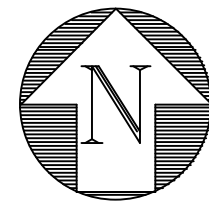
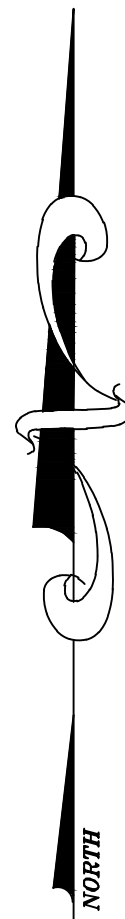


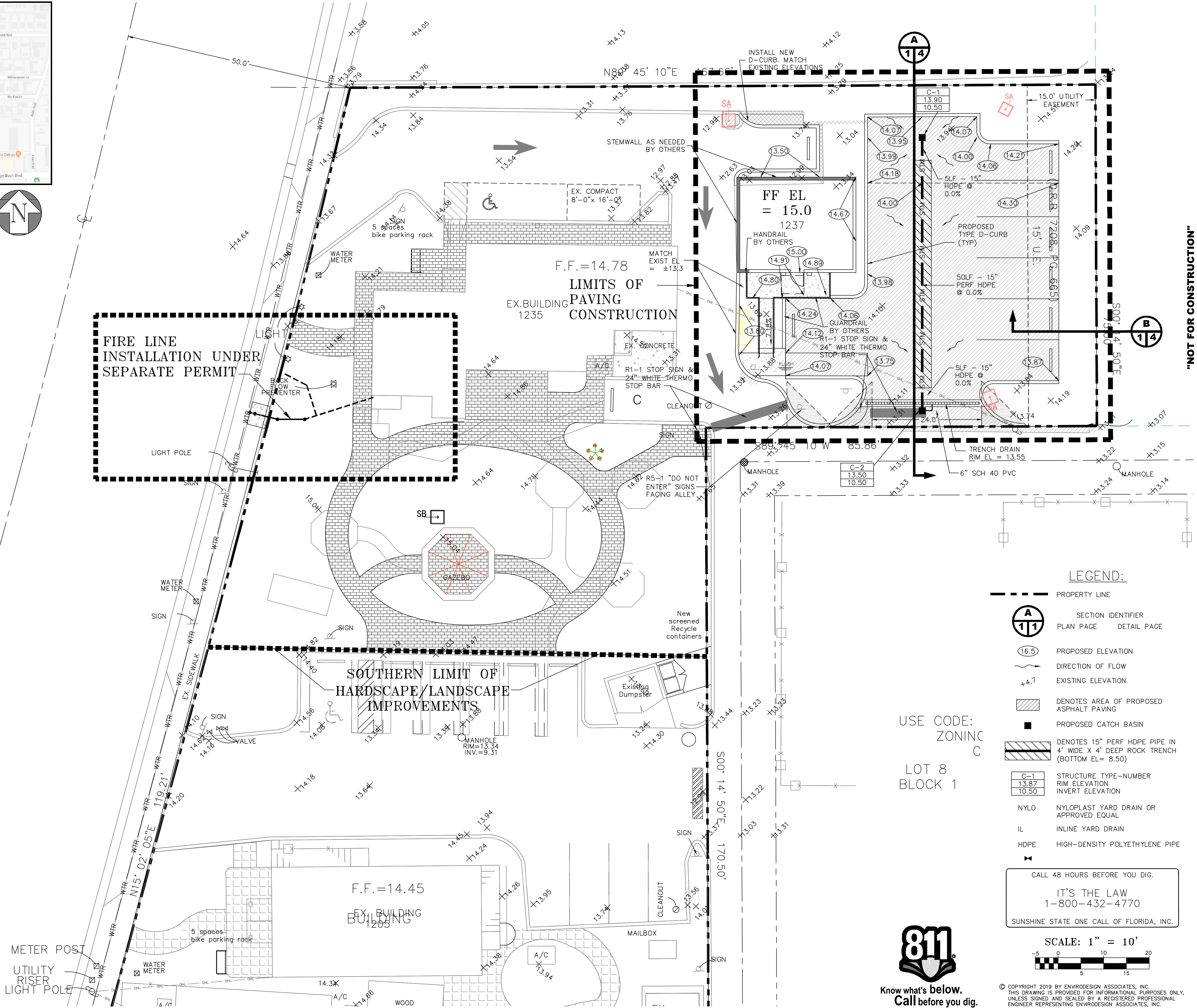
LOCATION MAP
N.T.S.



NOTE: CONTRACTOR TO FIELD
VERIFY EXACT LOCATION, SIZE, AND
ELEVATION OF ALL IMPROVEMENTS
AT TIME OF CONSTRUCTION AND
REPORT ANY DISCREPANCIES TO
ENVIRODESIGN ASSOCIATES, INC.



N. FEDERAL HIGHWAY
100' RIGHT-OF-WAY (PER RIGHT-OF-WAY MAP)
66' RIGHT-OF-WAY (PER PLAT)



LEGEND:

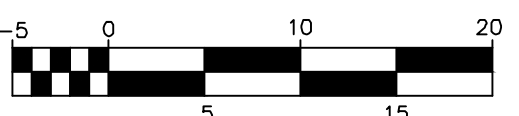
- PROPERTY LINE
- SECTION IDENTIFIER
PLAN PAGE
DETAIL PAGE
- PROPOSED ELEVATION
- DIRECTION OF FLOW
- EXISTING ELEVATION
- DENOTES AREA OF PROPOSED ASPHALT PAVING
- PROPOSED CATCH BASIN
- DENOTES 15" PERF HDPE PIPE IN 4' WIDE X 4' DEEP ROCK TRENCH (BOTTOM EL = 8.50)
- STRUCTURE TYPE-NUMBER
RIM ELEVATION
INVERT ELEVATION
- NYLO NYLOPLAST YARD DRAIN OR APPROVED EQUAL
- IL INLINE YARD DRAIN
- HDPE HIGH-DENSITY POLYETHYLENE PIPE

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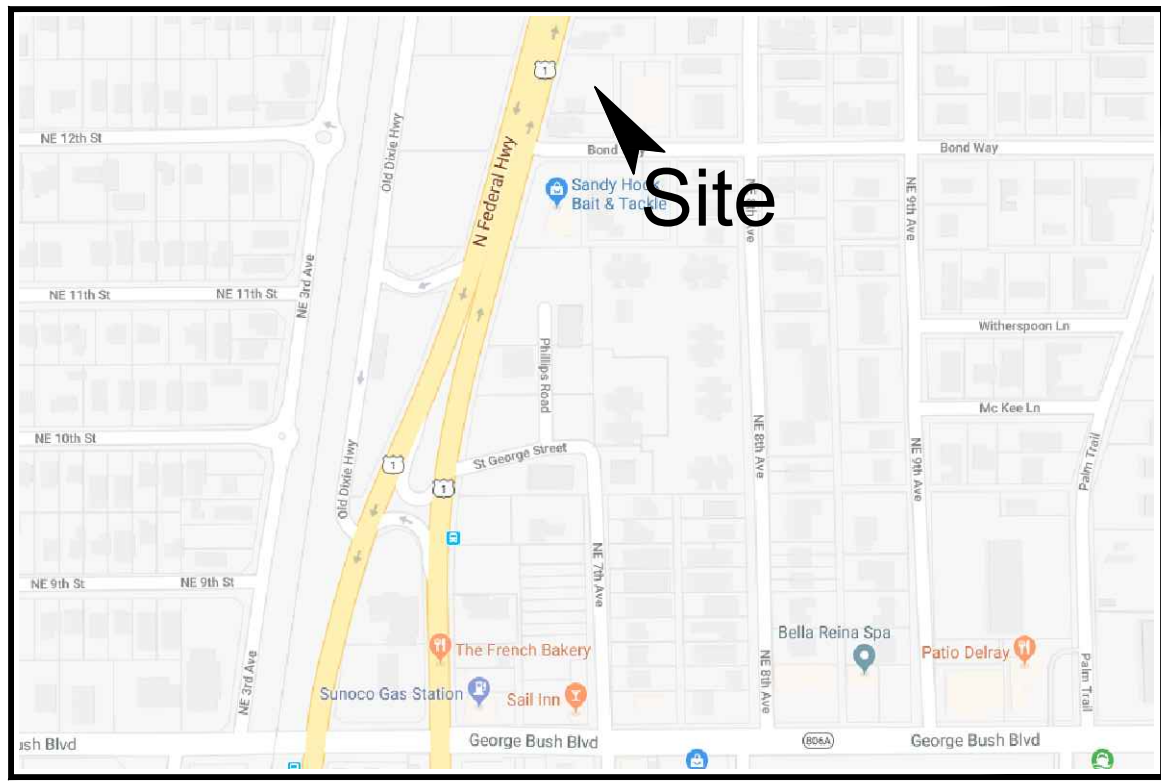
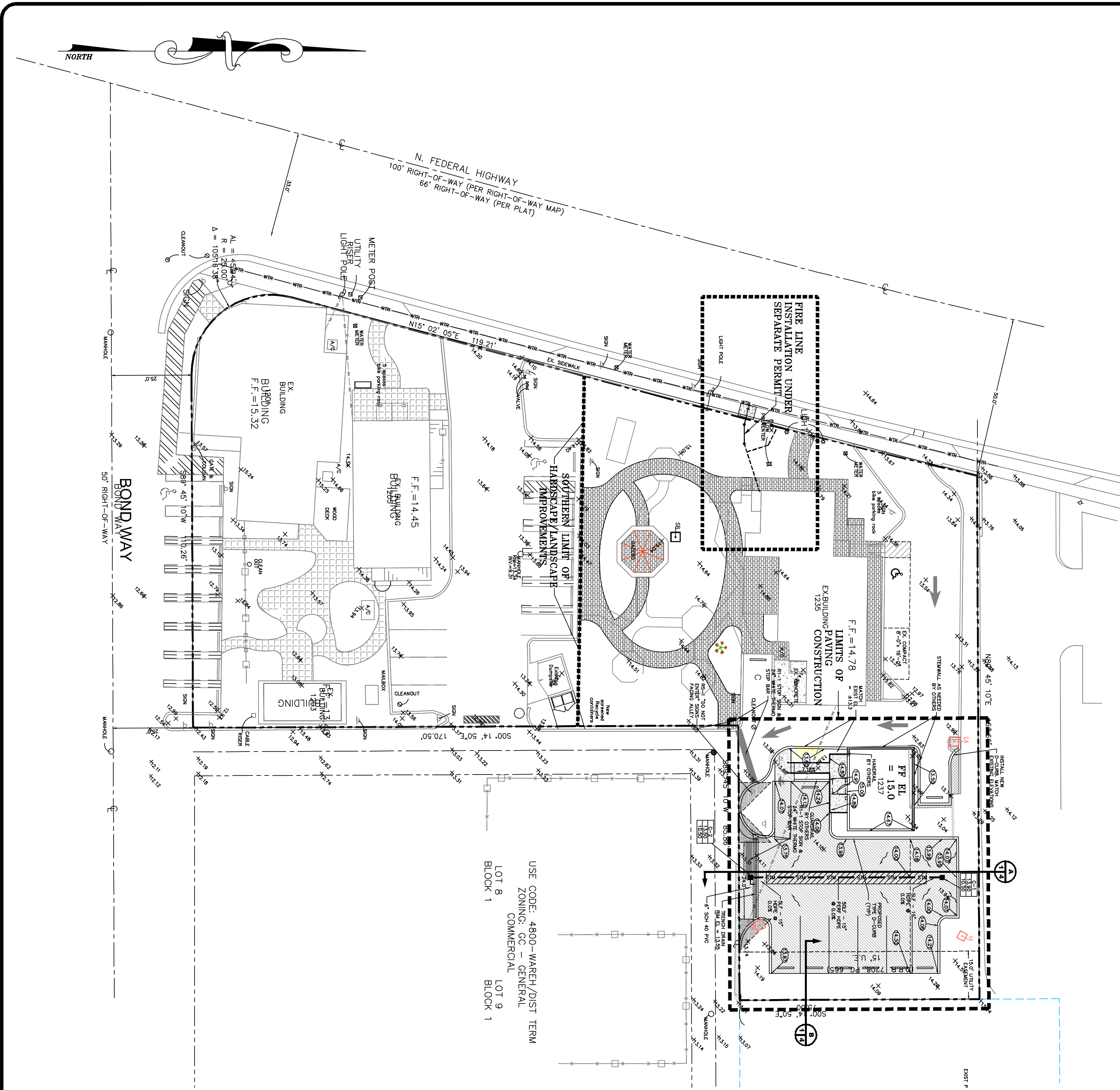
SCALE: 1" = 10'



