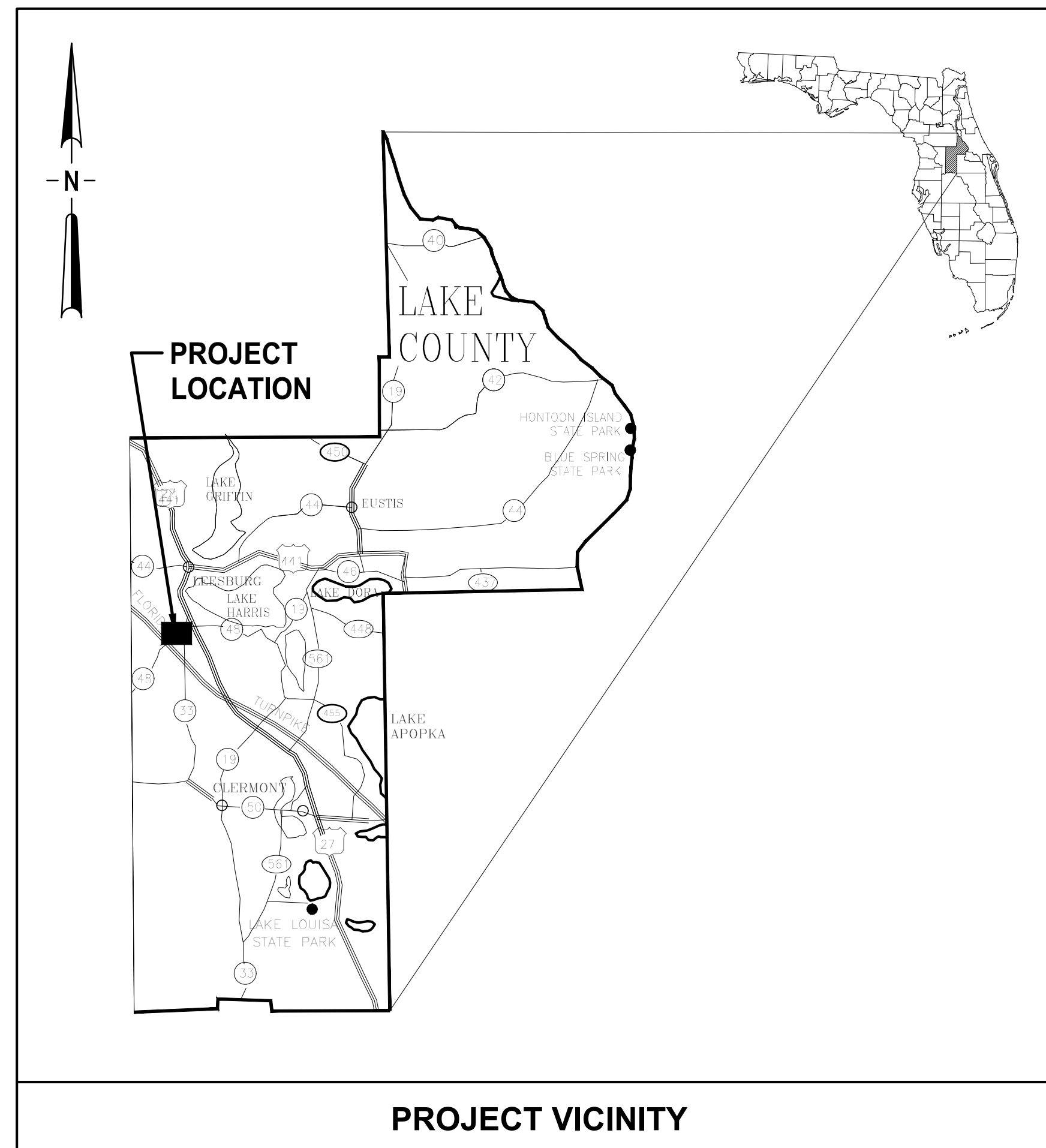


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# TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS

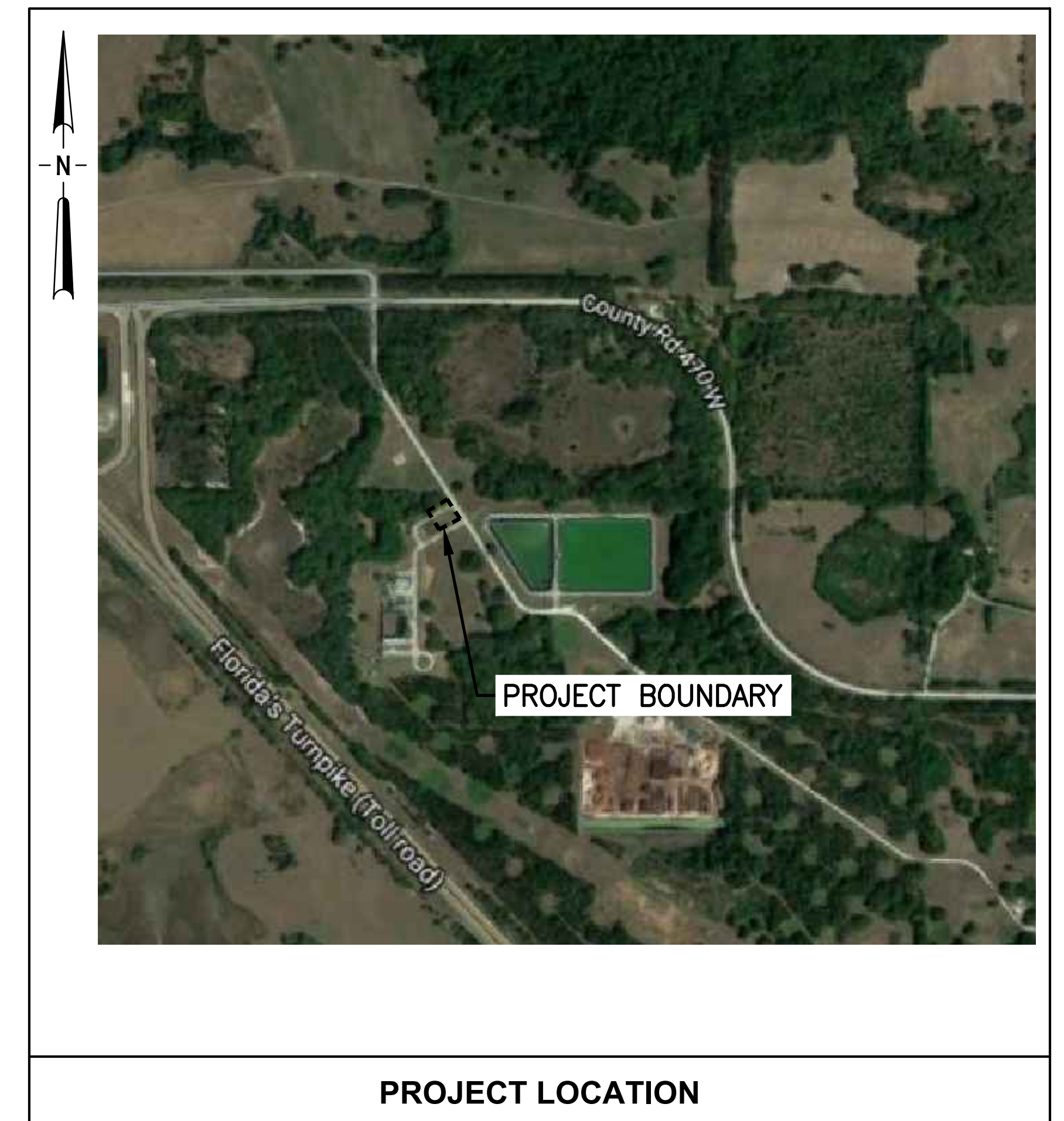
PREPARED FOR:  
**CITY OF LEESBURG, FLORIDA**



PREPARED BY:



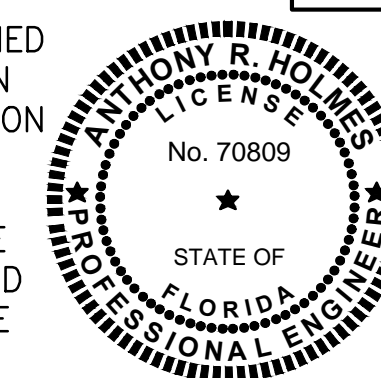
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
 CERTIFICATE OF AUTHORIZATION #1841  
 PROJECT MANAGER'S LOCATION  
 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703



LAST SAVED: 10/20/2017 8:07 AMBY:RWAE PLOTTED:10/20/2017 08:07 AMBY:RYAN WADE

**JONES EDMUNDS PROJECT No: 07810-084-01**

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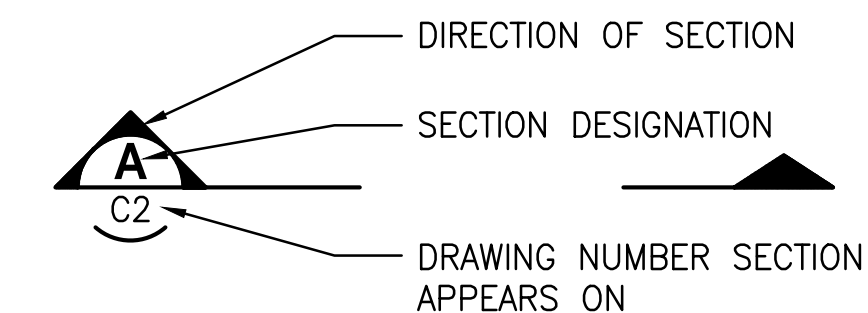
**OCTOBER 2017**

BID DOCUMENTS



### INDEX OF DRAWINGS

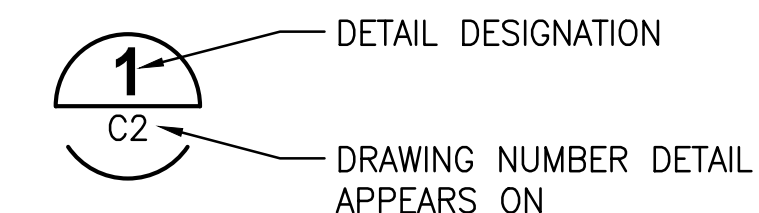
DRAWING NUMBER	SHEET DESCRIPTION
GENERAL	
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G2	DRAWING INDEX AND DESIGNATIONS
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G5	LEGENDS AND PIPE SCHEDULE
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E7	ELECTRICAL DETAILS
E8	POWER ONE-LINE DIAGRAM (MCCCS)
E9	ELECTRICAL SITE PLAN PLANT DRAIN LIFT STATION
INSTRUMENTATION	
I1	INSTRUMENTATION SYMBOLS, LEGENDS & NOTES
I2	BELT FILTER PRESS P & ID
I3	INSTRUMENTATION LOOP DIAGRAM
I4	INSTRUMENTATION LOOP DIAGRAM



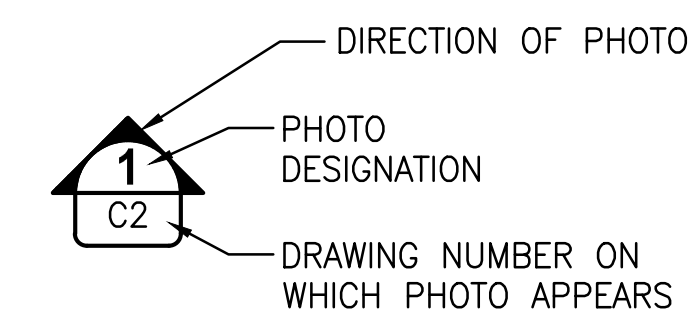
#### SECTION DESIGNATION



#### SECTION DESIGNATION



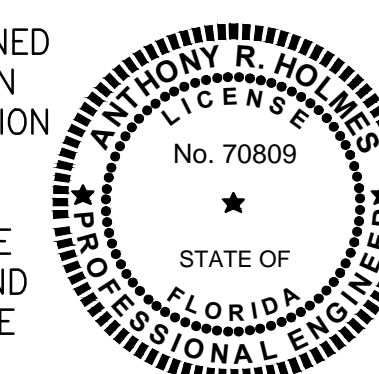
#### DETAIL DESIGNATION



#### PHOTO DESIGNATION

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BID DOCUMENTS

DESIGNED	AHOLMES			
DRAWN	RWADE			
CHECKED	TFRIEDRICH			
LTR.	DATE	REVISIONS	BY	APPRD.

**JONES EDMUNDS**  
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
 CITY OF LEESBURG, FLORIDA**

**DRAWING INDEX AND DESIGNATIONS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	G2



STANDARD ABBREVIATIONS

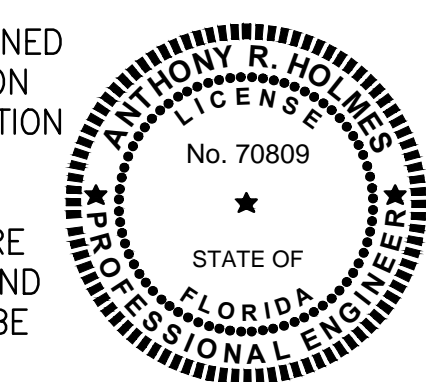
Table of standard abbreviations including symbols like '&', '@', 'A', 'AA STD', 'AASHTO', 'AC', 'ACI', 'ADJ', 'AFF', 'AFG', 'AIP', 'AISI', 'AIT', 'ALT', 'ALUM', 'AM', 'AMPS', 'ANSI', 'AP', 'APP', 'APPROX', 'AR', 'ARV', 'ASCE', 'ASD', 'ASTM', 'ATS', 'AUTO', 'AUX', 'AVE', 'AWG', 'AWS', 'AWWA', 'B/', 'B/L', 'BC', 'BF', 'BFP', 'BFV', 'BKR', 'BLD', 'BLDG', 'BLVD', 'BM', 'BO', 'BTM', 'BTM/', 'BV', 'BYP', 'C', 'C/L, CL', 'CAM', 'CAT', 'CB', 'CC', 'CCS', 'CF', 'CFWE', 'CI', 'CIP', 'CISP', 'CJ', 'CLF', 'CLR', 'CM', 'CMP', 'CMU', 'CO', 'CO', 'COL', 'COM', 'CON', 'CONC', 'CONSTR', 'CONT', 'CORP' and their corresponding definitions.

CUSTOM ABBREVIATIONS

Table of custom abbreviations including COL (CITY OF LEESBURG), SI (STANDARD INDEX), SJRWMD (ST. JOHNS RIVER WATER MANAGEMENT DISTRICT), TSE (THICKENED SLAB EDGE).

NOTES: 1. SEE LEGENDS AND PIPE SCHEDULE FOR ADDITIONAL ABBREVIATIONS. 2. NOT ALL ABBREVIATIONS MAY BE USED FOR THIS PROJECT.

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Table with columns: LTR., DATE, REVISIONS, BY, APPRO.

Table with columns: DESIGNED (AHOLMES), DRAWN (RWADE), CHECKED (TFRIEDRICH).

JONES EDMUNDS logo and address: 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821, 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS CITY OF LEESBURG, FLORIDA

ABBREVIATIONS

Table with columns: CERTIFICATE OF AUTHORIZATION #1841, APPROVED BY (ANTHONY R. HOLMES), DATE (OCT 2017), SCALE (NONE), PROJECT NO. (07810-084-01), DWG. NO. (G3).



**GENERAL NOTES**

RECORD DRAWINGS.

UNLESS NOTED OTHERWISE.

**REFERENCED DATA**

1. TOPOGRAPHIC SURVEY PERFORMED BY SOUTHEASTERN SURVEY SERVICES, INC., 10770 N 46TH ST C-300 TAMPA, FL 33617, A LICENSED PROFESSIONAL LAND SURVEYOR, DATED MAY 2017.
2. VERTICAL INFORMATION SHOWN HEREON REFERS TO A NATIONAL GEODETIC SURVEY (NGS) POINT PID#AA1805 WITH A PUBLISHED ELEVATION OF 82.97 FEET, NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88). HORIZONTAL POSITIONS FOR ALL FEATURES SHOWN ARE RELATIVE TO NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT, STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE. CONTROL POINT USED FOR THIS SURVEY IS NATIONAL GEODETIC SURVEY (NGS) POINTS PID#AA1805; DISTANCES SHOWN ARE GRID DISTANCES.
3. THE SURVEY INFORMATION CONTAINED HEREIN WAS OBTAINED FOR DESIGN PURPOSES AND MAY NOT BE AN ADEQUATE REPRESENTATION OF ACTUAL CONDITIONS FOR PROJECT CONSTRUCTION. EXISTING CONTOURS SHOWN REPRESENT INTERPOLATIONS/EXTRAPOLATIONS FROM THE BEST AVAILABLE SURVEY DATA. ALL RISKS RESULTING FROM THE USE OR INTERPRETATION OF THE SURVEY DATA SHOWN SHALL BE BORNE BY THE CONTRACTOR.
4. GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS PERFORMED BY UNIVERSAL ENGINEERING SCIENCES, INC. REFER TO REPORT DATED JUNE 06, 2017, APPENDIX A OF THE PROJECT SPECIFICATIONS.

**GENERAL**

5. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS (CITY OF LEESBURG, LAKE CO. DOH, FDEP, SJRWMD, FDOT, ETC) OBTAINED FOR THIS PROJECT.
6. THE CONTRACTOR IS ADVISED NOT TO SCALE FROM DRAWINGS BUT TO FIELD VERIFY ALL DIMENSIONS. THE DIMENSIONS OF SPECIFIED AND FURNISHED PRODUCTS AND MATERIALS TAKE PRECEDENCE OVER DIMENSIONS INDICATED ON THE DRAWINGS. IF SIGNIFICANT DEVIATIONS OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO CONSTRUCTION FOR A DETERMINATION AND RESOLUTION.

**CONSTRUCTION LAYOUT/LIMITS OF CONSTRUCTION**

7. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA FOR LAYOUT. PROOF OF LICENSE SHALL BE SUBMITTED TO THE ENGINEER BEFORE BEGINNING LAYOUT.
8. NO DISTURBANCE SHALL BE ALLOWED OUTSIDE OF THE RIGHT OF WAYS AND/OR THE LIMITS OF CONSTRUCTION SHOWN ON THE DRAWINGS UNLESS APPROVED BY THE OWNER OR SPECIFICALLY NOTED ON THE DRAWINGS.

**EXISTING CONDITIONS**

9. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE DRAWINGS BUT ARE NOT PURPORTED TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA. CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, DIMENSIONS, TYPES, AND CONDITIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE DRAWINGS) AFFECTING THE CONTRACTOR'S WORK.
10. PRIOR TO SHOP DRAWING PREPARATION AND SUBMITTAL AND PURCHASE OF RELATED MATERIALS, THE CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES (LOCATION, SIZE, MATERIALS OF CONSTRUCTION, OUTSIDE DIAMETER, WALL THICKNESS, ROUNDNESS, ELEVATIONS, ETC.) TO WHICH CONNECTION(S) WILL BE MADE. CONTRACTOR SHALL INCLUDE FIELD MEASUREMENTS ON SHOP DRAWINGS.
11. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING IMMEDIATELY IF CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE CONTRACTOR SHALL ACCURATELY RECORD ANY SUCH CONFLICTS ON THE

12. ANY PROPERTY CORNERS, MONUMENTS, OR BENCH MARKS WITHIN THE PROJECT AREA SHALL BE PROTECTED UNLESS OTHERWISE INDICATED FOR DEMOLITION. IF ANY SUCH ITEMS ARE IN DANGER OF DAMAGE OR HAVE BEEN DAMAGED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY AND REPLACE/RESTORE THESE ITEMS AT NO ADDITIONAL COST TO THE OWNER. IF OWNER CHOOSES TO SELF PERFORM THE WORK OR INCURS RELATED EXPENSES, THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR ALL COSTS ASSOCIATED WITH THE EFFORT.
13. CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE, PROTECT AND REPAIR ALL IRRIGATION DURING CONSTRUCTION ACTIVITIES.

**UTILITY COORDINATION**

14. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES NEAR THE PROJECT AREA AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE NOTIFYING "SUNSHINE STATE ONE CALL OF FLORIDA" AT LEAST 48 HOURS PRIOR TO ANY DIGGING WORK TO HAVE ALL EXISTING UTILITIES LOCATED. THE PHONE NUMBER IS 1-800-432-4770 AND THE WEB SITE IS WWW.SUNSHINE811.COM. IN INSTANCES WHERE DIGGING OCCURS IN WETLANDS, THE NOTIFICATION PERIOD SHALL BE INCREASED FROM AT LEAST 48 HOURS TO AT LEAST 10 DAYS.
15. FLORIDA LAW (FS 553.851) REQUIRES THAT PERSONS MAKING EXCAVATIONS IN PUBLIC STREETS, ALLEYS, RIGHT-OF-WAYS OR UTILITY EASEMENTS MUST FIRST OBTAIN INFORMATION ON LOCATIONS OF UNDERGROUND GAS PIPELINES.
16. THE CONTRACTOR SHALL PRESERVE AND MAINTAIN EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES WITHIN THE PROJECT AREA. ANY DAMAGE SHALL BE REPAIRED BY AND AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
17. THE CONTRACTOR IS RESPONSIBLE FOR BRACING, SHORING, OR PROVIDING OTHER MEANS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (EXPOSED OR UNEXPOSED) THAT MAY BE IMPACTED BY THE CONTRACTOR'S WORK.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING POWER/TELEPHONE COMPANIES AND ARRANGING TO HAVE UTILITIES POLES HELD AND/OR GUY WIRES REMOVED AND REPLACED, IF NECESSARY FOR CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER.

**SAFETY**

19. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH THE OSHA EXCAVATION SAFETY STANDARDS AND TO ABIDE BY THEM AS COVERED UNDER THE FLORIDA TRENCH SAFETY ACT.
20. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY.

**RESTORATION**

21. ALL PAVING, STABILIZED EARTH, DRIVEWAYS, CURBS, SIDEWALKS, FENCES, SOD, LANDSCAPING, WOOD BOLLARDS, CULVERTS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO THEIR ORIGINAL CONDITIONS BY AND AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.

**ACCESS/MAINTENANCE OF FACILITIES**

22. THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL EXISTING UTILITIES/FACILITIES AND MAINTAIN UNINTERRUPTED SERVICES THROUGHOUT THE CONTRACT PERIOD.

**PIPING NOTES**

23. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. CONTRACTOR SHALL TAKE CARE TO PROVIDE PROPER GRADE ELEVATIONS AND ALIGNMENTS.
24. SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO THE ADJACENT STRAIGHT RUN OF PIPE UNLESS NOTED OTHERWISE. TYPE OF JOINT AND FITTING MATERIAL SHALL BE AS SPECIFIED FOR THE ADJACENT STRAIGHT RUN OF PIPE

**UTILITY SEPARATION**

25. EACH PROPOSED UTILITY SHALL BE LAID TO ACHIEVE THE MINIMUM HORIZONTAL SEPARATION BETWEEN IT AND OTHER UTILITIES IN ACCORDANCE WITH THE TYPICAL UTILITY HORIZONTAL SEPARATION DETAIL AND FDEP REQUIREMENTS.
26. AT LOCATIONS WHERE A PROPOSED UTILITY CROSSES ANOTHER UTILITY, THE PROPOSED UTILITY SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL UTILITY CONFLICT DETAIL AND FDEP REQUIREMENTS.
27. IN THE EVENT THAT A UTILITY CONFLICT CAN NOT BE RESOLVED BY MAKING A MINOR ROUTE ADJUSTMENT OR BY UTILIZING THE TYPICAL UTILITY CONFLICT DETAIL, THE CONTRACTOR SHALL SUBMIT A RELOCATION PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. ALL RELOCATION EFFORTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND ANY AFFECTED UTILITY COMPANIES.

**PROJECT SPECIFIC:**

28. ALL UTILITIES SHALL BE KEPT IN OPERATION EXCEPT WITH THE WRITTEN CONSENT OF THE UTILITY OWNER.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING EXISTING UTILITIES THAT IT DAMAGES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. REPAIRS SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE CITY OF LEESBURG.

**SURVEYORS REPORT:**

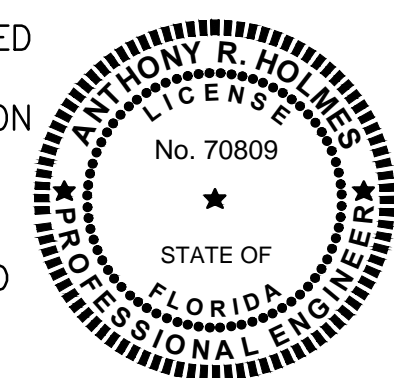
1. UTILITY LOCATIONS IF SHOWN HEREON ARE BASED ON FIELD LOCATION OF MARKINGS BY UTILITY COMPANY REPRESENTATIVES, SURFACE FEATURES AND CONSTRUCTION PLANS FURNISHED TO THE SURVEYOR. ADDITIONAL SUB-SURFACE UTILITIES MAY EXIST THAT HAVE NOT BEEN FIELD LOCATED.
2. EASEMENTS OR RIGHTS OF WAY THAT APPEAR ON RECORDED PLANS OR THAT HAVE BEEN FURNISHED TO THE SURVEYOR BY OTHERS HAVE BEEN INCORPORATED INTO THIS DRAWING WITH APPROPRIATE NOTATION. OTHER EASEMENTS MAY BE DISCOVERED BY A SEARCH OF THE PUBLIC RECORDS.
3. MINIMUM HORIZONTAL ACCURACY FOR THIS SURVEY IS IN ACCORDANCE WITH THE STANDARDS OF PRACTICE SET FORTH BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17 REQUIREMENTS OF FLORIDA ADMINISTRATION CODE. THE MAP AND MEASUREMENT METHODS USED FOR THIS SURVEY MEET OR EXCEED THIS REQUIREMENT. THE DIMENSIONS SHOWN HEREON ARE IN UNITED STATES STANDARD FEET AND DECIMALS THEREOF.
4. THIS SURVEY DOES NOT DETERMINE OWNERSHIP OF THE LANDS SHOWN HEREON.
5. UNDERGROUND FOUNDATIONS HAVE NOT BEEN LOCATED.
6. SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
7. FEATURES SHOWN BY SYMBOL AS INDICATED IN THE LEGEND ARE NOT TO SCALE.
8. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
9. VERTICAL INFORMATION SHOWN HEREON REFERS TO A NATIONAL GEODETIC SURVEY (NGS) POINT PID#AA1805 WITH A PUBLISHED ELEVATION OF 82.97 FEET, NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
10. HORIZONTAL POSITIONS FOR ALL FEATURES SHOWN ON THE MAP ARE RELATIVE TO NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT, STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE. CONTROL POINT USED FOR THIS SURVEY IS NATIONAL GEODETIC SURVEY (NGS) POINTS PID#AA1805; DISTANCES SHOWN ARE GRID DISTANCES.
11. IMPROVEMENTS & TOPOGRAPHIC FEATURES SHOWN HEREON ARE LIMITED TO AREAS PER SPECIFIC INSTRUCTIONS OF THE CLIENT.

**SURVEYORS LEGEND & ABBREVIATIONS**

- ⊙ = CLEAN OUT
- ☐ = FLAT GRATE INLET
- ∨ = DOWN GUY
- ⊙ = WATER SPIGOT
- ☐ = HAND HOLE
- ☒ = IRRIGATION VALVE
- ⋈ = LIGHT POLE
- ☐ = MITERED END SECTION
- ⊙ = NAIL W/DISC
- = POST/BOLLARD
- ☒ = RECLAIMED WATER VALVE
- ☒ = SOIL BORING
- ☒ = SEWER VALVE
- ☒ = VAULT
- ☐ = WATER METER
- ☒ = WATER VALVE
- ☐ = CONCRETE POWER POLE
- ☐ = ELECTRIC BOX
- ⊙ = ELECTRIC METER
- ☐ = ELECTRIC TRANSFORMER
- ☒ = HYDRANT
- ⊙ = MANHOLE, SANITARY SEWER
- ⊙ = MANHOLE, STORM SEWER
- ☒ = SIGN (SIGN)
- ☒ = ELM TREE (SIZE IN INCHES)
- ABS = ACRYLONITRILE BUTADIENE STYRENE PIPE
- DIP = DUCTILE IRON PIPE
- PVC = POLYVINYL CHLORIDE PIPE
- RCP = REINFORCED CONCRETE PIPE
- INV = INVERT
- TRAV.PT. = TRAVERSE POINT
- SSMC = SOUTHEASTERN SURVEYING & MAPPING CORPORATION
- X- = CHAIN LINK FENCE
- OHE = OVERHEAD ELECTRIC LINE

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LTR.	DATE	REVISIONS	BY	APPRO.

DESIGNED	AHOLMES
DRAWN	RWADE
CHECKED	TFRIEDRICH

**JONES EDMUNDS**  
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**GENERAL NOTES**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	G4

LAST SAVED: 9/6/2017 8:16 AM RWADE DWG LOCATION: \\TPA-MAIN\DRAWING\07810-LEESBURG\084-01 TURNPIKE WWP BELT FILTER PRESS\CONTRACT DRAWINGS\GENERAL\07810084-004.DWG



**CIVIL LEGEND**

- 90 --- EXISTING CONTOUR
- (90) --- PROPOSED CONTOUR
- --- RIGHT-OF-WAY BOUNDARY
- --- PROPERTY BOUNDARY
- --- CENTERLINE
- SF---SF--- SILT FENCE
- XXXXXX DEMO HATCH
- X---X--- FENCE
- OHE---OHE--- OVERHEAD ELECTRIC
- UGE---UGE--- UNDERGROUND ELECTRIC
- UGW---UGW--- UNDERGROUND WATER MAIN
- STS---STS--- STORM SEWER
- UGTV---UGTV--- UNDERGROUND CABLE TELEVISION
- UGT---UGT--- UNDERGROUND TELEPHONE
- GAS---GAS--- GAS MAIN
- SAN---SAN--- GRAVITY SANITARY SEWER
- FM---FM--- SANITARY FORCE MAIN
- SS SANITARY SEWER MANHOLE
- SW STORM WATER MANHOLE
- x100.00 SPOT ELEVATION
- COORDINATE POINT
- BOLLARD
- PROPOSED ASPHALT PAVEMENT
- CONCRETE
- GRAVEL
- LIMEROCK
- COMPACTED SOIL

**NOTE:**  
EXISTING PIPE AND EQUIPMENT ARE SHOWN IN THE DRAWINGS AS LIGHT-LINED AND/OR SCREENED. PROPOSED PIPE AND EQUIPMENT ARE SHOWN IN THE DRAWINGS AS HEAVY-LINED. ABOVE GRADE PIPE AND EQUIPMENT ARE SHOWN IN DRAWINGS AS SOLID-LINED. BELOW GRADE PIPE AND EQUIPMENT ARE SHOWN IN DRAWINGS AS DASHED-LINED. SEE BELOW EXAMPLES:

- OR --- EXISTING PIPE (ABOVE GRADE)
- OR --- NEW PIPE (BELOW GRADE)

**PIPING SYMBOLS**

- DOUBLE LINE SINGLE LINE PIPE
- DOUBLE LINE SINGLE LINE WELDED PIPE
- DOUBLE LINE SINGLE LINE FLANGED JOINT
- DOUBLE LINE SINGLE LINE MECHANICAL JOINT OR RESTRAINED PUSH-ON JOINT
- DOUBLE LINE SINGLE LINE FLEXIBLE COUPLING ADAPTER
- DOUBLE LINE SINGLE LINE EXPANSION JOINT
- DOUBLE LINE SINGLE LINE HUB & SPIGOT JOINT
- DOUBLE LINE SINGLE LINE BALL JOINT
- DOUBLE LINE SINGLE LINE FLANGED COUPLING ADAPTER W/ THRUST TIES
- DOUBLE LINE SINGLE LINE FLEXIBLE COUPLING WITH THRUST TIES
- DOUBLE LINE SINGLE LINE BLIND FLANGE
- DOUBLE LINE SINGLE LINE ELBOW UP
- DOUBLE LINE SINGLE LINE ELBOW DOWN
- DOUBLE LINE SINGLE LINE TEE UP
- DOUBLE LINE SINGLE LINE TEE DOWN
- DOUBLE LINE SINGLE LINE FEMALE QUICK DISCONNECT FITTING
- DOUBLE LINE SINGLE LINE MALE QUICK DISCONNECT FITTING

**MECHANICAL LEGEND**

- DOUBLE LINE SINGLE LINE LATERAL UP
- DOUBLE LINE SINGLE LINE LATERAL DOWN
- DOUBLE LINE SINGLE LINE CONCENTRIC REDUCER
- DOUBLE LINE SINGLE LINE ECCENTRIC REDUCER
- DOUBLE LINE SINGLE LINE UNION
- DOUBLE LINE SINGLE LINE CAP
- DOUBLE LINE SINGLE LINE ANCHOR
- DOUBLE LINE SINGLE LINE WYE
- DOUBLE LINE SINGLE LINE TEE
- DOUBLE LINE SINGLE LINE CROSS
- ELBOW, 90 DEGREE
- ELBOW, 45 DEGREE
- ELBOW, 22.5 DEGREE
- ABANDON IN PLACE
- DEMOLISH AND REMOVE

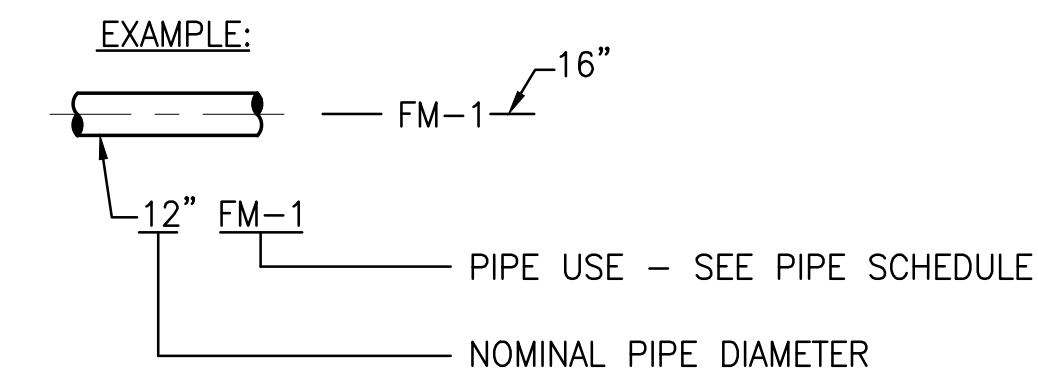
**VALVE SYMBOLS**

- KNIFE GATE
- GATE
- BUTTERFLY
- BALL
- CHECK
- DIAPHRAGM
- NEEDLE
- PRESSURE RELIEF
- AIR RELEASE AND/OR VACUUM RELIEF
- REGULATED SIDE
- HYDRAULIC CONTROL VALVE
- PLUG

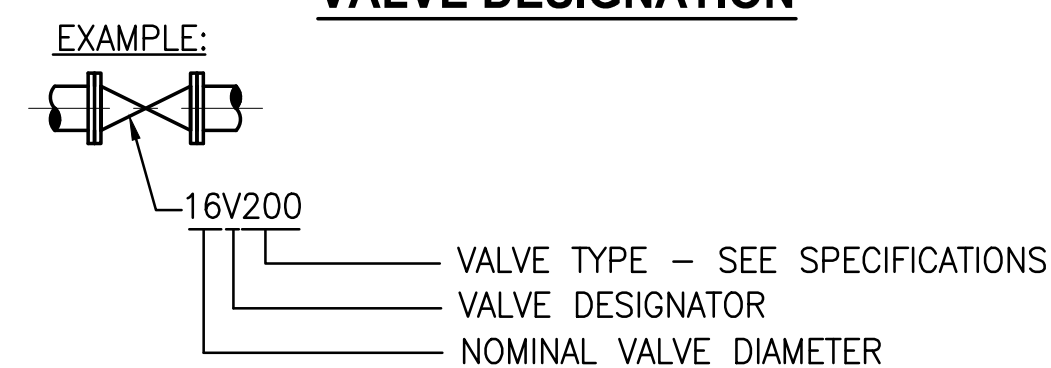
**PIPE SUPPORT SYMBOLS**

- FLANGED PIPE SUPPORT
- U-SHAPED PIPE SUPPORT
- HANGING PIPE SUPPORT

**PIPING DESIGNATION**



**VALVE DESIGNATION**

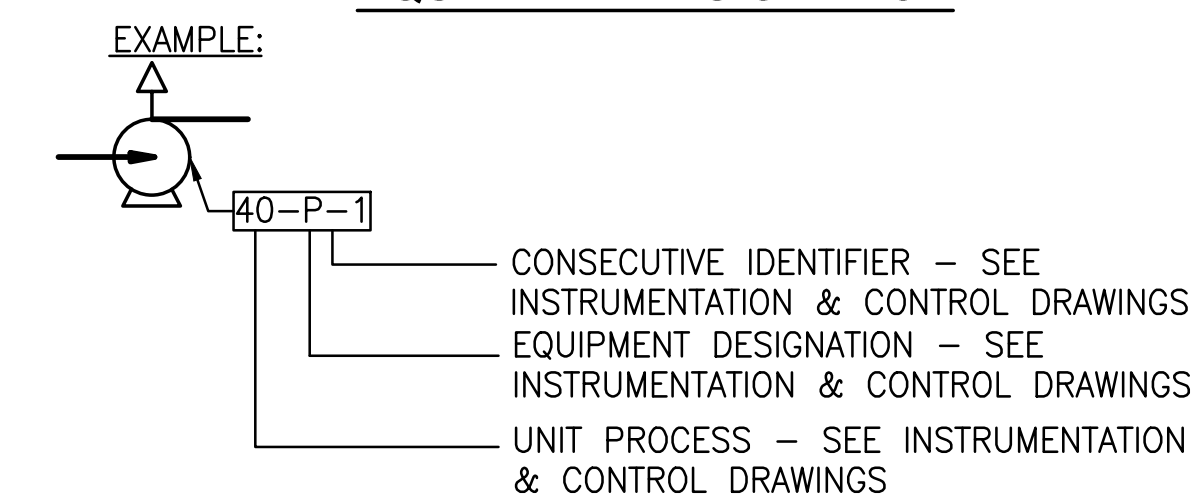


**ACTUATOR SYMBOLS**

- M XX ELECTRIC MOTOR
- EH XX ELECTROHYDRAULIC
- P XX PNEUMATIC
- H XX HYDRAULIC
- S SOLENOID
- MANUAL

**NOTE:**  
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC)  
XX: FO = FAIL OPEN  
FC = FAIL CLOSED  
FLP = FAIL TO LAST POSITION

**EQUIPMENT DESIGNATION**



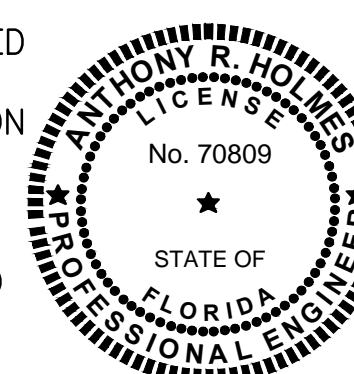
**MISC. SYMBOLS**

- COMPRESSED AIR FILTER
- COMPRESSED AIR FILTER / REGULATOR

**SPECIFIC NOTES:**  
(A) DISINFECT PIPING PER SECTION 15141.  
(B) PIPE SHALL BEAR ANSI/NSF 61 STAMP OR MEET FLORIDA ADMINISTRATIVE CODE 62-555.320(3)(b).  
(C) PNEUMATIC PRESSURE TESTING ALLOWED.  
(D) MEDIUM DUTY LAYFLAT DISCHARGE BULK HOSE REINFORCED WITH 3 PLY POLYESTER YARN EXTRUDED SIMULTANEOUSLY.  
**RESTRAINT SYSTEM NOTES:**  
(1) RESTRAIN ALL JOINTS.

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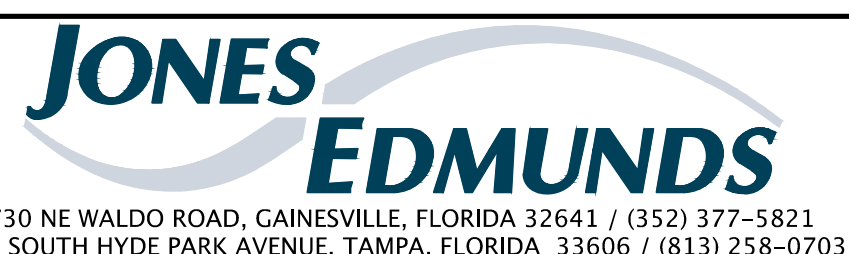
**PIPE SCHEDULE**

ABBREVIATION	FLOW STREAM IDENTIFICATION	PIPE/DUCT MATERIAL	PIPE MATERIAL ABBREV	SPECIFICATION NUMBER	PIPE LINING	NORMAL MAX OPERATING PRESSURE (PSIG)	FIELD TEST PRESSURE (PSIG)	EXPOSED PIPE PAINT SYSTEM	COLOR CODE	SPECIFIC NOTES
CA-1	COMPRESSED AIR	STAINLESS STEEL	SS	15250	N/A	175	200	N/A	N/A	N/A
DWC-1	DEWATERED CAKE	DUCTILE IRON	DI	15155	CERAMIC EPOXY	200	250	10	DARK BROWN	
DWC-2	DEWATERED CAKE	LAYFLAT POLYVINYL CHLORIDE	N/A	N/A	N/A	-	-	-	DARK BROWN	(D)
DS-1	DIGESTED SLUDGE	DUCTILE IRON	DI	15155	CERAMIC EPOXY	80	100	10	DARK BROWN	(1)
DR-1	DRAIN	POLYVINYL CHLORIDE (AWWA C900/C905)	PVC	02530	N/A	-	5	N/A	GREEN	(C)
DR-2	BFP FILTRATE DRAIN	DUCTILE IRON	DI	15155	CERAMIC EPOXY	20	100	6	GREEN	
PW-1	POTABLE WATER	POLYVINYL CHLORIDE (SCH 80)	PVC	15290	N/A	30	100	2	BLUE	(A)(B)
RCW-1	RECLAIMED WATER	POLYVINYL CHLORIDE (SCH 80)	PVC	15290	N/A	80	100	2	PANTONE PURPLE	(A)
RCW-2	RECLAIMED WATER	STAINLESS STEEL	SS	15250	N/A	80	100	N/A	N/A	(A)

LAST SAVED: 10/20/2017 8:10 AM RWADE DWG LOCATION: \\TPA-MAIN\DRAWING\07810-LEESBURG\084-01 TURNPIKE WWP BELT FILTER PRESS\CONTRACT DRAWINGS\GENERAL\07810084-005.DWG

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DRAWN: RWADE  
CHECKED: TFRIEDRICH

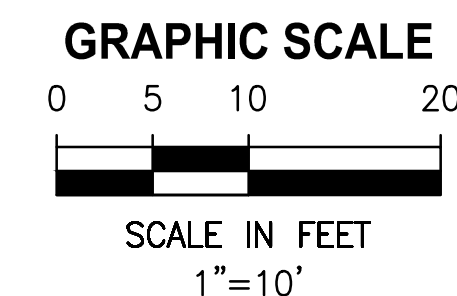
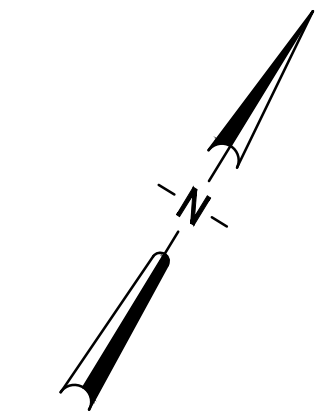


**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
CITY OF LEESBURG, FLORIDA

**LEGENDS AND PIPE SCHEDULE**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	G5

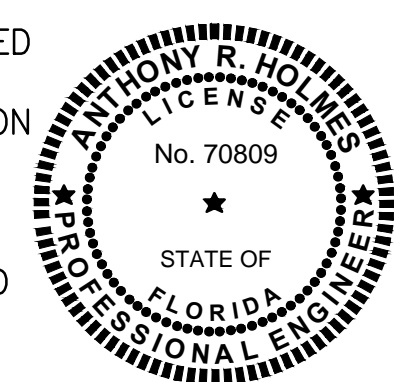




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DESIGNED: AHOLMES  
 DRAWN: RWAE  
 CHECKED: TFRIEDRICH

**JONES EDMUNDS**  
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
 CITY OF LEESBURG, FLORIDA

**KEY MAP**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	1"=10'	G6



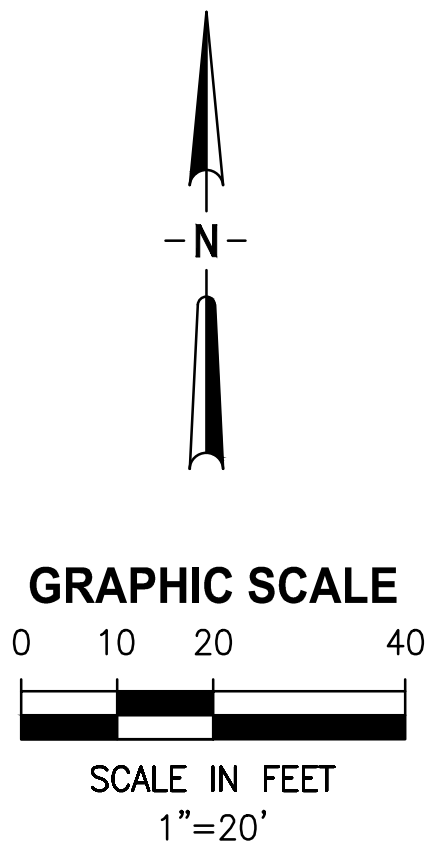
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**6**  
**C4** REDUCED PRESSURE BACKFLOW PREVENTER SEE DETAIL

CONNECT TO EXISTING 6" POTABLE WATER MAIN  
3"X6" TEE  
3" PW-1  
3" 45° BEND I.E. 87.70

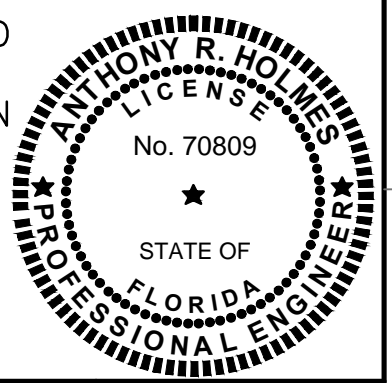
SEE DWG C2 FOR POTABLE WATER CONTINUATION

DEMOLISH EXISTING CONCRETE VALLEY GUTTER  
INLET TO REMAIN



**NOTE:**  
1. INSTALL BOLLARDS AT CORNERS OF REDUCED PRESSURE BACKFLOW PREVENTER PAD. SEE DETAIL **(S)**

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CHECKED TFRIEDRICH

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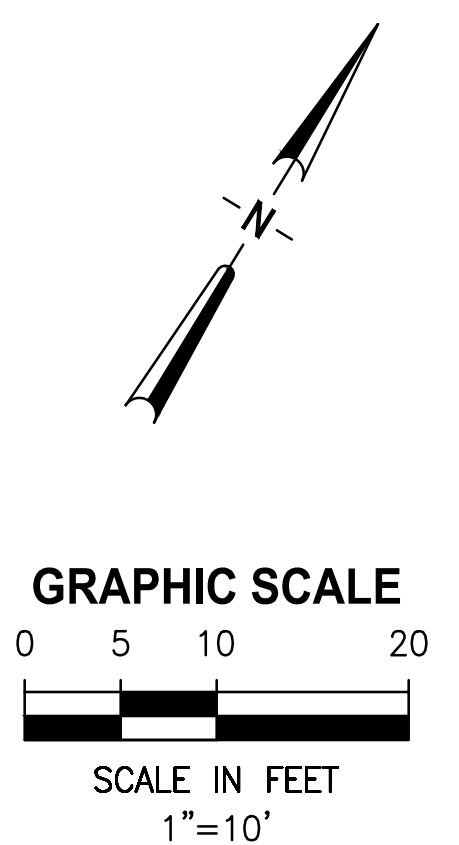
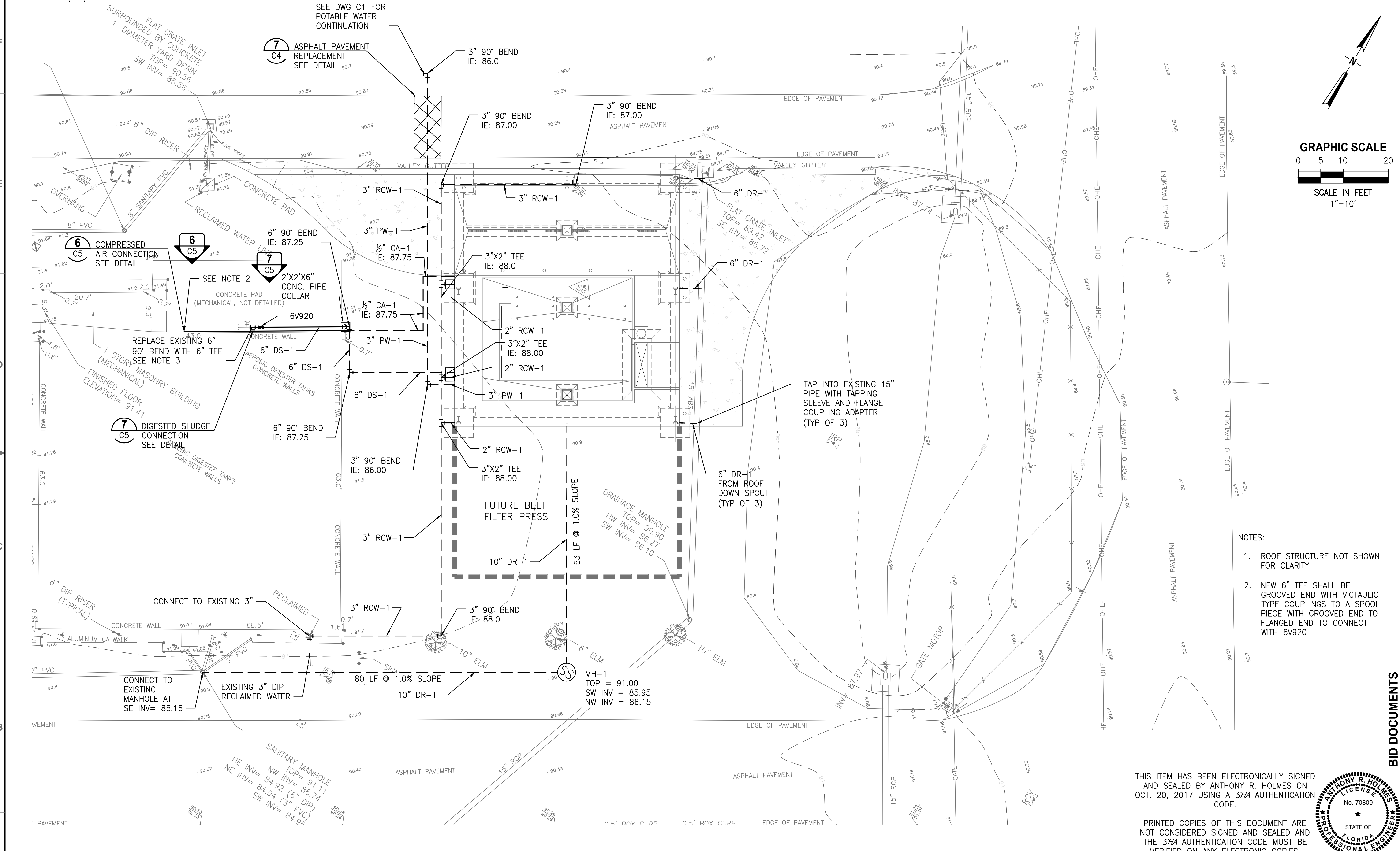
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

**EXISTING SITE AND POTABLE WATER CONNECTION PLAN**

CERTIFICATE OF AUTHORIZATION #1841 APPROVED BY ANTHONY R. HOLMES P.E. # 70809	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE 1"=20'	DWG. NO. C1

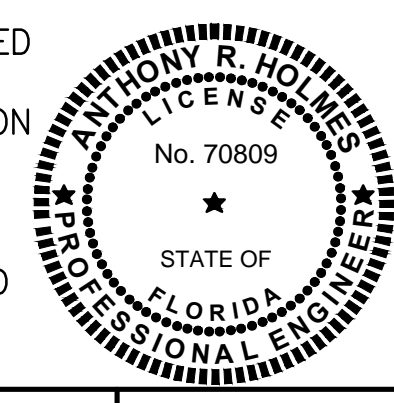


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- NOTES:
1. ROOF STRUCTURE NOT SHOWN FOR CLARITY
  2. NEW 6" TEE SHALL BE GROOVED END WITH VICTAULIC TYPE COUPLINGS TO A SPOOL PIECE WITH GROOVED END TO FLANGED END TO CONNECT WITH 6V920

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**JONES EDMUNDS**  
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

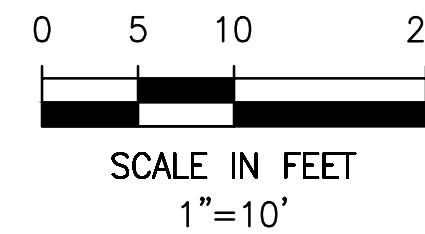
**YARD PIPING PLAN**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	1"=10'	C2

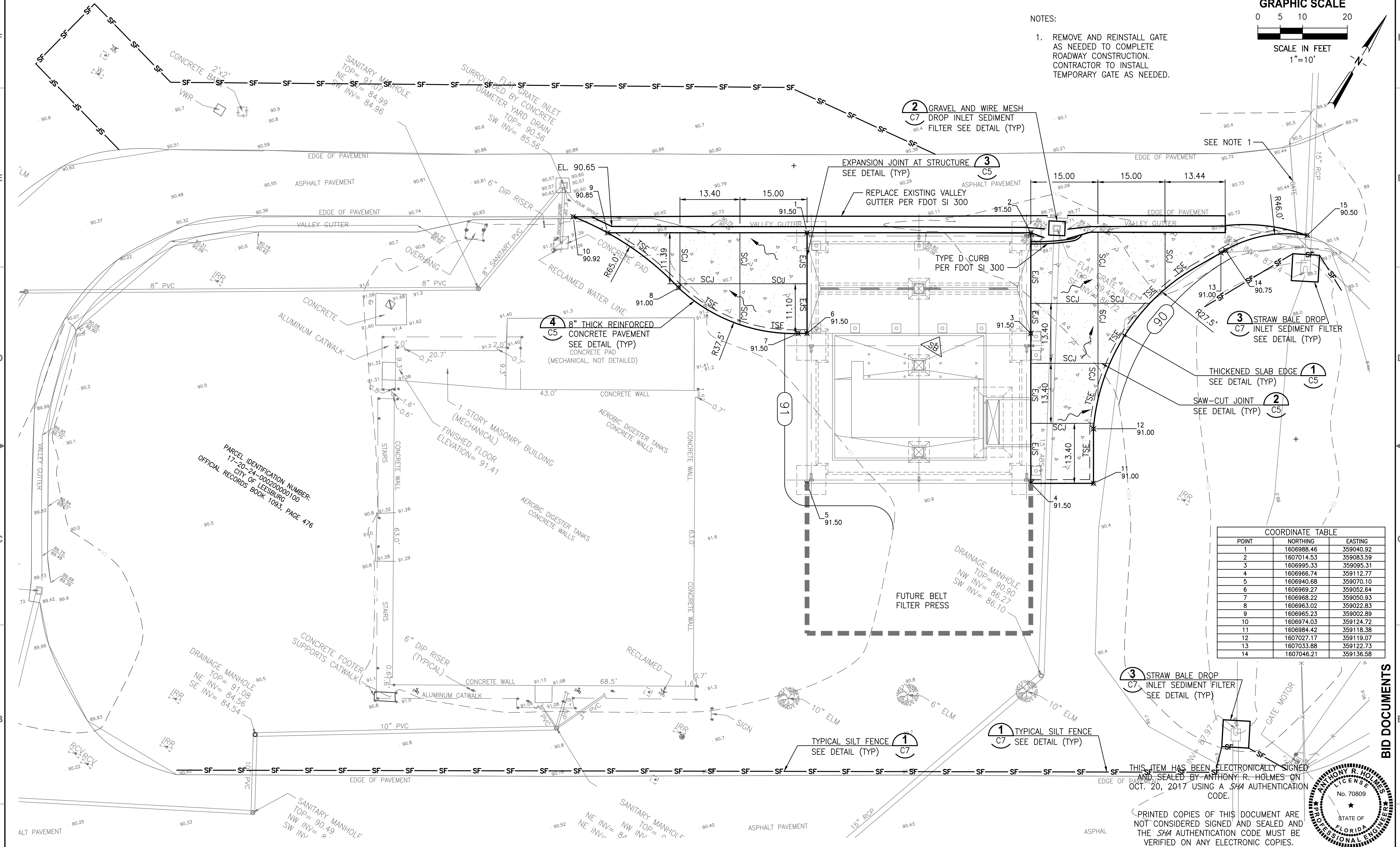
BID DOCUMENTS



**GRAPHIC SCALE**



- NOTES:
- REMOVE AND REINSTALL GATE AS NEEDED TO COMPLETE ROADWAY CONSTRUCTION. CONTRACTOR TO INSTALL TEMPORARY GATE AS NEEDED.

