 0 | 0 | 0 | 683 | 99 | 0 | 0 | 0 | 717 | 104 | 0 | 0 | 0 | 708 | 103 | 0 | 0 | 0 | 730 | 48 | 0 | 0 | 1 |
| P1 | 11W | T1S | 1,105 | 99 | 0 | 0 | 1 | 1,160 | 104 | 0 | 0 | 1 | 1,215 | 109 | 0 | 0 | 1 | 1,200 | 107 | 0 | 0 | 1 | 1,237 | 68 | 0 | 0 | 1 |
| | | T2M | 1,150 | 103 | 0 | 0 | 1 | 1,204 | 108 | 0 | 0 | 1 | 1,264 | 113 | 0 | 0 | 1 | 1,249 | 112 | 0 | 0 | 1 | | | | | |
| | | T3M | 1,150 | 103 | 0 | 0 | 1 | 1,205 | 108 | 0 | 0 | 1 | 1,265 | 113 | 0 | 0 | 1 | 1,250 | 112 | 0 | 0 | 1 | | | | | |
| | | T4M | 1,126 | 101 | 0 | 0 | 1 | 1,179 | 106 | 0 | 0 | 1 | 1,238 | 111 | 0 | 0 | 1 | 1,223 | 110 | 0 | 0 | 1 | | | | | |
| | | TFTM | 1,133 | 101 | 0 | 0 | 1 | 1,186 | 106 | 0 | 0 | 1 | 1,245 | 112 | 0 | 0 | 1 | 1,230 | 110 | 0 | 0 | 1 | | | | | |
| P2 | 19W | T1S | 1,801 | 95 | 1 | 0 | 1 | 1,886 | 99 | 1 | 0 | 1 | 1,981 | 104 | 1 | 0 | 1 | 1,957 | 103 | 1 | 0 | 1 | | | | | |
| | | T2M | 1,875 | 99 | 1 | 0 | 1 | 1,963 | 103 | 1 | 0 | 1 | 2,061 | 109 | 1 | 0 | 1 | 2,037 | 107 | 1 | 0 | 1 | | | | | |
| | | T3M | 1,876 | 99 | 1 | 0 | 1 | 1,964 | 103 | 1 | 0 | 1 | 2,062 | 109 | 1 | 0 | 1 | 2,038 | 107 | 1 | 0 | 1 | | | | | |
| | | T4M | 1,836 | 97 | 1 | 0 | 1 | 1,922 | 101 | 1 | 0 | 1 | 2,018 | 106 | 1 | 0 | 1 | 1,994 | 105 | 1 | 0 | 1 | | | | | |
| | | TFTM | 1,847 | 97 | 1 | 0 | 1 | 1,934 | 102 | 1 | 0 | 1 | 2,030 | 107 | 1 | 0 | 1 | 2,006 | 106 | 1 | 0 | 1 | | | | | |
| P3 | 32W | T1S | 2,809 | 87 | 1 | 0 | 1 | 2,942 | 92 | 1 | 0 | 1 | 3,089 | 96 | 1 | 0 | 1 | 3,052 | 95 | 1 | 0 | 1 | | | | | |
| | | T2M | 2,924 | 91 | 1 | 0 | 1 | 3,062 | 95 | 1 | 0 | 1 | 3,215 | 100 | 1 | 0 | 1 | 3,176 | 99 | 1 | 0 | 1 | | | | | |
| | | T3M | 2,925 | 91 | 1 | 0 | 1 | 3,063 | 95 | 1 | 0 | 1 | 3,216 | 100 | 1 | 0 | 1 | 3,177 | 99 | 1 | 0 | 1 | | | | | |
| | | T4M | 2,862 | 89 | 1 | 0 | 1 | 2,997 | 93 | 1 | 0 | 1 | 3,147 | 98 | 1 | 0 | 1 | 3,108 | 97 | 1 | 0 | 1 | | | | | |
| | | TFTM | 2,880 | 90 | 1 | 0 | 1 | 3,015 | 94 | 1 | 0 | 1 | 3,166 | 99 | 1 | 0 | 1 | 3,128 | 97 | 1 | 0 | 1 | | | | | |
| P4 | 47W | T1S | 3,729 | 80 | 1 | 0 | 1 | 3,904 | 84 | 1 | 0 | 1 | 4,099 | 88 | 1 | 0 | 1 | 4,051 | 87 | 1 | 0 | 1 | | | | | |
| | | T2M | 3,881 | 83 | 1 | 0 | 1 | 4,063 | 87 | 1 | 0 | 1 | 4,267 | 91 | 1 | 0 | 1 | 4,216 | 90 | 1 | 0 | 1 | | | | | |
| | | T3M | 3,882 | 83 | 1 | 0 | 1 | 4,065 | 87 | 1 | 0 | 1 | 4,268 | 91 | 1 | 0 | 1 | 4,217 | 90 | 1 | 0 | 1 | | | | | |
| | | T4M | 3,799 | 81 | 1 | 0 | 1 | 3,978 | 85 | 1 | 0 | 1 | 4,177 | 90 | 1 | 0 | 1 | 4,127 | 88 | 1 | 0 | 1 | | | | | |
| | | TFTM | 3,822 | 82 | 1 | 0 | 1 | 4,002 | 86 | 1 | 0 | 1 | 4,202 | 90 | 1 | 0 | 1 | 4,152 | 89 | 1 | 0 | 1 | | | | | |

| Performance Package | System Watts | Dist. Type | 27K (2700K, 70 CRI) | | | | | 30K (3000K, 70 CRI) | | | | | 40K (4000K, 70 CRI) | | | | | 50K (5000K, 70 CRI) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G | Lumens | LPW | B | U | G |
| P0 | 7W | T3M | 737 | 107 | 0 | 0 | 0 | 763 | 111 | 0 | 0 | 0 | 822 | 119 | 0 | 0 | 0 | 832 | 121 | 0 | 0 | 1 |
| | | T4M | 721 | 105 | 0 | 0 | 0 | 746 | 108 | 0 | 0 | 0 | 804 | 117 | 0 | 0 | 1 | 814 | 118 | 0 | 0 | 1 |
| P1 | 11W | T3M | 1,280 | 115 | 0 | 0 | 1 | 1,325 | 119 | 0 | 0 | 1 | 1,427 | 128 | 1 | 0 | 1 | 1,445 | 129 | 1 | 0 | 1 |
| | | T4M | 1,253 | 112 | 0 | 0 | 1 | 1,297 | 116 | 0 | 0 | 1 | 1,397 | 125 | 0 | 0 | 1 | 1,415 | 127 | 0 | 0 | 1 |
| P2 | 19W | T3M | 2,067 | 110 | 1 | 0 | 1 | 2,140 | 114 | 1 | 0 | 1 | 2,307 | 123 | 1 | 0 | 1 | 2,337 | 124 | 1 | 0 | 1 |
| | | T4M | 2,042 | 108 | 1 | 0 | 1 | 2,114 | 111 | 1 | 0 | 1 | 2,278 | 120 | 1 | 0 | 1 | 2,306 | 121 | 1 | 0 | 1 |
| P3 | 32W | T3M | 3,254 | 101 | 1 | 0 | 1 | 3,369 | 105 | 1 | 0 | 1 | 3,629 | 113 | 1 | 0 | 1 | 3,675 | 114 | 1 | 0 | 1 |
| | | T4M | 3,185 | 99 | 1 | 0 | 1 | 3,297 | 103 | 1 | 0 | 1 | 3,552 | 111 | 1 | 0 | 1 | 3,597 | 112 | 1 | 0 | 1 |
| P4 | 47W | T3M | 4,319 | 93 | 1 | 0 | 1 | 4,471 | 96 | 1 | 0 | 1 | 4,817 | 103 | 1 | 0 | 2 | 4,878 | 105 | 1 | 0 | 2 |
| | | T4M | 4,227 | 91 | 1 | 0 | 1 | 4,376 | 94 | 1 | 0 | 2 | 4,714 | 101 | 1 | 0 | 2 | 4,774 | 102 | 1 | 0 | 2 |

### Accessories
Ordered and shipped separately.

| | |
|---|---|
| WDGEAWS DDBXD U | WDGE 3.0inch Architectural Wall Spacer (specify finish) |
| WDGE2PBBW DDBXD U | WDGE2 surface-mounted back box (specify finish) |

### NOTES

1 P0 option not available with sensors/controls.
2 P1-P4 not available with AMB and LW.
3 AMB and LW always go together.
4 70CRI only available with T3M and T4M.
5 347V and 480V not available with E10WH or E20WC.
6 Not qualified for DLC. Not available with emergency battery backup or sensors/controls.
7 For PBBW and AWS with CCE option, require an RFA.
8 PE not available in 480V or with sensors/controls.
9 DMG option not available with sensors/controls.



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# D-Series
## LED Surface Canopy

dsseries

| Catalog Number | |
|---|---|
| Notes | |
| Type | 'S4' |

Hit the link or square on the page to go to the following website: www.acuitybrands.com/designselect

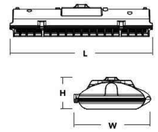
### Introduction

The D-Series LED Surface Canopy luminaire is ideal for covered walkways or drive-thrus, semi-covered outdoor aisles, and walk-in coolers and freezers. Its five optical choices provide the design flexibility to potentially reduce luminaire counts while still meeting IES criteria, lowering overall energy consumption.

Its expected service life of over 100,000 hours (20 years of nighttime operation) combined with the available motion/ambient sensor offers an extremely low maintenance solution that yields quick payback.

### Specifications

| | |
|---|---|
| Length: | 17-3/4" (45.1 cm) |
| Width: | 8-1/2" (21.6 cm) |
| Height: | 3-7/16" (8.7 cm) |
| Weight (max): | 16 lbs (7.3 kg) |




## Ordering Information

**EXAMPLE:** DSXSC LED 20C 700 40K T5M MVOLT SRM DWHXD

DSXSC LED

| Series | LEDs | Drive current | Color temperature | Distribution | Voltage | Mounting |
|---|---|---|---|---|---|---|
| DSXSC LED | 10C 10 LEDs (one engine)[1,2]<br>20C 20 LEDs (two engines)<br>30C 30 LEDs (three engines) | 350 350 mA<br>530 530 mA<br>700 700 mA<br>1000 1000 mA (1 A) | 30K 3000 K<br>40K 4000 K<br>50K 5000 K<br>AMBPC Amber phosphor converted[3] | TSE Type V, entryway[4]<br>T5M Type V, medium<br>T5W Type V, wide<br>T5R Type V, rectangular<br>ASY Asymmetric | MVOLT[5] 277[6]<br>120[5] 347[6]<br>208[5] 480[6]<br>240[5] | **Shipped included**<br>SRM Surface mount (12-inch length supply leads) |

| Options | | Finish (required) |
|---|---|---|
| **Shipped installed**<br>HS House-side shield (housing visor)[7]<br>SF Single fuse (120, 277, 347V)[1]<br>DF Double fuse (208, 240, 480V)[1]<br>SPD Separate surge protection[8]<br>DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[9,10]<br>PIR Motion/ambient sensor for 8-15' mounting heights[12]<br>PIRH Motion/ambient sensor for 15-30' mounting heights[12] | PIR1FC3V Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and Title 24 compliance[11]<br>PIRH1FC3V Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and Title 24 compliance[11]<br>**Shipped separately**<br>BDS Bird shroud[7] | DWHXD White<br>DNAXD Natural aluminum<br>DDBXD Dark bronze |

### Accessories
Ordered and shipped separately.

| | |
|---|---|
| DSXSCHS U | House-side shield (1 per light engine) |
| DSXSCBDSS U DWHXD U | Bird shroud for SRM on surface > box only, white (specify finish) |

### NOTES

1 Available with 700mA or 1000mA option only.
2 Not available with 347 or 480V.
3 AMBPC only available with 530mA or 700mA.
4 DesignLights Consortium qualified.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
6 N/A with one light engine (10C). Only available with 700mA or 1000mA.
7 Also available as a separate accessory; see Accessories information at left.
8 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
9 See the electrical section on page 3 for more details.
10 DMG not available with all PIR options
11 Dimming driver standard. Available in layouts up to 30'. Not available with 347V or 480V. Not available with fusing.
12 PIR & PIR3FC3V specifies the Acuity Controls SBOR 10 ODP motion/ambient sensor, the PIRH & PIRH1FC3V specifies the Acuity Controls SBOR 6 ODP motion/ambient sensor.

## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

| Light Engines | Drive Current (mA) | System Watts | Dist. Type | 30K (3000K, 80 CRI) | | | | 40K (4000K, 70 CRI) | | | | 50K (5000K, 70 CRI) | | | | AMBPC | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Lumens | B | U | G | Lumens | B | U | G | Lumens | B | U | G | Lumens | B | U | G |
| 10C (1 LEDs) | 700 mA | 26W | ASY | 2,601 | 0 | 0 | 1 | 2,793 | 1 | 0 | 1 | 2,810 | 1 | 0 | 1 | 2,253 | 1 | 0 | 1 |
| | | | TSE | 2,731 | 1 | 0 | 0 | 2,933 | 1 | 0 | 1 | 2,951 | 1 | 0 | 1 | 2,366 | 1 | 0 | 1 |
| | | | T5M | 2,742 | 1 | 0 | 0 | 2,945 | 2 | 0 | 0 | 2,963 | 2 | 0 | 0 | 2,376 | 2 | 0 | 0 |
| | | | T5W | 2,570 | 2 | 0 | 1 | 2,760 | 2 | 0 | 1 | 2,778 | 2 | 0 | 1 | 2,227 | 2 | 0 | 1 |
| | 1000 mA | 37W | T5R | 2,570 | 2 | 0 | 1 | 2,760 | 2 | 0 | 1 | 2,778 | 2 | 0 | 1 | 2,227 | 2 | 0 | 1 |
| | | | ASY | 3,547 | 0 | 0 | 1 | 3,809 | 1 | 0 | 1 | 3,834 | 1 | 0 | 1 | 3,073 | 1 | 0 | 1 |
| | | | TSE | 3,830 | 1 | 0 | 0 | 4,113 | 2 | 0 | 0 | 4,138 | 2 | 0 | 0 | 3,317 | 2 | 0 | 0 |
| | | | T5M | 3,846 | 2 | 0 | 0 | 4,130 | 2 | 0 | 0 | 4,156 | 2 | 0 | 0 | 3,332 | 2 | 0 | 0 |
| | | | T5W | 3,606 | 2 | 0 | 1 | 3,872 | 2 | 0 | 1 | 3,897 | 2 | 0 | 1 | 3,124 | 2 | 0 | 1 |
| | | | T5R | 3,606 | 2 | 0 | 1 | 3,872 | 2 | 0 | 1 | 3,897 | 2 | 0 | 1 | 3,124 | 2 | 0 | 1 |
| 20C (2 LEDs) | 350 mA | 25W | ASY | 2,298 | 1 | 0 | 1 | 3,004 | 1 | 0 | 1 | 3,023 | 1 | 0 | 1 | 3,023 | 1 | 0 | 1 |
| | | | TSE | 2,414 | 2 | 0 | 0 | 3,156 | 2 | 0 | 0 | 3,174 | 2 | 0 | 0 | 3,174 | 2 | 0 | 0 |
| | | | T5M | 2,950 | 2 | 0 | 0 | 3,168 | 2 | 0 | 0 | 3,187 | 2 | 0 | 0 | 3,188 | 2 | 0 | 0 |
| | | | T5W | 2,763 | 2 | 0 | 1 | 3,179 | 2 | 0 | 1 | 

# ELECTRICAL SYMBOLS (NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT)

- LED LIGHT FIXTURE
- LED LIGHT FIXTURE WITH EMERGENCY BATTERY PACK, 1100 LUMENS
  NL = NIGHT LIGHT – UNSWITCHED
  EM = LINE SENSITIVE – OPERATES ONLY ON POWER OUTAGE – SWITCHED
- CEILING MOUNTED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- LED LIGHT FIXTURE
- EXIT SIGN – SEE LIGHT FIXTURE SCHEDULE
- SURFACE–MOUNT EMERGENCY LIGHTING BATTERY PACK–SINGLE OR DOUBLE HEAD– SEE LIGHT FIXTURE SCHEDULE
- RECESSED EMERGENCY LIGHTING BATTERY PACK–SINGLE OR DOUBLE HEAD– SEE LIGHT FIXTURE SCHEDULE
- JUNCTION BOX IN ACCESSIBLE LOCATION ABOVE REMOVABLE CEILING W/ FLEXIBLE CONDUIT CONNECTION TO LIGHT FIXTURE
- FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT
- JUNCTION BOX IN ACCESSIBLE LOCATION
- DUPLEX CONVENIENCE RECEPTACLE AT +15" A.F.F. TO BOTTOM OR AS NOTED
- FOUR–PLEX CONVENIENCE RECEPTACLE AT +15" A.F.F. TO BOTTOM OR AS NOTED
- IG ISOLATED GROUND RECEPTACLE AT + 15" A.F.F. TO BOTTOM OR AS NOTED
- RECEPTACLE (TYPE AS SHOWN) AT + 42" A.F.F.
- SPECIAL USE RECEPTACLE. VERIFY NEMA NUMBER AND MOUNTING HEIGHT WITH EQUIPMENT
- $S$ $S_3$ $S_4$ TOGGLE SWITCH – SINGLE POLE, 3–WAY, 4–WAY AT +42" OR AS NOTED ON PLANS.
- $S_P$ SINGLE–POLE, ILLUMINATED HANDEL OR PILOT LIGHT TOGGLE SWITCH AT +42" OR AS NOTED ON PLANS
- $S_M$ MOTOR RATED SWITCH WITH THERMAL PROTECTION
- $S_V$ MOTOR SPEED CONTROL SWITCH. FURNISHED BY ELECTRICAL CONTRACTOR.
- PHOTOCELL – TORK #2100 – MOUNT ON ROOF AND AIM NORTH
- TS TIMESWITCH: TORK 'W' SERIES OR EQUAL
- CIRCUIT IN CONDUIT, CONCEALED. HASH MARKS INDICATE QUANTITY OF CONDUCTORS NO HASH MARKS INDICATE TWO CONDUCTORS, PLUS GROUND(S). (NOTE: WIRE AND OR CONDUIT SIZE SHOWN AT HOMERUN IS THE MINIMUM SIZE FOR THE ENTIRE CIRCUIT: #12 A.W.G. CU, 1/2"C. MINIMUM). LONG STROKE(S) INDICATE NEUTRAL CONDUCTOR(S), SHORT STROKES INDICATE PHASE OR SWITCHED CONDUCTORS AND LONG STROKES WITH DOT INDICATE GREEN INSULATED GROUNDING CONDUCTOR(S) TYPICAL. EACH ISOLATED GROUND CIRCUIT SHALL HAVE A SEPARATE NEUTRAL AND GROUND WIRE. BOND WIRES ARE NOT SHOWN ON DRAWINGS. BOND WIRES SHALL BE INSULATED CU. SIZED IN ACCORDANCE WITH N.E.C. #250.
- CIRCUIT IN CONDUIT CONCEALED IN FLOOR
- CIRCUIT IN CONDUIT CONCEALED IN WALLS OR ABOVE CEILING
- HOMERUN TO PANELBOARD OR AS NOTED
- PANELBOARD, MOUNT TOP OF PANEL AT + 6'–8". STUB (2) 3/4" E.C. INTO ACCESSIBLE CEILING SPACE ON FLUSH MOUNTED PANELS.
- MOTOR: SIZE AND RATING AS SHOWN. EF INDICATES 55–WATT, 120V. EXHAUST FAN
- A.C. MAGNETIC STARTER BY ELECTRICAL CONTRACTOR. HORSEPOWER, VOLTAGE AND PHASE RATED, NUMBER OF POLES REQUIRED. FURNISH WITH (1) N.O. AUXILLIARY CONTACT (120 V. CONTROL) SINGLE SPEED NON–REVERSING UNLESS OTHERWISE SHOWN ON PLAN
- DISCONNECT SWITCH – HORSEPOWER RATED, FUSED, NEMA 3R WHERE OUTSIDE. N.F. INDICATES NON–FUSED. (FUSE PER EQUIPMENT MANUFACTURERS' SPECIFICATIONS.)
- MOTOR CONTROLLER – FURNISHED WITH EQUIPMENT
- TELEPHONE OUTLET AT +15" TO BOTTOM OR AS NOTED WITH 3/4"C. UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE
- DATA OUTLET AT + 15" A.F.F. TO BOTTOM OR AS NOTED. STUB 3/4"C. INTO ACCESSIBLE CEILING SPACE
- DATA/TELEPHONE OUTLET AT + 15" A.F.F. TO BOTTOM OR AS NOTED. STUB 3/4"C. INTO ACCESSIBLE CEILING SPACE
- APPROVED TEMPERATURE SEAL–OFF AND EXPANSION JOINTS AS REQ'D BY N.E.C. ART. #300–7
- FLUSH FLOOR FOURPLEX OUTLET AND DATA/TELPHONE OUTLET COMBO WITH BRASS DEVICE PLATE
- FLUSH FLOOR DATA RECEPTACLE WITH BRASS COVER PLATE AND 3/4"C. STUBBED TO ABOVE ACCESSIBLE CEILING LOCATION
- FLUSH FLOOR TELEPHONE RECEPTACLE WITH BRASS COVER PLATE AND 3/4"C. STUBBED TO ABOVE ACCESSIBLE CEILING LOCATION
- FLUSH FLOOR DUPLEX OUTLET WITH BRASS DEVICE PLATE
- FLUSH FLOOR FOURPLEX OUTLET WITH BRASS DEVICE PLATE
- IG ISOLATED GROUND RECEPTACLE "HUBBELL" # IG5263 20A, 125V, FLUSH FLOOR WITH BRASS DEVICE PLATE
- TV TELEVISION OUTLET AT + 15" TO BOTTOM OR AS NOTED. STUB 3/4"C INTO ACCESSIBLE CEILING SPACE
- DIMMER SWITCH AT + 42" A.F.F. "LUTRON" NP SERIES. SIZE DIMMER FOR LOAD. TRACK LIGHTING SHALL HAVE "LUTRON" NP2000 DIMMER
- F A.D.A.–APPROVED FIRE ALARM STROBE
- F A.D.A.–APPROVED FIRE ALARM HORN/STROBE
- F A.D.A.–APPROVED FIRE ALARM PULL STATION
- (S) A.D.A.–APPROVED SMOKE DETECTOR MOUNTED IN CEILING OR AS INDICATED
- (X) CEILING MOUNTED OCCUPANCY SENSOR. LUTRON OR EQUAL.
- WP WEATHER PROOF
- EDF ELECTRIC DRINKING FOUNTAIN
- S.E.S. SERVICE ENTRANCE SECTION
- T.M.B. TELEPHONE MOUNTING BOARD: 4' X 8' X 3/4" PLYWOOD WITH #6 CU. BOND WIRE TO GROUNDING ELECTRODE SYSTEM
- T.T.C. TELEPHONE TERMINAL CABINET: 36" W. X 36" H X 6" D 16 GA. WEATHERPROOF HINGED LOCKABLE COVER, 5/8" PLYWOOD BACKBOARD. PROVIDE A #6 CU BOND TO GROUNDING ELECTRODE SYSTEM

NOTE:
THESE DOCUMENTS ESTABLISH THE GENERAL STANDARDS OF QUALITY AND DETAIL FOR DEVELOPING A NEGOTIATED CONSTRUCTION CONTRACT.

# ELECTRICAL SYSTEM SPECIFICATIONS – DIVISION 16000 (SOME SECTIONS MAY NOT APPLY)

1. GENERAL CONDITIONS

The General Provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other Conditions) and Division 1 – General Requirements as appropriate, apply to the work specified in this Section.

2. SCOPE OF WORK

The work included under this section consists of furnishing all materials, equipment, and labor and the performing of all functions, except as otherwise specified herein or shown on the drawings to be performed by others, for the installation and placing into operation of a complete electrical system as specified and shown on the drawings.

3. GENERAL DESCRIPTION

3.1 The work in general shall consist of, but is not necessarily limited to the following.

3.1.1 Furnishing and installing all fixtures with lamps as indicated on the drawings and as specified herein unless noted.

3.1.2 Furnishing and installing all electrical work, panels, service, conduit, wiring, etc., for all outlets and equipment.

3.1.3 Furnishing and installing all telephone outlets, conduits with pull strings and telephone mounting boards including conduit from telephone mounting board to the building entrance as indicated on the plan.

3.1.4 Furnishing and installing a complete Fire Alarm system as indicated on plans.

3.1.5 Include $ hundred dollars) allowance for power and telephone company utility service charges. Difference between actual cost and allowance to be credited or billed to the Owner.

3.1.6 Furnishing and installing all motor starters and control components, not specifically specified to be furnished in accordance with other sections of the specifications.

3.1.7 Furnishing and installing all power and wiring except that which is pre–wired in factory assembled equipment.

3.1.8 Installing all LINE VOLTAGE mechanical control wiring and associated controls which are furnished by the Mechanical Contractor (low voltage control wiring and controls shall be furnished and installed by the Mechanical Contractor).

3.1.9 Painting work as described under other sections of these specifications. Clean and prepare all surfaces ready for painting.

3.1.10 Provide temporary construction power as outlined below. This service shall be maintained throughout the entire job as the work progresses. Provide outlets at convenient points and in sufficient numbers so that no extension cord over 50 feet in length is required to reach any work point. Maintain general lighting in corridors, stairs, basement and other areas not receiving sufficient daylight required for safety. Remove temporary work as rapidly as required for or allowed by installation of permanent work.

3.1.11 Certain items of work by other trades will be necessary for the completion of work under this division. Cooperate with other trades and arrange for these items to be performed in orderly course.

3.1.12 This Contractor shall review the mechanical control requirements as specified and shown on the drawings and shall furnish and install all necessary conduit, wiring, boxes, protective devices, switches, etc., for the completion and proper operation of the system.

3.1.13 Review all drawings and all specifications for each section of work. Unless specifically noted otherwise, herein or elsewhere, furnish and install items of any electrical nature required for completion of work for other trades, whether or not same is shown or noted in this or other sections.

4. REGULATIONS AND CODES

The Contractor must comply with all state, municipal and federal safety laws, construction codes, ordinances and regulations relating to building and public health and safety. In addition, comply with rules and regulations of the State Fire Protection Code. Fire protection material must bear the Fire Underwriters Laboratories label.

5. GENERAL REQUIREMENTS

5.1 The Contractor shall examine the premises and satisfy himself of existing conditions under which he will be obligated to operate in performing his part of the work or that will in any manner affect the work under the contract. The Contractor shall cooperate with other trades so that the installations of all equipment may be properly coordinated.

5.2 All equipment furnished shall fit the space available, with connection, etc., in the required locations and with adequate space for operating and servicing. The drawings are generally diagrammatic and indicate the manner and method of the installation, while the specifications and fixture list denote the type and quality of material and workmanship to be used. Where a conflict exists between the drawings and the specifications, the Contractor shall promptly notify the Architect/Engineer whose decision shall be final. No allowance will be made subsequently in this connection in behalf of the Contractor after award of the contract.

6. EQUIPMENT AND MATERIAL

6.1 All materials furnished under this contract shall be new (except as noted), free from defects of any character, shall conform with the standards of the Underwriters Laboratories, Inc. (U.L.) (or other nationally recognized Laboratory), in every case where such a standard has been established and shall be so labeled. It is the intention of these specifications to indicate a standard of quality for all materials incorporated in this work, and where materials are not specified herein and are required to complete the electrical installation, these materials shall be of first quality for use intended. Manufacturers of similar quality products will be considered unless the specifications or drawings indicate otherwise.

6.2 Materials shall be suitable for intended use and location. Unless otherwise shown use NEMA–1 for interior areas and NEMA–3R for exterior areas.

6.3 The Architect/Engineer decision as to equal in grade and quality shall rule and be final for all electrical materials incorporated in this work. Where two or more similar type items are furnished, all shall be of the same manufacturer (e.g., all disconnect switches shall be of the same manufacturer) unless otherwise noted herein or shown on the drawings. All material and installation methods used shall be in accordance with the latest and approved electrical and mechanical engineering practices.

7. SERVICE ENTRANCE EQUIPMENT

7.1 Service entrance equipment shall be in accordance with the requirements of the municipal governing body and serving utility. Shop drawings shall be submitted to the serving utility for written approval before ordering equipment.