USE CODE:
ZONING
C
LOT 8
BLOCK 1

"NOT FOR CONSTRUCTION"

BY:	BAB
REVISIONS:	REVISE PER SITE PLAN CHANGES
DATE:	11/13/18
NO.	1
NOT VALID WITHOUT ENGINEER'S SEAL	
JOSEPH A. PIKE, P.E.	
FL REG # 42696	
PAVING & DRAINAGE PLAN FOR: DELRAY OASIS BUSINESS PARK 1201 N FEDERAL HIGHWAY DELRAY BEACH, FLORIDA	
ENGINEERS • ENVIRONMENTAL CONSULTANTS EnviroDesign Associates, Inc. www.envirodesign.com FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500 Fax: (561) 274-8558	
DRAWN:	B.A.B.
CHECKED:	J.A.P.
DATE:	11/13/19
JOB NO.	18023-ENG
SHEET NO.	1 OF 6



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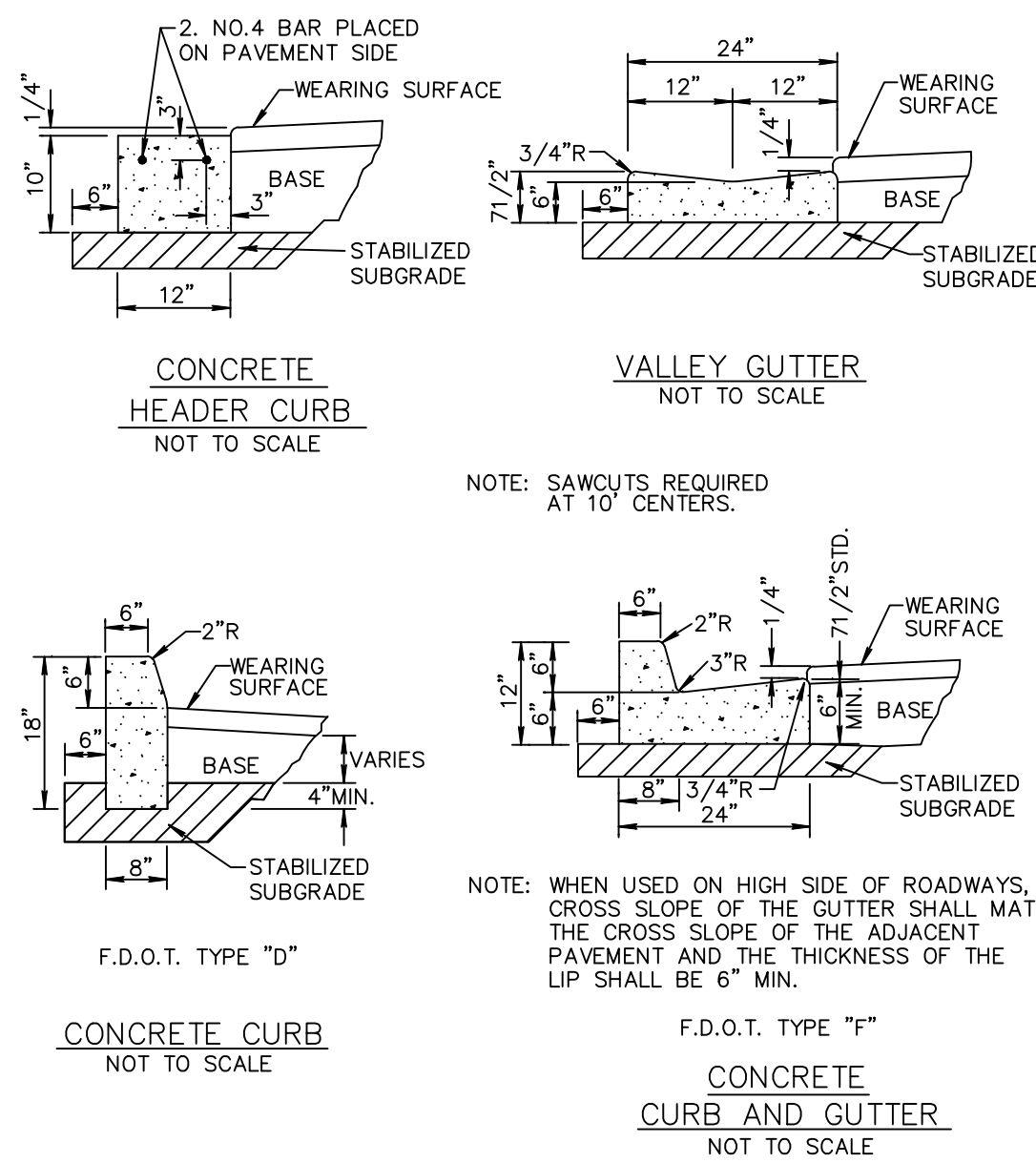
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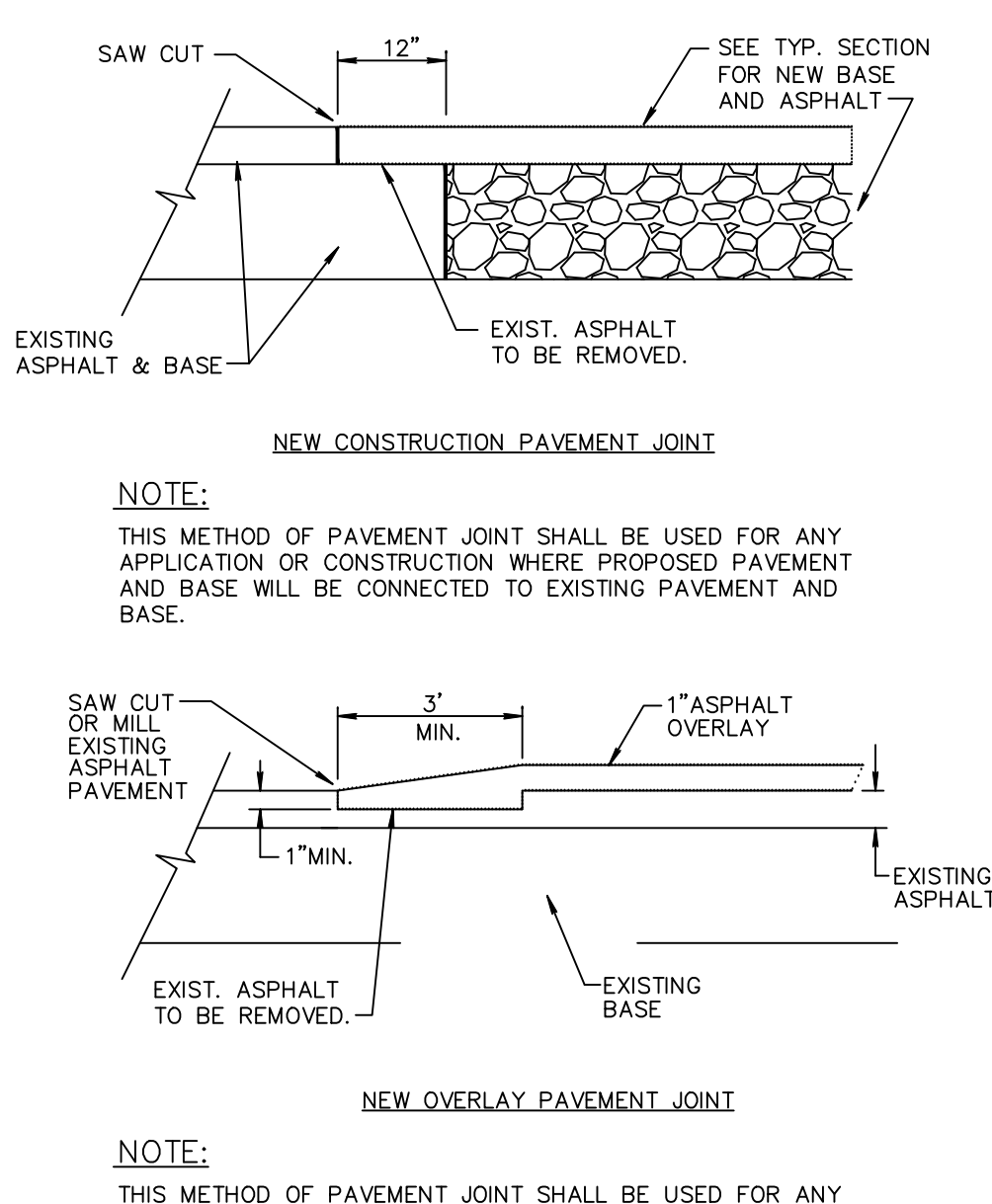
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NO.	DATE	REVISIONS	BY:
1	11/13/18	NEW SHEET FOR COORDINATION	BAB
1:20 COORDINATION PLAN FOR: DELRAY OASIS BUSINESS PARK 1201 N FEDERAL HIGHWAY DELRAY BEACH, FLORIDA			
ENVIRODESIGN ASSOCIATES, INC. 298 Pineapple Grove Way Pineapple Beach, Florida 33444 Phone: (561) 274-6500			
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CHECKED: J.A.P.			
DATE: 11/13/19			
JOB NO. 18023-ENG			
SHEET NO. 2 OF 6			