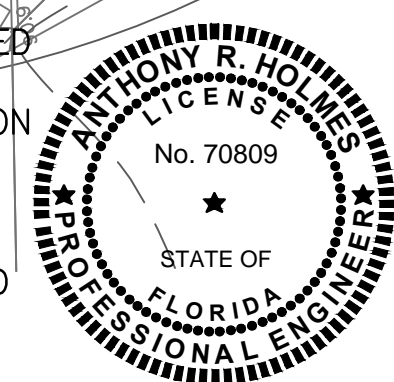


**COORDINATE TABLE**

POINT	NORTHING	EASTING
1	1606988.46	359040.92
2	1607014.53	359083.59
3	1606995.33	359095.31
4	1606966.74	359112.77
5	1606940.68	359070.10
6	1606969.27	359052.64
7	1606968.22	359050.93
8	1606963.02	359022.83
9	1606965.23	359002.89
10	1606974.03	359124.72
11	1606984.42	359118.38
12	1607027.17	359119.07
13	1607033.88	359122.73
14	1607046.21	359136.58

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 CHECKED TFRIEDRICH

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 CITY OF LEESBURG, FLORIDA**

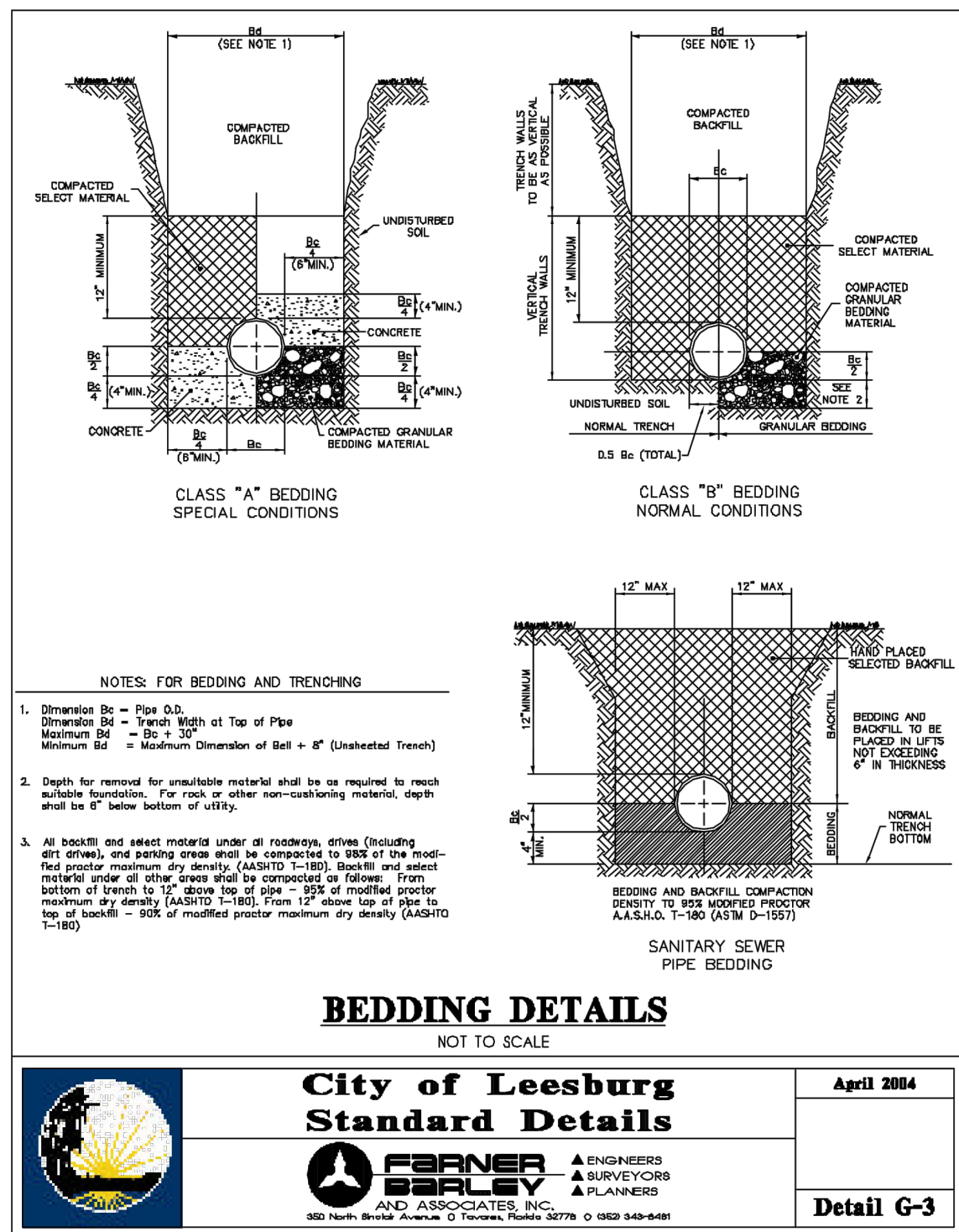
**PAVEMENT, GRADING AND DRAINAGE PLAN**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	1"=20'	C3

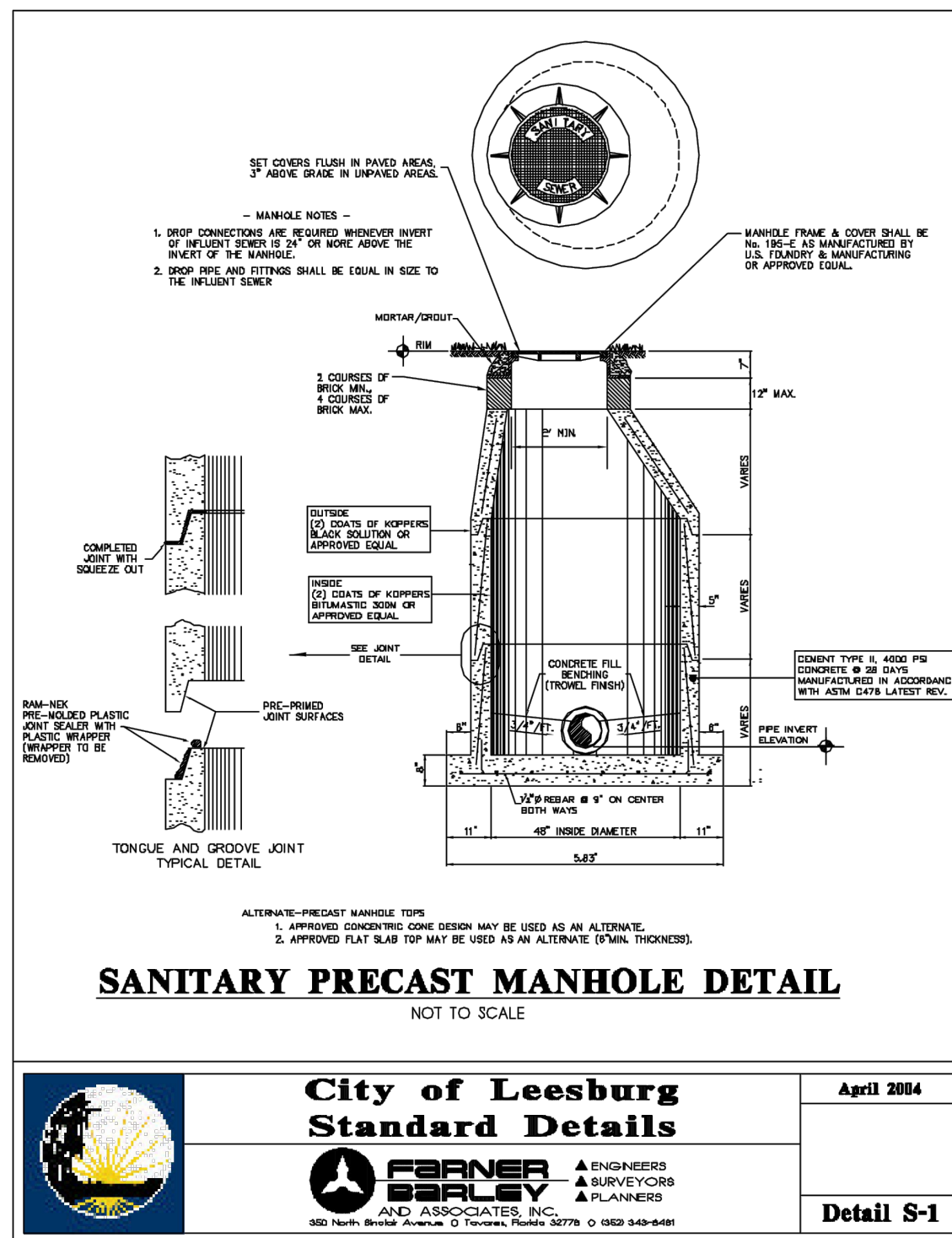
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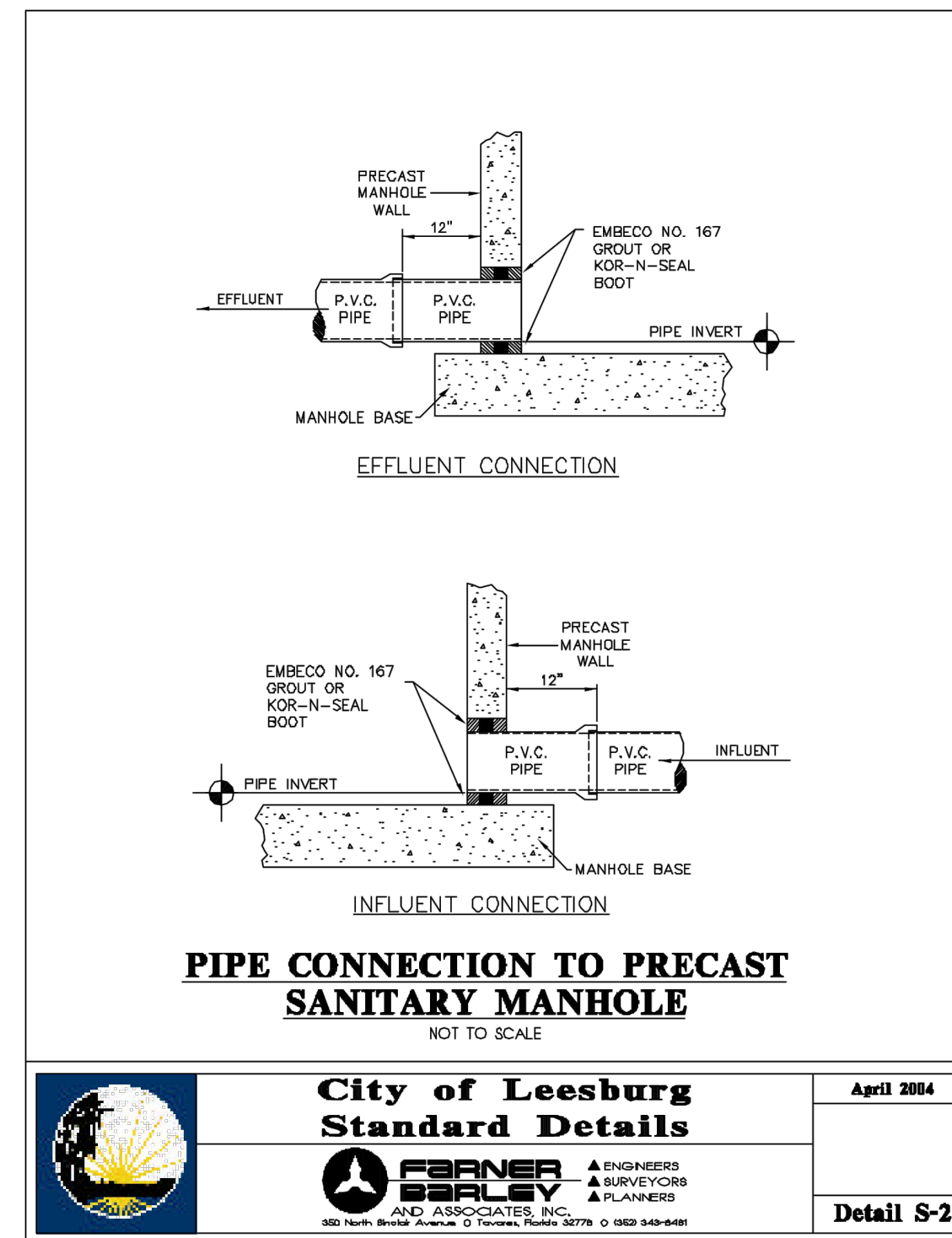




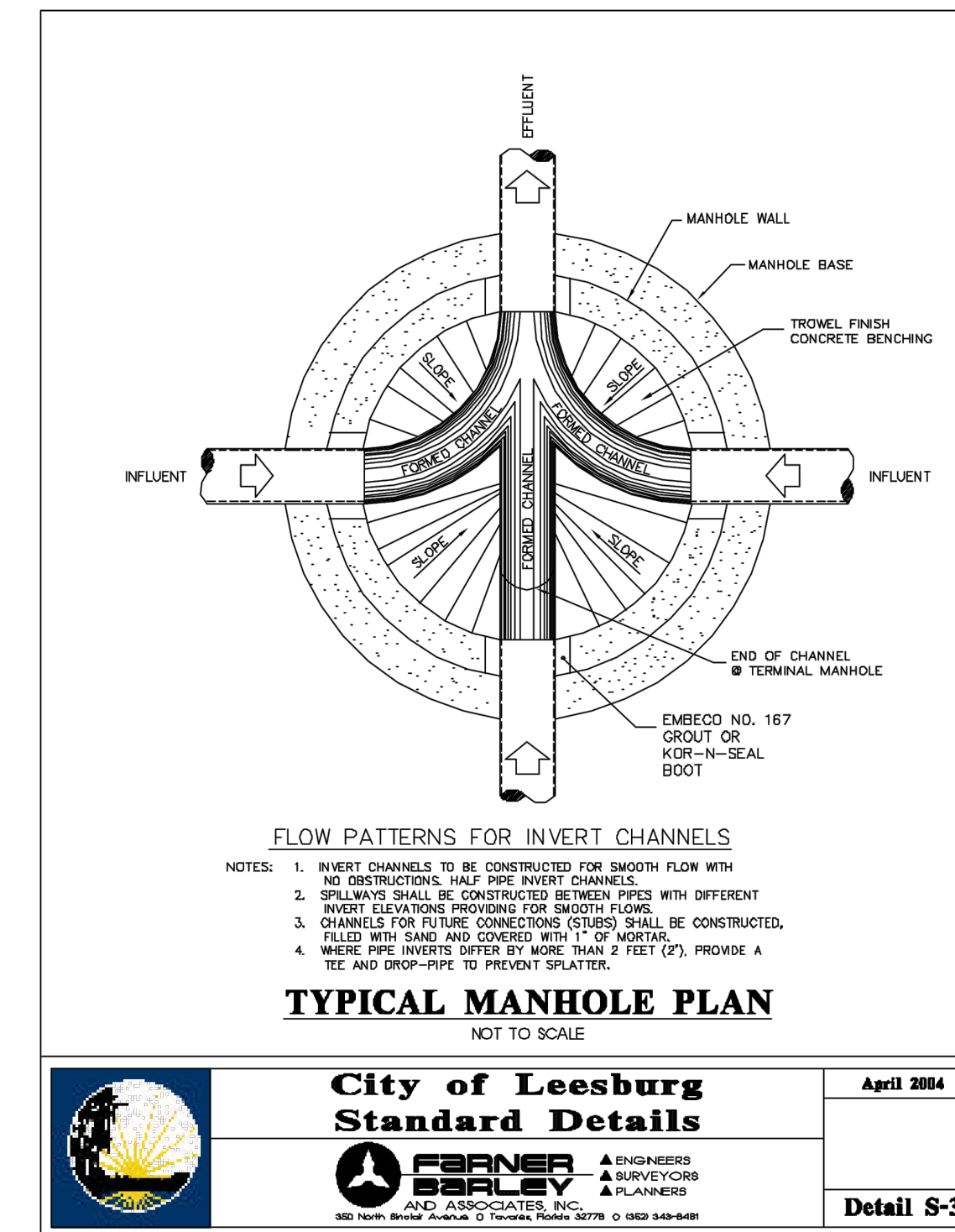
**BEDDING DETAILS 1**  
NOT TO SCALE



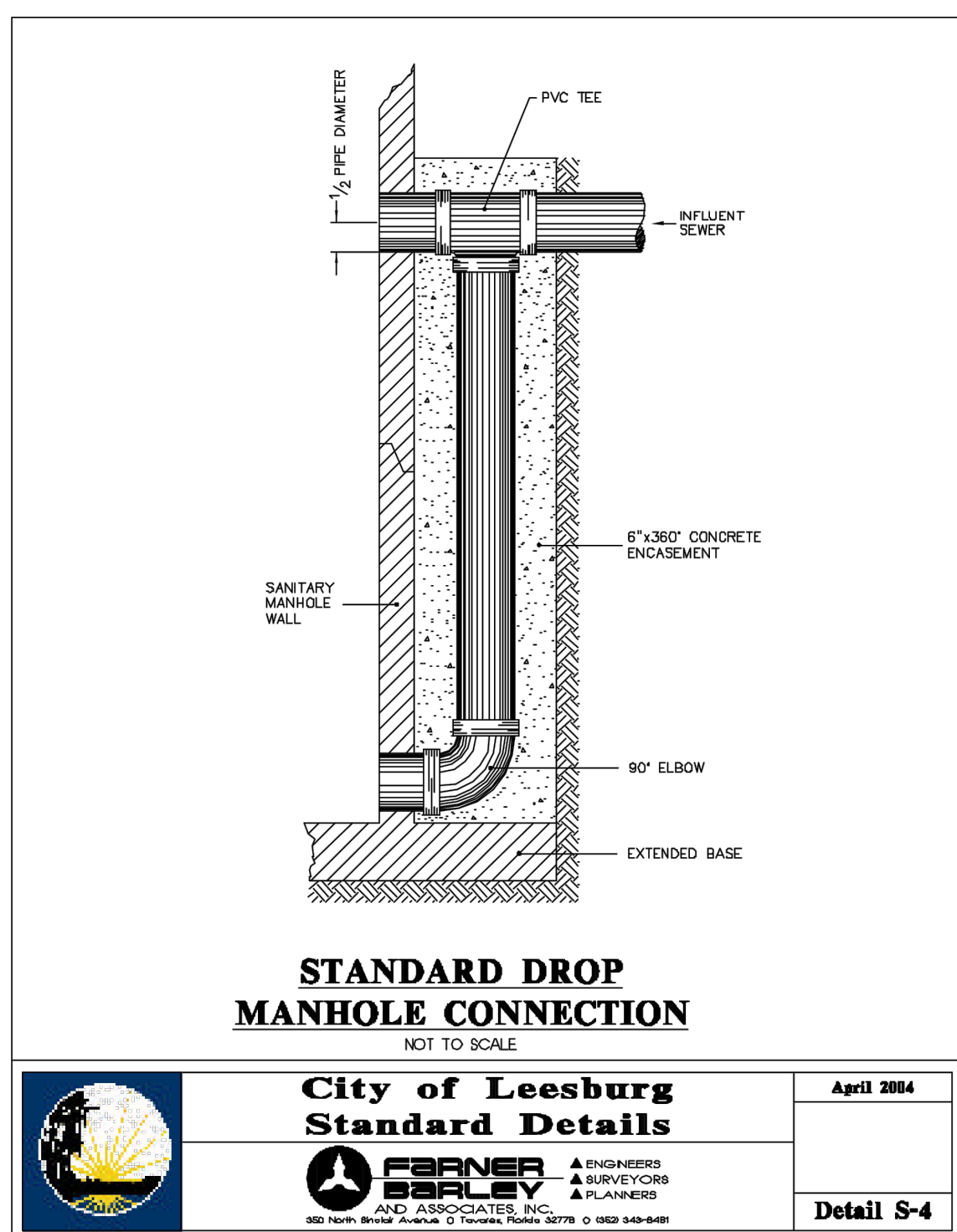
**SANITARY PRECAST MANHOLE DETAIL 2**  
NOT TO SCALE



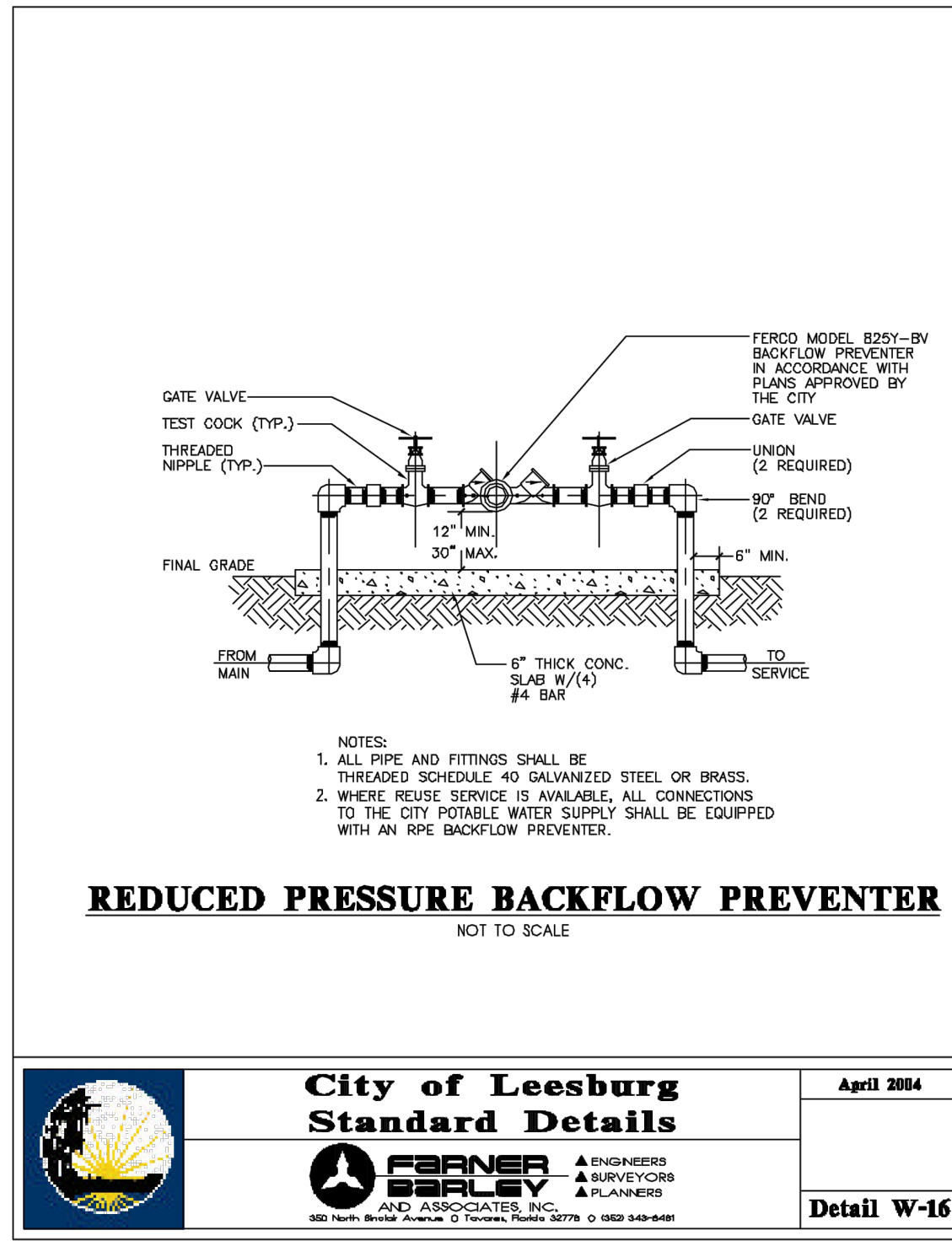
**PIPE CONNECTION TO PRECAST SANITARY MANHOLE 3**  
NOT TO SCALE



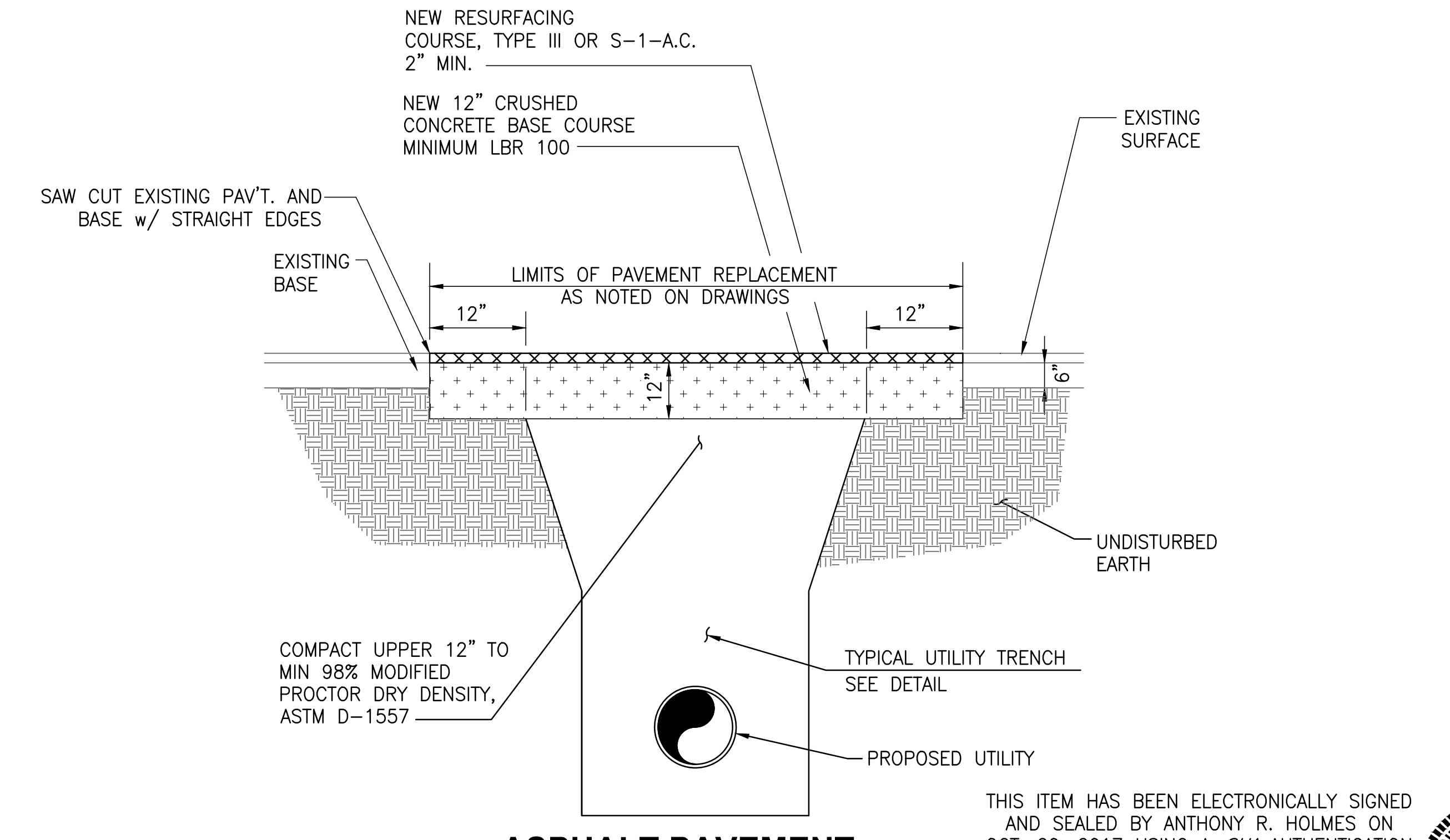
**TYPICAL MANHOLE PLAN 4**  
NOT TO SCALE



**STANDARD DROP MANHOLE CONNECTION 5**  
NOT TO SCALE



**REDUCED PRESSURE BACKFLOW PREVENTER 6**  
NOT TO SCALE



**ASPHALT PAVEMENT REPLACEMENT 7**  
NOT TO SCALE

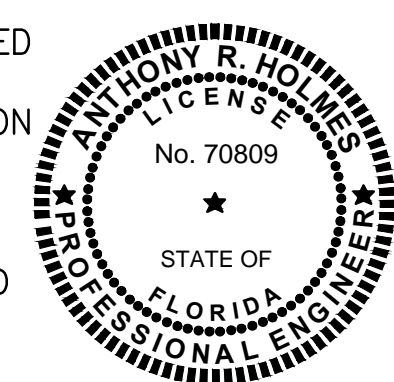
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
CITY OF LEESBURG, FLORIDA

**CIVIL DETAILS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	C4



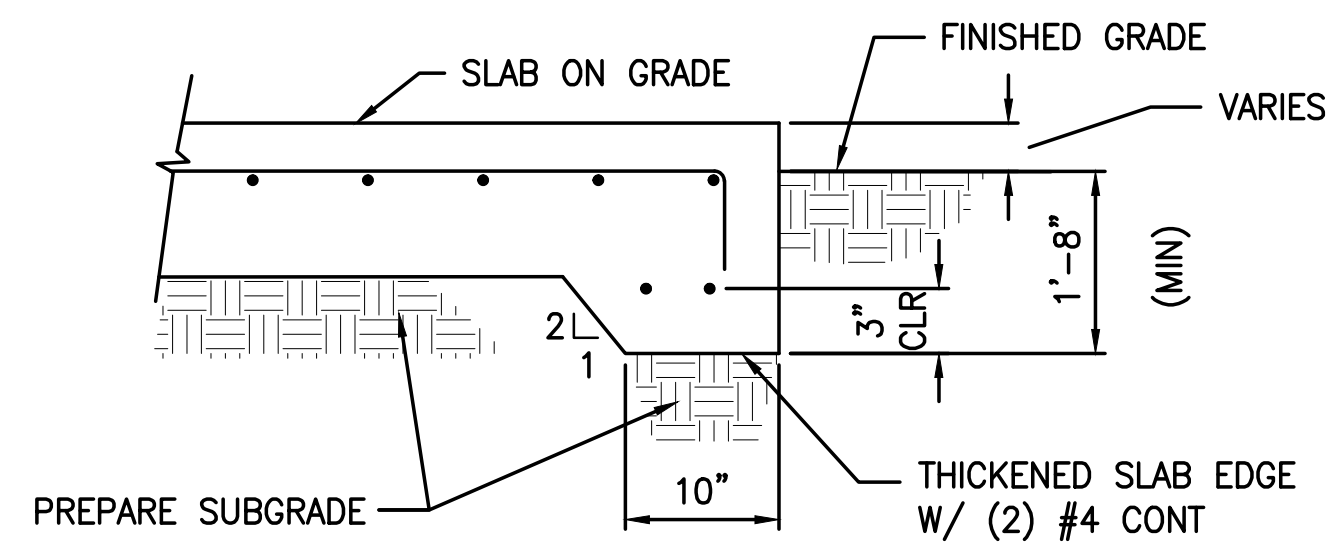
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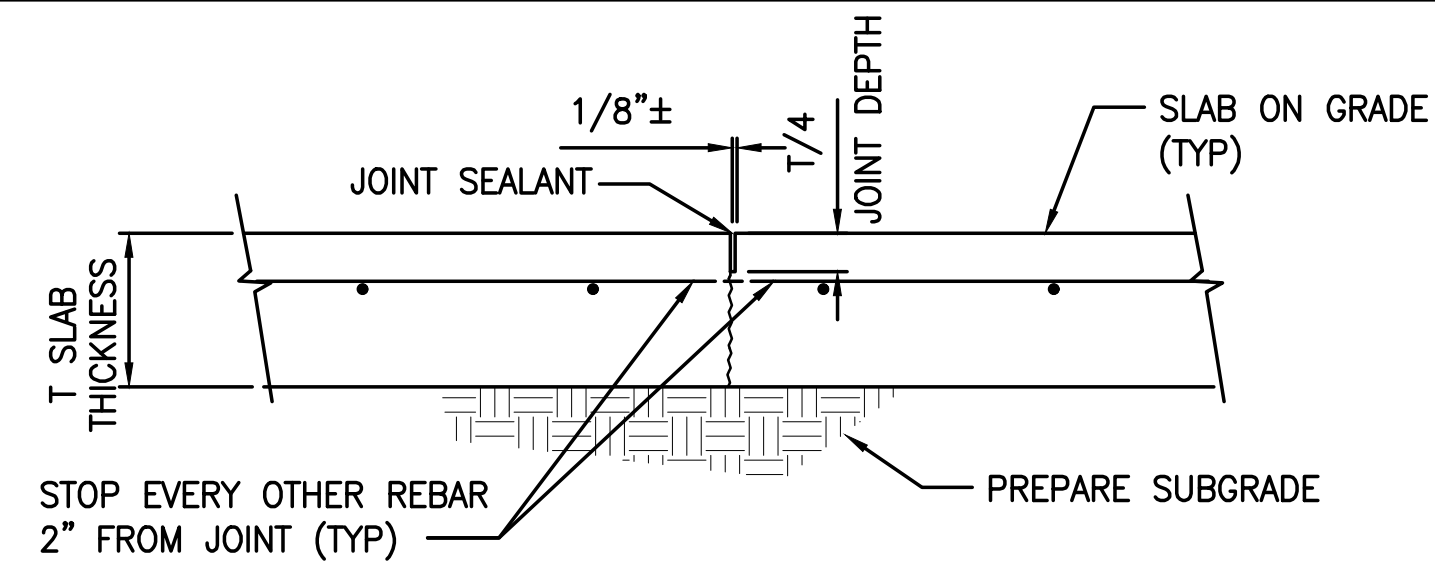
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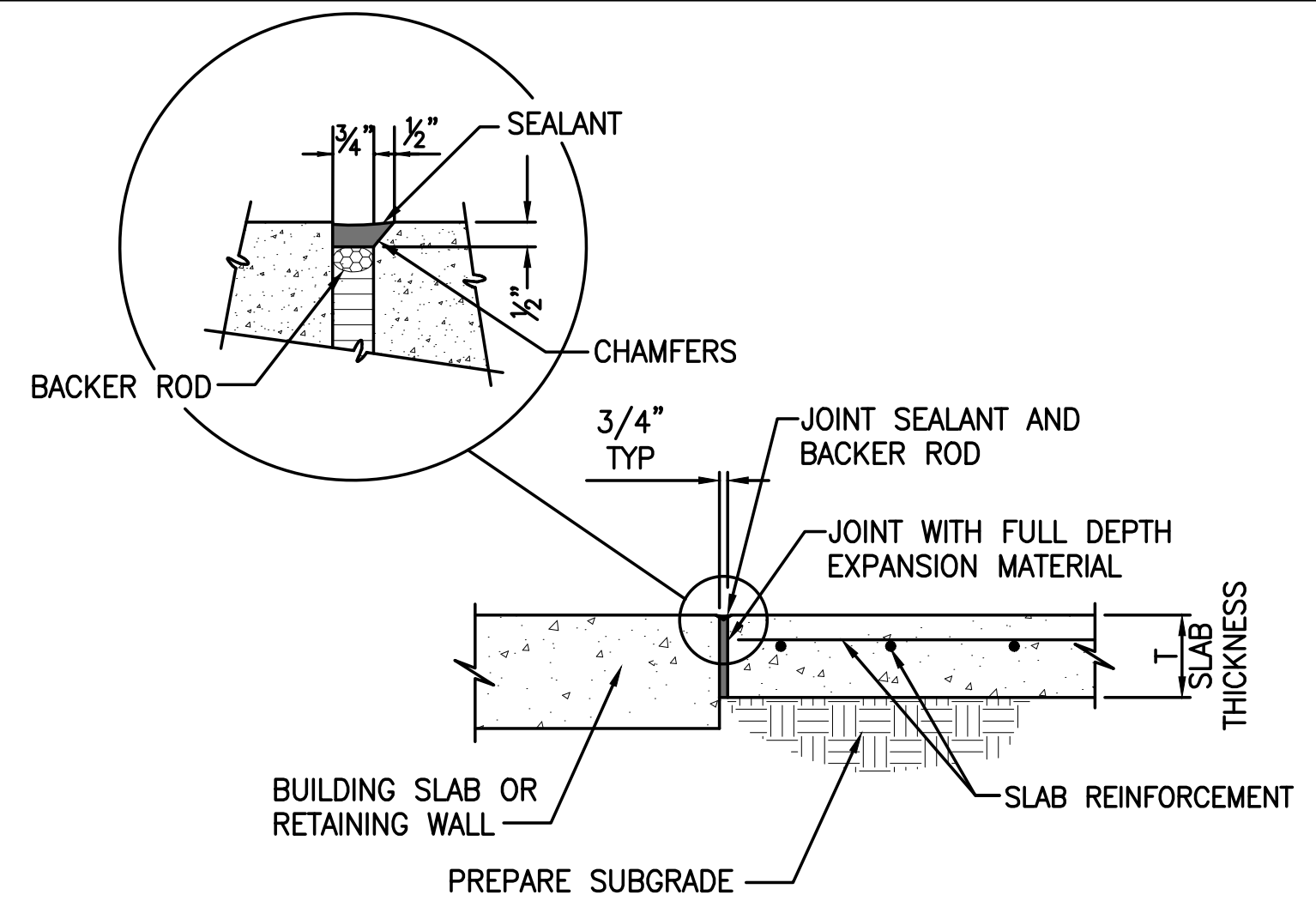


**(TSE)**  
**THICKENED SLAB EDGE DETAIL 1**  
NOT TO SCALE

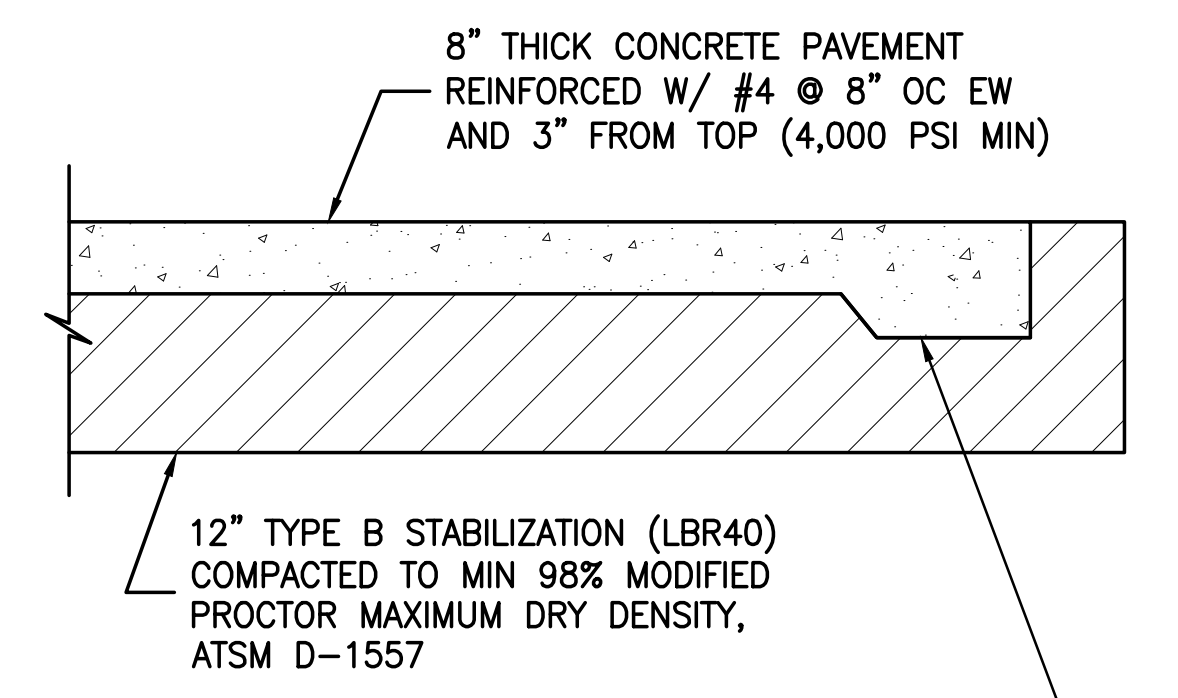


**NOTE:**  
SAW-CUT JOINTS SHALL BE PERFORMED WITHIN 4 TO 8 HOURS AFTER CONCRETE PLACEMENT.

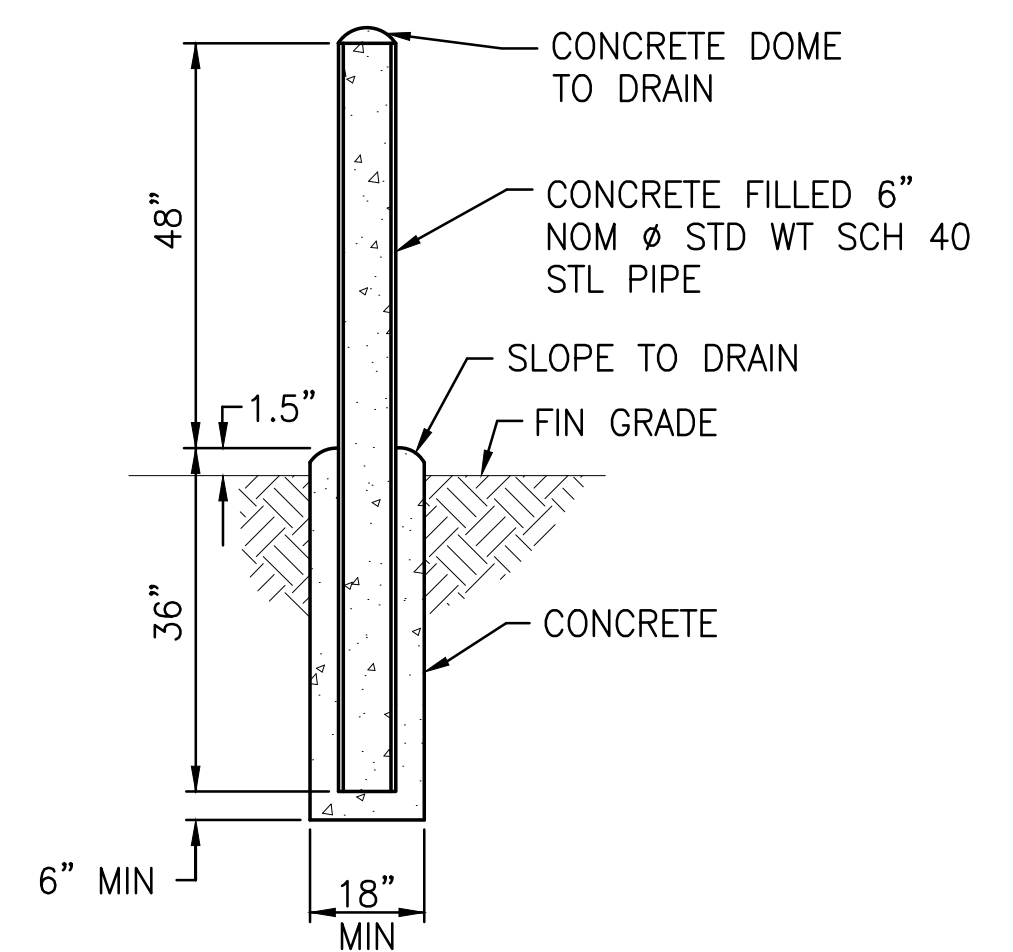
**(SCJ)**  
**SAW-CUT JOINT DETAIL 2**  
NOT TO SCALE



**(EJS)**  
**EXPANSION JOINT AT STRUCTURE DETAIL 3**  
NOT TO SCALE

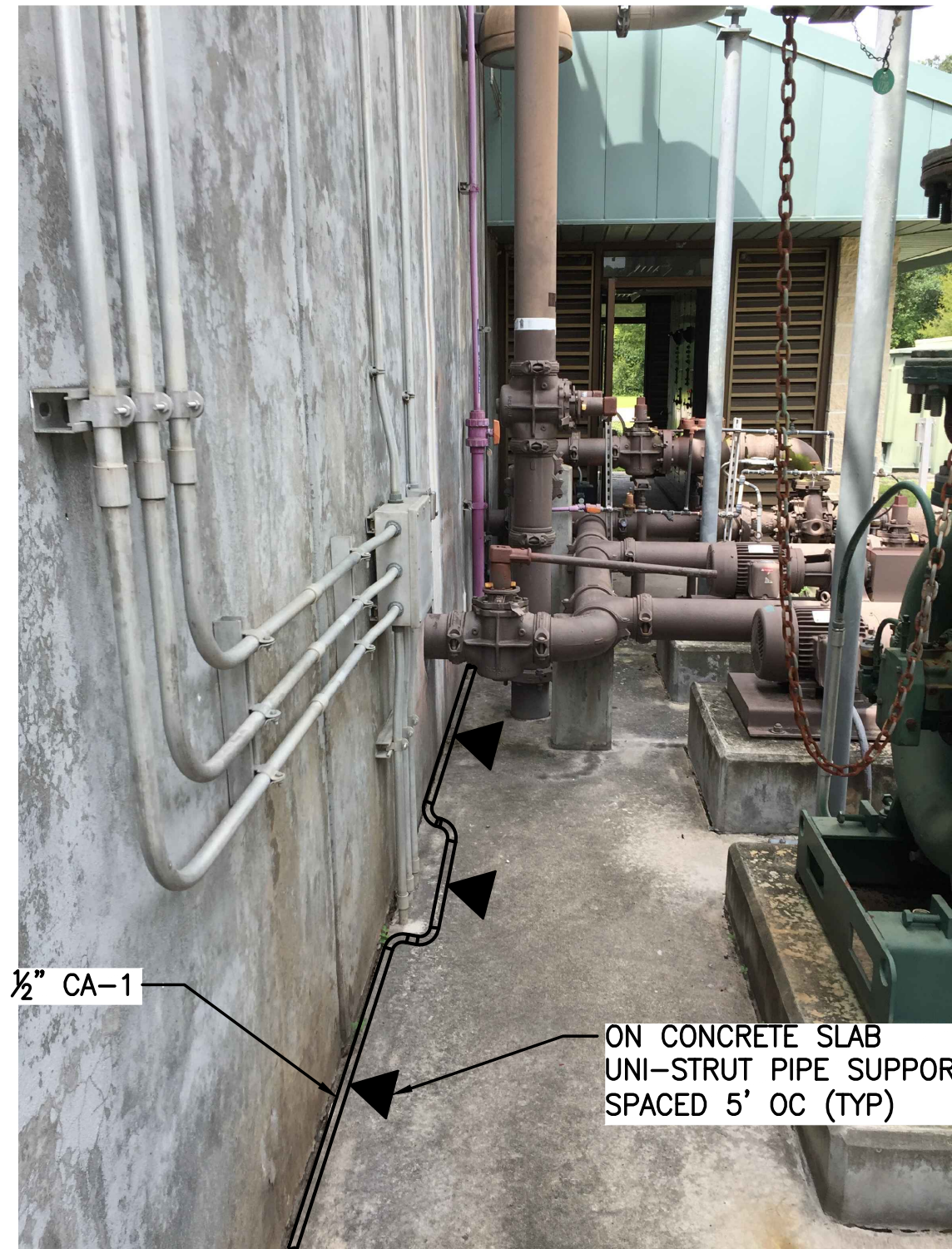


**1** THICKENED SLAB EDGE  
C5 SEE DETAIL (TYP)  
**CONCRETE PAVEMENT DETAIL 4**  
NOT TO SCALE

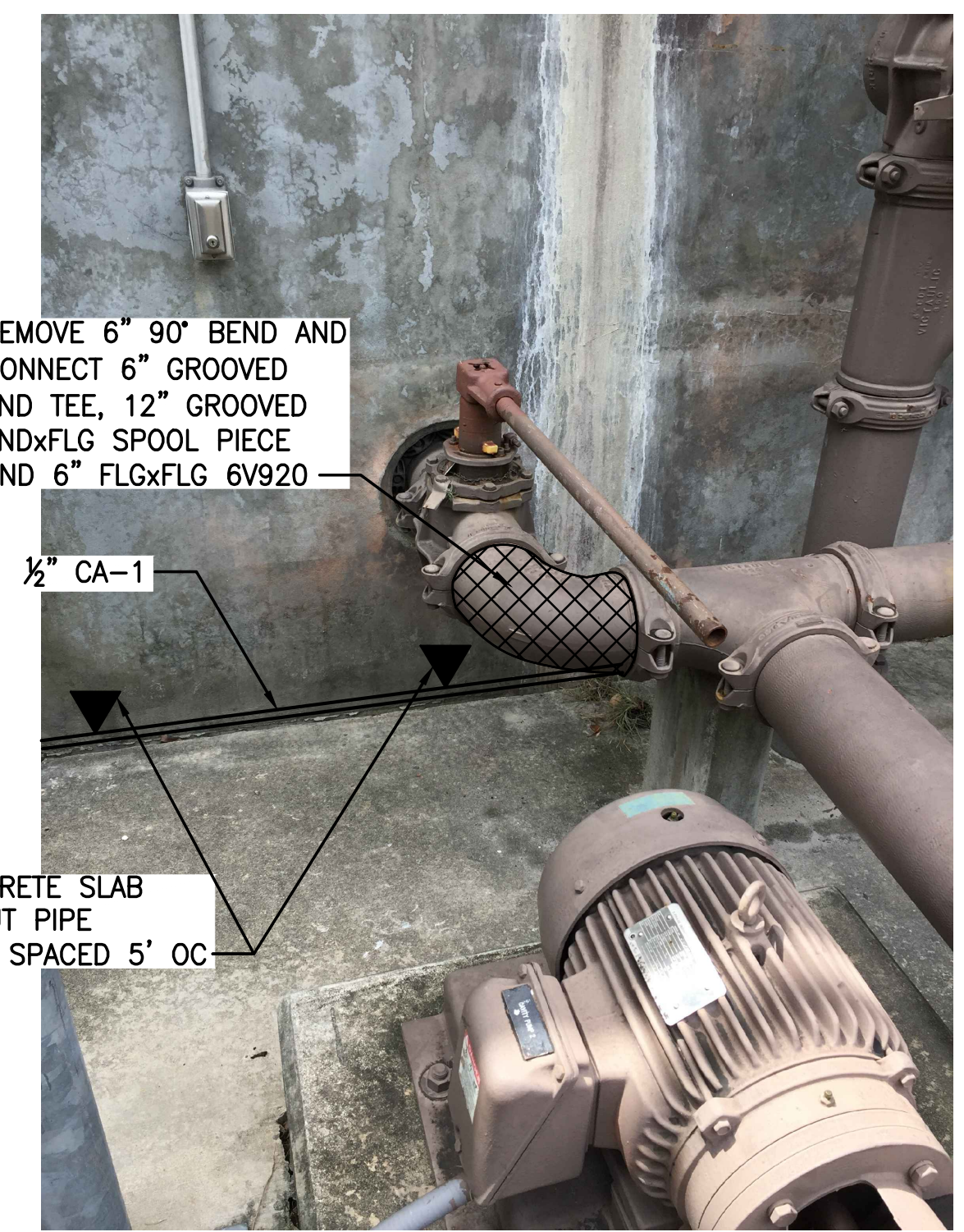


**NOTES:**  
A. ACTUAL INSTALLATION LOCATION OF EACH BOLLARD SHALL BE AS DIRECTED IN THE FIELD BY THE COUNTY.  
B. PAINT ALL PIPING MATERIALS OSHA SAFETY YELLOW.

**BOLLARD DETAIL 5**  
NOT TO SCALE



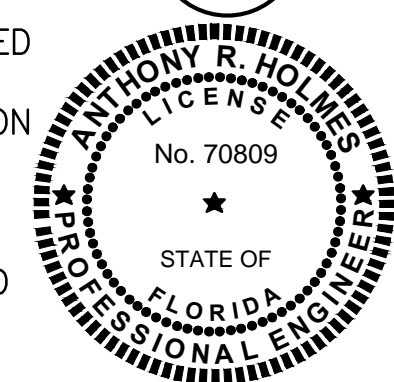
**COMPRESSED AIR CONNECTION DETAIL 6**  
NOT TO SCALE



**DIGESTED SLUDGE CONNECTION DETAIL 7**  
NOT TO SCALE

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LTR.	DATE	REVISIONS	BY	APPRO.

