



**City of Pembroke Pines**  
**Planning & Economic Development Department**  
**601 City Center Way 3<sup>rd</sup> Floor**  
**Pembroke Pines FL, 33025**

## Summary

<b>Agenda Date:</b>	June 27, 2019	<b>Application ID:</b>	SP 2019-05
<b>Project:</b>	Bergeron Park of Commerce South 15.25 Acre Storage	<b>Project Number:</b>	PRJ 2019-07
<b>Project Planner:</b>	Joseph Yaciuk, Planning Administrator		
<b>Owner:</b>	Bergeron Park of Commerce South Family LTD Partnership	<b>Agent:</b>	Bill Barbaro
<b>Location:</b>	South of Stirling Road and west of Southwest 196 Avenue		
<b>Existing Zoning:</b>	M-3 (General Industrial)	<b>Existing Land Use:</b>	Industrial
<b>Reference Applications:</b>	SP 2018-14 (Withdrawn), SP 2017-12, MSC 2018-12		
<b>Applicant Request:</b>	Construction of outdoor industrial storage with associated office trailer, parking, and security fencing.		
<b>Staff Recommendation:</b>	Approval.		
<b>Final:</b>	<input checked="" type="checkbox"/> Planning & Zoning Board	<input type="checkbox"/> City Commission	
<b>Reviewed for the Agenda:</b>	Director: <u></u>	Planning Administrator: <u></u>	

## **Project Description / Background**

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Bill Barbaro, agent for owner Bergeron Park of Commerce South Family LTD Partnership, submitted a site plan application for the construction of outdoor industrial storage with associated office trailer, parking, and security fencing. The proposed 15.25-acre parcel is generally located south of Stirling Road and west of Southwest 196 Avenue. It is the intent of the owner to lease the subject parcel to one tenant for auto auction use.

On June 22, 2017 the Planning and Zoning Board approved with conditions a site plan amendment application (SP 2017-12) for the development of an outdoor industrial storage facility with site perimeter fencing and landscaping for the property. The approval allowed for the flexibility for tenants to lease one acre or larger storage spaces on site. The approved plan required all tenant storage areas to be enclosed by 6-foot high, chain link fences. These fences may be modified throughout the site by building permit only as long as the minimum lot size requirements and associated building, engineering and fire access requirements are met. The approval also included the installation of perimeter landscape. As part of that approval, the applicant voluntarily agreed to return to the Board for consideration of associated sales trailers / permanent structures and parking areas for future tenants should that need arise.

On June 21, 2018, the applicant modified their outdoor storage plan for this property (MSC 2018-12) by reducing the overall size of the Bergeron Outdoor Storage South storage area from the originally approved 52.6 acres to 48.4 acres to accommodate two tenants. The first tenant, Insurance Auto Auctions, currently occupies an "L" shaped +/-37 acres parcel that is generally located along the entire western most portion and all of the land south of Sylvan Pass (private) of the Bergeron Outdoor Storage South site. The site will be used as additional storage of vehicles similar to their existing location in Bergeron Park of Commerce North. The remaining property within that plan is a rectangular shaped parcel that is generally located south of Republic Pass (private) and immediately east of the Insurance Auto Auctions. The site has yet to be leased.

Earlier this year, City staff received an application (SP 2018-14 – Bergeron Distribution Building #2) to build a distribution facility building on the subject parcel of similar design to the building which was recently completed at the southwest corner of Stirling Road and Southwest 196 Avenue. The proposed site plan was withdrawn during the staff review process by the owner and replaced with the proposed application.

### **BUILDINGS / STRUCTURES:**

Bergeron will be installing perimeter fencing and one (1), 13 foot high, trailer office (William Scotsman - 60' x 20' (1200 square feet) with ADA accessible ramp and associated parking areas. The trailer will be white with blue trim.

### **ACCESS:**

Access to this storage site will be through two driveways along Southwest 196 Avenue. The southernmost driveway will provide secure access to the proposed office trailer while the driveway to the north will provide main secured access to the storage area.

## **PARKING:**

The applicant proposes 11 parking spaces on site where 5 parking spaces are required based on Code. Parking will be provided to the south of the proposed trailer as depicted within the site plan.

## **LANDSCAPING:**

The Southwest 196 Avenue bufferyard for this site, consisting of Silver Buttonwood trees, Clusia hedge, and an 8 foot high chainlink fence with privacy screening; was approved as part of the original outdoor storage application (SP 2017-12). During review of that site plan, Bergeron voluntarily agreed to continue that perimeter landscaping theme fronting SW 196<sup>th</sup> Avenue (from Bergeron Distribution Center to the north to the existing US Post Office to the south of the site), creating a buffer theme along the road. The Southwest 196 Avenue perimeter plantings approved comply with Code requirements for the subject site.

In addition to the buffering already approved above, Bergeron has voluntarily agreed with this submittal to enhance the currently approved Southwest 196 Avenue buffer along this site above and beyond Code requirements by adding 48 Green Buttonwood trees along Southwest 196 Avenue. The Green Buttonwood trees will be planted at 12' height and will provide additional screening on the site from the residential property to the east.

- In total, the site will contain the following landscape:
- 48 Green Buttonwoods Trees
- 48 Silver Buttonwood Trees,
- 8 Crape Myrtles on the corners entries
- 1,967 Clusia Hedges

## **OTHER SITE FEATURES:**

The proposed parking area will be illuminated by three (3) concrete pole mounted full cut off fixtures (30 feet in height). The remaining storage area will not be lit and is not required to be illuminated per Code requirements. Lighting, as proposed, must comply with Section 116 of the Code of Ordinances.

**Staff has reviewed the proposed site plan and finds that the proposal meets code requirements. Staff therefore recommends approval of this application.**

**Enclosed:**

- Site Plan Application
- Memo from Planning Division (6/19/19)
- Memo from Zoning Administrator (6/19/19)
- Email from SBDD (6/19/19)
- Memo from Fire Prevention Bureau (6/10/19)
- Memo from Environmental Services (6/4/19)
- Memo from SBDD (6/3/19)
- Memo from Zoning Administrator (5/30/19)

Memo from Planning Division (5/29/19)  
Memo from Landscape Planner (5/29/19)  
Memo from Fire Prevention Bureau (5/29/19)  
Site Plan  
Subject Site Aerial Photo

## **PLANNING DIVISION STAFF COMMENTS**

### **Memorandum:**

**Date:** June 19, 2019  
**To:** SP 2019-05 file  
**From:** Joseph Yaciuk, Planning Administrator  
**Re:** Bergeron South 15.25 Acres

**Items which do not conform with the City of Pembroke Pines Code of Ordinances or other Governmental Regulations:**

ALL OF MY COMMENTS HAVE BEEN ADDRESSED

**Recommendations:** N/A

**Yaciuk, Joseph**

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**Subject:** FW: 190411 SP2019-05 / Bergeron 15.25 Acre Parcel / Response to DRC SBDD Comments

**From:** Kevin Hart [mailto:[kevin@sbdd.org](mailto:kevin@sbdd.org)]  
**Sent:** Wednesday, June 19, 2019 1:46 PM  
**To:** Yaciuk, Joseph <[jyaciuk@ppines.com](mailto:jyaciuk@ppines.com)>  
**Cc:** Frank Saia <[fsaia@bergeroninc.com](mailto:fsaia@bergeroninc.com)>; Bill Barbaro <[BBarbaro@cpc-eng.com](mailto:BBarbaro@cpc-eng.com)>; Marc Tolliver <[MTolliver@cpc-eng.com](mailto:MTolliver@cpc-eng.com)>; Pam Walsh <[Pam@SBDD.org](mailto:Pam@SBDD.org)>  
**Subject:** RE: 190411 SP2019-05 / Bergeron 15.25 Acre Parcel / Response to DRC SBDD Comments

Joe,

Please be advised that the applicant has addressed SBDD's DRC comments on the site plan for this project.

A Paving & Drainage Permit will be required from SBDD and all District criteria will need to be met.

Thanks.

Kevin Hart, P.E., CFM  
District Director  
South Broward Drainage District  
6591 Southwest 160th Avenue  
Southwest Ranches, FL 33331  
954-680-3337 (office)  
e-mail: [kevin@sbdd.org](mailto:kevin@sbdd.org)

## **DRC REVIEW FORM**

**PEMBROKE PINES FIRE RESCUE**

**FIRE PREVENTION BUREAU**

**FIRE PLANS EXAMINER BY:** Sandra Lluis, Fire Marshal  
(954) 499-9560

**PROJECT NAME:** Bergeron 15.25 Acre Parcel

**REFERENCE #:** SP 2019-05

**DATE REVIEWED:** June 10, 2019

**CONFORMS TO THE CITY OF PEMBROKE PINES FIRE DEPARTMENT STANDARDS**

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YOU HAVE SATISFIED THE FIRE DEPARTMENT'S CONCERNs REGARDING THE SITE PLAN REVIEW.

Plan review approved contingent COPP Engineering verification of the following:

1. Fire Hydrant installation on a minimum of an eight – inch looped water line in city rights-of-way or easement.
2. Turning Radius
3. All-weather driving surface to support the imposed load of fire apparatus weight a minimum of 32 tons.

Hardcopies from June 10<sup>th</sup>, 2019 meeting to be submitted.

**CITY OF PEMBROKE PINES  
PUBLIC SERVICES DEPARTMENT  
ENVIRONMENTAL SERVICES/ENGINEERING DIVISION**

## **DRC REVIEW FORM**



**JUNE 4, 2019**

**PROJECT: BERGERON 15.25 ACRE PARCEL SP 2019-05**

**To: Cole Williams, Planner  
Planner/Zoning Technician, Planning and Economic Development Department**

**From: KARL KENNEDY, P.E.  
Environmental Services/Engineering Division, Public Services Department  
(954) 518-9044**

**RECOMMENDATIONS:**

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The Environmental Services/Engineering Division's DRC 'Comments' for the proposed project have been satisfied and the proposed project is hereby recommended for 'Consideration' by the Planning and Zoning Board.

**DRC REVIEW COMMENTS  
CITY OF PEMBROKE PINES**

**AGENCY:** **SOUTH BROWARD DRAINAGE DISTRICT**  
**CONTACT:** **KEVIN HART, P.E. (954)680-3337**

**PROJECT NAME:** Bergeron 15.25 Acre Parcel

**DATE:** 6/3/2019

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**THE SITE PLAN FOR THE ABOVE-REFERENCED PROJECT HAS BEEN  
REVIEWED BY THE DISTRICT AND THE FOLLOWING COMMENTS MUST  
BE MET ADDRESSED/SATISFIED/NOTED:**

1. A Paving and Drainage Permit will be required from SBDD.
2. Provide an overall drainage plan to include Bergeron Distribution Center I, Bergeron Distribution Center II, Bergeron Outdoor Storage South, Ryder Trailer Storage, and the Bergeron 15.25 Acre Parcel.
3. Include SBDD's standard notes and details (as applicable) in the SBDD permit set.
4. The drainage report indicates that the "proposed project is consistent with the land use and site grading assumptions from the original permit". The grading plan is showing pavement high points (ridges) at elevations ranging between 9.06' NGVD (7.53' NAVD) and 9.38' NGVD (9.85' NAVD). These elevations are over 18" above the calculated 100-year, 3-day flood elevations for the property. The maximum pavement grades should be closer to 7.5' NGVD or 8.0' NGVD, which would coincide with the grading assumptions from the original permit. These high pavement grades may also impact previously calculated site storage (flood protection) and maximum stages, as indicated in previous drainage calculations.
5. The Node Basins listed in the Stage-Storage Calculations starting on Page 11 of the drainage report do not seem to match the node basin designations shown on Exhibit 1 at the end of the report.
6. Verify that the downstream drainage system (culvert sizes) is sized properly to handle the design runoff from this project.
7. Please note that all drainage inlets in grass areas will require a minimum 12" concrete apron.
8. Please note that portions of the existing drainage system may need to be cleaned upon completion of construction. To be determined in the field by SBDD's inspector.
9. Prior to final approval/acceptance of the project, SBDD will require a Maintenance Plan for the drainage system, with special emphasis on the maintenance of the perimeter swale

system.

10. The property owner will be required to enter into Maintenance and Indemnification Agreement with SBDD.
11. Additional comments may be issued upon receipt of the final Paving & Drainage Plans and drainage calculations.

**(REGARDLESS OF APPLICABLE COMMENTS, THE PETITIONER IS NOT EXEMPT FROM MEETING ALL STORMWATER MANAGEMENT REGULATIONS, STANDARDS AND PROCEDURES AS OUTLINED IN THE SBDD DESIGN CRITERIA MANUAL DATED MAR. 26, 2015.)**

**(ALL STANDARD COMMENTS WILL BE GIVEN TO THE PETITIONER ON A SEPARATE HANDOUT. THE PETITIONER WILL ONLY BE REQUIRED TO RESPOND TO THE COMMENTS RAISED ON THE DRC REVIEW FORM.)**

MEMORANDUM

May 30, 2019

To: Joe Yaciuk  
Planning Administrator

From: Dean A. Piper  
Zoning Administrator

Re: SP 2019-05 (Bergeron 15.25 Acre Parcel)

The following are my comments regarding the above Miscellaneous Plan:

1. Provide all color names, color numbers, finishes, materials, etc. on elevations of trailer.
2. Provide screening/mesh on fence along SW 196<sup>th</sup> Ave. to provide additional screening.
3. Will there be any lighting on trailer? If so, provide detail(s)/cut sheet of fixture(s)..
4. Include existing landscape plan with this submittal to show landscaping being provided along SW 196<sup>th</sup> Ave.

Please contact me with any questions.

## **PLANNING DIVISION STAFF COMMENTS**

### **Memorandum:**

**Date:** May 29, 2019  
**To:** SP 2019-05 file  
**From:** Joseph Yaciuk, Planning Administrator  
**Re:** Bergeron South 15.25 Acres

### **Items which do not conform with the City of Pembroke Pines Code of Ordinances or other Governmental Regulations:**

1. Provide notice per City Requirements (Note: Cutro and Associates reached out to staff and expects to have proper notice within the next day or so). Please note that notice must be provided by June 3 in order to potentially be scheduled for late June meeting.
2. Provide summary of operations of the business on this parcel
3. Provide colors of trailer on plans. Provide paint chips.
4. Provide fabric mesh on fence along 196<sup>th</sup> Avenue in order to help screen the storage use.
5. Missing landscape plan in my submittal. Please provide. Landscape should be designed to mitigate views of active storage site from residents on east side of property. Consider using mature landscaping at time of planting.
6. Provide terminal islands at ends of parking rows.

**Recommendations:** N/A

MEMORANDUM

May 29<sup>th</sup>, 2019

To: Joseph Yaciuk  
Planning Administrator

From: Kristen Jensen  
Landscape Planner

Re: (SP 2019-05) Bergeron Park of Commerce South 15.25 Acre Parcel

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The City of Pembroke Pines Planning Division has conducted a landscape review as documents provided. The following items need to be addressed prior to this project being found in compliance:

1. Please provide a landscape plan.
2. The existing landscape along 196<sup>th</sup> Ln does not provide a tall enough buffer from the residential community. Recommend installing additional category 3 trees between the existing trees along with mature plant material where the auto auction tenant will be located.
3. Irrigation must be repaired/installed properly to ensure that all new and existing landscape material is properly being irrigated. A "wet-check" shall be done at time of final inspection to ensure all irrigation heads are working properly etc.

Plant diversification is important for the project in order to sustain a healthy and vigorous landscape. It is also required that projects utilize best management practices set by Florida Friendly Landscape Standards.

Please contact me with any questions.

Kristen Jensen  
Landscape Planner/Designer  
Planning and Economic Development Division  
City of Pembroke Pines  
954.392.2107 (Office) • [kjensen@ppines.com](mailto:kjensen@ppines.com)  
Please consider the environment before printing this email.