7.2 Label equipment and each individual overcurrent device per Section 16000.22.

7.3 Approved manufacturers are: Sun Valley, Square D, Cutler–Hammer, Siemens/ITE, General Electric

8. PANELBOARDS

8.1 Each panel shall be provided with door lock and two keys, all keyed alike. Each panel shall be provided with typewritten sheet installed on door identifying the use of each branch circuit. Panels shall have bussing as indicated on the drawings.

8.2 Label equipment per Section 16000.22

8.3 Approved manufacturers are: Square D, Cutler–Hammer, Siemens/ITE, General Electric

9. STARTERS

9.1 All motor starters shall be furnished under this section of the specifications unless an integral part of equipment or noted as furnished with equipment specified under other sections of these specifications.

9.2 Separately mounted motor starters shall be across–the–line combination magnetic with 120V coils, fused disconnect contactors, additional auxiliary contact for interlocking of controls. Provide pushbutton or selector switch in cover. Switchboard mounted starters shall be magnetic with 120V coils and additional auxiliary contacts as required for interlocking of controls. Starters shall have an integral control circuit transformer or separate 120V control with control circuit disconnect switch in cover.

9.3 Manual starters shall be horsepower, voltage and phase rated with overload protection and green "on" pilot light. Surface mounted unless noted otherwise.

9.4 All starters shall have overload protection in all phase lines. Furnish and install the proper size overload heater elements determined from full load nameplate readings on motors and compensation for ambient temperature in all starters whether they be furnished under this Section or other Sections.

9.5 Label per Section 16000.22

9.6 Approved manufacturers are: Square D

10. TRANSFORMERS

10.1 Transformers shall be dry type, with voltage ratings as indicated on plans. Transformers shall be rated for for full load operation at a maximum 150 degree centigrade rise above a 40 degree centigrade ambient or as otherwise noted on drawings. Provide at least (4) 2 1/2 percent taps, two above normal and two below normal and have a sound rating not to exceed NEMA standards. Special "K" factor ratings as noted.

10.2 Submit complete transformer data with shop drawings for approval. The data shall include efficiencies, core and copper losses, impedance, regulation and sound level.

10.3 Installation of transformers shall be on vibration isolators and all wiring connections with flexible conduit.

10.4 Label per Section 16000.22

10.5 Approved manufacturers are: ACME, Square D, Jefferson, Cutler–Hammer, Westinghouse, General Electric, or same manufacturer as distribution equipment.

11. CONDUIT

11.1 Metallic conduits shall be hot dipped galvanized equal to LTV Steel.

11.2 Electric metallic tubing (EMT) is permitted for exposed work above 6'–0" A.F.F. or concealed work only. EMT is NOT permitted in the following: (1) in or under concrete, (2) in earth, (3) in grouted walls, (4) exterior of building, (5) with dissimilar metals, (6) where it will be subject to severe physical damage (either during or after installation), (7) in any hazardous (classified location) except as permitted by 502.10, 503.10 and 504.20, (8) without an equipment grounding conductor. Size and provide equipment grounding conductor per Article 250 and increase conduit size if required.

11.3 Rigid PVC conduit is permitted only underground or as noted on drawings. Provide rigid steel elbows and risers (NO MINIMUM SIZE). Size and provide equipment grounding conductor per Article 250 and increase conduit size if required.

11.4 Rigid galvanized or sheradized steel shall be used for all exposed conduit below 6'–0" A.F.F. or as noted on drawings. Where used in or under concrete or in earth, shall be code approved PVC coated or half lap wrapped with Polyken #900 tape or equal.

11.5 Install exposed raceways parallel and perpendicular to nearby surfaces or structural members and follow the surface contours as much as practical.

11.6 Run exposed, parallel, or banked raceways together. Make bends in parallel or banked runs from the same center line so that the bends are parallel. Factory elbows may be used in banked runs only where they can be installed parallel. This requires that there be a change in the plane of the run such as from wall to ceiling and that the raceways be of the same size. In other cases provide field bends for parallel raceways.

12. WIRE

12.1 Soft drawn annealed copper (unless otherwise noted on plans) having conductivity of not less than 98% of that of pure copper, uniform in cross section, free from flaws, scales, and other imperfections. All wire larger than #10 shall be stranded.

12.2 Insulation: Type THHN/THWN, or XHHW for all branch circuit and feeder wiring.

12.3 Sizes: No wire smaller than #12 unless otherwise noted on drawings.

12.4 Feeder conductors #2 awg and larger may be copper or AA–8000 series alluminum alloy. Alluminum conductors shall be equal or larger ampacity to copper. Conduit fill shall not exceed 40% factor as described in NEC, annex C, table C1 (copper) or C1A (alluminum).

13. MISCELLANEOUS MATERIALS:

13.1 Safety switches: Heavy duty, fused rejection type, minimum 200,000 A.I.C. rated. "NF" indicates not fused.

13.1.1 Label per Section 16000.22

13.1.2 Approved manufacturers are: Square D, Cutler–Hammer, Westinghouse, General Electric or same manufacturers as distribution equipment.

13.2 Fuses: "Bussmann" or "Gould Shawmut" mfg. No substitutions unless by prior written approval from Engineer, or as noted on drawings.

13.3 Conduit strap: Heavy gauge steel snap–on type.

13.4 Electrical metallic tubing fittings: Equal to T&B compression type. Connectors shall have insulated bushings.

13.5 Rigid conduit locknuts and bushings: Equal to T&B.

13.6 Flexible conduit and fittings: Equal to California Conduit and Cable Company, Inc.

13.7 Liquid tight conduit and fittings for all exterior and equipment connections.

13.8 Outlet boxes, plaster rings, pull, and junction boxes, etc: Equal to RACO. Zinc coated or Cadmium plated sheet steel for indoor locations, cast aluminum for outdoor locations.

13.8.1 For all light fixtures: Octagon or 4" square boxes.

13.8.2 For switches and receptacles: 4" or 4–11/16" square boxes.

13.8.3 Junction and pull boxes: 4" square minimum size. Provide with screwfastened covers located in accessible locations.

13.9 Condulets: Equal to Crouse–Hinds.

13.10 Wire and Cable: Equal to General Cable and/or Simplex.

13.11 Devices: "Hubbell", "Leviton", or approved equal. Receptacles: Duplex–20 amp #5362, isolated ground – 20 amp #IG–5362, GFCI– 20 amp #GF–5362. Switches: 20 amp #1221 single pole, 1222 double pole, 1223 three way, 1224 four way. Colors to be specified by Architect/Owner/Tenant.

13.12 Device plates: "Hubbell", "Leviton", or equal. Ivory nylon in interior areas or as noted on drawings. Zinc die cast flip lid mounted horizontally for exterior or weatherproof locations.

13.13 Lighting fixtures: Equal to as shown on fixture schedule or described on drawings, complete with lamps in original cartons and all canopies, stems, hangers and accessories including all structural members required for proper mounting. All fluorescent fixture ballasts shall be energy saving type. Submit shop drawings to Architect/Engineer for approval by the same. Must be C.E.C. approved in Calif.

13.14 Lamps: G.E. or equal and shall be for the maximum rated wattage of fixture unless otherwise shown on drawings.

14. SLEEVES, INSERTS, OPENINGS

14.1 Contractor shall layout and install his work in advance of pouring concrete floors or walls. Provide all sleeves and/or openings through floors or walls required for electrical conduits or ducts.

14.2 Sleeves shall be of rigid conduit or galvanized sheet steel rigidly supported and suitably packed to prevent entrance of wet concrete.

15. EXCAVATION/CUTTING/FITTING/REPAIRING/FINISHING

15.1 The Contractor shall include in his bid all excavation, compaction, fill, backfill, cutting, fitting, repairing and finishing of all work necessary for the installation of all equipment under this specification but no cutting of the work of other Contractors shall be done without the consent of the General Contractor.

15.2 Earthwork shall be done in accordance with latest industry standards.

16. CLEANUP OF PREMISES

Contractor shall at all times keep the premises clear of waste materials and debris caused by his employees and operation. Equipment not required in the work shall be removed prior to the termination of the contract.

17. TESTS AND INSPECTIONS

17.1 Contractor shall test wiring and devices as sections are completed and shall correct all defects immediately at his own expense, including any damage to walls, ceilings, floor or other portions of the building which may result from replacing defective equipment.

17.2 Furnish all meters, cable, connections and apparatus necessary for making tests.

17.3 Test system for shorts and grounds. Faulty wiring shall be removed and replaced. Any device, apparatus or fixture installed showing substandard performance shall be removed and replaced as directed by the Architect/Engineer.

17.4 Megger all systems neutrals to insure the neutral is not grounded within the system.

17.5 All equipment rated at 1,000 amps or more , or 480 volts shall be tested for insulation breakdown prior to its being energized. Such equipment shall withstand for a period of one minute without breakdown, the application of a 60HZ alternating potential of 1,000V plus twice the rated voltage of the device.

17.6 After the electrical wiring system installation is completed and at such time as the Architect/Engineer or his authorized representative may direct, the Contractor shall conduct an operating test for approval. Equipment shall be demonstrated to operate in accordance with requirements of specifications. Test shall be performed in presence of Architect/Engineer or his representative.

18. SHOP DRAWINGS

18.1 All data shall be submitted at one time, bound and indexed in an orderly manner. Prior to starting the work, submit to the Architect/Engineer for approval, six (6) sets of shop drawings of service (S.E.S.), panels, distribution sections, light fixtures, motor control centers, fire alarm system, dimmers, sound system, emergency generator, devices, transformers, labels as required by 16000.22, and all other equipment to be fabricated.

18.2 Procure shop drawings, wiring diagrams, etc., from other trades involved where such drawings may facilitate and expedite the work. Air conditioning and mechanical equipment shall be wired complete as per manufacturer's wiring diagrams furnished by the air conditioning and mechanical contractors.

19. DRAWINGS OF RECORD (AS–BUILT)

As–built drawings shall be submitted in accordance with and if required by Division 1 – General Requirements.

20. GUARANTEE

The Contractor shall guarantee all material and equipment to be free from defect of material and workmanship and shall replace or repair without cost to the owner all defective material and workmanship for a period of one year after final acceptance.

21. INSTRUCTIONS

21.1 Contractor shall instruct the Owner in the proper operating and maintenance of the equipment.

21.2 Contractor shall provide two (2) sets of operating and maintenance manuals for each piece of equipment provided by this discipline, only when such manuals are available from the manufacturer.

21.2.1 All manuals to be bound in a 3–ring binder and tabulated in an orderly manner.

22. LABELING

22.1 Labels shall be engraved, black on white melamine plastic laminate, 1/16" minimum thickness for signs up to 20 square inches or 8 inches long; 1/8" thick for larger sizes. Engraved legend shall be in white letters on black face with minimum 3/16" high letters. Labels shall be punched and fastened to equipment with aluminum rivets or self tapping stainless steel screws or number 10/32 stainless steel machine screws with nuts, flat and lock washers.

22.2 Label equipment with name, amperage, voltage, phase, and wires (i.e. Panel "A", 400A., 120/208V,3Ø,4W). Submit list of all labels with wording for review as per 16000.18.

22.3 Equipment to be labeled shall include service (S.E.S.) and all overcurrent devices, distribution sections and all overcurrent devices, motor control centers (M.C.C.) and all overcurrent devices, fusible panelboards and all overcurrent devices, panels, starters and transformers. Label other equipment as noted on plans.

TIMOTHY R. O'FARRELL
LICENSE
NO. 90739
9/15/25
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Revisions
1 CITY OF DELRAY BEACH 04/08/25
3 CITY COMMENTS 09/15/25

ELECTRICAL SYMBOLS & SPECIFICATIONS

Car Wash
14145 S. MILITARY TRAIL
Delray, FL 33484

711 East 9th Street
Tucson, Arizona 85719
520.903.2323 phone
www.a23studios.com
a.23 studios

Project 24099
Date 01.15.25
Scale Noted
Sheet E3.0

Job No. 24070

mw engineering, llc
Electrical Consulting Engineering Group
Tim O'Farrell, P.E.
timo@mwegroup.com
o. 480.731.5050
www.mwengineeringllc.com
2001 W. Alameda Dr., Suite 102 Tempe, AZ 85282

| OIL SEPARATOR CALCULATIONS | |
|---|---|
| SERVICE AREA | 3000 SQ. FT. |
| **OIL SEPARATOR SIZING** | |
| 6.0 CU. FT. FOR FIRST 100 SQ. FT. OF DRAINAGE AREA | 6 CU. FT. |
| 1.0 CU. FT. FOR EACH ADDITIONAL 100 SQ. FT. OF DRAINAGE AREA | 29 CU. FT. |
| CU. FT. REQUIREMENT | 35 CU. FT. |
| GAL. REQUIREMENT | 262 GAL |

*Sizing methodology complies with UPC section 1017.2 and IPC section 1003.4.2.2.*

Required Size: 262 gal min.
Proposed Size: **750** gal

Proposed tank exceeds minimum requirement therefore design is adequate.

CONSULTING ARBORIST, INC.

# Arboriculture Tree Report

14145 S Military Trail, Delray Beach, Fl

**Name:** Fazio Enterprises, Inc
**Attn.:** Jeff Fazio
**Address:** 50 Liberty Drive, Suite 9F
Boston, MA 02110

**Date:** March 29, 2025
**Email:** jeff@jeffsexpress.net

**Prepared by:** John Sutton
International Society of Arboriculture Certified Arborist

**Certification of Performance**

I, John Sutton, certify to the best of my knowledge, and abilities:

That I have personally inspected the tree(s) and or the property referred to in this report.

That it is my professional opinion, that the following report is true, and the conclusions and results stated are correct based on the information received about the property evaluated and the evaluation methods followed.

That the reported analyses, opinions, and conclusions are only limited by the reported assumptions, methods and limiting conditions and my personal, unbiased professional analyses, opinions and conclusions.

That Sutton Consulting Arborist, Inc. acts as an independent tree, and landscape consultant. This firm has no prospective or current interest in the property evaluated or interest/bias with respect to the parties involved.

That this Report, or parts of this Report, have not been revealed to any party other than the Client named and will not be revealed to any other party unless authorized to do so by Client named or by due process of law or by legally required public testimony by this firm of these results.

This report is written in good faith and all rights are reserved by Sutton Consulting Arborist, Inc. It is for use by the client named only.

_____John Sutton_____
John Sutton/Sutton Consulting Arborist
ISA Certified Arborist #SO-0326

# Report

## I. Introduction

This is a unimproved property. My assignment is to evaluate all desirable tree species on site for health and condition.