DESIGNED	AHOLMES
DRAWN	RWADE
CHECKED	TFRIEDRICH

**JONES EDMUNDS**  
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
CITY OF LEESBURG, FLORIDA

**CIVIL DETAILS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	C5

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## STORMWATER POLLUTION PREVENTION NOTES

GENERAL

1. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
2. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE ENGINEER PRIOR TO ANY EXCAVATION.
3. STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
4. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
5. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED AS SPECIFIED IN THE PLANS, FERTILIZED, AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED AND MULCHED AS SHOWN ON THE PLANS.
6. ALL CUT OR FILL SLOPES SHALL BE 4 (HORIZONTAL): 1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
8. THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES STATE WATER QUALITY STANDARDS.

EROSION AND SEDIMENT TRANSPORT PREVENTION

9. THE WORK SPECIFIED IN THIS SECTION CONSISTS OF MEASURES REQUIRED TO CONTROL EROSION AND TRANSPORT OF SEDIMENTS WITHIN AND FROM THE PROJECT AREA, SO AS TO PREVENT THE DEGRADATION OF RECEIVING WATERS, DETRIMENTAL EFFECTS ON PUBLIC OR PRIVATE PROPERTY ADJACENT TO THE PROJECT AND DAMAGE WITHIN THE PROJECT AREA. THESE MEASURES WILL INCLUDE THE CONSTRUCTION AND MAINTENANCE OF TEMPORARY AND PERMANENT EROSION CONTROLS.
10. CONSTRUCTION OPERATIONS SHALL BE RESTRICTED TO THOSE AREAS WHERE IT IS NECESSARY TO PERFORM FILLING OR EXCAVATION TO ACCOMPLISH THE WORK SHOWN ON THE DRAWINGS AND TO THOSE AREAS WHICH MUST BE ENTERED TO CONSTRUCT TEMPORARY OR PERMANENT STRUCTURES. AS SOON AS THE CONDITIONS WILL PERMIT, RIVERS, STREAMS, IMPOUNDMENT, STORMWATER STORAGE AND CONVEYANCE SYSTEMS AND ANY ONSITE RECEIVING WATER BODIES SHALL BE PROMPTLY CLEARED OF ALL OBSTRUCTIONS PLACED THEREIN OR CAUSED BY CONSTRUCTION OPERATIONS. RUNOFF FROM UNSTABILIZED AREAS SHALL BE DIRECTED TO EITHER THE OFFSITE POND OR TREATED THROUGH SILT FENCES BEFORE DISCHARGING FROM THE PROPERTY.

EROSION PRACTICES

11. PERMANENT EROSION CONTROL FEATURES SHALL BE INCORPORATED INTO THE PROJECT AT THE EARLIEST PRACTICAL TIME. TEMPORARY CONTROL FEATURES WILL BE USED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION WHICH WERE NOT FORESEEN AT THE TIME OF DESIGN TO CONTROL EROSION PRIOR TO THE TIME IT IS PRACTICAL TO CONSTRUCT PERMANENT CONTROL FEATURES.
12. TEMPORARY EROSION CONTROL MAY BE USED IN CONTROLLING EROSION IN AREAS WHERE CONDITIONS NOT UNDER THE CONTROL OF THE CONTRACTOR, PRECLUDE COMPLETION OF A SECTION OF A PROJECT IN A CONTINUOUS MANNER, AND FOR CONTROLLING EROSION IN AREAS WHERE CONSTRUCTION OPERATIONS MUST BE PERFORMED SUBSEQUENTLY THAT WILL CAUSE DAMAGE TO PERMANENT EROSION CONTROL FEATURES. TEMPORARY EROSION AND WATER POLLUTION CONTROL FEATURES SHALL CONSIST OF, BUT NOT BE LIMITED TO, GRASS, TEMPORARY MULCHING, SANDBAGGING, SEDIMENT BASINS, SEDIMENT CHECKS/EARTH DITCH CHECKS, BERMS, FLOATING TURBIDITY BARRIERS, HAY BALES AND SILT FENCE.

STABILIZATION PRACTICES

13. TEMPORARY STABILIZATION – SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITHIN 7 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THESE AREAS SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH. THE SURFACE AREAS OF UNPROTECTED ERODIBLE EARTH EXPOSED BY CLEARING AND GRUBBING, EXCAVATION OR FILLING OPERATIONS SHALL BE KEPT TO A MINIMUM AS PRACTICAL.
14. PERMANENT STABILIZATION – ALL DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED WILL BE STABILIZED BY SOD OR SEED AND MULCH IN ACCORDANCE WITH THE LANDSCAPING PLANS AND/OR CONSTRUCTION PLANS.

STRUCTURAL PRACTICES

15. STAKED SILT SCREENS – WILL BE INSTALLED ACCORDING TO THE PLANS TO PROTECT OFFSITE AREAS FROM ANY POSSIBLE ADVERSE EFFECTS FROM SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM SIDE OF ANY SILT SCREEN ONCE THE ACCUMULATED SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT SCREEN. ANY SEDIMENT DEPOSITS OR SOIL DISTURBANCE CREATED DURING THE INSTALLATION AND REMOVAL OF SILT SCREEN SHALL BE DRESSED TO CONFORM TO THE FINISHED GRADE. THE SILT SCREEN SHALL BE INSPECTED ALONG WITH THE REST OF THE PROJECT ONCE EVERY SEVEN DAYS OR WITHIN 24 HOURS OF A RAINFALL EVENT EXCEEDING 0.5". WHERE DEFICIENCIES EXIST, ADDITIONAL SILT FENCES SHALL BE INSTALLED OR REPLACED. ATTACHMENT OF SILT SCREEN TO EXISTING TREES WILL NOT BE PERMITTED UNLESS APPROVED BY THE PROJECT ENGINEER.

NOTE: THE FOLLOWING CONTROLS CONCERN DAY-TO-DAY ACTIVITIES ON THE SITE. THE SITE SUPERINTENDENT IS RESPONSIBLE FOR SEEING THAT THEY ARE CARRIED OUT APPROPRIATELY.

WASTE DISPOSAL

16. WASTE MATERIALS – ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN METAL DUMPSTERS AND THEN HAULED TO AN APPROVED DISPOSAL SITE. THE DUMPSTERS WILL MEET ALL COUNTY AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. NO CONSTRUCTION WASTE WILL BE BURIED ON THE SITE. ALL PERSONNEL WILL BE INSTRUCTED IN THE CORRECT PROCEDURE FOR WASTE DISPOSAL. EMPLOYEE WASTE AND OTHER LOOSE MATERIALS, E.G., CUPS, CANS, BAGS, ETC., WILL BE COLLECTED SO AS TO PREVENT THE RELEASE OF "FLOATABLES" DURING RUNOFF EVENTS.
17. HAZARDOUS WASTE – ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS, OR BY THE MANUFACTURER.
18. SANITARY WASTE – ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER MEETING ALL LOCAL AND STATE REGULATIONS.

OFFSITE VEHICLE TRACKING

19. MONITORING OF OFFSITE TRACKING OF SEDIMENTS AT THE ENTRANCES IS ESSENTIAL WHERE SILT FENCE WILL NOT BE PLACED TO ENABLE ACCESS TO THE SITE. IF IT APPEARS THAT SIGNIFICANT AMOUNTS OF SEDIMENT ARE BEING TRACKED OFF THE SITE, GRAVEL ENTRANCES OR OTHER EQUIVALENT MEASURES ARE RECOMMENDED TO HELP DISLodge THE SOIL, SEDIMENT AND DIRT BEFORE THE VEHICLES LEAVE THE SITE.

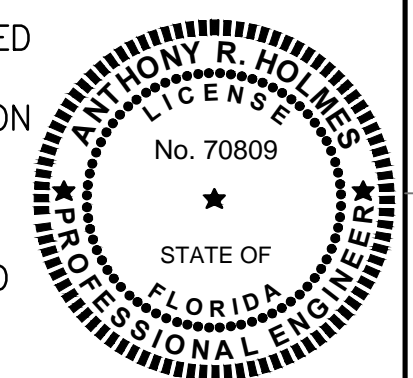
TIMING OF CONTROL MEASURES

20. AREAS WHERE THE GROUND HAS BEEN DISTURBED AND CONSTRUCTION ACTIVITIES TEMPORARILY WILL CEASE FOR MORE THAN 21 DAYS SHALL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA WHERE THE GROUND HAS BEEN DISTURBED, THAT AREA WILL BE STABILIZED WITH SOD OR OTHER SUITABLE STABILIZATION MATERIALS. AFTER THE SITE IS STABILIZED, ALL EXCESS SEDIMENTS AND DEBRIS WILL BE REMOVED FROM THE PONDS AND STORMWATER CONVEYANCE SYSTEM/STRUCTURES RECEIVING DIRECT RUNOFF FROM THE AREA.

LAST SAVED: 8/24/2017 10:29 AM RWADE DWG LOCATION: \\TPA-MAIN\DRAWING\07810-LEESBURG\084-01 TURNIPIKE WWTP FILTER PRESS\CONTRACT DRAWINGS\CIVIL\07810084-006.DWG

BID DOCUMENTS

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LTR.	DATE	REVISIONS	BY	APPRO.



**TURNPIKE WRF DEWATERING  
FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**STORMWATER POLLUTION AND  
PREVENTION NOTES**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	C6



**STORMWATER POLLUTION PREVENTION PLAN**

THIS PLAN SHALL BE IN ACCORDANCE WITH THE FLORIDA EROSION AND SEDIMENT CONTROL MANUAL.

**SITE DESCRIPTION AND GENERAL INFORMATION**

**PROJECT NAME AND LOCATION**

TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS, CITY OF LEESBURG, FLORIDA. THIS STORMWATER POLLUTION PREVENTION PLAN INCLUDES SITE IMPROVEMENTS AT TURNPIKE WATER RECLAMATION FACILITY, 1600 COUNTY ROAD 470, OPAKAHUMPKA, FLORIDA 34762.

**OWNER NAME AND ADDRESS**

CITY OF LEESBURG  
550 S. 14TH STREET  
LEESBURG, FLORIDA 34749-0630

**PROJECT DESCRIPTION**

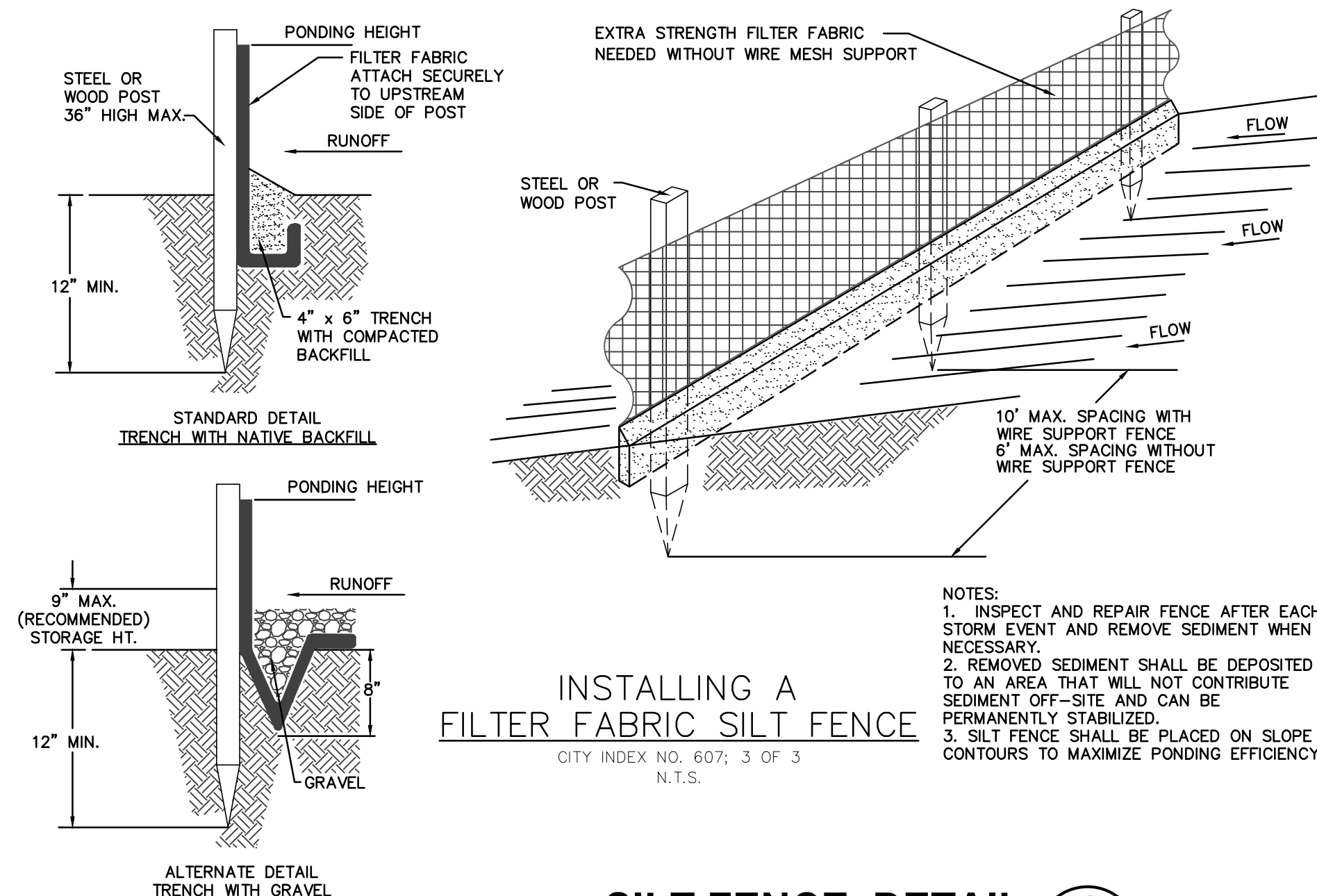
THE PROJECT CONSISTS OF THE INSTALLATION OF A DEWATERING FACILITY INCLUDING A SKID MOUNTED BELT FILTER PRESS AND TRUCK LOADING BAY. ALSO, UPGRADES TO THE ONSITE LIFT STATION, REPLACING THE EXISTING PUMPS WITH NEW LARGER PUMPS. A MORE DETAILED DESCRIPTION IS PROVIDED IN SECTION 01100, SUMMARY OF WORK IN THE PROJECT SPECIFICATIONS.

**SEQUENCE OF MAJOR ACTIVITIES**

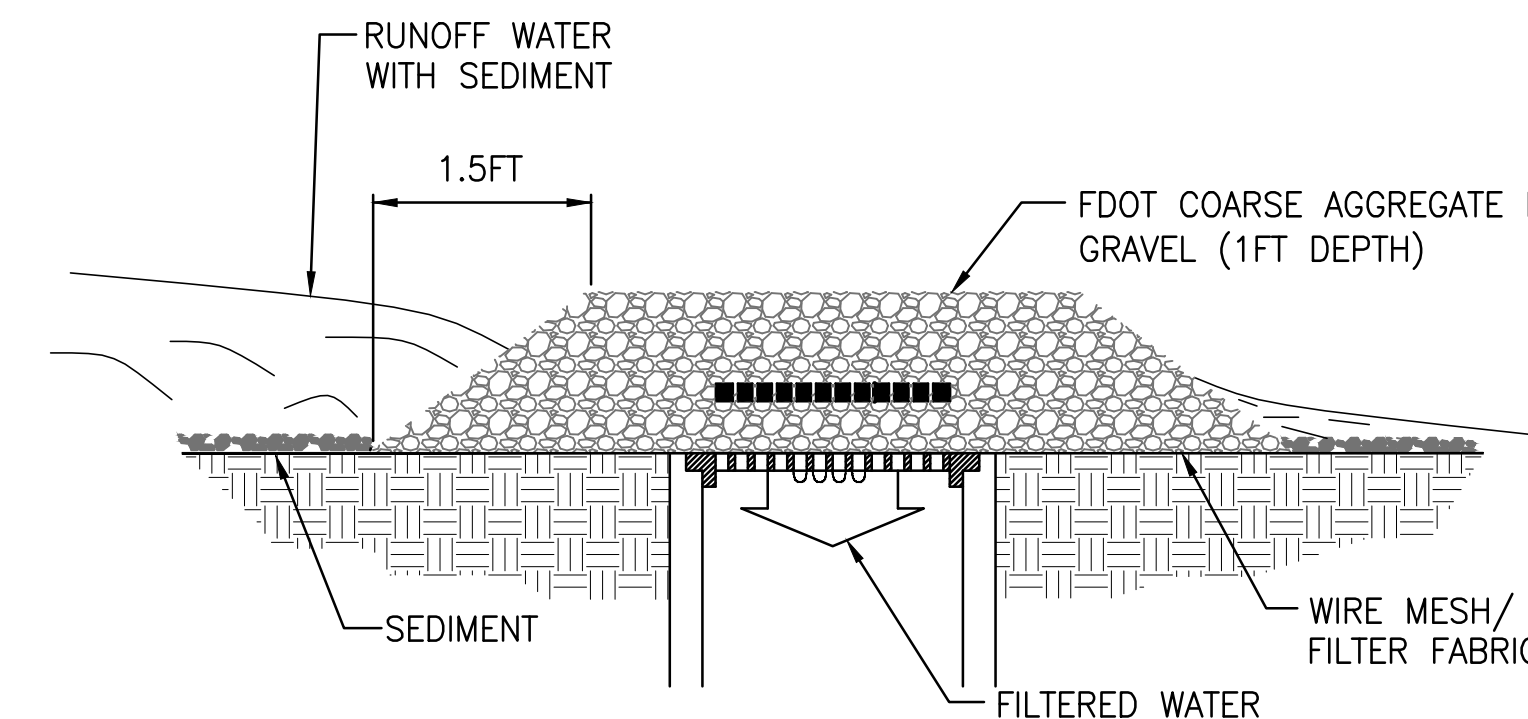
THE ORDER OF MAJOR ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL SILT FENCE AS SHOWN ON PLANS.
2. STABILIZE CLEARED AREAS WITHIN 48 HOURS OF LAST DISTURBANCE.
3. COMPLETE GRADING AND INSTALL PERMANENT SODDING.
4. WHEN ALL CONSTRUCTION IS COMPLETE, STABILIZE (E.G. SOD, SEED/MULCH, ETC) ANY REMAINING DISTURBED AREAS.

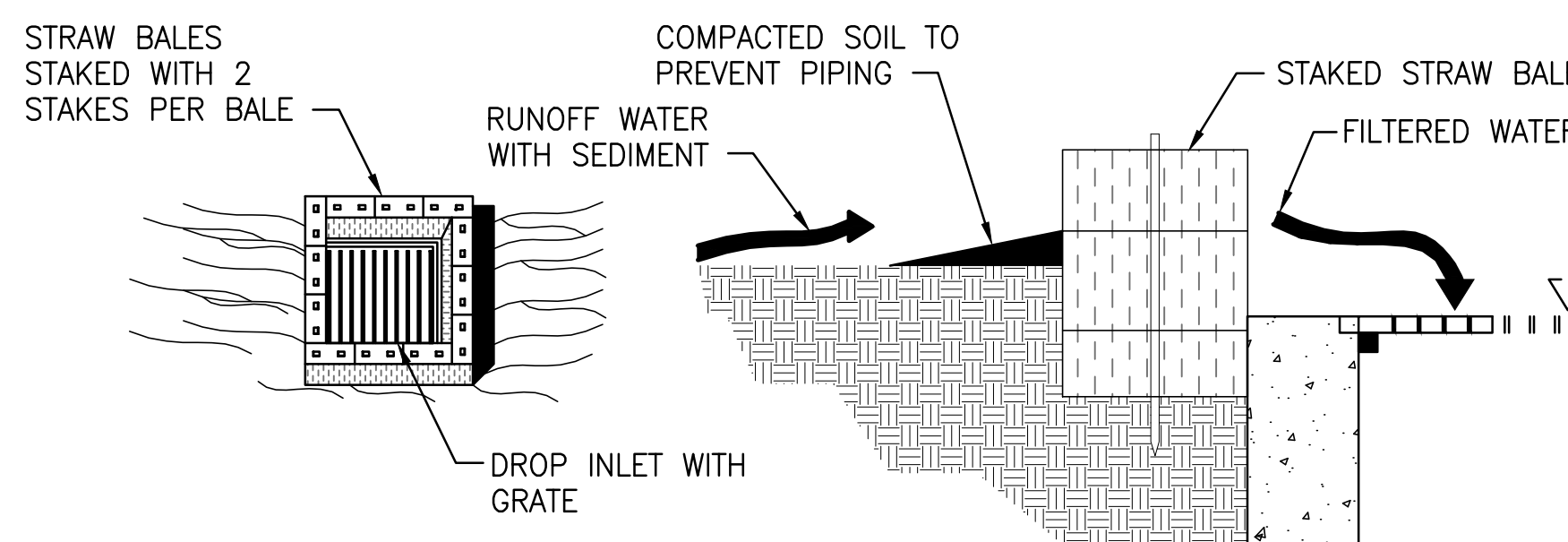
SUFFICIENT PRECAUTIONS SHALL BE TAKEN TO PREVENT POLLUTION OF STREAMS, CANALS, LAKES, RESERVOIRS, WETLANDS, AND OTHER WATER IMPOUNDMENTS. ALSO, OPERATIONS SHALL BE CONDUCTED AND SCHEDULED SO AS TO AVOID POLLUTION OR SILTATION OF STREAMS, WATER BODIES, ETC.



**SILT FENCE DETAIL 1**  
NTS C3



**GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER DETAIL 2**  
NTS C3



**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.15 CMS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

**STRAW BALE DROP INLET SEDIMENT FILTER 3**  
NTS

**STORMWATER POLLUTION PREVENTION PLAN**

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER

INSPECTOR: \_\_\_\_\_ FDEP NPDES STORMWATER IDENTIFICATION NUMBER: FLR1Q

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED / MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION / OTHER REMARKS

CONDITION CODE:  
G = GOOD  
C = NEEDS TO BE CLEARED  
M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON  
P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT  
O = OTHER

CONTROL TYPE CODES

1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. DETENTION POND
3. STRUCTURAL DIVISION	12. VEGETATIVE PRESERVATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
8. PIPE SLOPE DRAIN	16. CURB AND GUTTER	25. HAY BALES	34. OTHER
9. LEVEL SPREADERS	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
9. LEVEL SPREADERS	18. ROCK OUTLET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:

NAME: \_\_\_\_\_ QUALIFICATION: \_\_\_\_\_ DATE: \_\_\_\_\_  
THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

\*\*\*\*\*

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

NAME (RESPONSIBLE AUTHORITY) \_\_\_\_\_ DATE \_\_\_\_\_

LAST SAVED: 9/8/2017 10:50 AM RWADE DWG LOCATION: \\TPA-MAIN\DRAWING\07810-LEESBURG\084-01 TURNPIKE WTP BELT FILTER PRESS\CONTRACT DRAWINGS\CIVIL\07810084-C07.DWG

BID DOCUMENTS

DESIGNED	AHOLMES			
DRAWN	RWADE			
CHECKED	TFRIEDRICH			
LTR.	DATE	REVISIONS	BY	APPRO.

**JONES EDMUNDS**

730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

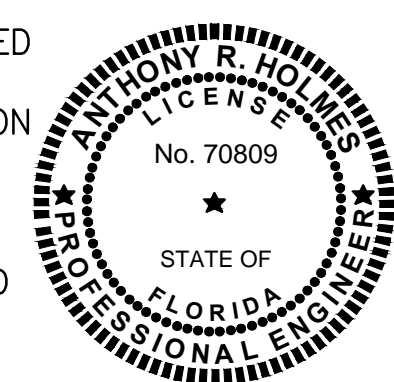
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**STORMWATER POLLUTION PREVENTION PLAN**

CERTIFICATE OF AUTHORIZATION #1841 APPROVED BY ANTHONY R. HOLMES P.E. # 70809	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE AS NOTED	DWG. NO. C7

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**MAINTENANCE/INSPECTION PROCEDURES**

**EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES**

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE.

- ALL CONTROL MEASURES SHALL BE INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF ANY RAINFALL EXCEEDING 0.5 INCHES AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:..
- ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF ITS REPORTING.
- ALL DRAINAGE STRUCTURES WILL BE INSPECTED FOR DEPTH OF SEDIMENTS. SEDIMENTS WILL BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED.
- PERMANENT SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. ANY DEFICIENCIES SHALL BE CORRECTED.
- INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
- THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
- THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
- SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION IF DAMAGED. THE SILT SCREEN SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. WHERE DEFICIENCIES EXIST, ADDITIONAL SILT FENCES SHALL BE INSTALLED OR REPLACED. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM SIDE OF ANY SILT SCREEN ONCE THE ACCUMULATED SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT SCREEN. ANY SEDIMENT DEPOSITS OR SOIL DISTURBANCE CREATED DURING THE INSTALLATION AND REMOVAL OF SILT SCREEN SHALL BE DRESSED TO CONFORM TO THE FINISHED GRADE.

A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. THESE INSPECTION REPORTS WILL BE KEPT AS A PART OF THE STORMWATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE (3) YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED. A COPY OF THE INSPECTION REPORT FORM IS PROVIDED

**INVENTORY OF BUILDING MATERIALS EXPECTED TO BE PRESENT ONSITE**

- MATERIALS PRESENT ONSITE DURING CONSTRUCTION WILL INCLUDE THOSE NORMALLY ASSOCIATED WITH THIS TYPE OF CONSTRUCTION:  
  
CONCRETE, STEEL REINFORCING BARS AND RELATED MATERIALS, LUMBER, PAINTS, PETROLEUM BASED PRODUCTS.

**MATERIAL MANAGEMENT (POLLUTION PREVENTION) PRACTICES**

THE FOLLOWING MATERIAL MANAGEMENT PRACTICES WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF:

**GENERAL PRACTICES**

THE FOLLOWING GENERAL PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT:

- SUFFICIENT PRECAUTIONS SHOULD BE TAKEN TO PREVENT POLLUTION OF WATER BODIES DIRECTLY OR INDIRECTLY WITH FUELS, OILS, BITUMENS, CALCIUM CHLORIDE, OR OTHER HARMFUL MATERIALS
- AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCTS REQUIRED FOR THIS PROJECT.
- ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

- WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED BEFORE DISPOSING OF THE CONTAINER.
- MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
- THE SITE WILL BE INSPECTED DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

**HAZARDOUS PRODUCTS**

THE FOLLOWING PRACTICES WILL BE UTILIZED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
- ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
- IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS' OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

**PRODUCT SPECIFIC PRACTICES**

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

- PETROLEUM PRODUCTS - ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS THAT ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- PAINTS - ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER, POND SYSTEM, OR RECEIVING WATER BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

**SPILL PREVENTION AND CLEANUP**

IN ADDITION TO THE MATERIALS MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

- MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA THAT IS ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BROOMS, DUST PANS, GLOVES AND PLASTIC AND METAL TRASH CONTAINERS, ETC. SPECIFICALLY FOR THIS PURPOSE.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
- THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
- THE SPILL PREVENTION PLANS WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THIS TYPE OF SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, ITS CAUSE, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
- THE CONTRACTOR SHALL REPORT ANY SPILL TO THE WRF LEAD OPERATOR, PUBLIC WORKS AND FDEP (IF APPLICABLE).

**CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS**

THE ONSITE PRACTICES SHALL COMPLY WITH THIS STORMWATER POLLUTION PREVENTION PLAN AS WELL AS REFLECT THE REQUIREMENTS OF THE:

- FDEP'S NPDES GENERIC PERMIT FOR CONSTRUCTION ACTIVITIES, 62-621.300(4), F.A.C.)
- ALL STATE REQUIREMENTS OF STORMWATER MANAGEMENT SYSTEMS UNDER CHAPTERS 40D-4, 40D-40 AND 40D-400 OF THE FLORIDA ADMINISTRATIVE CODE, AS ADMINISTERED BY THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT IN ADDITION 33 CFR ADMINISTERED BY THE ARMY CORP OF ENGINEERS.

**EROSION AND SEDIMENT CONTROL NOTES:**

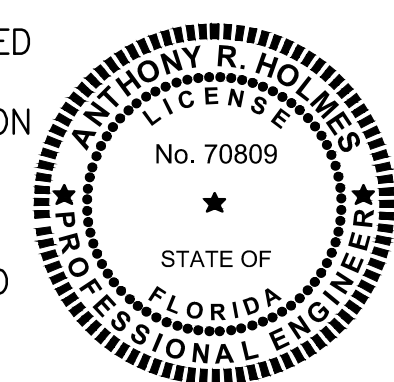
- THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION AND SEDIMENT CONTROL PLAN. THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COSTS TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.
- EROSION CONTROL PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 3 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.
- IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SIGHT.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED AS SOON AS POSSIBLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- ON-SITE AND OFF SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE EROSION CONTROL PLAN AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.
- ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACK FILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- EROSION/SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP) IN ADDITION TO THOSE PRESENTED ON THE PLANS SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTY OR ROADWAYS. CONTROLS SHALL BE DESIGNED, INSTALLED AND MAINTAINED AS REQUIRED BY THE ENGINEER AND/OR CONTRACTOR TO ENSURE SURFACE WATER QUALITY CONDITIONS ARE IN COMPLIANCE WITH THE WATER QUALITY STANDARDS.
- THE CONTRACTOR SHALL REPORT ALL OFFSITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTUS (NEPHELOMETRIC TURBIDITY UNITS) ABOVE BACKGROUND LEVEL WITHIN 24 HOURS AFTER OCCURRENCE. NOTIFICATION SHALL INCLUDE CAUSE OF THE PROBLEM, CORRECTIVE ACTIONS TAKEN AND INSTALLATION OF ADDITIONAL EROSION/SEDIMENT CONTROLS NOT SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS.
- THE CONTRACTOR SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320(4)(C)1., FLORIDA ADMINISTRATIVE CODE, FROM THE CONSTRUCTION SITE BY TAKING ADEQUATE MEASURES TO STABILIZE AFFECTED AREAS.
- FUEL AND OTHER PETROLEUM PRODUCT SPILLS SHALL BE CONTAINED, CLEANED UP AND REPORTED IMMEDIATELY.

**PAVING, GRADING & DRAINAGE NOTES:**

- ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN COUNTY'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OF FDOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
- ALL UNPAVED AREAS UNLESS OTHERWISE INDICATED IN PLANS DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.
- TRAFFIC CONTROL ON ALL FDOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THAT CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT. THE MOST STRINGENT SHALL GOVERN.
- THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL VEGETATION IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
- SOD, WHERE CALLED FOR IN THE PLANS, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY ANTHONY R. HOLMES ON OCT. 20, 2017 USING A SHA AUTHENTICATION CODE.

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DESIGNED	AHOLMES			
DRAWN	RWADE			
CHECKED	TFRIEDRICH			
LTR.	DATE	REVISIONS	BY	APPRO.

**JONES EDMUNDS**  
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS CITY OF LEESBURG, FLORIDA**

**EROSION AND SEDIMENT CONTROL NOTES**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	NONE	C8

LAST SAVED: 8/24/2017 10:33 AM RWADE DWG LOCATION: \\TPA-MAIN\DRAWING\07810-LEESBURG\084-01 TURNPIKE WWTP BELT FILTER PRESS\CONTRACT DRAWINGS\CIVIL\07810084-C08.DWG

BID DOCUMENTS



**GENERAL STRUCTURAL NOTES**

**GENERAL CONDITIONS**

- ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ELECTRICAL, AND SHOP DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE WORK DEPICTED ON THE DRAWINGS. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.
- FOR ALL ITEMS EMBEDDED IN OR PASSING THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL FOR TYPE, SIZE, LOCATION, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH A DEMOLITION, FOUNDATION EXCAVATIONS, AND OTHERS.
- SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.
- STANDARD DETAILS APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

**DESIGN CRITERIA**

**BUILDING CODES AND REFERENCES:**

- 2014 FLORIDA BUILDING CODE, 5TH EDITION (FBC)
- REINFORCED CONCRETE:
  - ALL STRUCTURES: ACI 318-11 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- STRUCTURAL STEEL: AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION
- ALUMINUM: ADM1-2010, ALUMINUM DESIGN MANUAL
- LIVE LOADS:
 

WALKWAYS, STAIRWAYS AND LANDINGS:	100 PSF
SLABS ON GRADE	300 PSF
- WIND DESIGN CRITERIA:
 

RISK CATEGORY	III
ULTIMATE DESIGN WIND SPEED, $V_{ULT}$	140 MPH
NOMINAL DESIGN WIND SPEED, $V_{ASD}$	108 MPH
EXPOSURE CATEGORY	C
ENCLOSURE CLASSIFICATION	PARTIALLY ENCLOSED

**FOUNDATIONS**

**GEOTECHNICAL REPORT:**

- GEOTECHNICAL EXPLORATION "PROPOSED TURNPIKE WWTP RELOCATION" PREPARED BY UNIVERSAL ENGINEERING SCIENCES, INC. (UES), UES REPORT NO. 1458100, DATED JUNE 6, 2017. ANY INTERPRETATION OF THE CONTENTS OF THE GEOTECHNICAL REPORT IS THE RESPONSIBILITY OF THE CONTRACTOR.

**SPREAD FOOTING DESIGN PARAMETERS:**

- MAXIMUM ALLOWABLE BEARING PRESSURE.....2,500 PSF (NET)
- MAXIMUM LATERAL SOIL BEARING PRESSURES.....250 PSF
- COEFFICIENT OF FRICTION.....0.30

**CONCRETE (CAST-IN-PLACE)**

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.
- ALL CONCRETE SHALL BE AIR-ENTRANED WITH A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.
- WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.
- ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS FINISHING IS COMPLETED OR FORMS ARE REMOVED.
- ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

**REINFORCING STEEL**

- REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A315 REQUIREMENTS. ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS.
- REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:
 

a. CONCRETE CAST AGAINST EARTH	3"
b. FORMED SURFACE IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER	2"
- LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL.
- THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.
- UNLESS OTHERWISE NOTED, THE MINIMUM REINFORCING FOR WALLS AND SLABS SHALL BE AS FOLLOWS.

MINIMUM REINFORCING						
THICKNESS	6"	8"	10"	12" - 16"	18" - 22"	24"
REINF. EACH WAY	#4 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"	#6 @ 12"	#7 @ 12"
LOCATION	CTR	CTR	EF	EF	EF	EF

**STRUCTURAL STEEL**

- DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND THE DESIGN DRAWINGS.
- STEEL MATERIAL:
  - W-SHAPED SECTIONS : ASTM A992, GRADE 50
  - HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B
  - ALL OTHER STRUCTURAL STEEL: ASTM A36
  - ALL PIPE: ASTM A53, GRADE B
- WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE REQUIREMENTS. ELECTRODES SHALL BE E-70XX.
- BOLTED CONNECTIONS:
  - MAIN CONNECTIONS: 3/4" DIA, ASTM A325 BOLTS. HOLES: 13/16" DIA CONNECTION SHALL BE "BEARING" TYPE WITH THREADS EXCLUDED FROM THE SHEAR PLANE.
  - SECONDARY CONNECTION: 3/4" DIA, ASTM A307 GRADE A BOLTS.
  - ALL CONNECTION SHALL HAVE A MINIMUM OF TWO BOLTS. GUSSET PLATES SHALL BE A MINIMUM OF 3/8" THICK.
  - ALL COLUMNS AND POSTS SHALL HAVE MILLED ENDS FOR FULL BEARING AT BASE PLATES.

**ALUMINUM**

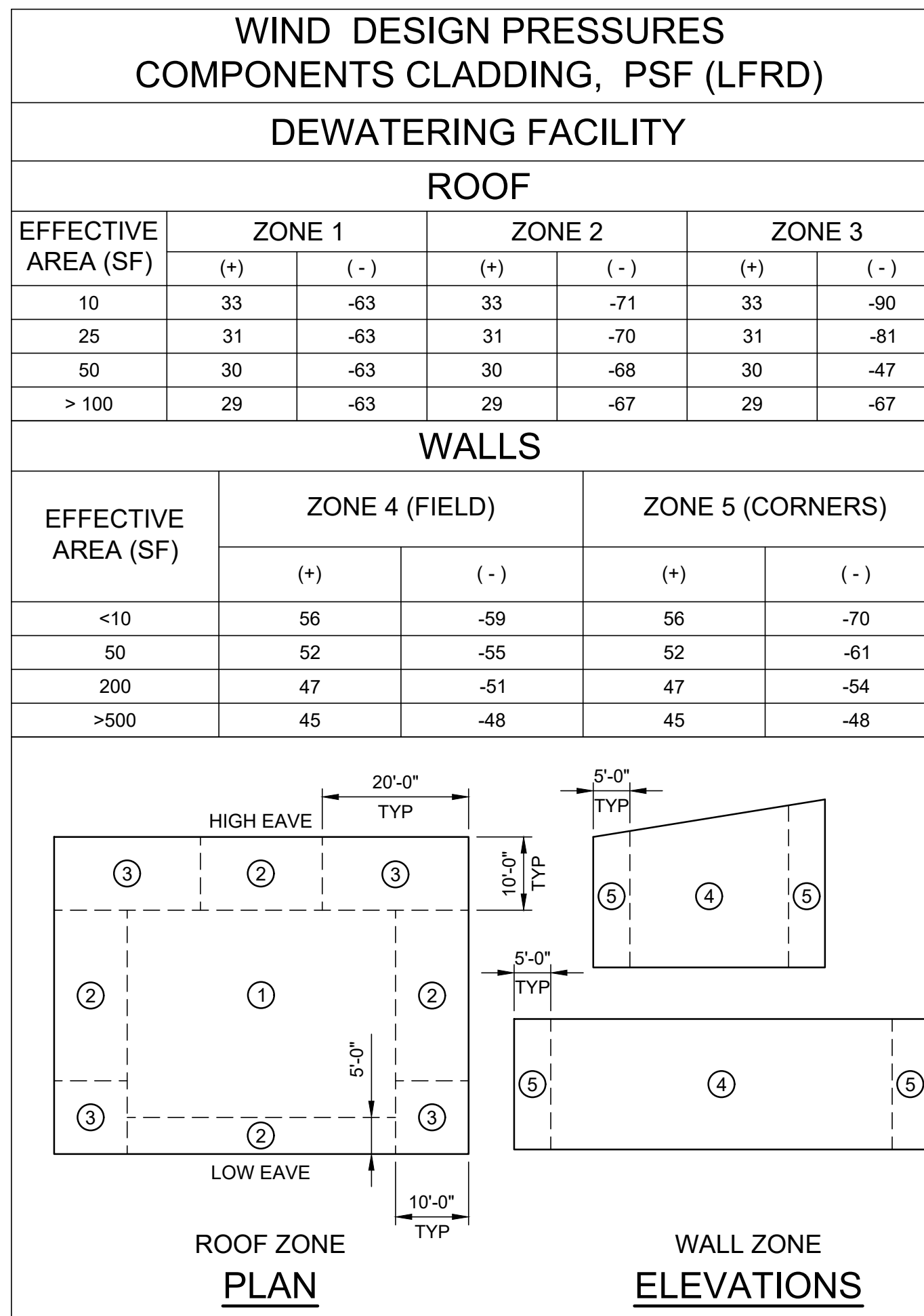
- ALUMINUM DESIGN, DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM DESIGN MANUAL.
- ALUMINUM IN CONTACT WITH OR EMBEDDED IN CONCRETE OR MASONRY SURFACES SHALL BE COATED WITH A HEAVY COATING OF ALKALI RESISTANCE BITUMINOUS PAINT.
- ALL BOLTS USED IN CONNECTIONS WITH ALUMINUM MEMBERS SHALL BE STAINLESS STEEL A316, UNLESS NOTED OTHERWISE.
- ALL WELDING OF ALUMINUM STRUCTURES SHALL CONFORM TO "STRUCTURAL WELDING CODE - ALUMINUM", AWS D1.2, LATEST EDITION.

**STAINLESS STEEL**

- STAINLESS STEEL PLATES, SHEETS AND STRUCTURAL SHAPES SHALL BE IN ACCORDANCE TO ASTM A240.
- STAINLESS STEEL MATERIALS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
  - EXTERIOR AND SUBMERGED USE: TYPE 316  
TYPE 316L (WHERE WELDED)
- ALL WELDING OF STRUCTURAL STAINLESS STEEL SHALL CONFORM TO "STRUCTURAL WELDING CODE - STAINLESS STEEL", ASW D1.6, LATEST EDITION.
- STAINLESS STEEL BOLTS, NUTS AND WASHERS SHALL BE TYPE 316 IN ACCORDANCE TO ASTM F593 UNLESS NOTED OTHERWISE.

**PRE-ENGINEERED METAL BUILDING**

- FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO DESIGN, FABRICATE, DELIVER TO JOB SITE AND ERECT THE PRE-ENGINEERED METAL BUILDING AS SHOWN ON THE CONTRACT DOCUMENTS.
- SUBMIT TO THE ENGINEER AS PROVIDED COMPLETE PLANS SHOWING SUPERSTRUCTURE COLUMN LINES SET TO COORDINATE WITH CONCRETE DIMENSIONS SHOWN. INDICATE ANCHOR BOLT SIZE AND LOCATIONS AND FOUNDATION REACTIONS IN KIPS AT ALL COLUMNS. FOUNDATION SIZE AND REINFORCEMENT FOR PRE-ENGINEERED METAL BUILDING ARE PRELIMINARY AND ARE SUBJECT TO CHANGE UNTIL FINAL REACTIONS ARE PROVIDED BY BUILDING MANUFACTURER AND APPROVED BY THE ENGINEER OF RECORD.
- SUBMIT LETTER AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA CERTIFYING THAT THE STRUCTURAL FRAMING AND COVERING PANELS PROPOSED MEET THE DESIGN CRITERIA.
- PRIOR TO FOUNDATION CONSTRUCTION, PRE-ENGINEERED METAL BUILDING SUBMITTAL MUST BE APPROVED. CONSTRUCTION DETAILS MAY BE VARIED TO SUIT MANUFACTURER'S STANDARD DESIGN.
- ALL BUILDING COLUMNS SHALL BE DESIGNED AS "PIN" CONNECTED. COLUMN ENDS SHALL NOT TRANSFER MOMENTS TO FOUNDATION. ANCHOR BOLTS SHALL BE DESIGNED BY THE BUILDING MANUFACTURER AND FURNISHED BY THE CONTRACTOR.
- SEE SPECIFICATION SECTION 13121 "PRE-ENGINEERED METAL BUILDING" FOR REQUIREMENT IN ADDITION TO THESE NOTES.



**WIND PRESSURE NOTES:**

- SEE "WINDLOADS" NOTES THIS SHEET FOR WIND DESIGN CRITERIA.
- DESIGN PRESSURES ARE PROVIDED AT ULTIMATE DESIGN WIND SPEEDS. TO CONVERT TO NOMINAL DESIGN WIND SPEEDS (ASD) MULTIPLE PRESSURE BY A FACTOR OR 0.60.
- THE EFFECTIVE AREA SHALL BE DETERMINED AS FOLLOWS UNLESS OTHERWISE NOTED:
  - THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE THIRD THE SPAN LENGTH.
  - THE AREA THAT IS TRIBUTARY TO AN INDIVIDUAL FASTENER.
- NEGATIVE SIGN INDICATES PRESSURE ACTING OUTWARD FROM SURFACE.

**STRUCTURAL ABBREVIATIONS**

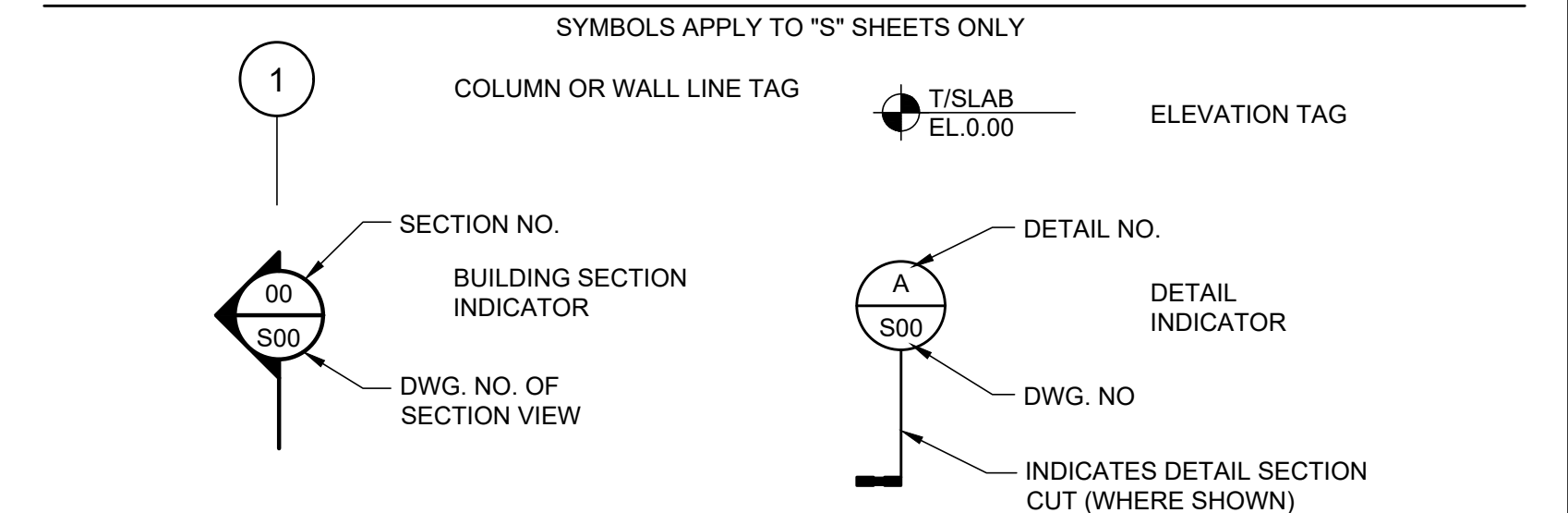
&	AND	EXP	EXPANSION	PEMB	PRE-ENGINEERED
@	AT	FE	FIRE EXTINGUISHER	PERP	METAL BUILDING
#	NUMBER	FF	FAR FACE, FINISHED	PL	PERPENDICULAR
ADDTL	ADDITIONAL		FLOOR	PLF	PLATE
ALUM	ALUMINUM	FG	FINISHED GRADE	PL	POUND PER LINEAR
AWS	AUTOMATIC END	FRP	FIBER REINFORCED		FOOT
	WELDED STUD(S)		PLASTIC	PT	PRESSURE TREATED
ALT	ALTERNATE	FT	FOOT	PROJ	PROJECTION
APROX	APPROXIMATE(LY)	FTG	FOOTING	PSF	POUNDS PER SQUARE
BLD	BUILDING	FV	FIELD VERIFY		FOOT
BM	BEAM	GA	GAGE	PSI	POUNDS PER SQUARE
BOT	BOTTOM	GALV	GALVANIZED		INCH
CJ	CONTROL JOINT	HK	HOOK	PVC	POLYVINYL CHLORIDE
CL	CENTER LINE	HORIZ	HORIZONTAL	R	RADIUS
CLR	CLEAR	HSS	HOLLOW STRUCTURAL	REINF	REINFORCING
CMU	CONCRETE MASONRY		SECTION	REQD	REQUIRED
	UNIT	HP	HIGH POINT	RO	ROUGH OPENING
COL	COLUMN	ID	INSIDE DIAMETER	SCHED	SCHEDULE(D)
CONC	CONCRETE	JT	JOINT	SIM	SIMILAR
CONN	CONNECTION	LB(S)	POUND(S)	SJ	SAWCUT JOINT
CONST JT	CONSTRUCTION JOINT	LONG	LONGITUDINAL	SMS	SHEET METAL SCREW
CONT	CONTINUOUS	LP	LOW POINT	SPECS	SPECIFICATIONS
DIA	DIAMETER	MANUF	MANUFACTURER	SQ	SQUARE
DEG	DEGREE(S)	MATL	MATERIAL	SS	STAINLESS STEEL
DO	DITTO	MAX	MAXIMUM	STD	STANDARD
DWG	DRAWING	MECH	MECHANICAL	STL	STEEL
DWL	DOWEL(S)	MFR	MANUFACTURER	T/	TOP OF
(E)	EXISTING	MIN	MINIMUM	TB	TIE BEAM
EA	EACH	MISC	MISCELLANEOUS	T&B	TOP AND BOTTOM
EF	EACH FACE	MO	MASONRY OPENING	THK	THICK
EJ	EXPANSION JOINT	MTL	METAL	THRU	THROUGH
EL	ELEVATION	NO	NUMBER	TOC	TOP OF CONCRETE
ELEC	ELECTRICAL	NTS	NOT TO SCALE	TOS	TOP OF STEEL
EMBED	EMBEDMENT	OC	ON CENTER	TYP	TYPICAL
EOC	EDGE OF CONCRETE	OD	OUTSIDE DIAMETER	UNO	UNLESS NOTED
EQ	EQUAL	OH	OPPOSITE HAND		OTHERWISE
EW	EACH WAY	OPNG	OPENING	VERT	VERTICAL
EXIST	EXISTING	PCS	PIECES	WWF	WELDED WIRE FABRIC

**LEGEND**

STRUCTURAL LEGEND APPLIES TO "S" SHEETS ONLY

	EARTH FILL		CONCRETE
	UNDISTURBED EARTH		EXISTING CONCRETE
	COMPACTED GRANULAR FILL		DEMOLITION
	GROUT OR SAND (AS NOTED)		STEEL
	GRATING		PRECAST CONCRETE

**SYMBOLS**



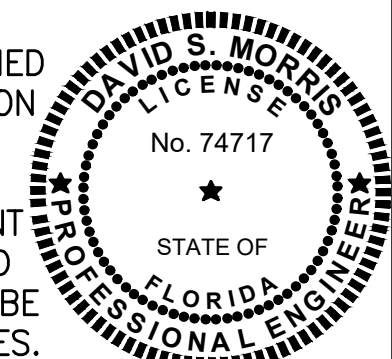
DESIGNED	DMORRIS			
DRAWN	DMORRIS			
CHECKED	JSOBCZAK			
LTR.	DATE	REVISIONS	BY	APPRD.