## DRC REVIEW FORM

**PEMBROKE PINES FIRE RESCUE  
FIRE PREVENTION BUREAU  
FIRE PLANS EXAMINER BY: Sandra Lluis, Fire Marshal  
(954) 499-9563**

**PROJECT NAME:** Bergeron 15.25 Acre Parcel  
**REFERENCE #:** SP 2019-05  
**DATE REVIEWED:** May 29, 2019

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**ITEMS WHICH DO NOT CONFORM TO THE CITY OF PEMBROKE PINES  
CODE OF ORDINANCES OR OTHER GOVERNMENTAL REGULATIONS:**

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**All submittals for Site Plan Approval must first be stamped by our Planning  
Department and delivered by planning per their procedures.**

1. Fire hydrant spacing is not met. Fire hydrants in all commercially and business zoned areas shall be installed on a minimum of an eight – inch looped water line in city rights-of-way or easements and shall not be spaced not further than 500 feet apart as measured along street or alleys. **COPP CO 93.25 (C)**. Where new hydrants are required to meet spacing, hydrants shall be placed at the entrances to access roads and entrances to the complex. Measurements taken as the fire truck travels. Engineering department verification required.
2. Please rework fire department access circulation to provide improved access to the longest inventory storage area.
3. Provide note to plans that indicate that gates shall be provided with signs to indicate the direction that they open.

BERGERON PARK OF COMMERCE SOUTH  
15.25 ACRE PARCEL  
PEMBROKE PINES, FLORIDA  
DRC PLAN SET 6/20/2019

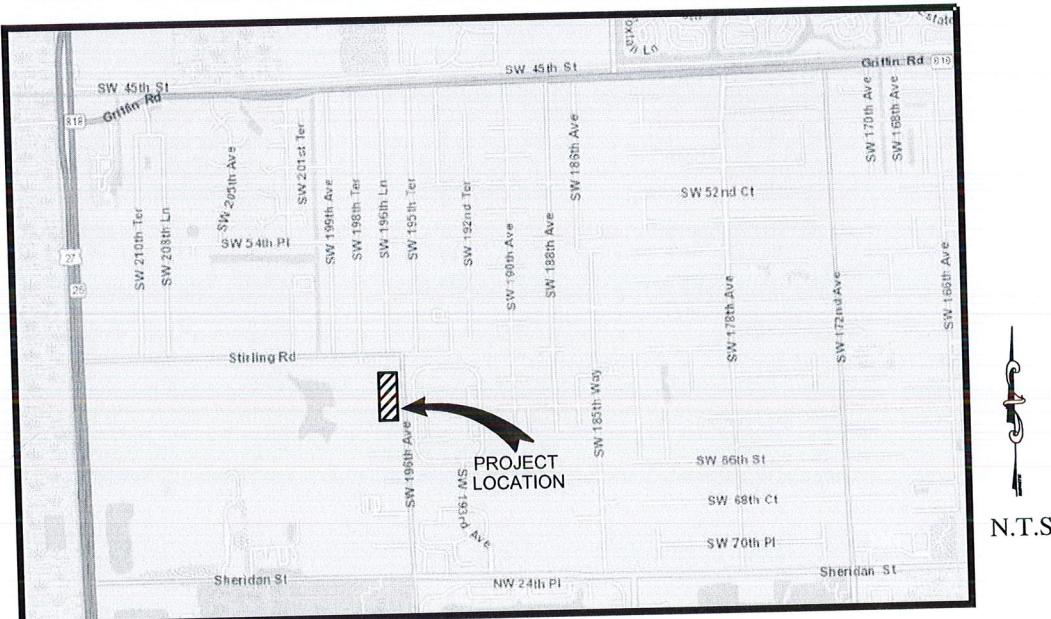
**City of Pembroke Pines  
Received**

JUN 20 2019

## Planning & Economic Development

## LOCATION MAP

SECTION 02, TWP 51, RNG. 39



## INDEX OF DRAWINGS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
CV-1	COVER SHEET
S-0	SPECIFIC PURPOSE SURVEY
S-1, S-2	SURVEY
SP-1	OVERALL SITE PLAN
SP-2	SITE PLAN
GN-1, GN-2	GENERAL NOTES & SPECIFICATIONS
EC-1	EROSION & SEDIMENT CONTROL PLAN
EC-2	EROSION & SEDIMENT CONTROL DETAILS
PGD-1	PAVING, GRADING, DRAINAGE, STRIPING & SIGNAGE PLANS
PGD-2	PAVING, GRADING, DRAINAGE & SIGNAGE DETAILS & SECTIONS
WS-1	WATER AND SEWER PLANS
WS-2, WS-3	WATER AND SEWER DETAILS
FA-1	FIRE ACCESS PLAN
E-1	PHOTOMETRIC PLAN
A-1	OFFICE TRAILER DETAILS

2003\1008411 Concert Auto Auction\ggd\d\Planset\DRC Planset\COVER.dwg

BERGERON PARK OF COMMERCE SOUTH  
15.25 ACRE PARCEL  
CITY OF PEMBROKE PINES

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COVER SHEET



CIVIL ENGINEERING | CONSTRUCTION SERVICES | GEOMATICS  
814 S. MILITARY TRAIL, DEERFIELD BEACH, FLORIDA 33442  
PHONE: (954) 972-3959 FAX: (954) 972-4178  
FILE NO. 1904

SCALE:	N.T.S.
DATE:	6/20/2019
DRAWN BY:	M.T.
CHECKED BY:	W.R.B
DESIGNED BY:	M.T.

**CV-1**

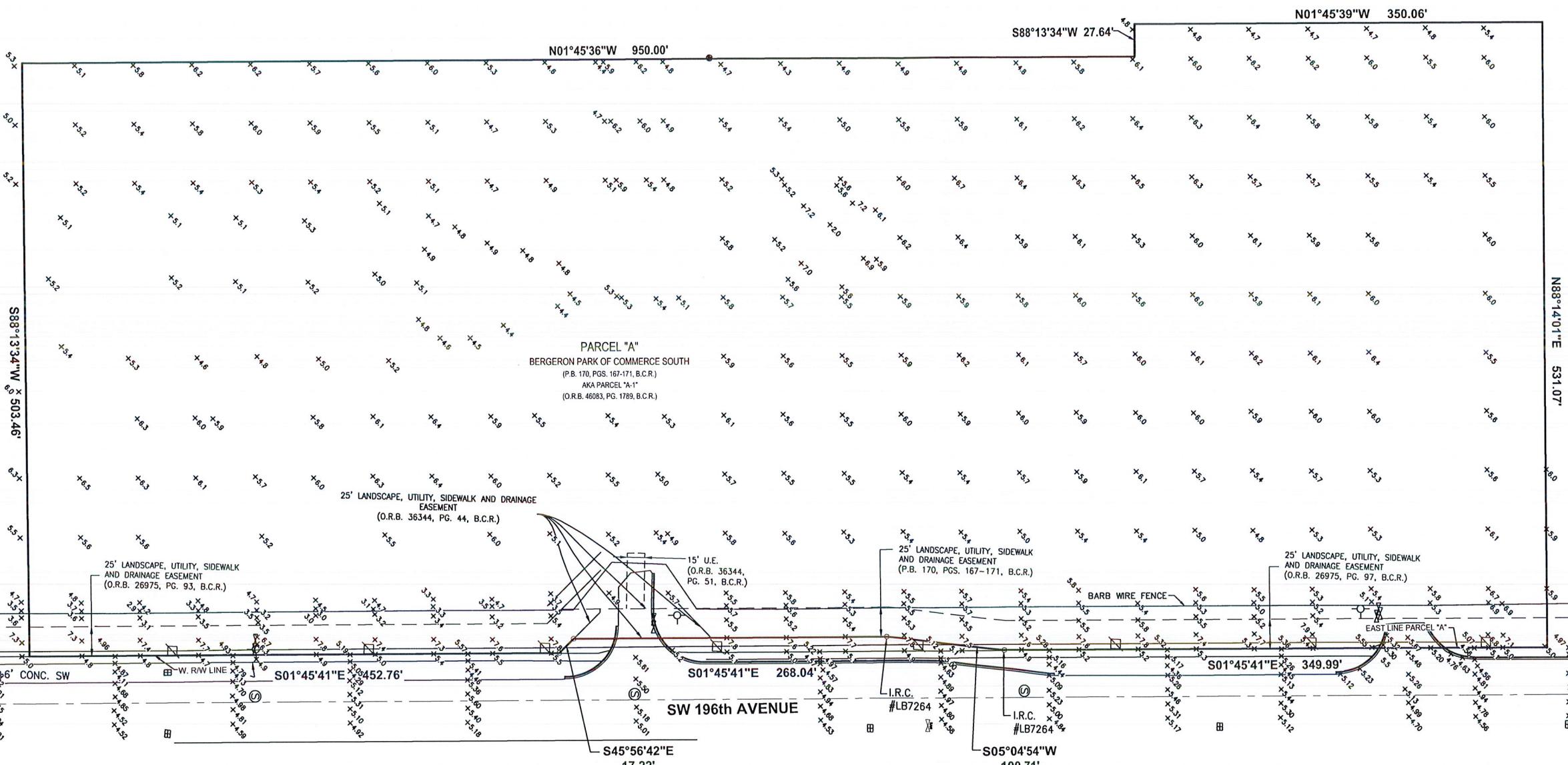
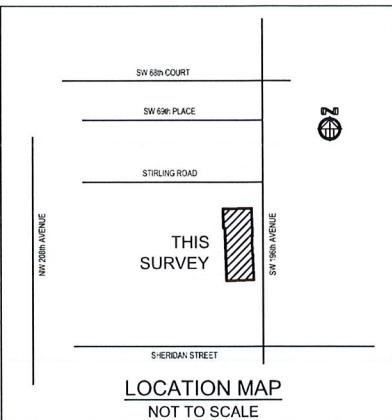
WILLIAM R. BARBARO  
LICENSE NO. 64761  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

WILLIAM R. BARBARO, P.E.  
FL. REGISTRATION NO. - 64761

**SPECIFIC PURPOSE SURVEY**  
**BERGERON PARK OF COMMERCE II**  
**PEMBROKE PINES**  
**BROWARD COUNTY, FLORIDA**

0 50 100  
 SCALE: 1"=50'

NORTH



**LEGAL DESCRIPTION:**

A PORTION OF PARCEL "A", "BERGERON PARK OF COMMERCE SOUTH", ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 170, PAGES 167 THROUGH 171 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA.

**SURVEYOR'S NOTES:**

1. THIS DRAWING IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS DRAWING IS THE PROPERTY OF CARNAHAN-PROCTOR-CROSS, INC., CERTIFICATE OF AUTHORIZATION NO. LB2936 AND SHALL NOT BE USED OR REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN AUTHORIZATION.
3. THE LANDS SHOWN HEREON ARE SUBJECT TO ALL EASEMENTS, RESERVATIONS, RIGHTS-OF-WAY, AND RESTRICTIONS OF RECORD.
4. ALL EASEMENTS SHOWN HEREON ARE FOR THE RECORD PLAT UNLESS OTHERWISE INDICATED.
5. THIS SKETCH WAS PREPARED WITHOUT BENEFIT OF A TITLE SEARCH, FOR INFORMATION CONCERNING RIGHTS-OF-WAY, EASEMENTS RESERVATIONS, AND OTHER SIMILAR MATTERS OF PUBLIC RECORD.
6. BASIS OF BEARINGS: BEARINGS SHOWN HEREON ARE BASED THE WEST LINE OF PARCEL "A", PLAT OF "BERGERON PARK COMMERCE SOUTH", PLAT BOOK 170, PAGES 167-171 BROWARD COUNTY RECORDS, FLORIDA, WHICH BEARS NORTH 01°45'36" WEST.
7. BENCHMARK REFERENCE: BROWARD COUNTY ENGINEERING BENCHMARK NO. 3751 SPIKE AT THE INTERSECTION OF STIRLING ROAD AND 195 TERRACE, ELEVATION = 6.998 FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 AND 5.47' NORTH AMERICAN VERTICAL DATUM OF 1988.
8. ELEVATIONS WERE DETERMINED ONLY AT THE LOCATIONS INDICATED, AT THE EXPECTED VERTICAL ACCURACY IS +/-0.10'.
9. FLOOD ELEVATION INFORMATION:
 

A. FIRM MAP NOS.O	: 12011C 0520 H
B. DATE OF FIRM	: 8-18-14
C. FIRM ZONE	: X (0.2% ANNUAL CHANCE FLOOD HAZARD)
D. BASE FLOOD ELEVATION	: N/A
E. COMMUNITY NUMBER	: 0520
10. THERE HAVE BEEN NO UNDERGROUND IMPROVEMENTS LOCATED IN CONNECTION WITH THIS SURVEY EXCEPT AS SHOWN HEREON.
11. THE SPECIFIC PURPOSE OF THIS SURVEY IS TO OBTAIN THE EXISTING GRADE ELEVATIONS.

LAST DAY OF FIELD WORK: 12/8/2018

**CERTIFICATION:**

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON CONFORMS TO THE APPLICABLE STANDARDS OF PRACTICE FOR PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATE STATUTES AND ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

LANDON M. CROSS  
 PROFESSIONAL SURVEYOR AND MAPPER  
 FLORIDA REGISTRATION NO. LS 3348

SCALE: 1" = 50'
DATE: 12/8/2018
DRAWN BY: NI
CHECKED BY: LMC
FB/PG: S/T
SURVEY TYPE: SPECIFIC PURPOSE SURVEY



CERTIFICATE OF AUTHORIZATION NO. LB 2936

814 SOUTH MILITARY TRAIL,  
 DEERFIELD BEACH, FLORIDA 33442  
 PHONE: 954-972-3959 FAX: 954-972-4178 WEBSITE:  
[www.carnahan-proctor.com](http://www.carnahan-proctor.com)

**SPECIFIC PURPOSE SURVEY**  
**BERGERON PARK OF COMMERCE II**  
**PEMBROKE PINES**  
**BROWARD COUNTY, FLORIDA**

NO.	DATE	BY	CK'D	REVISIONS
				FB/PG

PROJECT NO.