## II. Property Involved.

The property involved is known as 14145 S Military Trail, Delray Beach, Fl. I arrived on site 3-25-2025. The trees subject of this report are located on this property.

## III. Data Collection

The property/trees were evaluated by site visit to determine environmental conditions, species and DBH (diameter @ or near 4.5' above grade).

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## IV. Limiting Conditions.

This "Arboriculture Report" includes only the listed trees, landscape conditions in the immediate area where the tree is located, and conditions caused by or attributable to the trees on this property. We did not evaluate and make no evaluation or conclusions regarding any other part of the landscape or other items of this property.

Limits of the Assignment

1. This report is not intended as and does not represent legal advice and should not be relied upon to take the place of such advice.

2. This report is limited to documenting the condition of the tree on the dates given. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided be others.

3. Loss or alteration of any part of this report invalidates the entire report.

4. Sketches and photographs used in this report are intended as visual aids only and are not necessarily to scale.

## V. Discussion

An urban landscape is not a forest, woods or other wild habitat. It is intended to be a planned and controlled environment. Trees can cause considerable damage to structures when not planted in the right locations based on species and mature size. Trees should be planted with adequate green space for mature tree size both above and below ground in-order to prevent conflicts with all structures above and below ground. The appearance and value of residential landscapes suffer, and the property devaluates due to poor tree placement.

Poorly planned landscapes also give rise to possible property damage, bodily injury and other negative circumstances and unnecessary expenses.

Properly designed and professionally maintained landscape, plants, shrubs and trees traditionally stabilize and/or increase property values.

Trees growing in groups depend on each member of the group for stability of their root systems, wind breaks and shade. They work as one unit and appear as one from an aerial view. The loss of one or more from the group can and does have a detrimental effect on health, stability as well as aesthetically.

Most tree roots grow out horizontally from the tree in the top 6-12 inches of soil. A mature tree's roots can spread 2-3 times the diameter of the tree's crown or canopy.

Critical Root Zone (CRZ)

For existing trees, there is a minimum amount of area, above (for the trunk and crown) and below ground (for soil health and the root system vitality) that is required to protect trees and preserve tree health. This area is identified as the Critical Root Zone (CRZ) and is generally agreed to be equivalent to the soil area below ground and the space above ground defined by the tree's dripline, or the greatest extent of the branches. Significant risk of catastrophic failure exists if structural roots within this given radius are destroyed or severely damaged. Limits of disruption are based upon tree diameter (DBH) at 4.5 feet above the ground. We define the Critical Root Zone for all trees as the circular area above and below ground with a radius equivalent to the greater of 6 feet or 1.0 feet for every inch in trunk diameter at 4.5 feet above the ground. For example, a tree with a trunk diameter (DBH) of 10 inches has a CRZ of 10 feet (10 inches x 1.0) around the tree. While the radius of the CRZ is 10 feet, the diameter of the entire CRZ is 20 feet.

Generally, the full Perimeter (PCRZ) is considered the optimum amount of root protection for a tree. (The ICRZ is identified as the inner half of the CRZ radius). As root impact occurs within the PCRZ, greater post care will be required for the tree to remain alive and stable. The absolute maximum disturbance allowed must still leave the ICRZ undisturbed if the tree is to have any chance of survival.

The CRZ (Critical Root Zone) is calculated at 1" of root for each inch of trunk diameter at or near breast height (dbh). This gives the radius of the CRZ.

Example:

| Tree Diameter | CRZ | Tree Diameter | CRZ |
|---|---|---|---|
| 2" diameter | 2' radius | 16" diameter | 16' radius |
| 4" diameter | 4' radius | 20" diameter | 20' radius |
| 6" diameter | 6' radius | 24" diameter | 24' radius |
| 10" diameter | 10' radius | 30" diameter | 30' radius |
| 12" diameter | 12' radius | 40" diameter | 40' radius |

The CRZ of a tree, also called the "tree protection zone", is often defined as an imaginary circle on the ground that corresponds with the "dripline" of the tree. However, the dripline is very irregular and misleading, so the trunk diameter is referred to.

This is a generally accepted method for measuring CRZ, root systems do vary in depth and spread based on size of tree, soil quality, water table, species, and other related factors such as root obstructions.

**VI. Conclusions and Recommendations**

Please see attached survey with tree locations, individual tree specifics and pictures below.

| Tree # | Plant Common name | *Scientific/Botanical name* | DBH Inches | Height FT. GW | Canopy | Condition % | Notes |
|---|---|---|---|---|---|---|---|
| 1 | Sabal palm | *Sabal palmetto* | | 21 | 18x18 | 80 | |
| 228 | Slash pine | *Pinus elliottii* | 24 | 60 | 48x48 | 45 | Co-canopy, forest form, large dead branched |
| 230 | Slash pine | *Pinus elliottii* | 23.75 | 60 | 48x48 | 45 | Co-canopy, forest form, large dead branched |
| 231 | Slash pine | *Pinus elliottii* | 12 | 50 | 24x24 | 30 | Forest form |
| 232 | Slash pine | *Pinus elliottii* | 0 | | | 0 | Dead |
| 233 | Slash pine | *Pinus elliottii* | 14 | 50 | 28x28 | 30 | Forest form |
| 235 | Slash pine | *Pinus elliottii* | 10.75 | 50 | 21x21 | 30 | Forest form |
| 238 | Slash pine | *Pinus elliottii* | 15.5 | 50 | 30x30 | 60 | Forest form |
| 237 | Oak | | 0 | | | 0 | Did not locate |
| 236 | Oak | | 0 | | | 0 | Did not locate |
| 251 | Java plum | *Syzygium cumini* | | | | | Category I invasive "Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species". |
| 252 | Java plum | *Syzygium cumini* | | | | | Category I invasive "Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species". |
| 253 | Java plum | *Syzygium cumini* | | | | | Category I invasive "Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species". |
| 254 | Java plum | *Syzygium cumini* | | | | | Category I invasive "Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species". |
| 255 | Java plum | *Syzygium cumini* | | | | | Category I invasive "Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species". |
| 256 | Java plum | *Syzygium cumini* | | | | | Category I invasive "Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species". |
| 257 | Solitaire palm | *Ptychosperma elegans* | | 3 | | | too small |
| 265 | Strangler fig | *Ficus aurea* | 15.5 | 45 | 30x30 | 60 | |
| 266 | Sabal palm | *Sabal palmetto* | | 7 | 18x18 | 70 | |

| Tree # | Plant Common name | *Scientific/Botanical name* | DBH Inches | Height FT. GW | Canopy | Condition % | Notes |
|---|---|---|---|---|---|---|---|
| 267 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | 70 | |
| 268 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 269 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 270 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 271 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 272 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 273 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 274 | Alexander palm | *Archontophoenix alexandrae* | | 10 | 12x12 | | |
| 282 | Mango | *Mangifera indica* | 10 | 25 | 20x20 | 70 | |
| 283 | Sabal palm | *Sabal palmetto* | | 25 | 18x18 | 70 | |
| 284 | Sabal palm | *Sabal palmetto* | | 25 | 18x18 | 70 | |
| 290 | Slash pine | *Pinus elliottii* | 23 | 50 | 48x48 | 60 | |
| 286 | Areca palm | *Dypsis lutescens* | | 16 | | 70 | |
| 287 | Areca palm | *Dypsis lutescens* | | 16 | | 70 | |
| 288 | Areca palm | *Dypsis lutescens* | | 16 | | 70 | |
| 289 | Areca palm | *Dypsis lutescens* | | 16 | | 70 | |
| 291 | Areca palm | *Dypsis lutescens* | | 16 | | 70 | |
| 292 | Corn plant | | | | | | Not a tree |




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Please feel free to contact me should you have any questions.

In Support

_____John Sutton_____

John Sutton/Sutton Consulting Arborist
ISA Certified Arborist #SO-0326
TRAQ, Tree Risk Assessment Qualification
PPQ, Pruning Prescription Qualification
LIAF, Certified Landscape Inspector #2002-202

Sutton Consulting Arborist is staffed by professional Arborists, Horticulturists, and Landscape Inspectors. We utilize associates with expertise in their fields to provide the most accurate, efficient and useful information available to clients. We stand behind our work and can additionally answer any questions or fulfill needs for additional information or services.

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

# MEMORANDUM

**DATE:** July 23, 2025

**TO:** Jeff Fazio, Fazio Consulting, LLC

**FROM:** Jason Lui, Associate/Senior Noise Specialist

**SUBJECT:** Operational Noise Analysis for the Conklin Car Wash Project at 14145 South Military Trail in Delray Beach, Florida

## INTRODUCTION

This operational noise analysis has been prepared to evaluate the potential noise impacts and noise reduction measures associated with the proposed Conklin Car Wash Project (project) at 14145 South Military Trail in Delray Beach, Florida. This memorandum is intended to satisfy the requirements of the City of Delray Beach (City) for a project-specific operational noise impact analysis by examining the impacts from the proposed uses on the project site and evaluating the noise reduction measures the project requires.

## PROJECT LOCATION

The proposed project is located at 14145 South Military Trail in Delray Beach, Florida, at the southwest corner of Conklin Drive and South Military Trail. The project location and vicinity are shown in Figure 1 (all figures are provided in Attachment A).

## PROJECT DESCRIPTION

The proposed project would construct a construct a car wash with 19 parking spaces with vacuums on a 43,109-square-foot (sf) site. The proposed car wash building would be 4,237 sf and would include up to 10 Sonny's Car Wash 15-horsepower (hp) dryer blowers with silencers. In addition, the project would include two Sonny's Car Wash 30 hp vacuum producers and an air system blower surrounded by a 6-foot-high block wall. Also, the project would include an 8-foot-high block wall along the southern and western project boundary, 8-foot-high block walls just north and south of the car wash tunnel exit, a 6-foot-high wall at the car wash tunnel exit near the eastern project boundary, and a 4-foot-high block wall along the northern project boundary. The proposed project would operate daily from 7:00 a.m. to 9:00 p.m. The project site is currently vacant. Figure 2 shows the project site plan.

# REGULATORY SETTING

## Local Regulations

### *City of Delray Beach*

**Municipal Code.** Section 99.03(A)(7) of the City's Municipal Code limits noise generated from mechanical equipment (e.g., pumps, motors, fans, compressors, powered tools or similar devices, air conditioning or air-handling systems, and cooling towers) to 60 A-weighted decibels (dBA) when measured at any point on neighboring property line.

# EXISTING SETTING

## Overview of the Existing Noise Environment

Transportation facilities are the primary existing noise sources in the project area. Traffic noise in the project area includes South Military Trail, Conklin Drive, and other local roadways in the project vicinity. Also, activities from the tire shop north of the project site contribute to the noise environment in the project area.

## Land Uses in the Project Vicinity

Land uses surrounding the project site include commercial uses to the north, single-family residences to the northwest and west, and multifamily residences to the south and east.

## Ambient Noise Measurements

Four long-term (24-hour) noise level measurements were conducted from April 1 to April 2, 2025, using Larson Davis Spark 706RC dosimeters to document the existing noise environment within the project area. Table A summarizes the results of the long-term noise level measurements along with a description of the measurement locations and noise sources that occurred during the measurements. As shown in Table H, the daytime noise levels ranged from 52.6 to 69.5 dBA equivalent continuous sound level ($L_{eq}$) and nighttime average noise levels ranged from 47.4 to 67.4 dBA $L_{eq}$. The lowest ambient noise level during the project's hours of operation (7:00 a.m. to 9:00 p.m.) ranged from 52.6 to 67.0 dBA $L_{eq}$. The long-term noise level measurement survey sheets, along with the hourly $L_{eq,}$ $L_{max, and}$ $L_{min}$ results, are provided in Attachment B. Figure 3 shows the long-term monitoring locations.

### Table A: Long-Term Ambient Noise Monitoring Results

| Monitoring No. | Location | Noise Level (dBA $L_{eq}$) | | Noise Source |
|---|---|---|---|---|
| | | Daytime[1] | Nighttime[2] | |
| LT-1 | 14115 South Military Trail, Delray Beach, Florida. Southern edge of property, on a tree. Approximately 155 ft from Military Trail centerline. | 64.0–69.1 (65.4)[1] | 53.2–67.2 | Traffic on Military Trail and noise from parking lot and body shop activities. |
| LT-2 | 5260 Northwest 3rd Street, Delray Beach, Florida. Near the northwest corner of the building, on a palm tree. Approximately 120 ft from Military Trail centerline. | 65.9–69.5 (67.0)[1] | 54.2–67.4 | Traffic on Military Trail, occasional vehicles on Conklin Drive, and birds chirping. |
| LT-3 | 5020 North La Sedona Circle, Delray, Florida. Northeast corner of the property, on a palm tree. | 57.2–62.0 (58.2)[1] | 51.3–59.4 | Traffic on Military Trail and occasional vehicles on La Sedona Circle. |
| LT-4 | 5098 Conklin Drive, Delray Beach, Florida. Southeast corner of the property, on a utility pole. | 52.6–56.1 (52.6)[1] | 47.4–53.7 | Traffic on Military Trail and occasional vehicles on La Sedona Circle. |

Source: Compiled by LSA (2025).
Note: The long-term (24-hour) noise level measurements were conducted from April 1 to April 2, 2025.
[1] Daytime hours are from 7:00 a.m. to 10:00 p.m.
[2] Nighttime hours are from 10:00 p.m. to 7:00 a.m.
[3] Lowest ambient noise level between 7:00 a.m. and 9:00 p.m. (project's hours of operation).
dBA = A-weighted decibels $L_{eq}$ = equivalent continuous sound level
ft = foot/feet

## OPERATIONAL NOISE ANALYSIS

### Mobile Noise (Traffic)

The project is estimated to generate 166 daily trips based on the 14145 South Military Trail Concurrency Traffic Statement.[1] The existing ADT volume on South Military Trail used to access the project site would be higher than 166 based on the existing uses along this roadway and project-related traffic would not increase noise levels by 3 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise from project-related traffic on off-site sensitive receptors would not be perceptible to the human ear in an outdoor environment.

### Stationary Noise (Car Wash Operations)

Below is a discussion of each stationary noise source from the proposed car wash operations and their reference noise levels.

[1] PTC Transportation Consultants. 2024. *14145 S. Military Trail - #PTC24-095 Concurrency Traffic Statement.* October 29.

