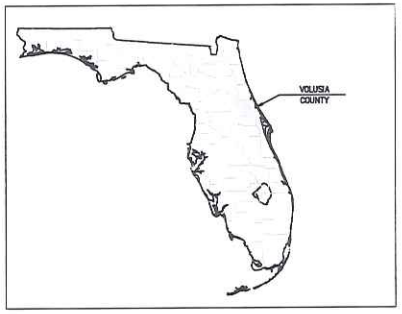
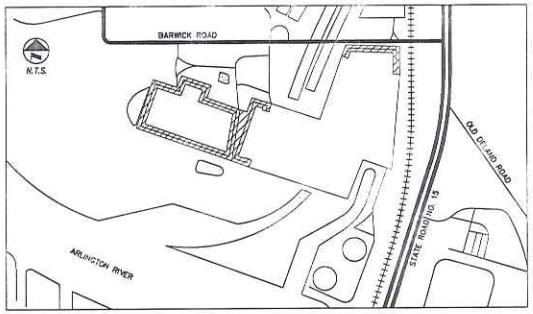
SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS

FPL

VOLUSIA COUNTY
SECTION 16, TOWNSHIP 19, RANGE 30 EAST



LOCATION MAP
(NOT TO SCALE)



VICINITY MAP
(NOT TO SCALE)

INDEX OF DRAWINGS

INDEX NO.	SHEET NO.	DESCRIPTION
E-SANØØ		COVER SHEET
SURVEY		SURVEY (7 SHEETS)
E-SAN27	1 OF 8	FENCE REMOVAL PLAN
E-SAN27	2 OF 8	CONCRETE WALL PLAN
E-SAN27	3 OF 8	CONCRETE WALL SECTIONS AND DETAILS
E-SAN27	4 OF 8	20' ROLLING GATE ELEVATION AND SECTION
E-SAN27	5 OF 8	20' ROLLING GATE PLAN AND DETAILS
E-SAN27	6 OF 8	30' ROLLING GATE ELEVATION AND SECTION
E-SAN27	7 OF 8	30' ROLLING GATE PLAN AND DETAILS
E-SAN27	8 OF 8	30' ROLLING GATE SECTION

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

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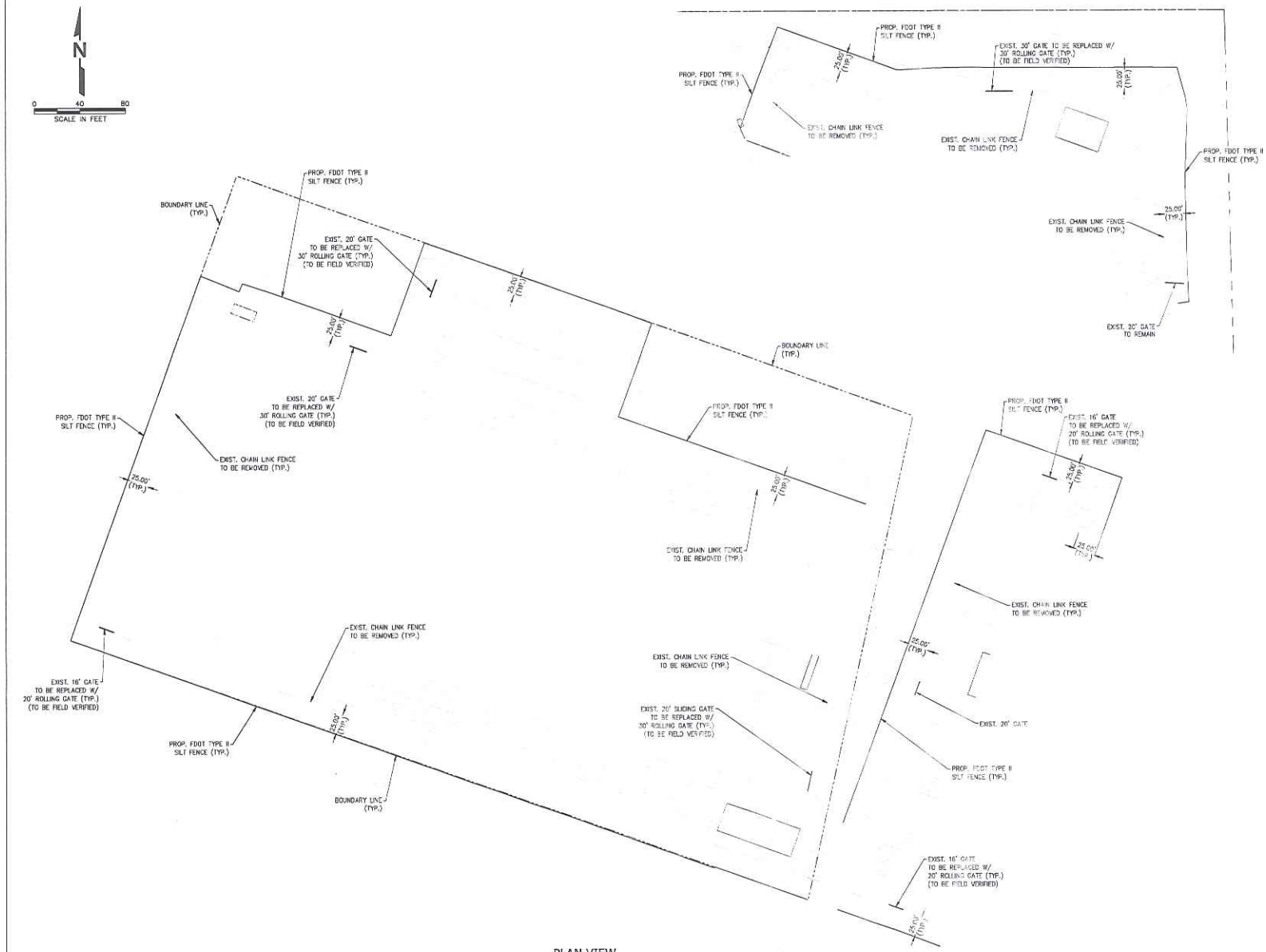
SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS
FPL PROJECT NO. PENDING

