

ST. LUCIE SUBSTATION YARD EXPANSION



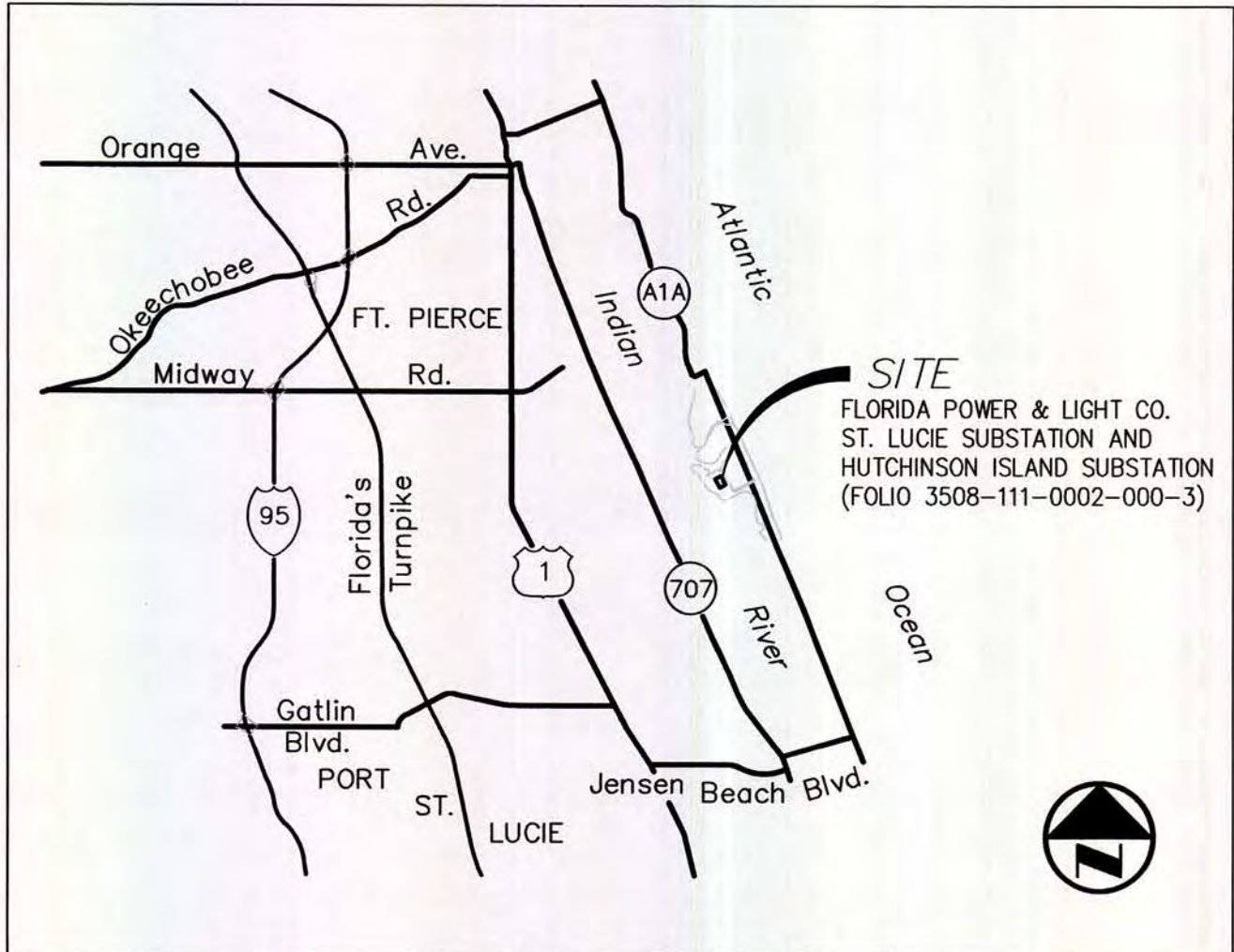
ST. LUCIE COUNTY SECTION 16, TOWNSHIP 36S, RANGE 41E



LOCATION MAP
(NOT TO SCALE)

LEGAL DESCRIPTION

8/09/15/16/17/21/22 36 41 ALL FRACT SECS 8 AND 9 LYG W OF A1A-LESS N 436.71 FT AND ALL FRACT SEC 9.



VICINITY MAP
(NOT TO SCALE)

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
7700 N. KENDALL DRIVE, SUITE 300
MIAMI, FL 33156
PH. (305) 412-8185 FAX. (305) 412-8105
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892
WWW.SCSENGINEERS.COM
SCS ES PROJECT NO. 09213182.00



PLANS PREPARED FOR :
FLORIDA POWER AND LIGHT COMPANY
TRANSMISSION AND SUBSTATION SITING SECTION

INDEX OF DRAWINGS

INDEX NO.	SHEET NO.	DESCRIPTION
SLU00	1 OF 1	COVER SHEET
SLU01J	1 OF 1	JURISDICTIONAL SITE PLAN
SLU02	1 OF 5	FENCE, FILL & GRADE PLAN
SLU02	2 OF 5	FENCE, FILL & GRADE SECTIONS
SLU02	3 OF 5	PAVEMENT, MARKING & SIGNING PLAN
SLU02	4 OF 5	FENCE, FILL & GRADE DETAILS
SLU02	5 OF 5	STORMWATER POLLUTION PREVENTION PLAN
SLU10	1 OF 1	TOPOGRAPHIC SURVEY
SLU20	1 OF 2	PRECAST CONCRETE WALL PLAN
SLU20	2 OF 2	PRECAST CONCRETE WALL SECTIONS AND DETAILS
SLU27	1 OF 5	20' ROLLING GATE SECTIONS
SLU27	2 OF 5	20' ROLLING GATE DETAILS
SLU27	3 OF 5	30' ROLLING GATE SECTIONS
SLU27	4 OF 5	30' ROLLING GATE DETAILS
SLU27	5 OF 5	30' ROLLING GATE SECTIONS



ST. LUCIE SUBSTATION
YARD EXPANSION
FPL PROJECT NO. 9562

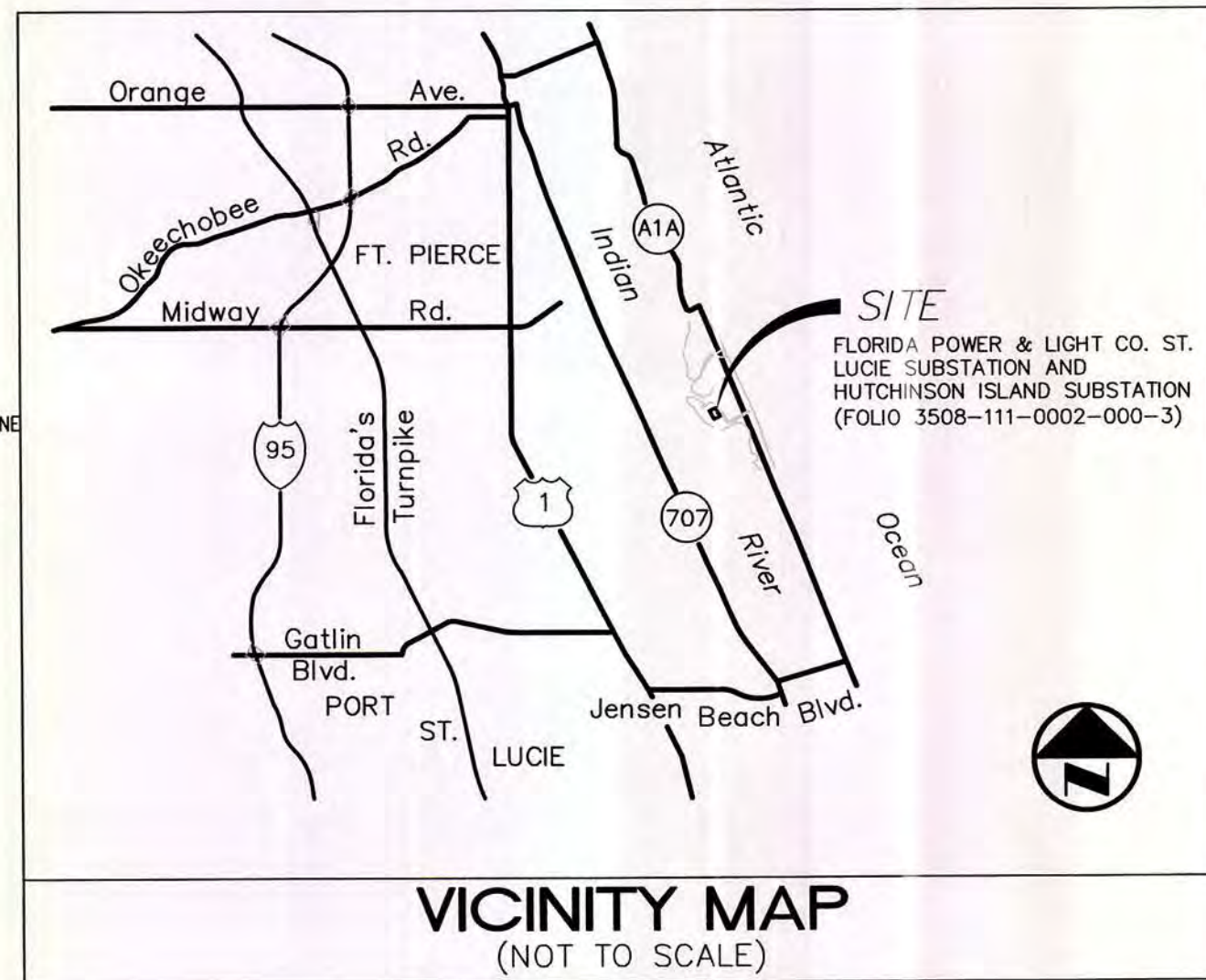
05-27-15

SLU00

CADE



JEFFREY P. THOMPSON, P.E.
LICENSE #69239



1. ELEVATIONS REFERENCED TO N.A.D.V., UNLESS OTHERWISE NOTED.

2. XX.XX DENOTES LOCATION AND ELEVATION OF EXISTING GRADE.

3. ELEVATIONS WHICH INDICATE TOP OF FILL OR LIMEROCK WHICH ARE TO BE COVERED WITH LOOSE ROCK OR ASPHALTIC CONCRETE TO NOT INCLUDE 0.17' (2") FOR LOOSE ROCK OR 0.125' (1.5") FOR ASPHALTIC CONCRETE AND ARE SHOWN AS XX.XX.

4. ELEVATIONS WHICH INDICATE TOP OF FILL OR CUT THAT ARE TO BE SODDED ARE THE PROPOSED ELEVATIONS OF THE TOP OF SOD AND ARE SHOWN XX.XX.

5. → INDICATES THE DIRECTION OF FLOW OF STORMWATER RUNOFF.

6. ALL CLEARING, EXCAVATING, FILLING, GRADING, PAVING AND DRAINAGE SHALL BE PERFORMED IN CONFORMANCE WITH THE CITY OF BOCA RATON SPECIFICATIONS FOR EROSION CONTROL.

7. GRASSING SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE APPROVED LANDSCAPE PLAN. ALL DISTURBED AREAS NOT SHOWN TO BE PLANTED, MULCHED, ETC. SHALL BE SODDED.

8. EROSION AND SEDIMENT CONTROL TO BE PROVIDED BY SODDING, TREELANDINGS, ETC.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

10. FPL SHALL ASSUME RESPONSIBILITY FOR MAINTENANCE OF THE STORMWATER FACILITIES WITHIN FPL PROPERTY UPON COMPLETION AND ACCEPTANCE BY THE COMPANY REPRESENTATIVE.

10. STORMWATER MANAGEMENT DESIGN DATA:

TOTAL PROJECT AREA	=	5.069 AC
IMPERVIOUS AREA	=	3.472 AC
PAVEMENT	=	0.402 AC
YARD AREA (EXPANSION AND CONTRIBUTING AREA)	=	2.958 AC
ROOF	=	0.112 AC
PERVIOUS AREA	=	1.597 AC

11. SOD SHALL BE PLACED SUCH THAT THE TOP OF THE GRASS IS AT THE SAME ELEVATION AS THE TOP OF THE COMPACTED FILL.

12. THE STORMWATER MANAGEMENT DESIGN IS BASED ON FDEP, SFWMO, AND ST. LUCIE COUNTY CRITERIA.

13. THE LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE ONLY AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.

14. MAINTENANCE OF TRAFFIC SHALL BE IN CONFORMANCE WITH FDOT SPECIFICATIONS.

15. THESE PLANS SHALL NOT BE UTILIZED FOR CONSTRUCTION UNLESS THEY ARE MARKED "FOR CONSTRUCTION" IN THE TITLE BLOCK.

16. GEOTECHNICAL EXPLORATION WAS PERFORMED BY ARDAMAN & ASSOCIATES, INC. DATED OCTOBER 3, 2013 (AAI FILE NO. 13-5494) AND THE CONTRACTOR IS DIRECTED TO THE DISCUSSIONS & RECOMMENDATIONS SECTION OF THE REPORT AND ADVISED THAT COMPLIANCE WITH THE INSTRUCTION IN THAT SECTION IS REQUIRED.

17. FIELD TESTING

A. PAVING SUBGRADE TO BE TESTED FOR DENSITY EVERY 10,000 SQ. FT. OR PORTION THEREOF AND ONE LBR PIT SHALL BE TAKEN IN AREA OF ASPHALT.

B. PAVING BASE AND YARD BASE TO BE TESTED FOR DENSITY EVERY 10,000 SQ. FT. OR PORTION THEREOF. PIT CERTIFICATION (FDOT) WILL BE SATISFACTORY FOR EVIDENCE OF LBR.

18. SUBSEQUENT TO FINAL GRADING, THE CONTRACTOR SHALL INSTALL THREE (3) PERMANENT CONCRETE (MONUMENT) BENCHMARKS AS A REFERENCE FOR OTHER WORK. THE LOCATIONS ARE SHOWN ON THESE PLANS. THE BENCHMARKS SHALL INCLUDE VERTICAL (SAME DATUM AS ORIGINAL SURVEY) AND HORIZONTAL (STATE PLANE COORDINATES) REFERENCES. BENCHMARK ELEVATIONS ARE TO BE SET AT DESIGN GRADE PLUS TWO INCHES. THE INFORMATION SHALL BE POSTED IN THE RELAY VAULT AND SHOWN ON THE AS-BUILT DRAWINGS.

19. QUICK SHALL BE USED IF IN ACCORDANCE WITH ALL APPLICABLE REGULATORY REQUIREMENTS.

20. THE REVIEW AND APPROVAL OF IMPROVEMENT PLANS DOES NOT AUTHORIZE THE CONSTRUCTION OF REQUIRED IMPROVEMENTS, WHICH ARE INCONSISTENT WITH EXISTING EASMENTS OF RECORD.