### *Sonny's Car Wash Dryer Blowers*

The proposed project would include up to 10 Sonny's Car Wash 15 hp dryer blowers with silencers. Measured reference noise levels of 11 Sonny's Car Wash 15 hp dryer blowers were conducted by LSA for the Mr. Car Wash at 8501 Springbrook Drive in Coon Rapids, Minnesota, which are provided in Attachment C. The car wash tunnel exit reference noise level of 86.6 dBA at 25 feet from the exit door without silencers was adjusted down to 86.2 dBA to account for one less blower, from 11 to 10 blowers. Also, the car wash tunnel entrance reference noise level of 79.7 dBA at 25 feet from the entrance door without silencers was adjusted down to 79.3 dBA to account for one less blower, from 11 to 10 blowers. Installing silencers would provide an additional average reduction of 4.1 dBA and 1.2 dBA at the car wash tunnel exit and entrance, respectively, based on measured reference noise levels of Sonny's Car Wash dryer blowers conducted by WSP for the Prestige Car Wash at 4921 North University Drive in Lauderhill, Florida, which is provided in Attachment D.

### *Vacuum Stations*

As mentioned above, the proposed project would include 19 vacuum stations. Reference noise levels for the vacuum stations were obtained from noise measurements conducted by MD Acoustics for Quick Quack Car Wash at 1555 West Warner Road in Gilbert, Arizona, which is provided in Attachment E. The measured noise level of one unholstered vacuum was 81 dBA at 1.5 feet. The project would have a total of 38 vacuum hoses for 19 vacuum stations (one vacuum hose on each side of the vehicle). The analysis assumed 19 unholstered vacuum hoses in operation.

### *Vacuum Producers and Air System Blower*

The proposed project would include two 30 hp vacuum producers and one 15 hp air system blower. One vacuum producer would be located in a fully enclosed room within the building south of the car wash tunnel. Noise levels generated from this vacuum producer were not modeled in SoundPLAN because exterior noise would be minimal to negligible due to noise attenuation from the building. The second vacuum producer and the air system blower would be surrounded by a 6-foot-high block wall near the entrance of the car wash tunnel. The reference noise levels for the vacuum producer and air system blower were obtained from the AutoVac Industrial Vacuum & Air Systems Equipment Decibel Certification, which is provided in Attachment F. The reference noise level for one 30 hp vacuum producer is 74 dBA at 15 feet. The reference noise level for one 15 hp air system blower is 72 dBA at 15 feet.

### *Operational Noise Analysis Summary*

SoundPLAN was used to calculate operational noise levels at receptors adjacent to the project site. Table B shows the calculated operational noise levels using SoundPLAN. As shown in Table B, noise levels at all 11 receptors (Receptor Nos. R-1 through R-9b) would not exceed the City's exterior noise standard of 60 dBA $L_{eq}$. The SoundPLAN printout is provided in Attachment G. In addition, the SoundPLAN printout in Attachment G shows that the 60 dBA $L_{eq}$ noise contour line does not cross the property line of adjacent land uses surrounding the project site.

## Table B: Car Wash Operational Noise Levels

| Receptor No. | Operational Noise Level (dBA $L_{eq}$) | Noise Standard (dBA $L_{eq}$) | Exceed? |
|---|---|---|---|
| R-1 | 53.4 | 60 | No |
| R-2 | 54.3 | 60 | No |
| R-3 | 54.8 | 60 | No |
| R-4 | 57.2 | 60 | No |
| R-5 | 54.4 | 60 | No |
| R-5b | 59.4 | 60 | No |
| R-6 | 54.2 | 60 | No |
| R-7 | 55.4 | 60 | No |
| R-8 | 54.6 | 60 | No |
| R-9 | 54.7 | 60 | No |
| R-9b | 56.4 | 60 | No |

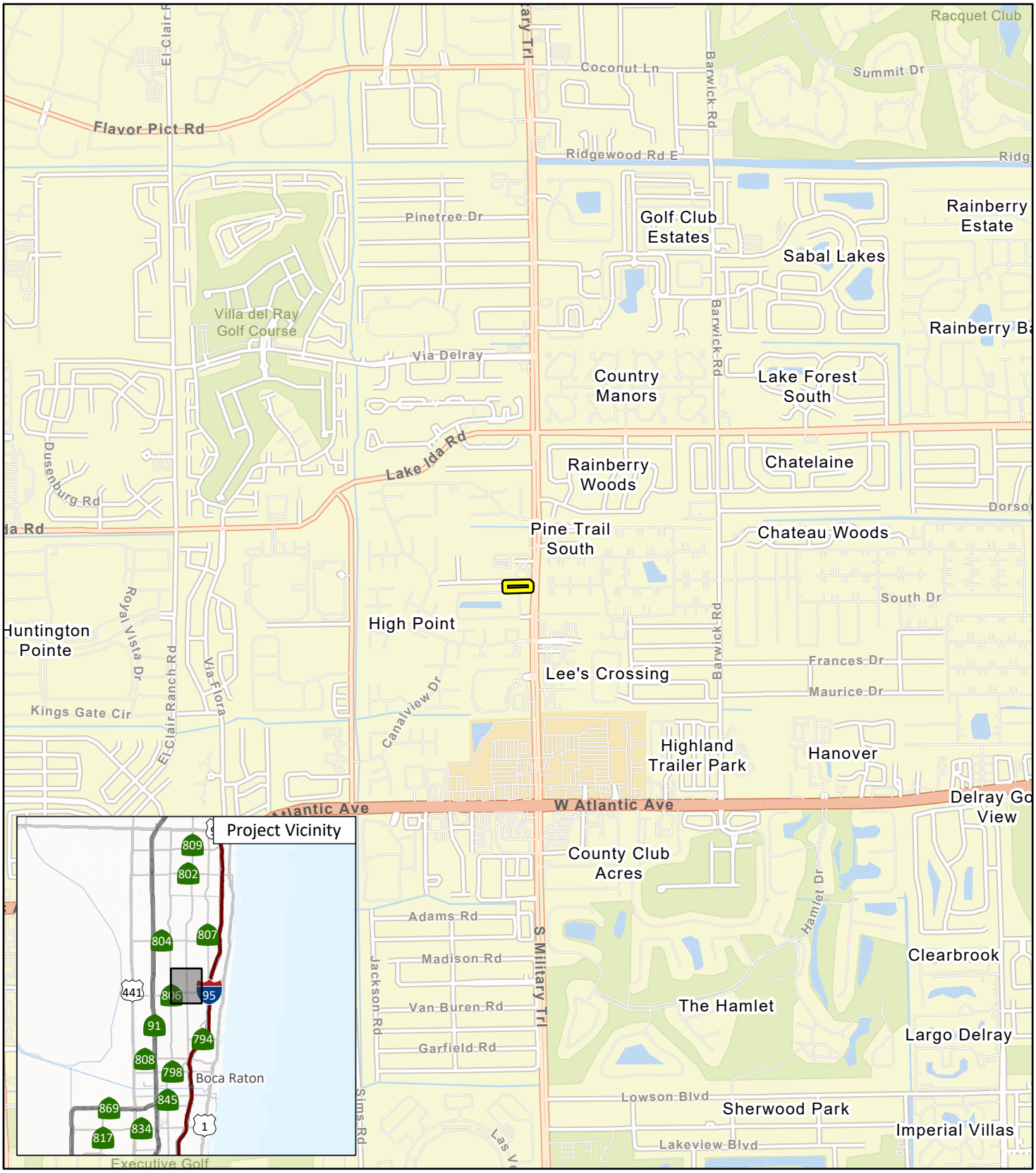
Source: Compiled by LSA (2025).
dBA = A-weighted decibels
$L_{eq}$ = equivalent continuous sound level

Attachments:
A: Figures
B: Noise Survey Sheets
C: Car Wash Dryer Blower Reference Noise Level
D: Car Wash With Silencers Reference Noise Level
E: Vacuum Reference Noise Level
F: Vacuum Producer and Air System Blower Reference Noise Level
G: SoundPLAN Operational Noise Level Exhibit

# ATTACHMENT A

# FIGURES

Figure 1: Project Location
Figure 2: Site Plan
Figure 3: Noise Monitoring Locations




LSA

Project Location

FIGURE 1

N

0 1000 2000

FEET

SOURCE: Esri Streets (2025)

I:\2024\20242069\GIS\Pro\Conklin Car Wash Project\Conklin Car Wash Project.aprx (4/10/2025)

*Conklin Car Wash Project*

Project Location

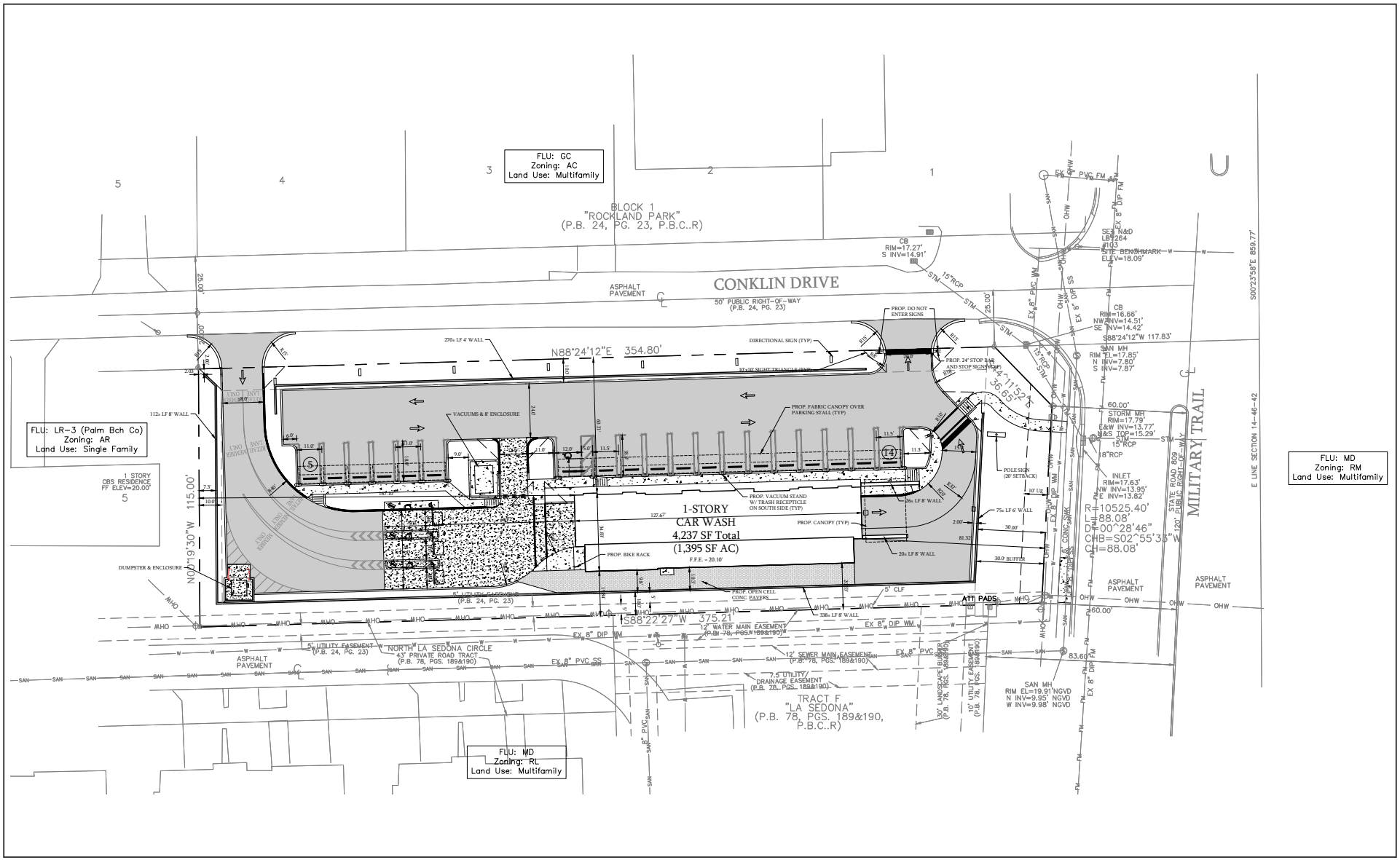



FIGURE 2

LSA

0 30 60

FEET

SOURCE: Urban Design Studio

I:\2024\20242069\G\Site_Plan.ai (7/28/2025)

*Conklin Car Wash Project*

Site Plan




LSA

FIGURE 3

LEGEND

Project Site Boundary

LT-1 Long-term Noise Monitoring Location

N

0 200 400

FEET

SOURCE: Google Earth 2025

*Conklin Car Wash Project*

Noise Monitoring Locations

I:\2024\20242069\G\Noise_Locs.ai (4/4/2025)

# ATTACHMENT B

# NOISE SURVEY SHEETS

# Noise Measurement Survey – 24 HR

Project Number: 20242069
Project Name: Conklin Car Wash

Test Personnel: Corey Knips
Equipment: LD Spark 706RC (SN: 17814)

Site Number: LT-1 Start Date: 4/1/2025

Time: From 10:00 a.m. To 10:00 a.m.

Site Location: Tire Kingdom, 14115 South Military Trail, Delray Beach, FL. On a tree on the south edge of the property, approximately 155 ft from South Military Trail centerline. North of the project site across Conklin Drive.

Primary Noise Sources: Traffic on South Military Trail, occasional vehicles on Conklin Drive, and activity at the body shop and the parking lot.