E-SANØØ

CADE

ERIC GOMEZ, P.E.
LICENSE #57461

E:\Jobs\FPL\Sanford\FPL_SAN27.dwg
9/27/2016



PLAN VIEW

LOCATION SKETCH
SECTION 16, TOWNSHIP 19, RANGE 30 EAST
VOLUSIA COUNTY

SYMBOL LEGEND

- BOLLARD
- CONCRETE UTILITY POLE
- ELECTRIC SERVICE
- EXISTING FENCE
- GUY ANCHOR
- LIGHT POLE
- OVERHEAD WIRES
- SIGN
- TOP OF BANK
- TOP OF SLOPE
- WOOD POWER POLE
- PROP. SILT FENCE

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CH EG | COR ___
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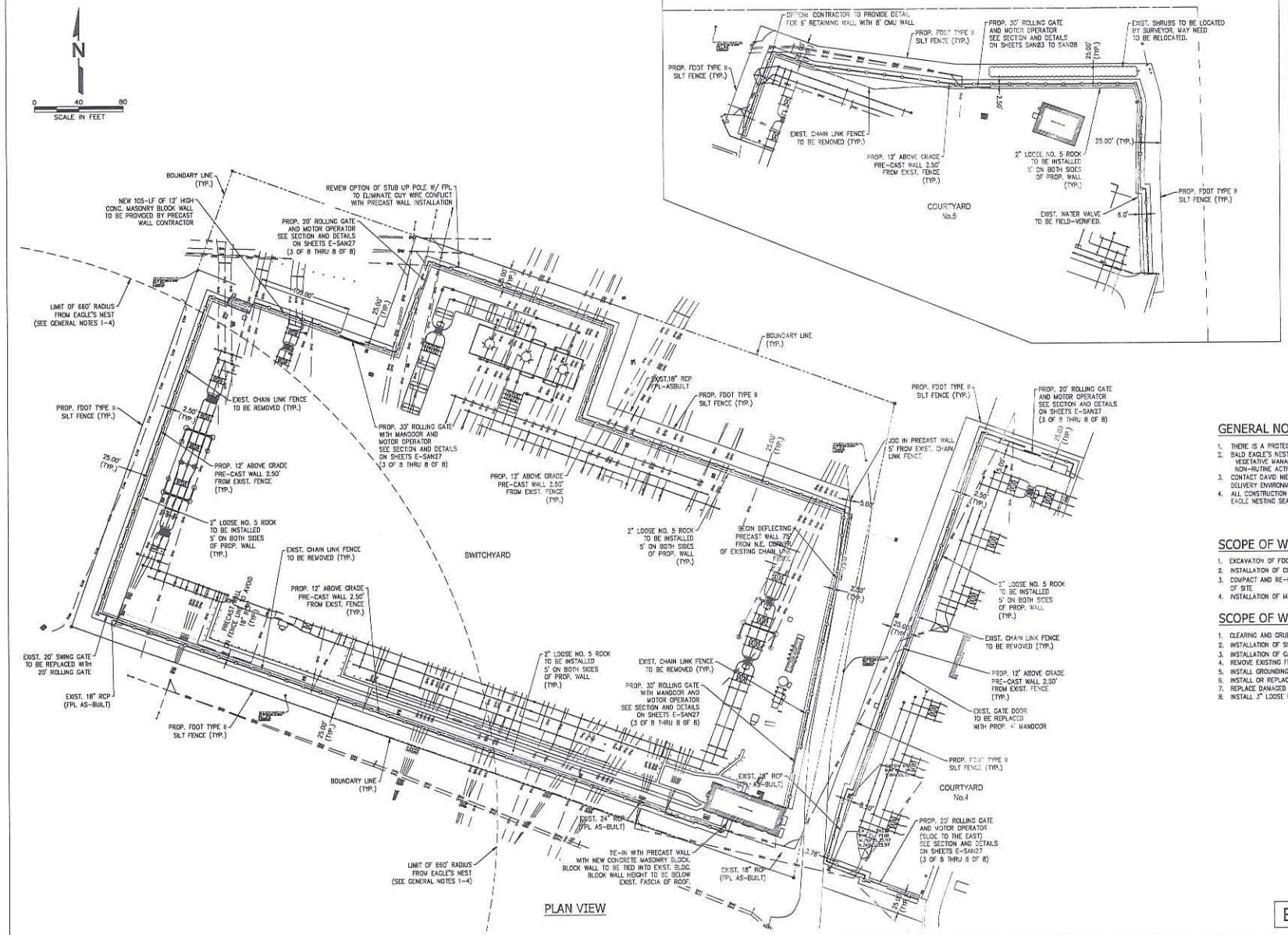
SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS

FENCE REMOVAL PLAN

SHEET 1 OF 8
E-SAN27
REV NO

ERIC GOMEZ, P.E.
FL REG. NO. #____



PLAN VIEW

LOCATION SKETCH
SECTION 16, TOWNSHIP 19, RANGE 30 EAST
VOLUSIA COUNTY

SYMBOL LEGEND

- BOLLARD
- CONCRETE UTILITY POLE
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- TOP OF BANK
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- WOOD POWER POLE
- PROP. SILT FENCE
- PROP. CONC. WALL
- EAGLE'S NEST RADIUS

GENERAL NOTES:

1. THERE IS A PROTECTED BALD EAGLE'S NEST WITHIN A 660 FT RADIUS.
2. BALD EAGLE'S NEST MONITORING IS REQUIRED PRIOR TO AND DURING THE FOLLOWING ACTIVITIES: VEGETATIVE MANAGEMENT, CONSTRUCTION, DELIVERY, STAGING OF MATERIALS AND OTHER NON-RUTINE ACTIVITIES.
3. CONTACT DAVID NIEBOL AT TEL. (561)404-3275 OR CELL. (772)812-5490 WITH "POWER DELIVERY ENVIRONMENTAL" TO COORDINATE MONITORING.
4. ALL CONSTRUCTION WITHIN EAGLE NEST'S RADIUS MUST BE COMPLETED PRIOR TO OR AFTER THE EAGLE NESTING SEASON WHICH BEGINS OCTOBER 1st AND ENDS MAY 15th.

SCOPE OF WORK (PRE-CAST WALL CONTRACTOR)

1. EXCAVATION OF FOOTERS FOR COLUMNS
2. INSTALLATION OF CONCRETE PRE-CAST PANELS
3. COMPACT AND RE-GRADE SITE ALONG NEW PERIMETER WALL TO MATCH EXISTING GRADE OF SITE
4. INSTALLATION OF MAN-DOOR

SCOPE OF WORK (SITE CONTRACTOR)

1. CLEARING AND GRUBBING
2. INSTALLATION OF SILT FENCE
3. INSTALLATION OF GATE(S)
4. REMOVE EXISTING FENCE AND GATES
5. INSTALL GROUNDING AND BARBED WIRE FOR NEW WALL
6. INSTALL OR REPLACE EXISTING SIGN(S)
7. REPLACE DAMAGED SOD
8. INSTALL 3" LOOSE ROCK ALONG PERIMETER OF NEW WALL

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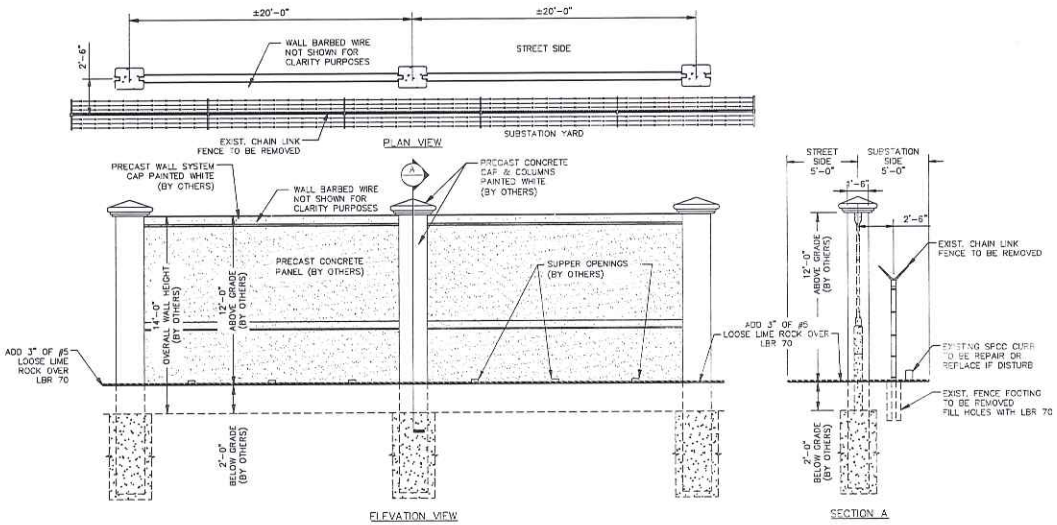
SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS

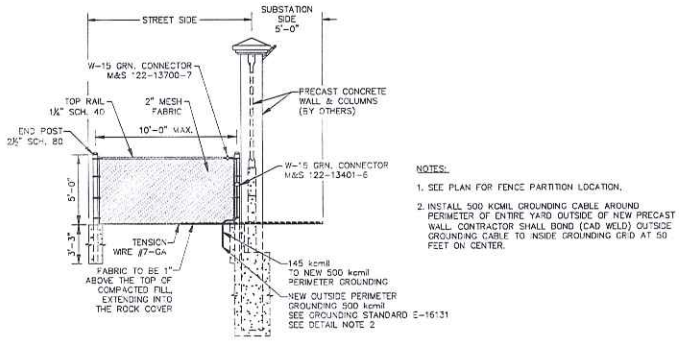
CONCRETE WALL PLAN

SHEET 2 OF 8
E-SAN27
REV NO

ERIC GOMEZ, P.E.
FL REG. NO. #



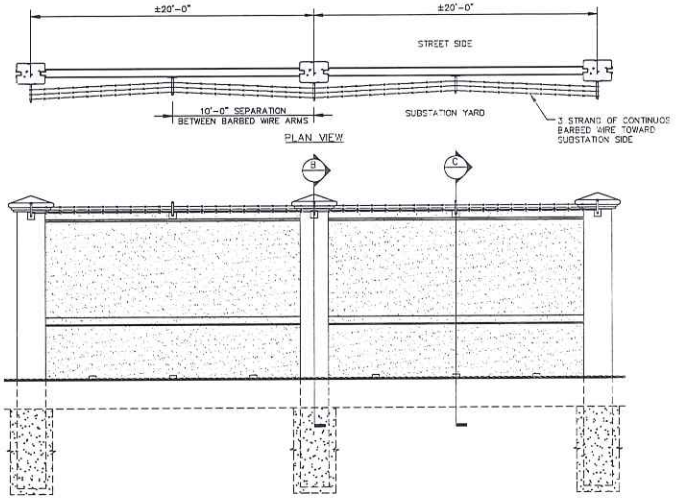
CHAIN LINK FENCE REMOVAL
SCALE: 3/8"=1'-0"



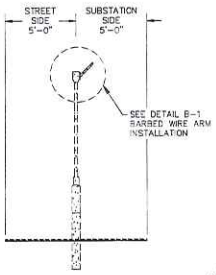
NOTES:

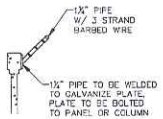
1. SEE PLAN FOR FENCE PARTITION LOCATION.
2. INSTALL 500 KCMIL GROUNDING CABLE AROUND PERIMETER OF ENTIRE YARD OUTSIDE OF NEW PRECAST WALL. CONTRACTOR SHALL BOND (CAD WELD) OUTSIDE GROUNDING CABLE TO INSIDE GROUNDING GRID AT 50 FEET ON CENTER.

PERIMETER FENCE PARTITION DETAIL
SCALE: 3/8"=1'-0"



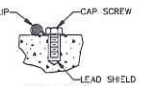
BARBED WIRE INSTALLATION
SCALE: 3/8"=1'-0"



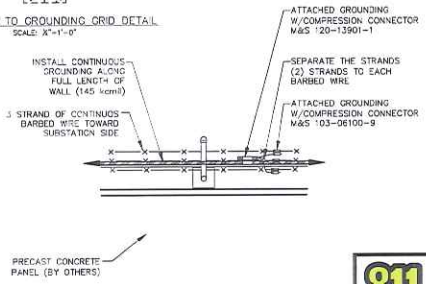


DETAIL B-1
NTS

CONNECTION TO GROUNDING GRID DETAIL
SCALE: 3/8"=1'-0"



DETAIL B-2



BARBED WIRE GROUNDING DETAIL
NTS

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	CH EG	COR	
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SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS

CONCRETE WALL SECTIONS AND DETAILS

SHEET 3 OF 8
E-SAN27

REV NO

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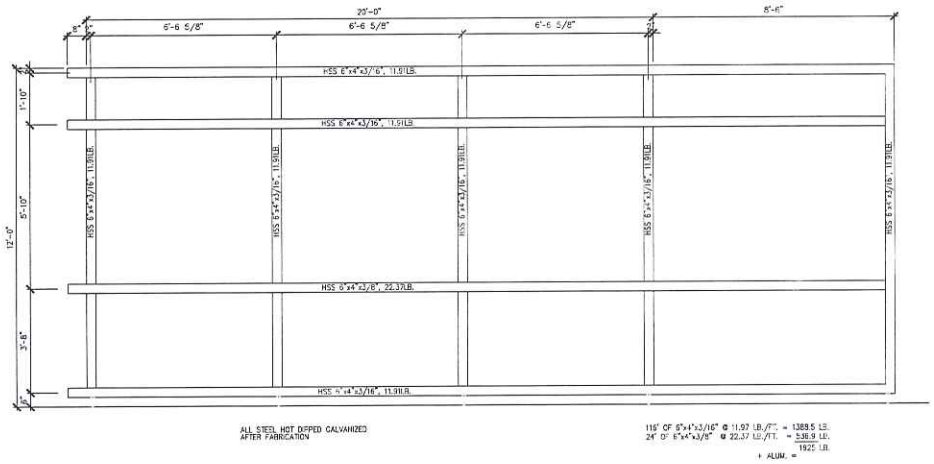
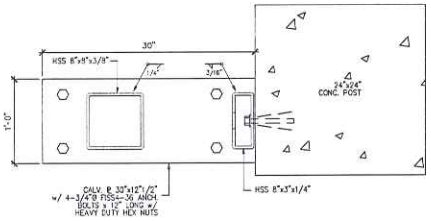
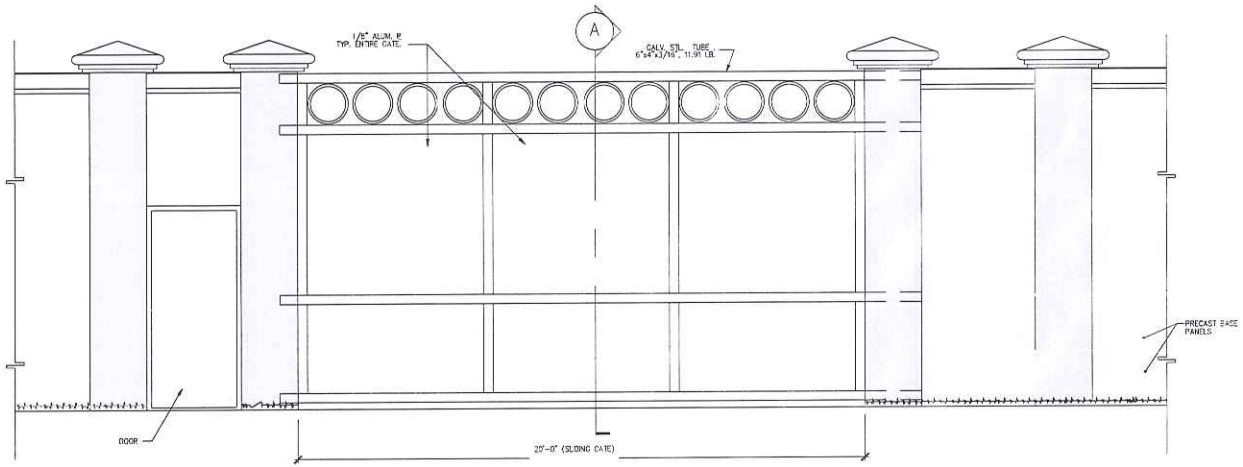
FL REG. NO. #