21. ALL UTILITIES AND BENCHMARKS SHALL BE KEPT OPEN AND ACCESSIBLE TO THE PUBLIC AND DEVELOPER, 700 UNIVERSE BLVD., T54/JW, JUNO BEACH, FLORIDA 33408. PHONE (561)904-3641.

22. THIS FACILITY WILL BE USED FOR TRANSFORMATION, REGULATION, AND DISTRIBUTION OF ELECTRICITY.

23. THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY AND IS EXEMPT FROM "THE FLORIDA ENERGY RESOURCE ACT".

24. BENCHMARK DESCRIPTION: NATIONAL GEODETIC SURVEY BENCHMARK "C 308" (PID-AF3163)
ELEVATION = 3.54 FT. (NAVD 88)

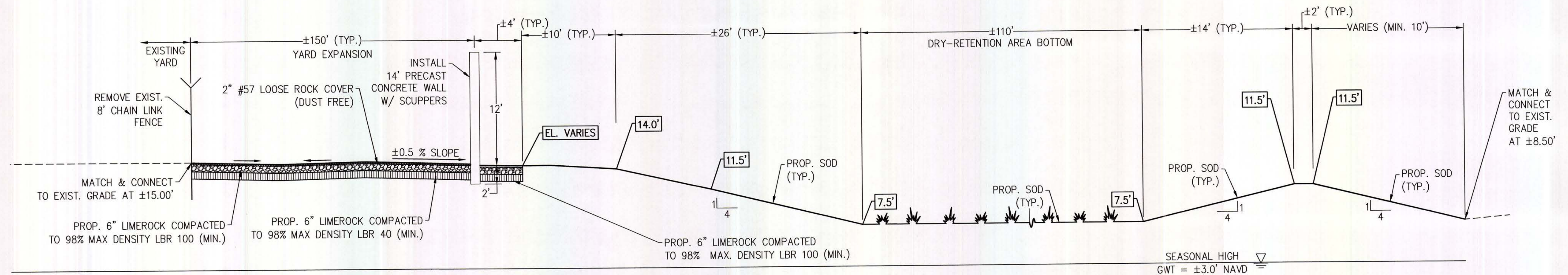
25. SUBJECT PROPERTY IS LOCATED IN ZONE AE (EL. 7") PER FIRM COMMUNITY PANEL NUMBER 120285 0282 G, DATED NOVEMBER 4, 1992.

26. SURVEY INFO DATED 08/2013 JOB #7754-12 PROVIDED BY:
AWROM & ASSOCIATES 50 SW 2ND AVE. SUITE 102 BOCA RATON, FLORIDA 33432 PHONE: 561-392-1554

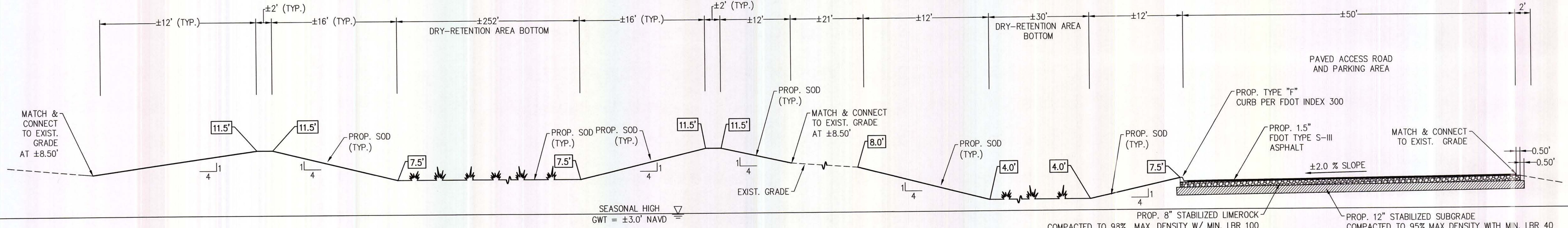
27. EXISTING MANHOLES, VALVES, INLETS, ETC. TO REMAIN TO BE ADJUSTED TO PROPOSED GRADE

BASED ON THE NATIONAL GEODETIC SURVEY (NGS) FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), THE ORTHOMETRIC HEIGHT CONVERSION FOR THIS SITE LOCATION IS REPRESENTED BY THE FOLLOWING EQUATION:

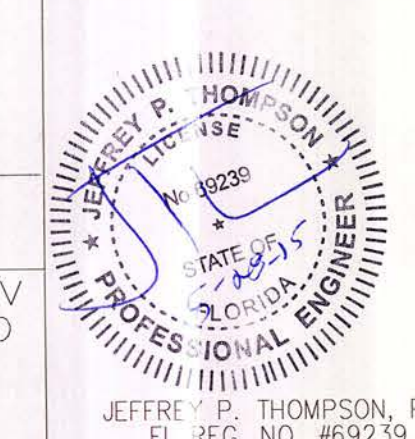
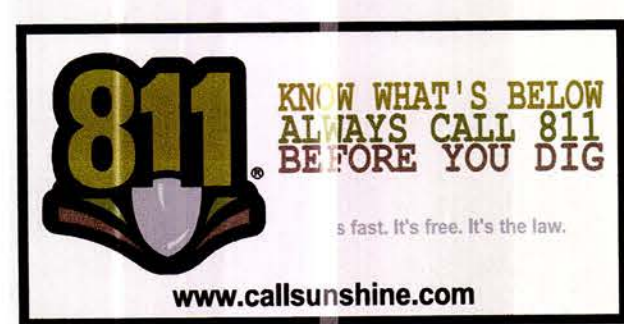
$$\text{ELEV. (NGVD)} = \text{ELEV. (NAVD)} + 1.50 \text{ FT}$$

SECTION A
N.T.S.



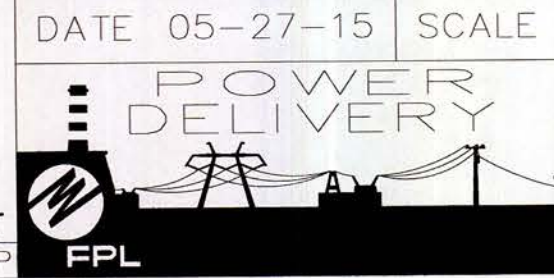
SECTION B
N.T.S.



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WWW.SCSENGINEERS.COM

REV	NO	DATE	REVISION
1	5-27-15		REVISED PER YARD EXPANSION

WDH	MB	WDH	JPT
BY	CH	COR	APP

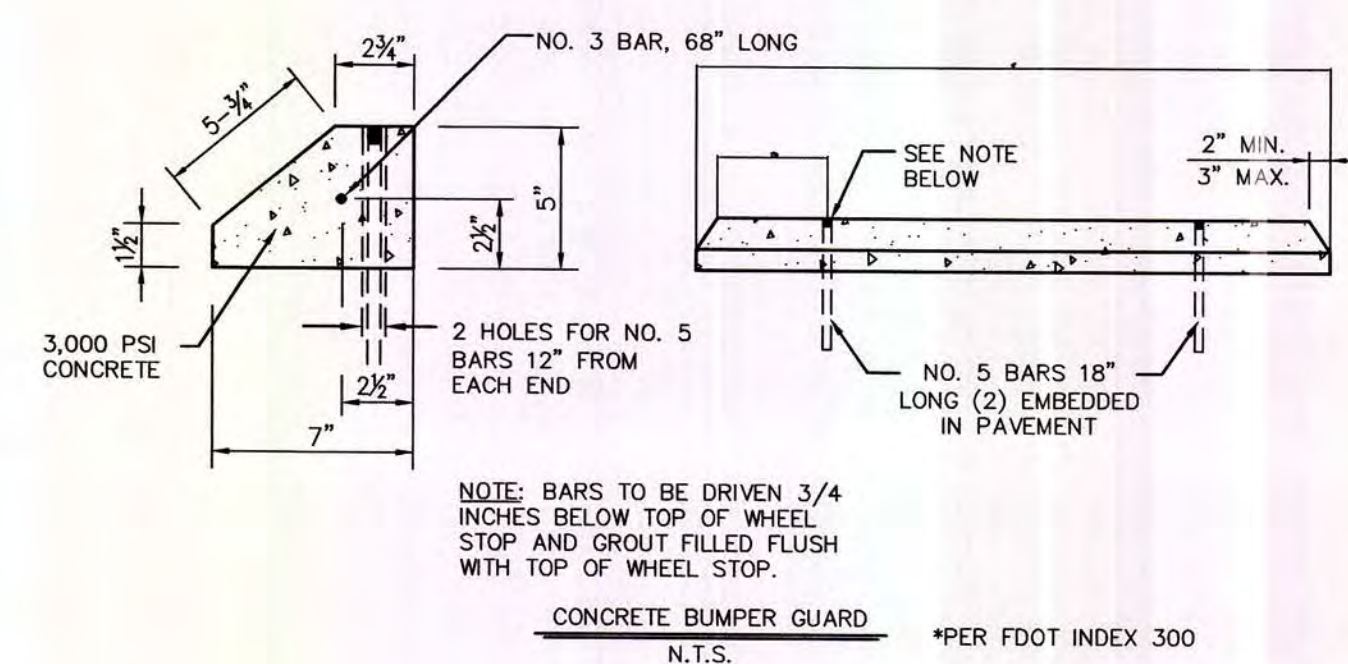
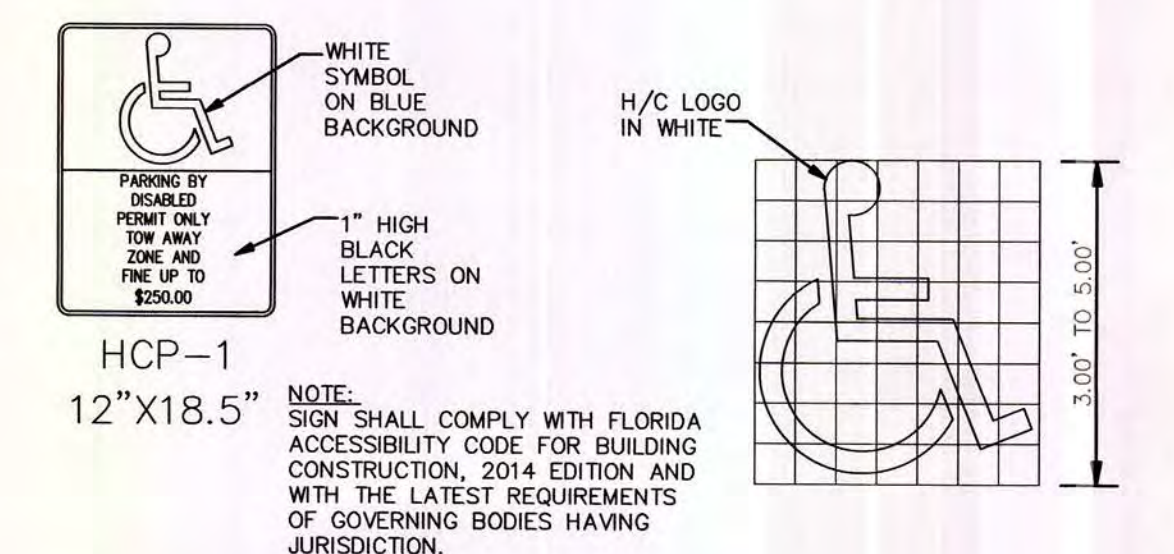
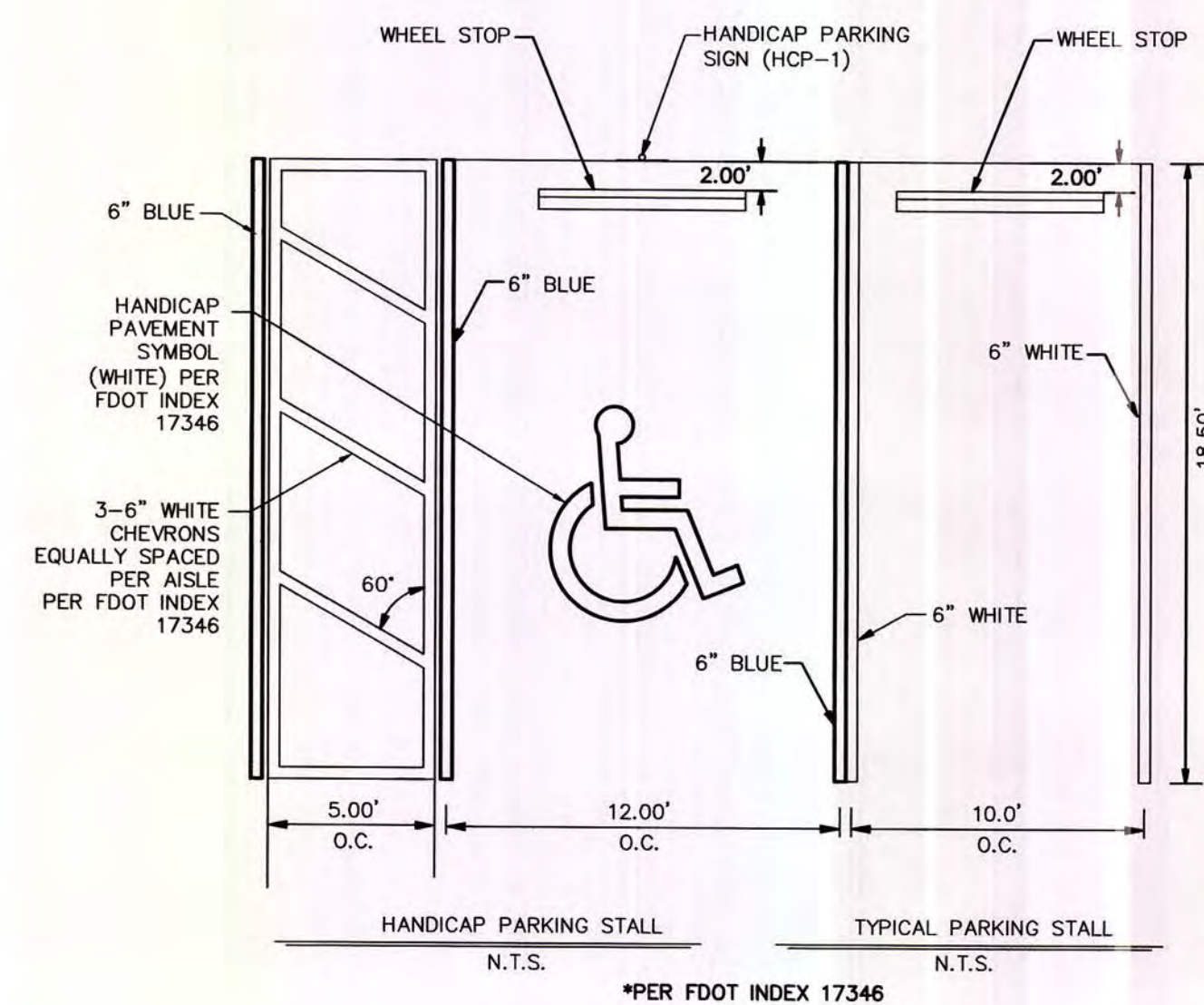
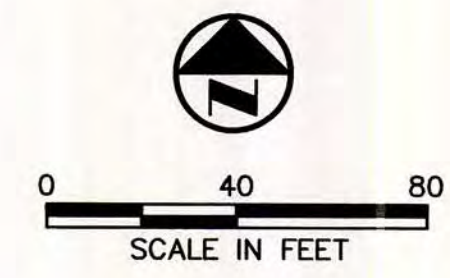