**JONES EDMUNDS**  
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
 CITY OF LEESBURG, FLORIDA

**GENERAL STRUCTURAL NOTES, ABBREVIATIONS, AND SYMBOLS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
DAVID S. MORRIS	SCALE	DWG. NO.
P.E. # 74717	AS NOTED	S1



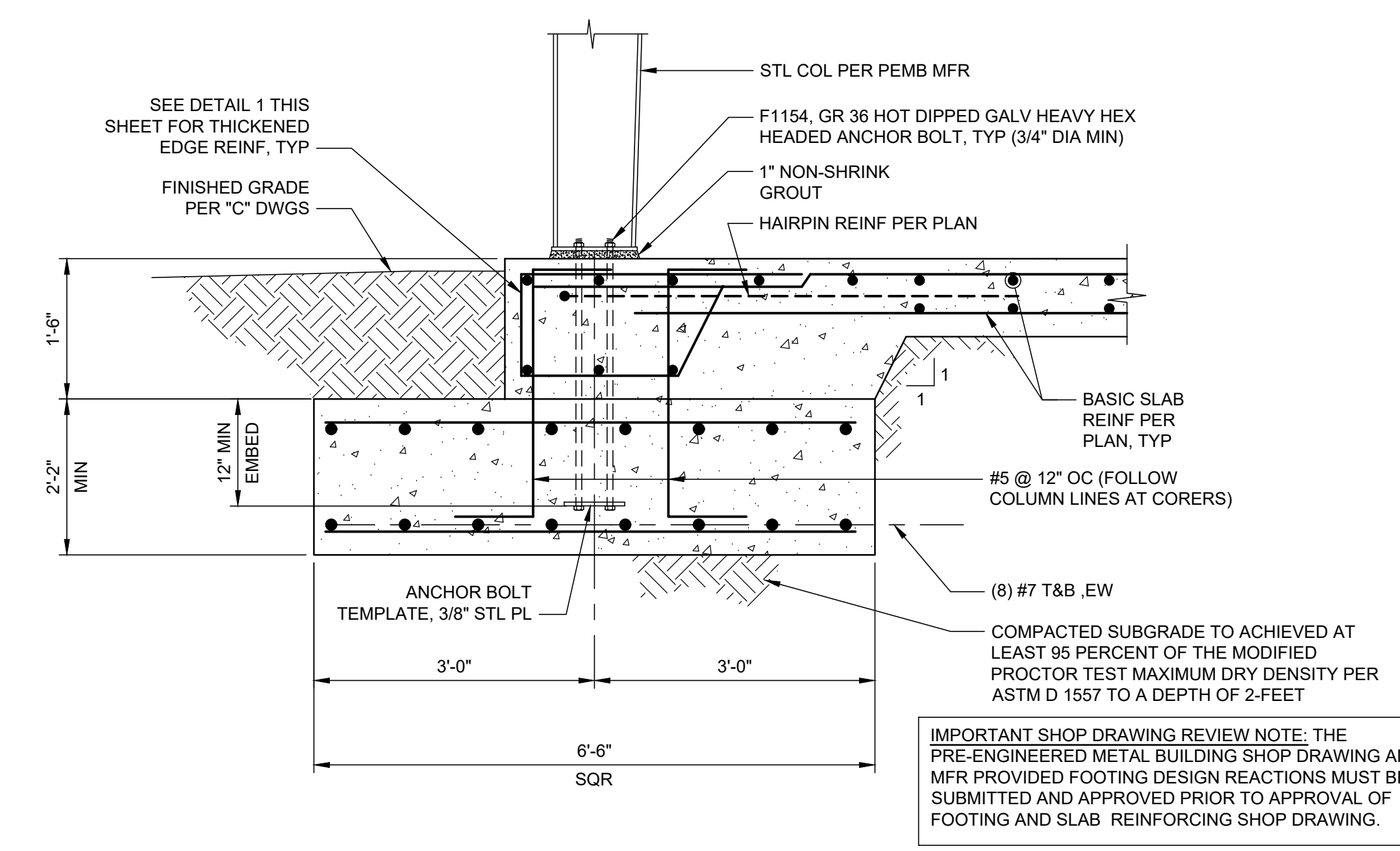
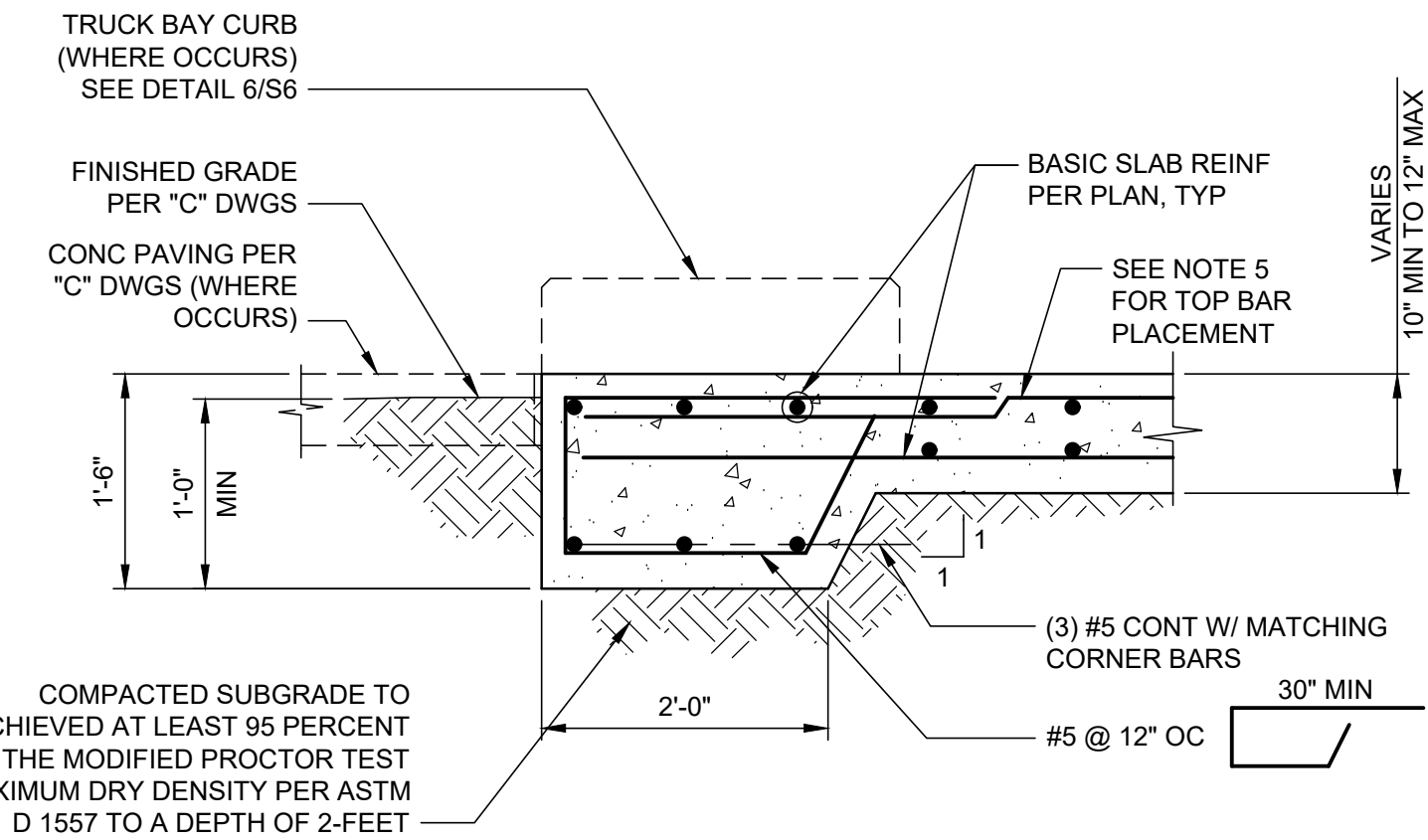
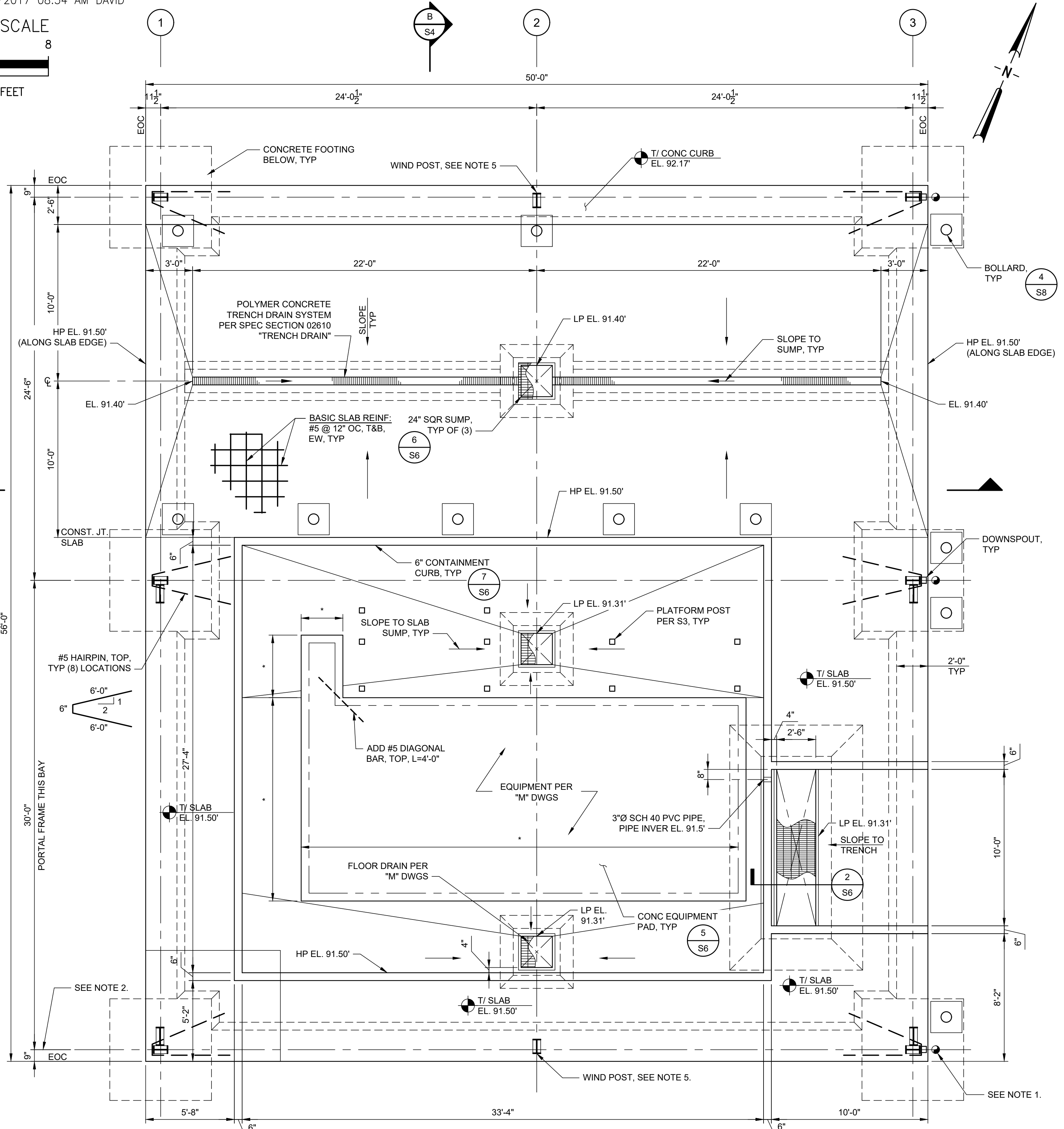
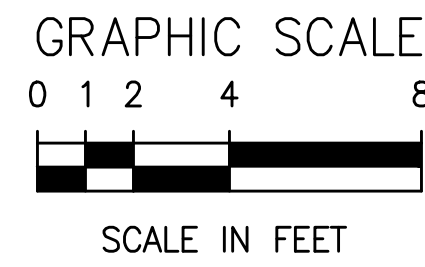
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BID DOCUMENTS



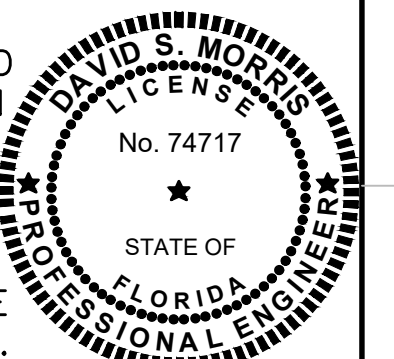


**NOTES:**

- PIPE PENETRATION FOR DOWNSPOUTS. DOWNSPOUTS SHALL BE TIED INTO SITE DRAINAGE SYSTEM PER "M" DWGS.
- FRAME LINE C SHALL BE DESIGNED AND DETAILED TO ALLOW FUTURE EXPANSION TO THE SOUTH.
- PLAN INDICATES BUILDING DIMENSIONS FROM CENTERLINE OF COLUMNS AND EDGE OF CONCRETE SLAB (EOC). THE PEMB MFR SHALL INDICATE EDGE OF CONCRETE AND EDGE OF STEEL ON THE SHOP DRAWINGS. OVERHANG OF STEEL LINE PAST EDGE OF CONCRETE IS ACCEPTABLE.
- WIND POST TO BE DESIGNED AND DETAILED TO RESIST LATERAL LOADS ONLY.
- CLEAR COVER OF TOP BARS MAY BE VARIED FROM 2" MINIMUM TO 4" MAXIMUM TO ACCOMMODATE THE SLOPING OF THE SLAB.

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LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED	DMORRIS
DRAWN	DMORRIS
CHECKED	JSOBCZAK

**JONES EDMUNDS**  
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

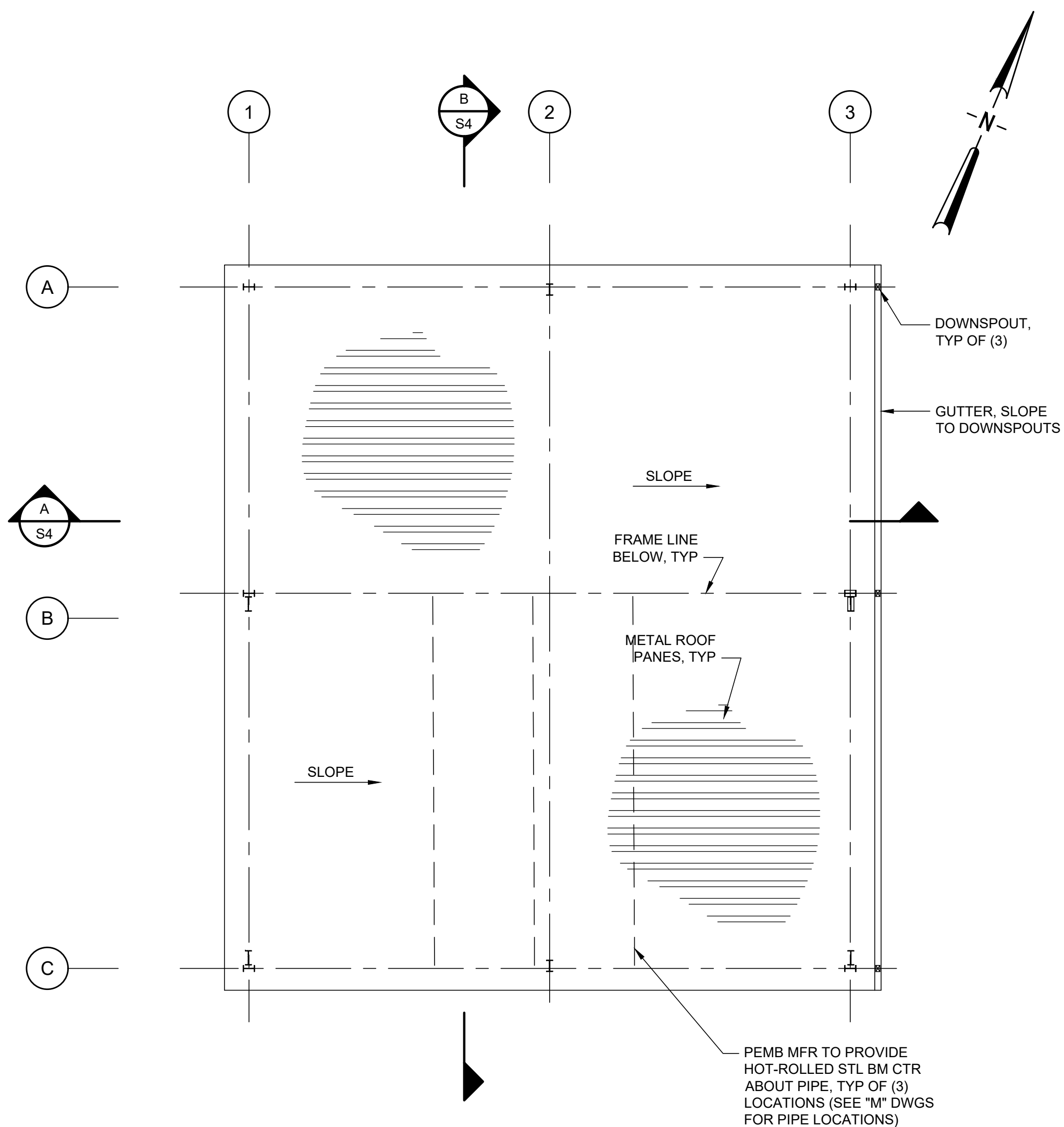
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEEBSBURG, FLORIDA**

**DEWATERING FACILITY  
FOUNDATION PLAN AND DETAILS**

CERTIFICATE OF AUTHORIZATION #1841 APPROVED BY	DATE OCT 2017	PROJECT NO. 07810-084-01
DAVID S. MORRIS P.E. # 74717	SCALE AS NOTED	DWG. NO. S2

BID DOCUMENTS





**BFP FACILITY  
ROOF PLAN**  
1/8"=1'-0"

**NOTES:**

- ALL PLATFORM FRAMING SHALL BE ALUMINUM UNLESS INDICATED OTHERWISE. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316.

**SHAPE LEGEND: (ALUM 6061-T6)**

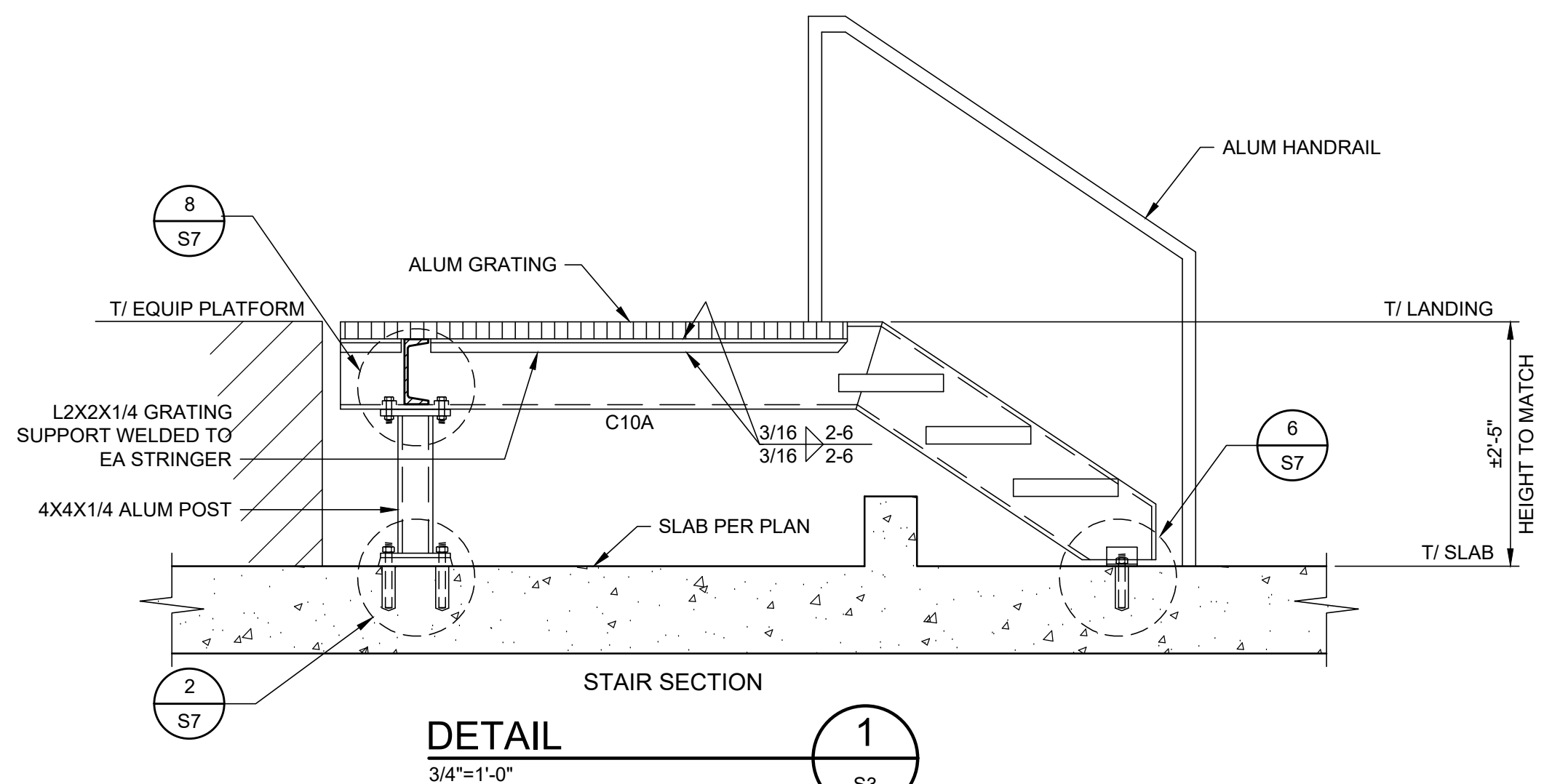
- C10 = CS10x8.36
- C10A = C10x8.64
- C8 = CS8x5.79
- 4X4 = 4x4x1/4 SQR TUBE
- L3 = L3x3x1/4

- PLATFORM LAYOUT SHALL BE COORDINATED WITH EQUIPMENT PRIOR TO SHOP DRAWING SUBMITTAL. THE SHOP DRAWING SHOWING PLATFORM FRAMING SHALL CLEARLY INDICATE LOCATION OF MEMBERS RELATIVE TO EQUIPMENT TO ENSURE NO CONFLICTS EXIST.
- THE CONTRACTOR SHALL VERIFY PANEL DIMENSIONS WITH THE PROGRESSING CAVITY CAKE PUMP AND BELT FILTER PRESS MANUFACTURE PRIOR TO FABRICATION OF ALUMINUM PLATFORM.
- ALUMINUM SHIPS LADDER TO BE 75" STANDARD DESIGN MODEL SLL-75 BY ROYALITE MANUFACTURING, INC. OR APPROVED EQUAL. LADDER SHALL BE IN CONFORMANCE W/ ALL OSHA REQUIREMENTS.

**LEGEND**

- INDICATES SKID PLATFORM AREA PROVIDED BY EQUIPMENT MANUFACTURER.

**PLATFORM FRAMING  
PLAN**  
1/4"=1'-0"



**DETAIL**  
3/4"=1'-0"

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED	DMORRIS
DRAWN	DMORRIS
CHECKED	JSOBCZAK

**JONES EDMUNDS**  
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

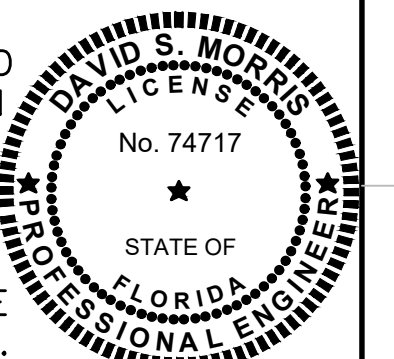
**TURNPIKE WRF DEWATERING  
FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**DEWATERING FACILITY  
ROOF PLAN AND PLATFORM PLAN**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
DAVID S. MORRIS	SCALE	DWG. NO.
P.E. # 74717	AS NOTED	S3

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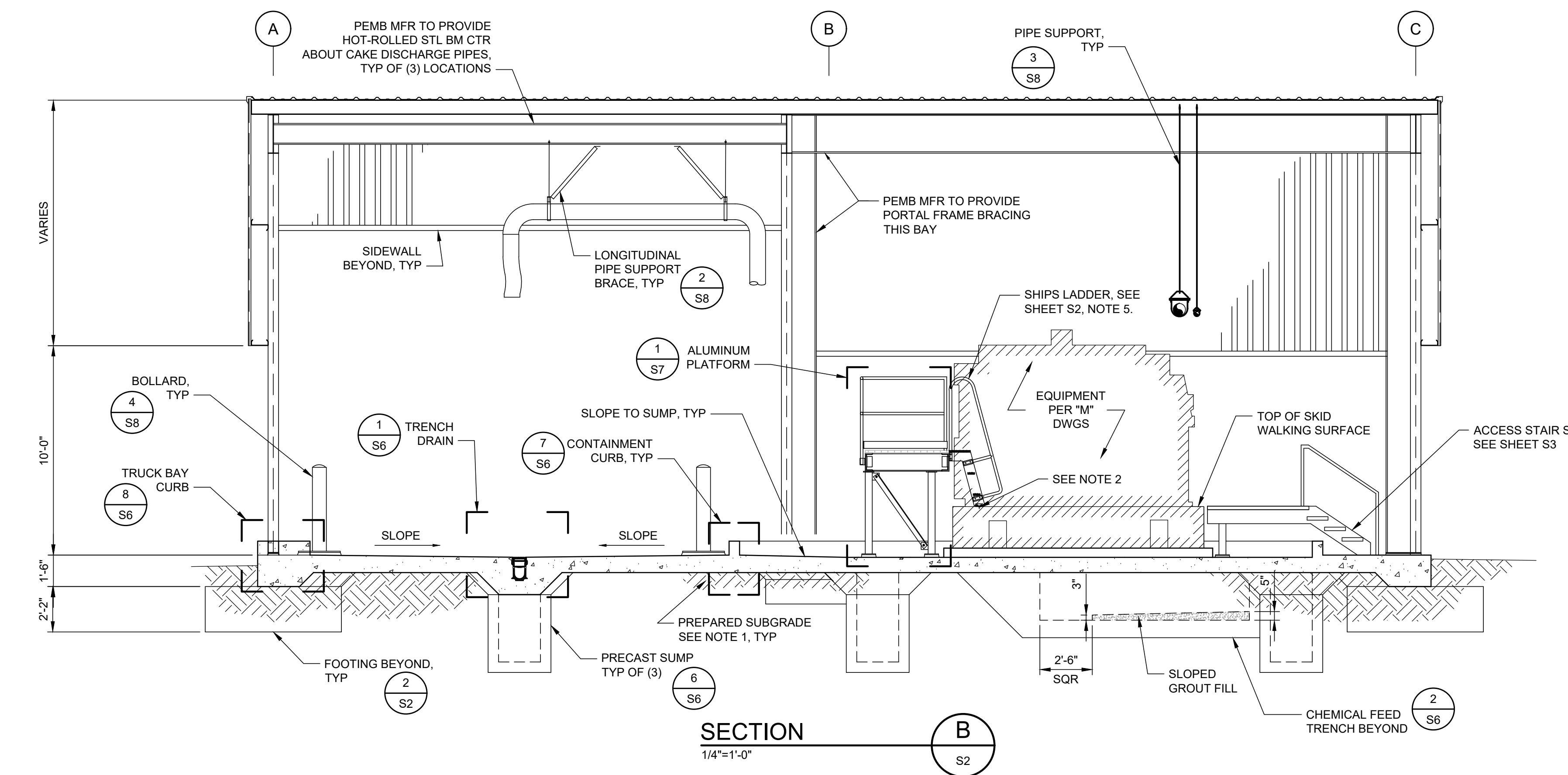
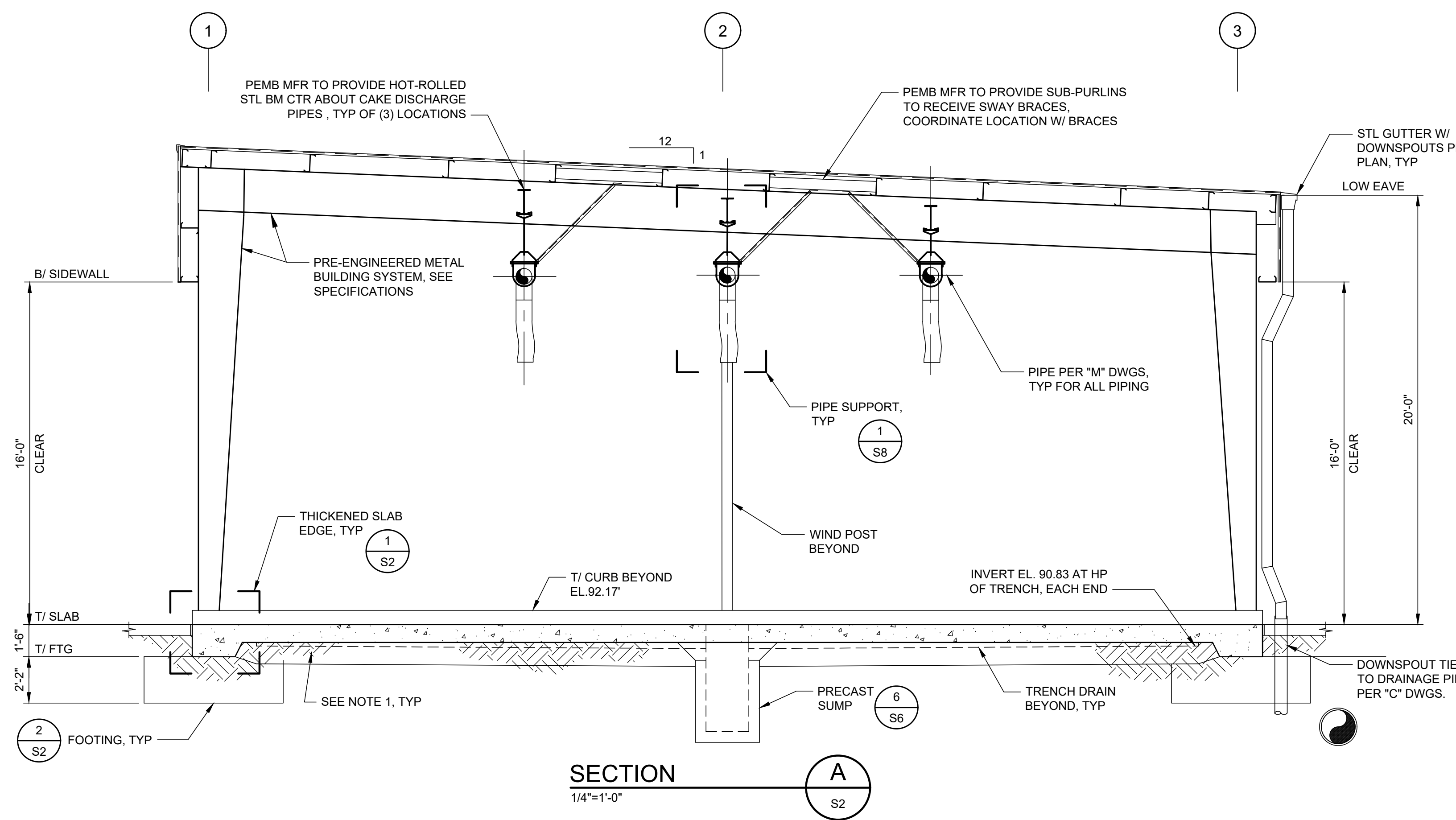
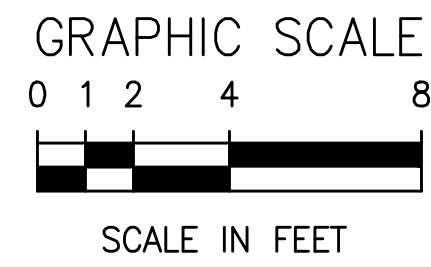
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**BID DOCUMENTS**

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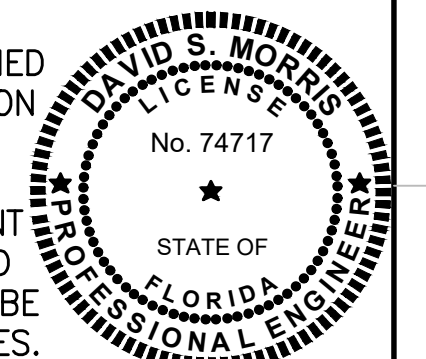




- NOTES:**
1. COMPACT SUBGRADE TO ACHIEVED AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR TEST MAXIMUM DRY DENSITY PER ASTM D 1557 TO A DEPTH OF 2-FEET BELOW SLAB OR FOOTING, TYP

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DRAWN	DMORRIS			
CHECKED	JSOBCZAK			
LTR.	DATE	REVISIONS	BY	APPRD.

**JONES EDMUNDS**  
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**DEWATERING FACILITY SECTIONS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
DAVID S. MORRIS	SCALE	DWG. NO.
P.E. # 74717	AS NOTED	S4

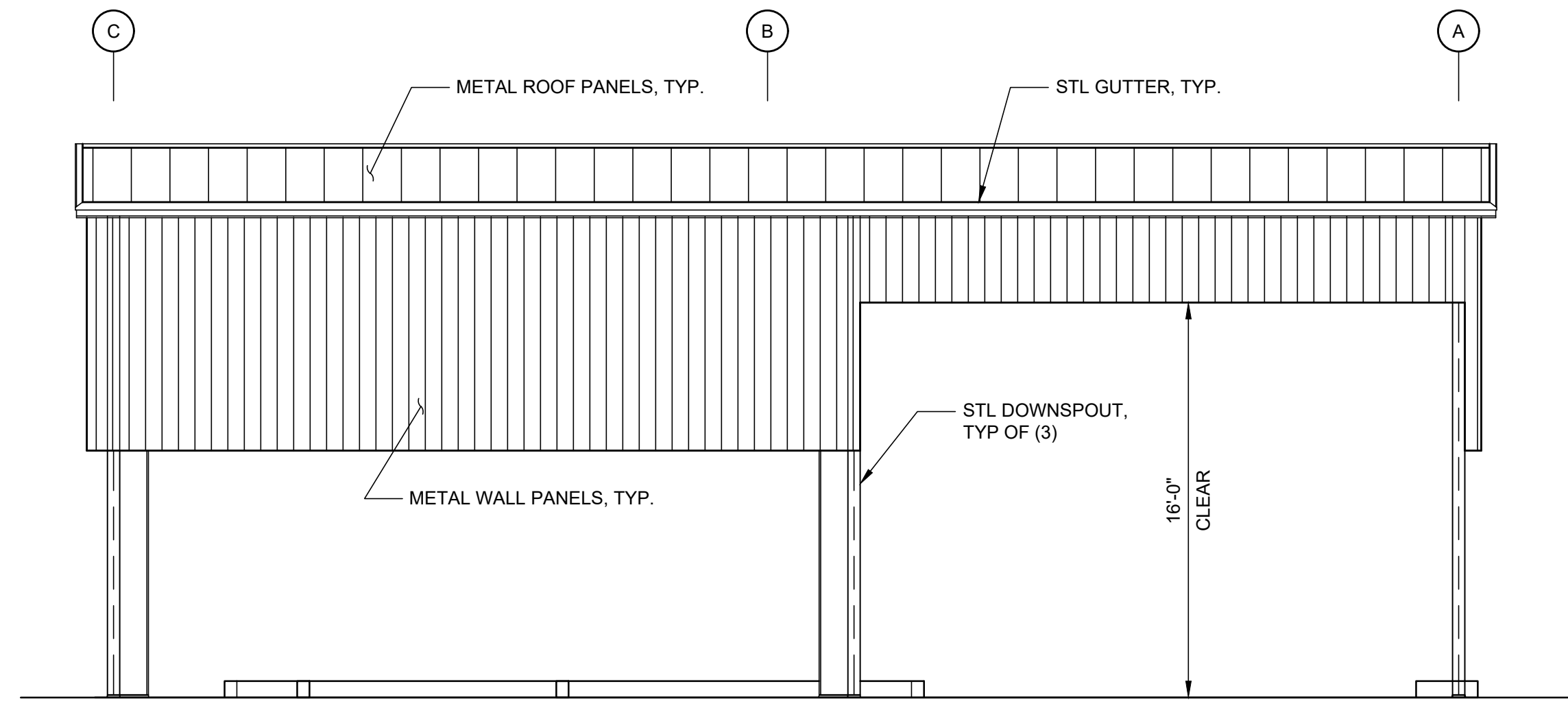


GRAPHIC SCALE

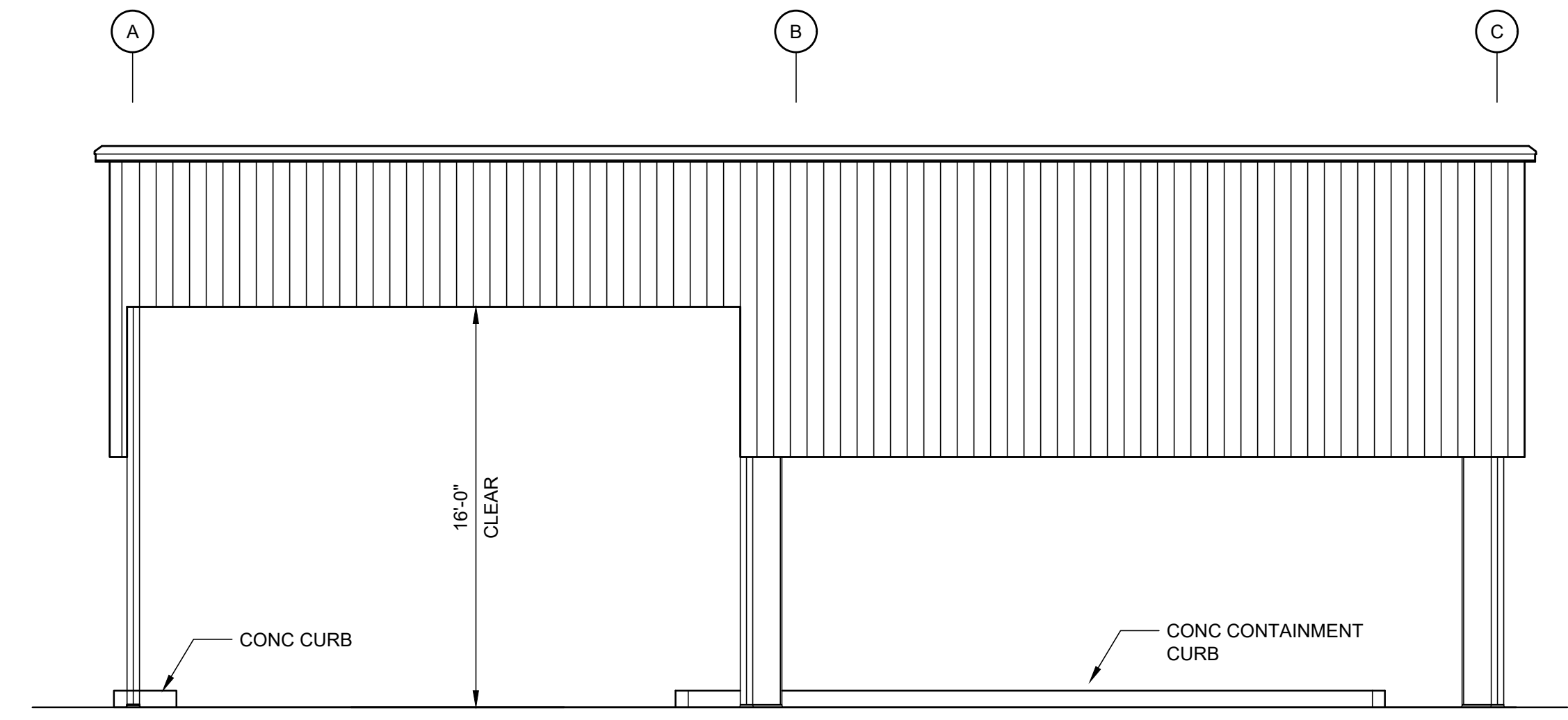
0 2 4 8



SCALE IN FEET



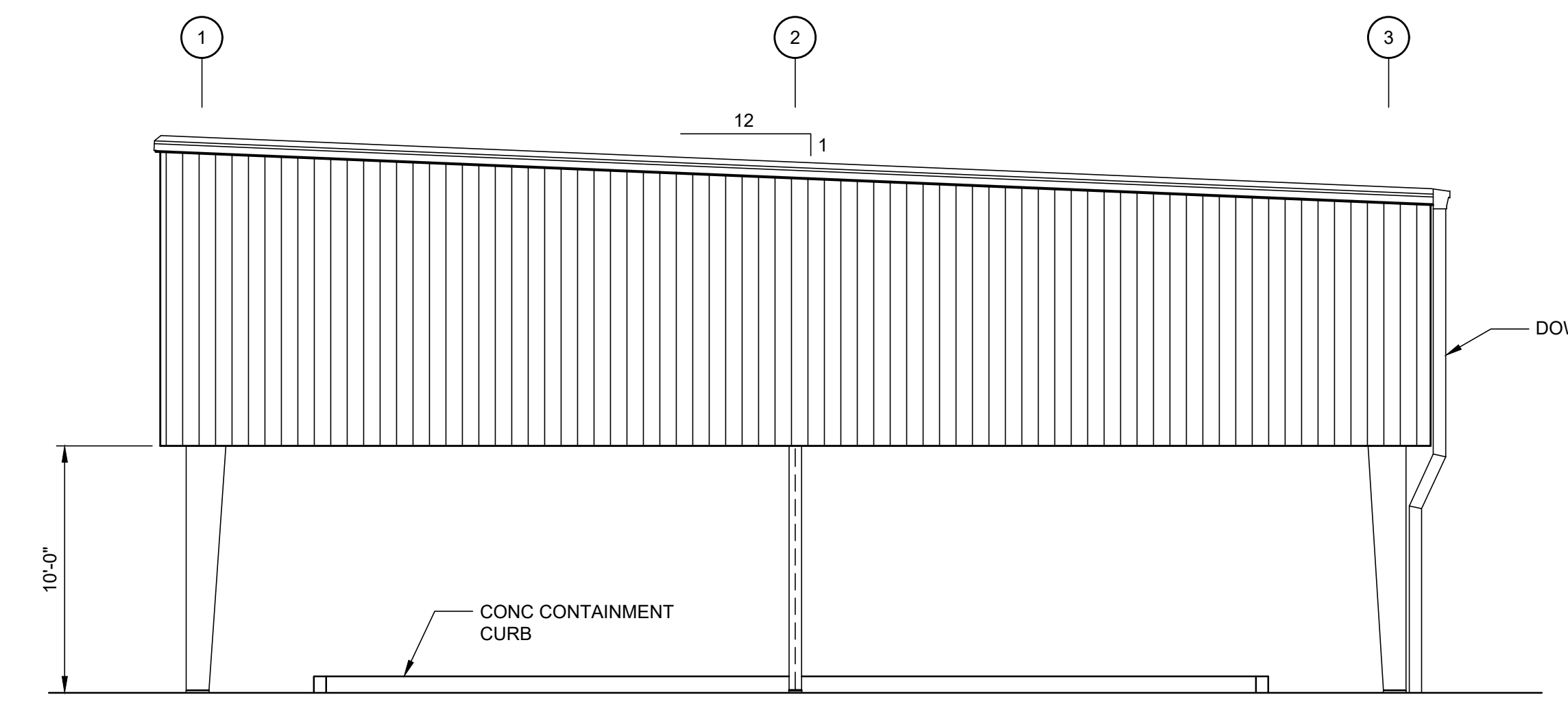
**EAST ELEVATION**  
3/16"=1'-0"



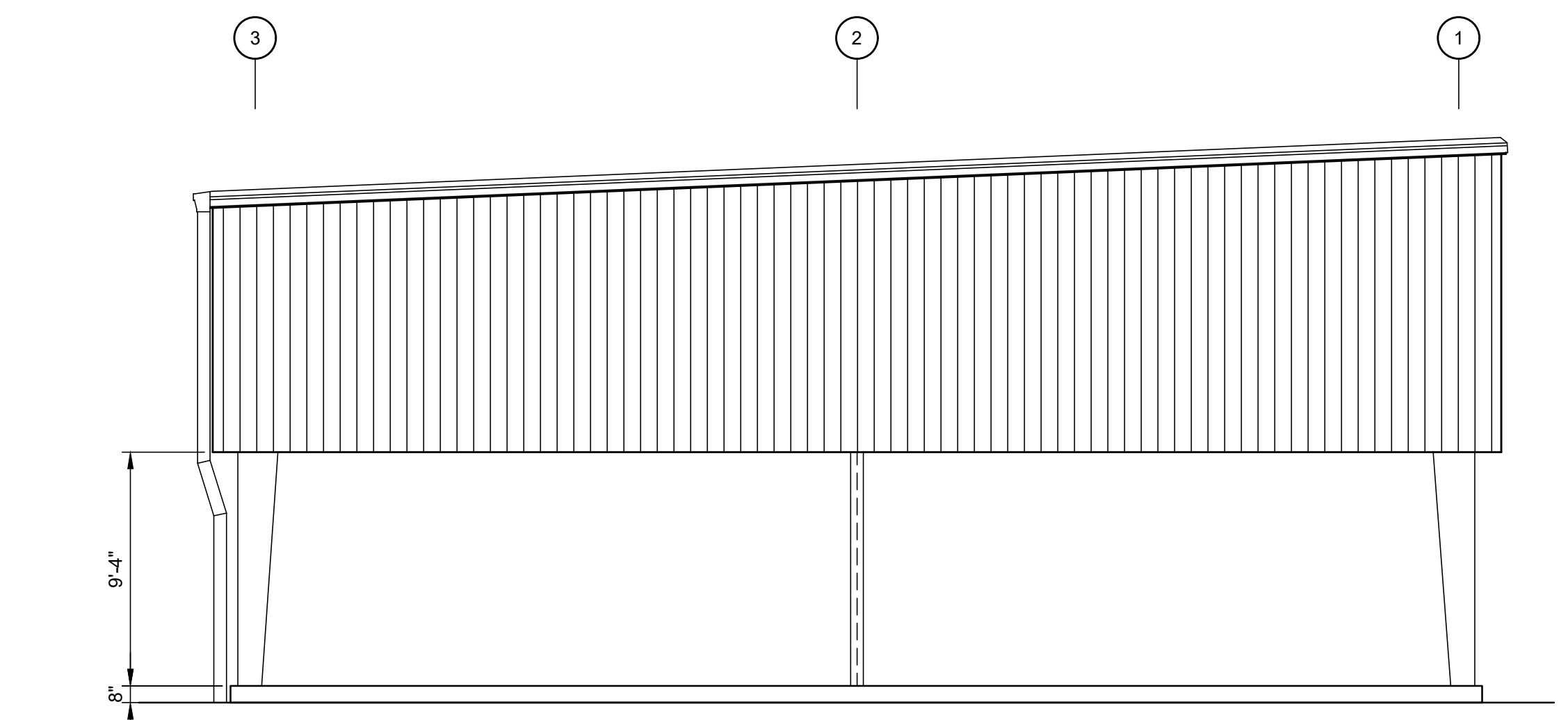
**WEST ELEVATION**  
3/16"=1'-0"

NOTES:

- EQUIPMENT NOT SHOWN FOR CLARITY.



**SOUTH ELEVATION**  
3/16"=1'-0"

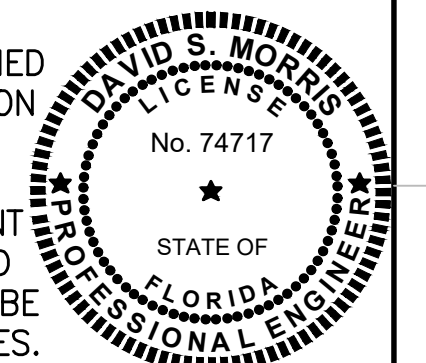


**NORTH ELEVATION**  
3/16"=1'-0"

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CHECKED	JSOBCZAK

**JONES EDMUNDS**  
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

**DEWATERING FACILITY ELEVATIONS**

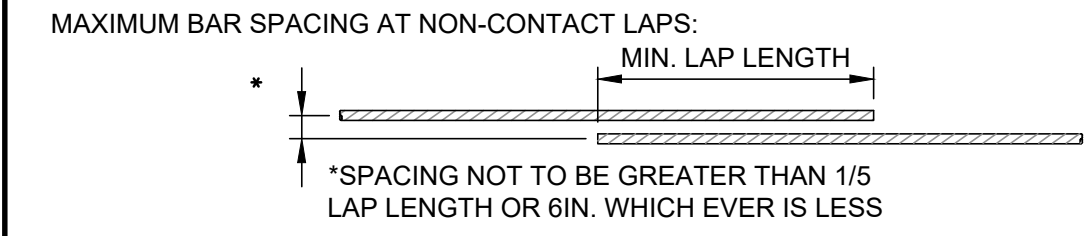
CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
DAVID S. MORRIS	SCALE	DWG. NO.
P.E. # 74717	AS NOTED	S5

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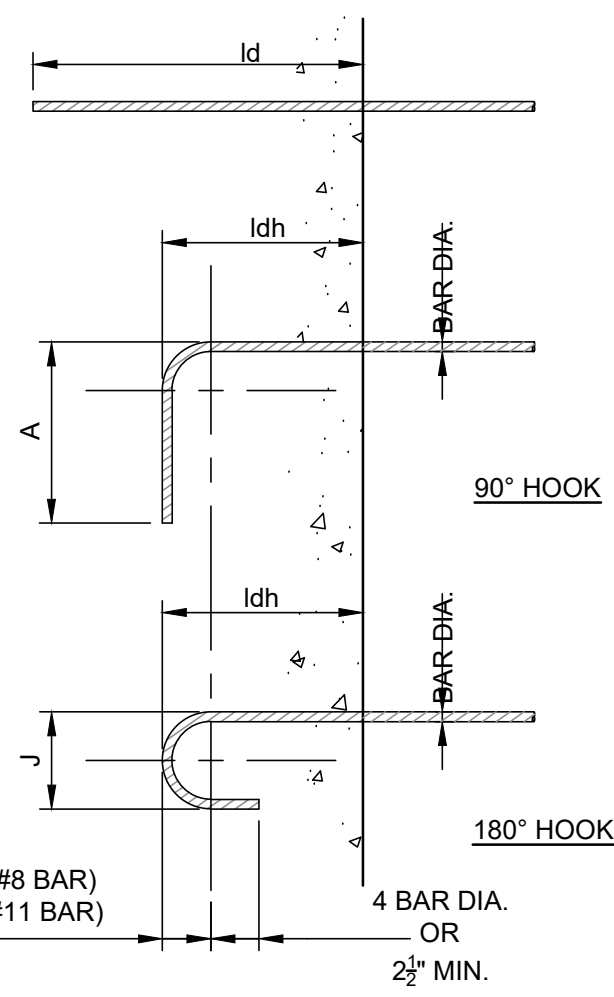
REBAR MINIMUM TENSION DEVELOPMENT & LAP LENGTHS					
CONCRETE STRENGTH $f_c = 4,000$ PSI OR GREATER					
BAR SIZE	DEVELOPMENT LENGTH, $l_d$		LAP LENGTH (CLASS B SPLICE)		BAR SIZE
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	
#3	1'-7"	1'-3"	2'-0"	1'-7"	#3
#4	2'-1"	1'-7"	2'-8"	2'-0"	#4
#5	2'-7"	2'-0"	3'-4"	2'-7"	#5
#6	3'-1"	2'-4"	4'-0"	3'-1"	#6
#7	4'-6"	3'-6"	5'-10"	4'-6"	#7
#8	5'-2"	3'-11"	6'-8"	5'-2"	#8
#9	5'-10"	4'-6"	7'-6"	5'-10"	#9
#10	6'-6"	5'-0"	8'-6"	6'-6"	#10
#11	7'-3"	5'-7"	9'-6"	7'-3"	#11

NOTES:  
 1. GRADE 60 UNCOATED REINFORCEMENT  
 2. SPLICE LENGTHS GIVEN ABOVE ARE TO BE USED UNLESS NOTED OTHERWISE ON DESIGN DRAWINGS.