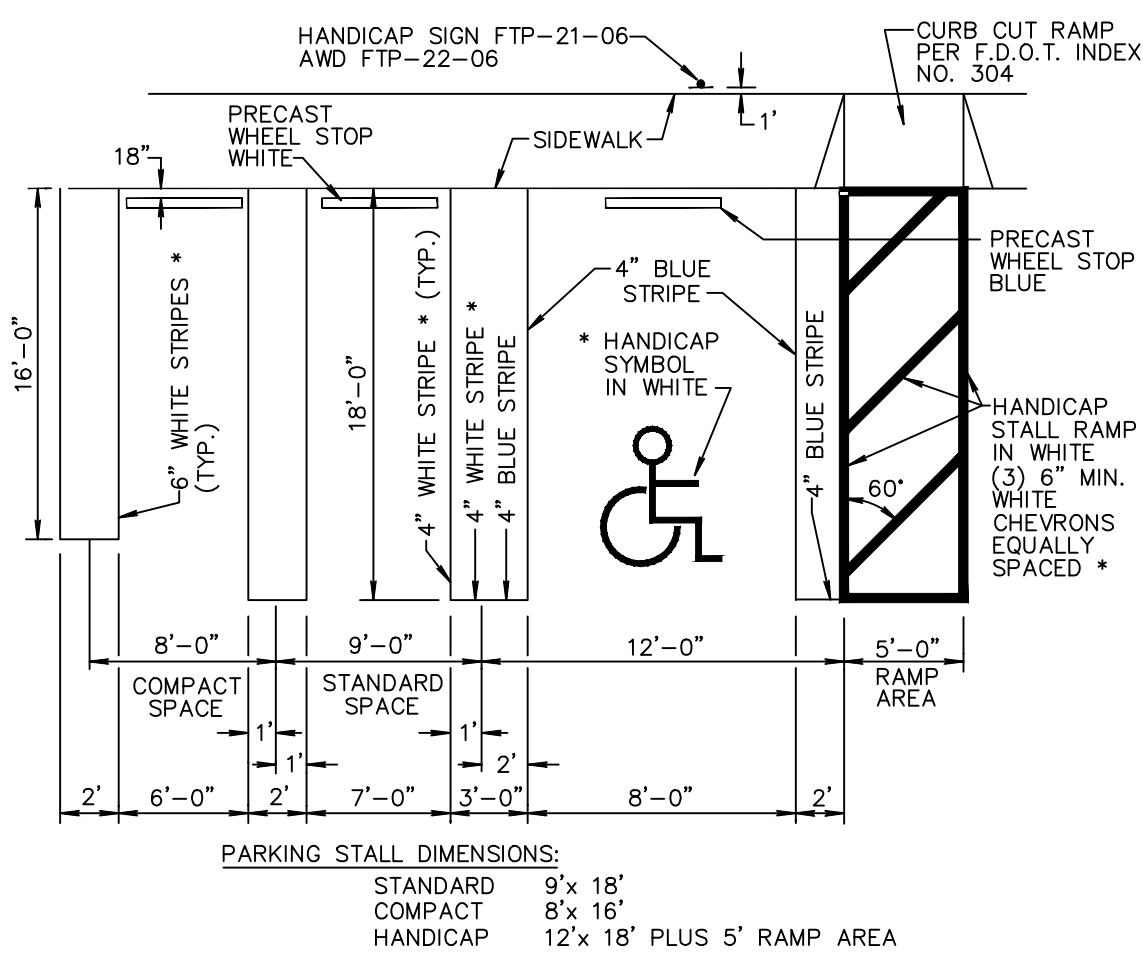
NOTES: 1. ROADWAY SUBGRADE SHALL IN ALL CASES EXTEND BELOW CURBING.
2. SAWCUTS AT 10' CENTERS SHALL BE MADE WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CURB AND GUTTER SECTIONS RT 6.1



NOTES: 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.

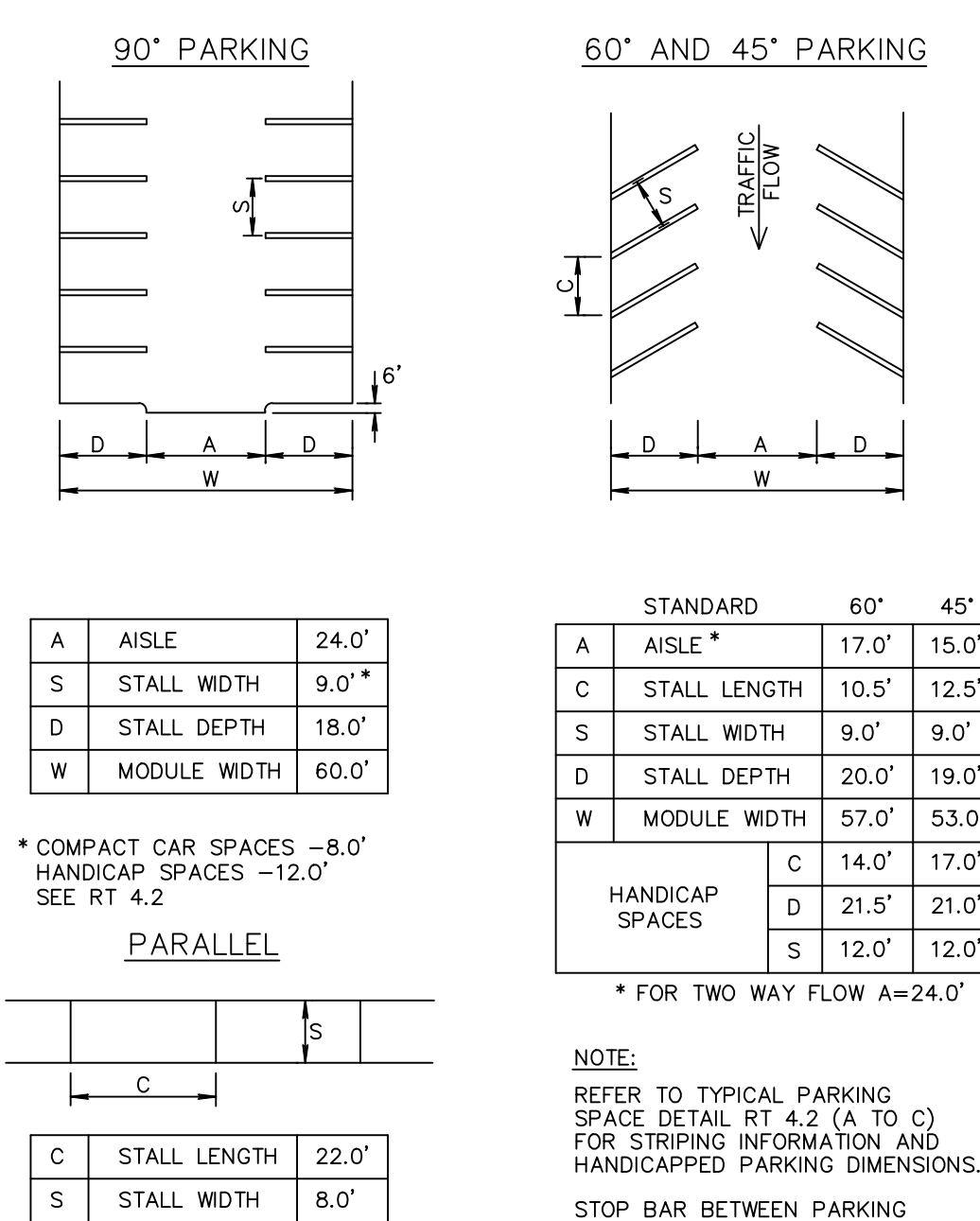
PAVEMENT JOINT DETAIL RT 7.1



* NOTES:

1. ON LIGHT COLORED SURFACE I.E. CONCRETE ALL HANDICAP MARKINGS SHALL BE BLUE AND STANDARD PARKING STRIPING SHALL BE 3" WHITE WITH 1" BLACK BORDER.
2. ALL STRIPPING 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 & H/C SYMBOL 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

TYPICAL PARKING SPACES
(1 OF 3)
DETAIL RT 4.2a



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

PARKING LOTS DETAIL RT 4.1

PAVEMENT MARKING SPECIFICATIONS

All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City Engineer 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, drops, 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 Engineer.
- Layout:
- Layout shall be made using marking chalk.
 - It is recommended that marking layout be inspected by the City Engineer 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 Engineer.
- 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.