SHEET 1 OF 1

SEAL



## **BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY**

**A PORTION OF SECTION 02, TOWNSHIP 51 SOUTH, RANGE 39 EAST,  
BROWARD COUNTY, FLORIDA**



TRANSACTIONS SURVEY

2000 AND 2005 SURVEY

110

CONSULT

HIG ENGINEERS

NO.	REVISION	DATE	BY

<b>BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY</b>	
PART OF PB 170 PAGES 167-171, BROWARD COUNTY	
PART OF SECTION 02, TOWNSHIP 51 SOUTH, RANGE 39 EAST	
FIELD SURVEY DRAWN: TAE	CHECKED: TAE
BOOK/PAGE(S): DC	
<b>PROJECT</b>	
170307	
<b>SHEET NO.</b>	
<b>2 OF 2</b>	

### BERGERON 15.25 ACRE PARCEL

PARCEL AREA = 664386 S.F. (15.25 AC)  
 GROSS INVENTORY STORAGE AREA = 501068 S.F. (11.50 AC)  
 NET TENANT INVENTORY STORAGE AREA = 355434 S.F. (8.16 AC)  
 DROP ZONE AREA = 62502 S.F. (1.43 AC)  
 OFFICE LOADING AREA = 17124 S.F. (0.39 AC)

### SITE DATA

DESCRIPTION	Sq. Ft.	Acre	% of Gross Site
Gross Site Area	664,386	15.25	100.0%
Total Pervious Area	78,445	1.80	11.8%
Total Impervious Area	585,941	13.45	88.2%
Pervious/Impervious Ratio:	0.13		
Gross Storage Area	501,068	11.50	75.4%

ZONING DATA	
Current Zoning:	M3
Proposed Zoning:	M3

LAND USE DATA	
Current Land Use:	Industrial
Proposed Land Use:	Industrial

### LEGAL DESCRIPTION

A PORTION OF PARCEL "A", "BERGERON PARK OF COMMERCE SOUTH", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 170 AT PAGES 167 THROUGH 171 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, AND PORTIONS OF SYLVAN PASS AND REPUBLIC PASS AS SHOWN ON SAID PLAT AND ABANDONED PER OFFICIAL RECORDS BOOK 36344 AT PAGE 1021 OF SAID PUBLIC RECORDS, ALL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF PARCEL C OF SAID PLAT; THENCE NORTH 88°14'21" EAST, ALONG THE NORTH LINE OF SAID PARCEL "A", A DISTANCE OF 340.86 FEET; THENCE NORTH 01°45'39" WEST, A DISTANCE OF 702.00 FEET; THENCE NORTH 89°52'20" EAST, A DISTANCE OF 28.09 FEET; THENCE NORTH 44°52'20" EAST, A DISTANCE OF 38.18 FEET; THENCE NORTH 89°52'20" EAST, A DISTANCE OF 349.82 FEET; THENCE SOUTH 86°41'39" EAST, A DISTANCE OF 200.36 FEET; THENCE NORTH 89°52'20" EAST, A DISTANCE OF 300.00 FEET; THENCE SOUTH 45°56'44" EAST, A DISTANCE OF 48.80 FEET (THE LAST EIGHT DESCRIBED COURSES BEING COINCIDENT WITH THE NORTH LINE OF SAID PARCEL "A"); THENCE SOUTH 01°45'41" EAST, A DISTANCE OF 1018.15 FEET; THENCE SOUTH 05°04'53" WEST, A DISTANCE OF 100.72 FEET (THE LAST TWO DESCRIBED COURSES BEING COINCIDENT WITH THE EAST LINE OF SAID PARCEL "A"); THENCE SOUTH 01°45'41" EAST, ALONG SAID EAST LINE AND THE SOUTHERLY EXTENSION THEREOF, A DISTANCE OF 268.04 FEET; THENCE SOUTH 15°56'41" EAST, A DISTANCE OF 17.22 FEET; THENCE SOUTH 01°45'41" EAST, A DISTANCE OF 268.04 FEET; THENCE SOUTH 01°45'41" EAST, A DISTANCE OF 1280.40 FEET; THENCE NORTH 01°45'39" WEST, ALONG SAID WEST LINE, A DISTANCE OF 2217.72 FEET TO THE POINT OF BEGINNING.

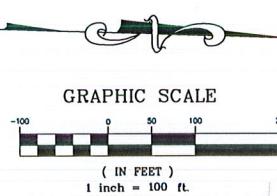
SAID LANDS SITuate IN THE CITY OF PEMBROKE PINES, BROWARD COUNTY, FLORIDA, AND CONTAIN 80.789 ACRES, MORE OR LESS.

### LEGEND

— — — — —	RIGHT OF WAY
— — — — —	PARCEL BOUNDARY
-x-x-x-x-x-	PROPOSED CHAIN-LINK FENCE
████████████████	PROP. TENANT INVENTORY STORAGE
████████████████	PROP. COMPACTED ASPHALT MILLINGS

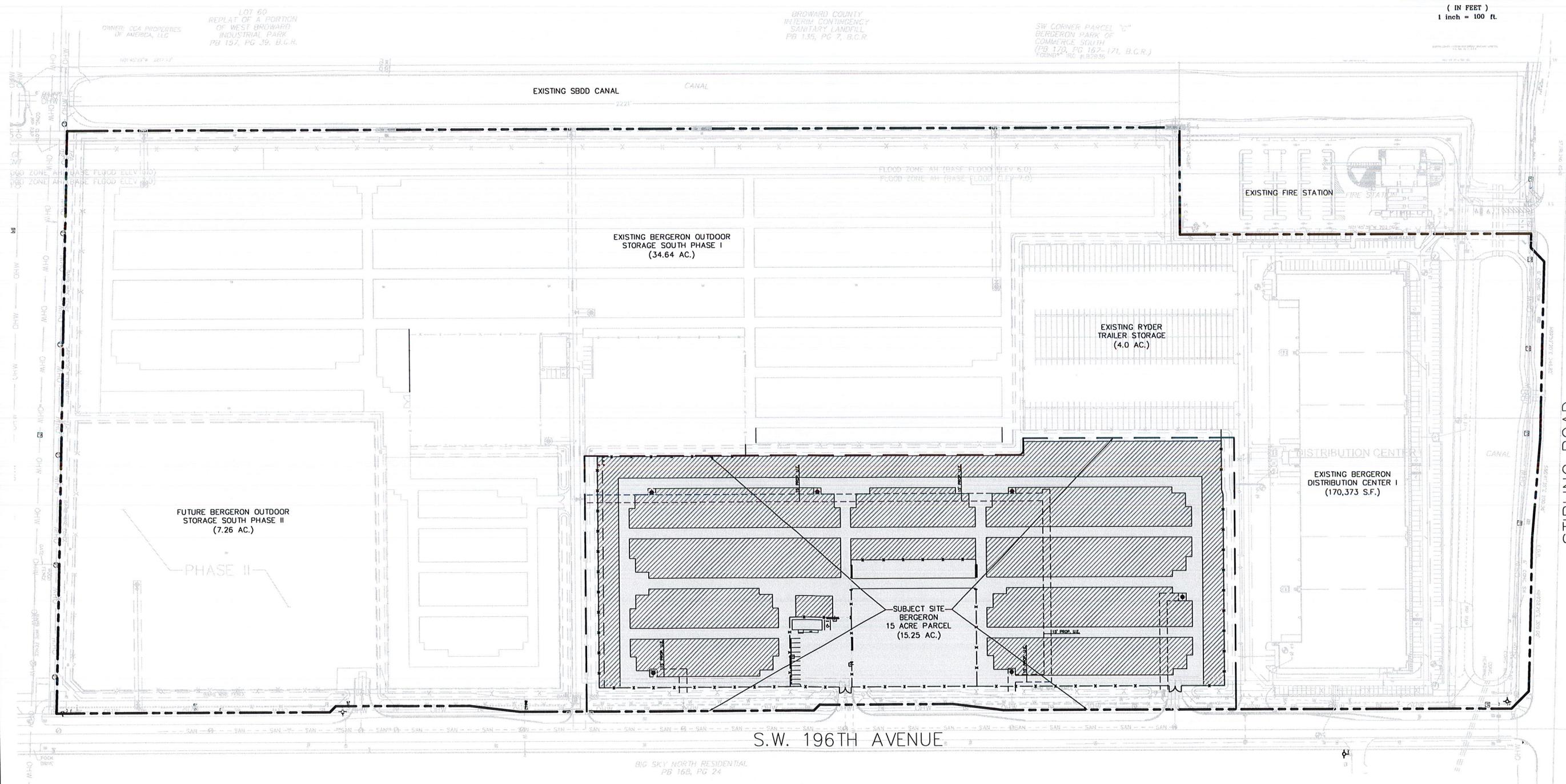


LOCATION MAP  
NOT TO SCALE



RESPONSE TO 5/29/2019 DRC COMMENTS	
△	6/17/2019
NO	DATE
MT	W.R.B.
BY	APRV
REVISIONS	

### OVERALL SITE PLAN



BERGERON 15.25 ACRE PARCEL

PARCEL AREA = 664386 S.F. (15.25 AC)

GROSS INVENTORY STORAGE AREA = 501068 S.F. (11.50 AC)

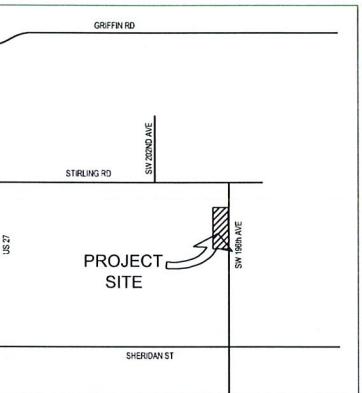
NET TENANT INVENTORY STORAGE AREA = 35

DROP ZONE AREA = 62502 S.F. (1.43 AC)  
OFFICE LOADING AREA = 17124 S.F. (0.39 AC)

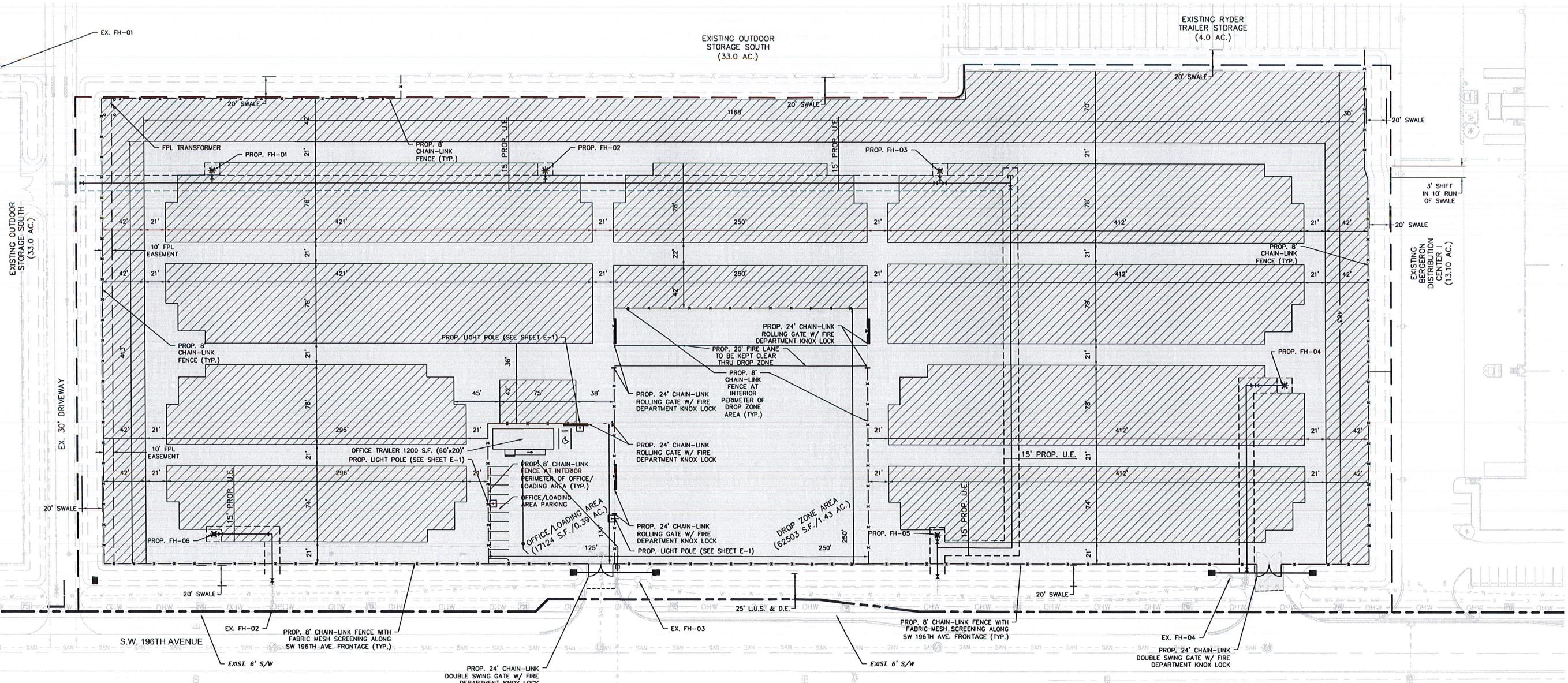
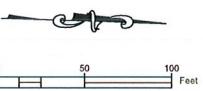
NOTE:

- 1) INVENTORY STORAGE PACK CORNERS MAY BE REDUCED TO ALLOW SAFE CIRCULATION OF FIRE TRUCK THROUGHOUT SITE.

## LEGEND



**LOCATION MAP**  
NOT TO SCALE



BERGERUN PARK OF COMMERCE SOUTH  
15.25 ACRE PARCEL  
CITY OF PEMBROKE PINES

SITE PLAN

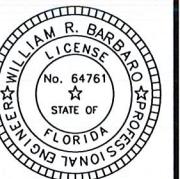
**ARNOLD PROCTOR & CROSS**  
Manufacturers of Fine  
Ceramic Products

CIVIL ENGINEERING | CONSTRUCTION SERVICES | GEOMATICS  
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FILE NO. \_\_\_\_\_

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ALE:	AS SHOWN
TE:	6/20/2019
AWN BY:	M.T.
ECKED BY:	W.R.B
SIGNED BY:	M.T.

SP-2



## I. APPLICABLE CODES

A. GENERAL:  
ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PEMBROKE PINES, BROWARD COUNTY DEPARTMENT OF PLANNING AND ENVIRONMENTAL PROTECTION (BCOPE), BROWARD COUNTY HEALTH DEPARTMENT (BCHD), SOUTH BROWARD DRAINAGE DISTRICT (SBD), SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWM), AND ALL OTHER LOCAL AND NATIONAL CODES WHERE APPLICABLE.

B. CONSTRUCTION SAFETY:  
ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.

C. TRENCH SAFETY ACT:  
1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH THE STATE OF FLORIDA TRENCH SAFETY ACT.  
2. WHERE EXCAVATIONS TO A DEPTH IN EXCESS OF FIVE FEET ('5') ARE REQUIRED THE CONTRACTOR SHALL INCLUDE THE FOLLOWING INFORMATION IN THE BID.  
A. A REFERENCE TO THE SAFETY STANDARDS THAT WILL BE IN EFFECT DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT.  
B. WRITTEN ASSURANCES BY THE CONTRACTOR PERFORMING THE TRENCH EXCAVATION THAT SUCH CONTRACTOR WILL COMPLY WITH THE APPLICABLE TRENCH SAFETY STANDARDS.  
C. A SEPARATE ITEM IDENTIFYING THE COST OF COMPLIANCE WITH THE APPLICABLE TRENCH SAFETY STANDARDS.  
3. WHERE A BID IS NOT SUBMITTED, THE CONTRACTOR SHALL SUBMIT THE INFORMATION LISTED IN ITEM 2, TO THE ENGINEER PRIOR TO STARTING WORK.

D. SURVEY DATA:  
ALL ELEVATIONS ON THE PLANS OR REFERENCED IN THE SPECIFICATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

## II. PRECONSTRUCTION RESPONSIBILITY

A. UPON RECEIPT OF NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE THE CITY OF PEMBROKE PINES ENGINEERING DIVISION, THE OWNER, AND THE ENGINEER, AFTER OBTAINING A CONSTRUCTION PERMIT FROM THE ENGINEERING DIVISION.

B. THE CONTRACTOR SHALL OBTAIN A "SUNSHINE CERTIFICATION NUMBER" AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION.

C. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, ELEVATION, AND MATERIAL OF ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES FOR WHICH HE FAILS TO REQUEST LOCATIONS SUNSHINE CERTIFICATION NUMBER. HE IS RESPONSIBLE AS WELL FOR DAMAGE TO ANY EXISTING UTILITIES WHICH ARE PROPERLY LOCATED.

E. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER, WHO WILL IN TURN NOTIFY THE CITY OF PEMBROKE PINES UTILITIES DEPARTMENT.

## III. INSPECTIONS

THE CONTRACTOR SHALL NOTIFY THE CITY OF PEMBROKE PINES ENGINEERING DIVISION 954-518-9040, SDD 954-680-3337, AND THE ENGINEER OF RECORD AT LEAST 24 HOURS PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS:

A. 1. STORM DRAINAGE.  
2. SANITARY SEWER.  
3. WATER SYSTEM.  
4. SUBGRADE: SUBMIT AND HAVE APPROVED DENSITIES PRIOR TO PLACEMENT OF ROCK.  
5. LIMEROCK BASE: SUBMIT AND HAVE APPROVED DENSITIES AND AS-BUILTS PRIOR TO THE PLACEMENT OF ANY ASPHALT.  
6. ASPHALTIC CONCRETE.  
7. FINAL.