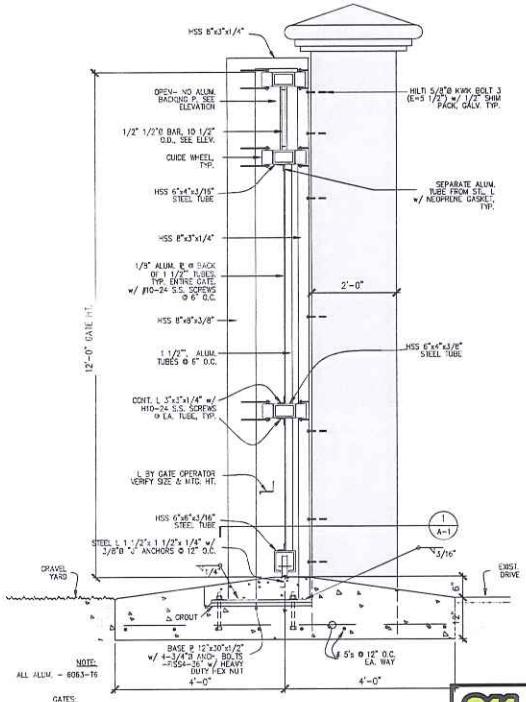
GATE FRAMING ELEVATION
SCALE: 1/2"=1'-0"



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



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



SECTION @ GATE A
SCALE: 3/4"=1'-0"

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SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS
20' ROLLING GATE
ELEVATION & SECTION

SHEET 4 OF 8
E-SAN27
REV NO

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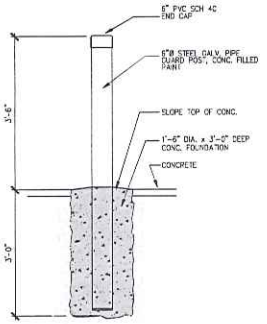
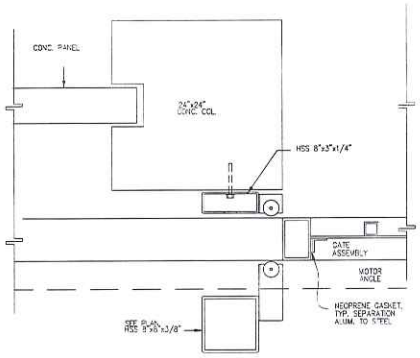
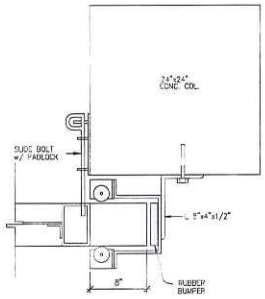
FL REG. NO. #____



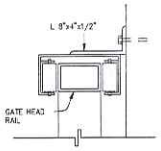
BOLLARD DETAIL
SCALE: 3/4"=1'-0"



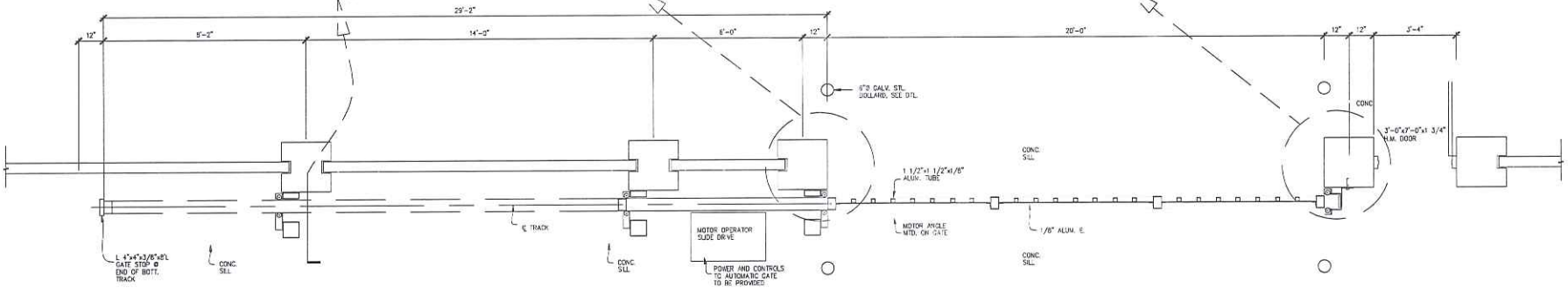
DETAIL
SCALE: 1 1/2"=1'-0"