PAVEMENT MARKING SPECIFICATIONS RT 8.1a
(Sheet 1 of 2)

ALL PAVEMENT MARKINGS

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

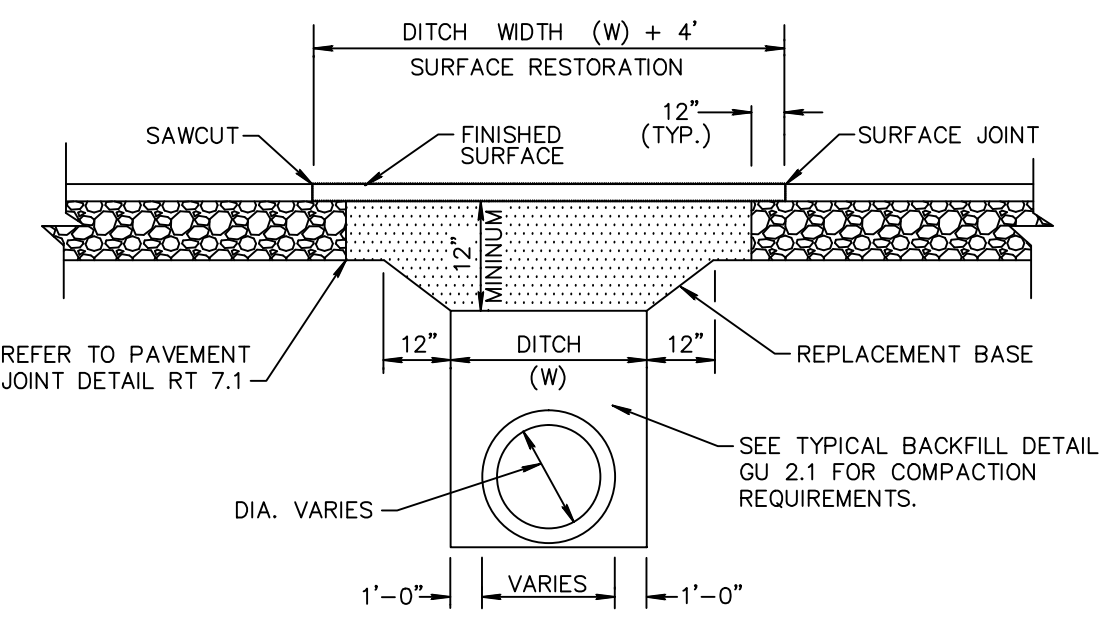
RAISED PAVEMENT MARKERS

- 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 Engineer prior to use.
- R.P.M.'s shall be installed using alkyd thermoplastic on asphalt and epoxy on concrete.

OTHER NOTES

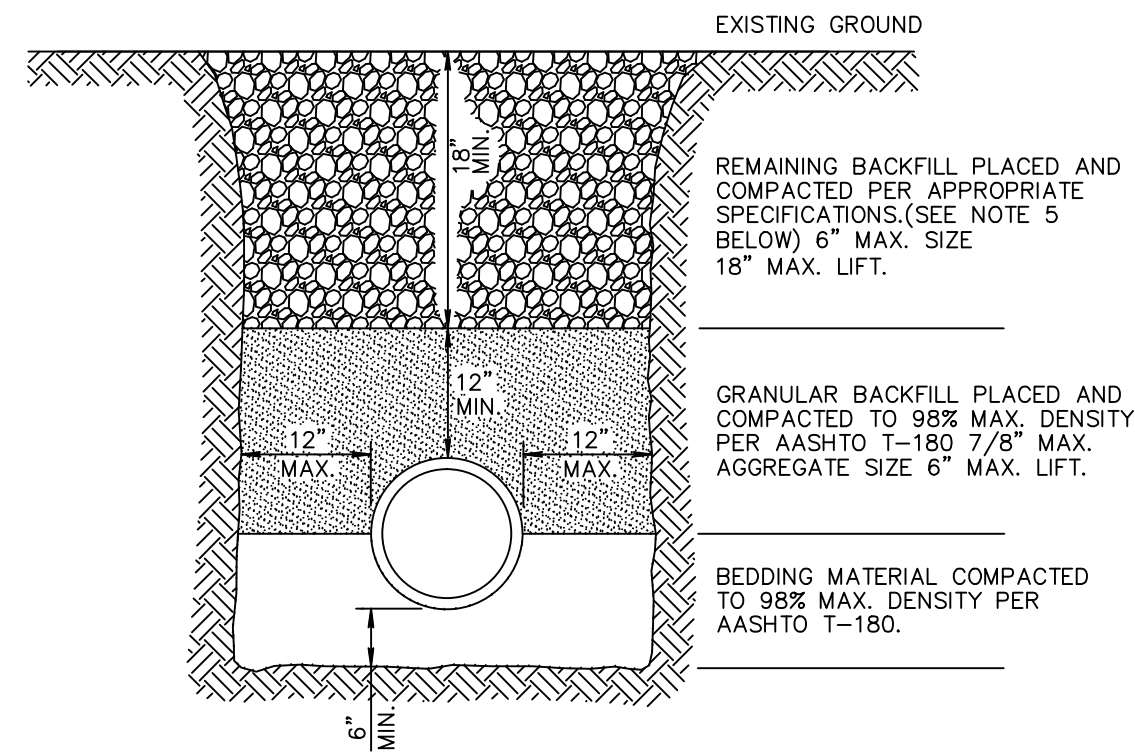
- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public right-of-way.

PAVEMENT MARKING SPECIFICATIONS RT 8.1b
(Sheet 2 of 2)



1. REPLACEMENT BASE TO BE AT MIN. 12" THICK.
- 2a. BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180 (MAX. LIFT THICKNESS = 6").
- 2b. 12" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
5. SURFACE MATERIAL SHALL BE F.D.O.T. TYPE S-I OR S-III ASPHALTIC CONC. (MIN. THICKNESS 1 1/2").
6. ANY PAVT. CUTS SHALL BE COLD PATCHED AT END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.

PAVEMENT REPAIR DETAIL GU 1.1



- NOTES:
1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED; 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 APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
 3. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
 4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
 5. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE.(AASHTO T-180)
 6. 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.

TYPICAL BACKFILL DETAIL GU 2.1



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"NOT FOR CONSTRUCTION"

PAVING & DRAINAGE DETAILS FOR:
DELRAY OASIS BUSINESS PARK
1201 N FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

EnviroDesign Associates Inc.
www.envirodesign.com
ENGINEERS • ENVIRONMENTAL CONSULTANTS
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506
298 Pineapple Grove Way Delray Beach, Florida 33444
Phone: (561) 274-6500 Fax: (561) 274-8558

DRAWN:
B.A.B.
CHECKED:
J.A.P.
DATE:
11/13/18
JOB NO.
18023-DTL
SHEET NO.
3 OF 6

NO.	DATE	REVISIONS:	BY:
1	11/13/18	RENUMBER SHEETS	BAB

U.S. FOUNDRY GRATE #6212
OR EQUAL

U.S. FOUNDRY GRATE #6290
OR EQUAL

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

The image contains two technical drawings of a manhole structure, labeled PLAN and SECTION.

PLAN View: Shows a square structure with an outer square labeled "WALL 'A'" and an inner square labeled "WALL 'B'". The overall width and height are 8'0". The distance between the inner and outer walls is 2'-1/4". The inner wall has a thickness of 2'-1/4". The center of the structure is labeled "B".

SECTION View: Shows a cross-section of the manhole. The top width is 8'0". The bottom width is 12". The height of the walls is 3'-0" CL. The top of the walls is labeled "WALL 'A'" and the bottom is labeled "WALL 'B'". The structure is filled with "GRATE 2'-1/4" and "GROUT CONCRETE COLLAR TO BASE". The bottom of the structure is labeled "VARIES". The bottom of the walls is labeled "UP TO 6' DEEP TO 12' DEEP". The bottom of the walls is labeled "NO. 4 BARS @ 12" O.C. EACH WAY".

Labels and Dimensions:

- PLAN: WALL "B", WALL "A", 8'0", 2'-1/4", 2'-1/4", B, 3'-0" CL.
- SECTION: 8'0", 2'-1/4", GRATE 2'-1/4", GROUT CONCRETE COLLAR TO BASE, VARIES, UP TO 6' DEEP TO 12' DEEP, NO. 4 BARS @ 12" O.C. EACH WAY, 12", 3'-0" CL.

Section Title: SECTION * SEE TYPICAL BACKFILL DETAIL GU 2.1

- 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" DIA. 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 3.1
 6. ALL STRUCTURES TO BE 4 SIDED ANGLE SHOULDERS.

Diagram illustrating the filter bed construction. The filter fabric is shown as a horizontal layer. Below the filter fabric is a layer of bedding, labeled "BEDDING DEPTH (SEE NOTE 1)". Below the bedding is a layer of rock, labeled "3/4\" ROCK BEDDING". The filter fabric is shown with a width of 12\" (TYP.) and a depth of 3/4\".

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.

The technical drawing illustrates the Ductile Iron Inlay Grate assembly in two views: a cross-section and a plan view.