B. ALL INSPECTIONS MADE BY THE CITY OF PEMBROKE PINES, SBD, AND FDOT THE ENGINEER OF RECORD WILL PROVIDE CONSTRUCTION OBSERVATION SERVICES.

## IV. SHOP DRAWINGS

A. PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT, A MATERIAL LIST SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER OF RECORD AND THE CITY OF PEMBROKE PINES FOR SANITARY MANHOLES, HYDRANTS, VALVES, PIPING, LIFT STATIONS AND OTHER ACCESSORIES. CATALOGUE LITERATURE SHALL BE SUBMITTED FOR WATER AND SEWER PIPES, FITTINGS AND APPURTENCES.

B. ANY PRODUCT THAT IS NOT ON THIS LIST MUST BE APPROVED IN ADVANCE BY THE ENGINEER OF RECORD AND THE CITY OF PEMBROKE PINES ENGINEERING DIVISION. SUCH APPROVAL REQUIRES THE SUBMISSION OF A SHOP DRAWING (SIX COPIES) FOR EACH PRODUCT. SHOP DRAWINGS MLL ALSO BE REQUIRED FOR ALL NON-STANDARD ITEMS

C. INDIVIDUAL SHOP DRAWINGS FOR ALL PRECAST STRUCTURES ARE REQUIRED. CATALOGUE LITERATURE WILL NOT BE ACCEPTED FOR PRECAST STRUCTURES.

## V. TEMPORARY FACILITIES

A. TEMPORARY UTILITIES:  
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES, AND ELECTRICITY TO HIS EMPLOYEE AND SUBCONTRACTORS FOR THEIR USE DURING CONSTRUCTION.  
2. OBTAIN CONSTRUCTION METER FOR ALL WATER USED ON JOB. ALL WATER USED FOR CLEANING, TESTING, ETC. WILL BE PAID FOR BY THE CONTRACTOR. IF WATER CAN NOT BE METERED THEN IT WILL BE CALCULATED.

B. TRAFFIC REGULATION:  
1. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE MUTCD AND BCTED.  
2. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.  
3. NO TRENCHES OR HOLES NEAR WALKWAYS OR IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION OF THE CITY OF PEMBROKE PINES.

## VI. PROJECT CLOSE OUT

A. CLEANING UP:  
1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER. UPON FINAL CLEAN UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEEP BROOM CLEAN.  
2. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED BY THE ENGINEER OR THE CITY OF PEMBROKE PINES, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT, EMPLOYEES OR THOSE OF HIS SUBCONTRACTORS TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THIS END, THE CONTRACTOR SHALL DO AS REQUIRED, ALL NECESSARY HIGHWAY OR DRIVEWAY, SIDEWALK AND LANDSCAPING WORK. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.  
3. WHERE MATERIAL OR DEBRIS HAS BEEN PLACED IN WATER WATER TRENCHES, GRANULAR, DIRT, ROCK, TRASH, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.  
4. WHEN WORKING IN AND AROUND EXISTING DRAINAGE CANALS, APPROPRIATE SILT BARRIERS SHALL BE INSTALLED AS REQUIRED BY SOUTH BROWARD DRAINAGE DISTRICT.

B. PROJECT RECORD DOCUMENTS:  
1. THE CONTRACTOR SHALL MAINTAIN ACCURATE AND COMPLETE RECORDS OF ALL WORK ITEMS COMPLETED.  
2. ALL "AS-BUILT" INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE, CLEAR AND LEGIBLE TO SATISFY THE ENGINEER THAT THE INFORMATION PROVIDED A TRUE REPRESENTATION OF THE IMPROVEMENTS CONSTRUCTED.

3. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD ONE COMPLETE SET OF "AS-BUILT" CONSTRUCTION DRAWINGS. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONED LOCATIONS AND ELEVATIONS OF ALL IMPROVEMENTS AND SHALL BE SIGNED BY THE CONTRACTOR.

4. ALL "AS-BUILT" INFORMATION ON ELEVATIONS, STATIONING OFFSETS AND TIES OF THE WATER, SANITARY SEWER, PAVING AND DRAINAGE SHALL BE CERTIFIED BY A REGISTERED LAND SURVEYOR.

5. "AS-BUILT" INFORMATION ON THE WATER SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO LOCATIONS OF ALL VALVES, FITTINGS, FIRE HYDRANTS AND WATER SERVICES AND TOP-OF-PIPE ELEVATION ON 100-FOOT INTERVALS AT A MINIMUM.

6. PRIOR TO A FINAL INSPECTION BY THE CITY OF PEMBROKE PINES, THE ENGINEER SHALL SUBMIT TWO (2) SETS OF BLUEPRINTS OF "AS-BUILT" CONSTRUCTION DRAWINGS.

7. UPON A FINAL INSPECTION BY THE CITY OF PEMBROKE PINES, THE ENGINEER SHALL SUBMIT TO THE CITY ONE (1) COMPLETE SET OF REPRODUCIBLE DRAWINGS AND THREE (3) SETS OF BLUEPRINTS OF "AS-BUILT" CONSTRUCTION DRAWINGS THAT HAVE BEEN CERTIFIED BY A REGISTERED LAND SURVEYOR AND THE ENGINEER OF RECORD AND COMPUTER FILES OF "AS-BUILT" CONSTRUCTION DRAWINGS ON 3-1/2" FLOPPY DISKS IN AUTOCAD RELEASE 14 FORMAT OR LATEST REVISION.

8. PRIOR TO PLACEMENT OF ANY ASPHALT OR CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER "AS-BUILT" PLANS SHOWING LIMEROCK BASE GRADES AND ALL DRAINAGE, WATER, AND SEWER IMPROVEMENTS. PAVING OPERATIONS SHALL NOT COMMENCE UNTIL THE ENGINEER AND THE CITY OF PEMBROKE PINES HAVE REVIEWED AND APPROVED THE "AS-BUILTS".

9. ALL REQUIRED DENSITY AND LBR TEST RESULTS FOR SUBGRADE SHALL BE PROVIDED TO AND APPROVED BY THE ENGINEER AND THE CITY OF PEMBROKE PINES PRIOR TO THE PLACING THE LIMEROCK BASE MATERIAL.

10. ALL REQUIRED DENSITY AND LBR TEST RESULTS FOR LIMEROCK SHALL BE PROVIDED TO AND APPROVED BY THE ENGINEER AND THE CITY OF PEMBROKE PINES PRIOR TO PLACING ASPHALT.

## WATER DISTRIBUTION AND/OR SEWAGE FORCE MAIN SYSTEM

## GENERAL:

1. THE CONTRACTOR SHALL NOTIFY THE CITY OF PEMBROKE PINES UTILITIES DEPARTMENT AND THE ENGINEER OF RECORD NO LATER 24 HOUR PRIOR TO MAKING CONNECTIONS TO EXISTING SYSTEMS. A CITY OF PEMBROKE PINES ENGINEERING DIVISION REPRESENTATIVE AND THE ENGINEER OF RECORD MUST BE PRESENT.

2. SEPARATION OF WATER AND SEWER MAINS:  
A. PARALLEL WATER AND SEWER MAINS SHALL HAVE A MINIMUM 10 FEET HORIZONTAL SEPARATION. WHERE THIS IS NOT POSSIBLE, THE SEWER MAIN SHALL BE IN A SEPARATE TRENCH AND BE AT LEAST 18 INCHES BELOW THE WATER MAIN AND BOTH MAINS SHALL BE DUCTILE IRON PER PRESSURE PIPE SPECIFICATIONS.  
B. THE SEWER MAIN SHALL CROSS BELOW ALL WATER MAINS WITH A MINIMUM OF 18 INCHES VERTICAL CLEARANCE. WHERE THE CLEARANCE IS LESS THAN 18 INCHES, THE SEWER MAIN AND THE WATER MAIN SHALL BE DUCTILE IRON PIPE, WITH A MINIMUM 12" CLEARANCE, FOR 20 FEET CENTERED ON THE POINT OF CROSSING. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING SHALL BE MECHANICALLY RESTRAINED.  
C. IF A SEWER MAIN MUST CROSS ABOVE A WATER MAIN, REGARDLESS OF VERTICAL CLEARANCE, THE PRECAUTION IN ITEM (B) ABOVE SHALL BE TAKEN.

3. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS FOR THE WATER MAINS AND SEWER FORCE MAINS, AND BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO THE CITY OF PEMBROKE PINES AND THE BROWARD COUNTY HEALTH DEPARTMENT.

4. CLEANING OF NEWLY INSTALLED PIPING SYSTEMS SHALL BE ACCOMPLISHED USING PIPE OF THE SAME MATERIAL AS THE EXISTING SYSTEM. NO CLEANING WITHOUT PRIOR APPROVAL OF THE UTILITIES DEPARTMENT. ALL WATER WILL BE ACCOUNTED FOR.

5. ALL EFFORTS SHALL BE MADE SO THAT WATER AND FORCE MAINS CROSS ABOVE DRAINAGE LINES WITH ADEQUATE COVER AND SEPARATION. IF THIS IS NOT POSSIBLE, IT SHALL BE INDICATED ON THE PLANS.

6. A THREE (3) FOOT LATERAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER/SEWER LINES AND OBSTRUCTIONS (I.E., CATCH BASINS, CONCRETE POLES, ETC.), FIVE (5) FEET FROM TREES.

7. THE MAXIMUM DEPTH TO THE BOTTOM OF THE PRESSURE MAIN INSTALLED SHALL NOT EXCEED SIX (6) FEET UNLESS APPROVED BY THE CITY OF PEMBROKE PINES ENGINEERING DIVISION.

8. RESTRAINED JOINTS SHALL BE USED, IN LIEU OF CONCRETE THRUST BLOCKS, AT ALL CHANGES IN DIRECTION, WATER MAINS, SEWER FORCE MAINS AND ELSEWHERE AS INDICATED ON THE DRAWINGS. RESTRAINT PIPE JOINTS WITHIN THE DISTANCE ON EACH SIDE OF FITTINGS AS REQUIRED TO PROPERLY RESTRAIN AND SUPPORT BENDS, TEES, VAVES, DEAD ENDS AND OTHER SUCH FITTINGS WITH THE EXCEPTION OF FIRE HYDRANTS.

## B. MATERIALS:

1. PIPE:  
THE WATER MAIN AND/OR SEWAGE FORCE MAIN SHALL BE EITHER POLYVINYL CHLORIDE (PVC) OR DUCTILE IRON PIPE (DIP) AND SHALL BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 150 PSI.  
A. PVC PIPE SHALL BE ASTM 1120 PRESSURE PIPE WITH IRON O.D., CLASS 150 (OR 180) CONFORMING TO ANSI/AWWA C900-97 OR C905-97 AND SHALL HAVE PUSH RUBBER GASKET JOINTS.  
B. DIP SHALL BE CLASS 250 WALL THICKNESS (UP TO 12") CLASS 300 ("1"-18") CLASS 250 (OR GREATER) WITH INTERIOR CEMENT LINING AND EXTERIOR COAL TAR COATING CONFORMING TO ANSI/AWWA C151/A21.51-02, OR LATEST REVISION. SEWAGE PIPE SHALL BE EITHER DOUBLE COATED CONFORMING TO ANSI/AWWA C104/A21.4-95 OR LATEST REVISION, OR POLYETHYLENE LINED CONFORMING TO ANSI/AWWA C105/A21.5-99 OR LATEST REVISION. IF APPROVED EQUAL, THE PIPE SHALL NOT HAVE A COAT TAR LINED INSIDE. ALL PIPES SHALL HAVE 300 PSI TESTS. ALL VALVES SHALL BE GATE VALVES, WITH A 1/2" SPIGOT PUSH ON TYPE, MECHANICAL JOINT OR FLANGED. FLANGED PIPE SHALL CONFORM WITH THE PHYSICAL AND CHEMICAL REQUIREMENTS AS SET FORTH IN THE HANDBOOK OF DUCTILE IRON PIPE OF THE CAST IRON PIPE RESEARCH ASSOCIATION.

2. FITTINGS:  
FITTINGS SHALL BE DUCTILE IRON COMPACT MECHANICAL JOINT AND SHALL BE CLASS 350 THROUGH 24" CONFORMING TO ANSI/AWWA C153/A21.53-00, OR LATEST REVISION, AND CLASS 250 IN SIZES 24" AND LARGER, CONFORMING TO ANSI/AWWA C110/A21.10 OR LATEST REVISION. COMPLETE WITH GLANDS, GASKETS, BOLTS AND NUTS. ALL FITTINGS SHALL BE CEMENT LINED AND SEAL COATED WITH THE SAME AS PIPE.

3. VALVES:  
A. VALVES SHALL BE GATE VALVES FOR WATER ("4"-12" SIZE), BUTTERFLY VALVES FOR WATER ("16" AND UP SIZE) OR PLUG VALVES FOR FORCE MAIN (ALL SIZES).  
I. GATE VALVES SHALL BE IRON BODY, FULLY RESILIENT SEAT, BRONZE MOUNTED NON-RESILIENT STEM, DOUBLE DISC, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-01 OR LATEST REVISION. EXPOSED VALVES SHALL BE OUTSIDE SOURCE AND YOKE TYPE.  
II. BUTTERFLY VALVES AND OPERATORS SHALL CONFORM TO ANSI/AWWA C504-00 STANDARD FOR RUBBER SEATED BUTTERFLY VALVES, OR LATEST REVISIONS. VALVES SHALL BE CLASS 150 A OR B.  
III. PLUG VALVES SHALL BE SEMI-STEEL BODY, NON-LUBRICATED, ECCENTRIC TYPE, WITH RESILIENT FACED PLUGS, AND CAPABLE OF Drip-Tight SHUT OFF AT THE RATED PRESSURE IF APPLIED AT EITHER PORT. VALVES ARE TO BE EQUIPPED WITH ACTUATING NUTS, CAST IRON HANDWHEELS OR CHAIN OPERATORS, WITH GALVANIZED STEEL CHAINS, AS APPROPRIATE FOR THE INSTALLATION AND TYPE OF OPERATOR.  
B. AIR RELEASE VALVES  
I. SEWER FORCE MAIN AIR RELEASE VALVES - SYSTEM SHALL BE A COMBINATION OF ONE SEWAGE AIR RELEASE VALVE AND ONE SEWAGE AIR/VACUUM VALVE WITH DUAL ISOLATION PLUG VALVES. BOTH VALVE BODIES AND COVERS SHALL BE OF CAST IRON CONSTRUCTION, ASTM A126-B. ALL INTERNAL PARTS SHALL BE STAINLESS STEEL, ASTM A-240 - TYPE 304 AND ASTM A276 - TYPE 303. THE VENTING ORIFICE SHALL BE 5/16" IN DIAMETER WITH STAINLESS STEEL SEAT. THE INLET ORIFICE SHALL BE 1/2" IN DIAMETER. THE VALVE BODY SHALL BE FULLY CAPABLE OF OPERATION IN SEWAGE FORCE MAIN. THE VALVES SHALL INCLUDE A BACK-FLUSHING FEATURE FOR PERIODIC CLEANING OF THE INTERNAL MECHANISM. THE OVERALL HEIGHT SHALL NOT EXCEED 22-1/2 INCHES.  
II. WATER MAIN AIR RELEASE VALVES - VALVE BODY AND COVER SHALL BE OF CAST IRON CONSTRUCTION, ASTM A126-B, ALL INTERNAL WORKING PARTS SHALL BE OF STAINLESS STEEL. ASTM A240, TYPE 303 FOR THE FLOAT AND ASTM A296 - TYPE 316 FOR THE LINKAGE. THE VENTING ORIFICE SHALL BE 3/16" IN DIAMETER WITH BRASS SEAT. THE INLET OPENING SHALL BE A 2" NPT SCREWED CONNECTION. THE OVERALL HEIGHT SHALL NOT EXCEED 13 INCHES.