Comments:

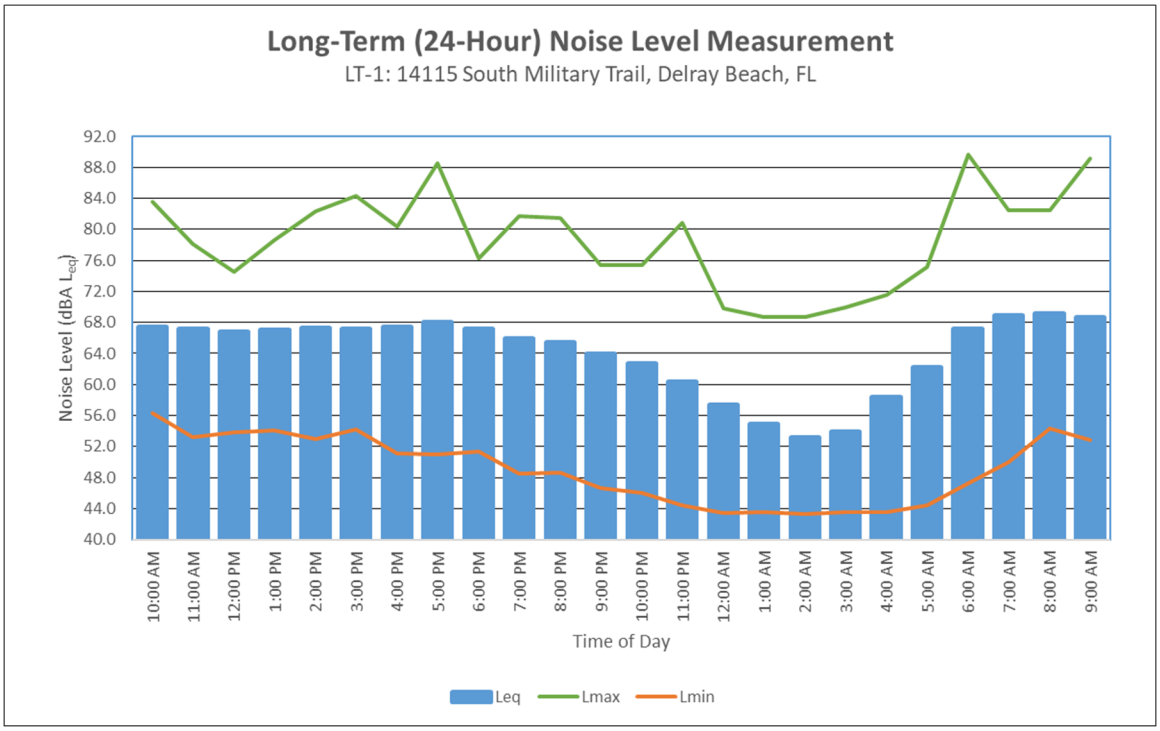
Photo:



## Long-Term (24-Hour) Noise Level Measurement Results at LT-1

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 10:00 AM | 4/1/2025 | 67.4 | 83.6 | 56.3 |
| 11:00 AM | 4/1/2025 | 67.2 | 78.1 | 53.2 |
| 12:00 PM | 4/1/2025 | 66.8 | 74.5 | 53.8 |
| 1:00 PM | 4/1/2025 | 67.0 | 78.6 | 54.1 |
| 2:00 PM | 4/1/2025 | 67.2 | 82.3 | 53.0 |
| 3:00 PM | 4/1/2025 | 67.2 | 84.3 | 54.2 |
| 4:00 PM | 4/1/2025 | 67.4 | 80.4 | 51.1 |
| 5:00 PM | 4/1/2025 | 68.0 | 88.5 | 51.0 |
| 6:00 PM | 4/1/2025 | 67.1 | 76.3 | 51.4 |
| 7:00 PM | 4/1/2025 | 65.9 | 81.7 | 48.5 |
| 8:00 PM | 4/1/2025 | 65.4 | 81.5 | 48.6 |
| 9:00 PM | 4/1/2025 | 64.0 | 75.4 | 46.7 |
| 10:00 PM | 4/1/2025 | 62.7 | 75.4 | 46.0 |
| 11:00 PM | 4/1/2025 | 60.3 | 80.9 | 44.4 |
| 12:00 AM | 4/2/2025 | 57.4 | 69.8 | 43.4 |
| 1:00 AM | 4/2/2025 | 54.9 | 68.7 | 43.6 |
| 2:00 AM | 4/2/2025 | 53.2 | 68.7 | 43.3 |
| 3:00 AM | 4/2/2025 | 53.9 | 70.0 | 43.6 |
| 4:00 AM | 4/2/2025 | 58.3 | 71.5 | 43.5 |
| 5:00 AM | 4/2/2025 | 62.2 | 75.2 | 44.4 |
| 6:00 AM | 4/2/2025 | 67.2 | 89.7 | 47.3 |
| 7:00 AM | 4/2/2025 | 68.8 | 82.5 | 50.0 |
| 8:00 AM | 4/2/2025 | 69.1 | 82.5 | 54.3 |
| 9:00 AM | 4/2/2025 | 68.7 | 89.1 | 52.8 |

Source: Compiled by LSA Associates, Inc. (2025).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: 20242069
Project Name: Conklin Car Wash

Test Personnel: Corey Knips
Equipment: LD Spark 706RC (SN: 17206)

Site Number: LT-2 Start Date: 4/1/2025

Time: From 10:00 a.m. To 10:00 a.m.

Site Location: 5260 NW 3rd Street, Delray Beach, FL. On a palm tree near the northwest corner of the building and approximately 120 feet from the Military Trail centerline. East of the project site across South Military Trail.

Primary Noise Sources: Traffic on South Military Trail and bird noise.

Comments:

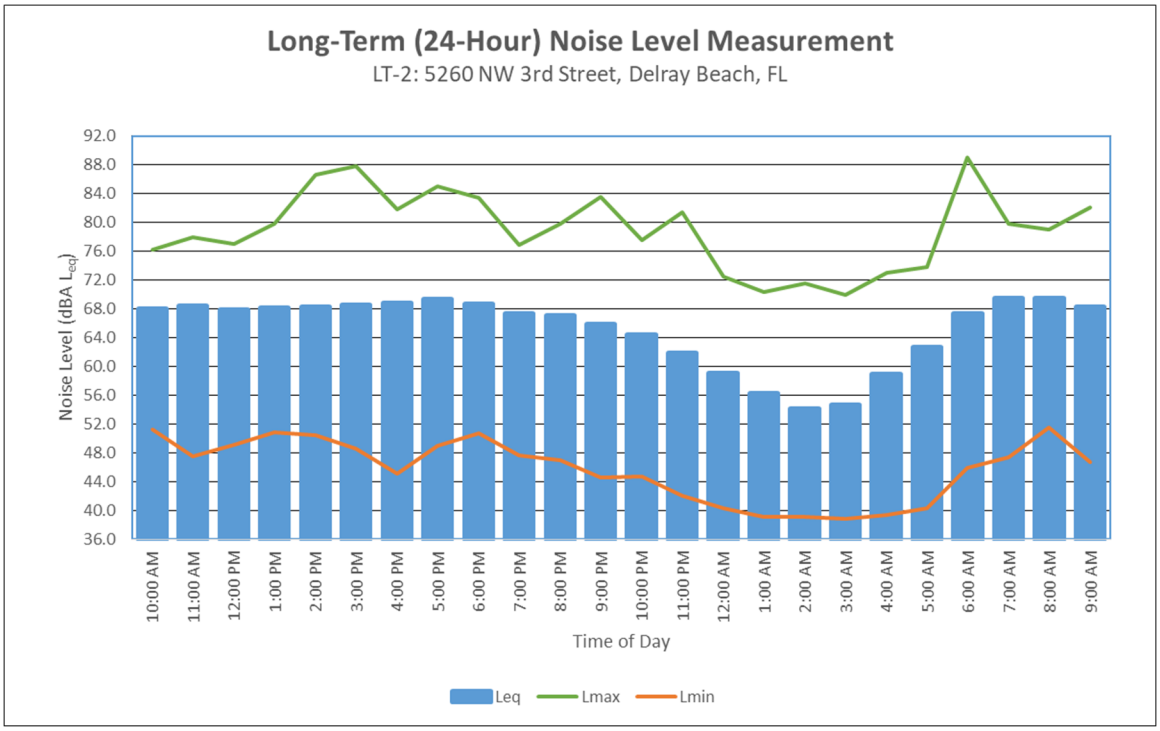
Photo:



## Long-Term (24-Hour) Noise Level Measurement Results at LT-2

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 10:00 AM | 4/1/2025 | 68.1 | 76.2 | 51.3 |
| 11:00 AM | 4/1/2025 | 68.4 | 78.0 | 47.5 |
| 12:00 PM | 4/1/2025 | 67.9 | 77.0 | 49.2 |
| 1:00 PM | 4/1/2025 | 68.1 | 79.9 | 50.9 |
| 2:00 PM | 4/1/2025 | 68.2 | 86.6 | 50.5 |
| 3:00 PM | 4/1/2025 | 68.6 | 87.9 | 48.6 |
| 4:00 PM | 4/1/2025 | 68.9 | 81.9 | 45.1 |
| 5:00 PM | 4/1/2025 | 69.4 | 85.1 | 49.0 |
| 6:00 PM | 4/1/2025 | 68.8 | 83.5 | 50.7 |
| 7:00 PM | 4/1/2025 | 67.4 | 76.9 | 47.7 |
| 8:00 PM | 4/1/2025 | 67.0 | 79.9 | 47.0 |
| 9:00 PM | 4/1/2025 | 65.9 | 83.6 | 44.6 |
| 10:00 PM | 4/1/2025 | 64.5 | 77.6 | 44.8 |
| 11:00 PM | 4/1/2025 | 61.9 | 81.4 | 42.1 |
| 12:00 AM | 4/2/2025 | 59.0 | 72.5 | 40.4 |
| 1:00 AM | 4/2/2025 | 56.3 | 70.4 | 39.2 |
| 2:00 AM | 4/2/2025 | 54.2 | 71.6 | 39.1 |
| 3:00 AM | 4/2/2025 | 54.7 | 70.0 | 38.9 |
| 4:00 AM | 4/2/2025 | 58.9 | 73.1 | 39.4 |
| 5:00 AM | 4/2/2025 | 62.7 | 73.8 | 40.4 |
| 6:00 AM | 4/2/2025 | 67.4 | 89.1 | 46.0 |
| 7:00 AM | 4/2/2025 | 69.5 | 79.9 | 47.4 |
| 8:00 AM | 4/2/2025 | 69.5 | 79.1 | 51.5 |
| 9:00 AM | 4/2/2025 | 68.3 | 82.1 | 46.7 |

Source: Compiled by LSA Associates, Inc. (2025).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: 20242069
Project Name: Conklin Car Wash

Test Personnel: Corey Knips
Equipment: LD Spark 706RC (SN: 17637)

Site Number: LT-3 Start Date: 4/1/2025

Time: From 10:00 a.m. To 10:00 a.m.

Site Location: 5020 North La Sedona Circle, Delray, FL on a palm tree near the northeast corner of the property. Approximately 195 feet from the Military Trail centerline. South of the project site.

Primary Noise Sources: Traffic on South Military Trail and occasional vehicles on La Sedona Circle.

Comments:

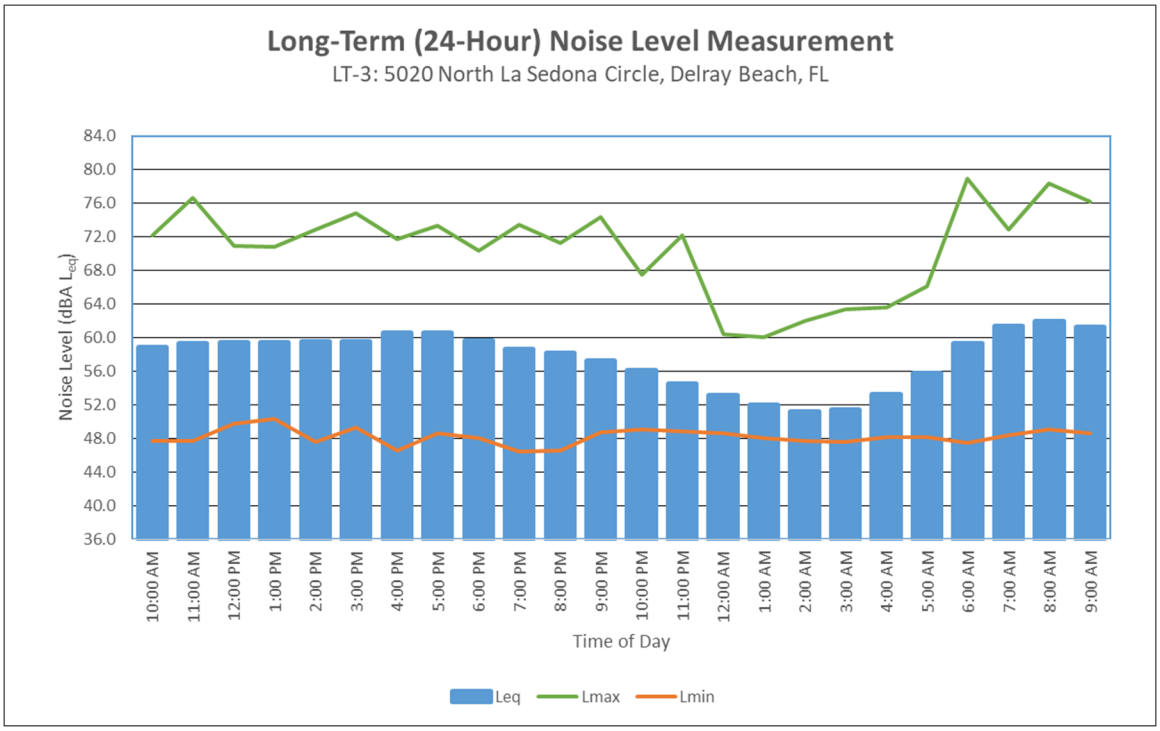
Photo:



## Long-Term (24-Hour) Noise Level Measurement Results at LT-3

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 10:00 AM | 4/1/2025 | 58.8 | 72.2 | 47.7 |
| 11:00 AM | 4/1/2025 | 59.4 | 76.7 | 47.7 |
| 12:00 PM | 4/1/2025 | 59.4 | 70.9 | 49.8 |
| 1:00 PM | 4/1/2025 | 59.5 | 70.8 | 50.3 |
| 2:00 PM | 4/1/2025 | 59.6 | 72.9 | 47.6 |
| 3:00 PM | 4/1/2025 | 59.5 | 74.8 | 49.3 |
| 4:00 PM | 4/1/2025 | 60.6 | 71.8 | 46.6 |
| 5:00 PM | 4/1/2025 | 60.6 | 73.3 | 48.6 |
| 6:00 PM | 4/1/2025 | 59.7 | 70.4 | 48.1 |
| 7:00 PM | 4/1/2025 | 58.7 | 73.5 | 46.5 |
| 8:00 PM | 4/1/2025 | 58.2 | 71.3 | 46.6 |
| 9:00 PM | 4/1/2025 | 57.2 | 74.4 | 48.8 |
| 10:00 PM | 4/1/2025 | 56.2 | 67.5 | 49.1 |
| 11:00 PM | 4/1/2025 | 54.6 | 72.2 | 48.9 |
| 12:00 AM | 4/2/2025 | 53.1 | 60.4 | 48.6 |
| 1:00 AM | 4/2/2025 | 52.0 | 60.1 | 48.1 |
| 2:00 AM | 4/2/2025 | 51.3 | 62.0 | 47.7 |
| 3:00 AM | 4/2/2025 | 51.4 | 63.4 | 47.6 |
| 4:00 AM | 4/2/2025 | 53.3 | 63.6 | 48.2 |
| 5:00 AM | 4/2/2025 | 55.8 | 66.1 | 48.2 |
| 6:00 AM | 4/2/2025 | 59.4 | 79.0 | 47.5 |
| 7:00 AM | 4/2/2025 | 61.4 | 72.9 | 48.4 |
| 8:00 AM | 4/2/2025 | 62.0 | 78.4 | 49.1 |
| 9:00 AM | 4/2/2025 | 61.3 | 76.2 | 48.6 |

Source: Compiled by LSA Associates, Inc. (2025).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# Noise Measurement Survey – 24 HR

Project Number: 20242069
Project Name: Delray Car Wash

Test Personnel: Corey Knips
Equipment: LD Spark 706RC (SN: 18571)

Site Number: LT-4 Start Date: 4/1/2025

Time: From 10:00 a.m. To 10:00 a.m.