Cross-Section View:

- DUCTILE IRON INLAY GRATE:** The central component, shown in black.
- RED DOT BUILT-IN LOCK BLOCK FOR GRATE LOCKDOWN:** A small black rectangular block on the top surface of the grate.
- CONCRETE FLOOR SLAB OR PAVEMENT:** The material surrounding the grate, shown with a stippled pattern.
- BEDDING CONCRETE:** A layer of concrete directly beneath the grate, indicated by a diagonal hatching pattern.
- POLYDRAIN CHANNEL:** A channel within the bedding concrete that allows for drainage.
- POLYLOCK LOCK TOGGLE:** A component that secures the grate into the bedding.
- ANCHOR RIBS:** Vertical ribs that anchor the grate into the bedding.
- SOIL SUBGRADE:** The base layer beneath the bedding concrete, shown with a cross-hatched pattern.
- Dimensions:**
 - 6.1"**: Width of the grate.
 - MIN. 4"**: Minimum width of the bedding concrete.
 - DEPTH VARIES WITH CHANNEL NO.**: Indicated by a vertical dimension line on the left.
 - MINIMUM**: Indicated by a vertical dimension line at the bottom of the grate.

PLAN VIEW:

- GRATE NO. 502:** The top-down view of the grate, showing its rectangular shape and internal structure.
- Dimensions:**
 - 19.6"**: Overall length of the grate.
 - 4.9"**: Overall width of the grate.

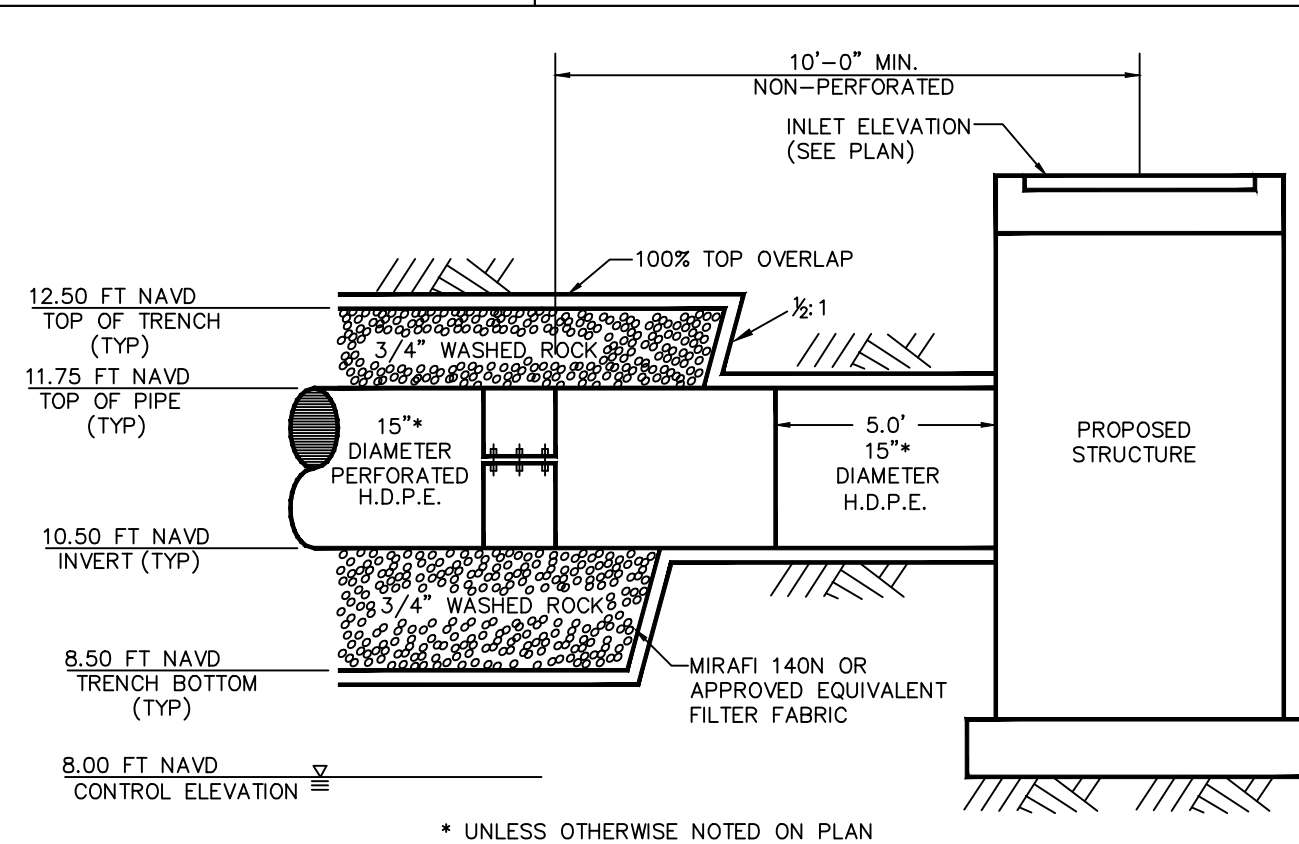
PLAN VIEW

CROSS SECTIONAL VIEW

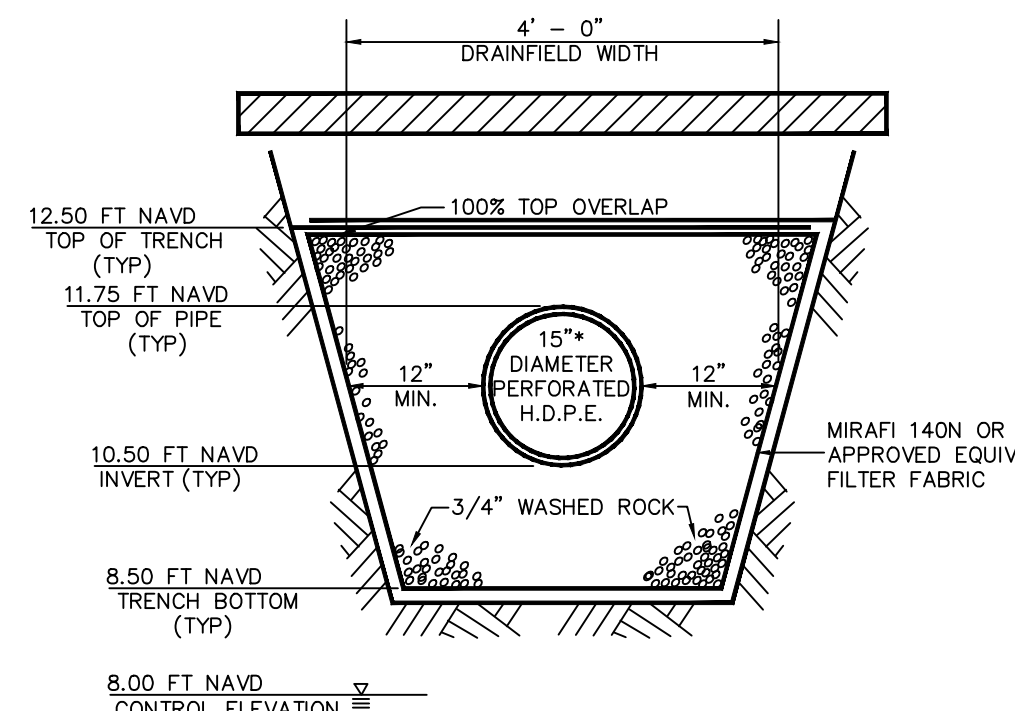
TRENCH DRAIN

NTS

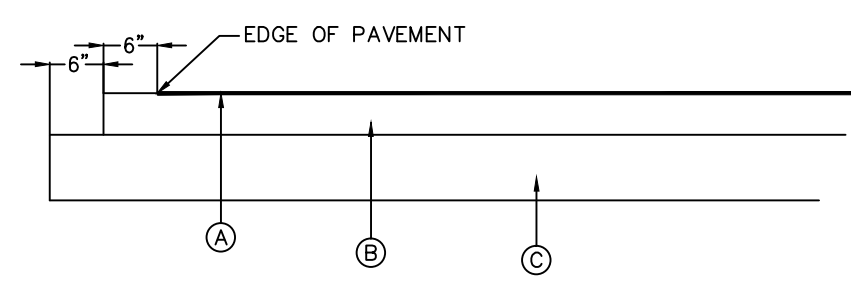
ABT, INC. P.O. Box 837/259 Murdock Road/Troutman, N.C. 28166
800-438-6057 (U.S., Canada and Mexico) or (704) 528-9806
Fax: (704) 528-5478



PERFORATED PIPE TRENCH
N.T.S.



PERFORATED PIPE TRENCH
N.T.S.



TYPICAL ON-SITE PAVING SECTION

- NTS
- | | |
|-----|---|
| (A) | 1-1/2" TYPE S-III A.C.S.C. (TWO LIFTS)
OR 1-1/2" TYPE S-I (ONE-LIFT) |
| (B) | 8" LIMEROCK BASE COMPACTED TO 98% MAX
DENSITY PER AASHTO T-180. PRIME & TACK
COAT PER FDOT SECTION 300. |
| (C) | 12" COMPACTED SUBGRADE COMPACTED TO
98% MAX. DENSITY PER AASHTO T-180. |

DELRAY OASIS BUSINESS PARK- Job #18023

WATER QUALITY VOLUME:

BASED ON F.A.C. CHAPTER 62-302 & SFWMD BASIS OF REVIEW

GIVEN:

TOTAL SITE AREA	6364 sf
ROOF AREA	390 sf
WATER SURFACE AREA	0 sf
WATER QUALITY SITE AREA	5974 sf (Total Site - water surface + roots)
WATER QUALITY IMPERVIOUS AREA	4020 sf (W.Q. Site Area - Pervious)
WATER QUALITY PERVIOUS AREA	1954 sf (W.Q. Site Area - Impervious)
WATER QUALITY % IMPERVIOUS	67.3 % (Impervious / W.Q. Site Area)

REQUIRED STORAGE VOLUME: WET DETENTION VOLUME = 1" OVER TOTAL SITE AREA OR 2.5" OVER IMPERVIOUS AREA (IF SITE IS OVER 40% IMPERVIOUS, USE 2.5" OVER IMPERVIOUS)