4. AIR RELEASE VALVES:  
1. THE PHYSICAL CONNECTION OF THE NEW SYSTEM TO THE EXISTING SYSTEM SHALL BE DONE IN ACCORDANCE WITH SECTION "C-1." (THIS DOCUMENT) WHICH WILL DICTATE THE ORDER OF THE PRESSURE TESTING AND DISINFECTION.  
2. ALL "AS-BUILT" INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE, CLEAR AND LEGIBLE TO SATISFY THE ENGINEER THAT THE INFORMATION PROVIDED A TRUE REPRESENTATION OF THE IMPROVEMENTS CONSTRUCTED.

C. A REFLECTIVE PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE NEAREST LANE OF ROAD PAVEMENT ADJACENT TO ALL VALVE LOCATIONS OUTSIDE THE ROAD PAVEMENT. WATER MARKERS SHALL BE WHITE, SEWER MARKERS SHALL BE GREEN.

## 4. FIRE HYDRANTS:

A. FIRE HYDRANTS SHALL HAVE A MINIMUM 5 1/4" VALVE OPENING AND SHALL OPEN AGAINST THE PRESSURE AND CLOSE WITH THE FLOW. HYDRANTS SHALL MEET OR EXCEED ANSI/AWWA C502-94, C503-97 OR LATEST REVISION, AND SHALL COMPLY WITH FACTORY MUTUAL RESEARCH CORPORATION AND UNDERWRITERS LABORATORIES UL246 STANDARD.

B. A BLUE REFLECTIVE PAVEMENT MARKER SHALL BE PROVIDED IN THE CENTER OF THE NEAREST LANES OF ROAD PAVEMENT ADJACENT TO ALL FIRE HYDRANT LOCATIONS.

## 5. DETECTOR TAPE:

DETECTOR TAPE SHALL BE 3" WIDE, BLUE TAPE FOR WATER MAIN AND BROWN TAPE FOR FORCE MAIN, WITH A METALLIZED FOIL CORE LAMINATED BETWEEN 2 LAYERS OF PLASTIC FILM. THE WORDS "CAUTION WATER LINE BURIED BELOW" OR "CAUTION FORCE MAIN BURIED BELOW" SHALL BE PRINTED AT 30' INTERVALS ALONG THE TAPE. TAPE SHALL BE FACED WITH A LOW GRADE ABOVE ALL PVC MAINS AND SERVICES OR AS RECOMMENDED BY MANUFACTURER. NON-METALLIC TAPE SHALL BE USED ABOVE DUCTILE IRON PIPE. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320, FAC.

## 6. SERVICE CONNECTIONS:

A. SERVICE SADDLES SHALL BE DUCTILE IRON EPOXY OR NYLON COATED WITH DOUBLE STAINLESS STEEL STRAPS OR SINGLE WIDE STRAP. SADDLES SHALL CONFORM TO ANSI/AWWA C111/21.11-00 AND ASTM A-584 OR LATEST REVISION.

B. SERVICE LINES SHALL BE POLYETHYLENE (PE) TUBING AS DESCRIBED IN ANSI/AWWA C901-02 OR LATEST REVISION, WITH A WORKING PRESSURE OF 200 PSI (OR 9). PIPE JOINTS SHALL BE OF THE COMPRESSION TYPE TOTALLY CONFINED GRIP SEAL AND COUPLING NUT. POLYETHYLENE SHALL BE EXTRUDED FROM PE 3408 HIGH MOLECULAR WEIGHT MATERIAL AND MUST CONFORM TO ASTM D-2737.

C. CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE ASTM B-62 WITH THREADED ENDS.

D. METER STOPS SHALL BE THE 90 DEGREE LOCKING TYPE AND SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE WITH ASTM B-62. METER STOPS SHALL BE CLOSED DURING CONSTRUCTION AND RESILIENT "O" RING SEALED AGAINST EXTERNAL LEAKAGE AT THE TOP. STOPS SHALL BE EQUIPPED WITH A METER COUPLING NUT ON THE OUTLET SIDES.

E. METER AND METER BOXES 2" OR LESS ARE SUPPLIED BY THE CITY OF PEMBROKE PINES AT THE OWNER'S EXPENSE.

## 7. TAPPING SLEEVES:

TAPPING SLEEVES SHALL BE DUCTILE IRON, ASTM GRADE 65-45-12, MECHANICAL JOINT.

## 8. VALVE BOXES:

A. VALVE BOXES FOR WATER MAINS AND SEWER FORCE MAINS SHALL BE ADJUSTABLE SCREW TYPE WITH 5-1/4" SHAFT, 18 TO 24 INCH EXTENSION, CAST IRON ASTM-A-48 CLASS 30 MARKED "WATER" OR "SEWER".

B. VALVE BOXES FOR BLOW-OFF ASSEMBLY SHALL BE CAST IRON ASTM-A-48 CLASS 30 MARKED "W".

## 9. RETAINER GLANDS:

RETAINER GLANDS SHALL CONFORM TO ANSI/AWWA C111/A21.11-00 OR LATEST REVISION. ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITERS LABORATORIES FOR 250 PSI MINIMUM WATER PRESSURE RATING.

## 10. DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY:

THE ASSEMBLY SHALL CONFORM TO ANSI/AWWA C510-97, OR LATEST REVISION, AND CAPABLE OF WITHSTANDING A WORKING PRESSURE OF AT LEAST 150 PSI WITHOUT DAMAGE TO WORKING PARTS OR IMPAIRMENT OF FUNCTION. IT SHALL CONSIST OF TWO INTERNALLY LOADED, INDEPENDENTLY OPERATING CHECK VALVES, LOCATED BETWEEN TWO TIGHTLY CLOSING RESILIENT-SEATED SHUT OFF VALVES, WITH FOUR PROPERLY PLACED RESILIENT-SEATED TEST COCKS.

## C. INSTALLATION:

## 1. GENERAL:

CONNECTION OF ALL NEW SYSTEMS TO EXISTING MAINS SHALL BE DONE USING ONE OF THE THREE FOLLOWING METHODS:

A. METHOD "A" PER BROWARD COUNTY PUBLIC HEALTH UNIT STANDARDS, WHICH INVOLVES A PRE-PLACED SIZE TEMPORARY CONNECTION BETWEEN THE EXISTING MAIN AND THE NEW MAIN.  
B. METHOD "B" PER BROWARD COUNTY PUBLIC HEALTH UNIT STANDARDS, WHICH INVOLVES A DIRECT CONNECTION BETWEEN THE NEW AND EXISTING MAINS USING TWO GATE VALVES SEPARATED BY A SLEEVE WITH A VENT PIPE.  
C. METHOD "C" APPROVED BY THE BROWARD COUNTY PUBLIC HEALTH UNIT, WHICH INVOLVES A TAP WITH ONE GATE VALVE REQUIRING DISINFECTION OF THE NEW SYSTEM PRIOR TO CONDUCTING THE PRESSURE TEST.

## 2. BEDDING:

BEDDING AND INITIAL BACKFILL (12 INCHES ABOVE PIPE) FOR ALL PIPES SHALL BE SAND WITH NO ROCK LARGER THAN 1" IN DIAMETER. PEA ROCK OR 3/4" WASHED ROCK OR WHERE UNSUITABLE BEDDING EXISTS AT THE DISCRETION OF THE CITY OF PEMBROKE PINES. ALL OTHER FILL SHALL NOT HAVE ROCK LARGER THAN 8" IN DIAMETER.

## 3. PVC PIPE:

A. PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATION'S GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEMS.  
B. PVC PIPE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER.  
C. DETECTOR TAPE SHALL BE INSTALLED THE FULL LENGTH OF ALL PVC MAINS APPROXIMATELY 18" BELOW GRADE, COLOR SIDE UP.

## 4. DUCTILE IRON PIPE:

A. DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST

BROWARD COUNTY DEPARTMENT OF PLANNING AND ENVIRONMENTAL PROTECTION

1. NOTES ON WATER SEWER SEPARATION:

A. SANITARY SEWERS AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAYED TO PROVIDE A MINIMUM VERTICAL CLEARANCE OF 18 INCHES FROM THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE, WHENEVER POSSIBLE. WHERE SANITARY SEWERS OR FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES OF VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (D.I.P.) AT THE CROSSING. SUFFICIENT LENGTHS OF D.I.P. MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN THE JOINTS. JOINTS ON THE SEWER SIDE SHALL BE AT LEAST 24 FEET FROM THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS WHEN THE WATER MAIN IS ABOVE THE SEWER MAIN. A MINIMUM VERTICAL CLEARANCE OF 12 INCHES MUST BE MAINTAINED AT ALL CROSSINGS WHEN THE WATER MAIN IS BELOW THE SEWER MAIN.

ALL CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUAL DISTANCE FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.

B. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SLOPE LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF D.I.P. AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF D.I.P. WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. IN THAT CASE, THE WATER MAIN SHOULD BE ABOVE THE SANITARY SEWER OR THE FORCE MAIN AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

C. ALL D.I.P. SHALL BE CLASS 50 OR HIGHER. ADEQUATE PROTECTIVE MEASURE AGAINST CORROSION SHALL BE USED AS DETERMINED BY DESIGN.

GENERAL NOTE:

THE CONTRACTOR SHALL CONFORM TO THE MOST CURRENT AND MOST STRINGENT STANDARDS AND SPECIFICATION REQUIREMENTS FOR THE BROWARD COUNTY DEPARTMENT OF PLANNING AND ENVIRONMENTAL REGULATION AND THE CITY OF PEMBROKE PINES, PERTAINING TO ALL UTILITY PIPE SEPARATIONS.

X. EARTHWORK AND COMPACTION

A. GENERAL

1. NONE OF THE EXISTING MATERIAL IS TO BE INCORPORATED IN THE LIMEROCK BASE.
2. ALL SUBGRADE UNDER PAVED AREAS SHALL HAVE A MINIMUM LBR VALUE OF 40 AND SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
3. ALL FILL MATERIAL IN AREAS NOT TO BE PAVED SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
4. A 2" BLANKET OF TOP SOIL SHALL BE PLACED OVER ALL AREAS TO BE SODDED.
5. SOD SHALL BE ST. AUGUSTINE, BITTER BLUE OR FLORATAM AND SHALL BE PLACED ON THE GRADED TOP SOIL AND WATERED TO INSURE SATISFACTORY CONDITION UPON FINAL ACCEPTANCE OF THE PROJECT.
6. WHEN WORKING IN AND AROUND EXISTING DRAINAGE CANALS OR LAKES, APPROPRIATE SILT BARRIERS SHALL BE INSTALLED.

A. ON-SITE:

1. ALL ORGANIC AND OTHER UNSUITABLE MATERIAL WITHIN THREE FEET OF AREAS TO BE PAVED SHALL BE REMOVED.
2. SUITABLE BACKFILL SHALL BE MINIMUM LBR 40 MATERIAL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 FOR THREE (3) FEET BEYOND THE PERIMETER OF THE PAVING.

XI. STORM DRAINAGE

A. CONTRACTOR MAY UTILIZE ONE OF THE FOLLOWING MATERIALS.

1. ALUMINUM:
  - A. PIPE SHALL BE ALUMINUM, MANUFACTURED IN CONFORMANCE WITH ASTM B209.
  - B. PIPE SHALL BE SPIRAL RIB DRAINAGE PIPE WITH 3/4" BY 3/4" RIBS, APPROXIMATELY 7-1/2" ON CENTER. GAUGE THICKNESS SHALL MEET FOOT STANDARD 945-1.
  - C. PIPE COUPLING BANDS SHALL BE 12" WIDE STANDARD SPLIT BANDS OF THE SAME ALLOY AS THE PIPE AND MAY BE ONE GAUGE LIGHTER THAN THE PIPE.
  - D. POLYURETHANE OR OTHER SEALANT SHALL BE USED WITH COUPLING BANDS ON ALL NON-PERFORATED PIPE.
2. REINFORCED CONCRETE PIPE (RCP):
 

CONCRETE PIPE FOR STORM SEWERS SHALL CONFORM TO ASTM L70-79, TABLE III, WALL B, OR LATEST REVISION. ALL PIPE SHALL HAVE MODIFIED TONGUE AND GROOVE JOINTS, AND HAVE RUBBER GASKETS, UNLESS OTHERWISE SPECIFIED.
3. POLYPROPYLENE PIPE (PPP):
 

POLYPROPYLENE PIPE SHALL HAVE A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS. MANNING'S "N" VALUE FOR USE IN DESIGN SHALL BE 0.012. POLYPROPYLENE PIPE MEETS OR EXCEEDS AASHTO M330 OR ASTM F2881 (12"-60"). PIPE SHALL BE JOINED BY WATERTIGHT, GASKETED INTEGRAL BELL REINFORCED BY A POLYMER COMPOSITE BAND & SPIGOT. THE JOINT SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. POLYPROPYLENE COMPOUND SHALL BE IMPACT MODIFIED COPOLYMER MEETING AASHTO M330 OR ASTM F2881 (12"-60"). INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.

4. MISCELLANEOUS:
  - A. BEDDING AND INITIAL BACKFILL OVER DRAINAGE PIPES SHALL BE SAND WITH NO ROCK LARGER THAN 1" DIAMETER.
  - B. BACKFILL MATERIAL UNDER PAVED AREAS SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
  - C. BACKFILL MATERIAL UNDER AREAS NOT TO BE PAVED SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
  - D. CATCH BASINS SHALL BE PRECAST MINIMUM 3000 PSI CONCRETE AND GRADE 40 REINFORCED STEEL.

5. INSTALLATION:
  - A. PIPE SHALL BE PLACED ON STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION OTHER FOREIGN FORMATIONS, AND CONSTRUCTED TO UNIFORM GRADE AND LINE.
  - B. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL WELL TAMPED IN LAYERS NOT TO EXCEED SIX INCHES (6").
  - C. PROVIDE A MINIMUM PROTECTIVE COVER OF 18 INCHES OVER STORM SEWER AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
  - D. THE CONTRACTOR SHALL NOTIFY THE LOCAL WATER CONTROL DISTRICT AT LEAST 24 HOURS PRIOR TO THE START OF THE CONSTRUCTION AND INSPECTION.

XII. STORM DRAINAGE PRE-TREATMENT/EXFILTRATION SYSTEM

- A. ANY CONFLICT WITH EXISTING OR PROPOSED UTILITIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. ANY IMPERMEABLE MATERIAL ENCOUNTERED IN THE DRAIN FIELD SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
- B. THE TRENCH LINER SHALL BE TYPAR SPUN BONDED POLYPROPYLENE FILTER FABRIC AS MANUFACTURED BY THE DUPONT COMPANY, OR APPROVED EQUAL. IT SHALL BE USED ON THE SIDES AND TOP OF DRAIN FIELD DITCH. THE TOP SECTION OF THE MATERIAL SHALL BE LAPPED A MINIMUM OF 24 INCHES AND THE CONTRACTOR SHALL TAKE EXTREME CARE IN BACKFILLING TO AVOID BUNCHING OF THE FABRIC.
- C. PERFORATED PIPE WITHIN THE DRAIN FIELD SHALL HAVE 3/8 INCH PERFORATIONS 360° AROUND THE PIPE WITH APPROXIMATELY 12 PERFORATIONS PER FOOT OF PIPE.
- D. PERFORATED PIPE SHALL TERMINATE FIVE FEET (5') FROM THE DRAINAGE STRUCTURE. THE REMAINING FIVE FEET (5') SHALL BE NON-PERFORATED PIPE.
- E. PIPES SHALL TERMINATE TWO FEET (2') FROM THE END OF THE TRENCH OR CONNECT TO ADDITIONAL CATCH BASINS.