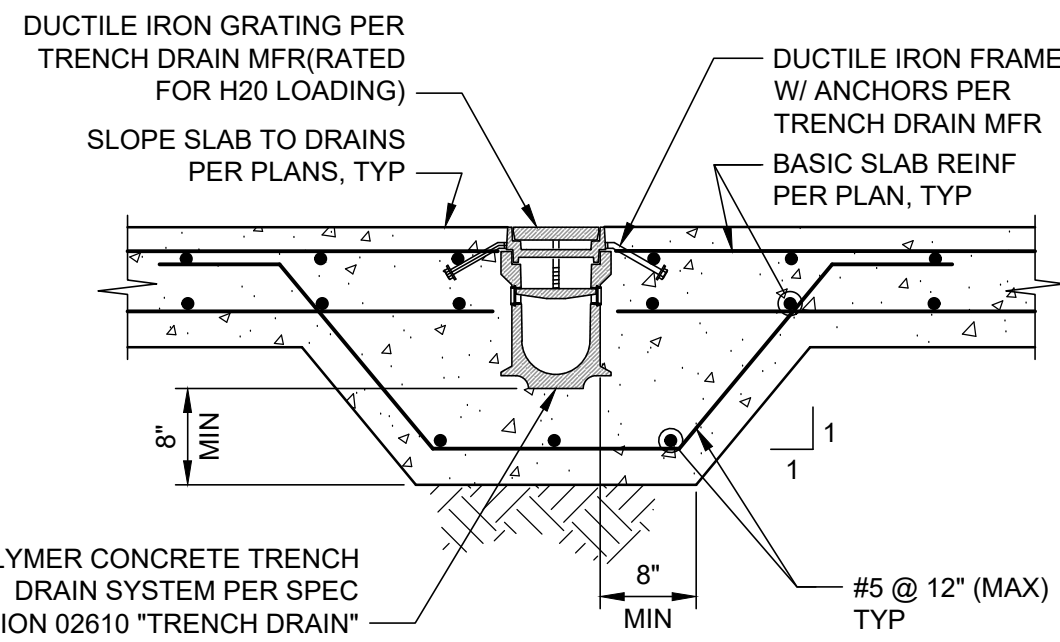


STANDARD HOOK DEVELOPMENT LENGTH			
BAR SIZE	90° STD HOOK "A"	180° STD HOOK "J"	DEVELOPMENT LENGTH, $l_{dh}$
#3	6"	3"	6"
#4	8"	4"	7"
#5	10"	5"	9"
#6	1'-0"	6"	10"
#7	1'-2"	7"	1'-0"
#8	1'-4"	8"	1'-2"
#9	1'-7"	11 1/2"	1'-3"
#10	1'-10"	1'-1 1/2"	1'-5"
#11	2'-0"	1'-2 3/4"	1'-7"

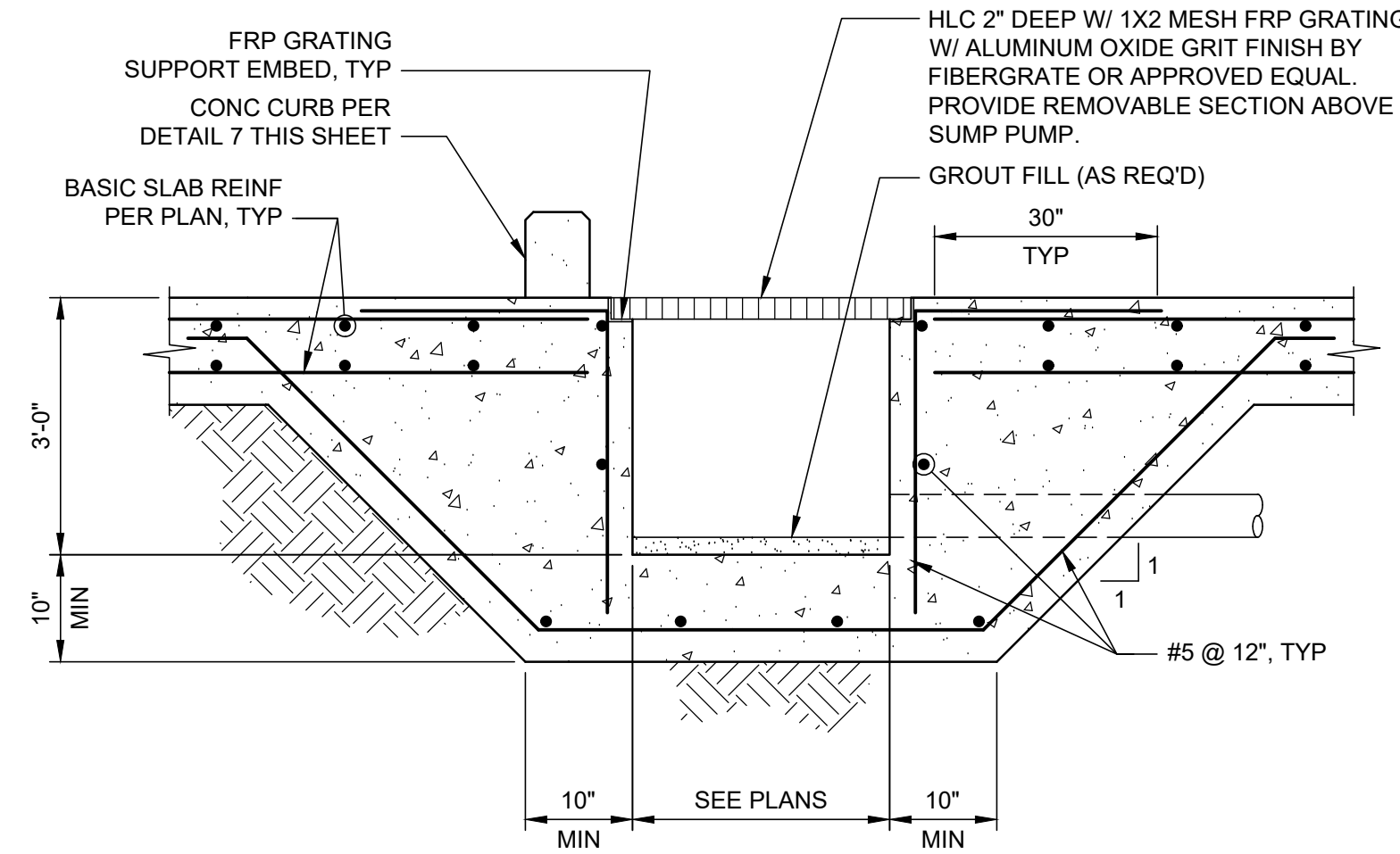
\*FOR STD HOOK BAR GEOMETRY NOT SHOWN REFER TO MINIMUM ACI REQUIREMENTS



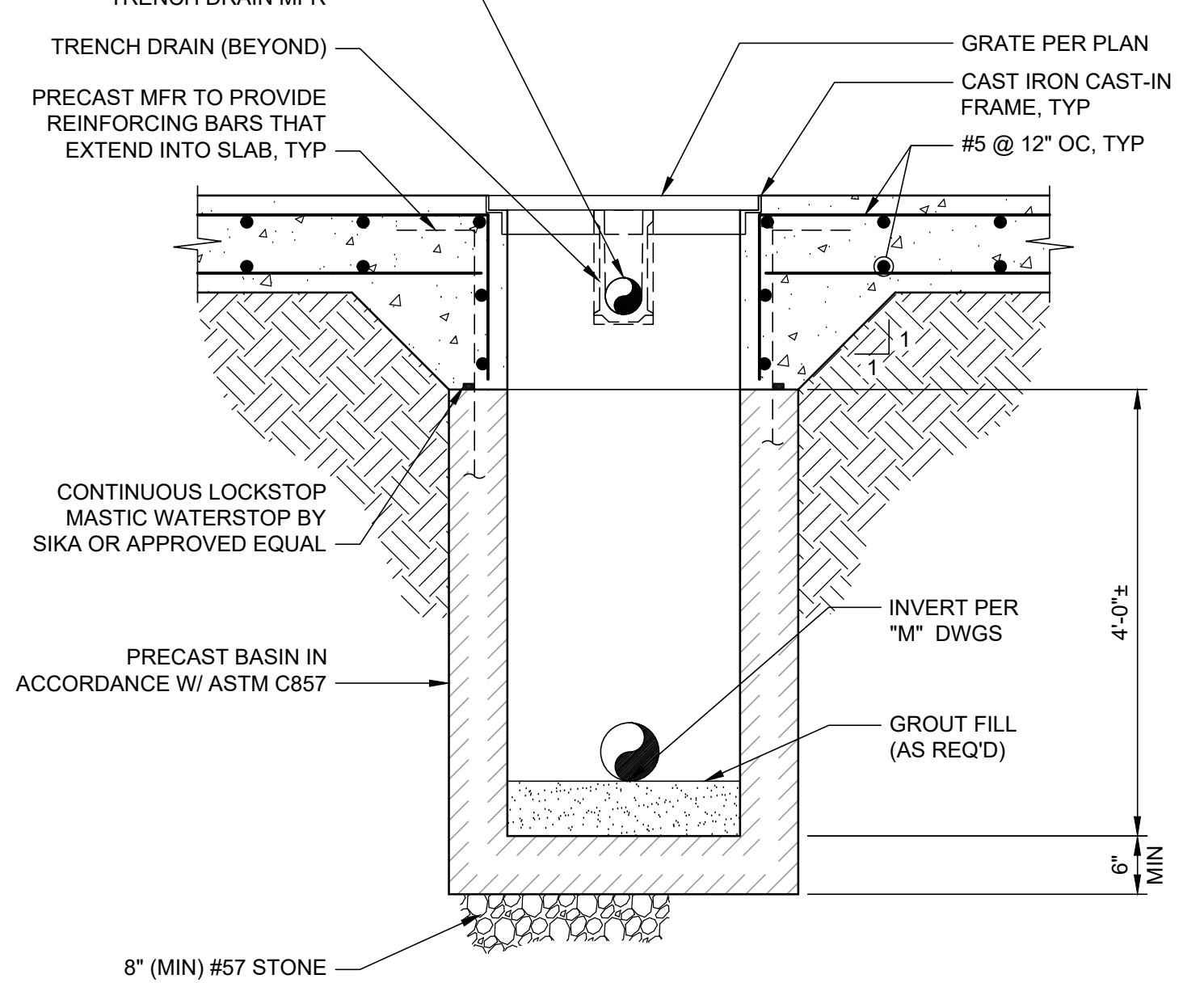
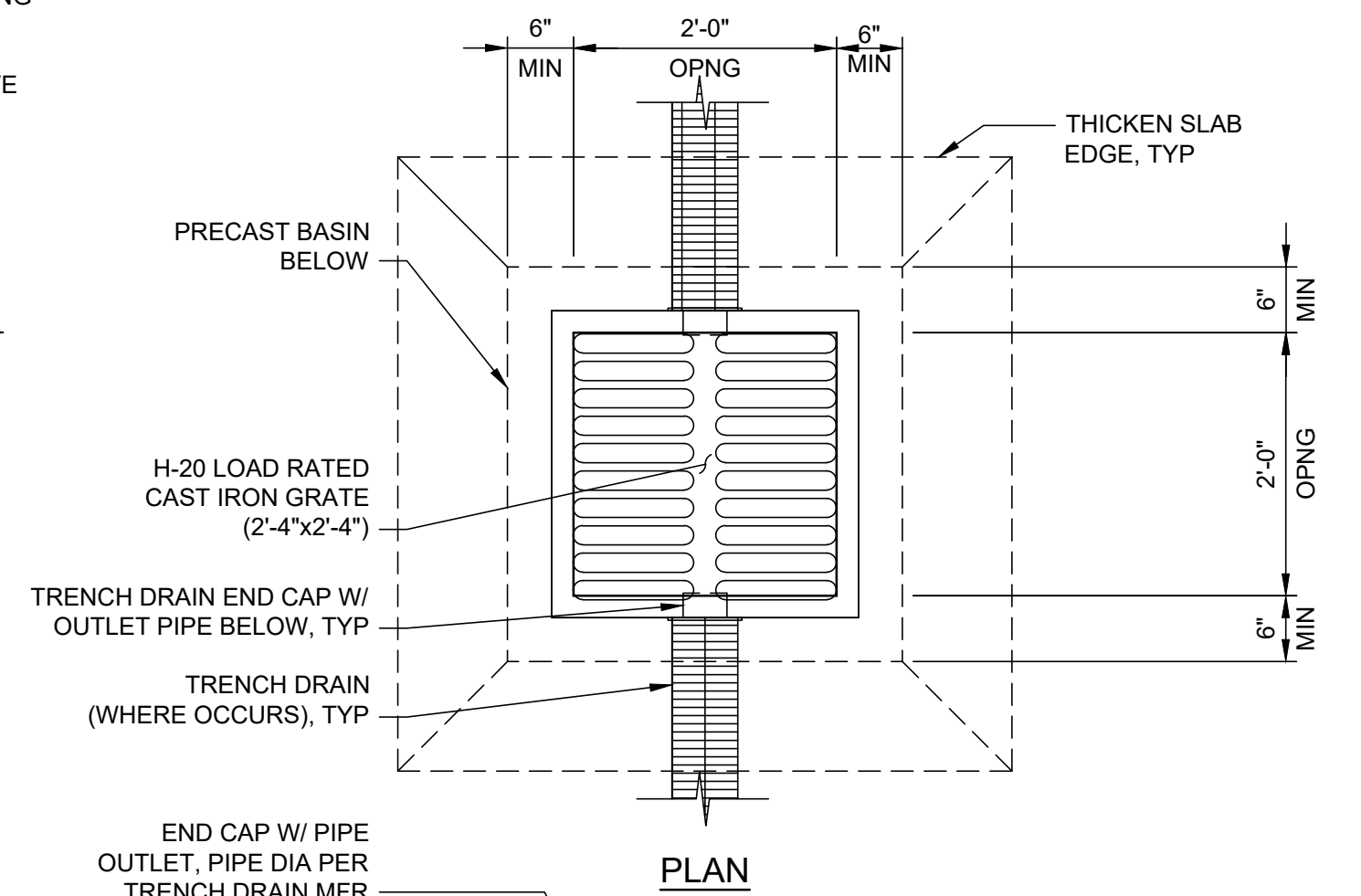
STANDARD REINFORCING DETAILS  
 DETAIL 3  
 NTS



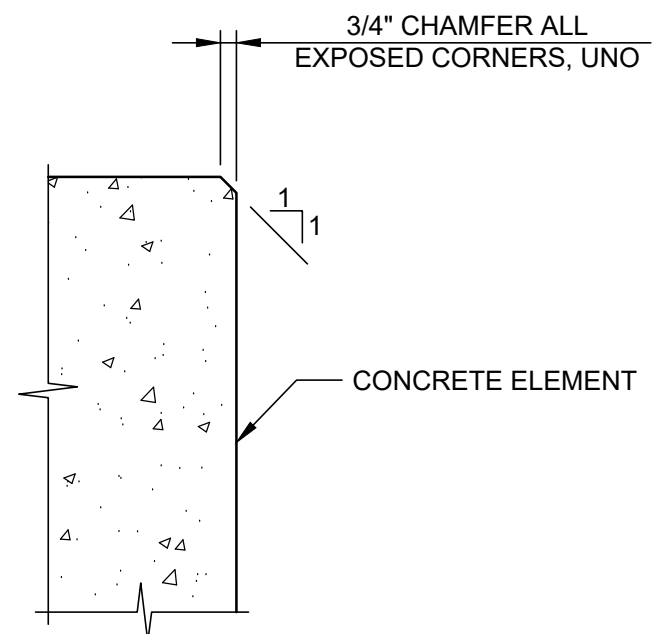
TRENCH DRAIN  
 DETAIL 1  
 3/4" = 1'-0"



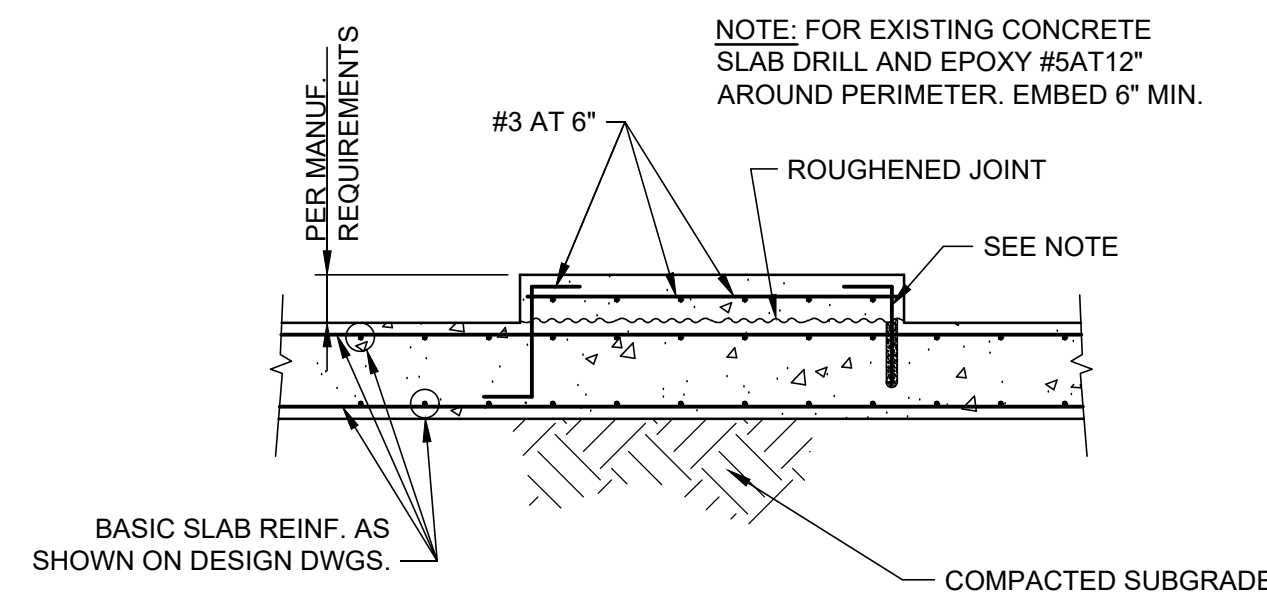
CHEMICAL FEED TRENCH  
 DETAIL 2  
 3/4" = 1'-0"



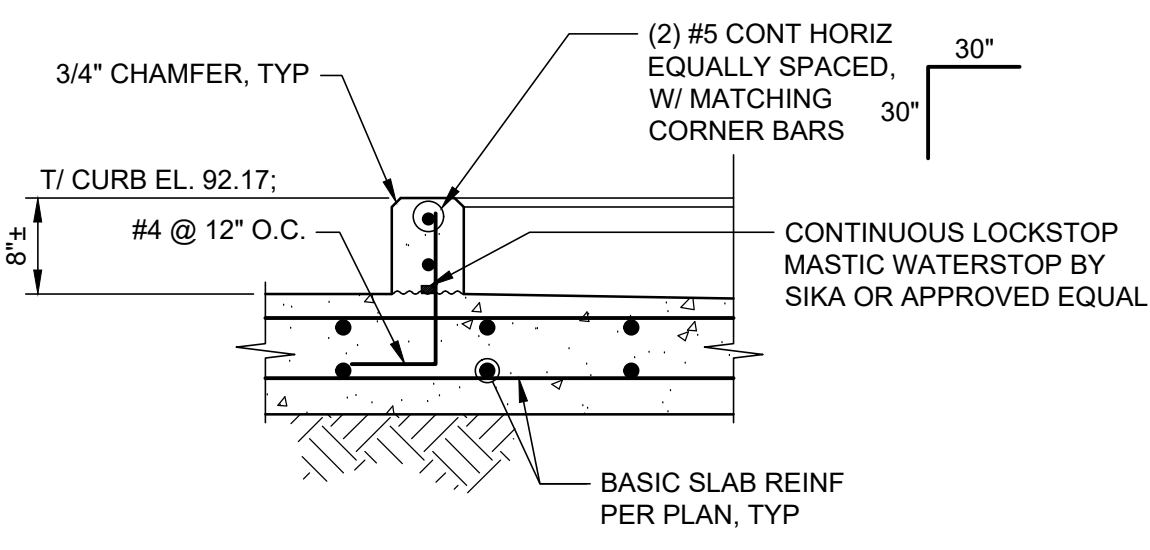
SUMP  
 DETAIL 6  
 3/4" = 1'-0"



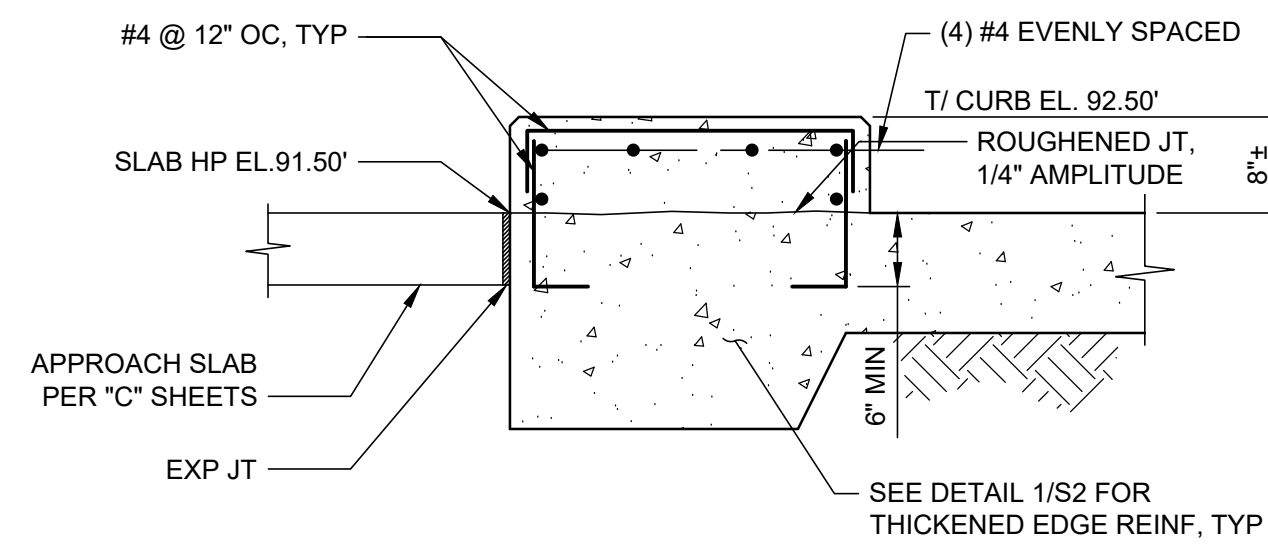
TYPICAL CHAMFER  
 DETAIL 4  
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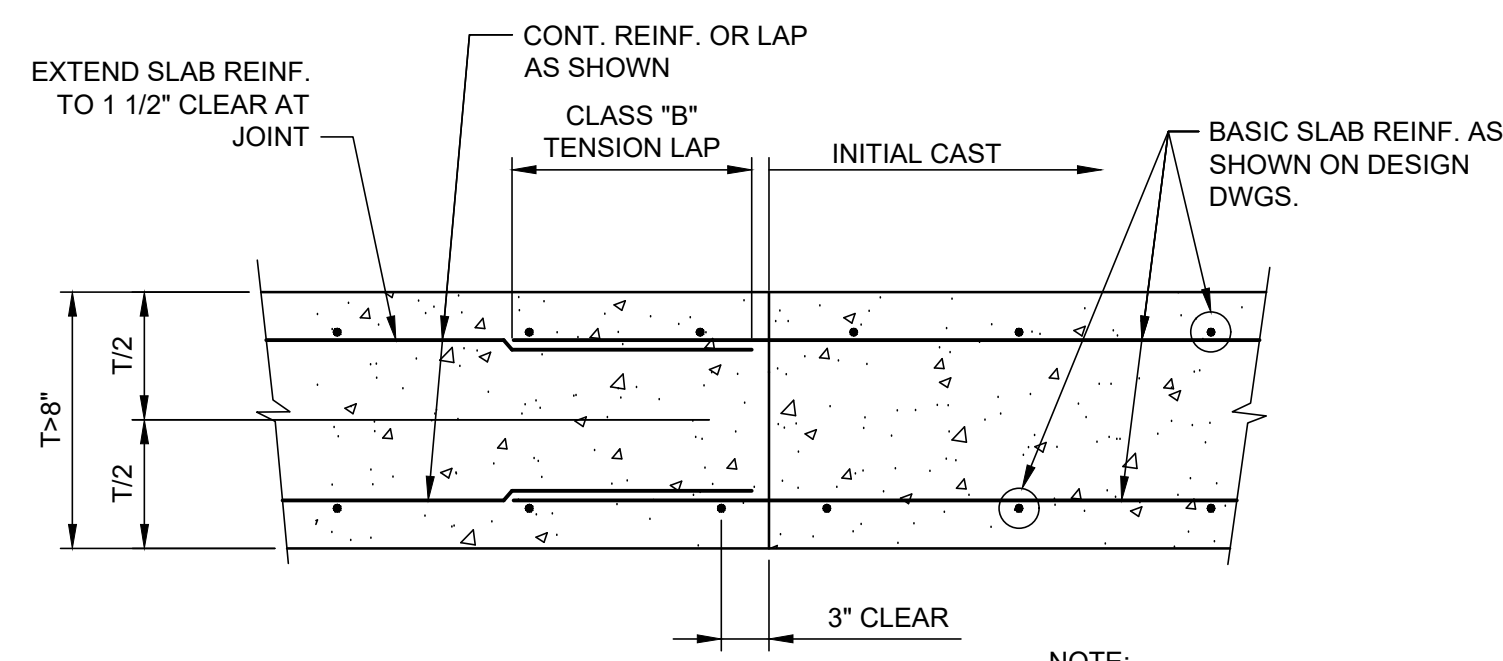
TYPICAL EQUIPMENT PAD  
 DETAIL 5  
 NTS



CONTAINMENT CURB  
 DETAIL 7  
 3/4" = 1'-0"



TRUCK BAY CURB  
 DETAIL 8  
 3/4" = 1'-0"

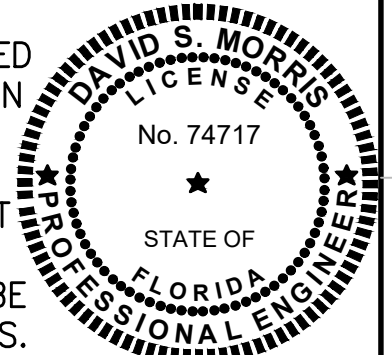


TYPICAL SLAB CONSTRUCTION JOINT  
 DETAIL 9  
 NTS

NOTE: ALLOW 48 HOURS BETWEEN PLACEMENT OF INITIAL CAST AND SUBSEQUENT CASTS.

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DESIGNED DMORRIS  
 DRAWN DMORRIS  
 CHECKED JSOBCZAK

**JONES EDMUNDS**  
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

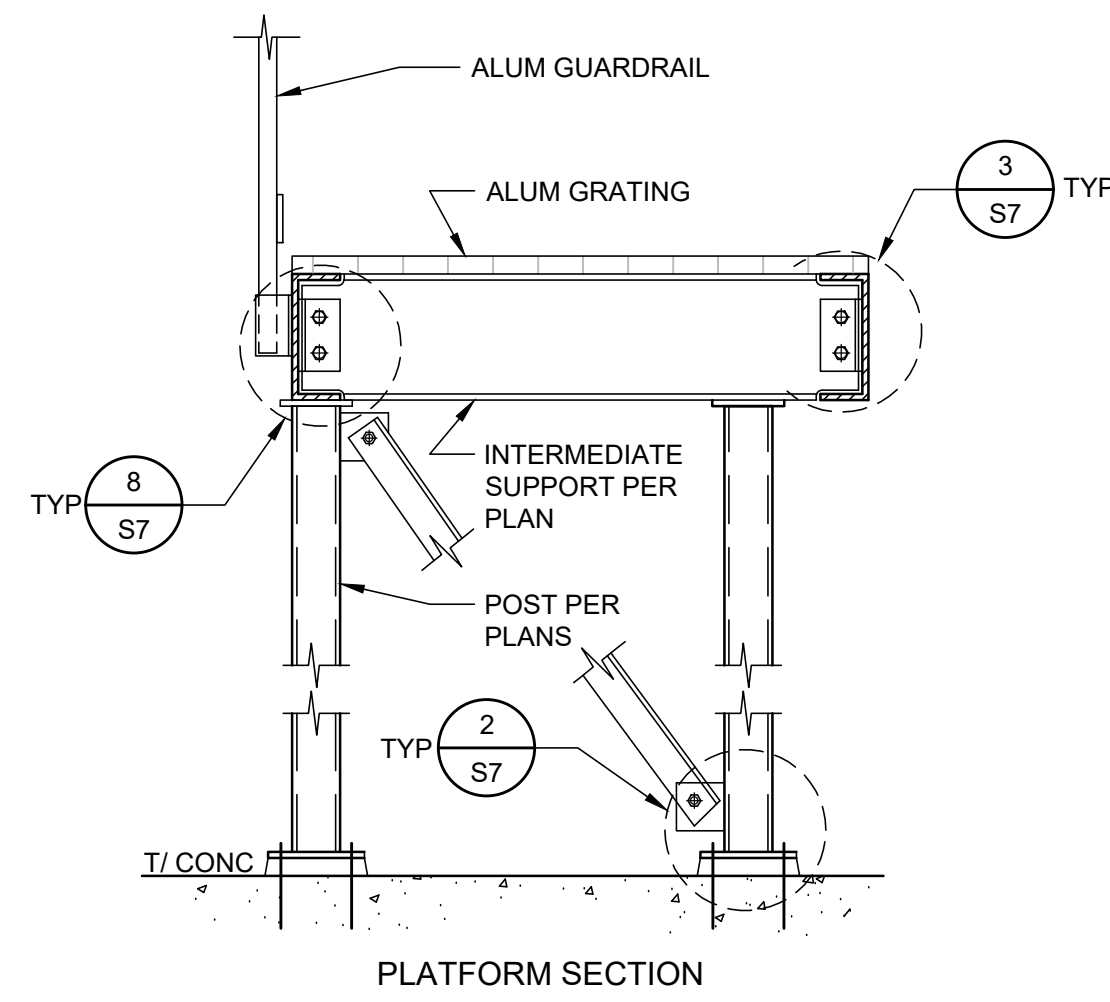
**DEWATERING FACILITY STRUCTURAL DETAILS**

CERTIFICATE OF AUTHORIZATION #1841 APPROVED BY	DATE OCT 2017	PROJECT NO. 07810-084-01
DAVID S. MORRIS P.E. # 74717	SCALE AS NOTED	DWG. NO. S6

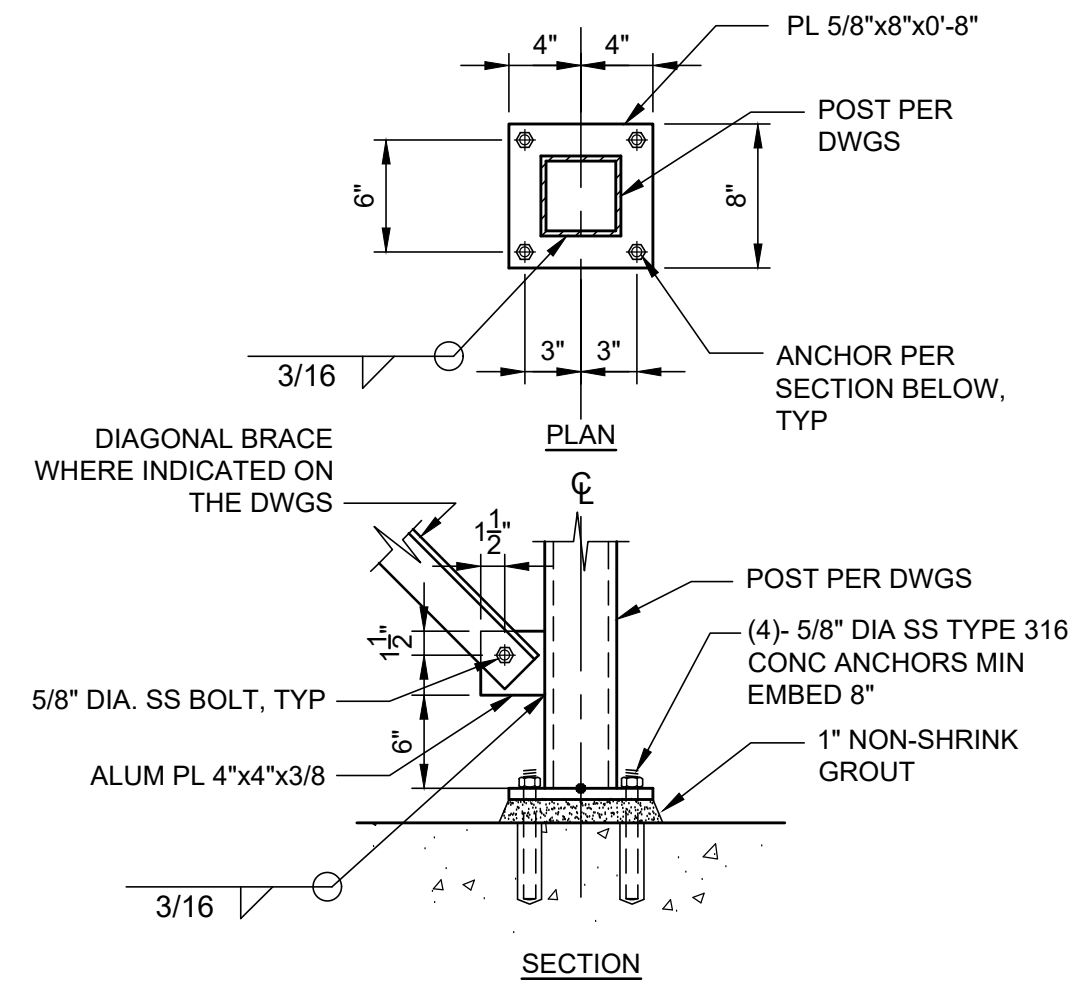
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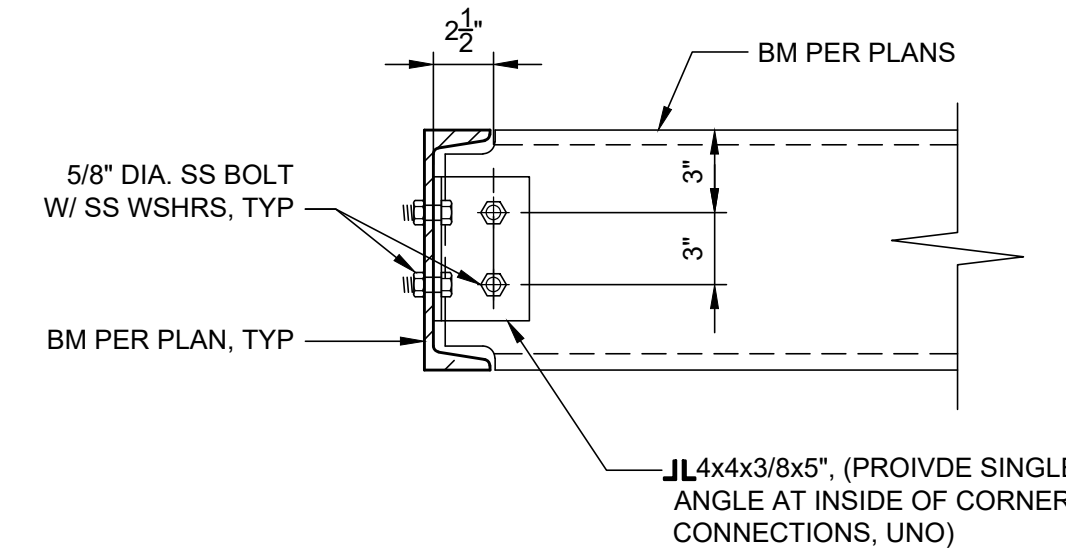




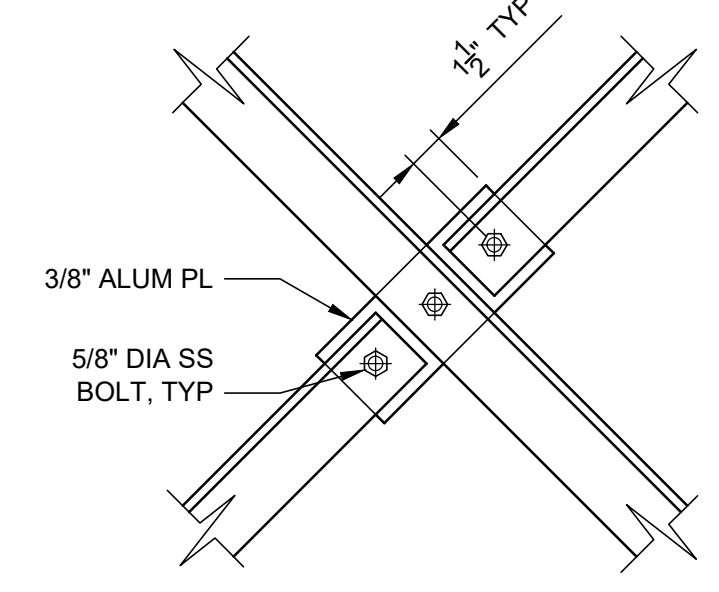
**DETAIL 1**  
NTS



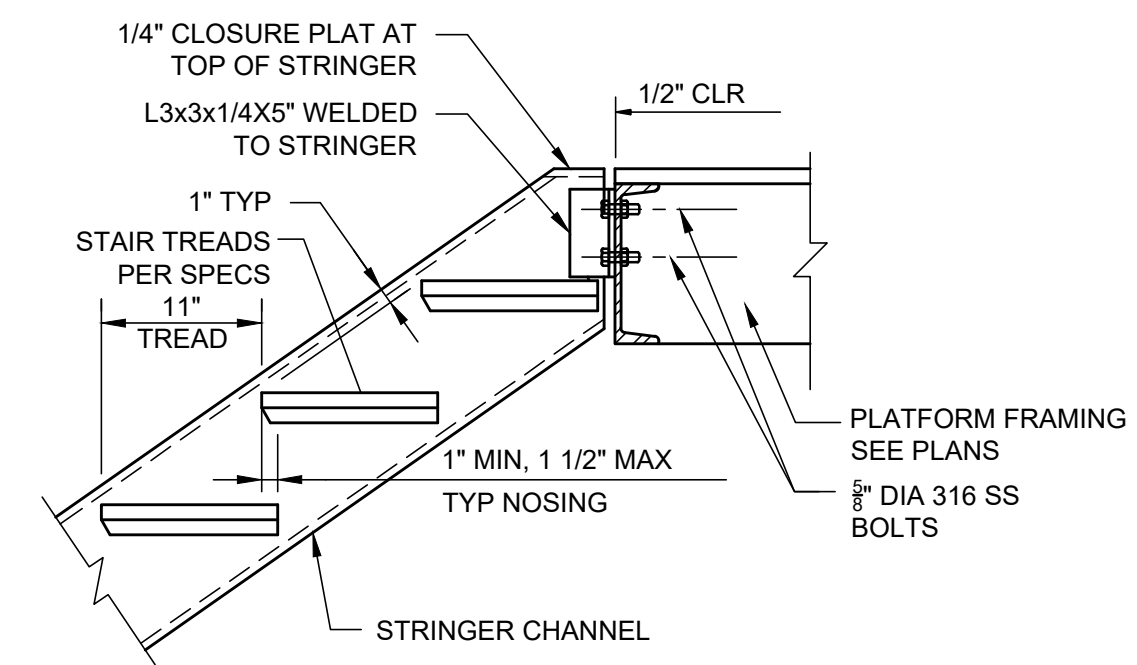
**DETAIL 2**  
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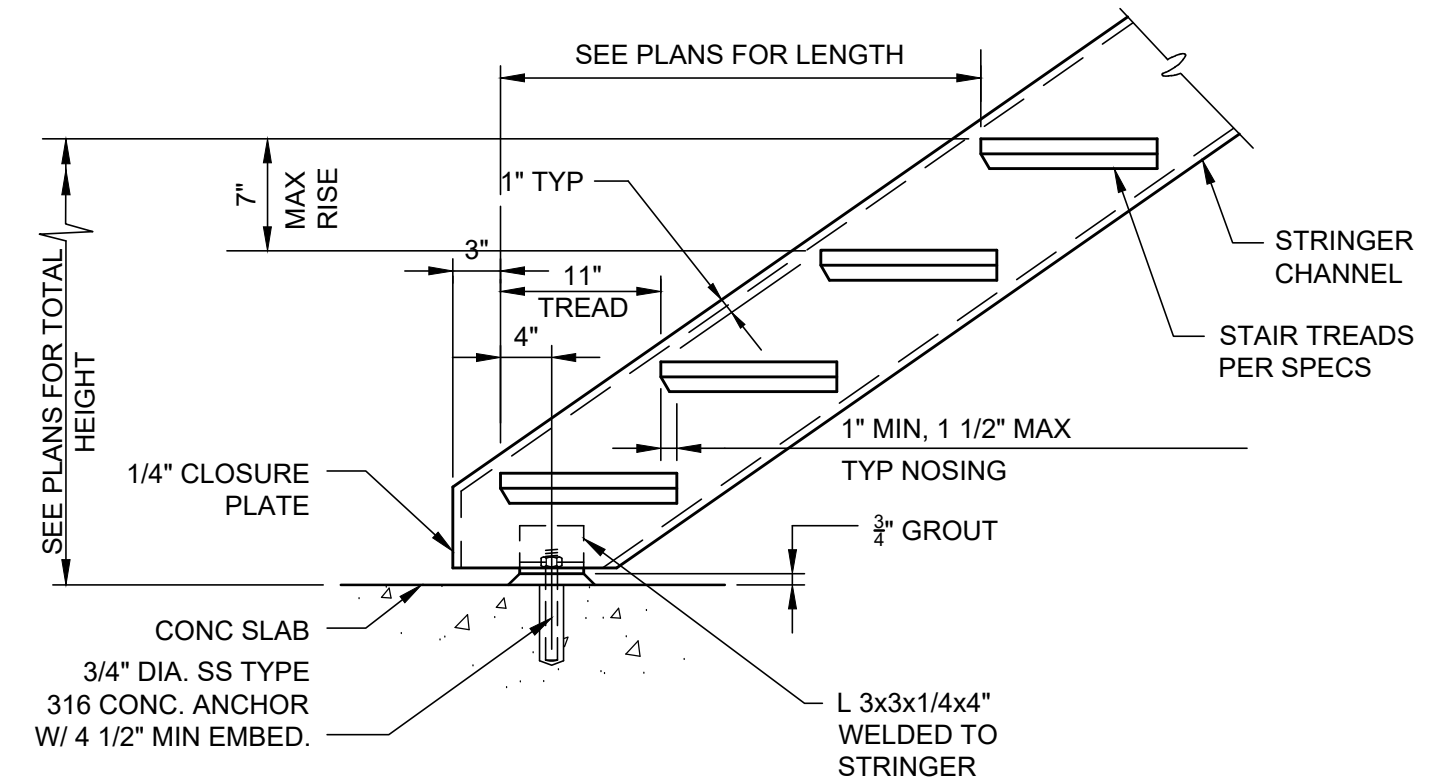
**DETAIL 3**  
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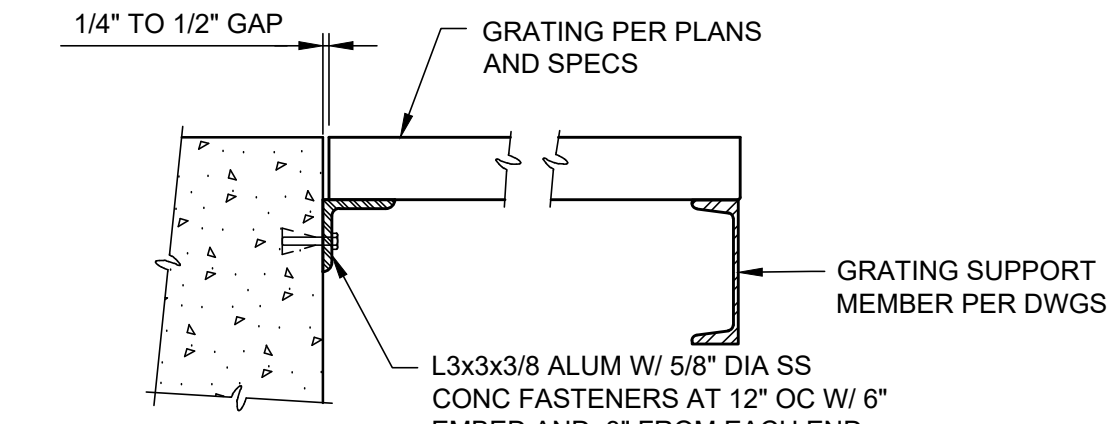
**DETAIL 4**  
NTS



**DETAIL 5**  
NTS

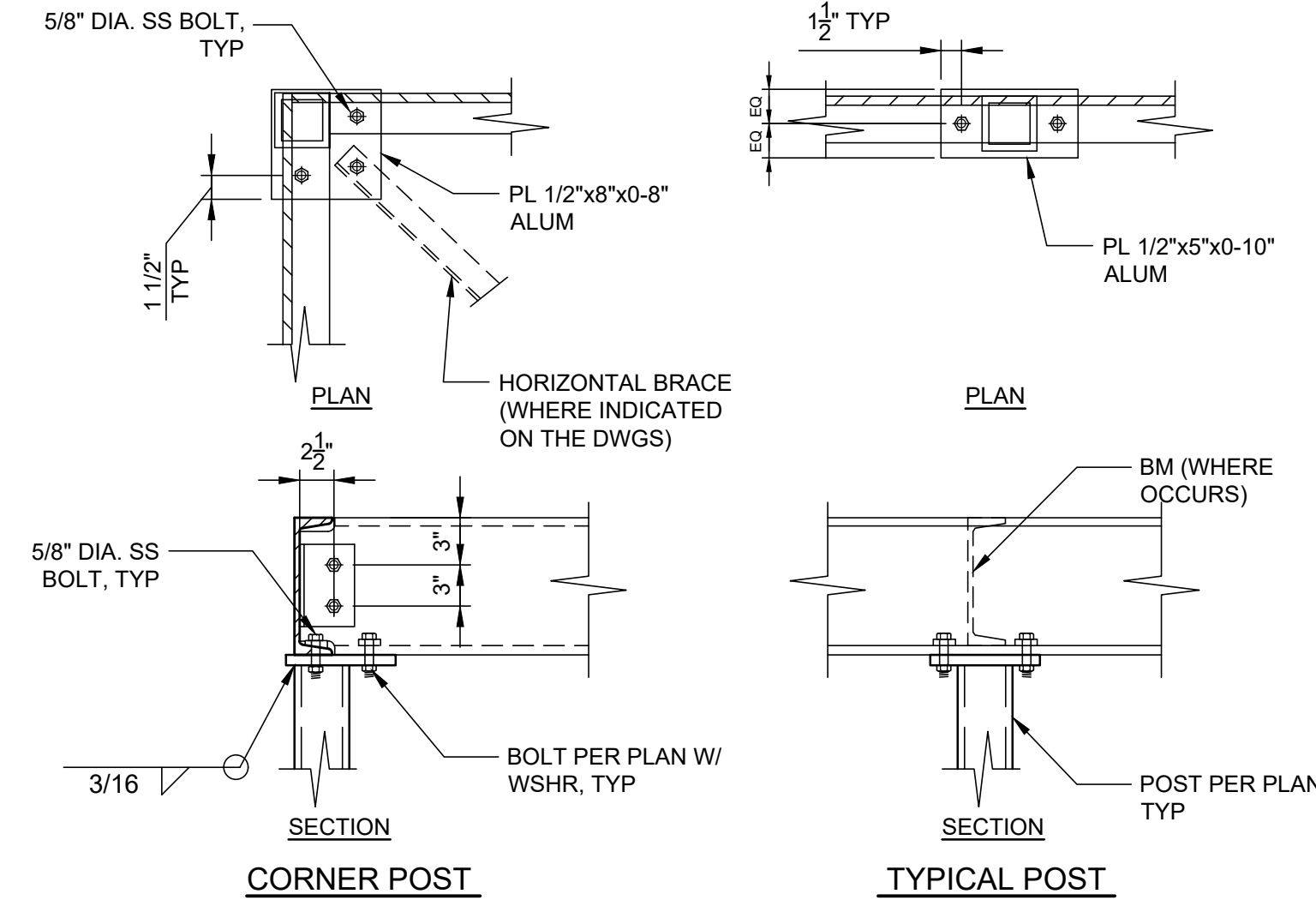


**DETAIL 6**  
NTS

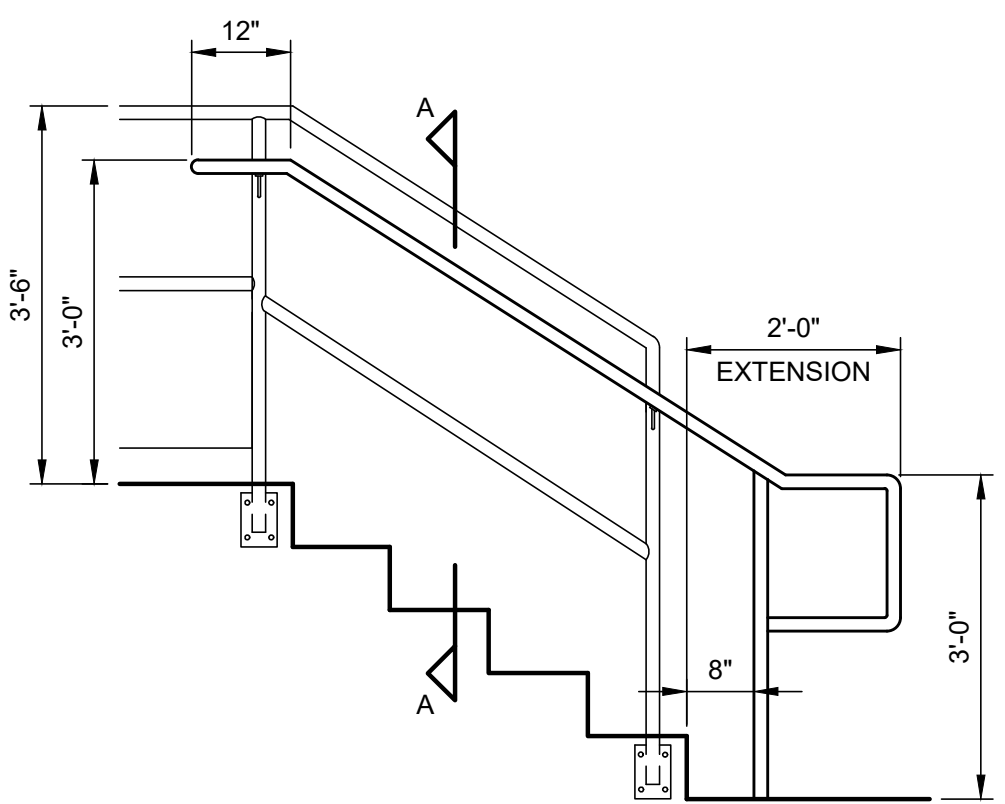


**DETAIL 7**  
NTS

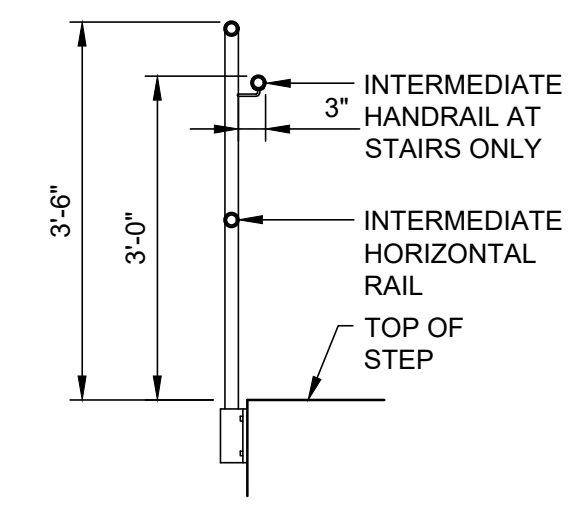
MAXIMUM SPAN	DEPTH	BEARING BAR	
		THICKNESS	SPACING
3'-0"	1 1/4"	3/16"	1 3/16"
4'-0"	1 1/2"	3/16"	1 3/16"
5'-0"	2"	3/16"	1 3/16"
6'-0"	2 1/4"	3/16"	1 3/16"



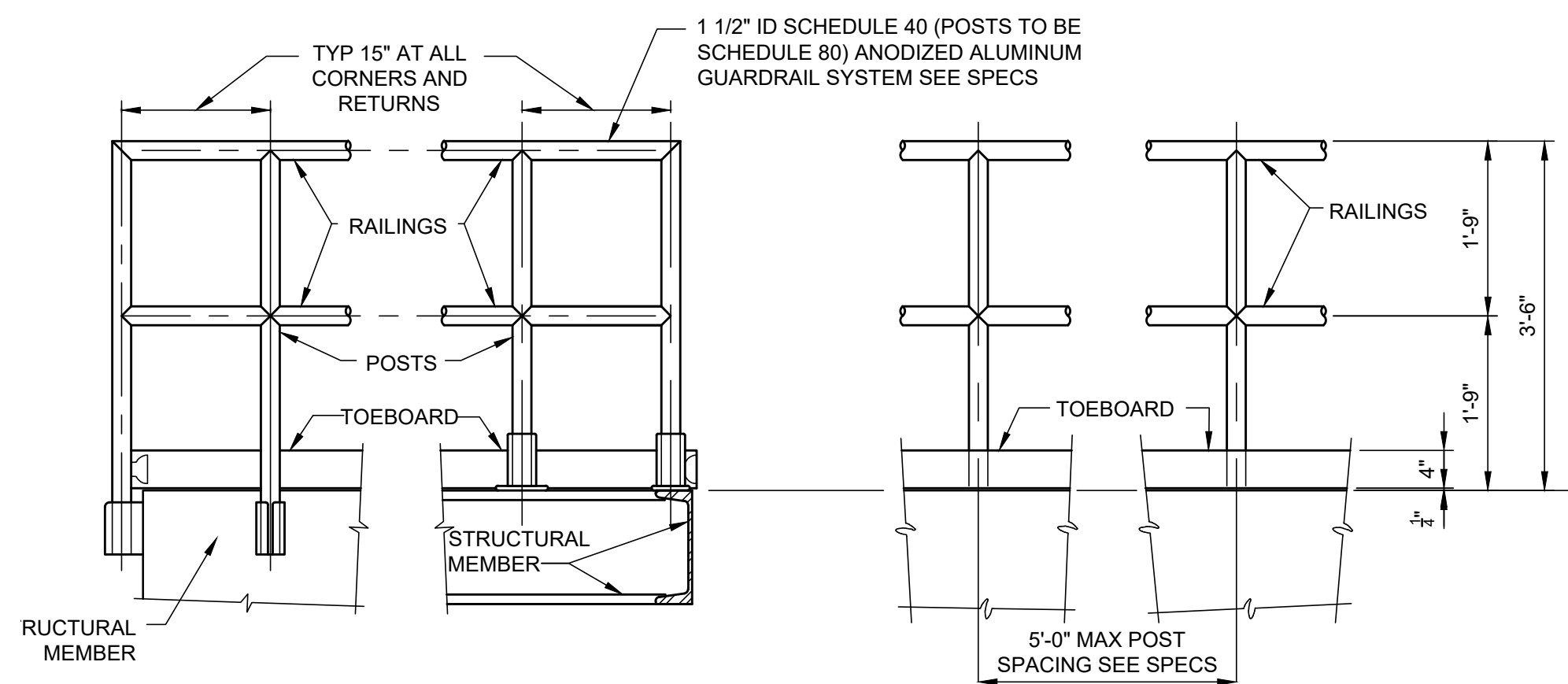
**DETAIL 8**  
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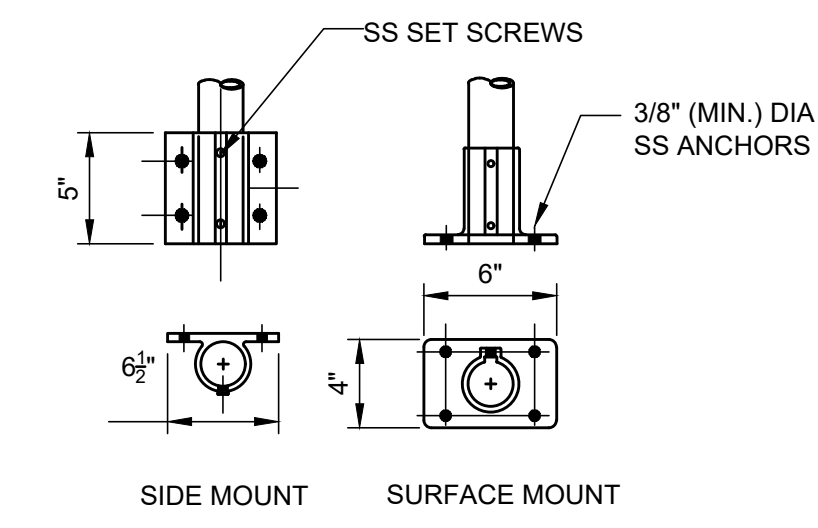
**DETAIL 9**  
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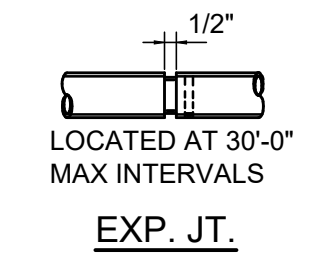
RAILING SECTION A-A



**DETAIL 10**  
NTS



CONNECTIONS



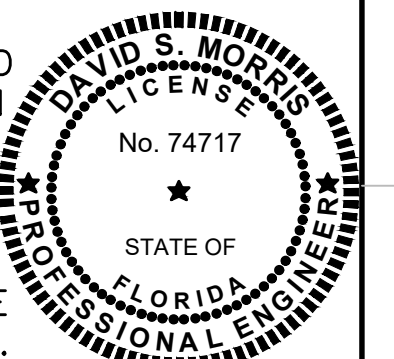
EXP. JT.

**ALUMINUM RAILING NOTES:**

- ALUMINUM EMBEDDED IN CONCRETE MUST BE PAINTED WITH ONE SHOP COAT OF HEAVY BITUMASTIC.
- ALUMINUM SHAPES IN CONTACT WITH CONCRETE MUST BE SEPARATED BY 1/32" NEOPRENE GASKET OR ANY CASE WHERE TWO DIFFERENT METALS ARE TO BE IN CONTACT. A NEOPRENE GASKET MUST BE PROVIDED.
- HANDRAILS, GUARDRAILS, POST, BRACKETS AND MOUNTINGS SHALL MEET INTERNATIONAL BUILDING CODE (IBC) AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS (OSHA) LOADING REQUIREMENTS.
- TOP OF ALL GUARDRAILS SHOULD BE 42" HIGH ABOVE THE FINISH FLOOR OR WALKWAY. THE INTERMEDIATE RAILS SHALL BE EQUALLY SPACED BETWEEN THE TOP RAIL AND THE TOEBOARD.
- ALL WALKWAYS SHALL USE GRATING UNLESS OTHERWISE SHOWN ELSEWHERE ON THE DRAWINGS. GRATING SHALL BE PLACED SUCH THAT OPENINGS AROUND GATES AND OTHER EQUIPMENT IS 2" MINIMUM.
- BASE CONNECTIONS SHOW (4) FOUR ANCHOR PATTERN, (2) BOLT PATTERN WILL BE ACCEPTABLE GIVEN THE LOADING REQUIREMENTS SPECIFIED ARE SATISFIED AND A MINIMUM OF 1/2" DIA SS ANCHORS/BOLTS ARE PROVIDED.

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LTR.	DATE	REVISIONS	BY	APPRD.