→ **COMPUTE 1" OVER TOTAL SITE AREA:**

1in * 6364 = 530 cf

→ **COMPUTE 2.5" OVER % IMPERVIOUS AREA:**

2.5in * 0.67 * 6364 = 892 cf (THIS METHOD CONTROLS)

PER SFWMD SWEEP APPLICANT'S HANDBOOK VOLUME II, 4.2.1

PROVIDE 100% FOR EXFILTRATION (exfil calcs includes 50% reduction & safety factor 2)

WATER QUALITY VOLUME = 892 * 1 = 892 cf

PRE- vs. POST-DEVELOPMENT 10-YEAR, 1-DAY RUN-OFF VOLUME:

GIVEN: REQUIRED STORAGE: 7.5" PER SFWMD TECHNICAL PUBLICATION EMA #390 FIGURE 9

	PRE	POST
TOTAL SITE AREA	6364	6364
IMPERVIOUS AREA	2052	4410
PERVIOUS AREA	4312	1954

USDA SCS RUNOFF EQUATION:

A = 6364 sf

Q = RUNOFF = $(P-0.2S)^2 / (P+0.8S)$

P = ACCUMULATED RAINFALL = 7.50

S = SOIL STORAGE * %PERVIOUS

AVERAGE PERVIOUS ELEVATION	=	13.75 ft	13.75 ft
WATER TABLE ELEVATION	=	8 ft	8 ft
DEPTH TO WATER TABLE	=	4 ft	4 ft
CUMULATIVE WATER STORAGE WITHIN	=	10.90 in	10.90 in
SOIL STORAGE PER SFWMD BASIS OF 25% REDUCTION		8.18 in	8.18 in
	S =	5.54 in	2.51 in
	0.2S =	1.11 in	0.50 in

NOTE: IF 0.2S IS > OR = P, THEN Q = 0

	Q =	3.42 in	5.15 in
	V =	1816 cf	2732 cf

TOTAL VOLUME REQUIRED:

WATER QUALITY VOLUME:

V = 892 cf = 0.25

10-YR. ONE DAY PRE- VS. POST-DEVELOPMENT RUNOFF VOLUME:

V = 915 cf = 0.25 (THIS METHOD CONTROLS)

REQUIRED VOLUME:

V = 915 cf = 0.25 Ac-In

PROVIDED VOLUME:

V = 1555 cf = 0.43 Ac-In

see exfil calcs

EXFILTRATION TRENCH CALCULATIONS

DELRAY OASIS BUSINESS PARK- Job #18023

L =	LENGTH OF TRENCH REQ'D (FT)	
V wq =	WTR QUALITY VOLUME TO BE TREATED (AC-IN)	= 0.25
V add =	ADD'L VOLUME TO BE TREATED (AC-IN)	= 0.006
W =	TRENCH WIDTH (FT)	= 4
H =	DEPTH TO WATER TABLE (FT)	= 5.5
Du =	NON-SATURATED TRENCH DEPTH (FT)	= 4
Ds =	SATURATED TRENCH DEPTH (FT)	= 0
FS =	SAFETY FACTOR NOT LESS THAN 2	= 0
%WQ =	PERCENT REDUCTION IN WATER QUALITY	= 50
K =	HYDRAULIC CONDUCTIVITY (CFS/FT ² -FT HEAD)	= 2 X 10
OR K =		= 0.0002

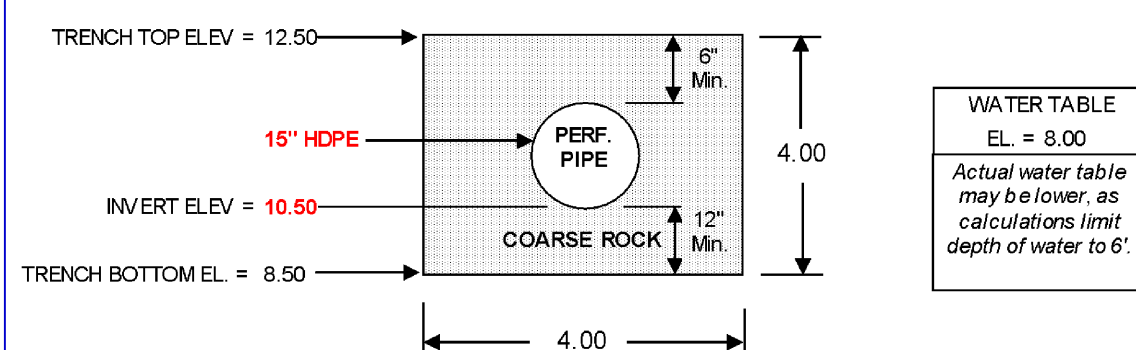
STANDARD FORMULA:

$$L = \frac{FS[(\%WQ)(V \text{ wq}) + V \text{ add}]}{K(HW + 2HDu - Du^2 + 2HDs) + (1.39 \times 10^{-4}) wDu} = 21.15 \text{ FEET}$$

CONSERVATIVE FORMULA: (NOT APPLICABLE - STANDARD FORMULA APPLIES)

$$L = \frac{V}{K(2HDu - Du^2 + 2HDS) + (1.39 \times 10^{-4}) wDu} = N/A$$

STANDARD TRENCH DETAIL - REFER TO ENGINEERING PLANS FOR ACTUAL SPECIFICATIONS



THEREFORE, MIN. TRENCH LENGTH REQUIRED	=	22 FEET
ACTUAL TRENCH LENGTH PROVIDED	=	50 FEET
ACTUAL TREATMENT VOLUME PROVIDED=0.43 AC-IN OR 0.04 AC-FT		
TRENCH DIMENSIONS: 4.00 FT. WIDE BY 4.00 FT. DEEP		

*PERCENTAGE OF EXFILTRATION VOLUME CREDITED TOWARD STAGE-STORAGE: 100 %

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PAVING & DRAINAGE DETAILS FOR:
DELRAY OASIS BUSINESS PARK
1201 N FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

 **EnviroDesign
Associates Inc.**

ENGINEERS • ENVIRONMENTAL CONSULTANTS

298 Pineapple Grove • Way Delray Beach, Florida 33444
Phone: (561) 274-6500 Fax: (561) 274-8558

DRAWN:
B.A.B.

CHECKED:
J.A.P.

DATE:
11/13/18

JOB NO.
18023-DTL

SHEET NO.

4 OF 6

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PAVING, GRADING AND DRAINAGE NOTES	
1. ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC LATEST STANDARDS. ALL PAVING AND DRAINAGE WORK IN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE FDOT LATEST STANDARDS.	11. ASPHALTIC CONCRETE SURFACE COURSE SHALL BE IN ACCORDANCE WITH SECTION 334 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SURFACE COURSE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS.
2. COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE AASHTO T-180 SPECIFICATIONS. SUBGRADE SHALL EXTEND 12 INCHES BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6" BEYOND VALLEY GUTTER, TYPE "I" CURB & GUTTER, OR TYPE "D" CURB. SUBGRADE SHALL BE 12 INCHES THICK COMPACTED TO 98% ACCORDING TO AASHTO T-180. ALL MUCK, STUMPS, ROOTS OR OTHER DELETERIOUS MATTER ENCOUNTERED IN THE PREPARATION OF THE SUBGRADE SHALL BE REMOVED COMPLETELY FROM THE CENTERLINE OF THE ROADWAY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT. IF SUBGRADE IS REQUIRED TO BE STABILIZED, THE REQUIRED BEARING VALUE DETERMINATIONS SHALL BE MADE BY THE FLORIDA BEARING TEST, TEST METHOD "C" OF AASHTO T-180 SPECIFICATIONS.	12. ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.
3. SHELLROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE FLORIDA DEPARTEMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SHELLROCK BASE SHALL BE AS SHOWN ON THE DETAIL DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. THE SHELLROCK SHALL HAVE A MINIMUM OF 40% CARBONATES OF CALCIUM AND MAGNESIUM IN THE MATERIAL.	13. PAVEMENT TRAFFIC STRIPES AND MARKINGS SHALL BE IN ACCORDANCE WITH CITY OF DELRAY BEACH CURRENT STANDARDS AND/OR MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND/OR PALM BEACH COUNTY TRAFFIC DEPARTMENT TYPICAL T-P-17, WHERE APPLICABLE.
4. LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE LIMEROCK BASE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.	14. SEQUENCE OF CONSTRUCTION – THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT ARE BENEATH THE PAVEMENT, SHALL BE IN PLACE AND HAVE PROPER DENSITY PRIOR TO THE CONSTRUCTION AND COMPACTION OF THE SUBGRADE.
5. MUCK AND PEAT – IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD OR PARKING AREA, THEY WILL BE REMOVED COMPLETELY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL. IF HARDPAN IS ENCOUNTERED IN THE SWALE AREA, IT WILL REMOVED TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.	15. INLETS AND MANHOLES – ALL INLETS AND MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FDOT SPECIFICATIONS, LATEST EDITION, AND ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION, AND PBC STANDARDS LATEST EDITION, WHERE APPLICABLE.
6. WHERE SOD IS DESIRED, LOWER THE GRADE 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.	16. GRATE ELEVATIONS REFER TO THE FLOWLINE OF THE GRATE.
7. CLEARING AND GRUBBING – WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.	17. GRADES SHOWN ARE FINISHED GRADES.
8. GUMBO – WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ONE FOOT BELOW THE SUBGRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.	18. MINIMUM ROAD CROWN ELEVATION SHALL BE EL. N/A' N.A.V.D.
9. PRIME COAT SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PRIME COAT SHALL BE RC-70 OR ASPHALT EMULSION PRIME (AEP). PRIME COAT SHALL BE APPLIED AT A RATE OF APPLICATION NOT LESS THAN 0.10 GALLONS PER SQUARE YARD FOR LIMEROCK BASES AND NOT LESS THAN 0.15 GALLONS PER SQUARE YARD FOR SHELL ROCK OR COQUINA SHELL BASES.	19. REINFORCED CONCRETE PIPE – THE PIPE SHALL CONFORM WITH THE REQUIREMENTS OF CLASS III OF ASTM C-76 AND WITH THE FDOT SPECIFICATIONS, LATEST EDITION. THE FIRST JOINT OF PIPE ENTERING OR LEAVING A MANHOLE OR INLET SHALL BE WRAPPED WITH FILTER FABRIC PER FDOT SPECIFICATIONS.
10. TACK COAT – BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FDOT SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.	20. CORRUGATED ALUMINUM PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M196 AND SECTIONS 125, 430 AND 943 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
	21. MEASUREMENT OF THE LENGTH OF PIPE SHALL BE FROM THE CENTER OF THE STRUCTURE TO THE CENTER OF THE STRUCTURE.
	22. PIPE BACKFILL – REQUIREMENTS FOR PIPE BACKFILL CROSSING ROADS OR PARKING AREAS SHALL BE DEFINED IN THE FDOT SPECIFICATIONS, LATEST EDITION. PIPELINE BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 100% OF THE STANDARD PROCTOR (AASHTO) T-99 SPECIFICATIONS.
	23. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THREE (3) CERTIFIED COPIES OF A CHEMICAL AND SIEVE ANALYSIS OF THE SHELL ROCK BY A STATE OF FLORIDA CERTIFIED LAB WHEN CONSTRUCTING A SHELL ROCK BASE FOR ROADWAY.
	24. PRIOR TO CERTIFICATION OF THE DRAINAGE SYSTEM, THE CONTRACTOR MUST PUMP DOWN AND LAMP THE DRAINAGE SYSTEM FOR INSPECTION BY THE ENGINEER AFTER FINISHED ROCK FOR THE ROADWAYS HAS BEEN INSTALLED.