XIII. PAVING

A. GENERAL:

1. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO THE CONSTRUCTION OF LIMEROCK BASE AND PRIOR TO PLACEMENT OF THE PAVEMENT.
2. ALL EXISTING PAVEMENT CUT OR DAMAGED BY CONSTRUCTION SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
3. WHERE PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE SAW CUT.
4. ALL STREET CORNER PAVEMENT RADII SHALL BE 25 FEET UNLESS OTHERWISE NOTED ON THE PLANS.
5. UPON COMPLETION OF DRAINAGE IMPROVEMENTS AND LIMEROCK BASE CONSTRUCTION THE CONTRACTOR SHALL PREPARE A SET OF "AS-BUILT" PLANS FOR THESE IMPROVEMENTS, SHOWING THE LOCATIONS AND THE PERTINENT GRADES OF ALL DRAINAGE INSTALLATIONS AND THE FINISHED ROCK GRADES OF THE ROAD CROWN AND EDGE OF PAVEMENT AT 50 FEET INTERVALS. THESE "AS-BUILTS" SHALL BE APPROVED BY THE CITY PRIOR TO THE PLACEMENT OF ASPHALT.
6. REFER TO ARCHITECTURAL PLANS FOR BRICK PAVERS DESIGN.

B. MATERIALS:

1. BASE COURSE SHALL BE CRUSHED LIMEROCK MIAMI OOLITE WITH A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM (60% FOR LOCAL STREETS AND PARKING AREAS) AND A MINIMUM LIMEROCK BEARING RATIO 100.
2. PRIME COAT AND TACK COAT SHALL MEET F.D.O.T. STANDARDS.
3. SURFACE COURSE SHALL BE EQUAL TO F.D.O.T. TYPE S-3 ASPHALT.
4. REINFORCED CONCRETE SLABS SHALL BE CONSTRUCTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI AND SHALL BE REINFORCED WITH A 6" X 6" NO. 6 GAUGE WIRE MESH.
5. REFER TO ARCHITECTURAL PLANS FOR BRICK PAVERS DESIGN.

C. INSTALLATION:

1. LIMEROCK BASE MATERIAL SHALL BE 8 INCHES THICK AND SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T80-C.
2. LIMEROCK BASE MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS. BASES GREATER THAN 6" SHALL BE PLACED IN TWO OR MORE EQUAL LIFTS.
3. ASPHALTIC CONCRETE SHALL BE A MINIMUM OF 1 1/2" THICK AND SHALL BE PLACED TWO 3/4" LIFTS. (NOTE: SECOND LIFT TO BE PLACED AFTER A MINIMUM OF 80% OF THE HOUSES HAVE BEEN COMPLETED OR AS DIRECTED BY THE CITY ENGINEER).
4. PRIME COAT SHALL BE PLACED ON ALL LIMEROCK BASES IN ACCORDANCE WITH F.D.O.T. STANDARDS.
5. TACK COAT SHALL BE PLACED AS REQUIRED IN ACCORDANCE WITH F.D.O.T. STANDARDS.
6. REFER TO ARCHITECTURAL PLANS FOR BRICK PAVERS DESIGN.

D. TESTING:

ALL SUBGRADE, LIMEROCK AND ASPHALT TESTS REQUIRED SHALL BE TAKEN AT THE DIRECTION OF THE ENGINEER AND/OR THE CITY OF PEMBROKE PINES.

1. THE FINISHED SURFACE OF THE BASE COURSE AND THAT OF THE WEARING SURFACE SHALL NOT VARY MORE THAN 1/4" FROM THE TEMPLATE. ANY IRRREGULARITIES EXCEEDING THIS LIMIT SHALL BE CORRECTED.
2. DENSITY TESTS SHALL BE TAKEN BY AN INDEPENDENT TESTING LABORATORY, CERTIFIED BY THE STATE OF FLORIDA, AND TAKEN AS DIRECTED BY THE ENGINEER AND THE CITY OF PEMBROKE PINES.
3. ALL TESTING COSTS (PAVING) SHALL BE PAID FOR BY THE OWNER EXCEPT THOSE TESTS FAILING TO MEET THE SPECIFIED REQUIREMENTS, WHICH ARE TO BE PAID BY THE CONTRACTOR.

XIV. SIGNING AND MARKING

- A. ALL PAVEMENT MARKINGS SHALL BE HOT APPLIED THERMOPLASTIC MANUFACTURED AND APPLIED IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATION'S SECTION 711 AND BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS WHERE APPLICABLE.
- B. ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.
- C. REFLECTIVE PAVEMENT MARKERS SHALL BE CLASS B MARKERS MANUFACTURED IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS 706 AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES.

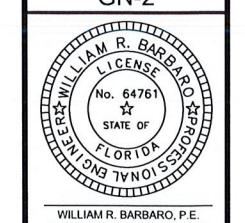
GENERAL NOTES & SPECIFICATIONS		BERGERON PARK OF COMMERCE SOUTH	15.25 ACRE PARCEL	CITY OF PEMBROKE PINES										
<table border="1"> <tr> <td>6/17/2019</td> <td>M.</td> <td>W.R.</td> <td>APRIL</td> <td>REVISIONS</td> </tr> <tr> <td>NO DATE</td> <td>BY</td> <td></td> <td></td> <td>RESPONSE TO 5/29/2019 DRC COMMENTS</td> </tr> </table>					6/17/2019	M.	W.R.	APRIL	REVISIONS	NO DATE	BY			RESPONSE TO 5/29/2019 DRC COMMENTS
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**CR**  
CARNAHAN PROCTOR & CROSS

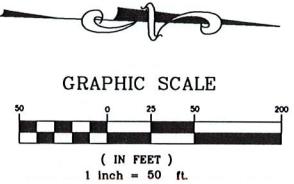
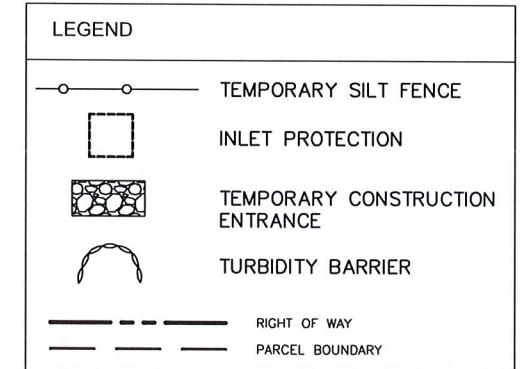
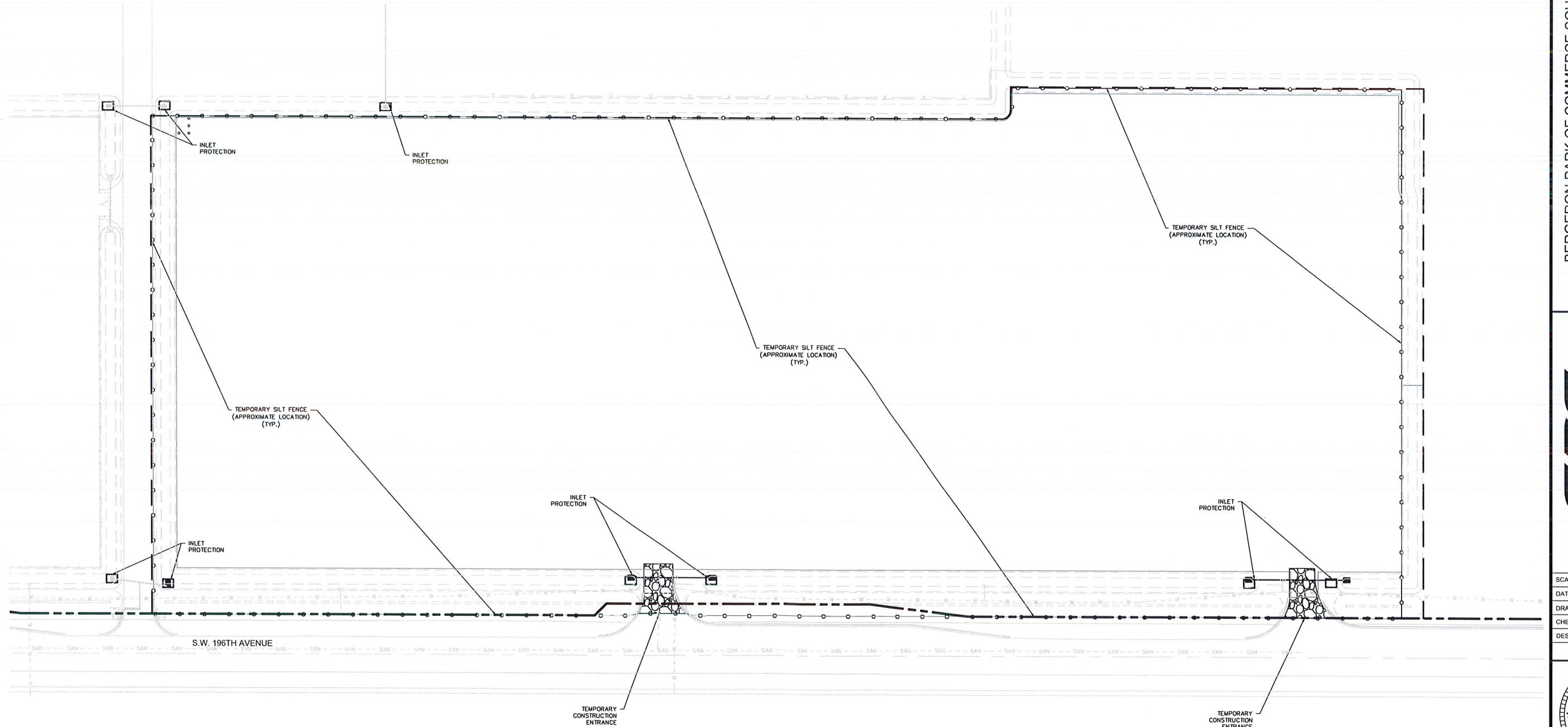
CIVIL ENGINEERING | CONSTRUCTION SERVICES | GEOMATICS  
814 S. MILITARY TRAIL, DEERFIELD BEACH, FLORIDA 33442  
PHONE: (954) 972-3955 FAX: (954) 972-4178  
FILE NO. 190411

SCALE: AS SHOWN  
DATE: 6/20/2019  
DRAWN BY: M.T.  
CHECKED BY: W.R.B.  
DESIGNED BY: M.T.

GN-2



WILLIAM R. BARBARO, P.E.  
FL. REGISTRATION NO. - 64761



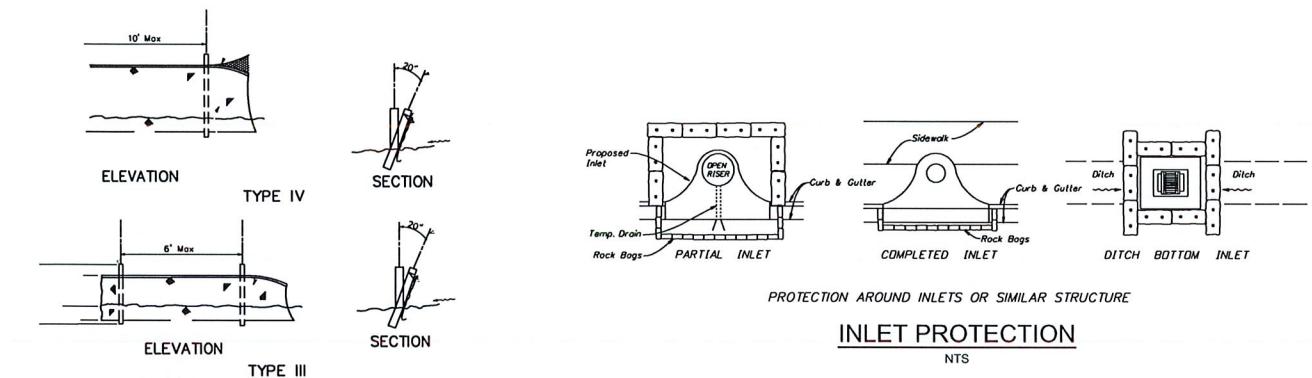
NOTE:

1. AREA AT PROPOSED DEMUCK IDENTIFIED BY THE BOUNDARIES OF SILT FENCE

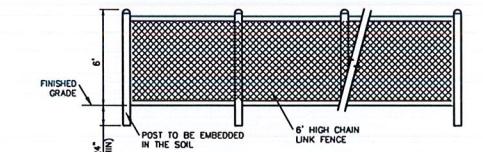
BERGERON PARK OF COMMERCE SOUTH 15.25 ACRE PARCEL CITY OF PEMBROKE PINES	EROSION & SEDIMENT CONTROL PLAN
 <b>CARNAHAN PROCTOR &amp; CROSS</b> <small>Engineering   Construction Services   Geomatics</small> 814 S. MILITARY TRAIL, DEERFIELD BEACH, FLORIDA 33442 PHONE: (954) 972-3859 FAX: (954) 972-4178 FILE NO. 190411	
LE: AS SHOWN	
E: 6/20/2019	
WN BY: M.T.	
CKED BY: W.R.B.	
DIGNED BY: M.T.	
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## EROSION AND SEDIMENT CONTROL NOTES

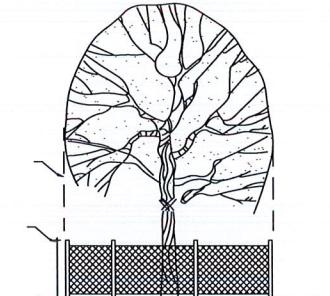
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND APPLICABLE WATER MANAGEMENT DISTRICT PERMIT(S) FOR THIS PROJECT.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWERS MANUAL" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (FDER).
- THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
- ALL EXCAVATIONS AND EARTHWORK SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND REROUTED THROUGH FILTERS, SILTATION DIAPERS AND SUMPS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CORRECTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION IN ACCORDANCE WITH CHAPTER 62-302, FLORIDA ADMINISTRATIVE CODE.
- THE CONTRACTOR SHALL PAY FOR ANY WATER QUALITY CONTROL VIOLATIONS FROM ANY AGENCY THAT RESULTS IN FINES BEING ASSESSED TO THE OWNER BECAUSE OF THE CONTRACTOR'S FAILURE TO ELIMINATE TURBID RUNOFF FROM LEAVING THE SITE AND RAISING BACKGROUND LEVELS ABOVE EXISTING BACKGROUND LEVEL.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
- ADDITIONAL PROTECTION - ON-SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- SILT FENCES SHALL BE USED ALONG THE PROPERTY LINES TO MINIMIZE OFFSITE SILTATION MITIGATION.
- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- FILTER FABRIC SHALL BE INSTALLED UNDER INLET GRATES AND EXTEND A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. IF MORE THAN ONE STRIP OF FABRIC IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED 1 FOOT.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL AND AS NEEDED.
- ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
- DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE APPLICABLE WATER MANAGEMENT DISTRICT.
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
- SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER BARRIER ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEDED.
- CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
- ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION AND SHALL BE REMOVED WHEN AREAS HAVE BEEN STABILIZED.