DATE 05-27-15	SCALE AS NOTED
DR JED	ER JPT
CH MB	COR WDH
APPROVED	

ST. LUCIE SUBSTATION
YARD EXPANSION
**FENCE, FILL & GRADE
SECTIONS**

SHEET 2 OF 5
SLUØ2

REV NO



JEFFREY P. THOMPSON, P.E.
FI REC NO #69239

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	1	5-27-15	REVISED PER YARD EXPANSION
ER	NO	DATE	REVISION

DATE	05-27-15	SCALE	AS NOTED
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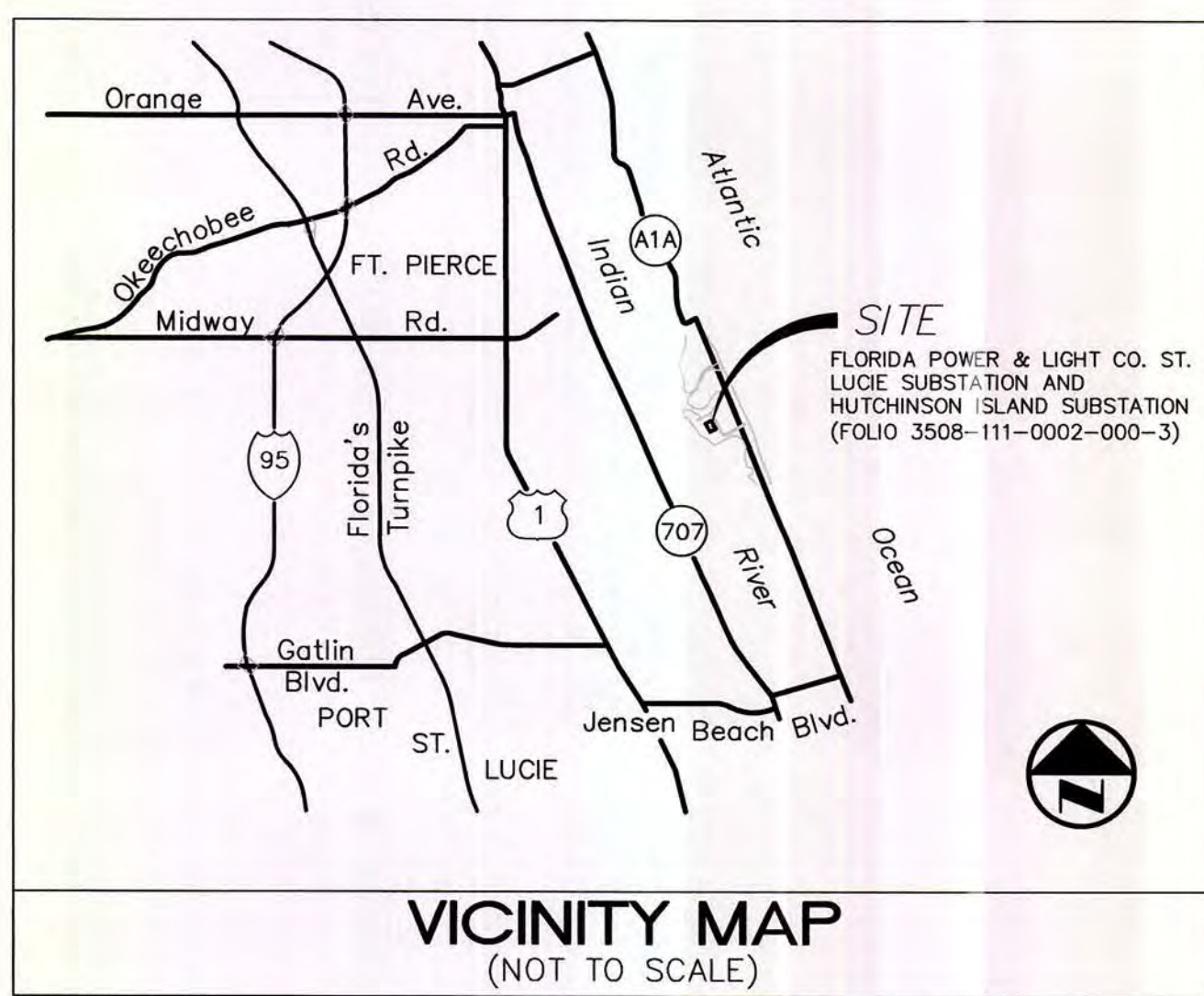
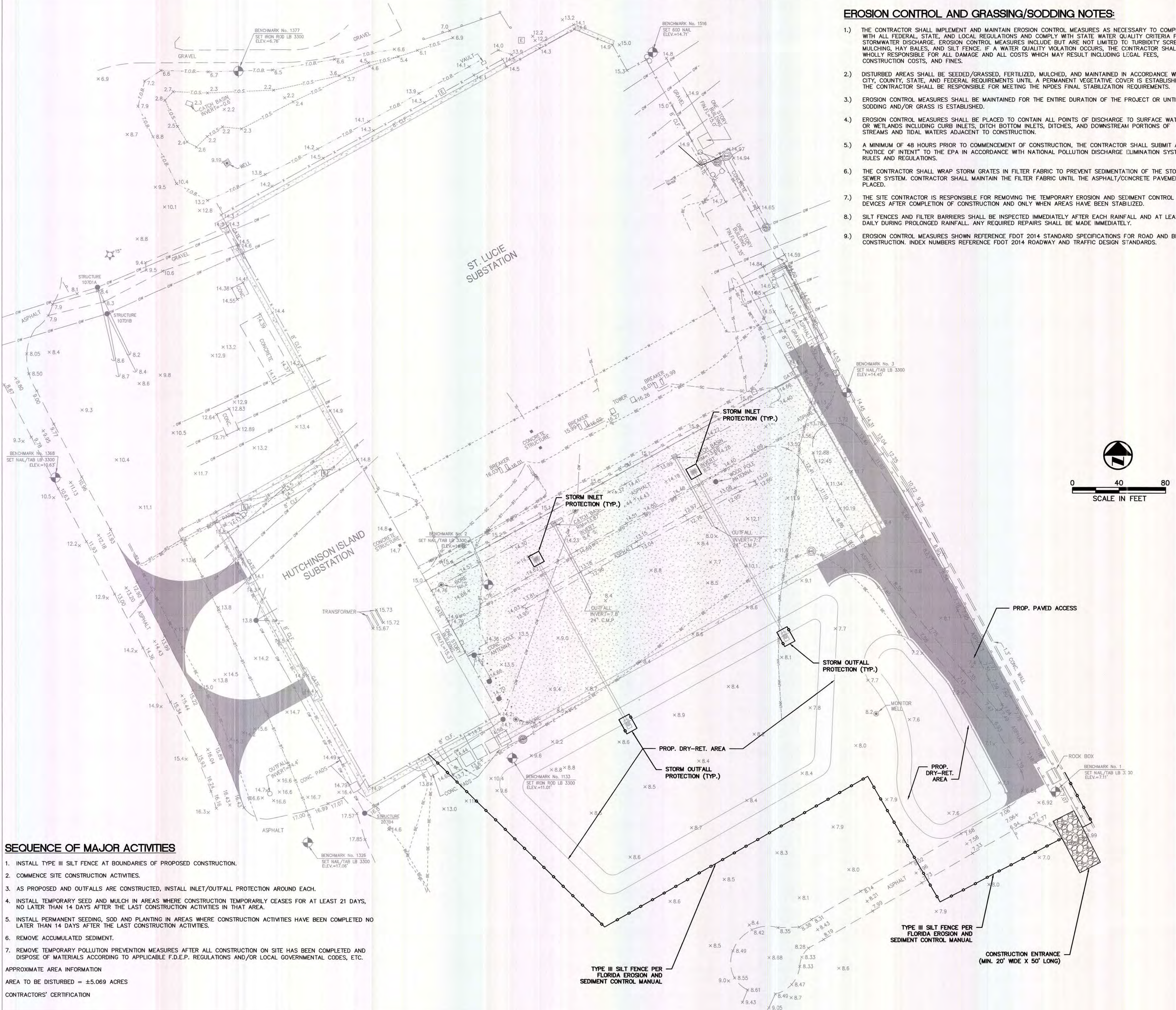
DR JED	ER JPT
CH MB	COR WDH
APPROVED	

ST. LUCIE SUBSTATION
YARD EXPANSION
PAVEMENT, MARKING &
SIGNING PLAN

SHEET 3

E-SLUØ2

REV	
NO	



EROSION CONTROL AND GRASSING/SODDING NOTES:

- 1.) THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND COMPLY WITH STATE WATER QUALITY CRITERIA FOR STORMWATER DISCHARGE. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO TURBIDITY SCREENS, MULCHING, HAY BALES, AND SILT FENCE. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSTRUCTION COSTS, AND FINES.
- 2.) DISTURBED AREAS SHALL BE SEEDED/GRASSED, FERTILIZED, MULCHED, AND MAINTAINED IN ACCORDANCE WITH CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
- 3.) EROSION CONTROL MEASURES SHALL BE MAINTAINED FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL SODDING AND/OR GRASS IS ESTABLISHED.
- 4.) EROSION CONTROL MEASURES SHALL BE PLACED TO CONTAIN ALL POINTS OF DISCHARGE TO SURFACE WATERS OR WETLANDS INCLUDING CURB INLETS, DITCH BOTTOM INLETS, DITCHES, AND DOWNSTREAM PORTIONS OF STREAMS AND TIDAL WATERS ADJACENT TO CONSTRUCTION.
- 5.) A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS.
- 6.) THE CONTRACTOR SHALL WRAP STORM GRATES IN FILTER FABRIC TO PREVENT SEDIMENTATION OF THE STORM SEWER SYSTEM. CONTRACTOR SHALL MAINTAIN THE FILTER FABRIC UNTIL THE ASPHALT/CONCRETE PAVEMENT IS PLACED.
- 7.) 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.
- 8.) SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- 9.) EROSION CONTROL MEASURES SHOWN REFERENCE FDOT 2014 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. INDEX NUMBERS REFERENCE FDOT 2014 ROADWAY AND TRAFFIC DESIGN STANDARDS.

GENERAL NOTES:

CONTRACTOR SHALL COMPLY WITH ALL TERMS AND CONDITIONS OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT. IN PARTICULAR, SEDIMENT AND EROSION CONTROLS AND STORM WATER MANAGEMENT MEASURES AND FDEP NPDES PROGRAM SHALL BE STRICTLY FOLLOWED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION, SEDIMENTATION AND STORM WATER MANAGEMENT MEASURES FOR THE DURATION OF THE PROJECT. ONCE THE PROJECT HAS BEEN COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY STORM WATER MANAGEMENT MEASURES AND SHALL DISPOSE OF THEM ACCORDING TO CODE.

EROSION AND SEDIMENTATION CONTROLS

1. CONTRACTOR SHALL INSTALL A TYPE III SILT FENCE, AS PER FLORIDA EROSION AND SEDIMENT CONTROL MANUAL AROUND THE LIMITS OF CONSTRUCTION PRIOR TO ANY DEMOLITION, FILLING OR GRADING OF ANY PORTIONS OF THE SITE.
2. PROPOSED INLETS, ONCE INSTALLED, SHALL BE PROTECTED FROM EROSION AND SEDIMENT RUNOFF BY THE USE OF SILT FENCE AS PER FLORIDA EROSION AND SEDIMENT CONTROL MANUAL.
3. A GRAVEL ACCESS ROAD SHALL BE CONSTRUCTED TO MINIMIZE THE EFFECTS OF TRUCK TRAFFIC AND SEDIMENTATION TRACKING BOTH ON AND OFF THE SITE.
4. TOP OF SOIL PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH SEED AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE SEEDING SHALL BE RYE(GRAIN)APPLIED AT THE RATE OF 120 POUNDS PER ACRE. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 4,000 POUNDS OF STRAW PER ACRE.
5. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED, SOD AND PLANTINGS NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. SEEDING SHALL BE THE SAME AS IN TEMPORARY SEEDING.

OTHER CONTROLS

1. ALL CONSTRUCTION WASTE MATERIAL SHALL BE COLLECTED AND STORED IN A SECURE METAL DUMPSTER RENTED FROM A LOCAL WASTE MANAGEMENT COMPANY. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURES FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
2. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY LOCAL REGULATIONS.
3. DUMP TRUCKS IMPORTING FILL MATERIALS TO THE SITE SHALL COVER THEIR LOADS WITH A TARPULIN TO AVOID UNNECESSARY GENERATION OF DUST.
4. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF AS PER LOCAL AND/OR STATE REGULATIONS OR AS RECOMMENDED BY THE MANUFACTURER. SITE PERSONNEL SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
5. A STABILIZED CONSTRUCTION ENTRANCE HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE SHALL BE SWEEPED DAILY TO REMOVE ANY EXCESS OF MUD, DIRT, OR ROCK TRACKED FROM THE SITE.
6. PROTECTIVE BARRIERS WILL BE INSTALLED AT THE PERIMETER OF PRESERVED VEGETATION AT THE COMMENCEMENT OF ANY SITE AND WILL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION. TEMPORARY SIGNS IDENTIFYING THE PRESERVE SHALL BE PLACED AROUND THE PERIMETER DURING CONSTRUCTION.