GENERAL NOTES	
1. CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID SURVEY MARKERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF PERMANENT REFERENCE MONUMENTS DISTURBED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER.	11. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE PLANS. UTILITIES SHOWN ON THE PLANS ARE FOR REFERENCE ONLY AND MAY NOT DEPICT ACTUAL LOCATIONS. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FOR LOCATION AND DEPTH OF THEIR LINES PRIOR TO CONSTRUCTION.	12. ENVIRODESIGN ASSOC. INC. SHALL NOT BE RESPONSIBLE FOR THE SAFETY OF THE WORKERS OR THE GENERAL PUBLIC. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFETY TO THE WORKERS IN ACCORDANCE WITH OCCUPATIONAL SAFETY & HEALTH ADMINISTRATIONS (OSHA) REQUIREMENTS AND THE SAFETY OF THE GENERAL PUBLIC.
3. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE DEENERGIZING OF POWER LINES AND/OR HOLDING POWER POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.	13. ALL MATERIALS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LOCAL UTILITY STANDARDS AND SPECIFICATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE REPLACEMENT OF TRAFFIC LOOPS IF DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COAST TO THE OWNER.	14. THE CONTRACTOR SHALL CALL SUNSHINE 1-800-432-4770 48 HOURS BEFORE DIGGING FOR FIELD LOCATIONS OF UNDERGROUND UTILITIES.
5. ALL ELEVATIONS REFER TO N.A.V.D. 1988. MINIMUM FINISHED FLOOR ELEVATION FOR ANY RESIDENTIAL STRUCTURE SHALL BE SET AT OR ABOVE ELEVATION N/A (WHICH IS ABOVE THE 100-YEAR FREQUENCY STORM).	15. CORRUGATED ALUMINUM PIPE USED BENEATH PAVEMENT SHALL BE IN CONFORMANCE WITH SEC. 8.24.E.5.i
6. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OR INSTALLATION AS REQUIRED BY THE ENGINEER OR BY THE APPROPRIATE GOVERNING AGENCIES.	16. ALL CONSTRUCTION ACTIVITY, INCLUDING TRENCHING, IS TO BE A MINIMUM OF SIX FEET FROM THE BASE OF ANY TREE THAT IS DESIGNATED TO REMAIN.
7. CONTRACTOR SHALL BE RESPONSIBLE TO SECURE AND PAY FOR, AT NO ADDITIONAL COST TO THE OWNER, ALL NECESSARY PERMITS, FEES AND LICENSES.	17. ALL LIMEROCK AND BASE MATERIALS SHALL BE REMOVED FROM THE PLANTER AREAS/ISLANDS AND REPLACED WITH APPROPRIATE PLANTING SOIL PRIOR TOT THE LANDSCAPING OF THE SITE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING THE REQUIRED NOTICES AND COMPLYING WITH ALL PERMIT(S) CONDITIONS.	18. THE REMOVAL OF ANY TREE ON THE SITE IS PROHIBITED WITHOUT THE REQUIRED PERMITS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE HOLDING OF OTHER UTILITY POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.	19. ALL MATERIALS AND CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY SHALL CONFORM TO THE FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM (LATEST ED.).
10. ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.	20. LANE CLOSURES WITHIN THE FDOT RIGHT-OF-WAY SHALL BE LIMITED TO THE HOURS OF 9AM-3PM, MONDAY-FRIDAY EXCLUDING GOVERNMENTAL HOLIDAYS. MAINTENANCE OF TRAFFIC SHALL BE PROVIDED IN ACCORDANCE WITH INDEX 613 OF THE FDOT DESIGN STANDARDS (LATEST ED.)

CITY OF DELRAY BEACH GENERAL NOTES	
DEFINITIONS 1. CITY – THE CITY OF DELRAY BEACH 2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS 3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION PROCEDURE 1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER AND SEWER CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES. 2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING. 3. A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91. 4. ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION. 5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES. 6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE. 7. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED. 8. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE. 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES. 10. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE. 11. CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL. 12. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY. 13. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS. 14. PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICAL T-P-P-17 (LATEST REVISION) UNLESS SHOWN OTHERWISE. 15. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY. 16. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES. 17. CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE (1-800-432-4770) 48 HOURS IN ADVANCE OF CONSTRUCTION.	18. GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE. 19. CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION. 20. EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE. 21. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE. 22. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS. 23. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED. 24. ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKING STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING. 25. EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS. 26. CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITH THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY. 27. SITE INFORMATION BASED ON A SURVEY PREPARED BY: PINNACLE SURVEY 28. THE EXTENT OF ROAD CONSTRUCTION WORK TO BE COMPLETED BY THE CONTRACTOR, WITHIN THE RAILROAD RIGHT-OF-WAY SHALL BE DETERMINED BY THE CITY AND COORDINATED WITH THE FLORIDA EAST COAST RAILWAY COMPANY AT THE TIME OF CONSTRUCTION. 29. RELOCATION OF UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES. 30. ALL CITY OF DELRAY BEACH STANDARD DETAILS INCLUDED IN THE CIVIL PLANS PREPARED BY ENVIRODESIGN ASSOCIATES, INC. HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT. 31. CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC 32. 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. 33. 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. 34. NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS, THEY SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.1 & LD 1.2 35. ALL SIDEWALKS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS. ALL SIDEWALKS NOT TO EXCEED 1:48 CROSS-SLOPE AND 1:20 RUNNING SLOPES. ALL RAMPS NOT TO EXCEED 1:48 CROSS-SLOPE AND 1:12 RUNNING SLOPES WITH MAXIMUM RISE AND RUNS PER ADA REQUIREMENTS WITH RAILINGS WHERE NEEDED. LANDINGS WITH 1:48 CROSS- AND RUNNING-SLOPES ARE TO BE PROVIDED AT TOPS AND BOTTOMS OF ALL RAMPS. 36. CITY OF DELRAY BEACH UTILITY DIVISION MUST BE CONTACTED AT LEAST 48 HOURS PRIOR TO ANY SHUTDOWN AND/OR REMOVAL OF EXISTING WATER MAIN OR SANITARY SEWER LINES AT 561-243-7312. 37. THE EXISTING SANITARY SEWER LINE MUST BE TELEVIEWED PRIOR TO AND AFTER ANY SANITARY SEWER SERVICE CONNECTION, REMOVAL AND/OR ABANDONMENT. 38. UPON APPROVAL AND RECEIPT OF PERMIT, THE CONTRACTOR SHALL CONTACT THE CITY OF DELRAY BEACH DEPUTY DIRECTOR OF CONSTRUCTION AT 561-243-7320 TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO STARTING ANY SITE WORK. 39. ALL WATER METER SIZES TO BE DETERMINED BY PLUMBING ENGINEERING OF RECORD AND SHALL BE CHECKED AND AUTHORIZED BY CITY OF DELRAY BEACH UTILITIES DIVISION. 40. ALL CITY OF DELRAY BEACH 2016 STANDARD DETAILS INCLUDED IN THIS SET OF PLANS AND DETAILS HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT.

"NOT FOR CONSTRUCTION"

BY: BAB

REVISIONS: RENUMBER SHEETS

DATE: 11/13/18

NO. 1

NOT VALID WITHOUT ENGINEER'S SEAL

PAVING & DRAINAGE DETAILS FOR:
DELRAY OASIS BUSINESS PARK
1201 N FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

EnviroDesign Associates Inc.

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ENGINEERS • ENVIRONMENTAL CONSULTANTS

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DRAWN:
B.A.B.

CHECKED:
J.A.P.