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



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



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

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.....Vultz=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 30F WITH DRIVE RAIL, 1 PHASE 208/230V 60HZ.
7. FENCE AND GATE SHALL BE GROUNDED PER FPL STANDARD DRAWING E-18131 LATEST REVISION.
9. 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.

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A - 2

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SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS

20' ROLLING GATE
PLAN & DETAILS

SHEET 5 OF 8

E-SAN27

REV NO

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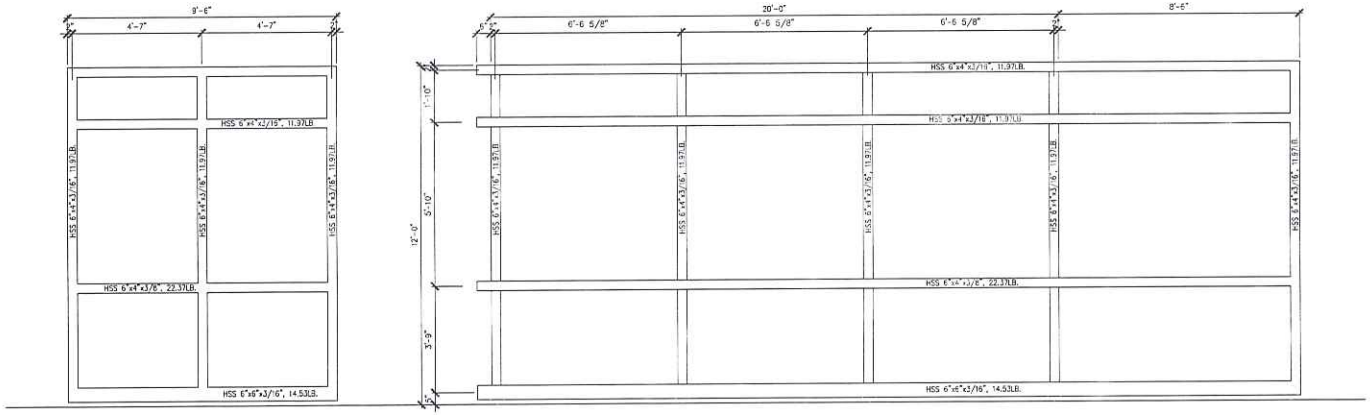
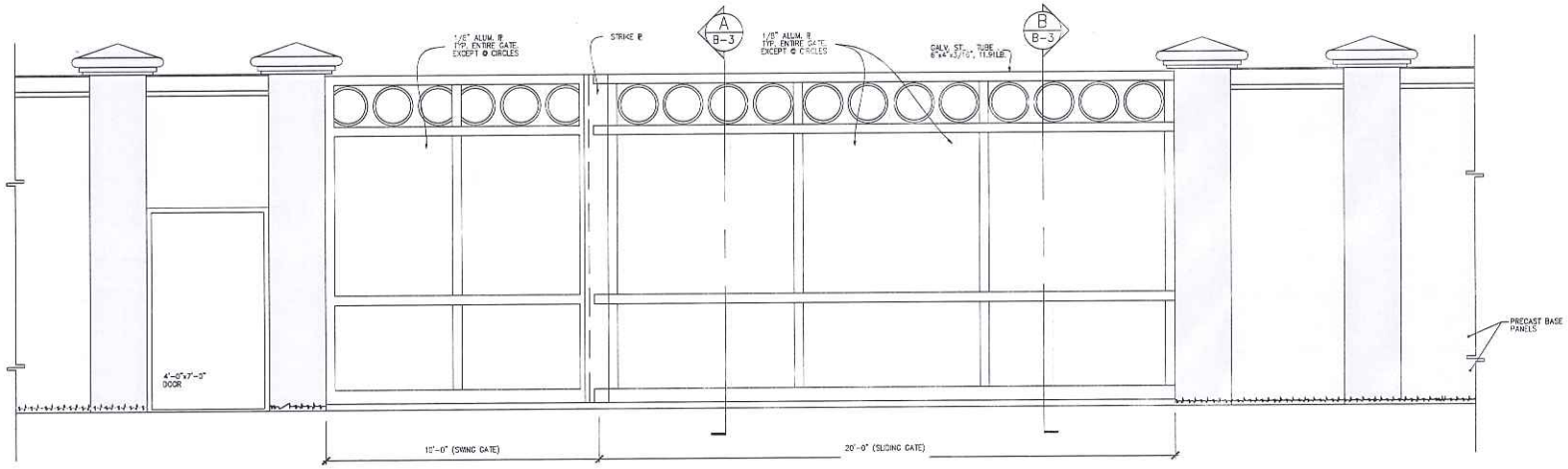
FL REG. NO. ___



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

GATE WT. (20'-0" SLIDING GATE)
STEEL 113.33 LIN. FT. HSS 6"x4"x3/16" @ 11.97LB./FT. = 1,357LB.
29.37 LIN. FT. HSS 6"x4"x3/8" @ 22.37LB./FT. = 65.5LB.
29.37 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'x.8LB./FT. ..... = 185LB.
TOTAL = 2979LB.