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DRAWN DMORRIS  
CHECKED JSOBCZAK

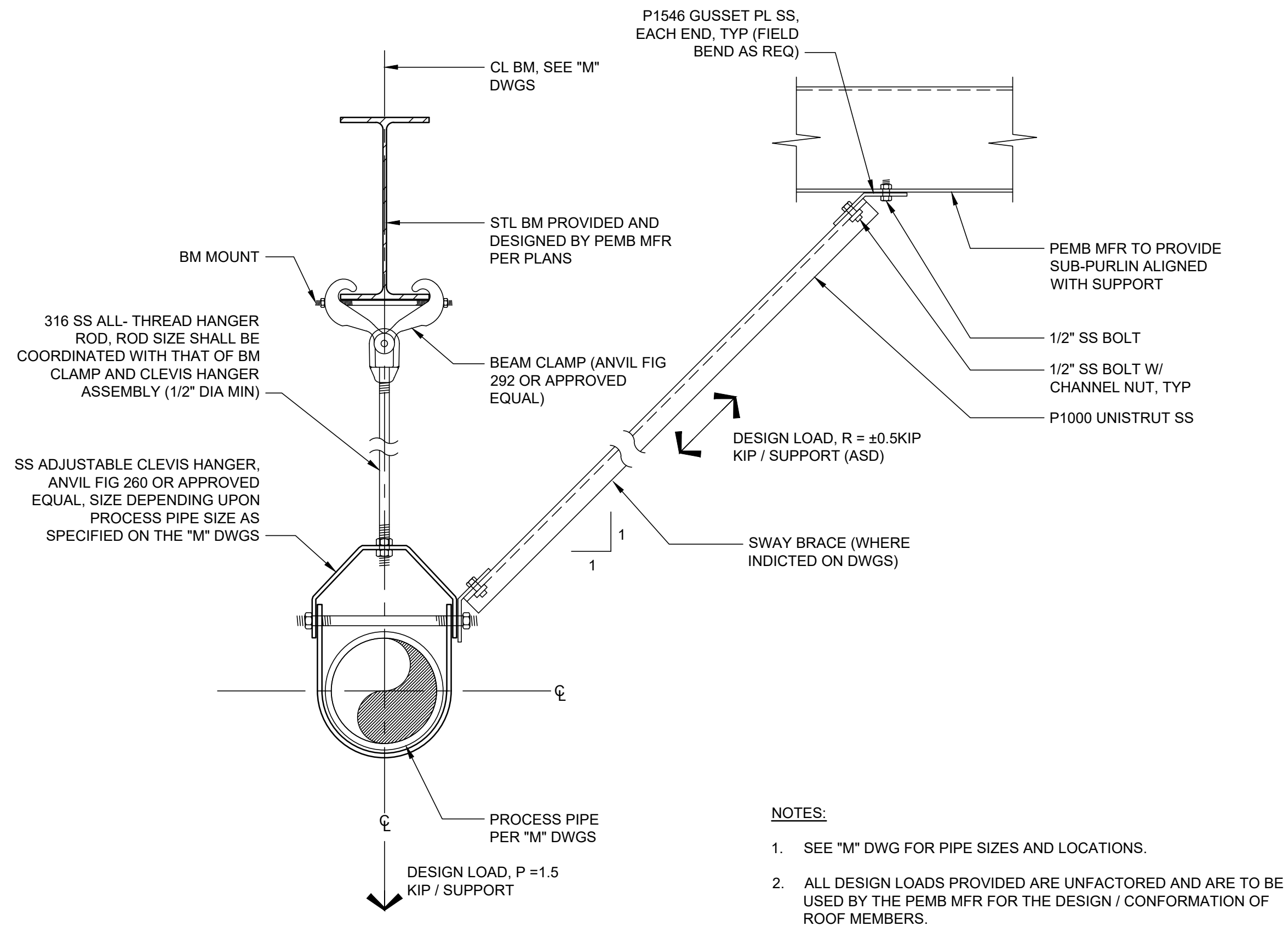
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

**DEWATERING FACILITY STRUCTURAL DETAILS**

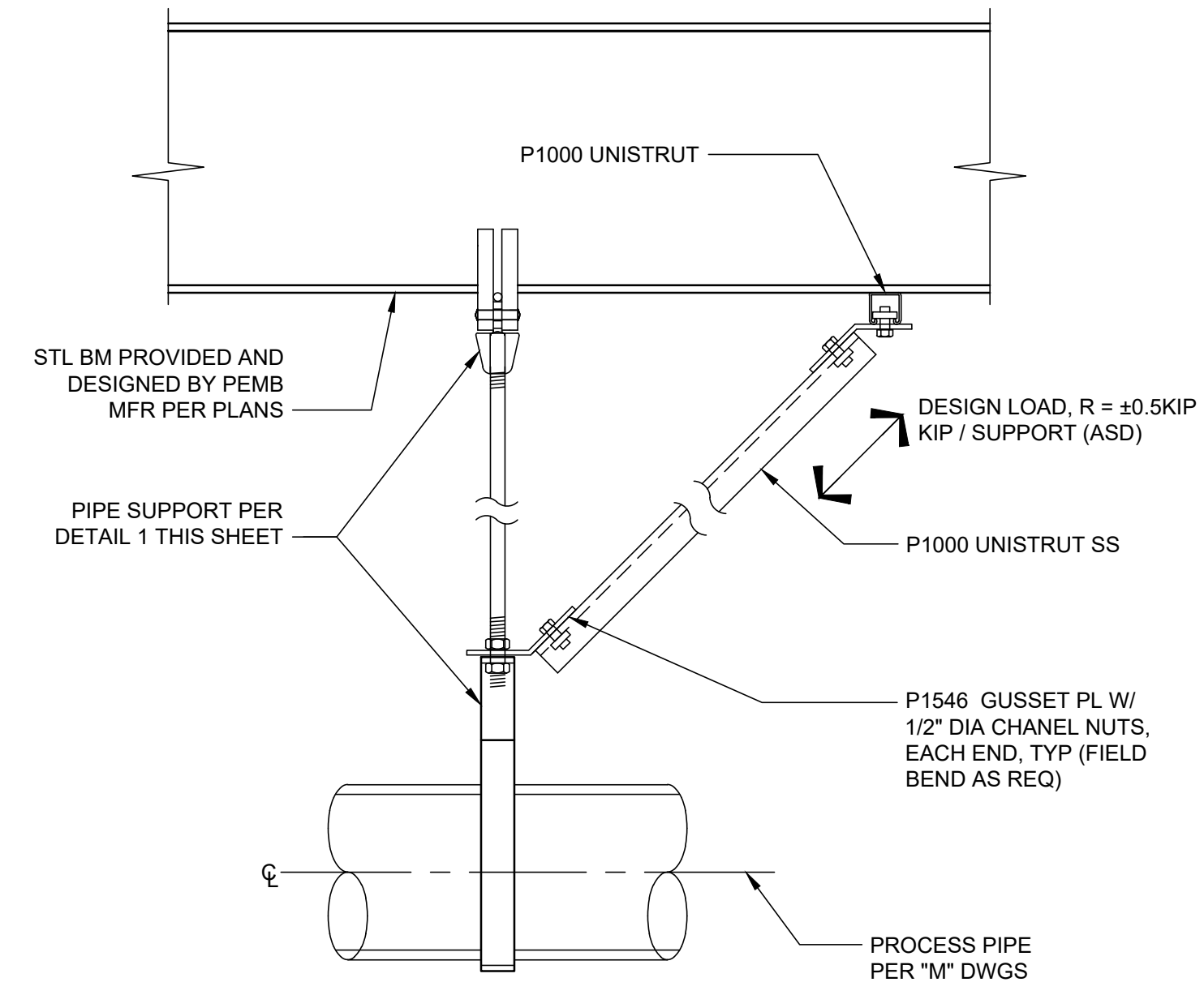
CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
DAVID S. MORRIS	SCALE	DWG. NO.
P.E. # 74717	AS NOTED	S7



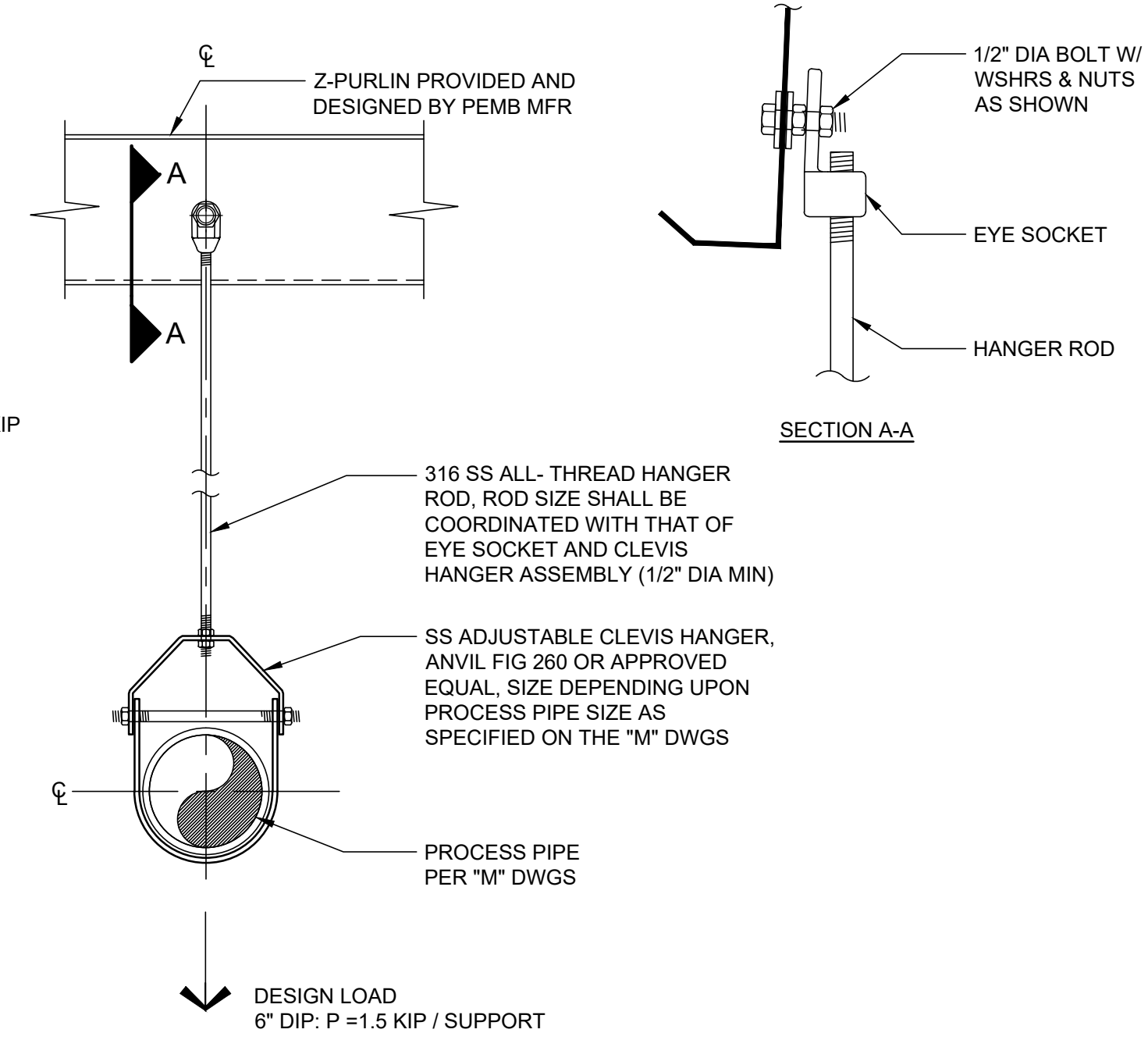


- NOTES:**
- SEE "M" DWG FOR PIPE SIZES AND LOCATIONS.
  - ALL DESIGN LOADS PROVIDED ARE UNFACTORED AND ARE TO BE USED BY THE PEMB MFR FOR THE DESIGN / CONFORMATION OF ROOF MEMBERS.

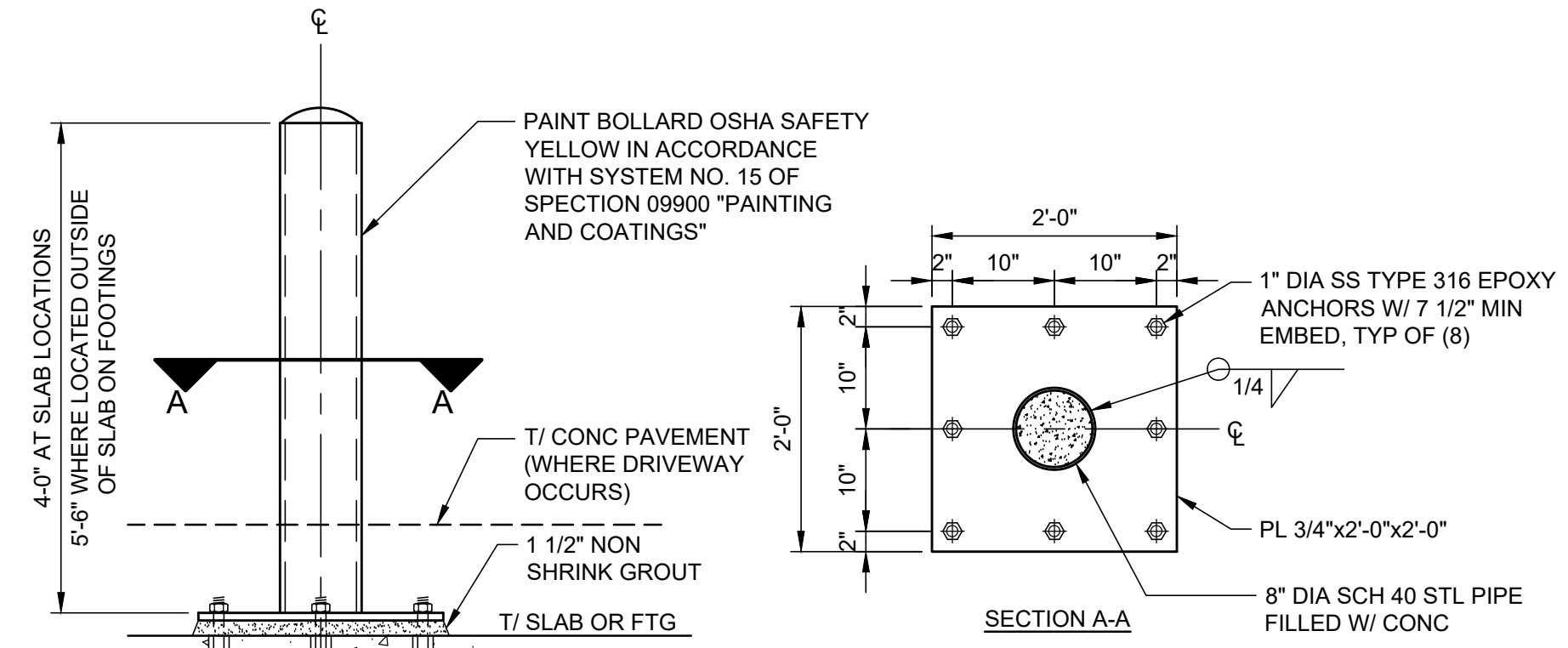
PIPE SUPPORT  
**DETAIL 1**  
NTS S4



LONGITUDINAL PIPE BRACING  
**DETAIL 2**  
NTS S4



PIPE SUPPORT  
**DETAIL 3**  
NTS S4



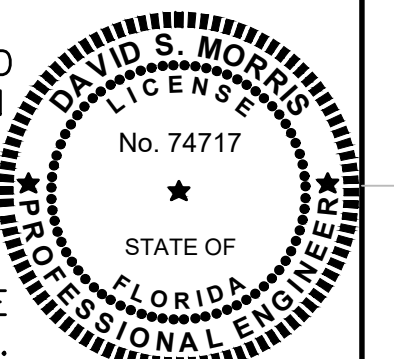
NOTE: LOCATIONS OF BOLLARDS SHALL BE COORDINATED W/ "C" & "M" DWGS

SURFACE MOUNTED BOLLARD  
**DETAIL 4**  
3/4" = 1'-0" S2

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DESIGNED	DMORRIS
DRAWN	DMORRIS
CHECKED	JSOBCZAK

**JONES EDMUNDS**

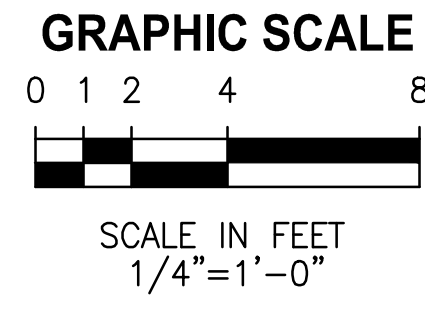
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821  
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS CITY OF LEESBURG, FLORIDA**

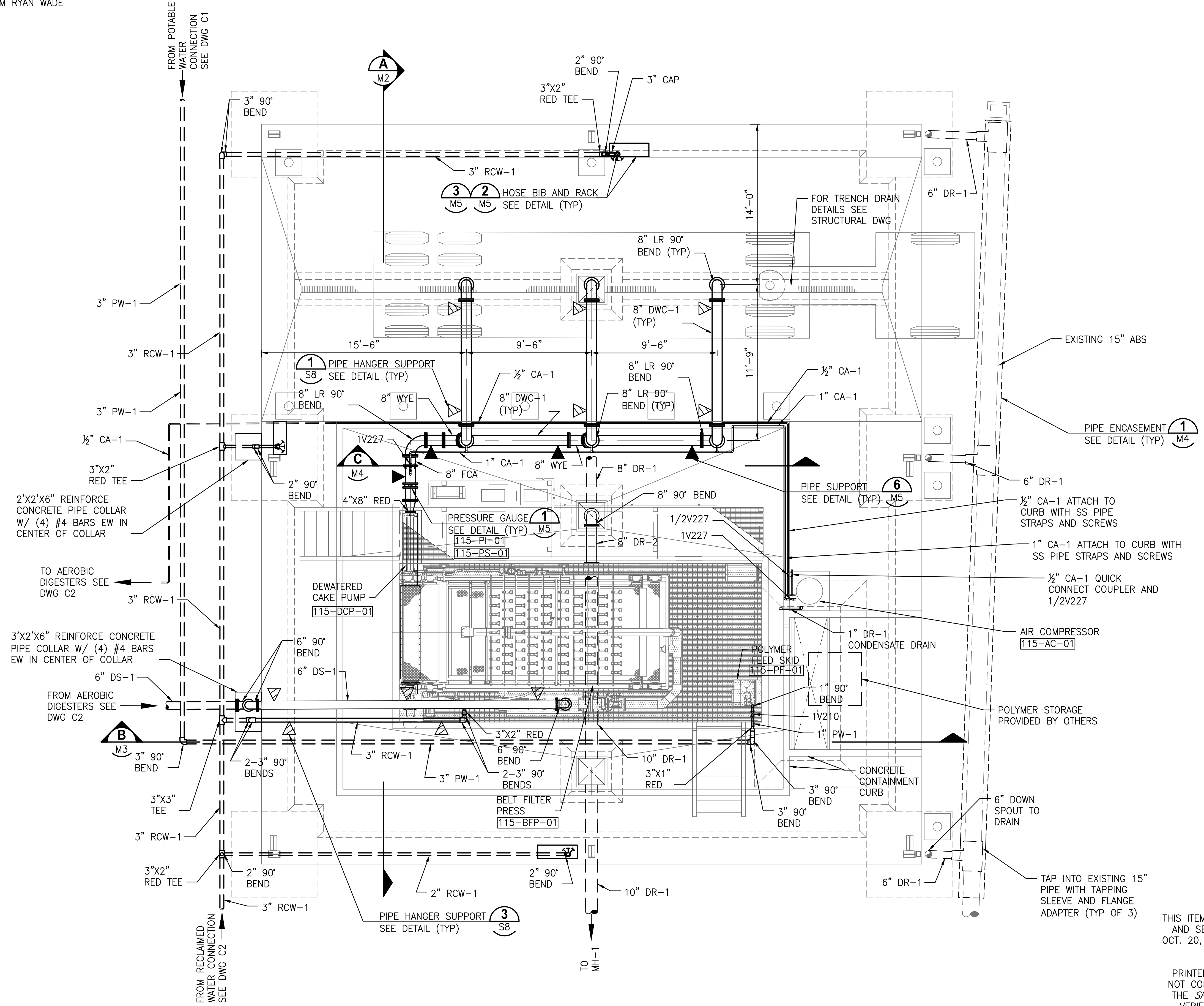
**DEWATERING FACILITY STRUCTURAL DETAILS**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
DAVID S. MORRIS	SCALE	DWG. NO.
P.E. # 74717	AS NOTED	S8





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 DRAWN: RWADE  
 CHECKED: TFRIEDRICH

**JONES EDMUNDS**  
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 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

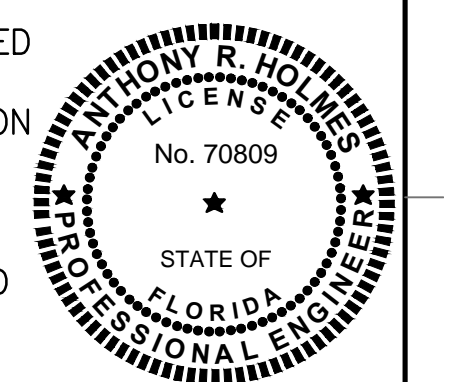
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
 CITY OF LEESBURG, FLORIDA**

**DEWATERING FACILITY PLAN**

CERTIFICATE OF AUTHORIZATION #1841 APPROVED BY ANTHONY R. HOLMES P.E. # 70809	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE 1/4"=1'	DWG. NO. M1

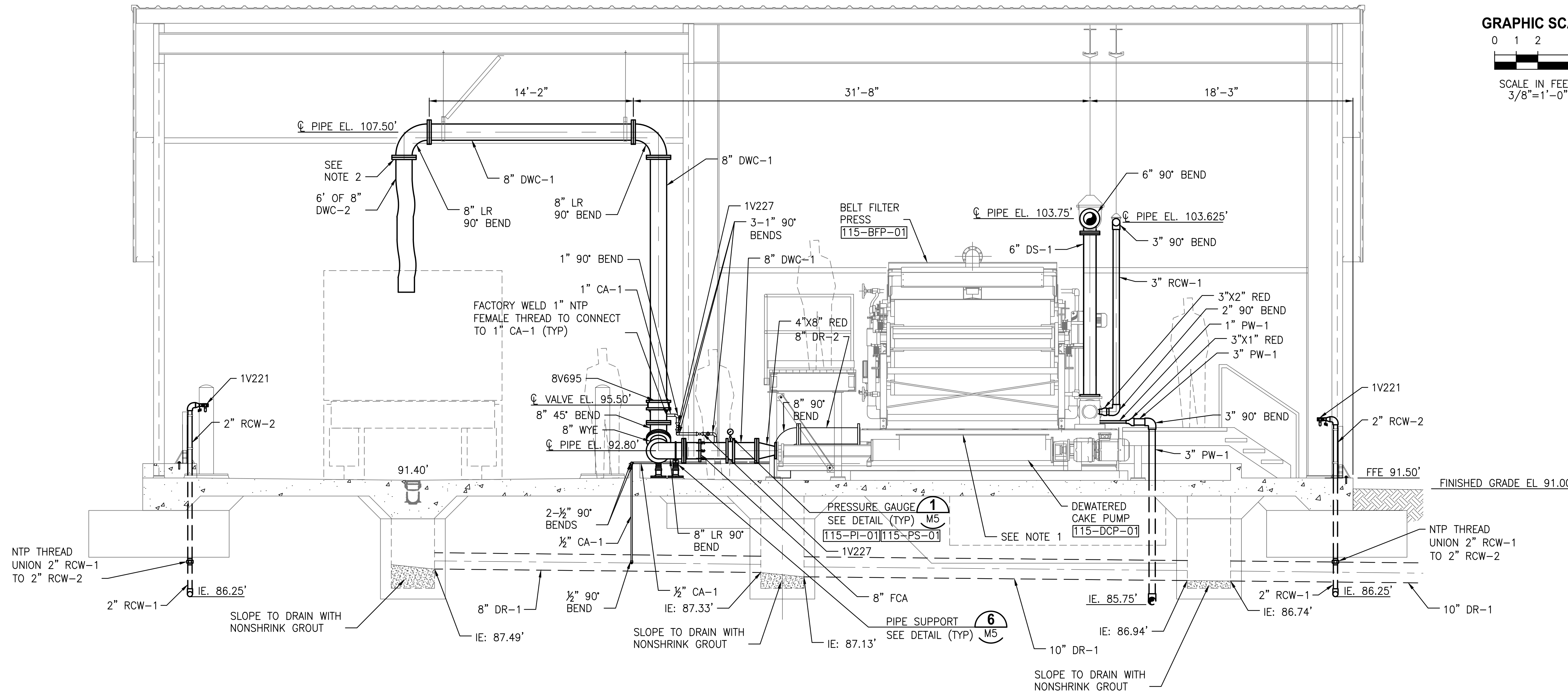
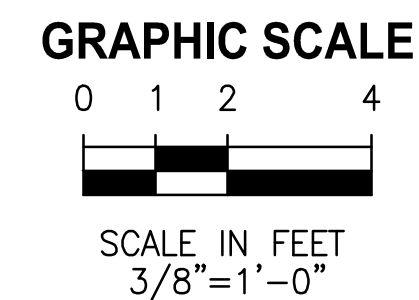
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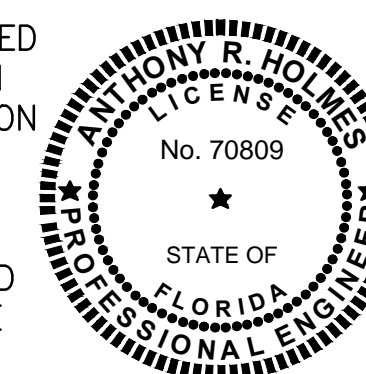
**DEWATERING FACILITY SECTION A**  
M1

**NOTES:**

1. THE DEWATERED CAKE HOPPER SHALL BE AISI TYPE 316LSS. CONTRACTOR TO FIELD VERIFY DIMENSIONS AND COORDINATE WITH BELT FILTER PRESS AND PROGRESSING CAVITY CAKE PUMP MANUFACTURERS PRIOR TO FABRICATION AND INSTALLATION.
2. LAYFLAT PIPE SHALL BE 3' LONG OF 8" DIAMETER. LAYFLAT PIPE SHALL BE AFFIXED TO THE 8" 90° LR BEND WITH AISI TYPE 316SS FLANGED COUPLING ADAPTER WITH A THREE T-BOLT CLAMPS.

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DRAWN	RWADE			
CHECKED	TFRIEDRICH			
LTR.	DATE	REVISIONS	BY	APPRO.

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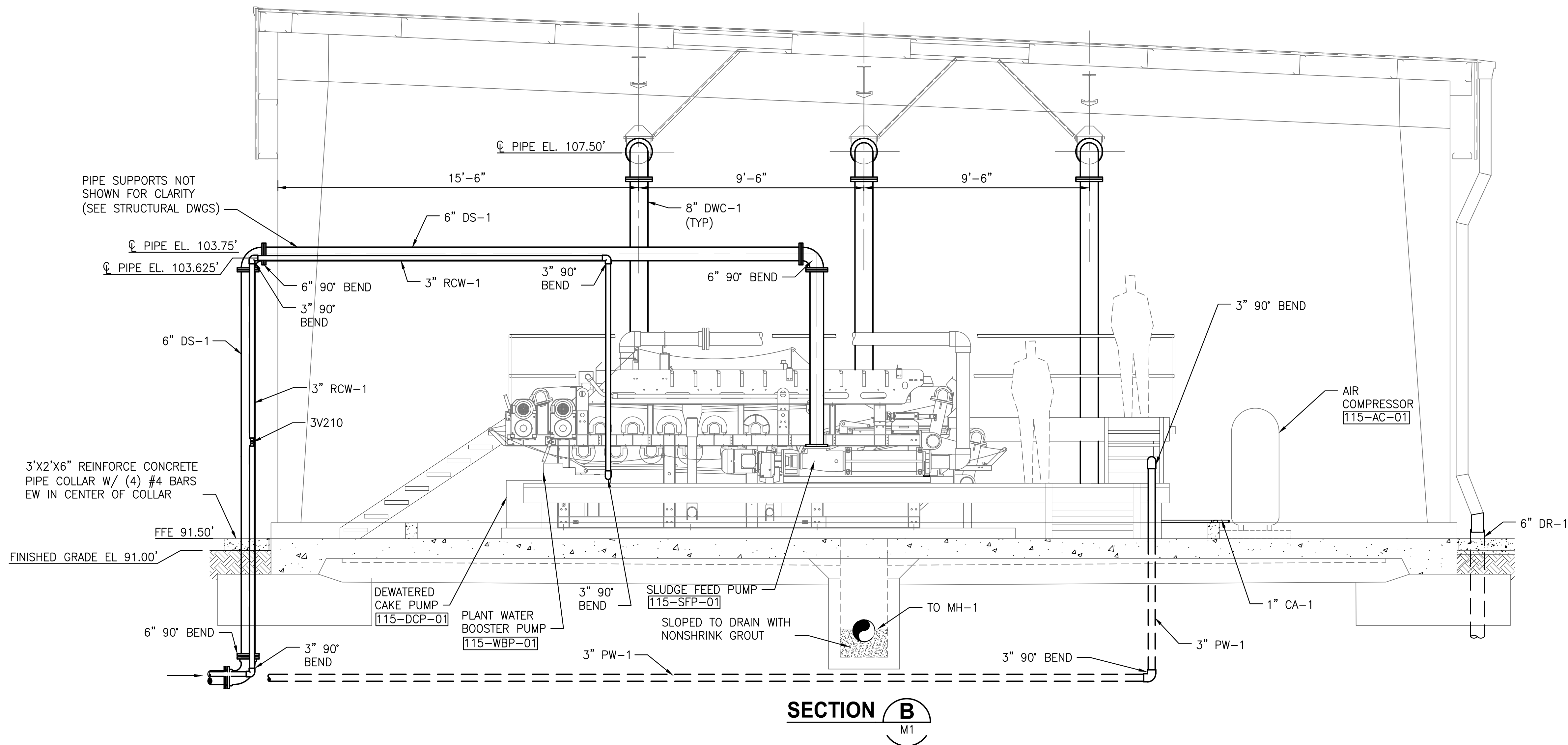
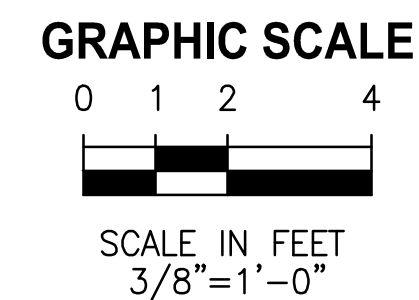
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
CITY OF LEESBURG, FLORIDA

**DEWATERING FACILITY SECTION**

CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	3/8"=1'	M2

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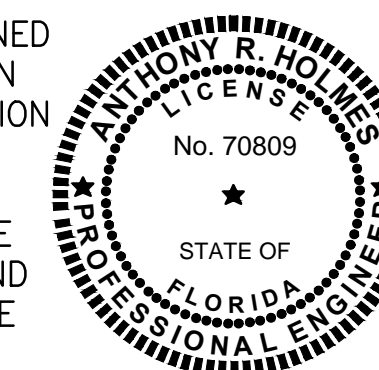
**SECTION B**  
M1

**NOTE:**

1. POLYMER FEED SKID NOT SHOWN FOR CLARITY.
2. BOLLARDS NOT SHOWN FOR CLARITY, SEE STRUCTURAL DRAWINGS FOR LOCATIONS.

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
CITY OF LEESBURG, FLORIDA

**DEWATERING FACILITY SECTION**

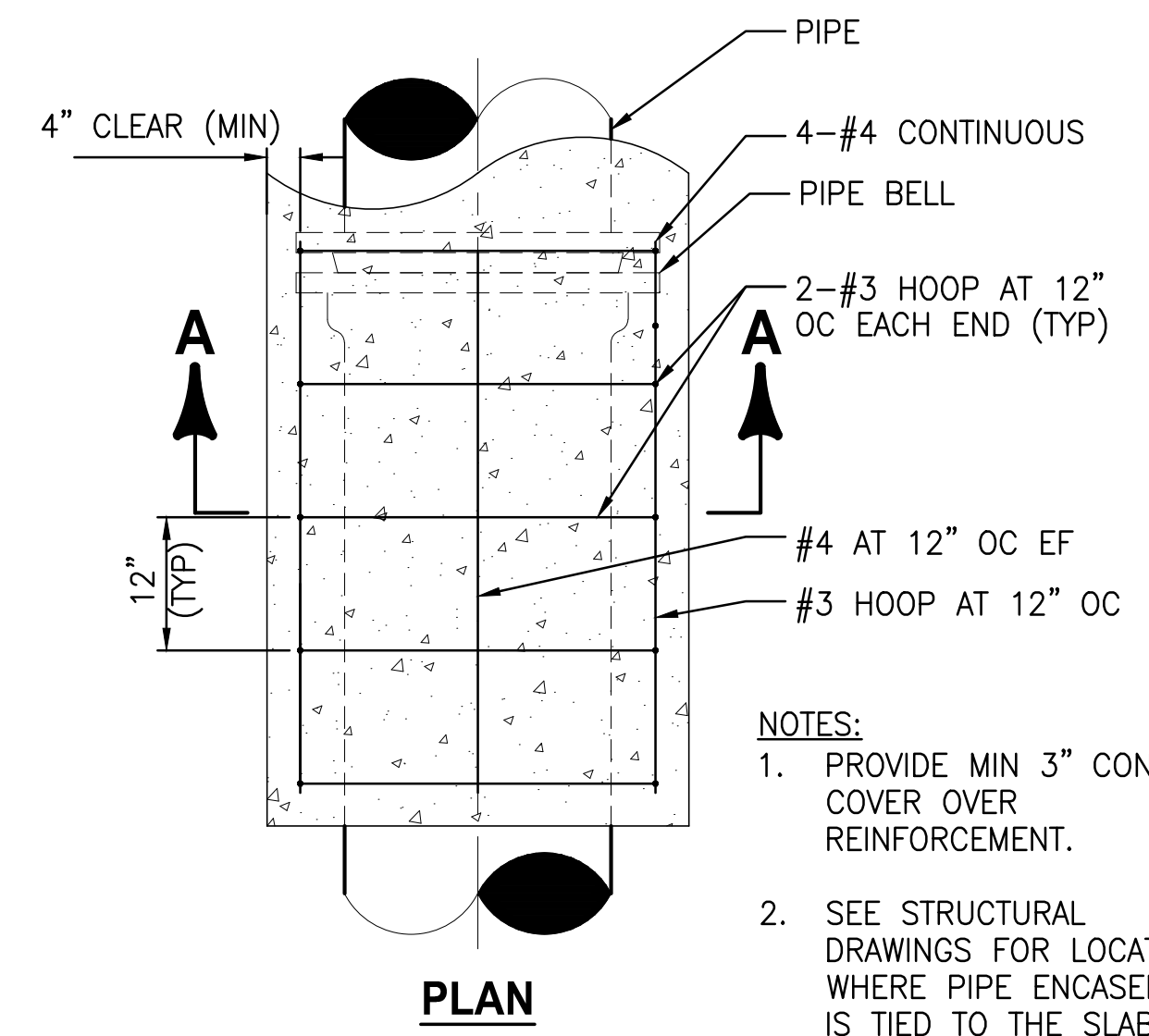
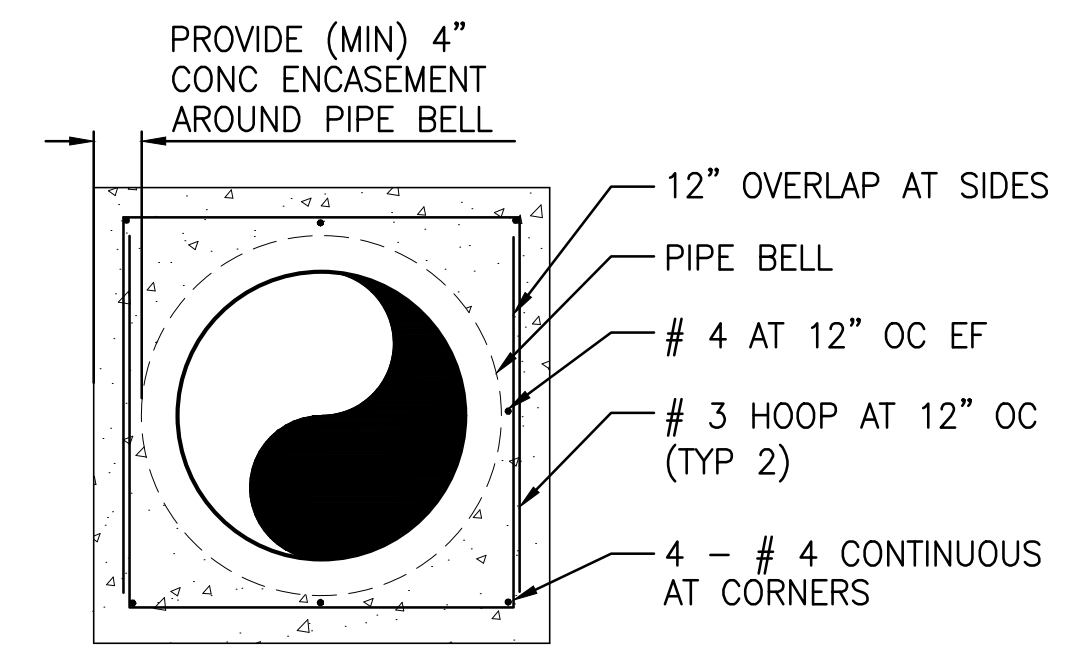
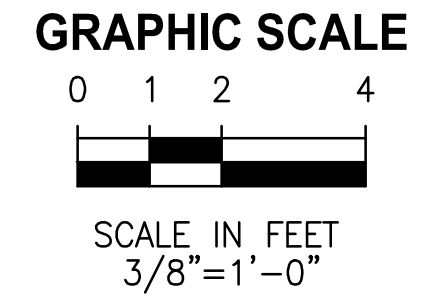
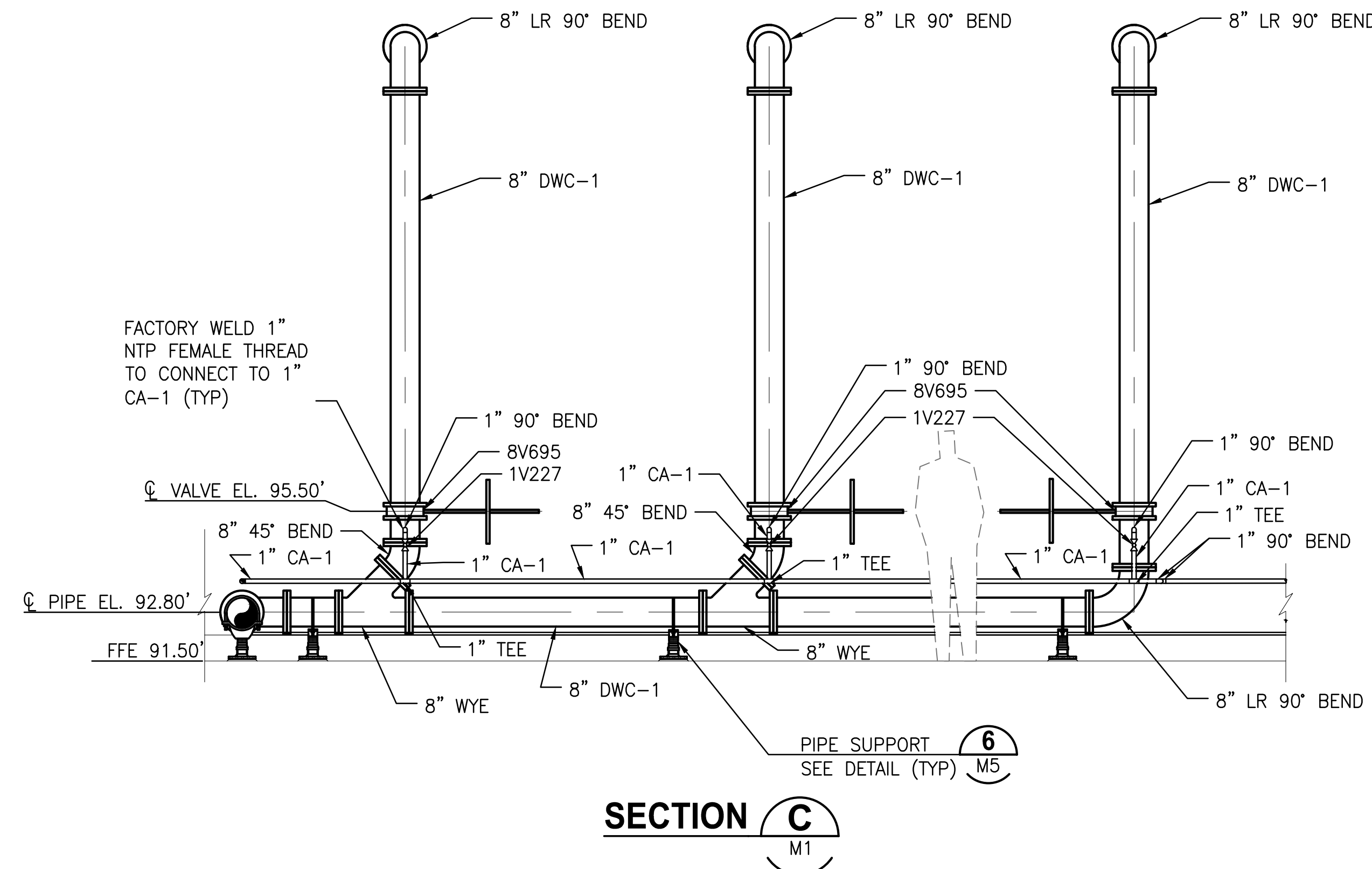
CERTIFICATE OF AUTHORIZATION #1841	DATE	PROJECT NO.
APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
P.E. # 70809	3/8"=1'	M3

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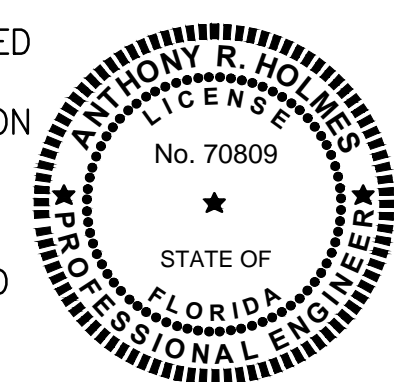
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- NOTES:**
1. PROVIDE MIN 3" CONC COVER OVER REINFORCEMENT.
  2. SEE STRUCTURAL DRAWINGS FOR LOCATIONS WHERE PIPE ENCASEMENT IS TIED TO THE SLAB.

**TYPICAL CONCRETE ENCASEMENT DETAIL**  
NTS

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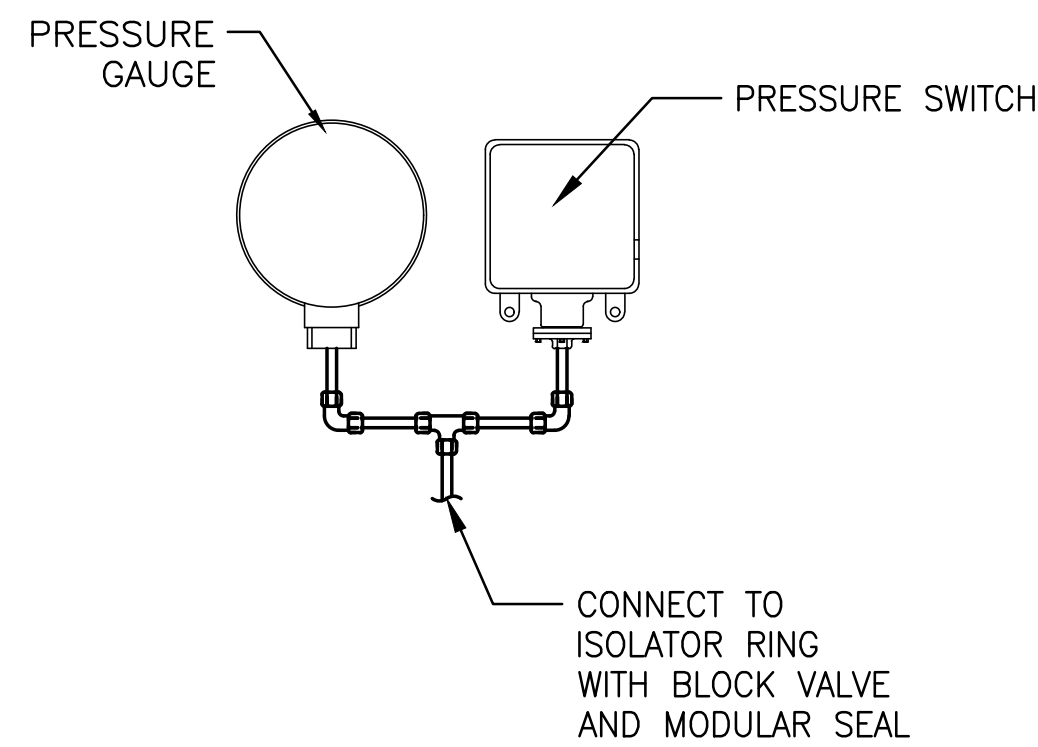
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**DEWATERING FACILITY SECTION & MECHANICAL DETAIL**

CERTIFICATE OF AUTHORIZATION #1841 APPROVED BY ANTHONY R. HOLMES P.E. # 70809	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE AS NOTED	DWG. NO. M4

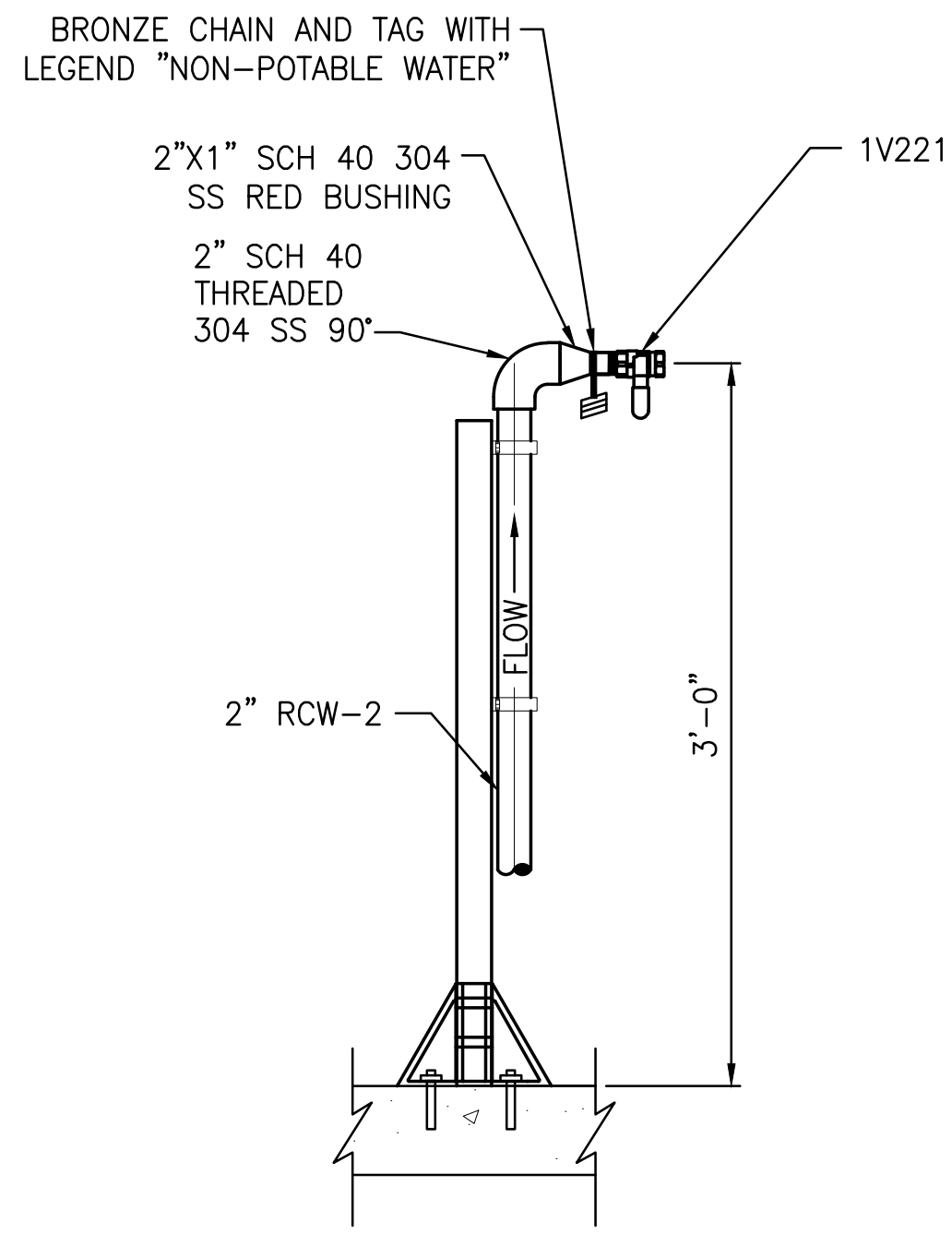
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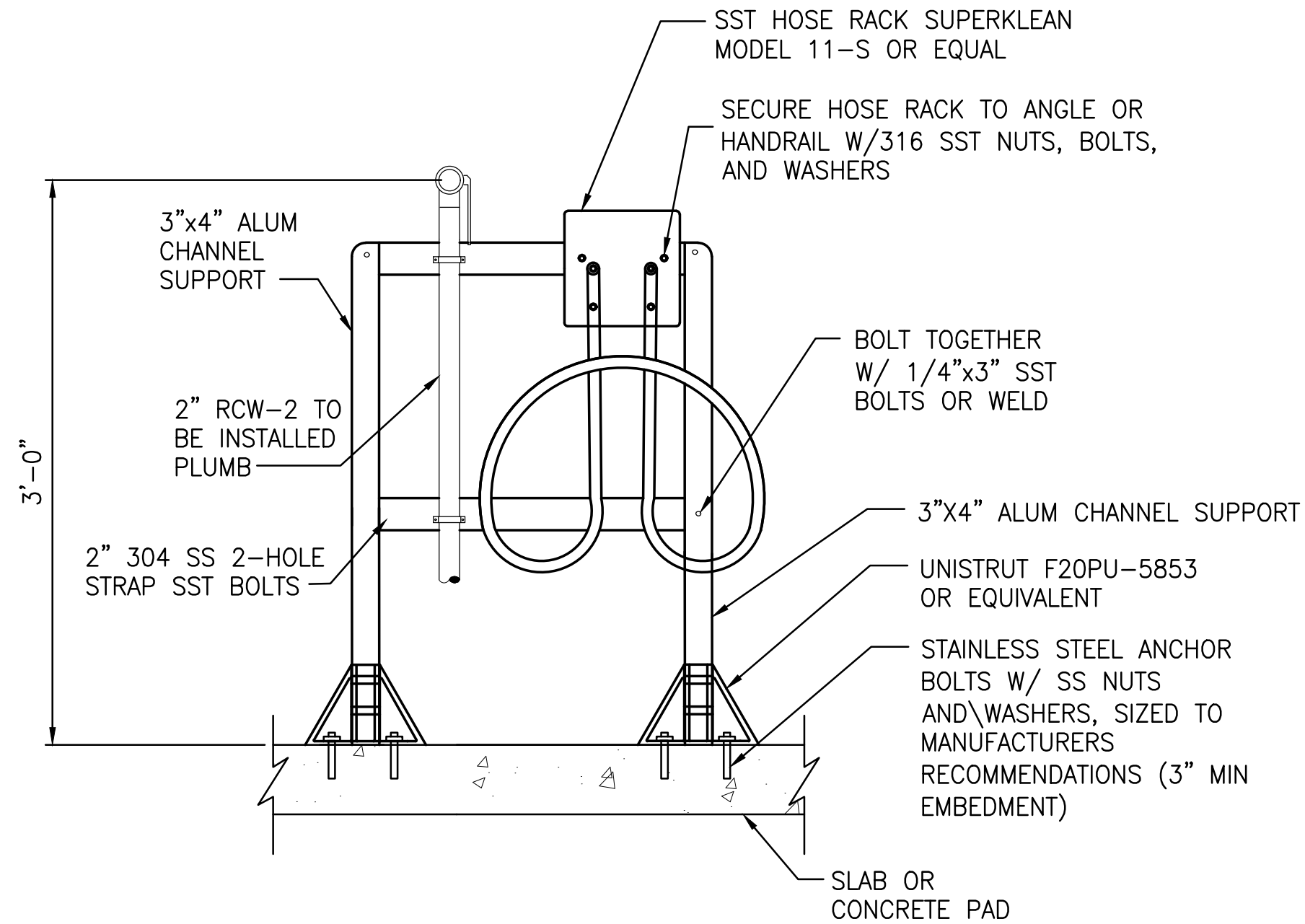


- NOTES:
1. SIZE, TYPE, PRESSURE RANGE AND MANUFACTURER PER SPECIFICATIONS.
  2. VERIFY SIZE OF LOWER CONNECTION PRIOR TO PURCHASING ANCILLARY PARTS.
  3. PRESSURE GAUGE, PRESSURE SWITCH AND ISOLATOR RING TO BE PROVIDED IN ACCORDANCE WITH SPECIFICATIONS.

**PRESSURE GAUGE AND SWITCH** 1  
NTS M4

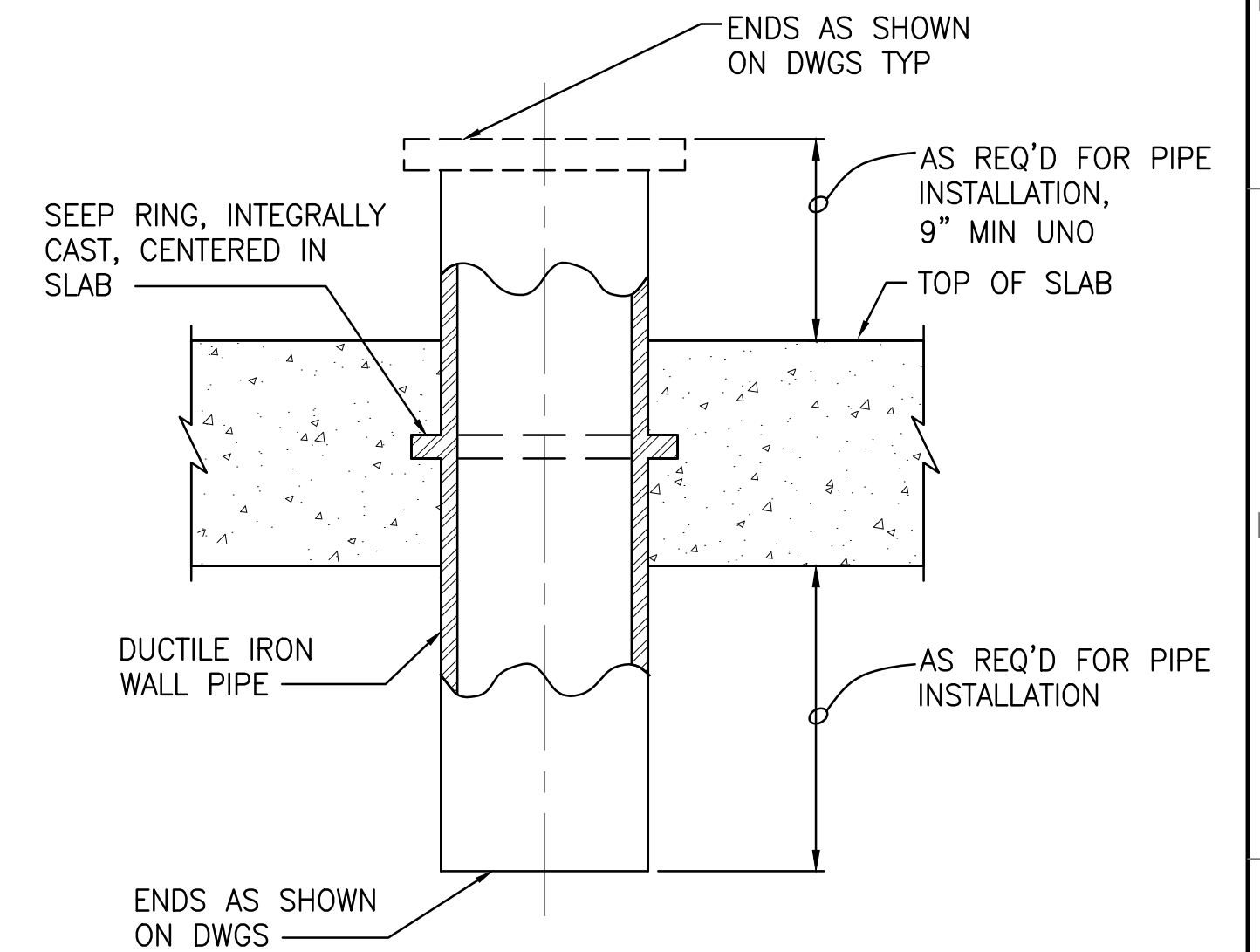


**HOSE BIBB DETAIL** 2  
NTS



- NOTE:
1. ALUMINUM IN CONTACT OR EMBEDDED IN CONCRETE OR MASONRY SHALL BE COATED WITH A HEAVY COATING OF ALKALI RESISTANT BITUMINOUS PAINT.