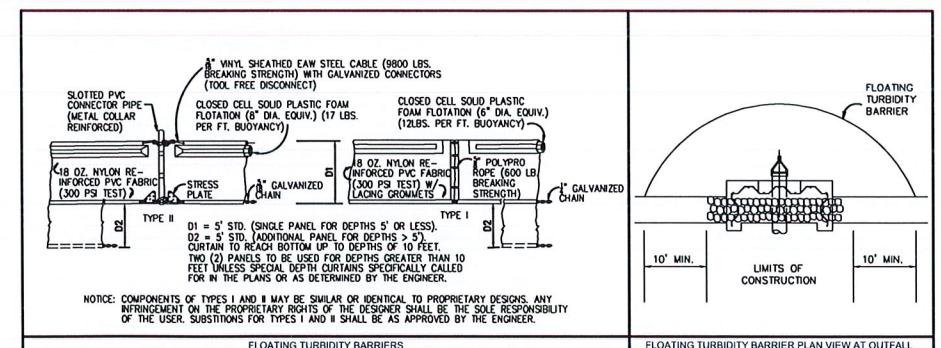
SILT FENCE DETAIL  
NTS



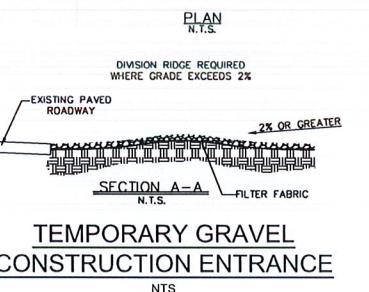
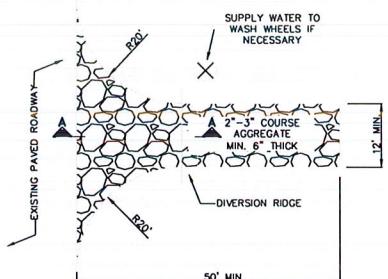
CONSTRUCTION FENCE DETAIL  
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TREE PRESERVATION  
BARRICADE FENCING DETAIL  
NTS



FLOATING TURBIDITY BARRIER  
NTS



TEMPORARY GRAVEL  
CONSTRUCTION ENTRANCE  
NTS

EROSION & SEDIMENT CONTROL DETAILS		FILE NO. 190411
BERGERON PARK OF COMMERCE SOUTH 15.25 ACRE PARCEL CITY OF PEMBROKE PINES	6/17/2019 M.T. NO	W.R.B. APRV REVISIONS
	6/17/2019 M.T. NO	W.R.B. APRV REVISIONS
		NOTE: FOR SILT FENCE APPLICATIONS AND NOTES, SEE SHEET 3 OF 3 FOOT INDEX No. 102.
		REVISIONS

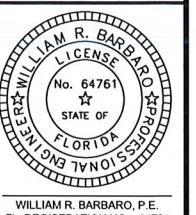


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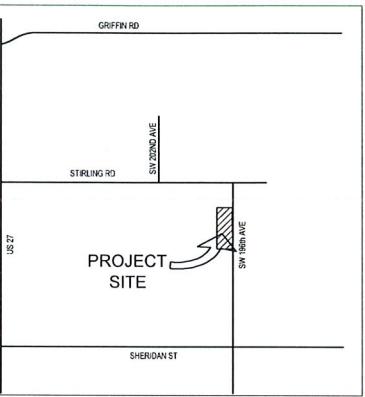
WILLIAM R. BARBARO, P.E.  
FL. REGISTRATION NO. - 64761

PROPOSED STRUCTURES					
Structure Name	Structure Type	Rim Elevation (NAVD 88)	Invert Elevation (NAVD 88)		
			N	W	E
CB-1	P - 4'	3.50			-1.26
CB-2	P - 4'	3.50	0.25		
CB-3	P - 4'	3.50			0.25
CB-4	P - 4'	3.50	-3.77		
CB-5	P - 4'	3.50			-3.77

NOTES:

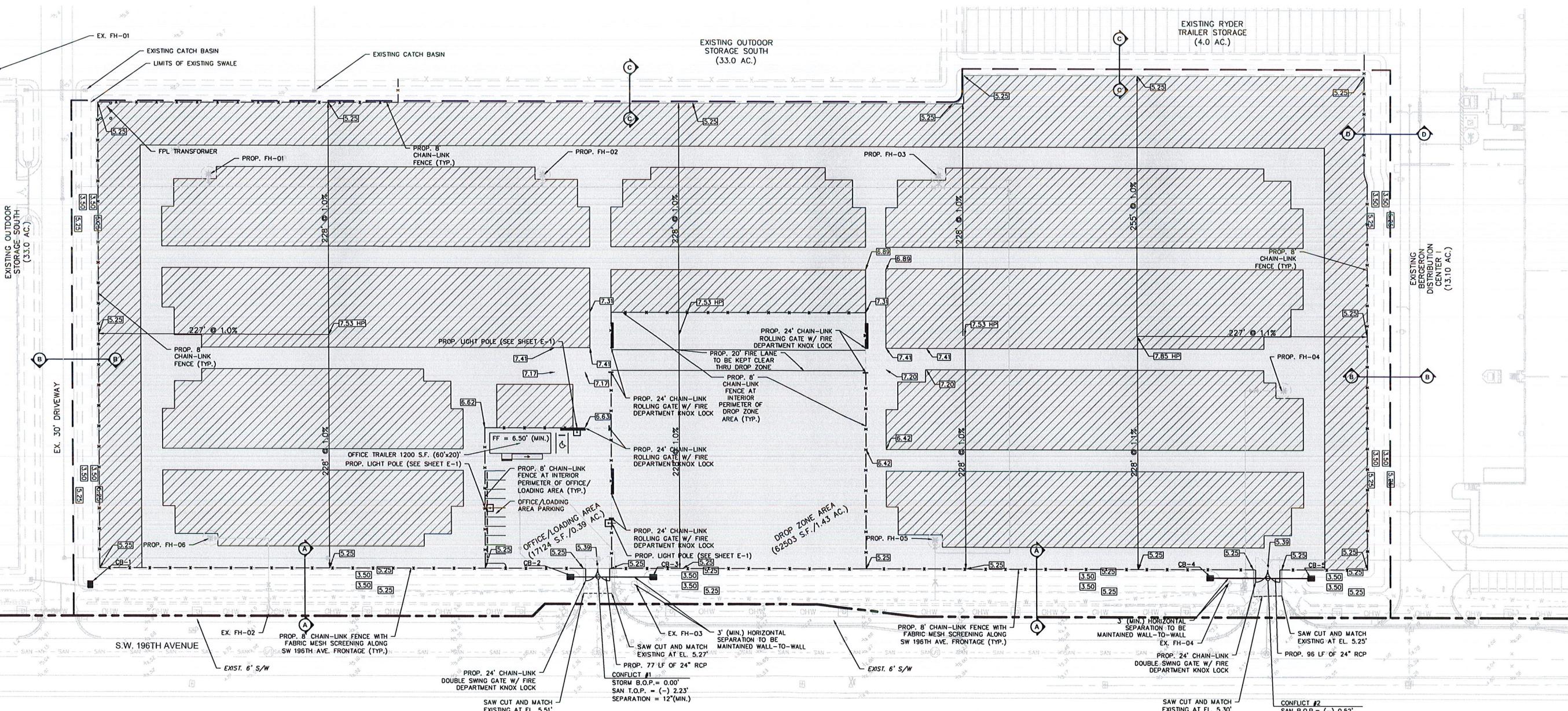
1. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).  
TO CONVERT TO NGVD: NCVD = NAVD + 1.528'
2. CONSTRUCT CONCRETE APRON SURROUNDING CATCH BASINS. CONCRETE APRON TO BE MIN. 12" WIDE AND 6" THICK WITH 4X4 WIRE MESH. REFER TO CONCRETE APRON DETAIL ON SHEET PGD-2.

LEGEND	
—	RIGHT OF WAY
—	PARCEL BOUNDARY
- - -	PROPOSED CHAIN-LINK FENCE
■■■■■	EXISTING CATCH BASIN
—	EXISTING ELEVATION (NAVD)
+	SLOPE W/ FLOW ARROW
PROP. TENANT INVENTORY STORAGE	
PROP. COMPACTED ASPHALT MILLINGS	
PROP. GRADE (NAVD) NCVD = NAVD + 1.528'	



LOCATION MAP  
NOT TO SCALE

0 50 100 Feet





## NOTE:

1. CONTRACTOR TO FIELD VERIFY THE INVERT ELEVATIONS OF THE EXISTING SANITARY SEWER MAINS BEFORE THE BEGINNING OF CONSTRUCTION. IF THERE ARE ANY DEVIATIONS FROM THE ENGINEERING PLANS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD.
2. ALL PROPOSED FIRE HYDRANTS TO HAVE 7.5' CLEAR RADIUS FROM ANY OBSTRUCTION AND PROTECTED BY BOLLARDS AT 3' RADIUS, PER STANDARD CITY DETAIL (SEE DETAIL ON SHEET PGD-2).
3. CONTRACTOR TO MAINTAIN 36" OF COVER (MIN) OVER PVC PIPE FOR ALL WATER IMPROVEMENTS DEPICTED ON THESE PLANS. COVER REQUIREMENTS MAY BE REDUCED TO 30" OF COVER (MIN.) WITH THE MATERIAL SELECTION OF D.I.P.
4. CONTRACTOR TO MAINTAIN 12" OF VERTICAL SEPARATION (MIN.) WHEN W.M. CROSSES OVER OTHER PIPES. CONTRACTOR TO MAINTAIN 18" OF VERTICAL SEPARATION (MIN.) WHEN W.M. CROSSES UNDER OTHER PIPES. W.M. CROSSING OVER OTHER PIPES IS THE PREFERRED METHOD, HOWEVER COVER REQUIREMENTS SHALL BE MAINTAINED.
5. FOR W.M. CROSSINGS, BOTH WATER MAIN PIPE AND THE CROSSING PIPE SHALL BE OF A FULL PIPE LENGTH AND CENTERED UPON THE CROSSING WHERE THE VERTICAL SEPARATION SHALL BE MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL OF PIPE.

LEGEND	
PROPOSED WATER MAIN TEE	PROPOSED VERTICAL BENDS
PROPOSED GATE VALVE	PROPOSED SANITARY SEWER MANHOLE
PROPOSED D.O.C.V.	PROPOSED SEWER DIRECTION OF FLOW
PROPOSED WATER METER WITH B.F.P.	C.O. PROPOSED CLEAN OUT
PROPOSED WATER MAIN PLUG	S.P. # PROPOSED BACTERIOLOGICAL SAMPLING POINT
PROPOSED FIRE HYDRANT ASSEMBLY	U.E. UTILITY CONFLICT
	R.O.W. RIGHT OF WAY
	PARCEL BOUNDARY
	PROPOSED CHAIN-LINK FENCE
	PROP. TENANT INVENTORY STORAGE

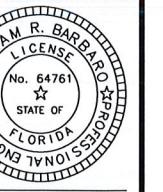
RESPONSE TO 5/29/2019 DRC COMMENTS  
REVISIONS

BERGERON PARK OF COMMERCE SOUTH  
15.25 ACRE PARCEL  
CITY OF PEMBROKE PINES

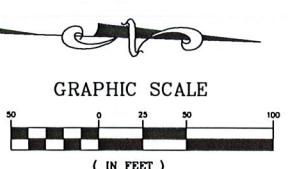
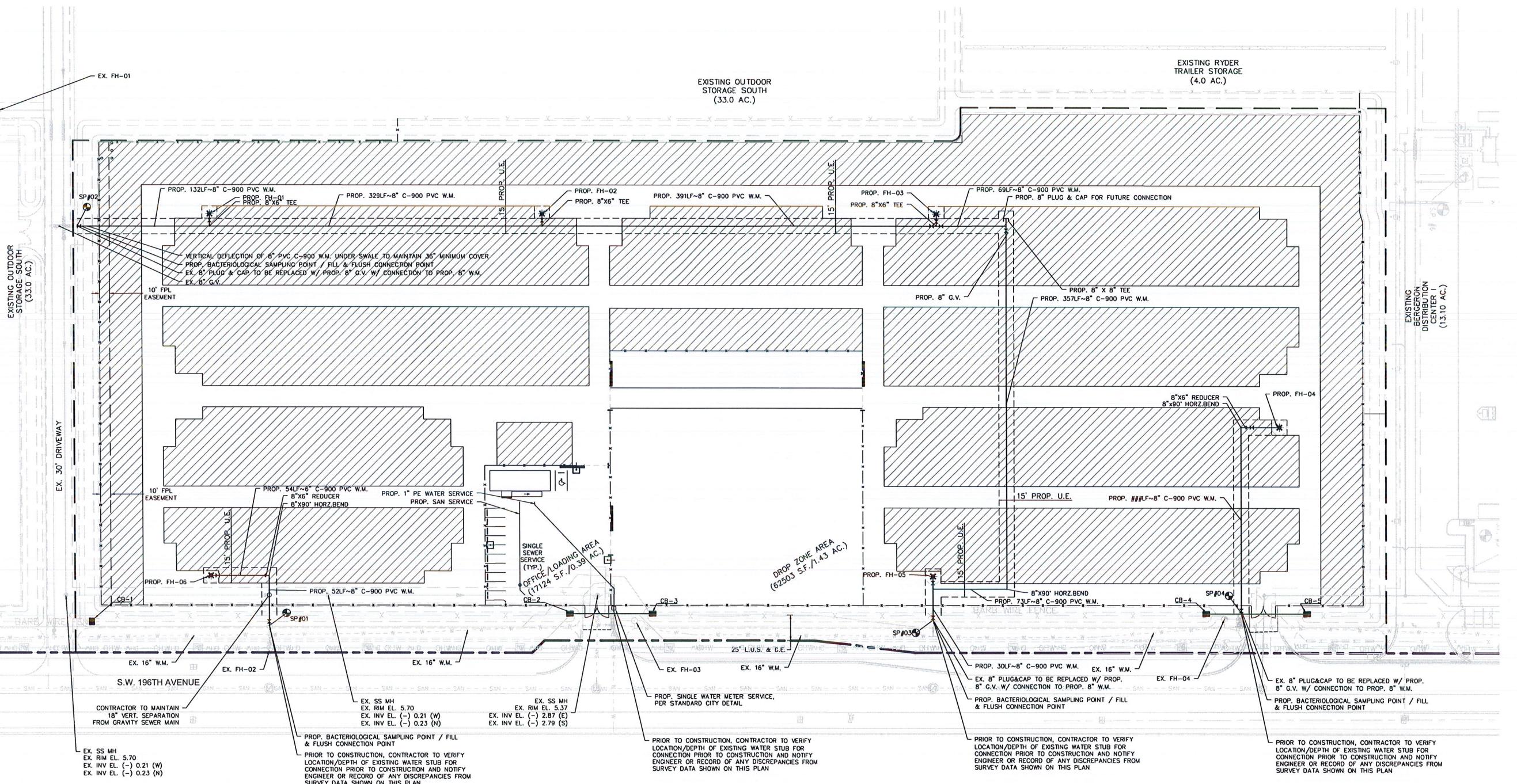
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814 S. MILITARY TRAIL, DEERFIELD BEACH, FLORIDA 33442  
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FILE NO. 190411

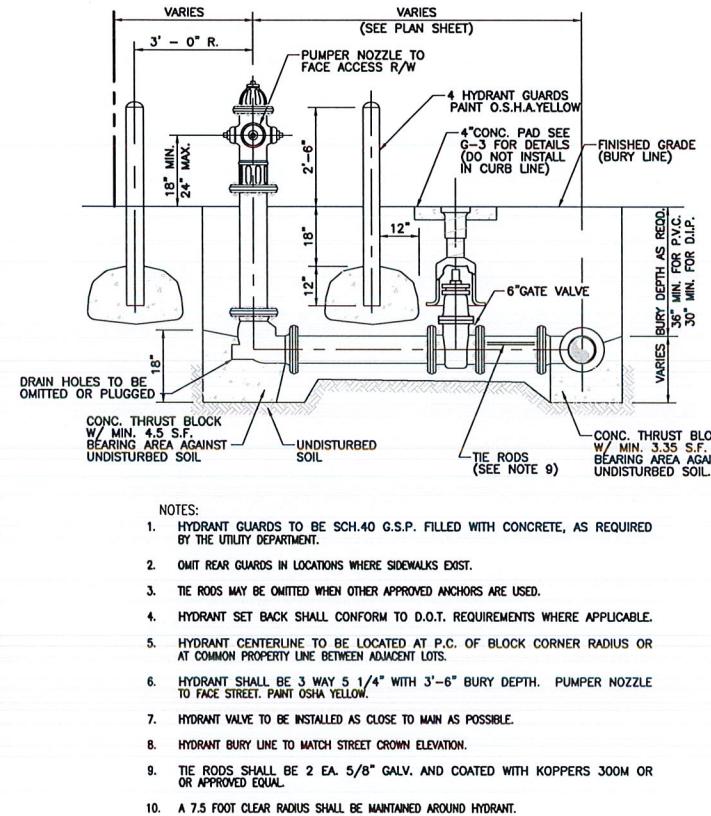
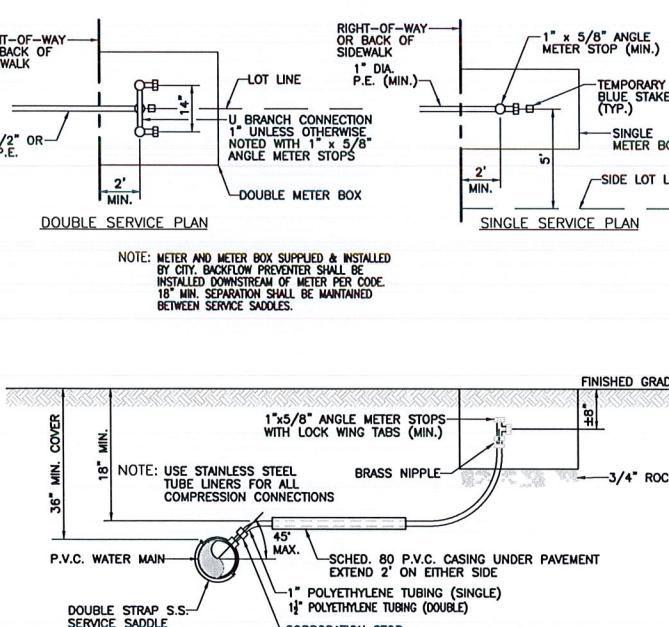
SCALE: AS SHOWN  
DATE: 6/20/2019  
DRAWN BY: M.T.  
CHECKED BY: W.R.B.  
DESIGNED BY: M.T.