MAINTENANCE AND INSPECTION PROCEDURES

1. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT SHALL SELECT THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION MAINTENANCE REPORT. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE PROPER TRAINING IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING EROSION AND SEDIMENT CONTROLS USED ON-SITE IN GOOD WORKING ORDER.
2. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSPECTED EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN DEPTH. ALL CONTROLS MUST BE IN GOOD OPERATING CONDITION UNTIL THE AREA THEY PROTECT HAS BEEN COMPLETELY STABILIZED AND THE CONSTRUCTION IS COMPLETED.
3. BUILT UP SEDIMENT SHALL BE REMOVED FROM THE SILT FENCE WHEN IT HAS REACHED ONE THIRD OF THE HEIGHT OF THE FENCE. SILT FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, IF FABRIC IS SECURELY ATTACHED TO THE FENCE POST, AND IF FENCE POST IS FIRMLY IN THE GROUND.
5. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASH-OUTS, AND HEALTHY GROWTH.
6. THE INSPECTOR SHALL RECORD ANY DAMAGES OR DEFICIENCIES IN THE CONTROL MEASURES ON AN INSPECTION REPORT FORM PROVIDED FOR THIS PURPOSE. THESE REPORTS SHALL DOCUMENT THE INSPECTION OF ALL POLLUTION PREVENTION MEASURES AND SHALL ALSO BE USED TO REQUEST MAINTENANCE AND REPAIR. THE CONTRACTOR SHALL CORRECT DAMAGE OR PROVIDE MAINTENANCE AS RECOMMENDED BY REPORTS AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN 7 DAYS AFTER THE INSPECTION. FAILURE TO DO SO SHALL BE REPORTED TO THE F.D.E.P.

SEQUENCE OF MAJOR ACTIVITIES

1. INSTALL TYPE III SILT FENCE AT BOUNDARIES OF PROPOSED CONSTRUCTION.
2. COMMENCE SITE CONSTRUCTION ACTIVITIES.
3. AS PROPOSED AND OUTFALLS ARE CONSTRUCTED, INSTALL INLET/OUTFALL PROTECTION AROUND EACH.
4. INSTALL TEMPORARY SEED AND MULCH IN AREAS WHERE CONSTRUCTION TEMPORARILY CEASES FOR AT LEAST 21 DAYS, NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITIES IN THAT AREA.
5. INSTALL PERMANENT SEEDING, SOD AND PLANTING IN AREAS WHERE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITIES.
6. REMOVE ACCUMULATED SEDIMENT.
7. REMOVE TEMPORARY POLLUTION PREVENTION MEASURES AFTER ALL CONSTRUCTION ON SITE HAS BEEN COMPLETED AND DISPOSE OF MATERIALS ACCORDING TO APPLICABLE F.D.E.P. REGULATIONS AND/OR LOCAL GOVERNMENTAL CODES, ETC.

APPROXIMATE AREA INFORMATION
AREA TO BE DISTURBED = ±5.069 ACRES
CONTRACTORS' CERTIFICATION

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
7700 N. KENDALL DRIVE, SUITE 300
MIAMI, FL 33156
PH (305) 412-8185 FAX (305) 412-8105
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892
WWW.SCSENGINEERS.COM

1
ER NO

5-27-15
DATE

REVISED PER YARD EXPANSION
REVISION

DATE 05-27-15
SCALE AS NOTED

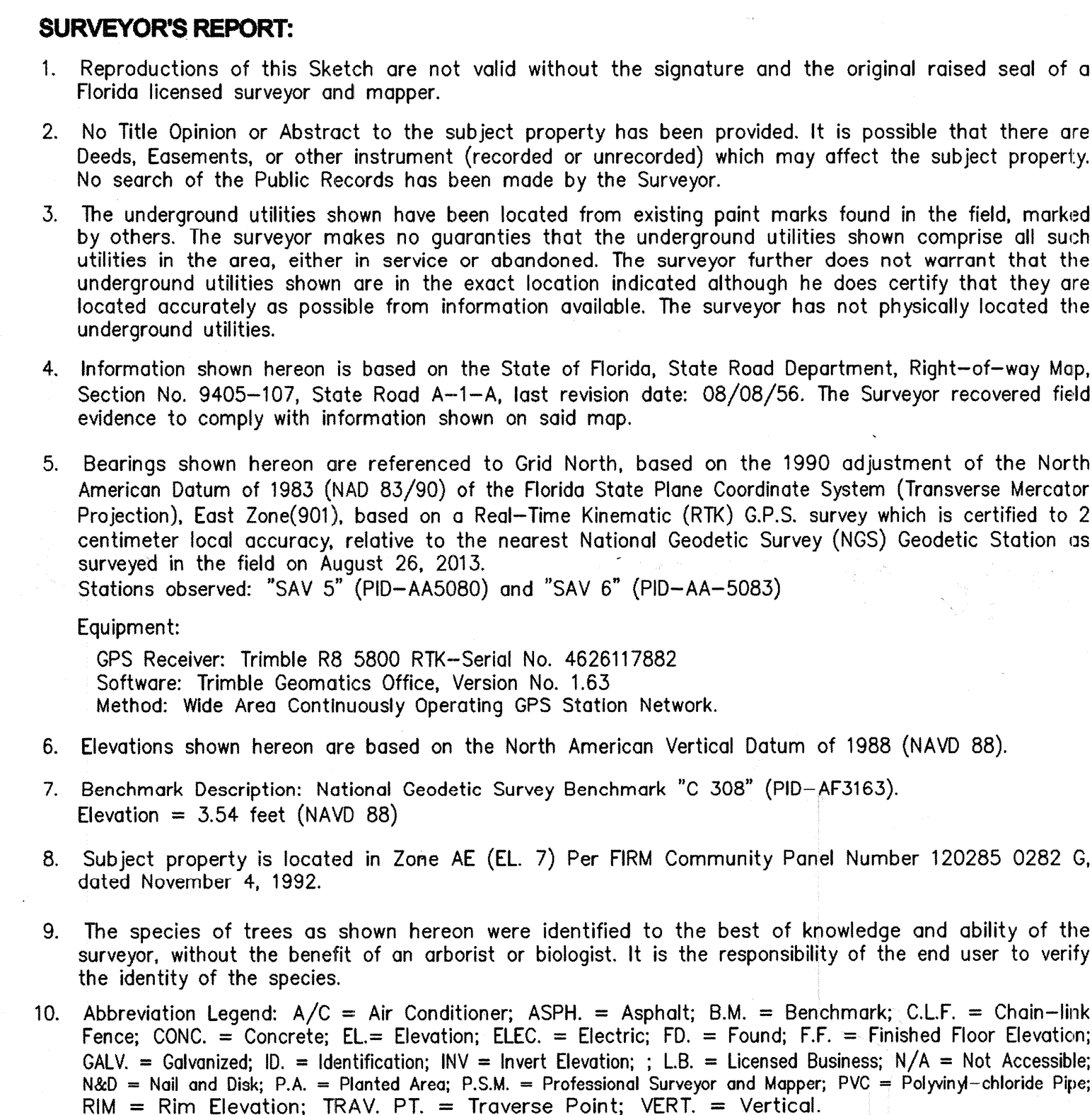
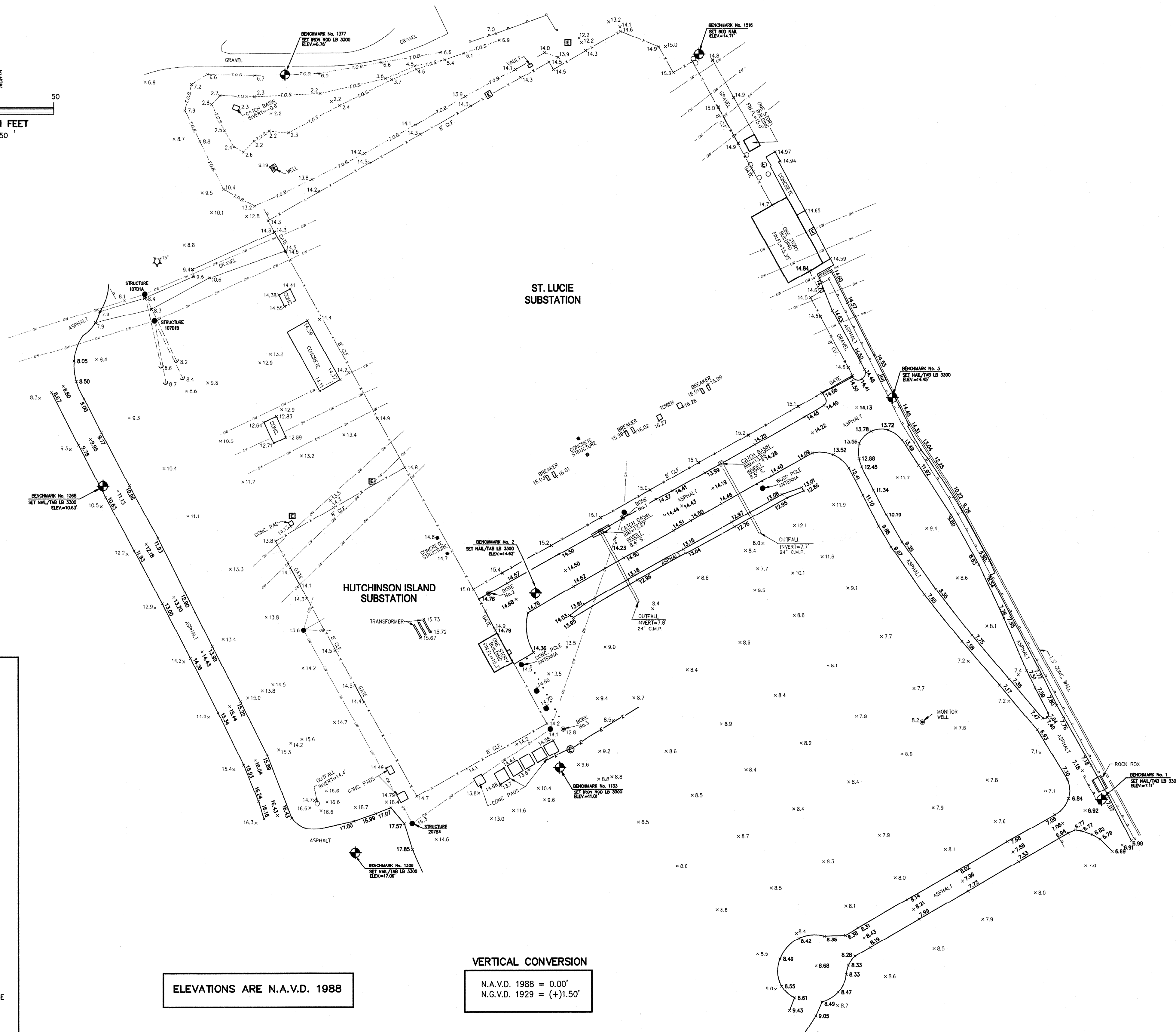
POWER DELIVERY
FPL

DR JED
CH MB
ER JPT
COR WDH

ST. LUCIE SUBSTATION
YARD EXPANSION
STORMWATER POLLUTION
PREVENTION PLAN

SHEET 5 OF 5
REV NO
SLU02

JEFFREY P. THOMPSON, P.E.
FL REG. NO. #69229



CERTIFICATION:

I HEREBY CERTIFY that the attached Topographic Survey of the hereon described property is true and correct to the best of my knowledge and belief as prepared under my direction. I FURTHER CERTIFY that this Topographic Survey meets the Minimum Technical Standards set forth in Chapter 5J-17.05, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

Date: 8/23/2013

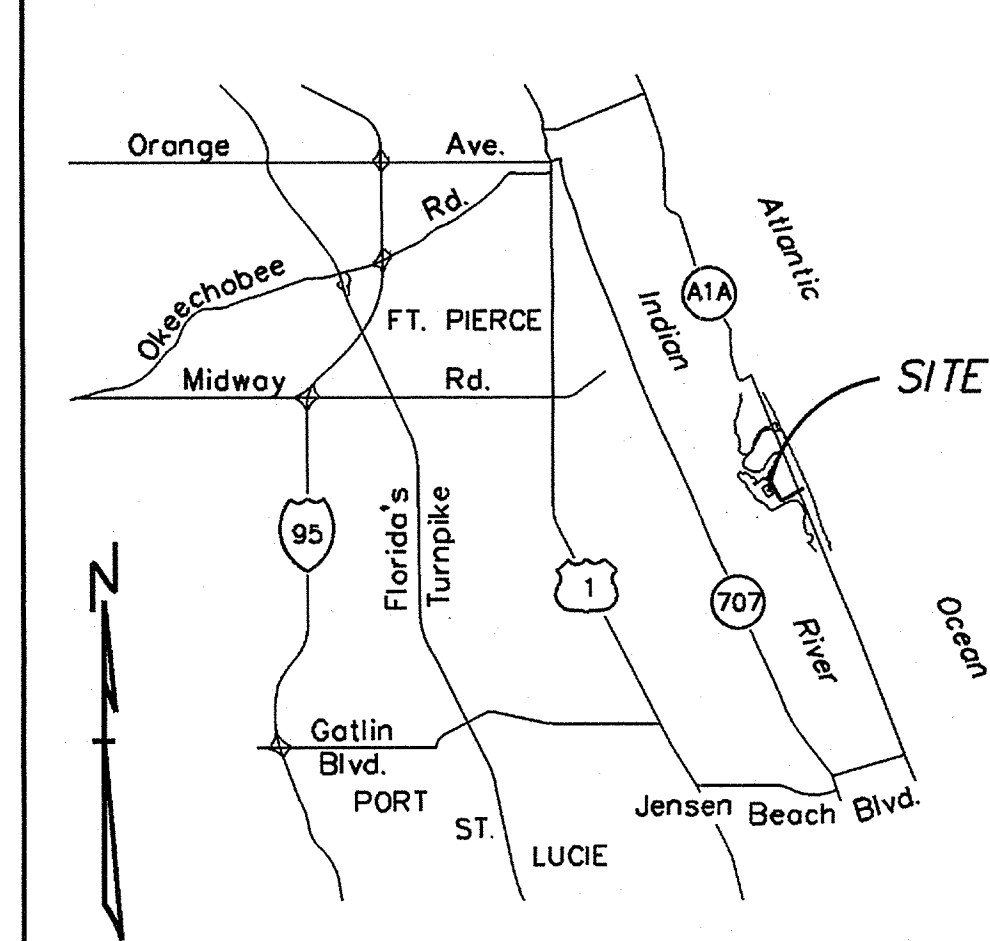
ALAN M. REYNOLDS, P.S.M.
Florida Registration No. 6346
AVIROM & ASSOCIATES, INC.
L.B. No. 3300

[illegible]

**TOPOGRAPHIC SURVEY
ST. LUCIE SUBSTATION AND
HUTCHINSON ISLAND SUBSTATION**

**HUTCHINSON ISLAND
ST. LUCIE COUNTY, FLORIDA**

JOB #:	7754-12		
SCALE:	1" = 50'		
DATE:	08/23/2013		
BY:	A.M.R.		
CHECKED:	M.D.A.		
F.B.	1587	PG.	23
SHEET	1	OF	1



LOCATION SKETCH
SEC. 16, TWP. 36 S., RGE. 41 E.,
ST. LUCIE COUNTY

LEGEND:

-  PROP. LOOSE ROCK AREA
 (EXPANSION AREA)
 PROP. RETENTION AREA
 ————x——— EXIST. FENCE
 x----- EXIST. FENCE TO BE REMOVED
 ————xx—— TEMP. FENCE
 ———— PROP. 14' CONCRETE WALL
 (12' ABOVE GROUND, 2' BELOW GROUND)

	1	05-21-15	REV'D WALL LOCATION PER LATEST EXPANSION REVISION	
FR	NO	DATE	REVISION	

JSR				
BY	CH	COR	APP	

DATE 09-03-14	SCALE 0 30 45 60 9
	POWER DELIVERY
	DRRODRIGUEZ ER
	CH COR
	APPROVED

ST. LUCIE SUBSTATION
EXPANSION
CONCRETE WALL PLAN

132996S5 R1

 (SU, G, FF)

SHEET 1 OF 2

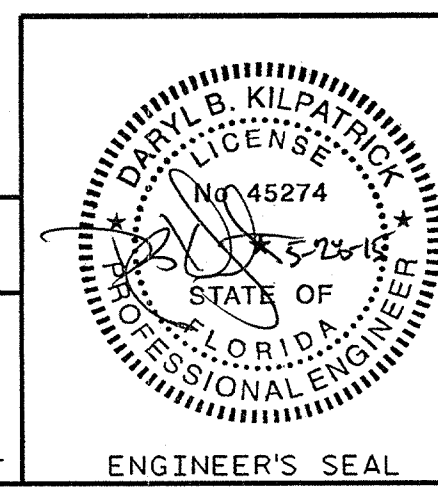
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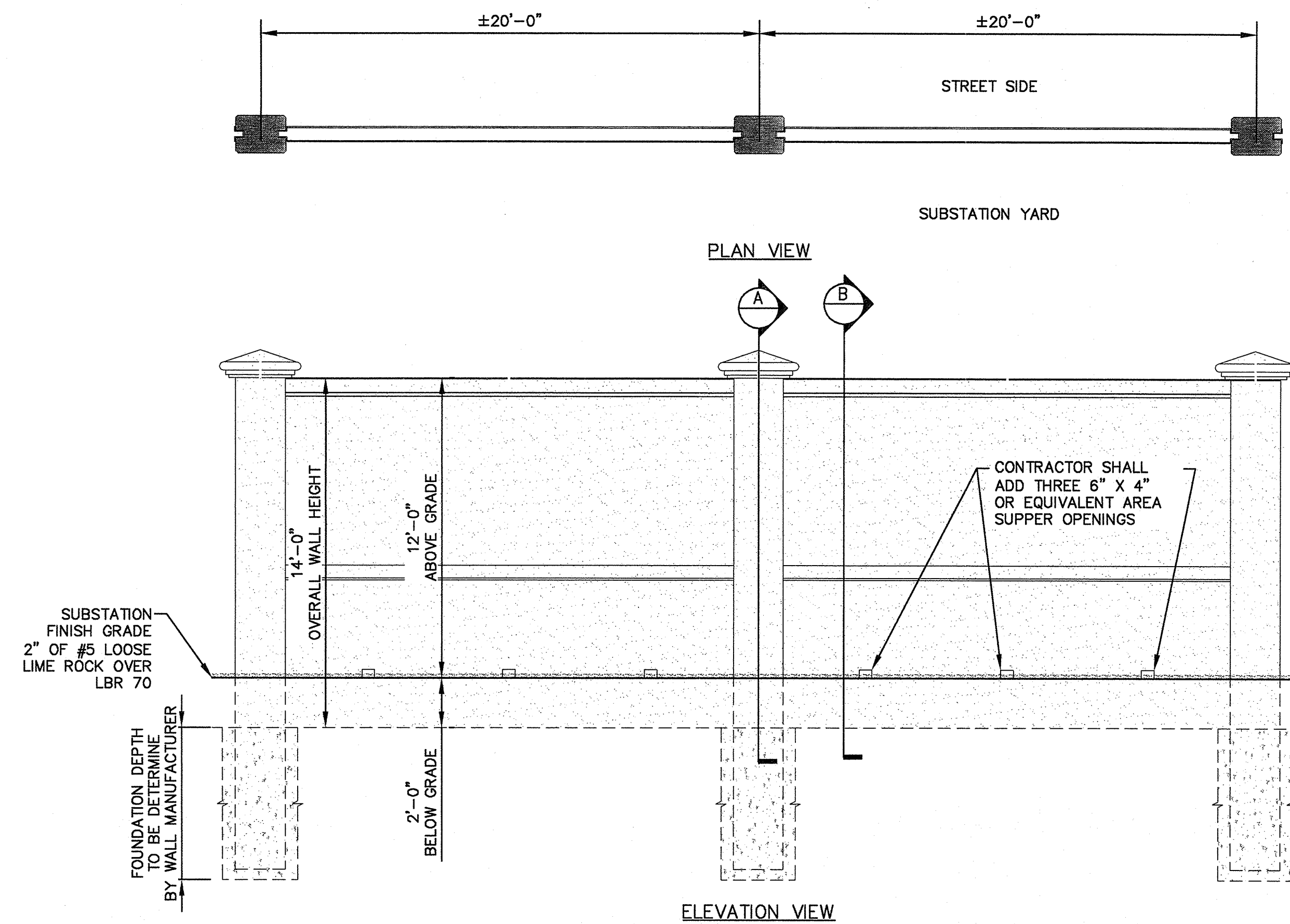
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REV	
NO	

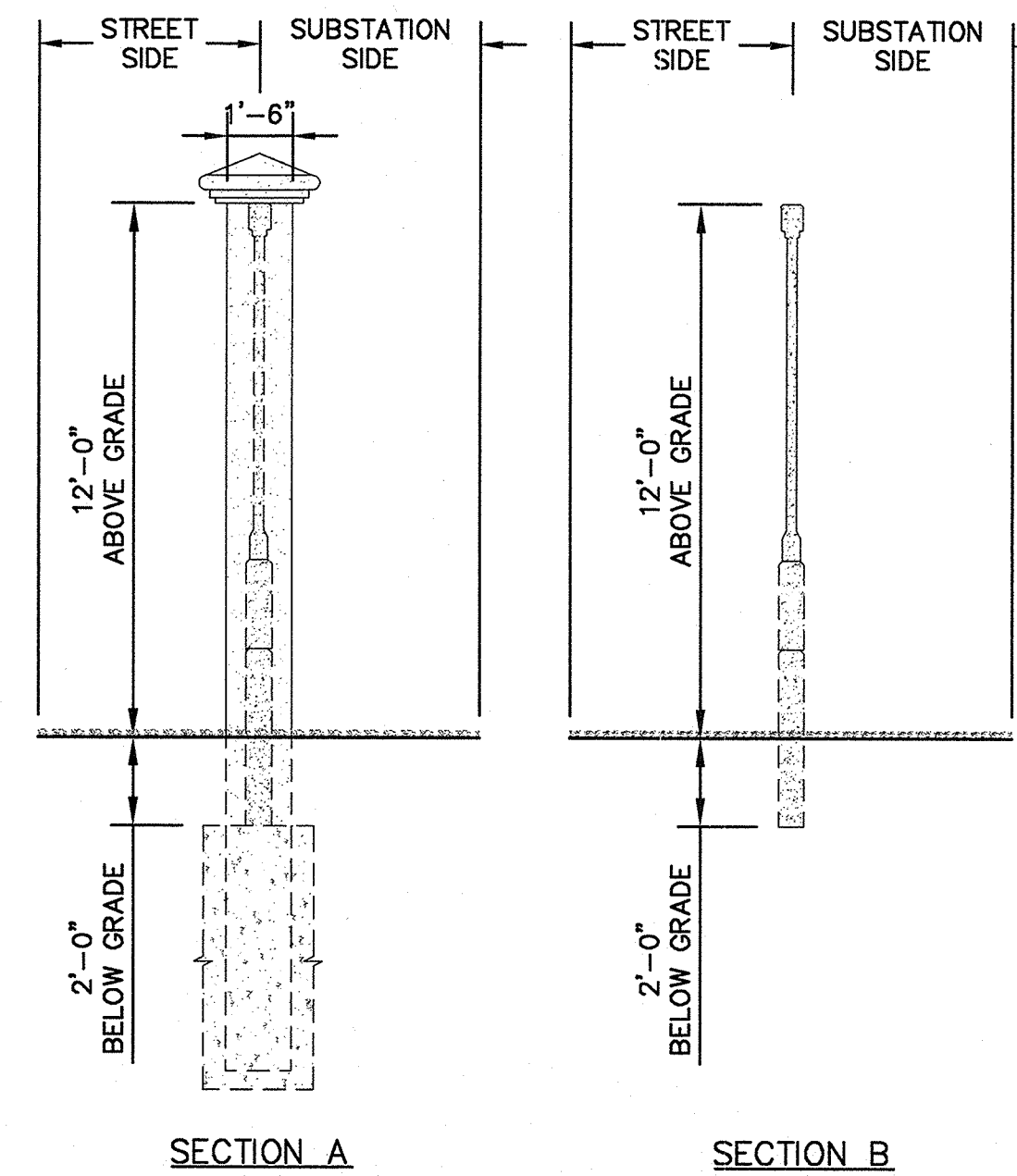
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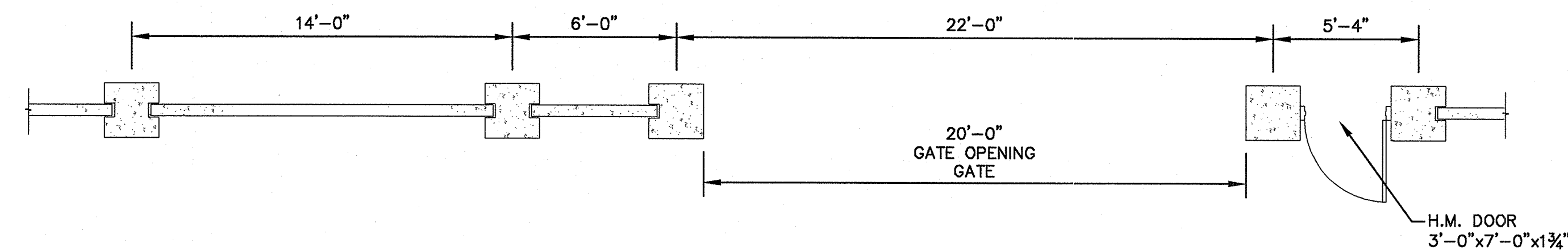


WALL INSTALLATION
SCALE: 1/4"=1'-0"

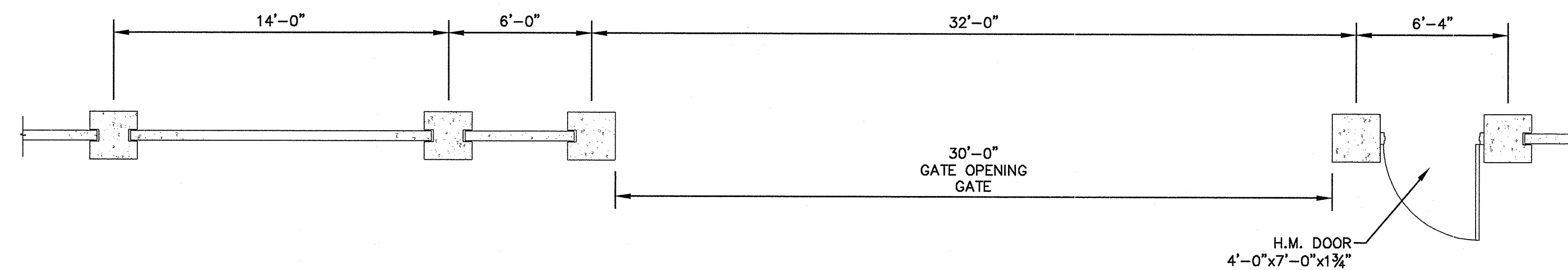


NOTES:

- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND SPECIFICATIONS OF PRE CAST CONCRETE WALL, PANELS AND COLUMNS.
- WALLS AND DOORS SHALL BE DESIGNED TO WITHSTAND 194 MPH WIND VELOCITY IN ACCORDANCE WITH ASCE 7-10 AND FBCB 2010, FOR A CATEGORY IV STRUCTURE. DESIGN SHALL INCORPORATE ALL DOOR AND GATE OPENINGS.
- DETAILED ENGINEERING DRAWINGS AND CALCULATIONS SHALL BE PROVIDED BY BUILDING CONTRACTOR FOR APPROVAL BY FPL PRIOR TO CONSTRUCTION. DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY REGISTERED FLORIDA STRUCTURAL ENGINEER. FINAL WALL DESIGN SHALL BE IN SUBSTANTIAL COMPLIANCE WITH THIS CONCEPTUAL DESIGN.
- EXTERIOR OF WALL PANEL SHALL BE TEXTURED USING TEXCOTE LX 70W COLAR TO MATCH BENJAMIN MORE MONROE BISQUE. INSIDE OF WALL MAY BE PAINTED WITH TWO COATS OF FRESH KOTE LATEX COLOR TO MATCH BENJAMIN MORE MONROE BISQUE. WALL COLUMN, CAP AND TRIM SHALL BE MANUFACTURERS SMOOTH FINISH COLOR SHALL BE MONTGOMERY WHITE.
- ALL WORK SHALL BE IN ACCORDANCE WITH FPL SPECIFICATIONS D-4 AS APPLICABLE.
- ALL WORK SHALL COMPLY TO FLORIDA BUILDING CODE 2010 EDITION.
- DESIGN LOADS :
WIND LOAD-PER ASCE 7-10
BASIC WIND LOAD VELOCITY.....Vults=194 mph
(RISK CATEGORY IV; EXPOSURE "D")
- CONCRETE:
A. CONCRETE
CONFORMING TO ASTM C94 TO ACHIEVE A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. PLANT CONTROL IS REQUIRED. NO WATER SHALL BE ADDED AFTER MIXING TRUCK LEAVES PLANT WITHOUT THE APPROVAL OF PLANT ENGINEER. MAXIMUM MIX TIME AT POINT OF DEPOSIT IS 90 MINUTES.
B. REINFORCING STEEL:
CONFORMING TO ASTM A-615-GRADE 60, FREE FROM OIL, LOOSE SCALE & RUST.
C. WELDED WIRE FABRIC:
CONFORMING TO ASTM A-185, FREE FROM OIL, LOOSE SCALE & RUST.