Site Location: Near the southeast corner of 5098 Conklin Drive, Delray Beach, FL. On a utility pole at the fence line, approximately 440 feet from the Military Trail centerline. Near the southwest corner of the project site.

Primary Noise Sources: Traffic on South Military Trail and occasional vehicles on La Sedona Circle.

Comments:

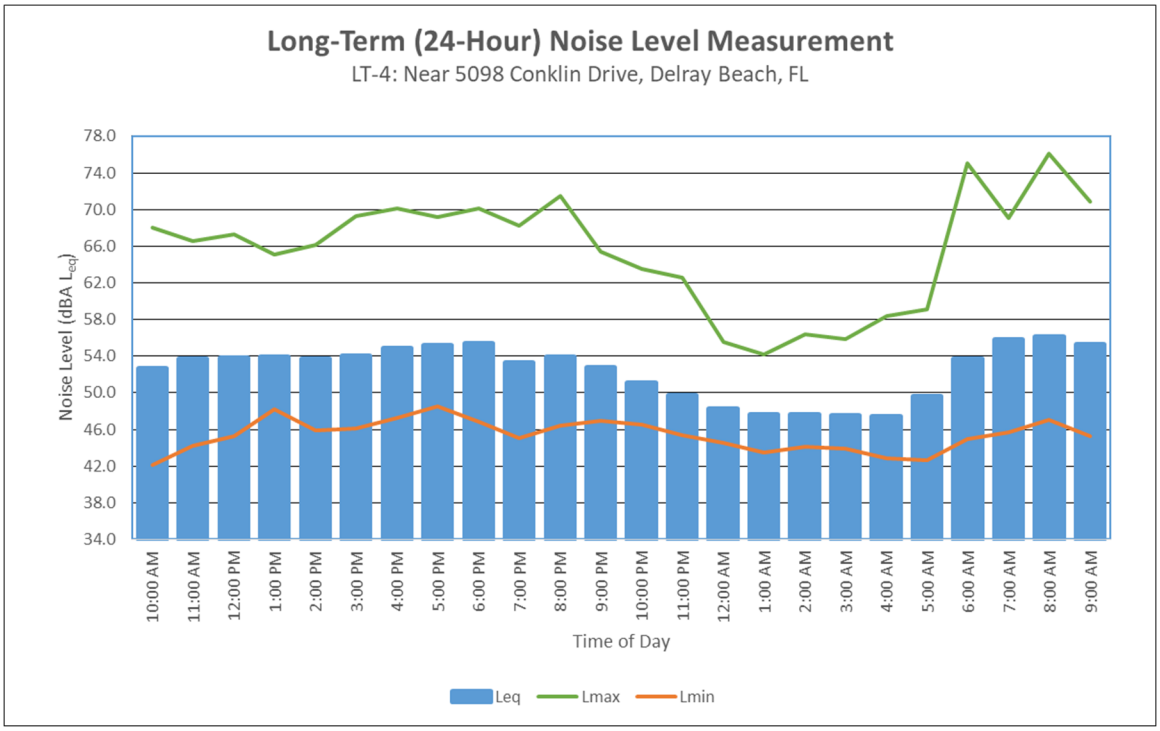
Photo:



## Long-Term (24-Hour) Noise Level Measurement Results at LT-4

| Start Time | Date | Noise Level (dBA) | | |
|---|---|---|---|---|
| | | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
| 10:00 AM | 4/1/2025 | 52.6 | 68.0 | 42.1 |
| 11:00 AM | 4/1/2025 | 53.7 | 66.6 | 44.2 |
| 12:00 PM | 4/1/2025 | 53.8 | 67.3 | 45.3 |
| 1:00 PM | 4/1/2025 | 53.9 | 65.1 | 48.2 |
| 2:00 PM | 4/1/2025 | 53.7 | 66.1 | 45.9 |
| 3:00 PM | 4/1/2025 | 54.0 | 69.3 | 46.1 |
| 4:00 PM | 4/1/2025 | 54.9 | 70.1 | 47.3 |
| 5:00 PM | 4/1/2025 | 55.2 | 69.2 | 48.5 |
| 6:00 PM | 4/1/2025 | 55.4 | 70.1 | 46.8 |
| 7:00 PM | 4/1/2025 | 53.3 | 68.2 | 45.1 |
| 8:00 PM | 4/1/2025 | 53.9 | 71.5 | 46.4 |
| 9:00 PM | 4/1/2025 | 52.7 | 65.4 | 46.9 |
| 10:00 PM | 4/1/2025 | 51.1 | 63.5 | 46.5 |
| 11:00 PM | 4/1/2025 | 49.7 | 62.6 | 45.4 |
| 12:00 AM | 4/2/2025 | 48.3 | 55.5 | 44.5 |
| 1:00 AM | 4/2/2025 | 47.6 | 54.2 | 43.5 |
| 2:00 AM | 4/2/2025 | 47.6 | 56.4 | 44.1 |
| 3:00 AM | 4/2/2025 | 47.5 | 55.9 | 43.9 |
| 4:00 AM | 4/2/2025 | 47.4 | 58.4 | 42.9 |
| 5:00 AM | 4/2/2025 | 49.6 | 59.1 | 42.7 |
| 6:00 AM | 4/2/2025 | 53.7 | 75.1 | 45.0 |
| 7:00 AM | 4/2/2025 | 55.9 | 69.1 | 45.7 |
| 8:00 AM | 4/2/2025 | 56.1 | 76.1 | 47.1 |
| 9:00 AM | 4/2/2025 | 55.3 | 70.9 | 45.3 |

Source: Compiled by LSA Associates, Inc. (2025).
dBA = A-weighted decibel
$L_{eq}$ = equivalent continuous sound level
$L_{max}$ = maximum instantaneous noise level
$L_{min}$ = minimum measured sound level



# ATTACHMENT C

# CAR WASH DRYER BLOWER REFERENCE NOISE LEVEL

# Noise Measurement Survey

Project Number: 20252186
Project Name: MCW Springbrook
Test Personnel: Moe Abushanab
Equipment: Larson Davis Lxt SE

Site Number: 1-50 Date: 2/12/25 Time: From 9:00 am To 10:45 am

Site Location: Mr. Car Wash at 8501 Springbrook Drive in Coon Rapids, Minnesota

Primary Noise Sources: Car wash tunnel blowers at entrance and exit.

Measurement Results:

| No. | Tunnel Entrance Noise Level (dBA $L_{eq}$) | No. | Tunnel Exit Noise Level (dBA $L_{eq}$) | Diagram |
|---|---|---|---|---|
| 1 | 78.5 | 26 | 87.9 |  |
| 2 | 86.6 | 27 | 93.1 | |
| 3 | 87.9 | 28 | 94.8 | |
| 4 | 87.0 | 29 | 94.0 | |
| 5 | 80.1 | 30 | 88.6 | |
| 6 | 81.3 | 31 | 87.8 | |
| 7 | 85.0 | 32 | 91.1 | |
| 8 | 86.1 | 33 | 92.1 | |
| 9 | 83.4 | 34 | 91.5 | |
| 10 | 80.4 | 35 | 88.1 | |
| 11 | 78.7 | 36 | 86.9 | |
| 12 | 83.8 | 37 | 88.6 | |
| 13 | 83.3 | 38 | 89.6 | |
| 14 | 82.3 | 39 | 89.1 | |
| 15 | 80.3 | 40 | 86.3 | |
| 16 | 80.8 | 41 | 84.6 | |
| 17 | 80.6 | 42 | 87.6 | |
| 18 | 81.5 | 43 | 88.5 | |
| 19 | 80.8 | 44 | 88.1 | |
| 20 | 78.5 | 45 | 85.6 | |
| 21 | 77.4 | 46 | 83.8 | |
| 22 | 79.1 | 47 | 85.7 | |
| 23 | 79.7 | 48 | 86.6 | |
| 24 | 80.0 | 49 | 86.0 | |
| 25 | 78.8 | 50 | 83.7 | |



[1] Reference noise level measurements were conducted starting at a distance of 5 feet from the building and 5 feet apart from each location.

Location Photo:



# ATTACHMENT D

# CAR WASH WITH SILENCERS REFERENCE NOISE LEVEL

## *Project Description*

This report presents the results of a second round of acoustical tests performed on Sonny's Car Wash dryer blowers and client-designed and installed prototype silencers. The first round of acoustical tests was described in a previous report, *Sonny's Car Wash Dryer Blowers Noise Assessment*, dated 2/16/18.

In this round of tests, the silencers were installed on the dryer blowers at Prestige Car Wash located at 4921 N. University Drive, Lauderhill, Florida. As shown in **Photos 1 and 2**, Prestige is an active car wash in commercial operation. The noise tests were performed after operating hours on 10/3/18 to minimize noise sources in the car wash not attributable to the blowers.




**Photo 1. Prestige Car Wash Entry Portal**




**Photo 2. Prestige Car Wash Exit Portal**

## *Noise Measurement Procedure*

The procedure followed in this second round of acoustical tests involved performing calibrated A-weighted broadband and third-octave band noise measurements both with and without the prototype silencers attached to the dryer blowers. As shown in **Figure 1**, noise measurements were performed at nine measurement positions (M0 thru M8) inside, outside and in the vicinity of Prestige Car Wash. The nine positions can be described as follows:




M0 - Inside tunnel towards exit
M1 - Tunnel exit portal (east)
M2 - Outside tunnel in direct line from exit
M3 - Outside tunnel in direct line from exit
M4 - Tunnel entrance portal (west)
M5 - Building facade property to south
M6 - Northern property line
M7 - Outside tunnel in line from entrance
M8 - Inside office/waiting room area

**Figure 1. Noise Measurement Positions**

The noise measurement instrumentation consisted of a Svantek Model 971 Sound Level Analyzer using a Svantek 7052E Precision Microphone covered with a 3½-inch windscreen. The SVAN-971 was programmed to measure and store Leq noise data in 1-minute samples using an RMS 'slow' time response. The SVAN-971 computed broadband sound levels in unweighted (dBZ) and A-weighted (dBA) decibels, and computed the unweighted third-octave band $L_{eq}$ levels from 20 Hz to 20 kHz. The noise measurement system was calibrated with a Larson Davis Model 150 Calibrator, and complies with ANSI Standard S1.4 for Type 1 quality and accuracy.

Data reduction and post-processing consisted of comparing the broadband A-weighted and third-octave band results measured with and without the silencers at each measurement position. The noise reduction (dBNR) is the difference in decibels between the two measured noise levels. Attempts were made to maintain consistency with as many variables as possible between the two noise measurements; however, background traffic noise did contribute slightly to some of the outdoor readings.

As shown in **Photo 3**, the dryer blowers are typical backward centrifugal air fans. The impellers spin at 3,600 RPM, and each fan has one impeller with 11 blades. Barring other effects, this would lead to expected higher noise emission levels in the 60 Hz, 120 Hz, 180 Hz, 630 Hz and 1,250 Hz third-octave frequency bands. As shown in **Photo 4**, the prototype silencers consisted of acoustically lined cylindrical covers attached to the air intake-side of the blowers. No noise control modifications were performed on the air exhaust-side of the blowers.



**Photo 3. Dryer Blowers Without Silencers**



**Photo 2. Dryer Blowers With Silencers**

### *Noise Results and Findings*

The results of the second round of acoustical tests of the dryer blower prototype silencers can be seen in **Table 1**. The magnitude of noise reduction attributable to the prototype silencers ranged from 1.1 to 4.5 dBNR depending on measurement position. The positions yielding the most noise reduction were those in line with the tunnel exit side of the blowers. The least noise reduction was found in line with the tunnel entrance side. This asymmetry could be attributable to the acoustical directivity of the blowers.

**Figures 2 thru 10** show the A-weighted broadband and third-octave band results with and without the silencers for each measurement position. The noise reduction is the difference between the two plotted curves.

All results presented in the table and figures are shown in A-weighted decibels (dBA) so that visual results would correlate better with how humans would perceive the given sounds over the full audio spectrum. Presenting the results in A-weighted decibels also allows for easier identification of the louder frequency bands that would benefit the most from subsequent noise control efforts.