WS-1

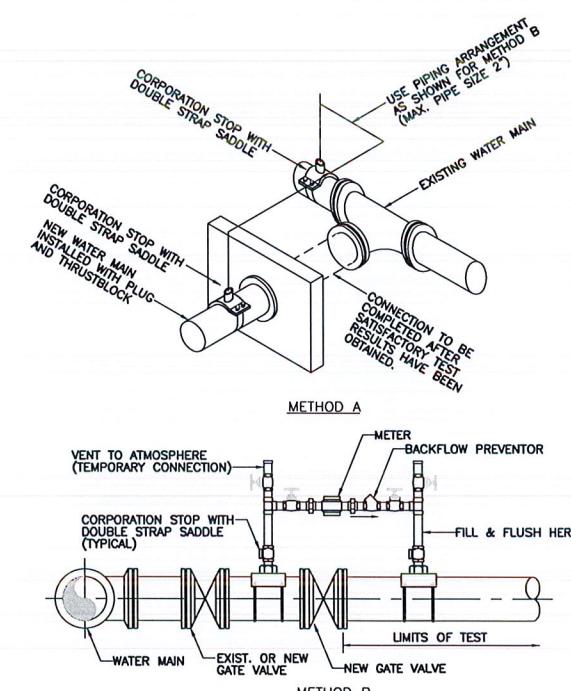


WILLIAM R. BARBARO, P.E.  
FL. REGISTRATION NO. - 64761





TYPICAL SINGLE &amp; DOUBLE SERVICE CONNECTION

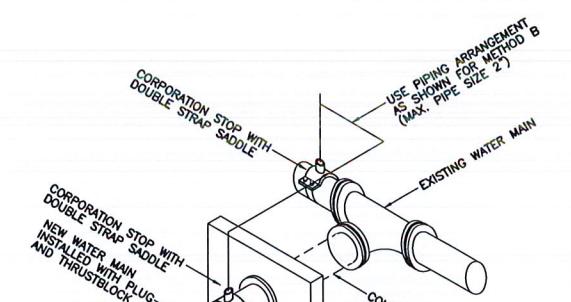


TEEE &amp; WYE 90° BEND 45° &amp; 22 1/2° BEND

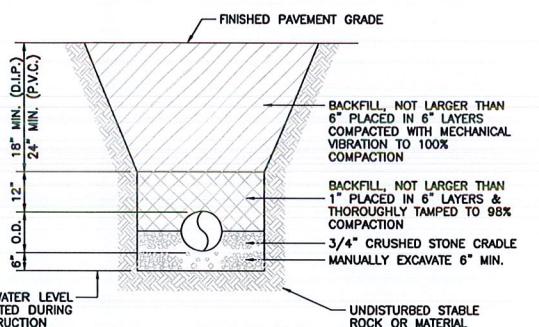
PIPE SIZE	TEE & WYE	90° BEND	45° & 22 1/2° BEND	11 1/4° BEND
6"	27	27	16	9
8"	34	34	20	11
10"	41	41	24	14
12"	48	48	28	16
14"	55	55	32	18
16"	62	62	35	20
18"	69	69	39	22
20"	75	75	42	24
24"	87	87	49	27
30"	104	104	57	31
36"	120	120	65	35
42"	134	134	72	39
48"	147	147	79	42
54"	160	160	85	45

NOTE:  
THE FIGURES IN THIS TABLE ARE BASED ON 150 PSI TEST PRESSURE WITH 2.5 FEET OF COVER AND 2000 POUNDS PER SQUARE FOOT SOIL BEARING AGAINST UNDISTURBED TRENCH. A 20% SAFETY FACTOR HAS BEEN ADDED.

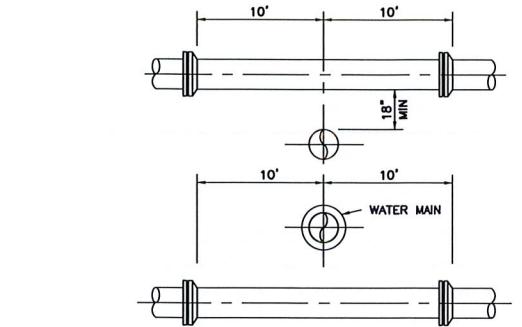
RESTRAINED JOINT DETAIL



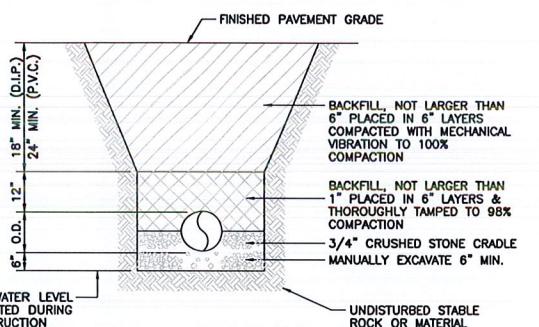
UTILITY CROSSING GENERAL REQUIREMENTS



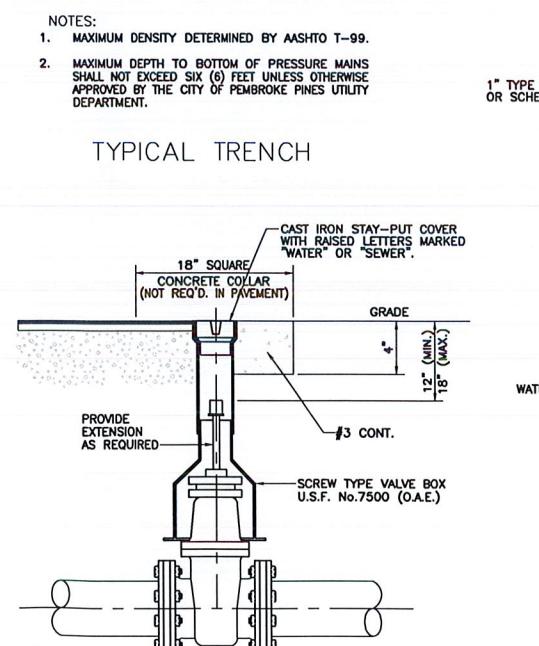
UTILITY CROSSING DEFLECTION TYPE



UTILITY CROSSING FITTING TYPE

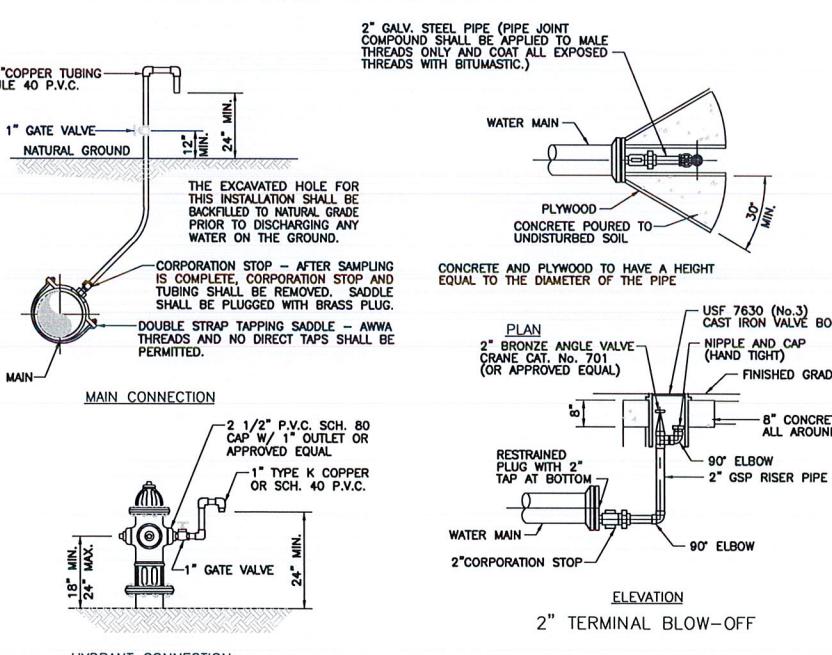


METER BANK DETAIL



TYPICAL TRENCH

VALVE AND BOX DETAIL



TYPICAL SAMPLING POINTS

**CR**  
CARMANAHAN PROCTER & CROSS

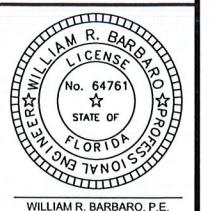
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**BERGERON PARK OF COMMERCE SOUTH  
15.25 ACRE PARCEL  
CITY OF PEMBROKE PINES**

NO.	DATE	W.R.B.	REVISIONS
	6/17/2019	M.T.	BY

SCALE: N.T.S.  
DATE: 6/20/2019  
DRAWN BY: M.T.  
CHECKED BY: W.R.B.  
DESIGNED BY: M.T.

WS-2

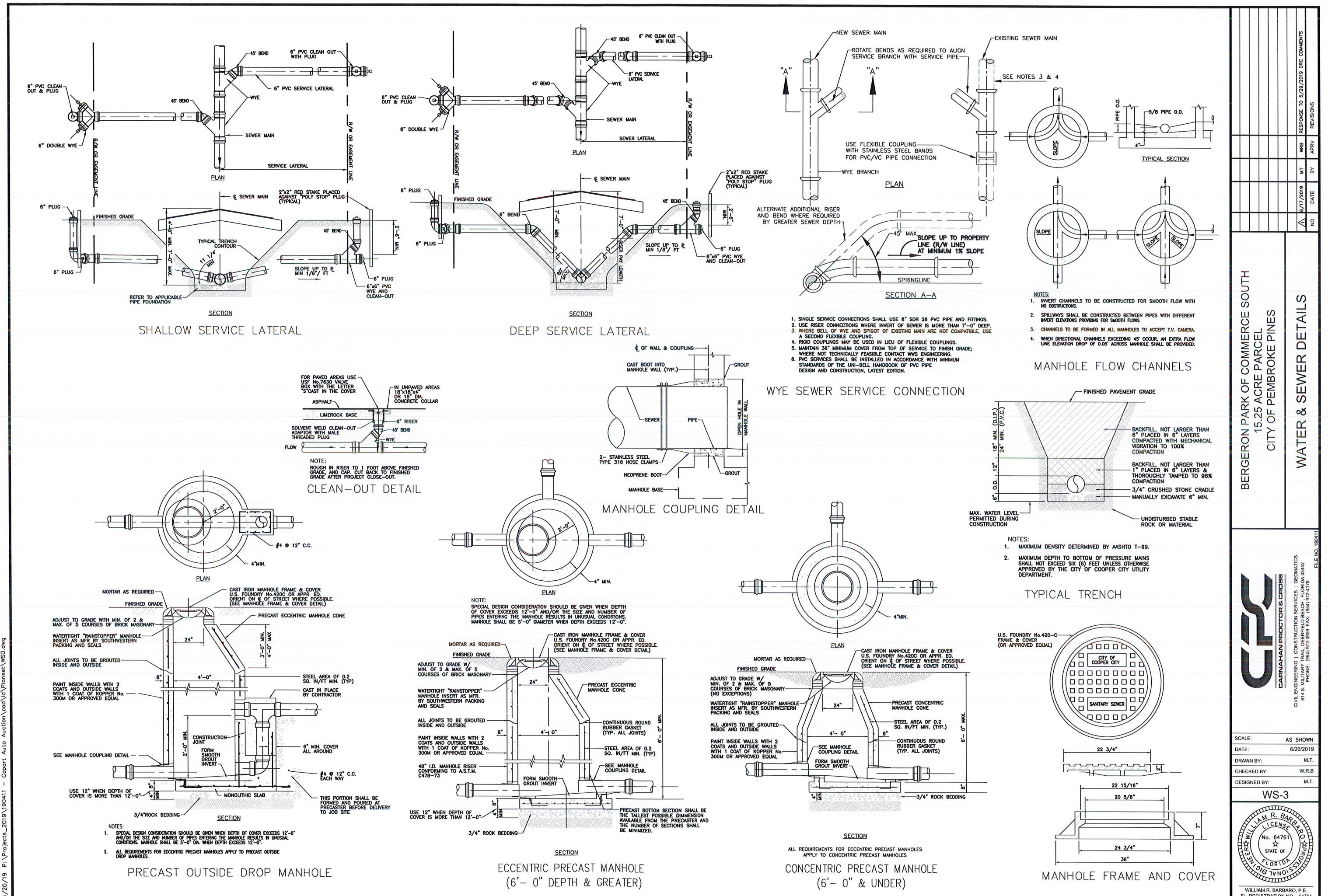


WILLIAM R. BARBARO, P.E.  
FL. REGISTRATION NO. -64761

1. (*) 18" MINIMUM CLEARANCE REQUIRED FOR WATER AND SEWER MAIN CROSSINGS, 12" MINIMUM CLEARANCE REQUIRED FOR OTHER UTILITY CROSSINGS.
2. THE DEFLECTION TYPE CROSSING SHALL BE USED WHENEVER POSSIBLE ONLY UNDER SPECIAL ORDERS BY THE ENGINEER SHALL THE FITTING TYPE CROSSING BE ALLOWED.
3. CONSTRUCT CROSSING USING 75% OF MANUFACTURES MAXIMUM JOINT DEFLECTION (MAXIMUM).

1. (*) 18" MINIMUM CLEARANCE REQUIRED FOR WATER AND SEWER MAIN CROSSINGS, 12" MINIMUM CLEARANCE REQUIRED FOR OTHER UTILITY CROSSINGS.
2. COAT TIE RODS WITH A COAL TAR ENAMEL AFTER ASSEMBLY (2 COATS MIN.).
3. THE RODS MAY BE OMITTED WHEN OTHER APPROVED METHODS OF RESTRAINING ARE UTILIZED.

1. (*) 18" MINIMUM CLEARANCE REQUIRED FOR WATER AND SEWER MAIN CROSSINGS, 12" MINIMUM CLEARANCE REQUIRED FOR OTHER UTILITY CROSSINGS.
2. COAT TIE RODS WITH A COAL TAR ENAMEL AFTER ASSEMBLY (2 COATS MIN.).
3. THE RODS MAY BE OMITTED WHEN OTHER APPROVED METHODS OF RESTRAINING ARE UTILIZED.



## NOTE

1. THE ENTIRE LENGTH OF THE FIRE ACCESS ROAD WILL BE ABLE TO SUPPORT 32 TONS. SEE PAVEMENT SECTION DETAIL ON SHEET PGD-2.
2. KNOX PAD LOCKS SHALL BE PROVIDED FOR ALL MANUAL GATES AS INDICATED ON THIS PLAN.

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