20' GATE OPENING & ACCESS DOOR
SCALE: 1/4"=1'-0"



30' GATE OPENING & ACCESS DOOR
SCALE: 1/4"=1'-0"

REV	NO	DATE	DESCRIPTION	BY	CH	COR	APP
1	05-21-15		REV'D PLAN VIEWS	JSR			

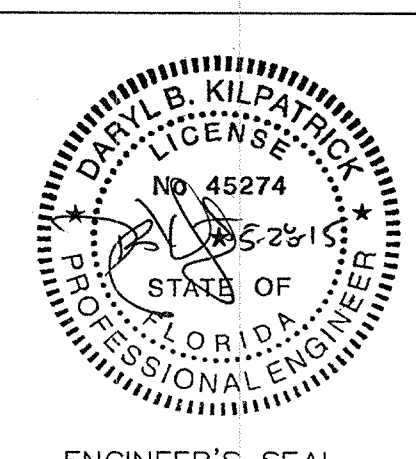
DATE 09-03-14	SCALE 0	AS SHOWN
POWER DELIVERY	DR JSR	ER
CH. APPROVED	CH. COR	
FPL		

ST. LUCIE SUBSTATION EXPANSION
CONCRETE WALL
SECTIONS & DETAILS

132996S6_R1

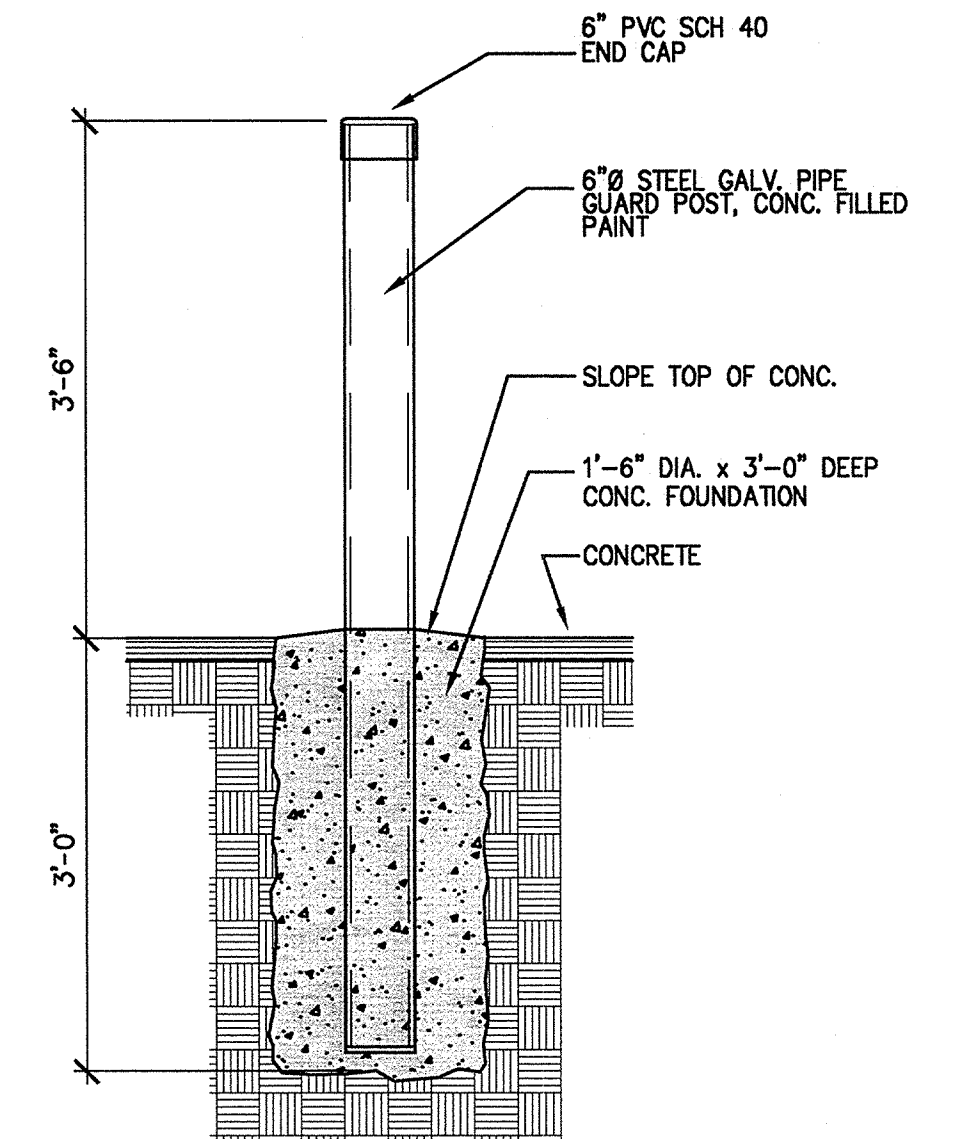
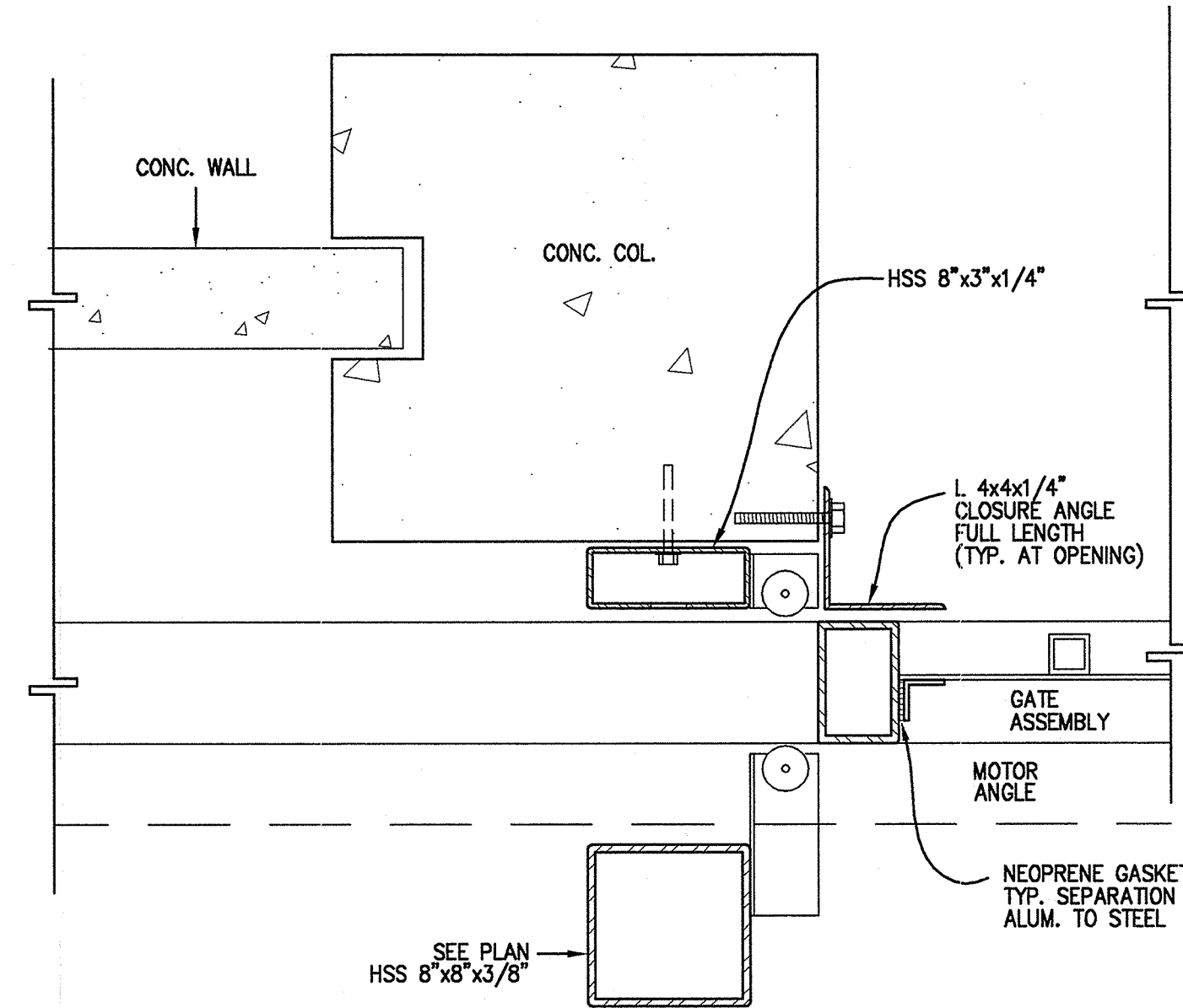
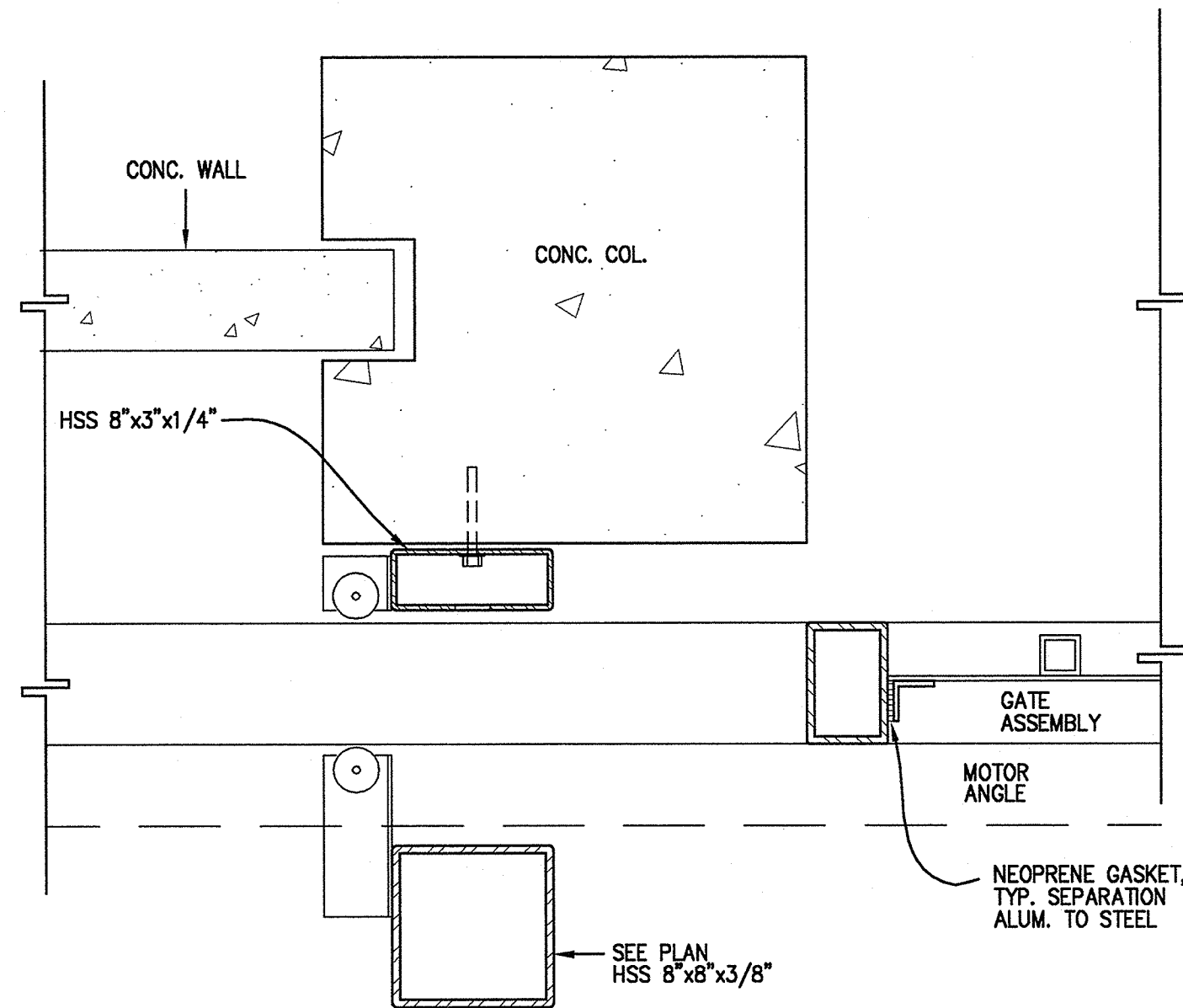
SHEET 2 OF 2
E-SLU20

REV NO
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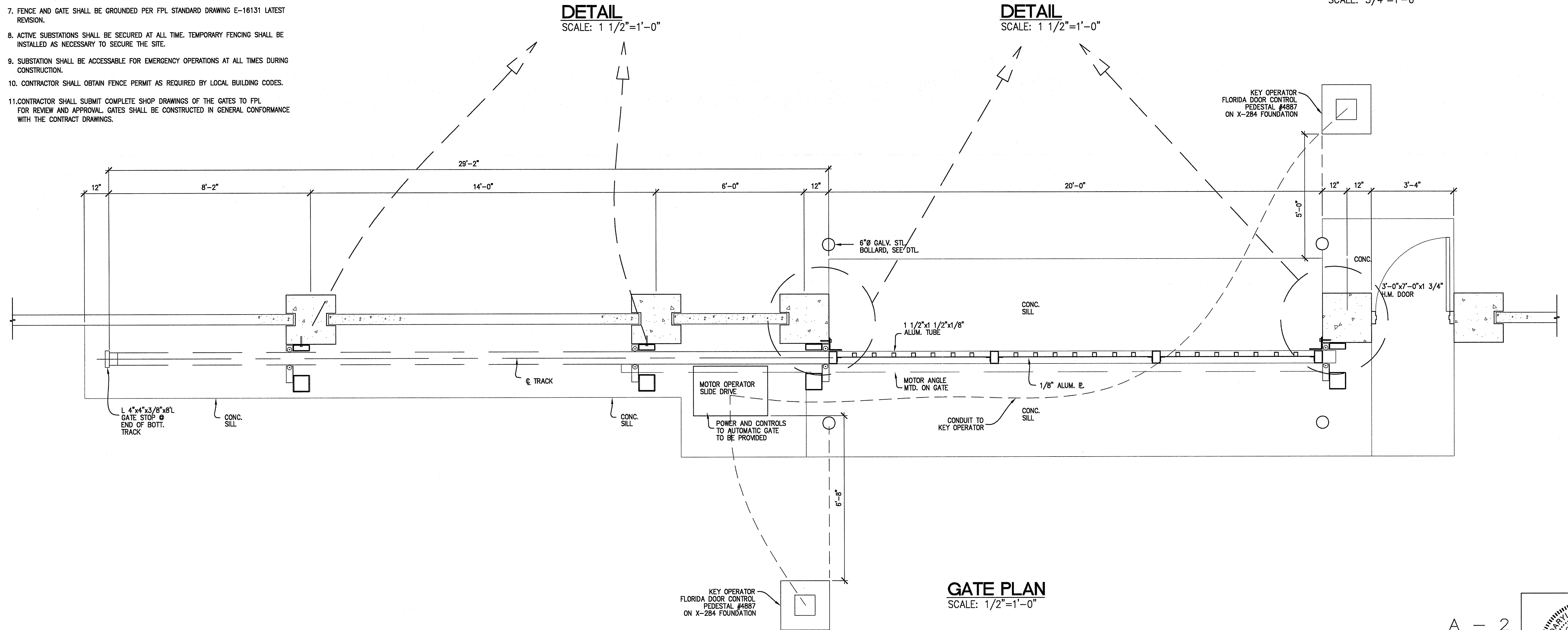


NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH FPL SPECIFICATIONS D-4 AS APPLICABLE.
2. ALL WORK SHALL SHALL COMPLY TO FLORIDA BUILDING CODE 2010 EDITION.
3. DESIGN LOADS :
WIND LOAD-PER ASCE 7-10
BASIC WIND LOAD VELOCITY.....Vults=194 mph
Vasd=150 mph
(RISK CATEGORY IV; EXPOSURE "D")
4. CONCRETE:
A. CONCRETE
CONFORMING TO ASTM C94 TO ACHIEVE A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. PLANT CONTROL IS REQUIRED. NO WATER SHALL BE ADDED AFTER MIXING TRUCK LEAVES PLANT WITHOUT THE APPROVAL OF PLANT ENGINEER. MAXIMUM MIX TIME AT POINT OF DEPOSIT IS 90 MINUTES.
B. REINFORCING STEEL:
CONFORMING TO ASTM A-615-GRADE 60, FREE FROM OIL, LOOSE SCALE & RUST.
C. WELDED WIRE FABRIC:
CONFORMING TO ASTM A-185, FREE FROM OIL, LOOSE SCALE & RUST.
5. MISCELLANEOUS METAL
A. ROLLED SHAPES - ASTM A992 (FY.50.0 KSI)
ROUND COLUMNS - ASTM A500 GRADE B (FY.42 KSI)
MISC. ANGLES & PLATES - ASTM A-36 (FY.36.0 KSI)
B. ALL THESE SHAPES, MEMBERS AND CONNECTIONS DENOTED TO BE HOT DIPPED GALVANIZED SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
C. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
D. WELDING SHALL CONFORM WITH AWS SPECIFICATIONS. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS WHO MUST HOLD CURRENT WELDING CERTIFICATES.
E. FASTENINGS: MAKE ALL EXPOSED FASTENINGS OF STAINLESS STEEL SAME AS THE METAL TO WHICH FASTENING IS APPLIED, UNLESS OTHERWISE SHOWN.
F. ALUMINUM: ALLOY 6063-T6 MILL FINISH.
G. SEPARATE ALL ALUMINUM FROM GALVANIZED STEEL WITH NEOPRENE SEPARATORS.
H. GATES SHALL RECEIVE AN ESP (ELECTROSTATIC PAINT) FINISH. COLOR WHITE. SUBMIT SAMPLE FOR APPROVAL.
I. CONTRACTOR SHALL MINIMIZE FIELD WELDING. ALL FIELD WELDS SHALL BE CLEANED/PING AND COATED WITH COLD GALVANIZING MATERIAL.
J. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR FPL APPROVAL PRIOR TO FABRICATION.
6. GATE MOTOR:
HYSECURITY, SLIDE DRIVE 40 WITH DRIVE RAIL, 1 PHASE 208/230V 60HZ.
7. FENCE AND GATE SHALL BE GROUNDED PER FPL STANDARD DRAWING E-16131 LATEST REVISION.
8. ACTIVE SUBSTATIONS SHALL BE SECURED AT ALL TIME. TEMPORARY FENCING SHALL BE INSTALLED AS NECESSARY TO SECURE THE SITE.
9. SUBSTATION SHALL BE ACCESSABLE FOR EMERGENCY OPERATIONS AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL OBTAIN FENCE PERMIT AS REQUIRED BY LOCAL BUILDING CODES.
11. CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS OF THE GATES TO FPL FOR REVIEW AND APPROVAL. GATES SHALL BE CONSTRUCTED IN GENERAL CONFORMANCE WITH THE CONTRACT DRAWINGS.



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



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

ER NO	DATE	REVISION
1	05-21-15	REV'D PLAN VIEW & DETAILS

BY	CH	COR	APP
JSR			

DATE 09-03-14	SCALE 0 AS SHOWN
POWER DELIVERY	DR ROUX(WJB) ER
	CH COR
	APPROVED

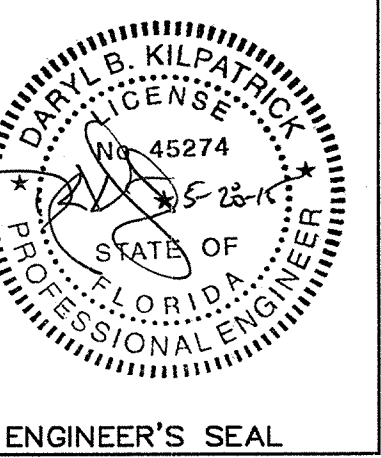
ST. LUCIE SUBSTATION EXPANSION
20' ROLLING GATE
GATE PLAN & DETAILS

132996S8_R1

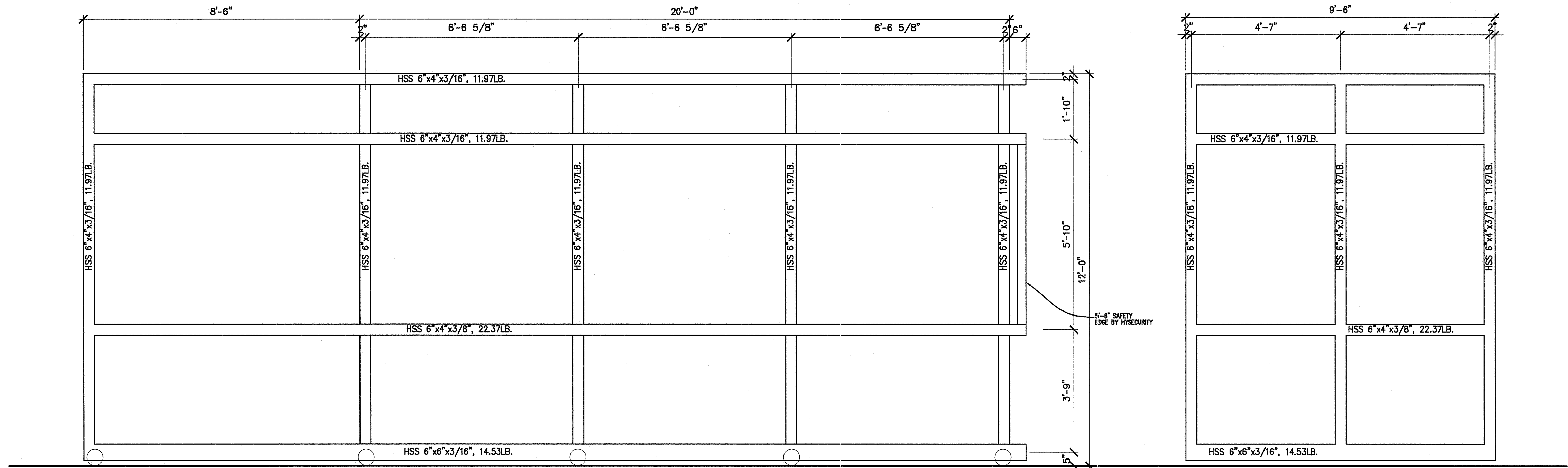
SHEET 2 OF 5
E-SLU27

REV NO
1

A - 2

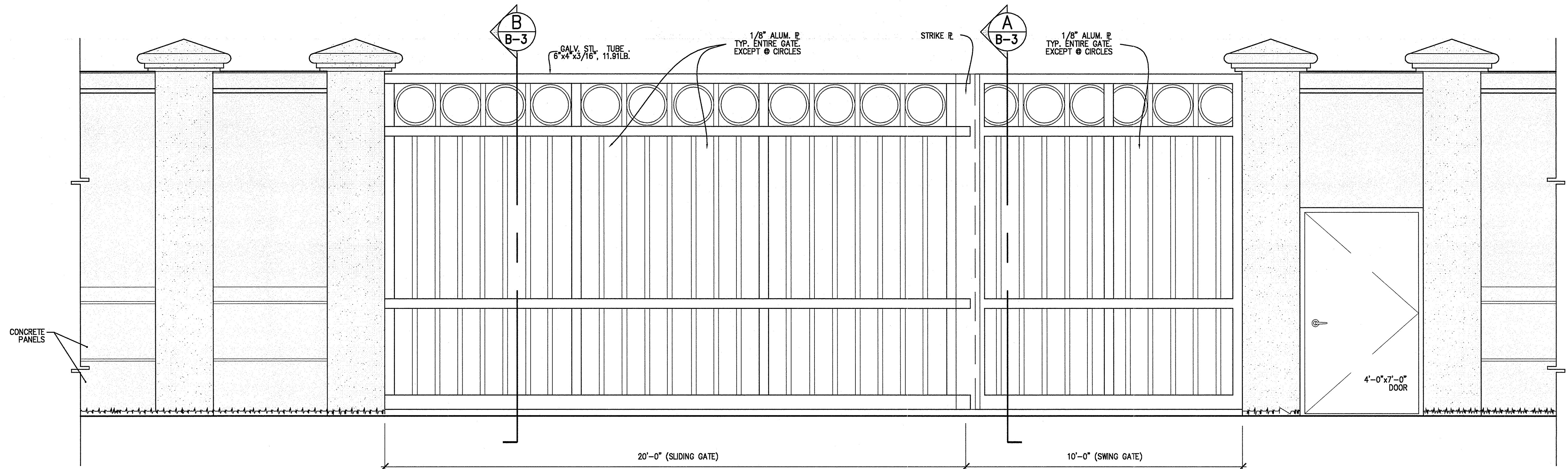


GATE WT. (20'-0" SLIDING GATE)
STEEL 113.33 LIN. FT. HSS 6"x4"x3/16" @ 11.97LB./FT. = 1,357LB.
29.17 LIN. FT. HSS 6"x4"x3/8" @ 22.37LB./FT. = 653LB.
29.17 LIN. FT. HSS 6"x6"x3/16" @ 14.53LB./FT. = 424LB.
ALUM. 1/8" @ 180 S.F.x2LB./S.F. = 360LB.
1 1/2"x1 1/2" TUBE 231'x8LB./FT. = 185LB.
TOTAL = 2979LB.



GATE FRAMING ELEVATION
SCALE: 1/2"=1'-0"