**Table 1. Sonny's Dryer Blower Silencers Acoustical Test Results (Round 2)**

| Sonny's Car Wash Blower and Silencer Noise Measurement Tests 10/3/18 | | | | | | |
|---|---|---|---|---|---|---|
| Prestige Car Wash - 4921 N. University Drive, Lauderhill, FL 33351 | | | | | | |
| **Site No.** | **Distance to Blowers* (feet)** | **Noise Measurement Site Location** | **Traffic Noise Influence**** | **Noise Level No Silencers dBA Leq** | **Noise Level With Silencers dBA Leq** | **Approx. Noise Reduction dBNR** |
| M0 | 8 | Inside tunnel near blowers towards exit | No | 99.7 | 96.9 | 2.8 |
| M1 | 22 | Tunnel exit portal (east) | No | 96.3 | 92.8 | 3.6 |
| M2 | 51 | Outside tunnel in direct line from exit | Slightly | 84.8 | 80.3 | 4.5 |
| M3 | 95 | Outside tunnel in direct line from exit | Yes | 78.4 | 74.1 | 4.3 |
| M4 | 68 | Tunnel entrance portal (west) | No | 88.3 | 87.1 | 1.1 |
| M5 | 110 | Building facade adjacent property to south | Yes | 65.7 | 63.2 | 2.5 |
| M6 | 83 | Northern property line | Yes | 69.7 | 66.7 | 3.1 |
| M7 | 99 | Outside tunnel in direct line from entrance | No | 77.7 | 76.5 | 1.2 |
| M8 | 10 | Inside office/waiting room area | No | 67.9 | 66.1 | 1.7 |
| *Blowers are located approximately 22 feet inside the car wash tunnel exit and approximately 68 feet inside the tunnel entrance. | | | | | | |
| **Traffic noise from N. University Drive NB & SB movements did have an impact on some noise measurements that were farther away from the blower noise. | | | | | | |

# ATTACHMENT E

# VACUUM REFERENCE NOISE LEVELS

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

**AZ Office**
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249
p. (602) 774-1950

**CA Office**
1197 Los Angeles Ave, Ste C-256
Simi Valley, CA 93065
p. (805) 426-4477

**Project:** SuperStar Car Wash Chula Vista
**Site Location:** 1555 W Warner Rd, Gilbert, AZ 85233
**Date:** 4/5/2018
**Field Tech/Engineer:** Robert Pearson
**Source/System:** Vacutec System

**Location:** Vac Bay 1
**Sound Meter:** NTi XL2 **SN:** A2A-05967-E0
**Settings:** A-weighted, slow, 1-sec, 10-sec duration
**Meteorological Cond.:** 80 degrees F, 2 mph wind

**Site Observations:**
Clear sky, measurements were performed within 1.5ft of source. Measurements were performed while the vacuum was positiioned at three (3) different positions. Holstered, unholstered and inside a car. This data is utilized for acoustic modeling purposes and represents an average sound level at a vacuum station.

**Table 1: Summary Measurement Data**

| Source | System | Overall dB(A) | 3rd Octave Band Data (dBA) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1K | 1.25K | 1.6K | 2K | 2.5K | 3.15K | 4K | 5K | 6.3K | 8K | 10K | 12.5K | 16K | 20K |
| Vacutech (Holstered) | Vacuum | 63.3 | 9 | 17 | 22 | 29 | 31 | 35 | 40 | 41 | 44 | 43 | 46 | 48 | 47 | 49 | 51 | 51 | 51 | 52 | 53 | 52 | 52 | 50 | 52 | 53 | 50 | 47 | 47 | 48 | 45 | 39 | 30 |
| Vacutech (Unholstered) | Vacuum | 80.7 | 6 | 19 | 22 | 28 | 34 | 37 | 40 | 43 | 47 | 46 | 48 | 48 | 48 | 49 | 54 | 55 | 58 | 58 | 62 | 65 | 68 | 70 | 74 | 75 | 73 | 69 | 67 | 65 | 63 | 60 | 55 |
| Vacutech (Inside Car) | Vacuum | 69.6 | 16 | 28 | 31 | 38 | 42 | 45 | 49 | 51 | 52 | 55 | 60 | 61 | 57 | 55 | 59 | 53 | 55 | 56 | 54 | 57 | 57 | 57 | 57 | 57 | 55 | 54 | 51 | 48 | 46 | 42 | 36 |
| Average Level* | Vacuum | 76.3 | 13 | 24 | 28 | 34 | 38 | 41 | 45 | 47 | 49 | 51 | 56 | 57 | 53 | 52 | 56 | 54 | 56 | 56 | 59 | 61 | 64 | 66 | 69 | 70 | 68 | 64 | 62 | 60 | 58 | 55 | 50 |

* Refers to the logarithmic average of all measurements. This measurement represents an average of the multiple vacuum positions.

**Figure 1: Example Measurement Position**

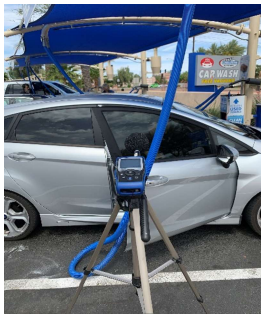
**Figure 1: Holstered**

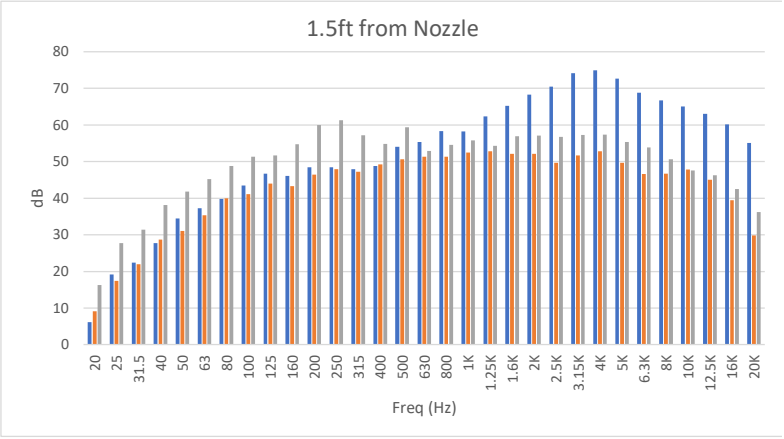



**Figure 2: Unholstered**



**Figure 3: Inside Car**



# ATTACHMENT F

# VACUUM PRODUCER AND AIR SYSTEM BLOWER REFERENCE NOISE LEVELS

# EQUIPMENT DECIBEL CERTIFICATION

This is to certify that the following AutoVAC equipment was measured with the following decibel levels of noise emission (+/- 2dB) in accordance with ISO 2151:2004. These ratings are taken at 15 feet from the machine with no background noise or outside interference in a 50 x 50ft interior room.

| VACUUM PRODUCER | | | | | |
|---|---|---|---|---|---|
| **HORESPOWER** | **STAGE** | **START/RUN dB WITH VFD** | **START dB NO VFD** | **SERIAL NO** | **PASS/FAIL** |
| 10 | 3 | 64 | 84 | | |
| 15 | 4 | 66 | 88 | | |
| 20 | 5 | 66 | 88 | | |
| 25 | 6 | 72 | 92 | | |
| 30 | 7 | 74 | 92 | | |
| 40 | 8 | 76 | 95 | | |

| BLOWER | | | | |
|---|---|---|---|---|
| **HORESPOWER** | **START/RUN dB WITH VFD** | **START dB NO VFD** | **SERIAL NO** | **PASS/FAIL** |
| 15 | 72 | 85 | | |

Equipment Used to measure decibel levels

| EQUIPMENT | MANUFACTURER | MODEL NO | SERIAL NO |
|---|---|---|---|
| Sound Level Meter | Extech Instruments | 407730 | 9848853 |

Certified By: Danny Stewart Date: 4/16/2025

This certificate does not claim product approval or endorsement by NVLAP, NIST or any agency of the Federal Government. If you have any further questions, please contact AutoVAC at our toll free number 888-628-8682.

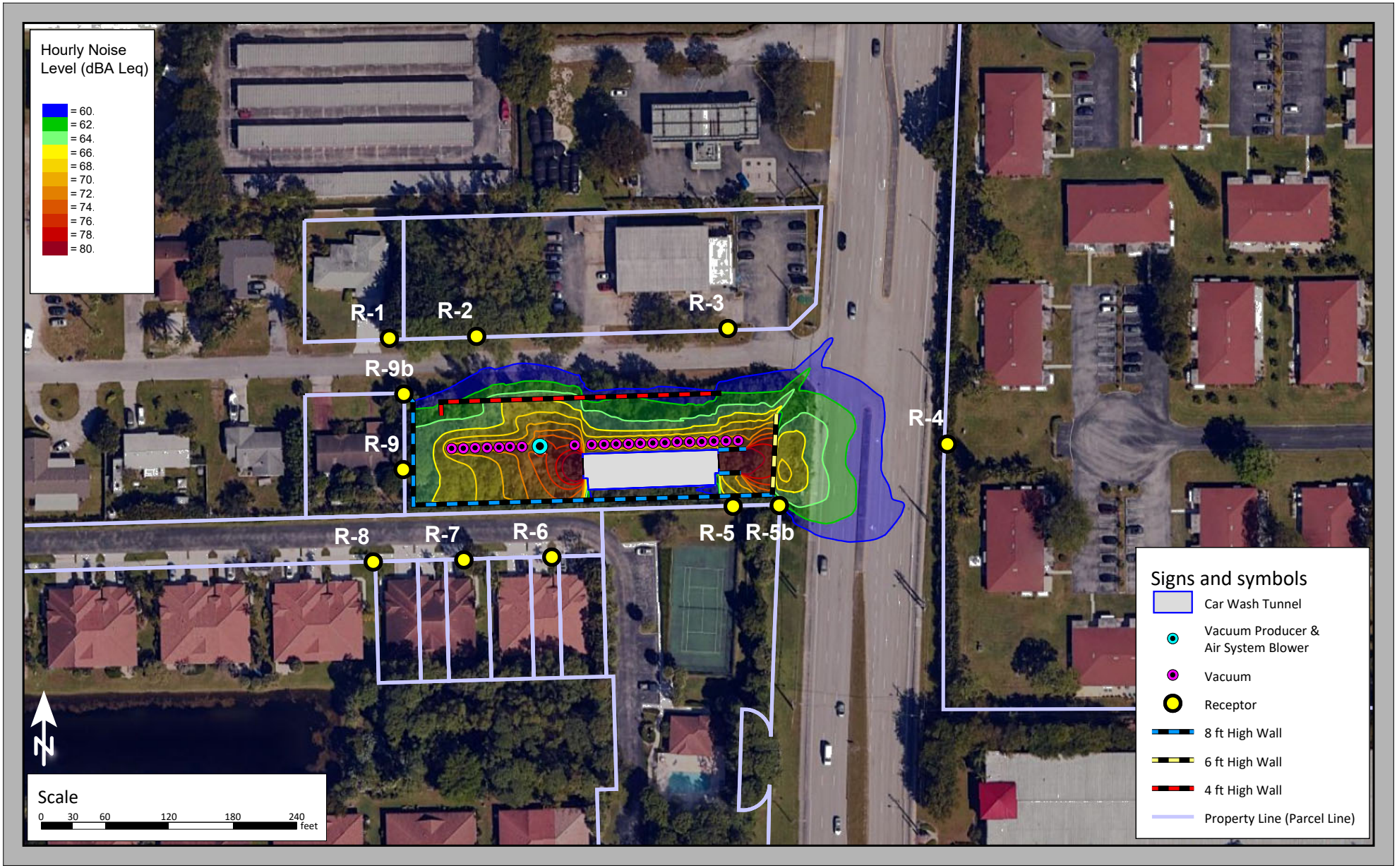
# ATTACHMENT G

# SOUNDPLAN OPERATIONAL NOISE LEVEL EXHIBIT

# Conklin Car Wash

Project No. 20242069

Project Operational Noise Levels



**Engineering and Public Works Department**
P.O. Box 21229
West Palm Beach, FL 33416-1229
(561) 684-4000
FAX: (561) 684-4050
www.pbc.gov

**Palm Beach County Board of County Commissioners**
Maria G. Marino, Mayor
Sara Baxter, Vice Mayor
Gregg K. Weiss
Joel Flores
Marci Woodward
Maria Sachs
Bobby Powell, Jr.

**County Administrator**
Verdenia C. Baker

*"An Equal Opportunity Affirmative Action Employer"*

printed on sustainable and recycled paper

January 30, 2025

Andrea M Troutman, P.E.
Pinder Troutman Consulting, Inc.,
601 Heritage Dr, Suite 493
Jupiter, FL 33458

**RE: 14145 S Military Trail**
**Project #: 250118**
**Traffic Performance Standards (TPS) Review**

Dear Ms. Troutman:

The Palm Beach County Traffic Division has reviewed the above referenced project Traffic Impact Statement, dated October 29, 2024, pursuant to the Traffic Performance Standards in Article 12 of the Palm Beach County (PBC) Unified Land Development Code (ULDC). The project is summarized as follows:

| | |
|---|---|
| **Municipality:** | Delray Beach |
| **Location:** | Westside of Military Trail, South of Lake Ida Road |
| **PCN:** | 12-42-46-14-03-002-0010 |
| **Access:** | One ingress access driveway and one egress access driveway to Conklin Drive (As used in the study and is NOT necessarily an approval by the County through this TPS letter) |
| **Existing Uses:** | Vacant |
| **Proposed Uses:** | Carwash (Automatic) = 1 Lane |
| **New Daily Trips:** | 166 |
| **New Peak Hour Trips:** | 12 (6/6) AM; 14 (7/7) PM |
| **Build-out:** | December 31, 2027 |

Based on the review, the Traffic Division has determined the proposed development generates less than 21 peak hour trips. Therefore, a detailed traffic study is not required. The project **meets** the Traffic Performance Standards.

Please note the receipt of a TPS approval letter does not constitute the review and issuance of a Palm Beach County Right-of-Way (R/W) Construction Permit nor does it eliminate any requirements that may be deemed as site related. For work within Palm Beach County R/W, a detailed review of the project will be provided upon submittal for a R/W permit application. The project is required to comply with all Palm Beach County standards and may include R/W dedication.

No building permits are to be issued by the City after the build-out date specified above. The County traffic concurrency approval is subject to the Project Aggregation Rules set forth in the Traffic Performance Standards Ordinance.

The approval letter shall be valid no longer than one year from date of issuance, unless an application for a Site Specific Development Order has been approved, an application for a Site Specific Development Order has been submitted, or the approval letter has been superseded by another approval letter for the same property.

If you have any questions regarding this determination, please contact me at 561-478-5755 or email MRahman@pbc.gov.

Sincerely,

Moshiur Rahman, Ph.D., P.E.
Professional Engineer
Engineering and Public Works Dept.
Traffic Division

MR:QB:ep
ec: Addressee
Anthea Gianniotes, AICP, Director of Development Services, City of Delray Beach
Quazi Bari, P.E., PTOE, Manager - Growth Management, Traffic Division
Alberto Lopez Tagle, Technical Assistant III, Traffic Division

File: General - TPS - Mun - Traffic Study Review
F:\TRAFFIC\MR\MUNICIPALITIES\APPROVED\2025\250118 14145 S MILITARY TRAIL.DOCX