**HOSE RACK ASSEMBLY** 3  
NTS



- NOTE:
1. COAT FLOOR PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

**TYPICAL FLOOR PIPE DETAIL** 4  
NTS

STAINLESS STEEL PIPE STRAP AISI TYPE 316 W/316 SST BOLTS AND HEAVY DUTY CHANNEL NUTS

UNISTRUT 20V-2100 BACK TO BACK CHANNEL

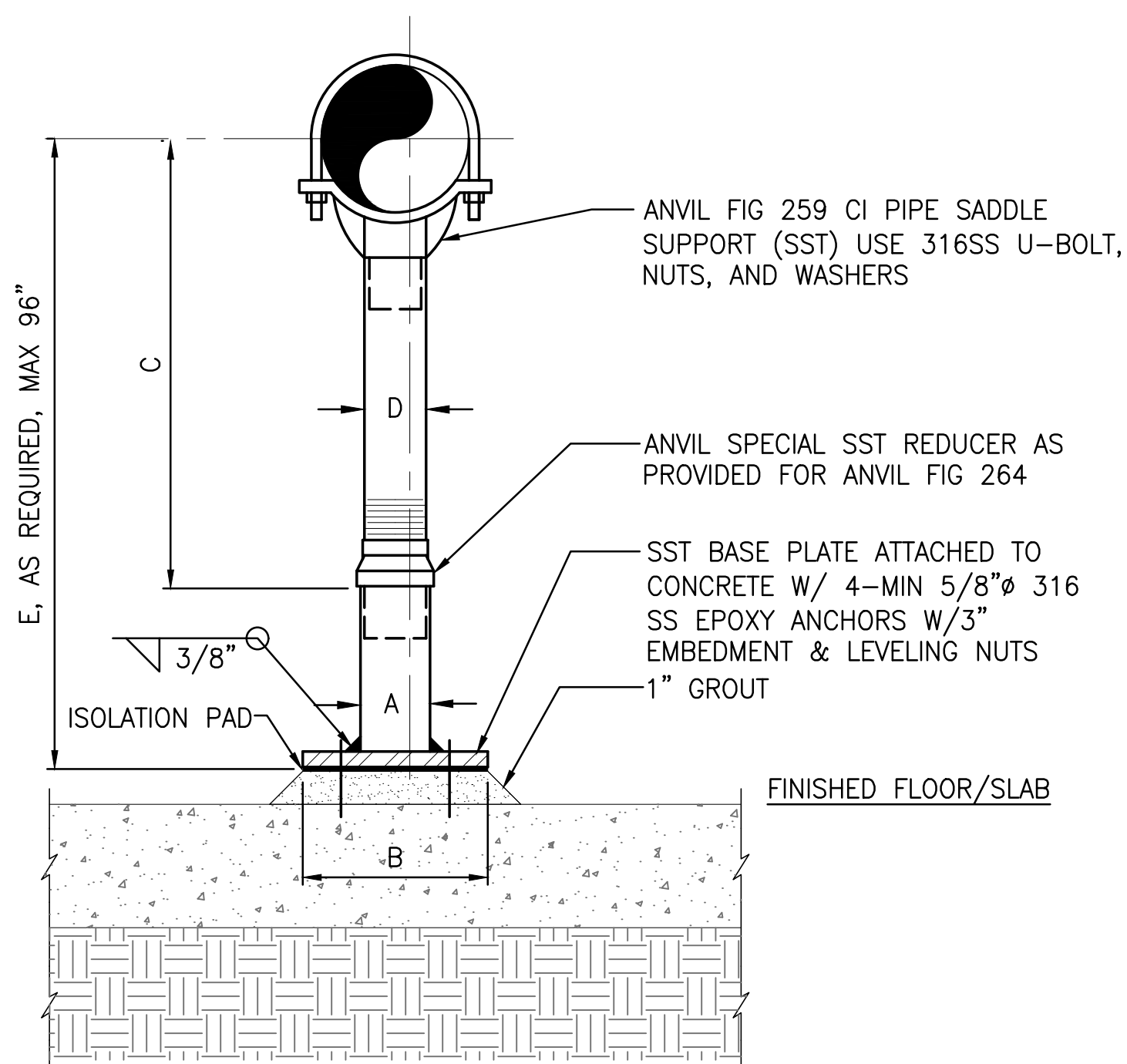
UNISTRUT CHANNEL FITTING P2348

UNISTRUT 1 5/8"x1 5/8" CHANNEL P1000

UNISTRUT POST BASE P1887 W/316 SST 1/2" DIA x 6" LONG EXPANSION ANCHORS

- NOTE:
1. ALL CHANNELS AND FITTINGS SHALL BE DIPPED GALVANIZED STEEL UNO.

**TYPICAL CHANNEL STRUT PIPE SUPPORT DETAIL** 5  
NTS



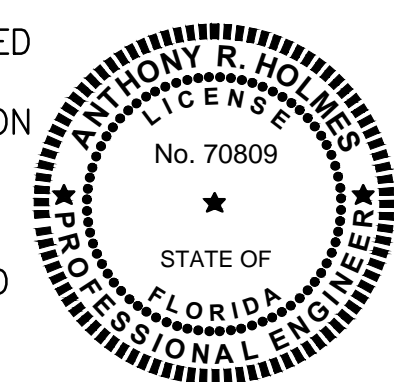
PIPE SIZE	A	B	C		D
			MIN	MAX	
INCHES					
4	4	9	9 1/4	14	3
5	4	9	10	14 3/4	3
6	4	9	10 1/2	15 1/4	3
8	4	9	11 3/4	16 1/2	3
10	4	9	13 1/2	18 1/4	3
12	4	9	15	19 3/4	3
14	4	11	16 1/4	20 3/4	3
16	4	11	17 3/4	22 1/4	3
18	6	13 1/2	19 1/2	24	4
20	6	13 1/2	21	25 1/2	4
24	6	13 1/2	23 3/4	28 1/4	4
30	6	13 1/2	27	31 1/2	4
36	6	16	30	36	4

**TYPICAL PIPE SUPPORT DIMENSION TABLE**

- NOTES:
1. SST (304 TYP) PIPE SUPPORT AND SST (304 TYP) BASE PLATE (WITH STAINLESS STEEL FASTENING HARDWARE).
  2. ALL HARDWARE SHALL BE 316 SS.
  3. PROVIDE NEOPRENE WAFFLE ISOLATION PAD, KORFUND KORPAD 40 UNDER SUPPORT FOOT WHEN PIPING IS ISOLATED OR SUPPORT IS ADJACENT TO MECHANICAL EQUIPMENT.
  4. FOR BASE, AND COMPONENT DIMENSIONS, SEE PIPE SUPPORT DIMENSION TABLE ABOVE. ALL DIMENSIONS IN INCHES.
  5. SEE PLANS AND SECTIONS FOR PIPE CENTERLINE ELEVATION REQUIREMENTS (DIMENSION "E").
  6. BASE PLATES SHALL BE SQUARE AND BE (SST) 1/2-INCH THICK FOR PIPE SIZES THROUGH 10-INCH. FOR ALL LARGER PIPES BEING SUPPORTED, THE BASE PLATES SHALL BE 3/4-INCH (SST) THICK OR USE COMPANION FLANGE THREADED TO PIPE (SST).
  7. FOR PIPE SUPPORTS 2 1/2", 3", AND 3 1/2" USE ANVIL FIG 191. USE 3X 3X 3/8 WASHER W/ 3/4" HOLE AND BOTTOM SECTION OF TYPICAL PIPE SUPPORT.
  8. THE ANVIL MODEL NUMBERS PROVIDE THE QUALITY AND SIZING OF THE REQUIRED SUPPORTS, BUT NOT THE MATERIAL. THE MATERIAL IS TO BE 304 OR 316 STAINLESS STEEL. SUPPORTS SHALL BE FABRICATED OF SST AS REQUIRED AND THIS IS TYPICAL FOR ALL SUPPORTS AND HANGERS SHOWN IN THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
CITY OF LEESBURG, FLORIDA

**MECHANICAL DETAILS**

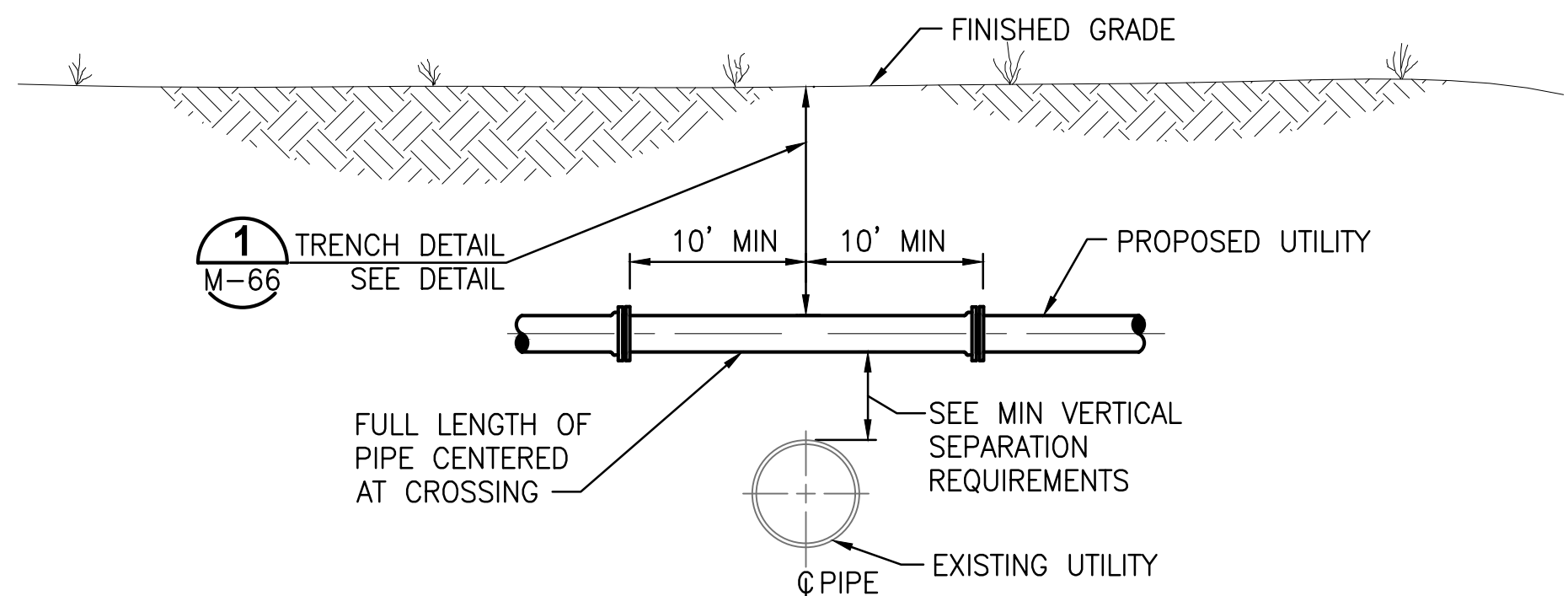
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APPROVED BY	OCT 2017	07810-084-01
ANTHONY R. HOLMES	SCALE	DWG. NO.
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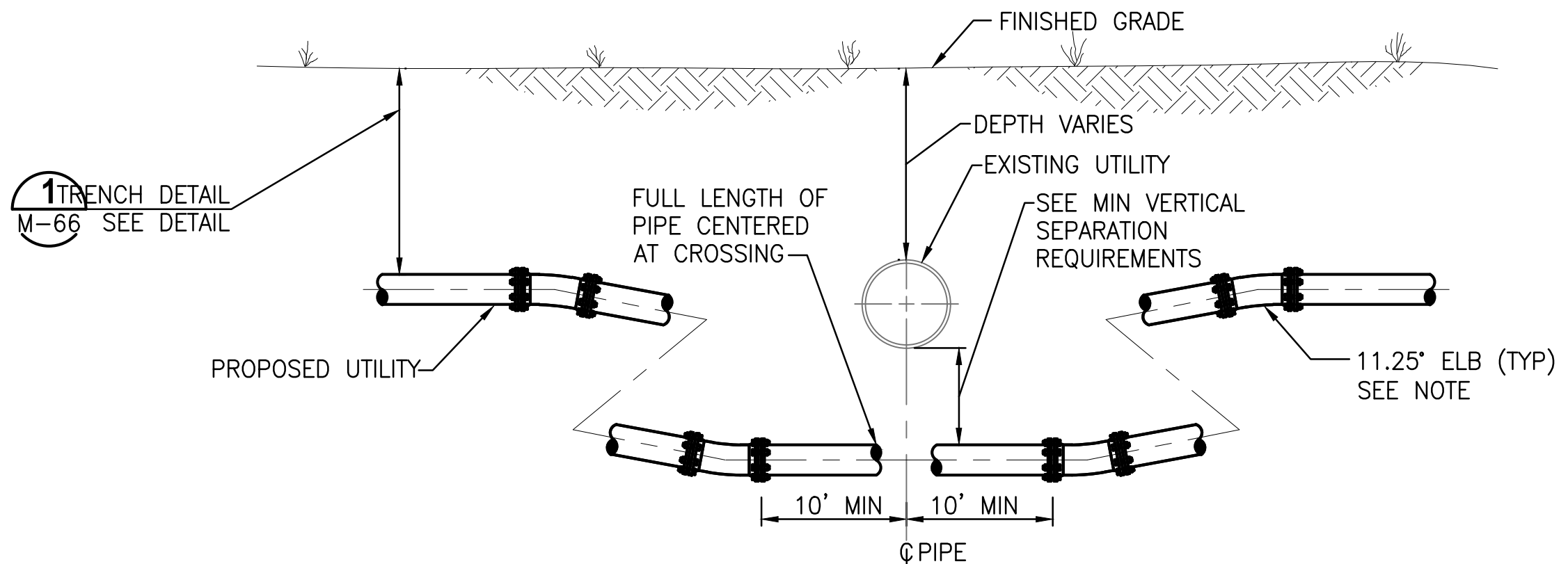
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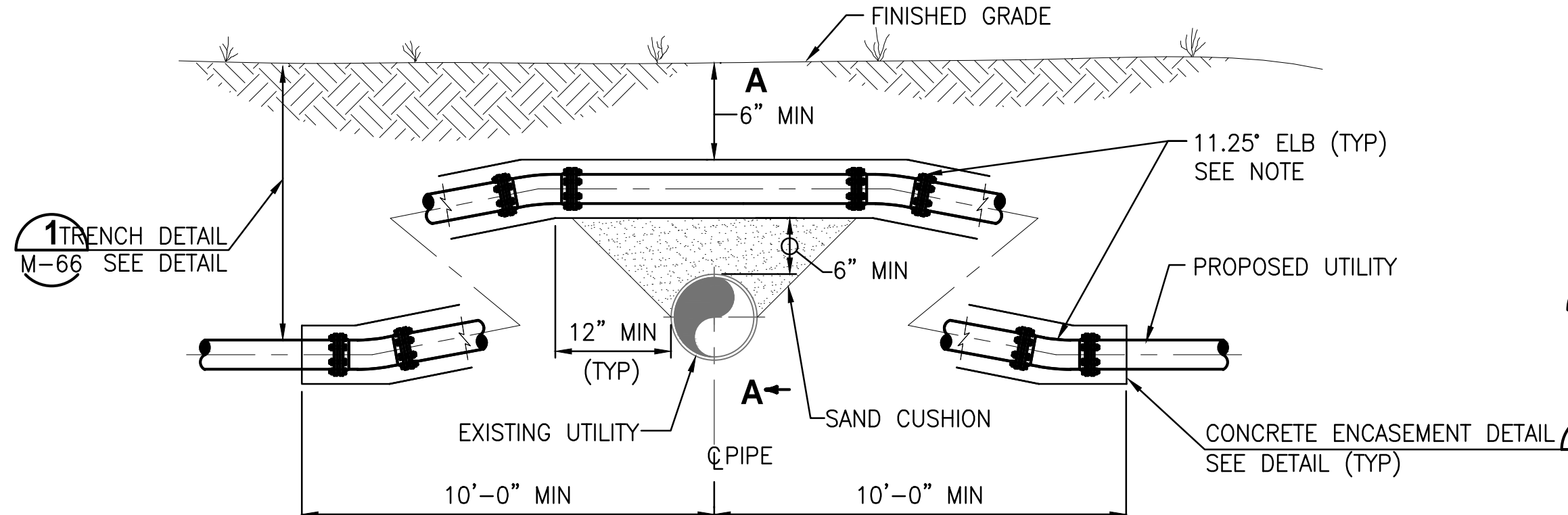
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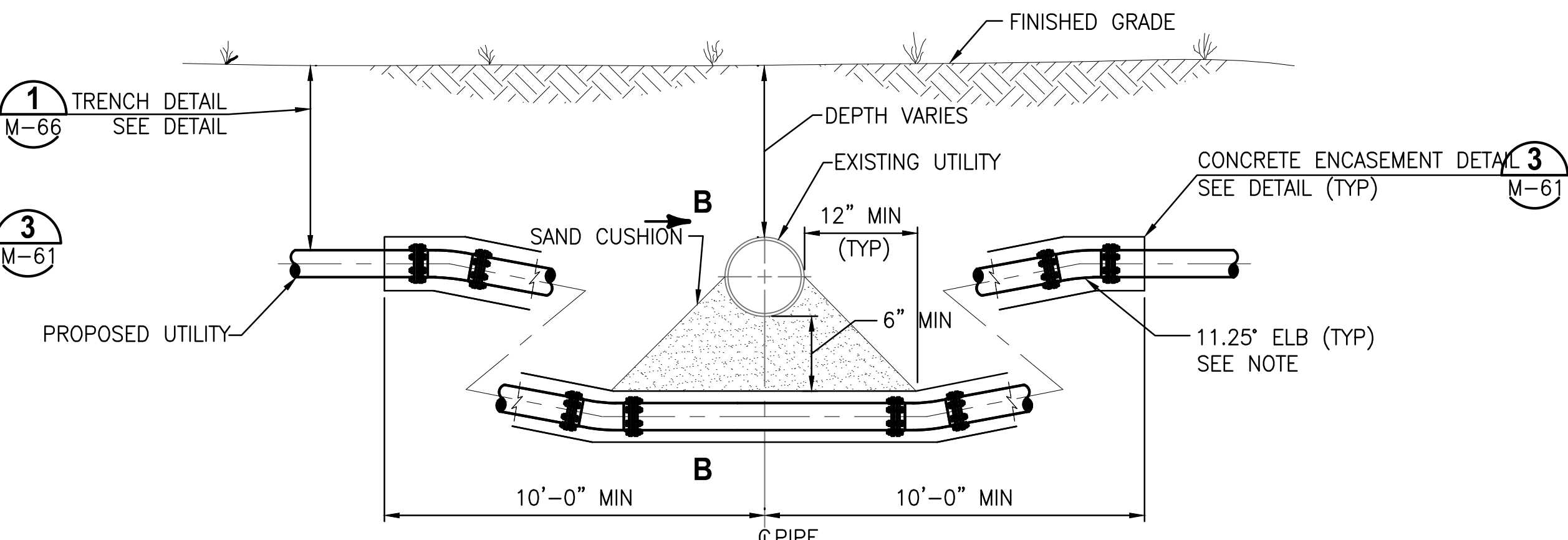
**OPTION 1 (SUFFICIENT COVER AND SEPARATION AVAILABLE)**



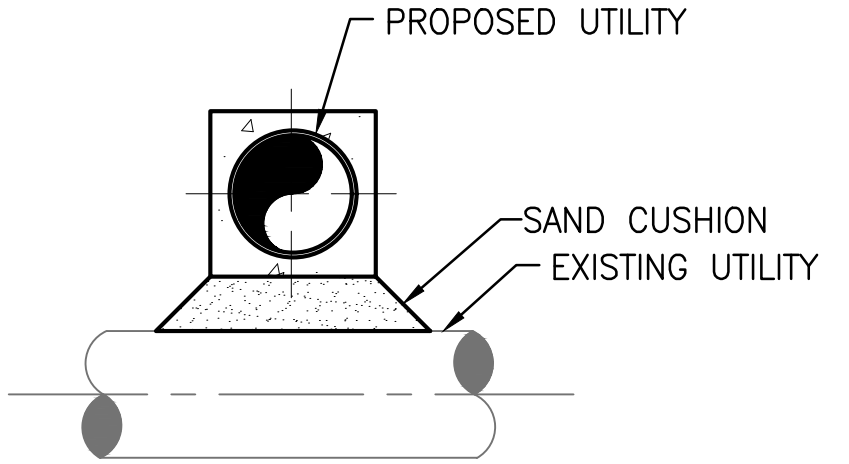
**OPTION 2 (SUFFICIENT SEPARATION AVAILABLE)**



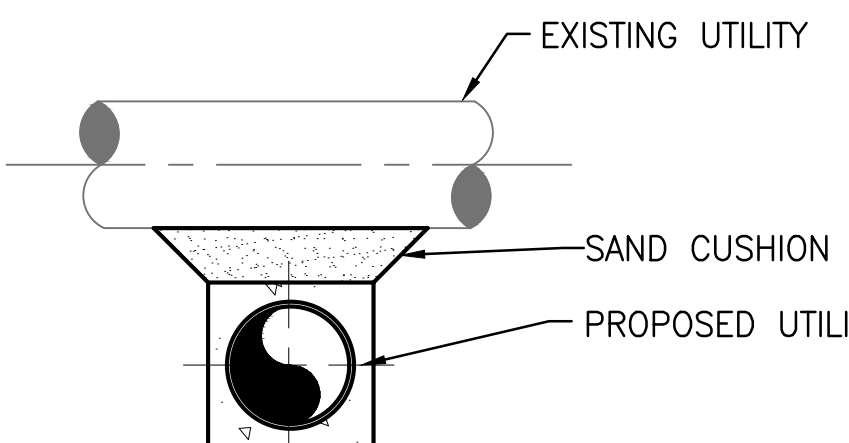
**ALTERNATE OPTION 1 (SUFFICIENT COVER OR SEPARATION NOT AVAILABLE)**



NOTE: IF ADDITIONAL COVER BEYOND MIN IS REQUIRED TO INSTALL PROPOSED UTILITY BENEATH EXISTING UTILITY, PROVIDE FITTINGS AS SHOWN.



**SECTION A-A**



**SECTION B-B**

PROPOSED UTILITY	EXISTING UTILITY						COMMENTS
	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	
POTABLE WATER	1'-0"	1'-6"	1'-6"	1'-0"	1'-6"	1'-0"	SEE NOTE 1
GRAVITY SANITARY SEWER	1'-6"	1'-0"	1'-0"	1'-6"	1'-6"	1'-0"	SEE NOTE 2
SEWAGE FORCE MAIN	1'-6"	1'-0"	1'-0"	1'-6"	1'-6"	1'-0"	SEE NOTE 2
STORM	1'-0"	1'-6"	1'-6"	1'-0"	1'-0"	1'-0"	
RECLAIMED WATER	1'-6"	1'-6"	1'-6"	1'-0"	1'-0"	1'-0"	SEE NOTE 2
ELECTRIC TELECOMMUNICATIONS	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	

- NOTES:**
- ONLY OPTION 1 CONSTRUCTION IS ALLOWED WITHOUT APPROVAL OF ENGINEER.
  - ONLY OPTION 2 CONSTRUCTION IS ALLOWED WITHOUT APPROVAL OF ENGINEER.
  - FITTINGS SHALL NOT BE USED ON GRAVITY SANITARY SEWER. GRAVITY SANITARY SEWER SHALL BE CONSTRUCTED AT A UNIFORM GRADE BETWEEN MANHOLE STRUCTURES

**MINIMUM VERTICAL SEPARATION REQUIREMENTS**



NTS

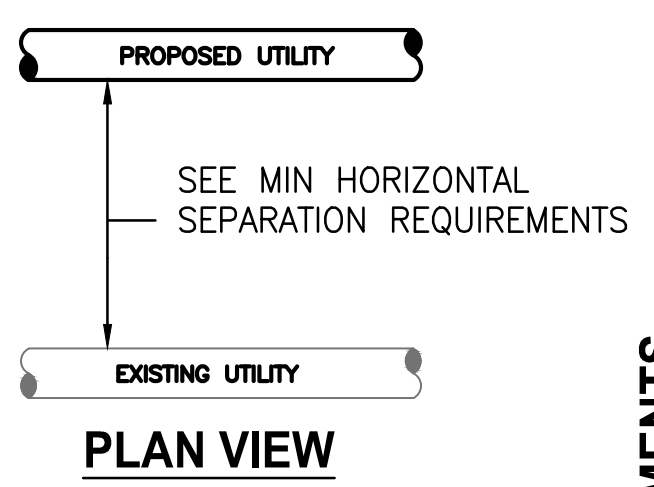
**ALTERNATE OPTION 2 (SUFFICIENT SEPARATION NOT AVAILABLE)**

PROPOSED UTILITY	EXISTING UTILITY						
	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	TREE
POTABLE WATER	1'-0"	10'-0"	10'-0"	3'-0"	3'-0"	3'-0"	10'-0"
GRAVITY SANITARY SEWER	10'-0"	1'-0"	1'-0"	5'-0"	5'-0"	3'-0"	
SEWAGE FORCE MAIN	10'-0"	1'-0"	1'-0"	3'-0"	3'-0"	3'-0"	
STORM	3'-0"	5'-0"	3'-0"	1'-0"	3'-0"	3'-0"	
RECLAIMED WATER	3'-0"	5'-0"	3'-0"	3'-0"	1'-0"	3'-0"	
ELECTRIC TELECOMMUNICATIONS	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	2'-0"	

**MINIMUM HORIZONTAL SEPARATION REQUIREMENTS**



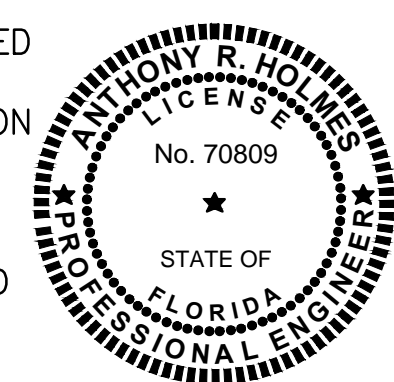
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**PLAN VIEW**

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**TURNIPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
 CITY OF LEESBURG, FLORIDA

**MECHANICAL DETAILS**

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P.E. # 70809	AS SHOWN	M6

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**ABBREVIATION LEGEND**

A	AMPS	LOC	LOCAL
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AIC	AMPERE INTERRUPTING CURRENT	MCC	MOTOR CONTROL CENTER
A/C	AIR CONDITIONING	MCP	MASTER CONTROL PANEL
CV	CONTROL VALVE	MFR	MANUFACTURER
CAH	CONDUCTIVITY ALARM HIGH	MLO	MAIN LUGS ONLY
CB	CIRCUIT BREAKER	MSB	MAIN SWITCHBOARD
DN	DOWN	MTD	MOUNTED
EG	EQUIPMENT GROUND	NS	VIBRATION SWITCH
EW	ELECTRIC WATER HEATER	O.C.	ON CENTER
EX	EXISTING	P	POLE
FCV	FLOW CONTROL VALVE	PIT	PRESSURE INDICATING TRANSMITTER
FE	FLOW ELEMENT	PLC	PROGRAMMABLE LOGIC CONTROLLER
FIT	FLOW INDICATING TRANSMITTER	PS	PRESSURE SWITCH
FOC	FIBER OPTIC CONVERTER	PM	POWER MONITOR
FS	FLOW SWITCH	R	RELOCATED
FV	FLOW VALVE	REM	REMOTE
GALV	GALVANIZED	RIO	REMOTE INPUT/OUTPUT CABINET
GC	GROUND CONDUCTOR	RTD	RESISTANCE TEMPERATURE SWITCH
GF	GROUND FAULT	SS	STAINLESS STEEL
GND	GROUND	SI	SHAFT TACHOMETER SENSOR
HOA	HAND OFF AUTOMATIC	SPD	SURGE PROTECTION DEVICE
HP	HORSE POWER	SWS	SEAL WATER SOLENOID
HTR	HEATER	TSP	TWISTED SHIELDED PAIR
I/O	INPUT/OUTPUT	UPS	UNINTERRUPTABLE POWER SOURCE
JB	JUNCTION BOX	VFD	VARIABLE FREQUENCY DRIVES
LCP	LOCAL CONTROL PANEL	WP	WEATHER PROOF
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS GROUND FAULT PROTECTION FEATURES	LE	LEVEL ELEMENT
LSL	LEVEL SWITCH LOW	LIT	LEVEL INDICATING TRANSMITTER

**ELECTRICAL SYMBOL LEGEND**

SYMBOL	DESCRIPTION	MOUNTING
	POWER PANELBOARD, VOLTAGE AS NOTED	M.H. 6'-6" MIN. TO TOP
	BRANCH PANEL	M.H. 6'-6" MIN. TO TOP
	EQUIPMENT CONTROL PANEL	M.H. 6'-6" MIN. TO TOP
S	SINGLE POLE SWITCH (20A, 120/277)	M.H. 40" MIN. TO BOTTOM
S <sub>3</sub>	THREE WAY SWITCH (20A, 120/277)	M.H. 40" MIN. TO BOTTOM
	DUPLEX RECEPTACLE (20A, 125V)	M.H. 18" TO CENTERLINE
	RACEWAY CONCEALED IN WALL OR ABOVE CEILINGS	SEE SPECIFICATIONS
	RACEWAY CONCEALED UNDER FLOOR OR BELOW GRADE	SEE SPECIFICATIONS
	RACEWAY EXPOSED ON WALL OR CEILING	SEE SPECIFICATIONS
	HOMERUN TO PANEL, LETTERS INDICATE PANEL, NUMBERS INDICATE CIRCUIT. NOTE: ANY CIRCUIT WITHOUT FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. A GREATER NUMBER OF WIRES IS INDICATED AS SHOWN:  EG (3 WIRES & EQUIPMENT GROUND),  (4 WIRES & EQUIPMENT GROUND), ETC.	SEE SPECIFICATIONS
	RACEWAY RISER, UP OR DOWN AS NOTED.	SEE SPECIFICATIONS
	JUNCTION BOX OR OUTLET BOX, 4"x2 1/8" DEEP BOX UNLESS OTHERWISE NOTED	SEE SPECIFICATIONS
	MOTOR, NUMERAL INDICATES HORSEPOWER	BY OTHER DIVISION
	NON-FUSIBLE SAFETY SWITCH	SEE SPECIFICATIONS
	DRY TYPE TRANSFORMER	FLOOR OR AS NOTED

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL PROVIDE RUBBER MATS AND PLYWOOD COVERS FOR ALL OWNERS EQUIPMENT SUSCEPTIBLE TO DAMAGE.
2. ALL WORK SHALL BE PERFORMED DURING TIME PERIODS ACCEPTABLE TO THE OWNER. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL PERFORM ALL TEMPORARY WORK NECESSARY TO MAINTAIN CONTINUITY OF ELECTRICAL SERVICE WHEN CONNECTION IS MADE TO EXISTING SYSTEMS AND FACILITIES. EXISTING SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR CONSENT OF THE OWNER'S REPRESENTATIVE AND MAY BE INTERRUPTED ONLY AT AND FOR THE SPECIFIED TIME DESIGNATED BY OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE GUIDED BY THE OWNER'S REPRESENTATIVE AT ALL TIMES IN MATTERS AFFECTING THE EXISTING FACILITIES.
4. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL ENSURE THAT ALL SYSTEMS OPERATE AS DESIGNED AND REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER. COMPLETE SET OF AS-BUILT DRAWINGS SHALL BE COMPILED (BY THE CONTRACTOR) AND ISSUED (1 EACH) TO THE ENGINEER AND BUILDING MAINTENANCE PERSONNEL UPON COMPLETION OF CONSTRUCTION AND TESTING.
5. ALL ELECTRICAL AND INSTRUMENTATION WIRING AND CONDUIT SHALL BE INSTALLED BELOW GRADE AND SHALL NOT CROSS SIDEWALKS OR WALKWAYS. ABOVE GRADE WHERE POSSIBLE.

**GENERAL DEMOLITION NOTES:**

1. REMOVE AND/OR RELOCATE ALL CONDUIT WIRE, OUTLET BOXES, ETC. WHICH ARE MADE UNNECESSARY BECAUSE OF DEMOLITION/NEW CONSTRUCTION. VERIFY LOCATIONS AND QUANTITIES OF ELECTRICAL EQUIPMENT AND WIRING AT THE SITE. CONDUIT TO BE REMOVED OR ABANDONED SHALL BE REMOVED COMPLETELY IF POSSIBLE. WHERE (ABOVE GRADE) REMOVAL IS NOT POSSIBLE, CONDUIT SHALL BE CAPPED AND TAGGED AS SPARE. WHERE (BELOW GRADE) REMOVAL IS NOT POSSIBLE, CONDUIT SHALL BE CUT BELOW THE SURFACE AND CAPPED. ALL MATERIALS REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR. PATCH CONCRETE FLOOR TO MATCH EXISTING.
2. ANY DEMOLITION OR REMOVAL INDICATED IS SHOWN TO PROVIDE THE GENERAL EXTENT OF DEMOLITION. THIS INFORMATION IS NOT A RECORD DRAWING OF EXISTING CONDITIONS.
3. ANY DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT (AS INDICATED IN NOTES 1 & 2 ABOVE) SHALL BE CONFIRMED AND APPROVED BY OWNER BEFORE EXISTING EQUIPMENT IS DISCONNECTED AND REMOVED.

**LIGHTNING PROTECTION SYSTEM**

CONTRACTOR SHALL FURNISH AND INSTALL CLASS I LIGHTNING PROTECTION SYSTEM ON EQUALIZATION TANK, ELECTRICAL ENCLOSURES AND SALSNES FILTER PLATFORM. ALL MATERIALS SHALL BE ALUMINUM. SYSTEM SHALL COMPLY WITH ALL REQUIREMENTS FOR A "MASTER LABEL" CERTIFICATION.

**LIGHTING FIXTURE SCHEDULE**

SYMBOL	DESCRIPTION	VOLTS	FIXTURE WATTAGE	LAMPS	MOUNTING
A	4' SUSPENDED FIXTURE HOLOPHANE NO. EVT4-6000LM-FST-MD-MVOLT-GZ10-40K-80CRI LITHONIA HUBBELL METALUX	MVOLT	64	LED	SUSPENDED
B	WALL PACK LIGHT FIXTURE HOLOPHANE NO. W4PLED-20C-700-40K-T3M-MVOLT-PE-BKSDP LITHONIA HUBBELL METALUX	MVOLT	45	LED	SURFACE

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS CITY OF LEESBURG, FLORIDA**

**POWER ONE-LINE DIAGRAM**

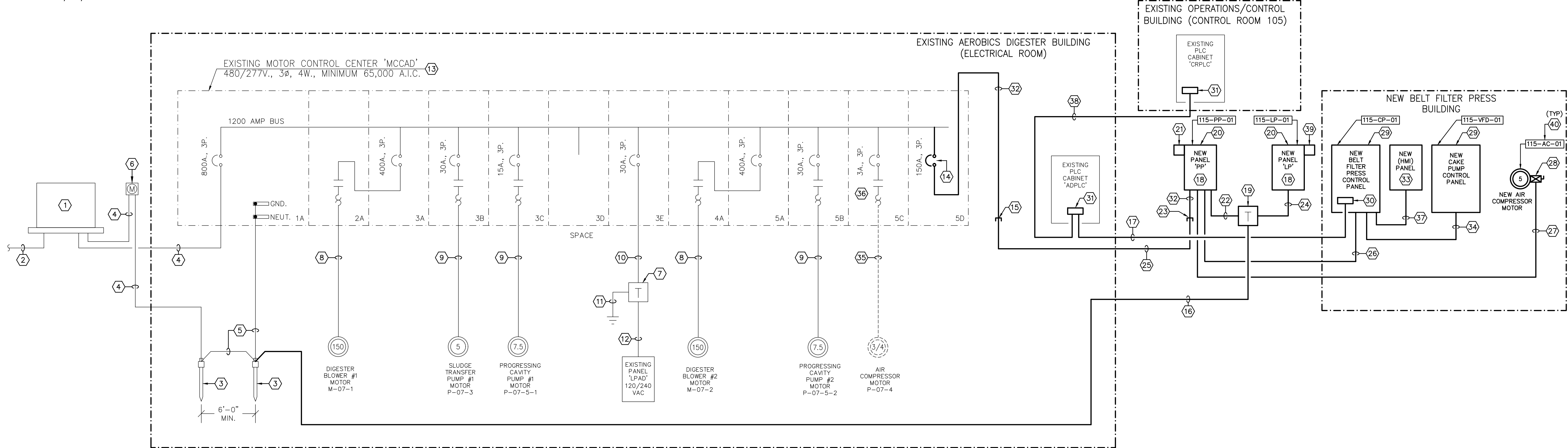
CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE NONE	DWG. NO. E1

DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.

LAST SAVED: 10/12/2017 9:39 AM RICHARD.BARBEITO DWG LOCATION: P:\6199\6149\ELEC\6149-E1.DWG

BID DOCUMENTS





**NOTES:**

- ① EXISTING UTILITY TRANSFORMER TO REMAIN.
- ② EXISTING UTILITY PRIMARY CONDUCTORS TO REMAIN.
- ③ EXISTING 5/8" x 20'-0" COPPERWELD GROUND ROD TO REMAIN.
- ④ EXISTING CONDUIT AND CONDUCTORS TO REMAIN.
- ⑤ EXISTING 1/0 GROUND CONDUCTOR TO REMAIN.
- ⑥ EXISTING KIOWATT HOUR METER TO REMAIN.
- ⑦ EXISTING 15KVA DRY TYPE TRANSFORMER 480-120/240V, 3Ø, 4W. TO REMAIN.
- ⑧ EXISTING 3 NO. 4/0 AND 1 NO. 2 E.G. - 2" C.
- ⑨ EXISTING 3 NO. 12 AND 1 NO. 12 E.G. - 3/4" C.
- ⑩ EXISTING 3 NO. 10 AND 1 NO. 10 E.G. - 3/4" C.
- ⑪ EXISTING GROUNDING CONDUCTOR TO REMAIN.
- ⑫ EXISTING CONDUIT AND WIRE TO REMAIN.
- ⑬ EXISTING MOTOR CONTROL CENTER TO REMAIN.
- ⑭ PROVIDE AND INSTALL NEW CIRCUIT BREAKER IN EXISTING BUCKET SPACE.
- ⑮ EXTEND EXISTING 1 1/2" C. (USING ELBOW FITTING) TO EXISTING 'MCCAD'.
- ⑯ BOND TO EXISTING (AEROBICS DIGESTER) GROUND RING. #6 AWG GROUND CONDUCTOR.
- ⑰ NEW 12 STRAND (MULTIMODE) FIBER OPTIC CABLE IN 1" C. PROVIDE TERMINATION AND TESTING WITH OOTR REPORT.

- ⑱ SEE PANEL SCHEDULE ON DRAWING E6.
- ⑲ NEW 15KVA (NEMA 3R) DRY TYPE TRANSFORMER 480-120/208V., 3Ø, 4W.
- ⑳ NEMA 4X (316 STAINLESS STEEL) ENCLOSURE.
- ㉑ NEW SURGE PROTECTION DEVICE (PQ PROTECTION # PQC100) 480/277V., 3Ø, 4W. OR PRE-APPROVED EQUIVALENT. CONNECT WITH 4 NO. 10 AND 1 NO. 10 E.G. - 3/4" C. MAX LENGTH 18" WITH NO SHARP BENDS.
- ㉒ 3 NO. 8 AND 1 NO. 8 E.G. - 3/4" C.
- ㉓ EXTEND EXISTING 1 1/2" C. TO NEW PANEL 'PP'.
- ㉔ 4 NO. 6 AND 1 NO. 8 E.G. - 1" C.
- ㉕ 3 NO. 2/0 AND 1 NO. 6 E.G. IN EXISTING 1 1/2" C.
- ㉖ 3 NO. 1/0 AND 1 NO. 6 E.G. - 2" C.
- ㉗ 3 NO. 10 AND 1 NO. 10 E.G. - 3/4" C.
- ㉘ 30A. 3P. COMBINATION MOTOR STARTER.
- ㉙ NEW (VENDER SUPPLIED) CONTROL PANEL, FURNISHED AND PRE-MOUNT ON SKID. COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENTS WITH SKID MANUFACTURER.
- ㉚ NEW FIBER CONVERT, PATCH PANEL AND POWER SUPPLY. SEE DRAWINGS I3 AND I4.

- ㉛ PROVIDE AND INSTALL NEW FIBER OPTIC PATCH PANEL. SEE DRAWINGS I3 AND I4.
- ㉜ 3 NO. 2/0 AND 1 NO. 6 E.G. - 1 1/2" C.
- ㉝ NEW (HMI) PANEL PROVIDED AND INSTALLED BY OWNER.
- ㉞ NEW CONDUIT & WIRE, FURNISHED AND PRE-MOUNT ON SKID. COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENTS WITH SKID MANUFACTURER.
- ㉟ EXISTING 3 NO. 12 AND 1 NO. 12 E.G. - 3/4" C. TO BE REMOVED.
- ㊱ EXISTING CIRCUIT BREAKER AND MOTOR STARTER TO REMAIN. MCC BUCKET TO BE RELABELLED AS "SPARE".
- ㊲ NEW CAT 5E (ETHERNET) CABLE IN 3/4" C.
- ㊳ REMOVE EXISTING 2 STRAND (MULTIMODE) FIBER OPTIC CABLE AND REPLACE WITH NEW 12 STRAND (MULTIMODE) FIBER CABLE. REUSE EXISTING 2" CONDUIT. SEE DRAWINGS I3 AND I4. PROVIDE TERMINATION AND TESTING WITH OOTR REPORT.
- ㊴ NEW SURGE PROTECTION DEVICE (PQ PROTECTION # PQC100) 120/208V., 3Ø, 4W. OR PRE-APPROVED EQUIVALENT. CONNECT WITH 4 NO. 10 AND 1 NO. 10 E.G. - 3/4" C. MAX LENGTH 18" WITH NO SHARP BENDS.
- ㊵ PROCESS TAG NUMBERS FOR INSTRUMENTATION REFERENCE. SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.

LINE LEGEND	
—	NEW CONSTRUCTION
- - -	EXISTING TO REMAIN
---	TO BE REMOVED

**POWER ONE-LINE DIAGRAM (MCCAD)**

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS CITY OF LEESBURG, FLORIDA**

**POWER ONE-LINE DIAGRAM**

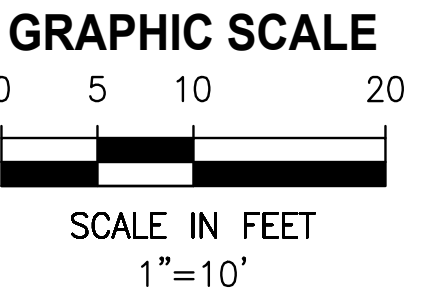
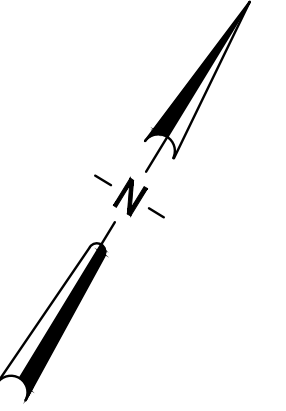
CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE NONE	DWG. NO. E2

DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.

LAST SAVED: 10/12/2017 3:06 PM RICHARD.BARBEITO DWG LOCATION:P:\-6199\6149\ELEC\6149-E2.DWG

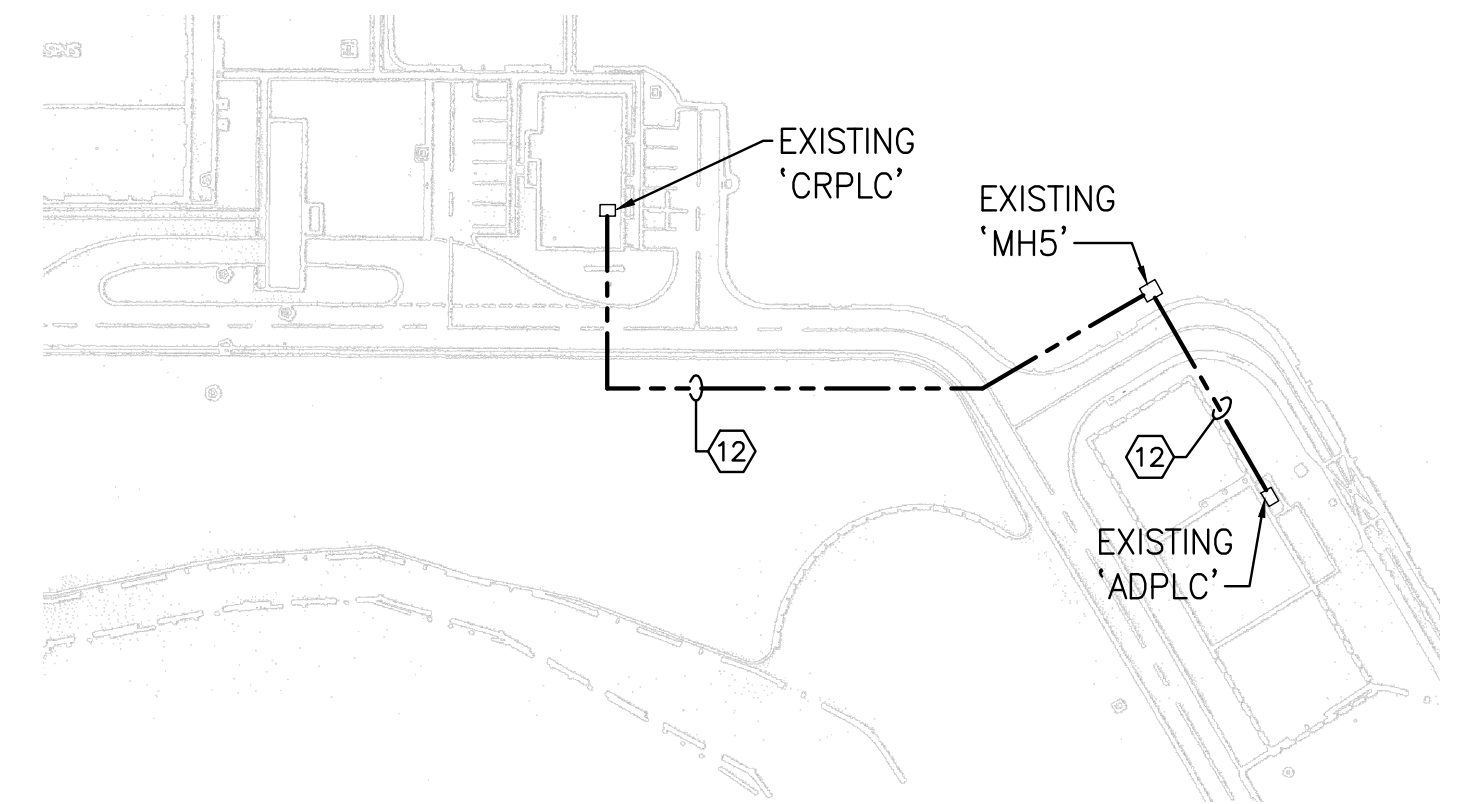
BID DOCUMENTS



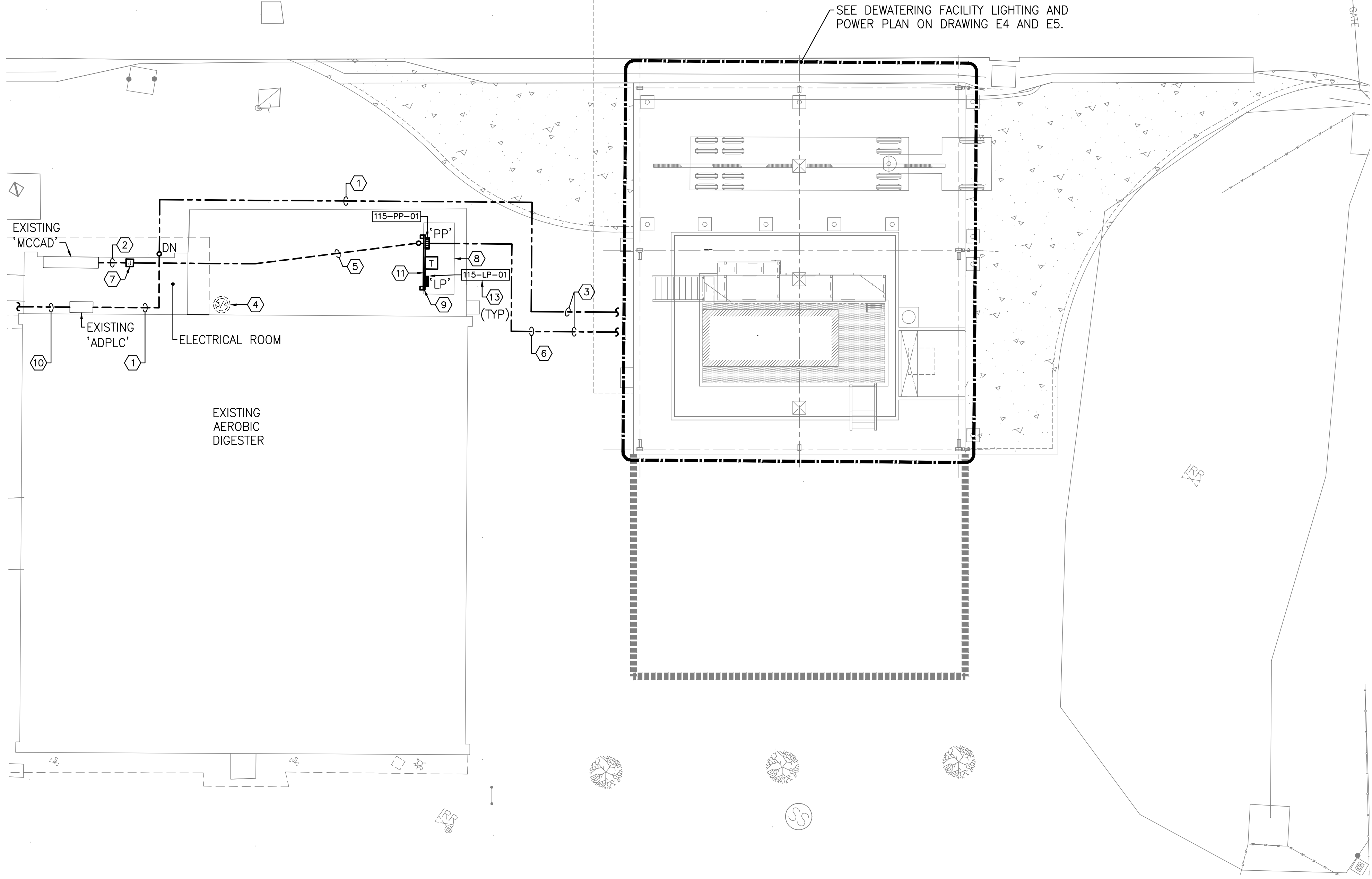


**DRAWING NOTES:**

- ① NEW CONDUIT WITH FIBER OPTIC CABLE TO NEW BELT FILTER PRESS LOCAL CONTROL PANEL. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2. SEE INSTRUMENTATION DRAWINGS I3 AND I4.
- ② NEW CONDUIT AND CONDUCTORS TO NEW PANEL 'PP'. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ③ SEE DRAWING E4 FOR CONTINUATION.
- ④ EXISTING COMPRESSOR TO BE REMOVED. REMOVE CONDUIT AND CONDUCTOR BACK TO IT'S ORIGINAL SOURCE.
- ⑤ EXISTING CONDUIT AND NEW CONDUCTORS TO NEW PANEL 'PP'. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ⑥ NEW CONDUIT AND CONDUCTORS TO NEW BELT FILTER PRESS LOCAL CONTROL PANEL. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ⑦ NEW FLOOR MOUNTED JUNCTION BOX LOCATION. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ⑧ EXISTING CONCRETE PAD TO REMAIN.
- ⑨ PROVIDE AND INSTALL NEW (316 S.S) PANEL SUPPORT RACK. SEE DRAWING E7 FOR SUPPORT RACK DETAIL.
- ⑩ EXISTING 2" CONDUIT WITH REPLACED FIBER OPTIC CABLE TO EXISTING PLC CABINET 'CRPLC' LOCATED IN EXISTING OPERATIONS/CONTROL BUILDING. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2. SEE INSTRUMENTATION DRAWINGS I3 AND I4.
- ⑪ SEE ELECTRICAL SUPPORT FRAME DETAIL ON DRAWING E7.
- ⑫ NEW (12 STRAND) FIBER OPTIC CABLE IN EXISTING 2" CONDUIT. SEE DRAWINGS E2, I3 AND I4.
- ⑬ PROCESS TAG NUMBERS FOR INSTRUMENTATION REFERENCE. SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.