ALL STEEL HOT DIPPED GALVANIZED
AFTER FABRICATION



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

ER	NO	DATE	REVD ELEVATION	REVISION
	1	05-21-15	REVD ELEVATION	

JSR	BY	CH	COR	APP

DATE 09-03-14	SCALE 0 AS SHOWN
POWER DELIVERY	DR ROUX(WJB) ER
	CH COR
	APPROVED

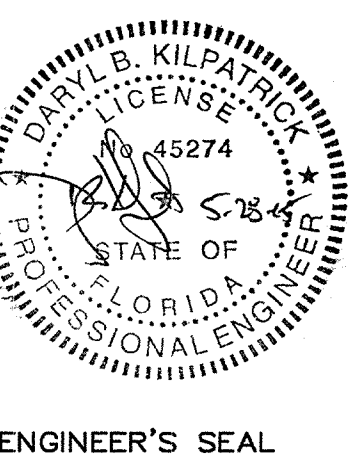
ST. LUCIE SUBSTATION EXPANSION
30' ROLLING GATE
GATE PLAN & DETAILS

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SHEET 3 OF 5
E-SLU27

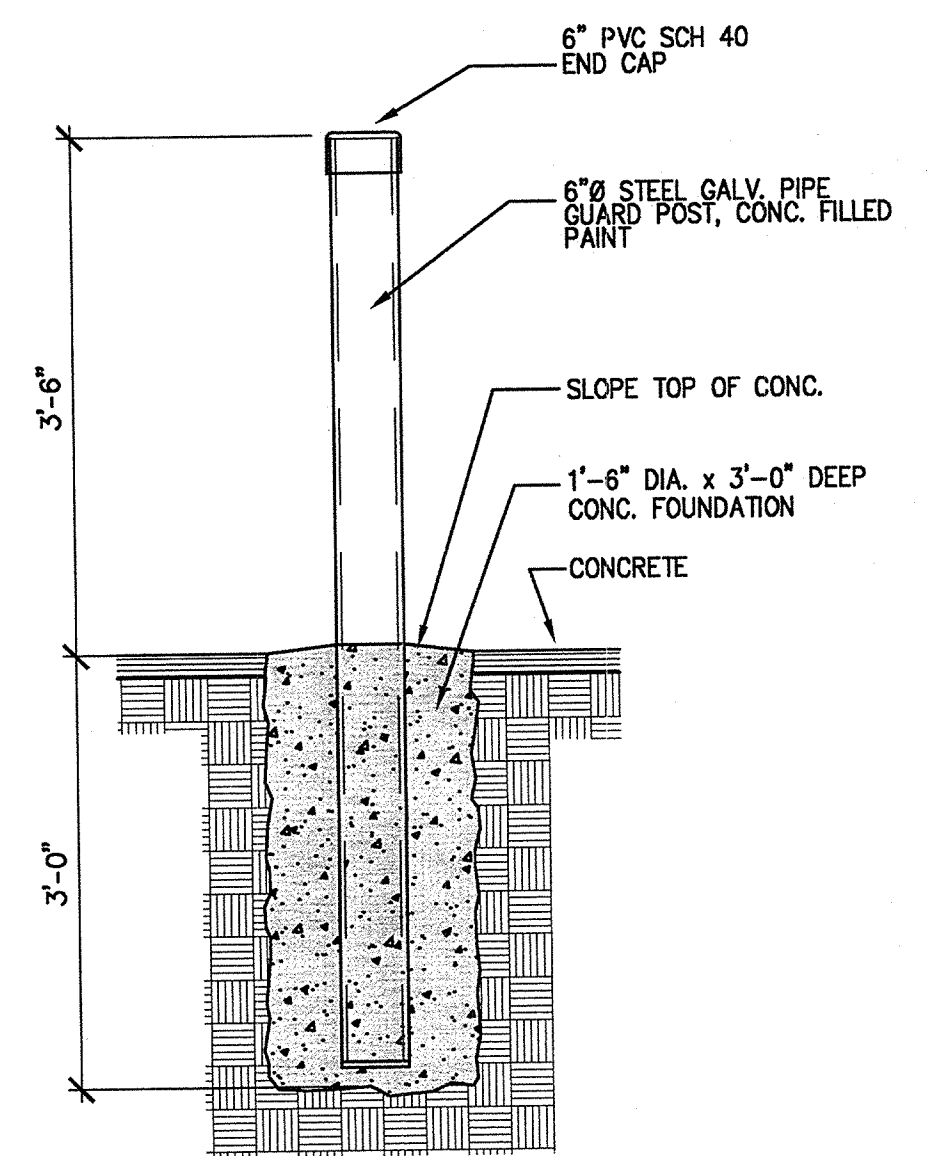
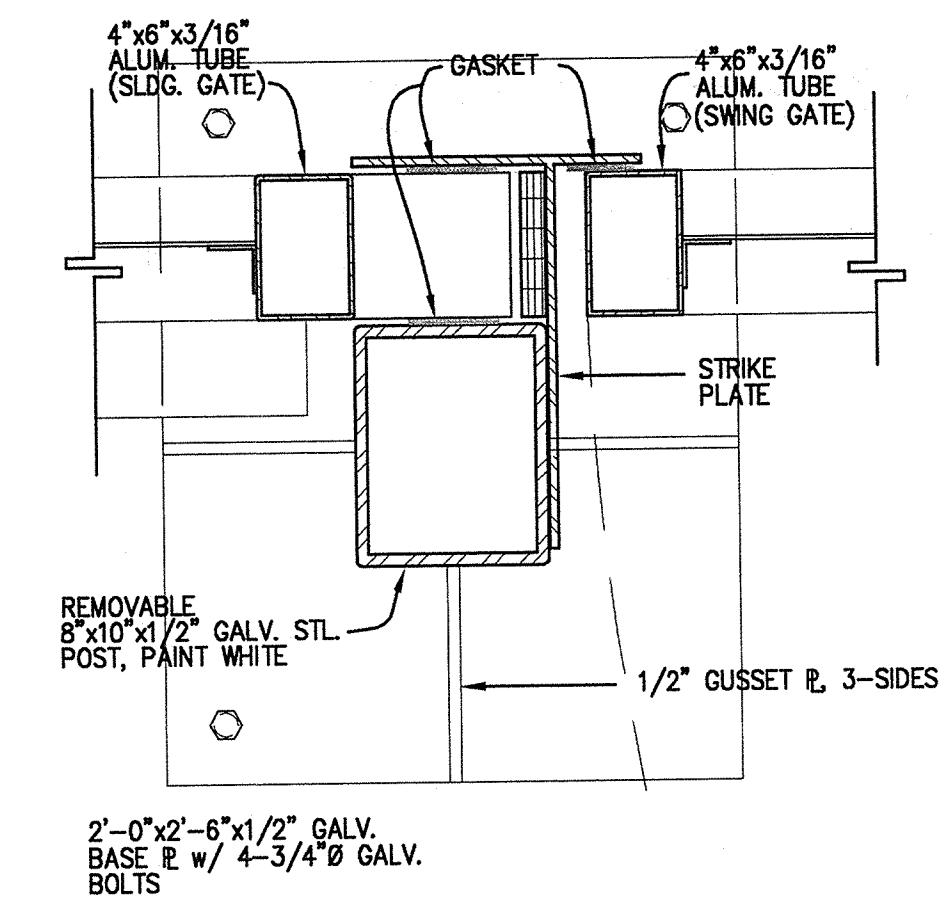
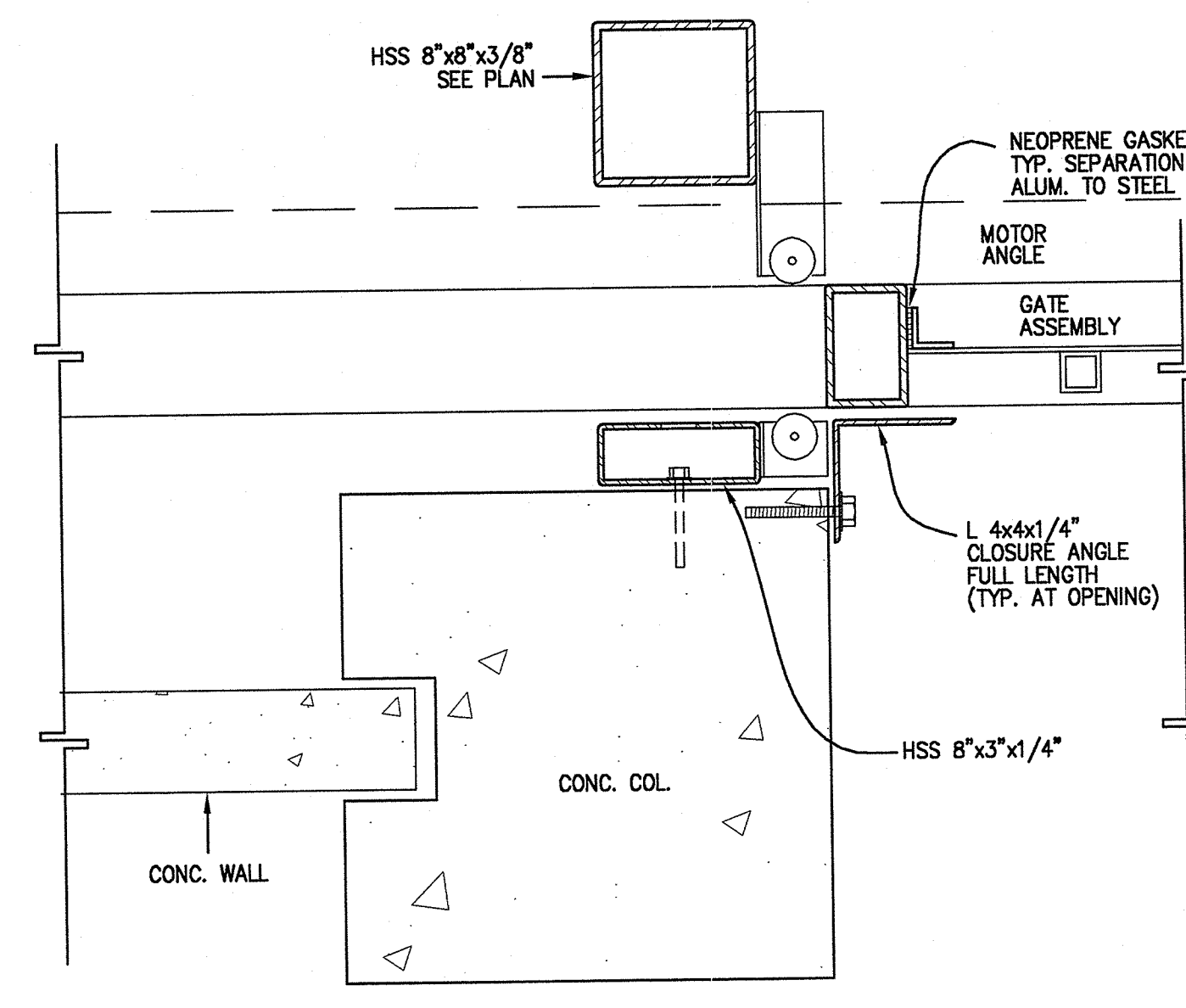
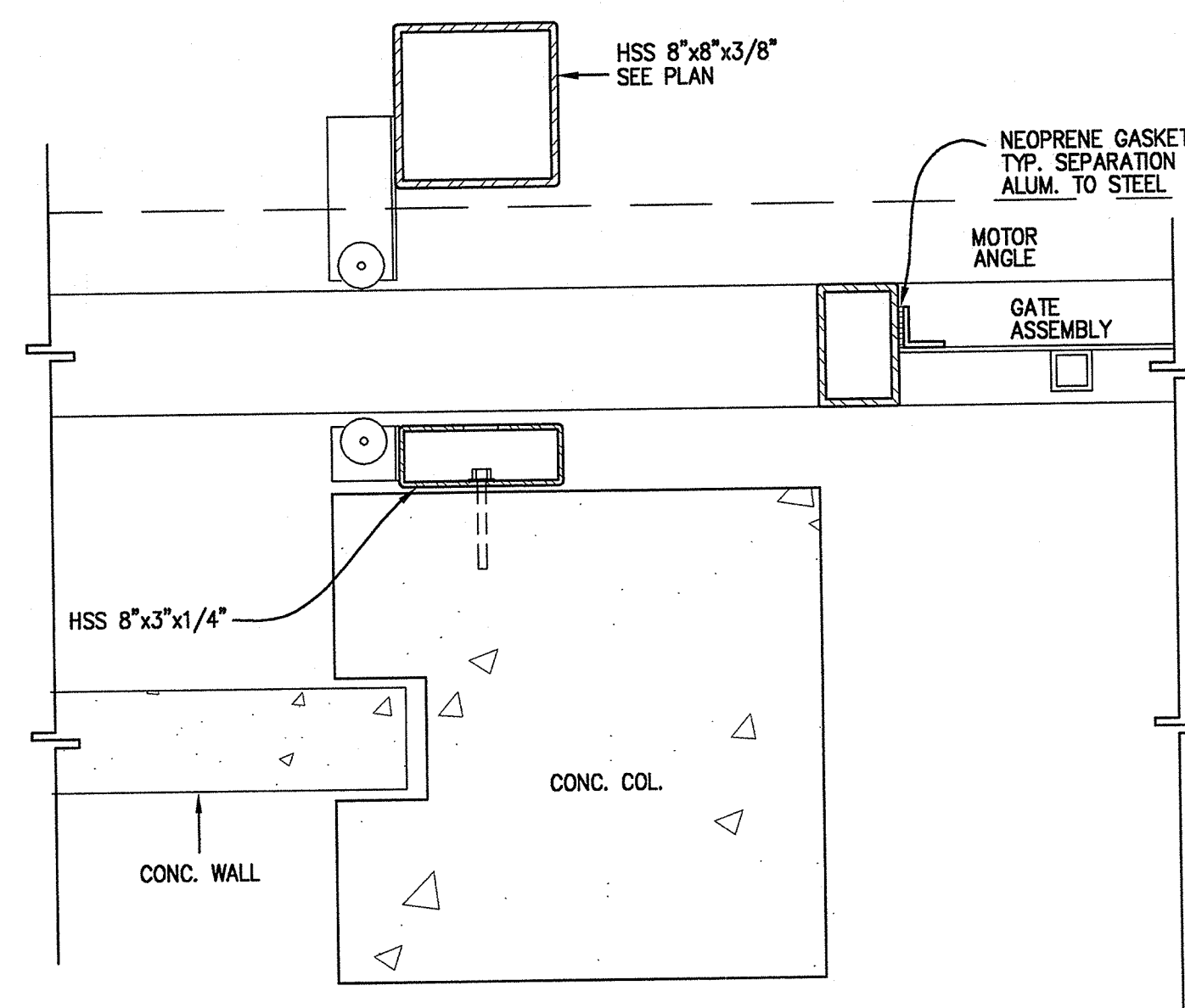
REV NO
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B - 1



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(RISK CATEGORY IV; EXPOSURE "D")
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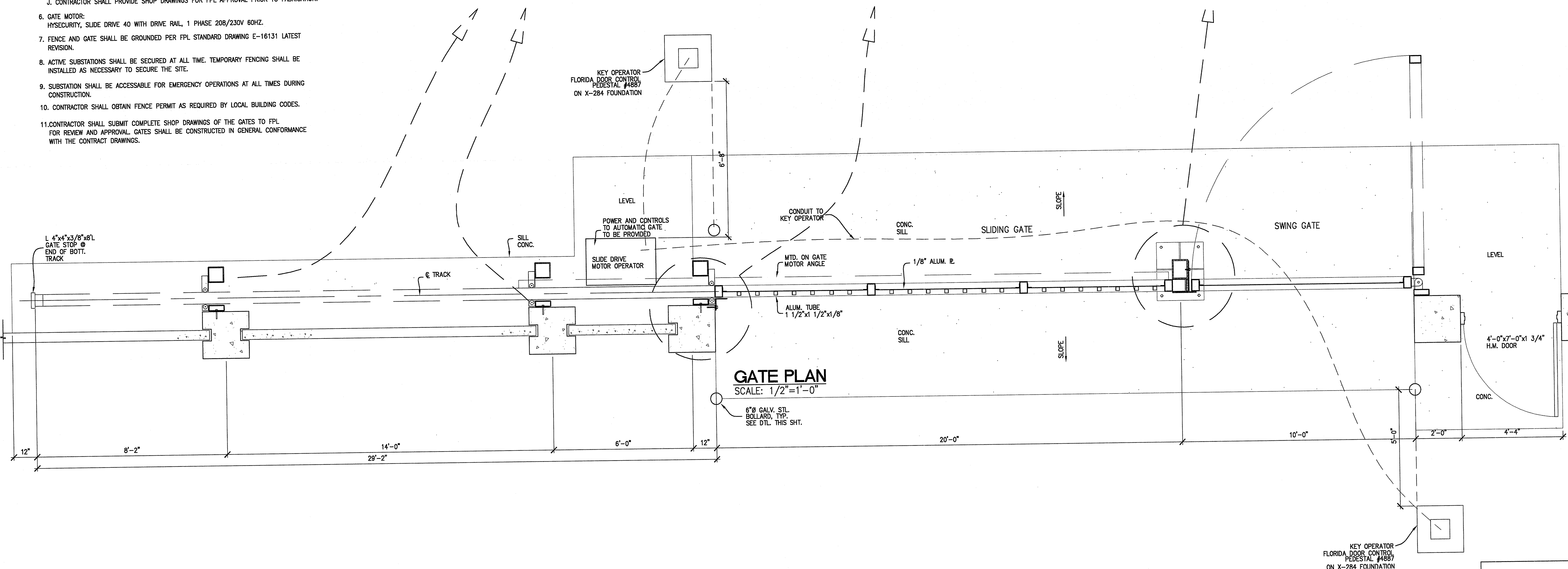


DETAIL
SCALE: 1 1/2"=1'-0"

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

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

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



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

KEY OPERATOR
FLORIDA DOOR CONTROL
PEDESTAL #4887
ON X-784 FOUNDATION

B - 2

REV	NO	DATE	REVISION
1	05-21-15		REV'D PLAN VIEW & DETAILS

JSR	BY	CH	COR	APP
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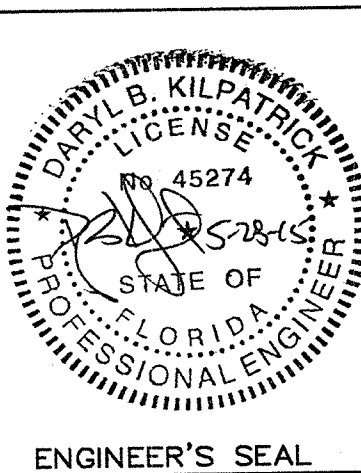
DATE 09-03-14	SCALE 0	AS SHOWN
POWER DELIVERY		
DR ROUX(WJB)	ER	
CH	COR	
APPROVED		

ST. LUCIE SUBSTATION EXPANSION
30' ROLLING GATE
GATE ELEVATION & SECTION

132996S10_R1

SHEET 4 OF 5
E-SLU27

REV NO
1



ENGINEER'S SEAL