DATE:
11/13/18

JOB NO.
18023-DTL

SHEET NO.
5 OF 6

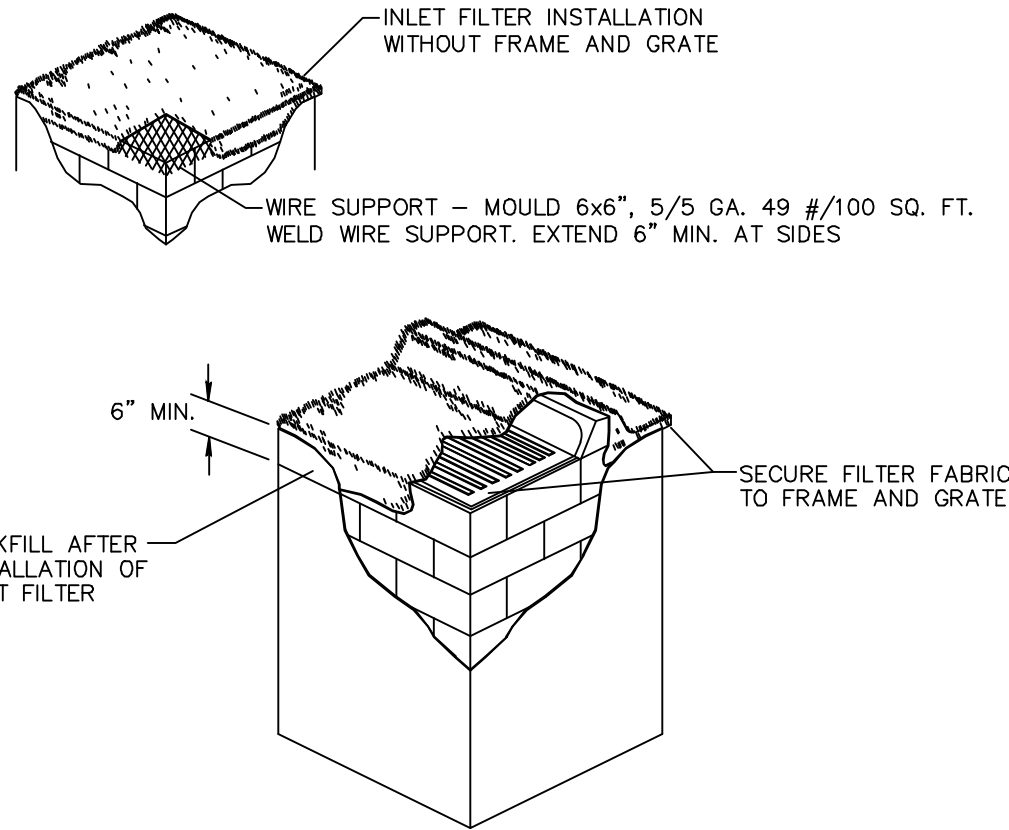
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NOTES:

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

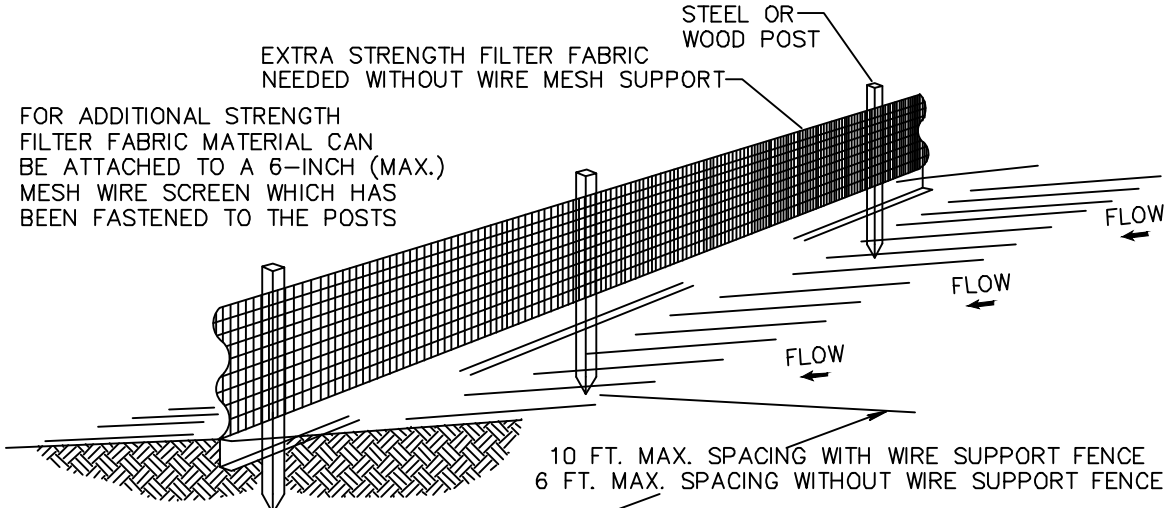
A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

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.

INLET FILTER DETAIL D 8.1

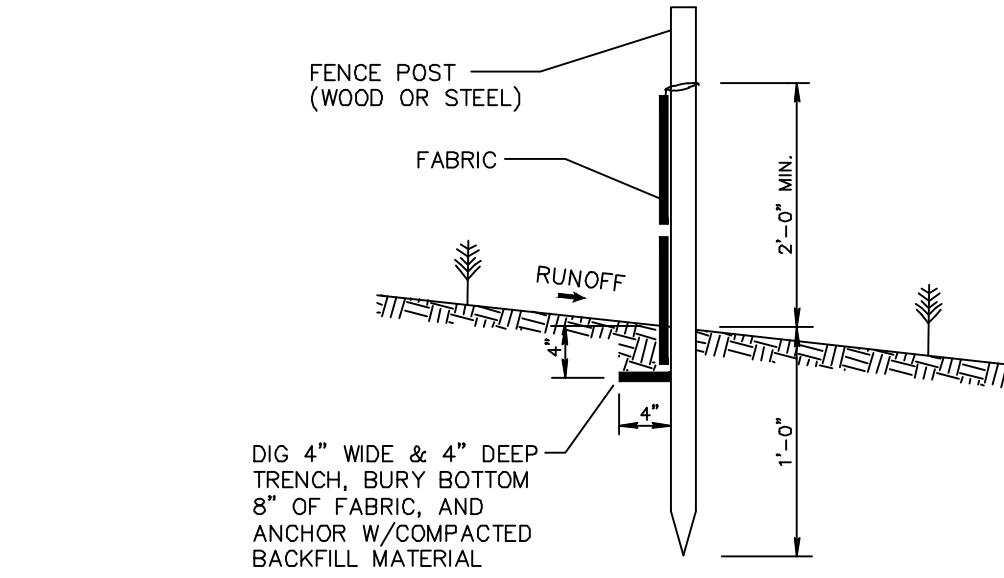
- THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE 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.
- 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.
- 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.
- KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
- FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
- DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
- ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
- EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
- 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.
- DISCHARGE FROM DEWATERING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.

EROSION CONTROL NOTES DETAIL D9.1



- NOTES:
- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 CM).
 - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
 - POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 M) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 CM). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 M).
 - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10 CM) WIDE AND 4 INCHES (10 CM) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
 - 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 (25 MM) LONG, THE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 CM) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
 - THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 CM) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
 - THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
 - ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
 - ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDEP.

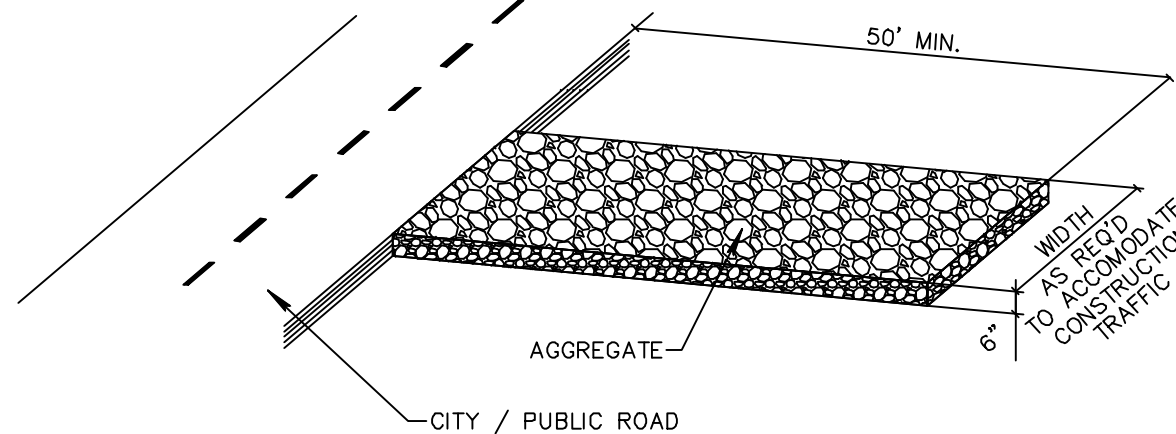
SILT FENCE INSTALLATION DETAIL D 9.1a
Sheet 1 of 2



- NOTES:
- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 CM).
 - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
 - POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 M) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 CM). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 M).
 - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10 CM) WIDE AND 4 INCHES (10 CM) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
 - 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 (25 MM) LONG, THE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 CM) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
 - THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 CM) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
 - THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
 - ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
 - ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDEP.

ATTACHING TWO SILT FENCES
NOT TO SCALE

SILT FENCE INSTALLATION DETAIL D 9.1b
Sheet 2 of 2



NOTE:

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

STABILIZED CONSTRUCTION ENTRANCE DETAIL D9.1C

CONSTRUCTION ENTRANCE
LOCATION TO BE
DETERMINED BY
CONTRACTOR AS NEEDED

CALL 48 HOURS BEFORE YOU DIG.

IT'S THE LAW
1-800-432-4770

SUNSHINE STATE ONE CALL OF FLORIDA, INC.



Know what's below.
Call before you dig.

SCALE: 1" = 10'



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POLLUTION PREVENTION PLAN FOR:
DELRAY OASIS BUSINESS PARK
1201 N FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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DRAWN:
B.A.B.

CHECKED:
J.A.P.

DATE:
11/13/19

JOB NO.
18023-ENG

SHEET NO.
6 OF 6

NOT VALID WITHOUT
ENGINEER'S SEAL
NO. DATE: 11/13/18
REVISIONS: REVISE TO MATCH SITE PLAN CHANGES
BY: JOSEPH A. PIKE, P.E.
FL REG # 42696