ALL STEEL HOT DIPPED GALVANIZED AFTER FABRICATION



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

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B - 1

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DATE 06-30-15 SCALE AS NOTED
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FPL
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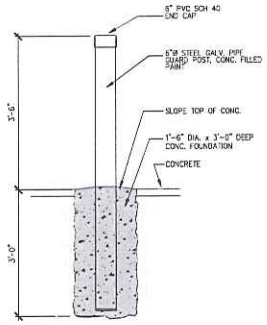
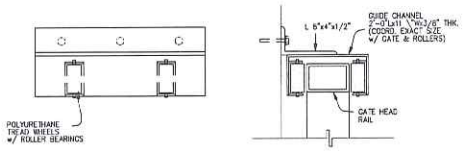
SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS
30' ROLLING GATE
PLAN & DETAILS

SHEET 6 OF 8
E-SAN27
REV NO

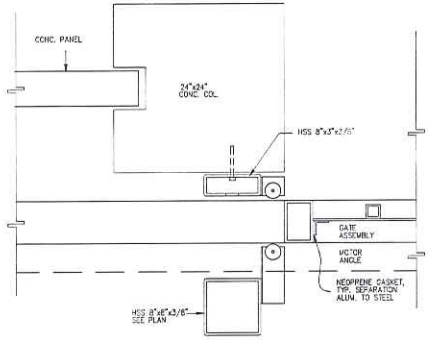
ERIC GOMEZ, P.E.
FL REG. NO. #____



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



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



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

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2. ALL WORK SHALL SHALL COMPLY TO FLORIDA BUILDING CODE 2012 EDITION.
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   Vasd=150 mph
   (RISK CATEGORY IV; EXPOSURE "D")
4. CONCRETE:
   A. CONCRETE
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   B. REINFORCING STEEL:
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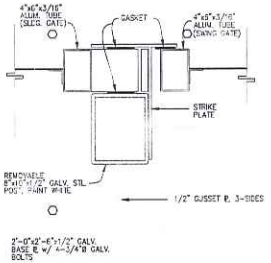
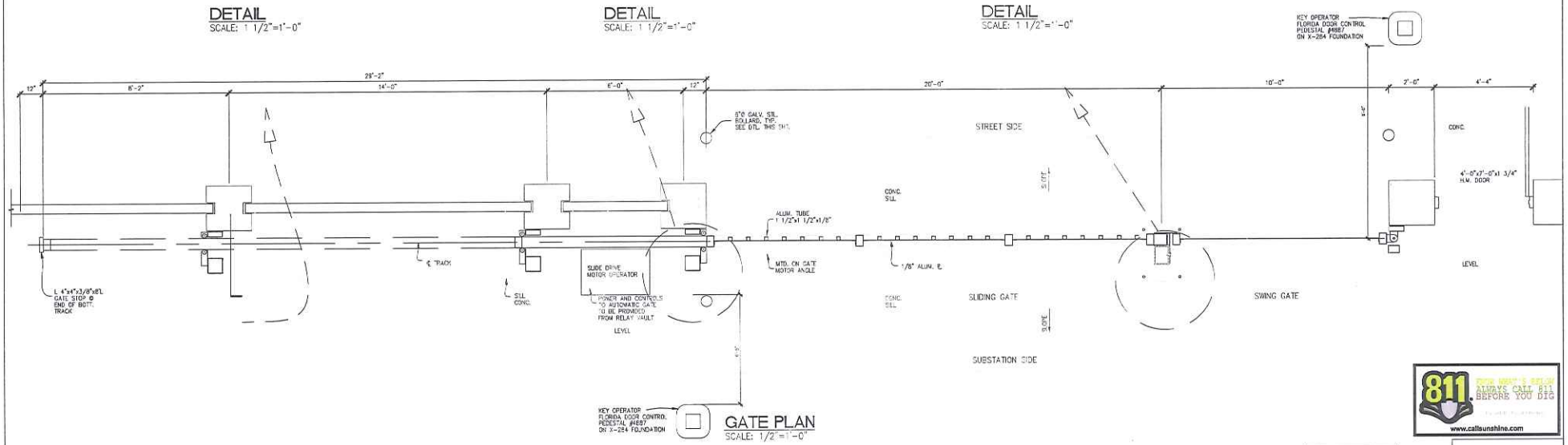
   C. WELDED WIRE FABRIC:
   CONFORMING TO ASTM A-185, FREE FROM OIL, LOOSE SCALE & RUST.



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

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 6061-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 30F 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.
12. SWING GATE SHALL HAVE A MINIMUM OF THREE (3) HINGES. HINGES SHALL BE CONSTRUCTED OF STEEL BOLTED TO THE PRECAST WALL COLUMN AND SHALL HAVE "ZERK" FITTING FOR GREASE LUBRICATION. HINGES SHALL DE DESIGN FOR 150% OF THE DEAD WEIGHT OF THE GATE. SWING GATE WILL BE BOLTED FROM THE INSIDE TO THE REMOVABLE STEEL POST.



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

811 ALWAYS CALL 811 BEFORE YOU DIG
www.callsunshine.com

B - 2

BID SET

EGSC
ENGINEERING CONSULTANTS
PH. (305) 553-9457 FAX. (305) 551-4869
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 9306
WWW.EGSCFL.COM

ER	NO	DATE	REVISION	BY	CH	COR	APP

DATE 06-30-15 | SCALE AS NOTED | DR WCR | ER | CH EG | COR | APPROVED

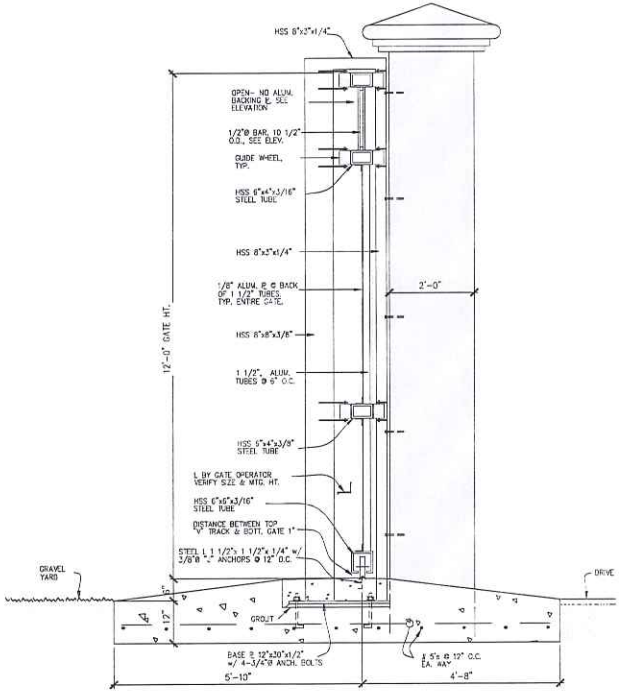
POWER DELIVERY FPL

SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS
30' ROLLING GATE
PLAN & DETAILS

SHEET 7 OF 8
E-SAN27

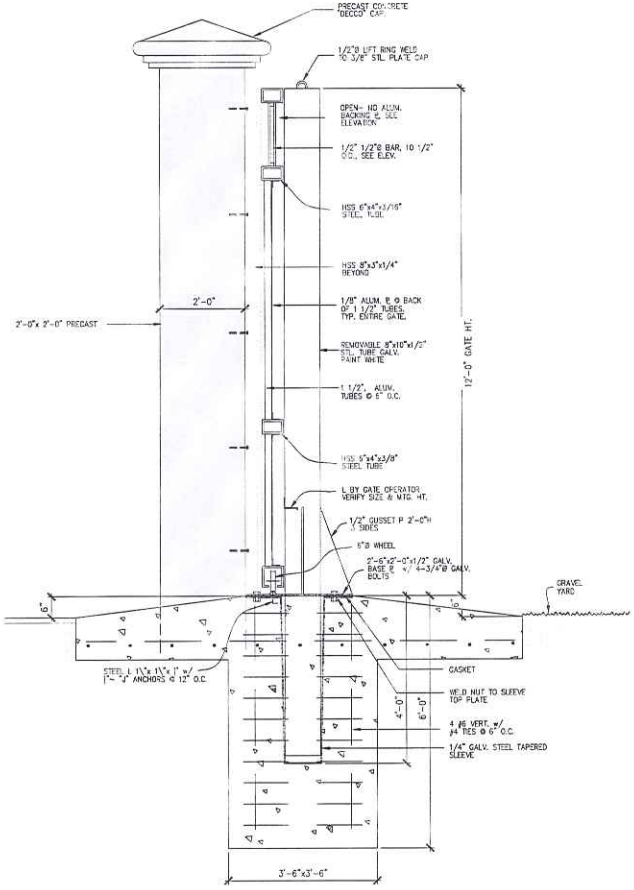
REV NO

ERIC GOMEZ, P.E.
FL REG. NO.



GATES:
1. PROVIDE SHOP DRAWINGS OF GATES FOR ARCHITECTS APPROVAL.
2. GATE TO BE INSTALLED w/ MIN. GAP SPACE BETWEEN WALL & GATE.

SECTION @ GATE (B / B-3)
SCALE: 3/4"=1'-0"



SECTION @ GATE (A / B-3)
SCALE: 3/4"=1'-0"

811 DON'T DIG ALWAYS CALL 811 BEFORE YOU DIG
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B - 3

BID SET

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ENGINEERING CONSULTANTS
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FLORIDA CERTIFICATE OF AUTHORIZATION NO. 9306
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ER	NO	DATE	REVISION	BY	CH	COR	APP

DATE 06-30-15	SCALE AS NOTED		
POWER DELIVERY FPL	DR WCR	ER	
	CH EG	COR	
	APPROVED		

SANFORD SUBSTATION
TRANSMISSION SECURITY WALLS

30' ROLLING GATE
SECTION

SHEET 8 OF 8

E-SAN27

REV NO

ERIC GOMEZ, P.E.
FL REG. NO. #