**KEY PLAN**  
1"=100'



**ELECTRICAL SITE PLAN**  
1"=10'

**CARASTRO & ASSOCIATES, INC.**

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

**ELECTRICAL SITE PLAN**

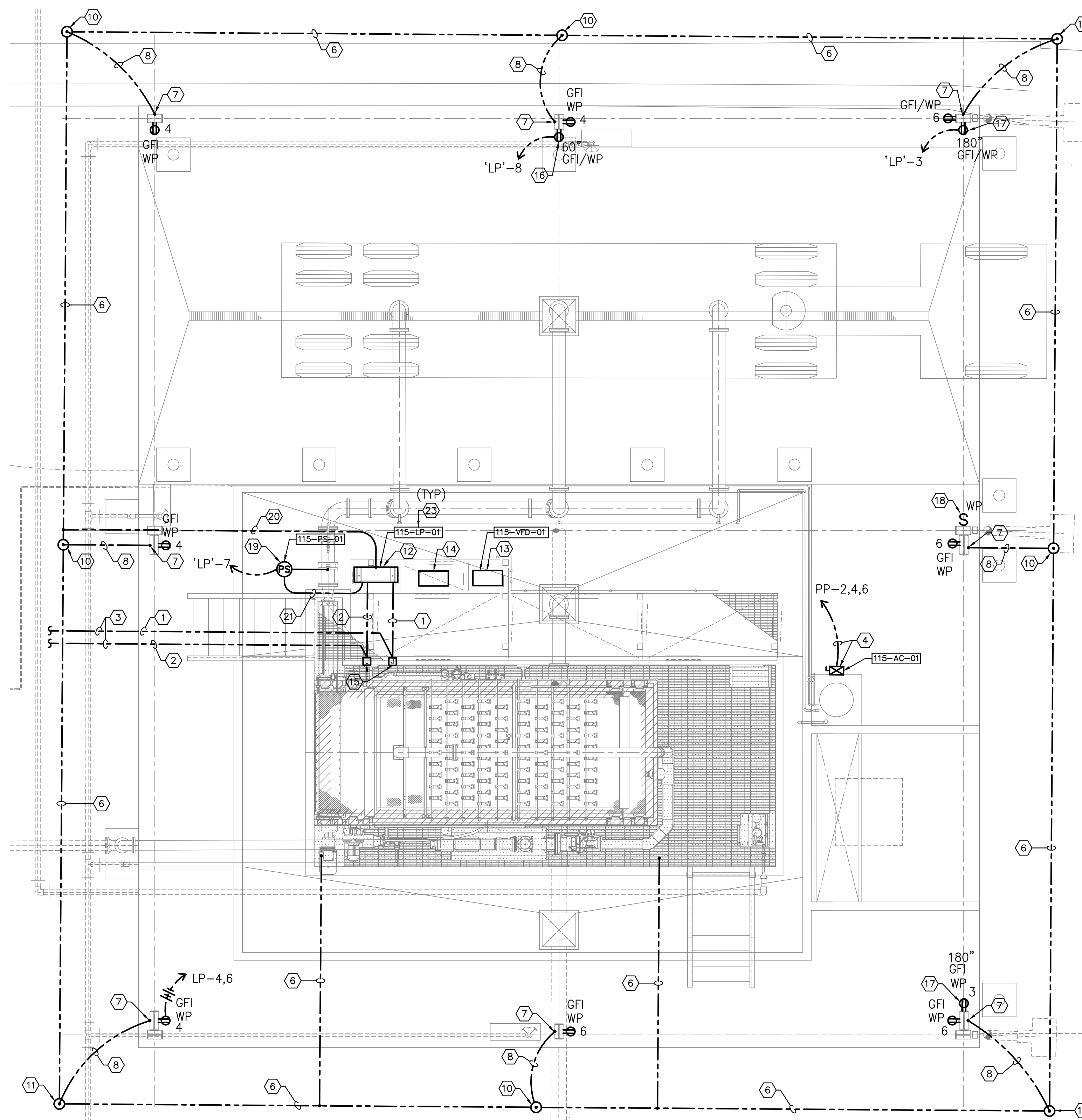
CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE 1"=10'	DWG. NO. E3

LAST SAVED: 10/12/2017 12:16 PM ALBERT NIEVES DWG LOCATION: P:\-6199\6149\ELEC\6149-E3.DWG

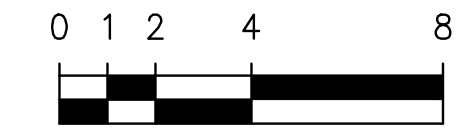
DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.

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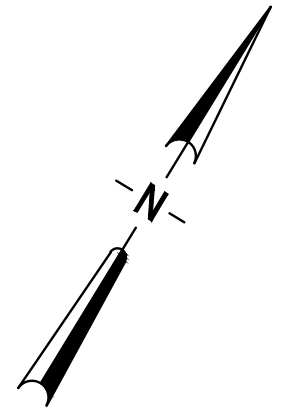




**GRAPHIC SCALE**



SCALE IN FEET  
1/4"=1'-0"



**DRAWING NOTES:**

- ① NEW 1" CONDUIT WITH FIBER OPTIC CABLE TO EXISTING 'ADPLC' CABINET. SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ② NEW CONDUIT AND CONDUCTORS (POWER). SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ③ SEE DRAWING E4 FOR CONTINUATION.
- ④ SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR CONDUIT, WIRING AND DISCONNECT SIZES.
- ⑤ 120V CONNECTION AND OUTLET BOX FOR TRUCK SCALE. COORDINATE ELECTRICAL REQUIREMENTS AND LOCATION WITH TRUCK SCALE MANUFACTURER.
- ⑥ NO. 4/0 BARE COPPER CONDUCTOR FOR GROUND GRID.
- ⑦ EXOTHERMIC WELD CONNECTION.
- ⑧ NO. 4/0 BARE COPPER CONDUCTOR FROM STEEL COLUMN TO GROUND GRID.
- ⑨ NEW CONDUIT AND CONDUCTORS (POWER) TO EXISTING 'MCCAD' (LOCATED IN AEROBIC DIGESTER). SEE POWER ONE-LINE DIAGRAM ON DRAWING E2 FOR ADDITIONAL INFORMATION.
- ⑩ NEW 5/8" X 20'-0" COPPER GROUND ROD.
- ⑪ NEW 5/8" X 20'-0" COPPER GROUND ROD WITH EXTERIOR TEST POINT. SEE DETAIL ON DRAWING E7.0.
- ⑫ NEW BELT FILTER PRESS CONTROL PANEL.
- ⑬ NEW CAKE PUMP CONTROL PANEL.
- ⑭ NEW HMI PANEL. HMI PANEL SUPPLIED AND INSTALLED BY OWNER.
- ⑮ NEW JUNCTION BOXES TO BE INCLUDED WITH (BFP) SKID.
- ⑯ DUPLEX RECEPTACLE WITH IN-USE COVER PLATE FOR FUTURE ODOR CONTROL SYSTEM.
- ⑰ SWITCHED DUPLEX RECEPTACLE WITH IN-USE COVER PLATE FOR FUTURE FAN. SEE NOTE ⑱ FOR SWITCH LOCATION.
- ⑱ SWITCH WITH WEATHERPROOF COVER PLATE FOR SWITCHED RECEPTACLE (NOTE ⑰).
- ⑲ PRESSURE SWITCH. ASHCROFT NO. B-200-42-B-XFS. PRESSURE SWITCH TO BE INCLUDED WITH STAINLESS STEEL DIAPHRAGM SEAL AND ISOLATOR VALVE. REFER TO SPECIFICATION SECTION 15125, PIPING APPURTENANCES. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER.
- ⑳ NO. 2 AWG GROUND CONDUCTOR.
- ㉑ 3 NO. 14 AWG - 3/4"C.
- ㉒ PROCESS TAG NUMBERS FOR INSTRUMENTATION REFERENCE. SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.

**POWER PLAN**

1/4"=1'-0"

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**ELECTRICAL DEWATERING FACILITY PLAN - POWER**

CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE 1/4"=1'-0"	DWG. NO. E4

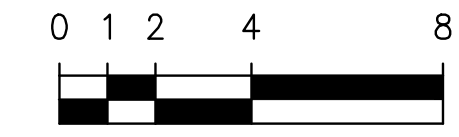
DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.

LAST SAVED: 10/12/2017 3:09 PM RICHARD.BARBEITO DWG LOCATION:P:\6199\6149\ELEC\6149-E4.DWG

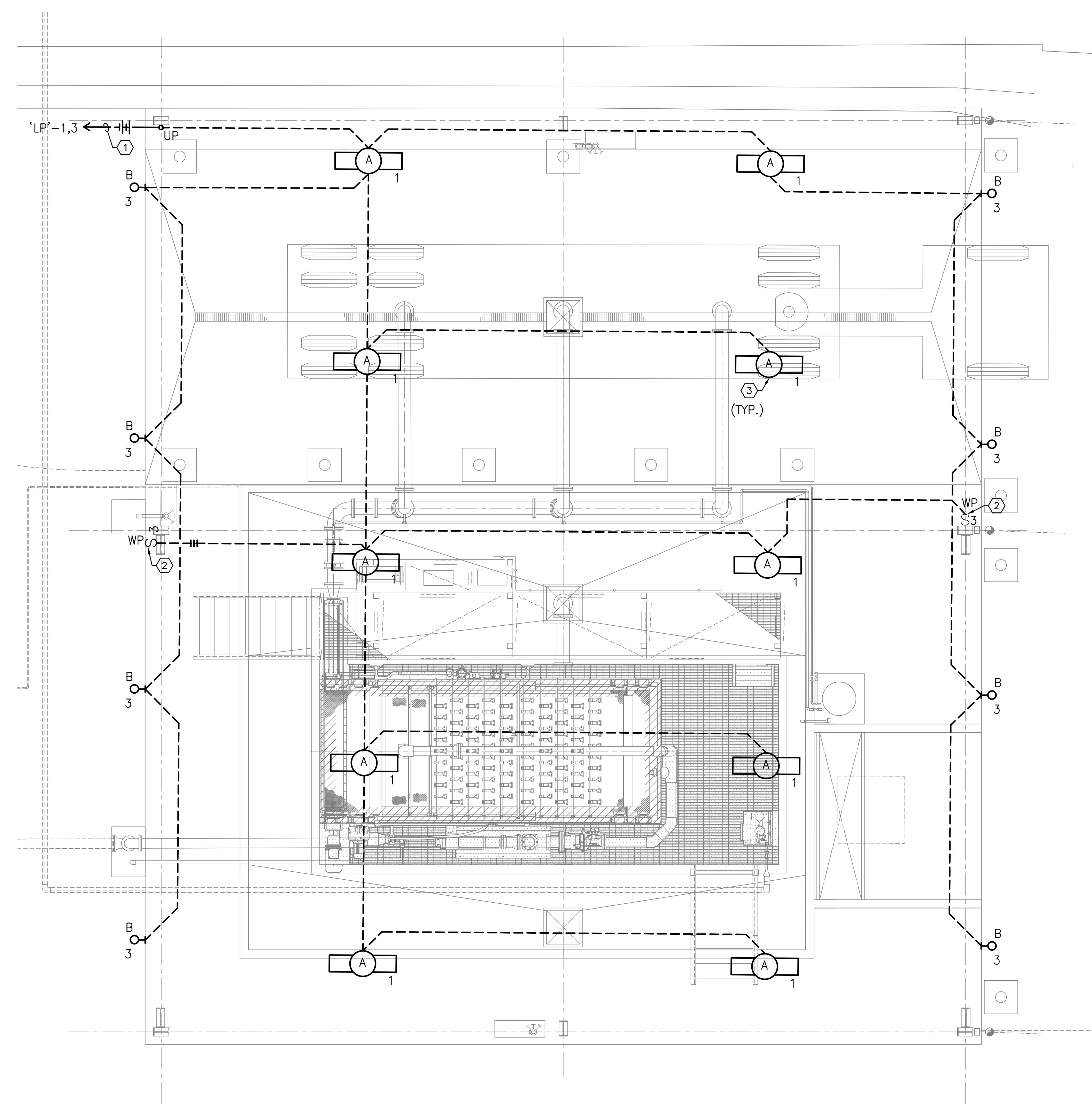
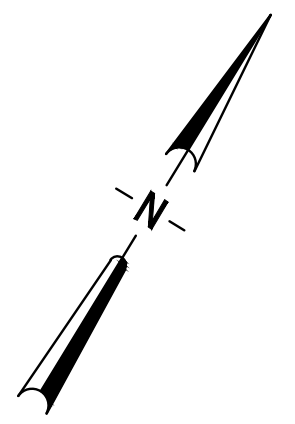
BID DOCUMENTS



**GRAPHIC SCALE**



SCALE IN FEET  
1/4" = 1'-0"



**DRAWING NOTES:**

- ① 4 NO. 12 AND 1 NO. 12 E.G. - 3/4" C.
- ② WEATHER PROOF LIGHTING SWITCH. COORDINATE EXACT LOCATION WITH OWNER.
- ③ MOUNT LIGHT FIXTURE TO UNDER SIDE OF STRUCTURAL BEAMS. COORDINATE EXACT LOCATIONS WITH STRUCTURAL.

**LIGHTING PLAN**

1/4" = 1'-0"

**CARASTRO & ASSOCIATES, INC.**  
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 324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING  
 FACILITY IMPROVEMENTS  
 CITY OF LEESBURG, FLORIDA**

**ELECTRICAL DEWATERING  
 FACILITY PLAN - LIGHTING**

CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE 1/4" = 1'-0"	DWG. NO. E5

DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.

LAST SAVED: 10/12/2017 9:43 AM RICHARD.BARBETO DWG LOCATION:P:\-6199\6149\ELEC\6149-E5.DWG

BID DOCUMENTS



①  
115-PP-01

PANEL: PP		AMPS: 150 MAIN: MCB MODEL: NF FEED THRU LUGS: YES						MOUNT: SURFACE ENCLOSURE: NEMA 4X AIC: 65,000										
SERVICE: 277/ 480		SECTION 1																
CKT NUM	DESCRIPTION	CODE	CONNECTED LOAD (KVA)									BREAKER		DESCRIPTION	CKT NUM			
			A	P	A	B	C	A	B	C	A	P						
1	PANEL 'LP' (VIA 15 KVA XFMR)	EQ	40	3	5.33						2.92			20	3	MTR	AIR COMPRESSOR	2
3	PANEL 'LP' (VIA 15 KVA XFMR)	EQ				5.33					2.92					MTR	AIR COMPRESSOR	4
5	PANEL 'LP' (VIA 15 KVA XFMR)	EQ					5.33				2.92					MTR	AIR COMPRESSOR	6
7	SPARE		20	3	0.00						13.94			80	3	EQ	BELT FILTER PRESS CONTROL PANEL	8
9	SPARE			1	0.00						13.94					EQ	BELT FILTER PRESS CONTROL PANEL	10
11	SPARE			1	0.00						13.94					EQ	BELT FILTER PRESS CONTROL PANEL	12
13	SPACE			1	0.00						0.00				1		SPACE	14
15	SPACE			1	0.00						0.00				1		SPACE	16
17	SPACE			1	0.00						0.00				1		SPACE	18
19	SPACE			1	0.00						0.00				1		SPACE	20
21	SPACE			1	0.00						0.00				1		SPACE	22
23	SPACE			1	0.00						0.00				1		SPACE	24
25	SPACE			1	0.00						0.00			30	3		SURGE PROTECTION DEVICE (SPD)	26
27	SPACE			1	0.00						0.00						SURGE PROTECTION DEVICE (SPD)	28
29	SPACE			1	0.00						0.00						SURGE PROTECTION DEVICE (SPD)	30
			5.3		5.3						16.9			16.9				
			CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	MIN NEC LOAD (KVA)	MIN NEC LOAD (AMPS)											
LIGHTING (LTG)			0.0	1.25	0.0	0.0	0.0	* PER NEC 215.3										
RECEPTACLES (REC)			0.0	*	0.0	0.0	0.0	* PER NEC 220.44										
AC (NON COINCID)(AC NC)			0.0	1.0	0.0	0.0	0.0	* PER NEC 220.60										
HEAT (NON COINCID)(H NC)			0.0	1.0	0.0	0.0	0.0	* PER NEC 220.60										
HVAC (COINCID)(HVAC C)			0.0	1.0	0.0	0.0	0.0											
EQUIPMENT (EQ)			57.8	1.0	57.8	57.8	57.8											
MOTORS (MTR)			0.0	1.0	0.0	0.0	0.0	* PER NEC 430.24										
LARGEST MOTOR			8.8	1.25	8.8	11.0	11.0											
MISCELLANEOUS (MISC)			0.0	1.0	0.0	0.0	0.0											
TOTAL			66.6		66.6	68.8	82.7	AMPS										

①  
115-LP-01

PANEL: LP		AMPS: 50 MAIN: MCB MODEL: NQ00 FEED THRU LUGS: YES						MOUNT: SURFACE ENCLOSURE: NEMA 4X AIC: 22,000										
SERVICE: 120/ 208 V, 3Ø, 4W		SECTION 1																
CKT NUM	DESCRIPTION	CODE	CONNECTED LOAD (KVA)									BREAKER		DESCRIPTION	CKT NUM			
			A	P	A	B	C	A	B	C	A	P						
1	LIGHTING - INTERIOR	LTG	20	1	1.64						0.60			20	1	MISC	SCALE	2
3	LIGHTING - EXTERIOR	LTG	20	1		0.36					0.72			20	1	REC	RECEPTACLES - COLUMN	4
5	RECEPTACLES - FAN (FUTURE)	REC	20	1			0.36				0.72			20	1	REC	RECEPTACLES - COLUMN	6
7	PRESSURE SWITCH	MISC	20	1	0.20						0.80			20	1	REC	RECEPTACLES - ODOR CONTROL (FUTURE)	8
9	SPACE			1		0.00					0.00				1		SPACE	10
11	SPACE			1			0.00				0.00				1		SPACE	12
13	SPACE			1	0.00						0.00			30	3		SURGE PROTECTION DEVICE (SPD)	14
15	SPACE			1		0.00					0.00						SURGE PROTECTION DEVICE (SPD)	16
17	SPACE			1			0.00				0.00						SURGE PROTECTION DEVICE (SPD)	18
			1.8		0.4						1.4			0.7				
			CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	MIN NEC LOAD (KVA)	MIN NEC LOAD (AMPS)											
LIGHTING (LTG)			2.0	1.25	2.0	2.5	2.5	* PER NEC 215.3										
RECEPTACLES (REC)			2.6	*	2.6	2.6	2.6	* PER NEC 220.44										
AC (NON COINCID)(AC NC)			0.0	1.0	0.0	0.0	0.0	* PER NEC 220.60										
HEAT (NON COINCID)(H NC)			0.0	1.0	0.0	0.0	0.0	* PER NEC 220.60										
HVAC (COINCID)(HVAC C)			0.0	1.0	0.0	0.0	0.0											
EQUIPMENT (EQ)			0.0	1.0	0.0	0.0	0.0											
MOTORS (MTR)			0.0	1.0	0.0	0.0	0.0	* PER NEC 430.24										
LARGEST MOTOR			0.0	1.25	0.0	0.0	0.0											
MISCELLANEOUS (MISC)			0.8	1.0	0.8	0.8	0.8											
TOTAL			5.4		5.4	5.9	16.4	AMPS										

**DRAWING NOTES:**  
 ① PROCESS TAG NUMBER FOR INSTRUMENTATION REFERENCE.  
 SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
 CITY OF LEESBURG, FLORIDA**

**PANEL SCHEDULES**

CERTIFICATE OF AUTHORIZATION  
 APPROVED BY  
 PAUL S. CARASTRO  
 P.E. # 45830

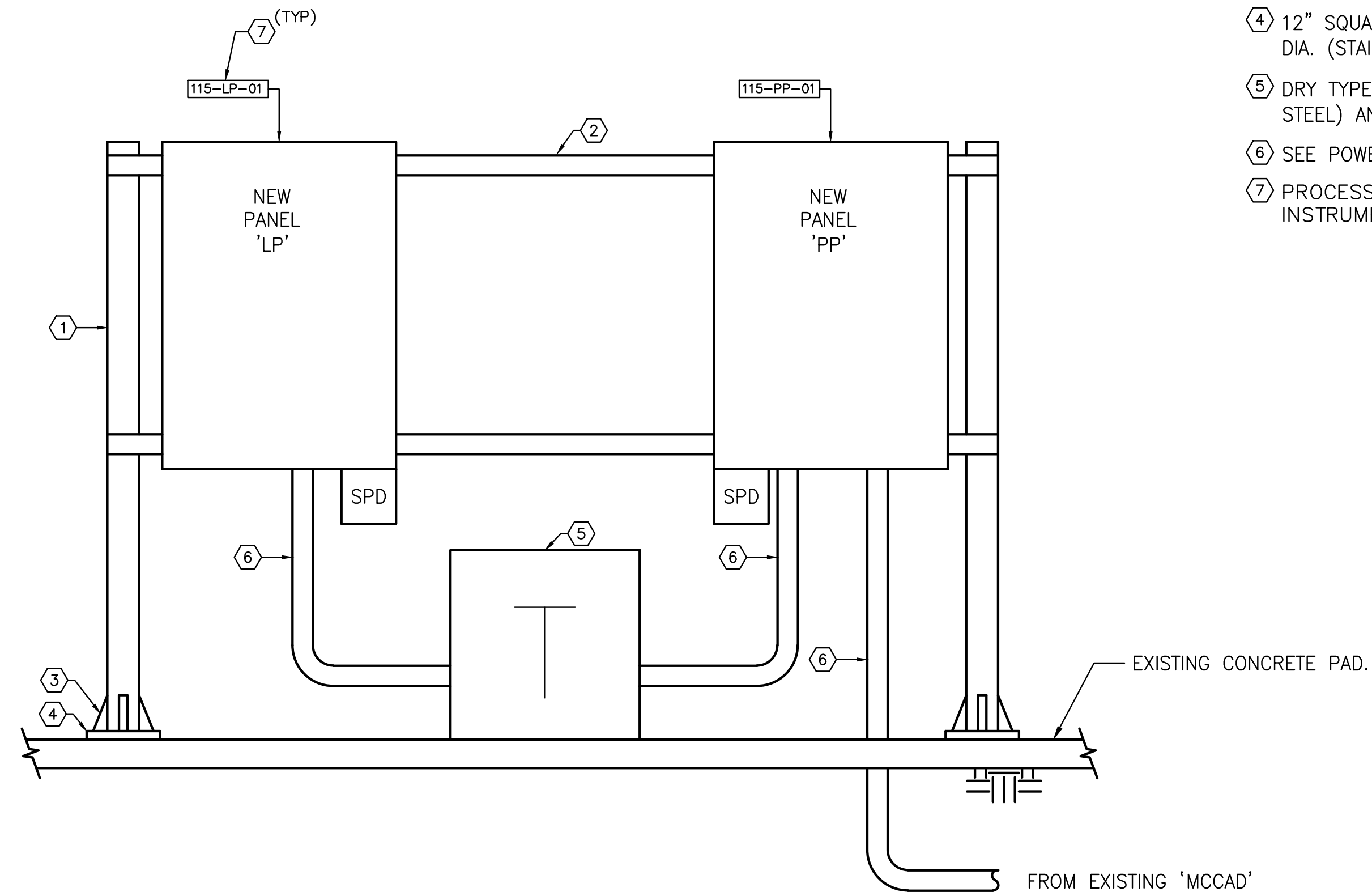
DATE	PROJECT NO.
OCT 2017	07810-084-01
SCALE	DWG. NO.
NONE	E6

DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.

LAST SAVED: 10/12/2017 11:57 AM RICHARD.BARBEITO DWG LOCATION:P:\-6199\6149\ELEC\6149-E6.DWG

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**DRAWING NOTES:**

- ① 6" (316 STAINLESS STEEL) SUPPORT POST. 6'-6" HIGH.
- ② 1-1/2" X 1 1/2" MIN. (316 STAINLESS STEEL) UNI-STRUT TYPE CHANNEL TO SUPPORT PANEL. ATTACH PANELS TO CHANNEL WITH 3/8" STAINLESS STEEL HARDWARE. (SIZE AS REQUIRED)
- ③ 3/8" THICK (316 STAINLESS STEEL) GUSSETS WELDED TO SUPPORT POST AND BASE.
- ④ 12" SQUARE, 3/8" THICK (316 STAINLESS STEEL) PLATE BOLTED TO PAD WITH 1/2" DIA. (STAINLESS STEEL) ANCHOR BOLTS AND WASHERS.
- ⑤ DRY TYPE TRANSFORMER BOLTED TO CONCRETE PAD WITH 1/2" DIA. (STAINLESS STEEL) ANCHOR BOLTS AND WASHERS.
- ⑥ SEE POWER ONE-LINE DIAGRAM ON DRAWING E2.
- ⑦ PROCESS TAG NUMBER FOR INSTRUMENTATION REFERENCE. SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.

**ELECTRICAL SUPPORT  
FRAME DETAIL**

SCALE = NOT TO SCALE

DRAWING NOTES:

**CARASTRO & ASSOCIATES, INC.**

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**TURNPIKE WRF DEWATERING  
FACILITY IMPROVEMENTS  
CITY OF LEEBSBURG, FLORIDA**

**ELECTRICAL DETAILS**

CERTIFICATE OF AUTHORIZATION  
APPROVED BY  
PAUL S. CARASTRO  
P.E. # 45830

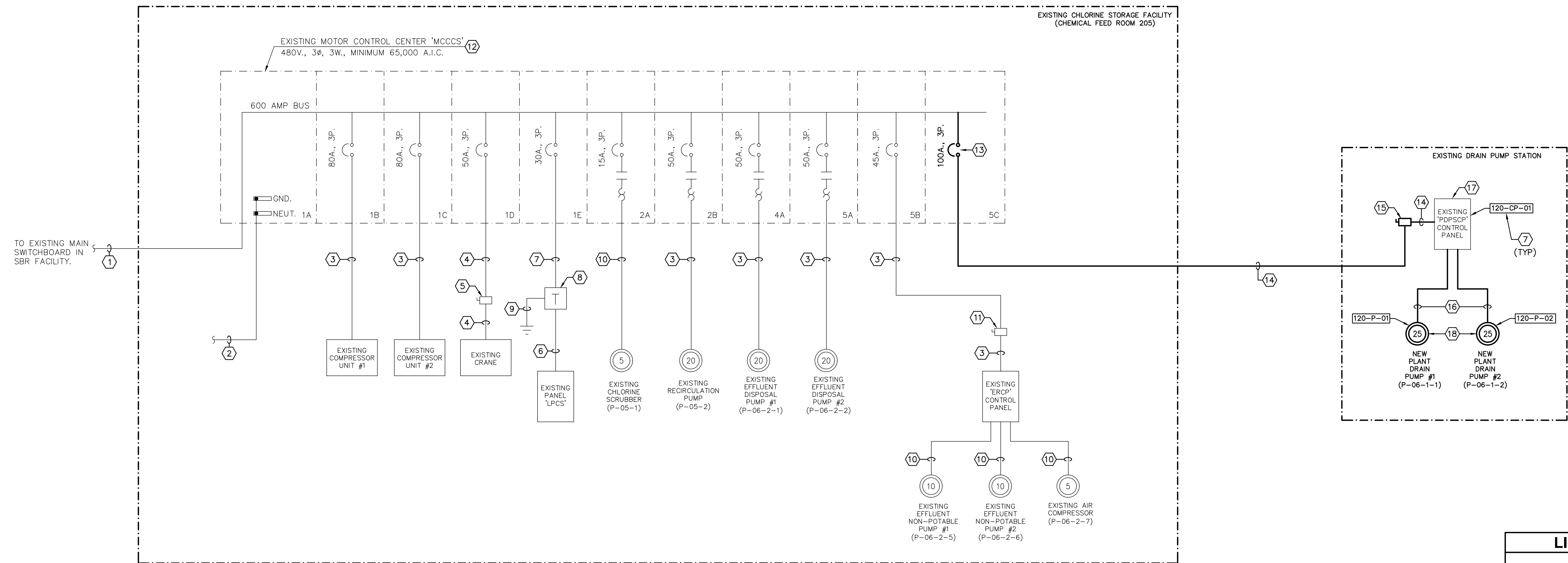
DATE  
OCT 2017  
SCALE  
NONE

PROJECT NO.  
07810-084-01  
DWG. NO.  
E7

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LINE LEGEND	
—	NEW CONSTRUCTION
- - -	EXISTING TO REMAIN
---	TO BE REMOVED

**POWER ONE-LINE DIAGRAM (MCCCS)**

**NOTES:**

- ① EXISTING 3-600 MCM AND 1 NO. 1/0 E.G. - 4"C. TO REMAIN.
- ② EXISTING GROUND CONDUCTOR TO TO EXISTING GROUNDING GRID.
- ③ EXISTING 3 NO. 8 AND 1 NO. 8 E.G. - 1"C. TO REMAIN.
- ④ EXISTING 3 NO. 10 AND 1 NO. 10 E.G. - 3/4"C. TO REMAIN.
- ⑤ EXISTING 30A. 3-POLE DISCONNECT SWITCH TO REMAIN.
- ⑥ EXISTING 4 NO. 1 AND 1 NO. 6 E.G. - 1 1/2"C. TO REMAIN.
- ⑦ EXISTING 3 NO. 8 AND 1 NO. 8 G.C. - 1"C. TO REMAIN.
- ⑧ EXISTING 30KVA DRY TYPE TRANSFORMER 480-120/208V., 3φ, 4W. TO REMAIN.
- ⑨ EXISTING NO. 8 AWG GROUND CONDUCTOR TO REMAIN.
- ⑩ EXISTING 3 NO. 12 AND 1 NO. 12 E.G. - 3/4"C. TO REMAIN.
- ⑪ EXISTING 60A. 3-POLE DISCONNECT SWITCH TO REMAIN.
- ⑫ EXISTING MOTOR CONTROL CENTER TO REMAIN.
- ⑬ REMOVE EXISTING 40A., 3-POLE CIRCUIT BREAKER AND REPLACE WITH NEW CIRCUIT BREAKER SHOWN.
- ⑭ REMOVE EXISTING 3 NO. 8 AND 1 NO. 8 E.G. - 1" C. AND REPLACE WITH NEW 3 NO. 3 AND 1 NO. 6 E.G. - 1 1/2"C.
- ⑮ REMOVE EXISTING 30A., 3 POLE, NEMA 4X (STAINLESS STEEL) DISCONNECT SWITCH AND REPLACE WITH NEW 100A. 3-POLE, NEMA 4X (316 STAINLESS STEEL) DISCONNECT SWITCH.
- ⑯ REMOVE EXISTING 3 NO. 12 AND 1 NO. 12 E.G. - 3/4" C. AND REPLACE WITH NEW 3 NO. 6 AND 1 NO. 8 E.G. - 1"C.
- ⑰ EXISTING DRAIN PUMP CONTROL PANEL TO REMAIN. REMOVE EXISTING CIRCUIT BREAKERS AND MOTOR STARTER WITH WHAT IS SHOWN BELOW.

QTY.	CIRCUIT BREAKER	POLE	VOLTS	DESCRIPTION
1	100A.	3	460	MAIN
2	60A.	3	460	(25 HP) SUBMERSIBLE PUMP (18.64 KW)

\* BREAKERS RATED 65,000 A.I.C. MINIMUM.

QTY.	MOTOR STARTER	POLE	VOLTS	DESCRIPTION
2	SIZE 2	3	460	(25 HP) SUBMERSIBLE PUMP

- ⑱ REMOVE EXISTING 10 HP PUMPS AND REPLACE WITH PUMP SHOWN.
- ⑲ PROCESS TAG NUMBER FOR INSTRUMENTATION REFERENCE. SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.

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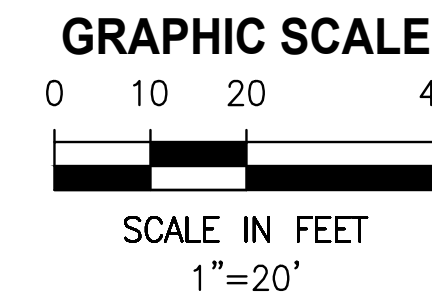
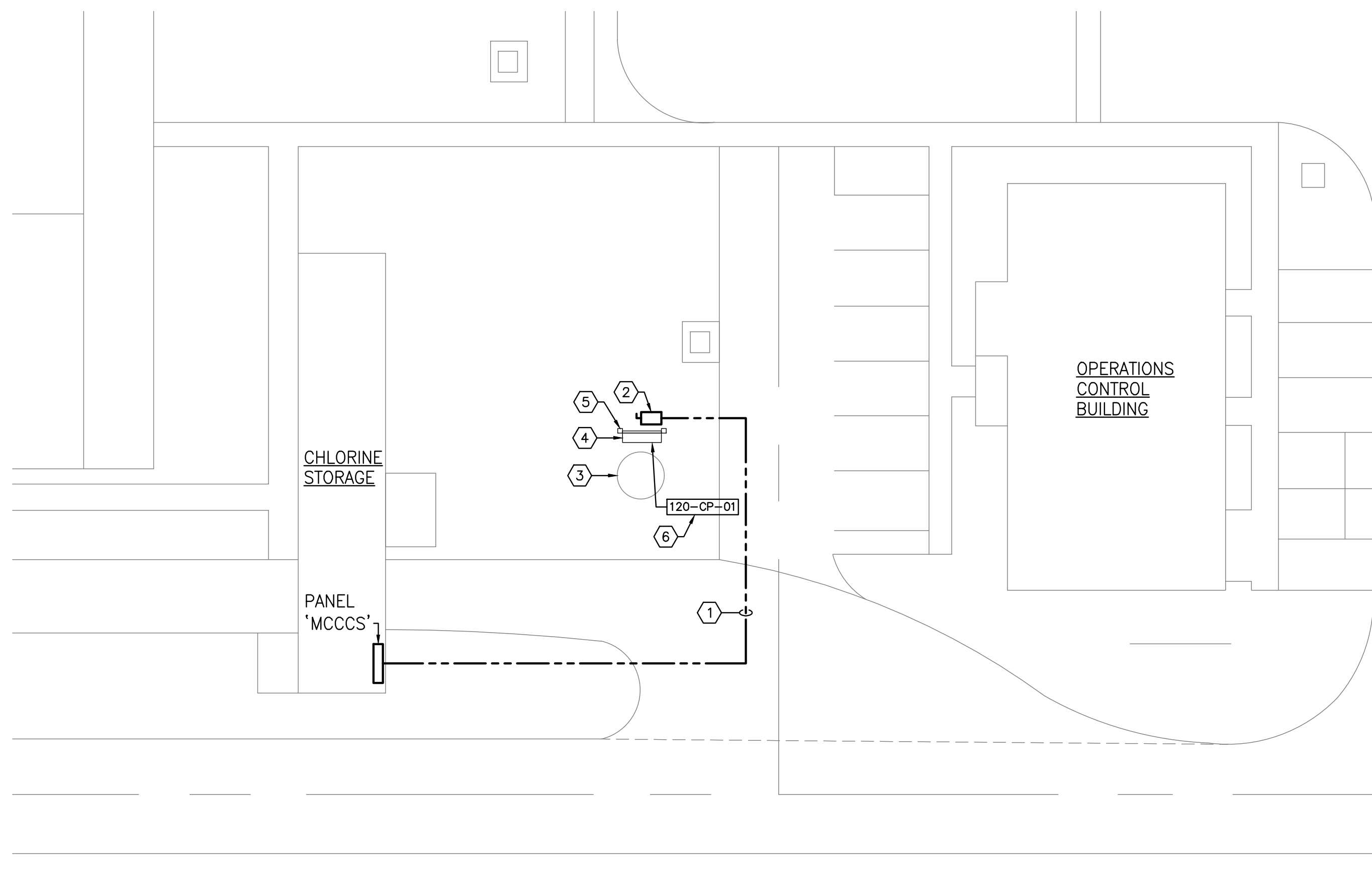
**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS CITY OF LEESBURG, FLORIDA**

**POWER ONE-LINE DIAGRAM (MCCCS)**

CERTIFICATE OF AUTHORIZATION APPROVED BY PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE NONE	DWG. NO. E8

DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.





**ELECTRICAL SITE PLAN – PLANT DRAIN LIFT STATION**

1"=20'

**DRAWING NOTES:**

- ① SEE POWER ONE-LINE DIAGRAM (MCCCS) ON DRAWING E8 FOR CONDUIT AND CONDUCTOR SIZES.
- ② SEE POWER ONE-LINE DIAGRAM (MCCCS) ON DRAWING E8 FOR DISCONNECT SIZE.
- ③ EXISTING DRAIN STATION TANK TO REMAIN.
- ④ EXISTING DRAIN STATION CONTROL PANEL (PDSPCP) TO REMAIN. SEE ONE-LINE DIAGRAM ON DRAWING E8.
- ⑤ EXISTING PANEL SUPPORT SYSTEM TO REMAIN.
- ⑥ PROCESS TAG NUMBER FOR INSTRUMENTATION REFERENCE. SEE INSTRUMENTATION DRAWINGS FOR ADDITIONAL INFORMATION.

**CARASTRO & ASSOCIATES, INC.**

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**TURNPIKE WRF DEWATERING  
FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**ELECTRICAL SITE PLAN  
PLANT DRAIN LIFT STATION**

CERTIFICATE OF AUTHORIZATION  
APPROVED BY  
PAUL S. CARASTRO  
P.E. # 45830

DATE  
OCT 2017  
SCALE  
1"=20'

PROJECT NO.  
07810-084-01  
DWG. NO.  
E9

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### ELECTRICAL SYMBOLS

(KCI)	ELAPSED TIME METER		COMMUNICATION LINK DIRECTION ON SAME DRAWING (SOFTWARE AND HARDWARE TYPES)
(KS)	TIMER		• MATCHPOINT (LETTER)
(PB)	MOMENTARY PUSHBUTTON		• DRAWING NUMBER
(PB)	PUSHBUTTON WITH LOCKOUT		
(HS)	HAND (MAINTAINED) SELECTOR SWITCH OR MECHANICALLY INTERLOCKED PUSHBUTTONS (SEE CONTROL SCHEMATICS)	(IL)	INDICATING LIGHT R - RED (OFF, STOPPED, CLOSED) G - GREEN (ON, RUNNING, OPEN) A - AMBER (MALFUNCTION) B - BLUE (POWER ON) W - WHITE (STATUS)
X/X/X	FUNCTION SUBSCRIPTS FOR HAND SWITCH AND PUSHBUTTON CONTROLS	(HS)	ELECTRIC MOTOR OPERATED VALVE OR GATE ACTUATOR WITH INTEGRAL BUILT-IN DEVICES
H/O/A	HAND-OFF-AUTO	(HIC)	HS L/O/R - LOCAL/OFF/REMOTE SELECTOR SWITCH
L/O/R	LOCAL-OFF-REMOTE	(ZT)	HK O/S/C - OPEN/STOP/CLOSE PUSHBUTTONS
L/R	LOCAL-REMOTE	(ZC)	ILO & ZSC - OPEN & CLOSED LIMIT SWITCHES
M/A	MANUAL-AUTO	(ZSC)	ILO & ILC - OPEN & CLOSED INDICATING LIGHTS
M/O/A	MANUAL-OFF-AUTO	(ILO)	ZC - POSITION CONTROLLER
O/A	OPEN-AUTO	(LO)	ZT - POSITION TRANSMITTER
O/C	OPEN-CLOSE	(MST)	MOTOR(M) WITH SPEED TRANSMITTER
O/C/A	OPEN-CLOSE-AUTO	(VFD)	VARIABLE FREQUENCY DRIVE
O/O	ON-OFF	(TE/TS)	TEMPERATURE ELEMENT AND/OR SWITCH (INTEGRAL WITH MOTOR OR BEARING ASSEMBLY)
120V	120V AC POWER SUPPLY	(VE/VS)	VIBRATION ELEMENT AND/OR SWITCH (FIELD MOUNTED AT/ON EQUIPMENT)
480V	480V AC POWER SUPPLY	(M)	ELECTRIC MOTOR OPERATOR
120V	120V AC POWER ON-OFF SWITCH	(MS)	MOISTURE SENSOR
	ELECTRIC (ELECTRONIC) SIGNAL	(MOT)	MOTOR STARTER AND ASSOCIATED INTERLOCK LOGIC
	FOXBORO COMMUNICATION PROTOCOL	(MMD)	MICROPROCESSOR METERING DEVICE
	SONIC OR ULTRASONIC SIGNAL (GUIDED) FROM TRANSDUCERS (CABLE BY VENDOR)	(PMR)	MOTOR PROTECTIVE RELAY
	HYDRAULIC LINE		ALARM HORN
	CAPILLARY LINE	(S)	STROBE LIGHT A - AMBER (COMMON MALFUNCTION)
	INSTRUMENT AIR (IA)		
	SOFTWARE LINK OR COMMUNICATION LINK		
	FIBER OPTIC COMMUNICATION		
	NORMALLY OPEN CONTACT		
	NORMALLY CLOSED CONTACT		
	SURGE PROTECTION		

### PROCESS SYMBOLS

PROCESS LINES (ON/OFF PAGE):

PROCESS MEDIUM  
CONN: AREA OR EQUIPMENT DRAWING TXX-XX

UTILITY LINES (ON/OFF PAGE):

REMARKS 1  
CONN: UTILITY DRAWING NUMBER

REMARKS 2

INSTRUMENT SIGNAL LINES (ON/OFF PAGE):

SIGNAL NAME  
CONN: CONNECTION NUMBER

	DENOTES NORMALLY CLOSED TYPE OF ALL VALVES		OPEN ENDED CAP
	GATE VALVE		PIPE END CAP
	KNIFE GATE VALVE (KV)		MAIN PROCESS LIVE
	BUTTERFLY VALVE		AUXILIARY SYSTEM
	BALL VALVE		SUBMERSIBLE PUMP
	DIAPHRAGM VALVE		XXXXXX QUICK DISCONNECT
	PLUG VALVE		METERING PUMP
	PINCH VALVE		ROTAMETER
	CHECK VALVE		MAC METER
	CONC CHECK VALVE		MIXER
	NEEDLE VALVE		SLICE GATE
	GLOBE VALVE		SLIDE GATE
	BULKHEAD FITTING		CALIBRATION COLUMN
	UNION		STRAINER
	BACKFLOW PREVENTER		PULSATION DIAPHRAGM
	PNEUMATIC GATE VALVE		HARNESSED COUPLING ADAPTOR (FLANGED)
	PRESSURE REDUCING VALVE		EXPANSION JOINT (FLANGED)
	PRESSURE REDUCING AND SOLENOID VALVE		DRAIN
	BACKPRESSURE VALVE		
	PRESSURE RELIEF VALVE		
	AIR RELEASE VALVE		
	2-WAY ELECTRIC SOLENOID VALVE		
	SOLENOID OPERATOR NO = NORMALLY OPEN NC = NORMALLY CLOSED		
	3-WAY ELECTRIC SOLENOID VALVE WITH EXHAUST PORT		
	PNEUMATIC OPERATOR ZSO - OPEN LIMIT SWITCH ZSC - CLOSED LIMIT SWITCH		

### INSTRUMENT AND FUNCTION SYMBOLS

	FIELD MOUNTED
	MOTOR CONTROL CENTER MOUNTED
	FACE OF PANEL MOUNTED
	INTERIOR OF PANEL MOUNTED
	ASTERISK DENOTES INSTRUMENTS/DEVICES/PANELS PROVIDED BY PACKAGE SYSTEM VENDOR OR EQUIPMENT SUPPLIER. NOT SUPPLIED AS PART OF THE INSTRUMENT AND CONTROL SYSTEM SPECIFIED IN DIVISION 13 OF THE SPECIFICATIONS
	INSTRUMENTS SHARING COMMON HOUSING
	INDICATOR/CONTROLLER/RECORDER/ALARM POINT ACCESSIBLE VIA SHARED VIDEO DISPLAY AT OPERATORS WORKSTATION (FUNCTIONS IN DISTRIBUTED LOGIC CONTROLLER OR PLC) AS ABOVE BUT WITH LIMITED ACCESS (NOT NORMALLY ACCESSIBLE)
	PLC INPUT/OUTPUT AND/OR LOGIC FUNCTIONS DI - DIGITAL INPUT DO - DIGITAL OUTPUT AI - ANALOG INPUT AO - ANALOG OUTPUT

### PRIMARY ELEMENT SYMBOLS

	FLAG MOUNTED LEVEL ELEMENT (ULTRASONIC TYPE)		ANALYSIS ELEMENT CL - CHLORINE PC - PARTICLE COUNTER TURB - TURBIDITY
	FLOW ELEMENT (VENTURI TYPE)		FLOW ELEMENT (INSERTION TYPE)
	PROCESS SYMBOLS		ULTRASONIC TRANSDUCER

- NOTES:
- EXISTING POWER AND SIGNAL CONNECTIONS TO REMAIN AS PART OF THE IMPROVEMENTS ARE SHOWN BY LIGHT LINE WEIGHTS ( ) ON THE PROCESS AND INSTRUMENTATION DIAGRAMS
  - REFER TO SPECIFICATION SECTION 13300 FOR ADDITIONAL I/O SIGNALS NOT SHOWN ON THE P&D'S

### ABBREVIATIONS

- |      |                                  |
|------|----------------------------------|
| AI   | - ANALOG INPUT                   |
| AO   | - ANALOG OUTPUT                  |
| BA   | - BALL VALVE                     |
| DCS  | - DISTRIBUTED CONTROL SYSTEM     |
| DI   | - DIGITAL INPUT                  |
| DO   | - DIGITAL OUTPUT                 |
| EMR  | - EMERGENCY                      |
| I/O  | - INPUT/OUTPUT                   |
| LCP  | - LOCAL CONTROLLER PANEL         |
| MCC  | - MOTOR CONTROL CENTER           |
| VMS  | - VALVE MASTER STATION           |
| GCL  | - GRIT CLASSIFIER                |
| GP   | - GRIT PUMP                      |
| OIT  | - OPERATOR INTERFERENCE TERMINAL |
| PPS  | - PERFORATED PLATE SCREEN        |
| SLG  | - SLIDE GATE                     |
| SWC  | - SCREENINGS WASHER/COMPACTOR    |
| SV   | - SOLENOID VALVE                 |
| VFD  | - VARIABLE FREQUENCY DRIVE       |
| VGC  | - VORTEX GRIT CHAMBER            |
| UPS  | - UNINTERRUPTIBLE POWER SUPPLY   |
| KV   | - KNIFE GATE                     |
| PS   | - POWER SUPPLY                   |
| FOC  | - FIBER OPTIC CONVERTER          |
| FOP  | - FIBER OPTIC PATCH PANEL        |
| E-SW | - ETHERNET SWITCH                |

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
 CITY OF LEESBURG, FLORIDA

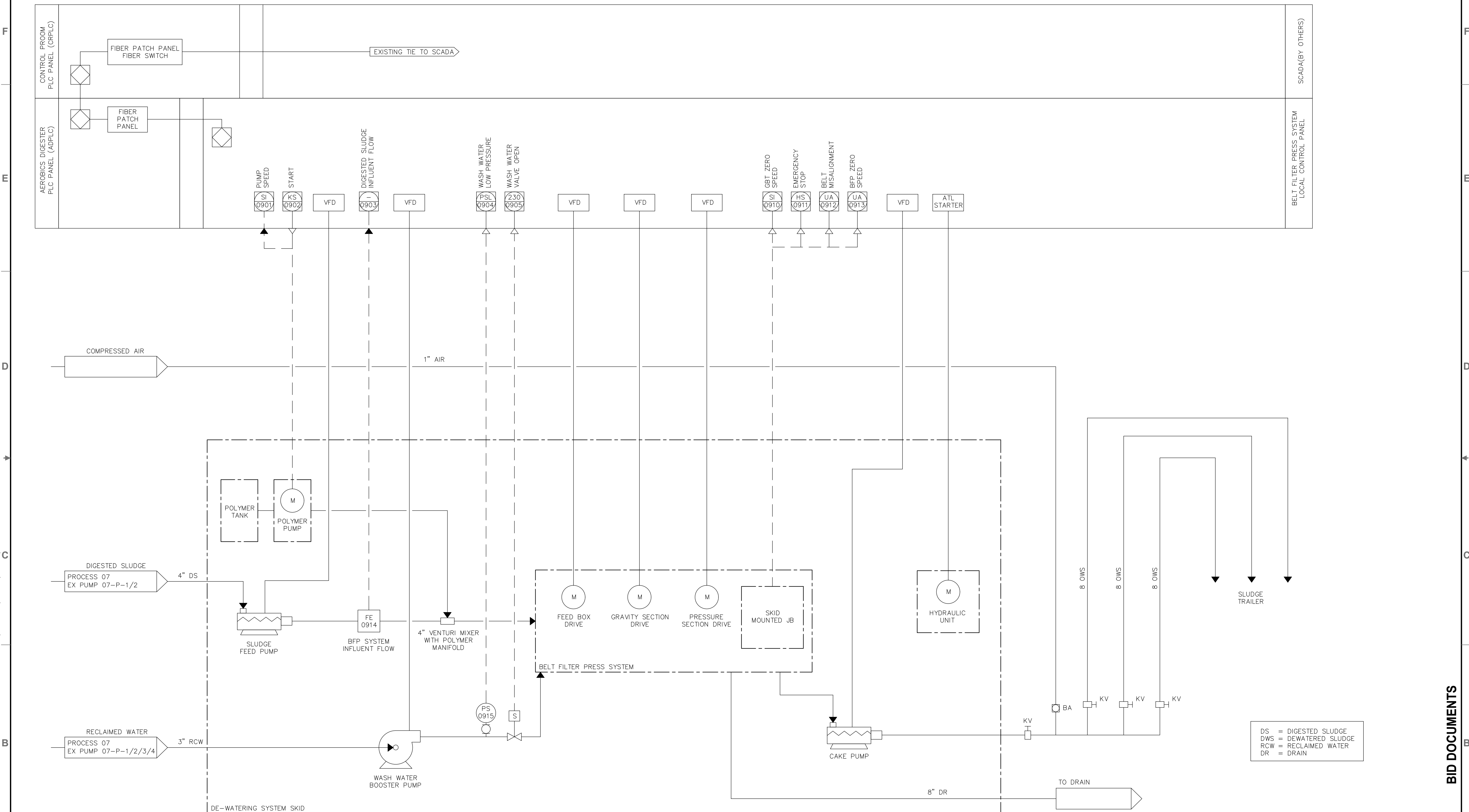
**INSTRUMENTATION SYMBOLS, LEGENDS & NOTES**

CERTIFICATE OF AUTHORIZATION APPROVED BY	DATE	PROJECT NO.
PAUL S. CARASTRO	OCT 2017	07810-084-01
P.E. # 45830	SCALE	DWG. NO.
	NONE	11

DESIGNED	RFB			
DRAWN	AN			
CHECKED	PSC			
LTR.	DATE	REVISIONS	BY	APPRD.



LAST SAVED: 10/12/2017 5:30 PM RICHARD.BARBETO DWG LOCATION:P:\6199\6149\6149-P&ID\6149-12.DWG



DS = DIGESTED SLUDGE  
 DWS = DEWATERED SLUDGE  
 RCW = RECLAIMED WATER  
 DR = DRAIN

**CARASTRO & ASSOCIATES, INC.**  
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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS**  
**CITY OF LEESBURG, FLORIDA**

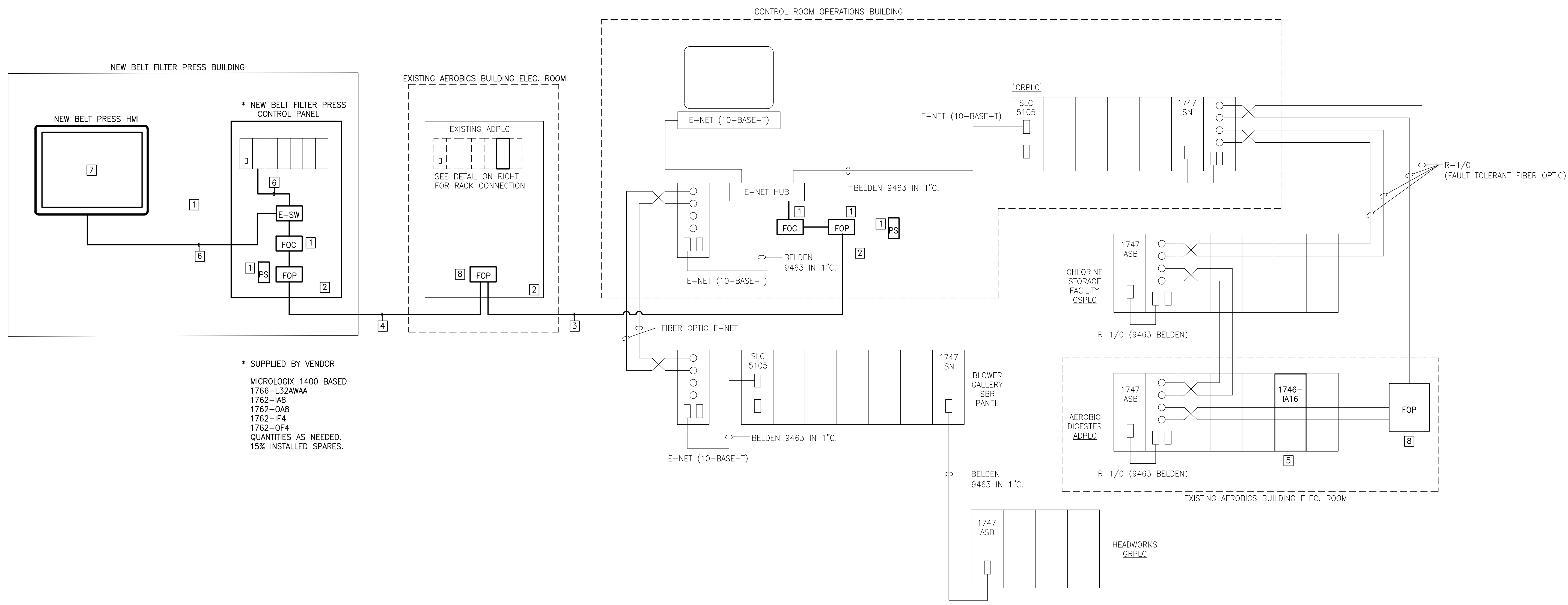
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CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE	DWG. NO. 12

LTR.	DATE	REVISIONS	BY	APPRD.	CHECKED
					PSC
					AN
					RFB

BID DOCUMENTS





\* SUPPLIED BY VENDOR  
 MICROLOGIX 1400 BASED  
 1766-L32AWAA  
 1762-IA8  
 1762-OA8  
 1762-IF4  
 1762-OF4  
 QUANTITIES AS NEEDED.  
 15% INSTALLED SPARES.

**NEW WORK**

- 1 PROVIDE AND INSTALL FIBER OPTIC MEDIA CONVERTER(FOC) - N-TRON #102MC-ST FIBER PATCH PANEL(FOP) - CORNING #SPH-01P, CCH-CP12-15T 12VDC POWER SUPPLY(PS) - N-TRON #ET-PS-024-02
- 2 LOCATION SHOWN IS NOT NECESSARILY THE IDEAL LOCATION. SUPPLIER TO SUBMIT ON LOCATION SUITABLE
- 3 NEW 12 STRAND MUTI-MODE FIBER CABLE, RUN IN EXISTING CONDUIT. EXISTING FIBER CABLE CAN BE USED FOR PULL
- 4 NEW 12 STRAND MUTI-MODE FIBER CABLE IN NEW CONDUIT SEE NOTE 17 ON DRAWING E2

- 5 PROVIDE AND INSTALL ONE (1) 1746-IA16 DISCRETE INPUT MODULE, 16 PT. COMPLETE WITH TERMINAL BLOCKS, LABELS AND ETC.
- 6 CAT5E ETHERNET CABLE
- 7 HMI AND PEDISTAL PROVIDED BY CITY CONTRACTOR TO PROVIDE INSTALLATION. THAT INCLUDES BUT IS NOT LIMITED TO SS ANCHORING BOLTS, GROUT FINISH ETC FOR A FINISHED INSTALLATION.
- 8 PROVIDE AND INSTALL FIBER PATCH PANEL(FOP) CORNING #SPH-01P, CCH-CP12-15T

LINE LEGEND	
	NEW CONSTRUCTION
	EXISTING TO REMAIN

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**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
 CITY OF LEESBURG, FLORIDA**

**INSTRUMENTATION LOOP DIAGRAM**

CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE NONE	DWG. NO. I3

LAST SAVED: 10/12/2017 3:25 PM BEN DWG LOCATION: P:\-6199\6149\6149\6149-13.DWG

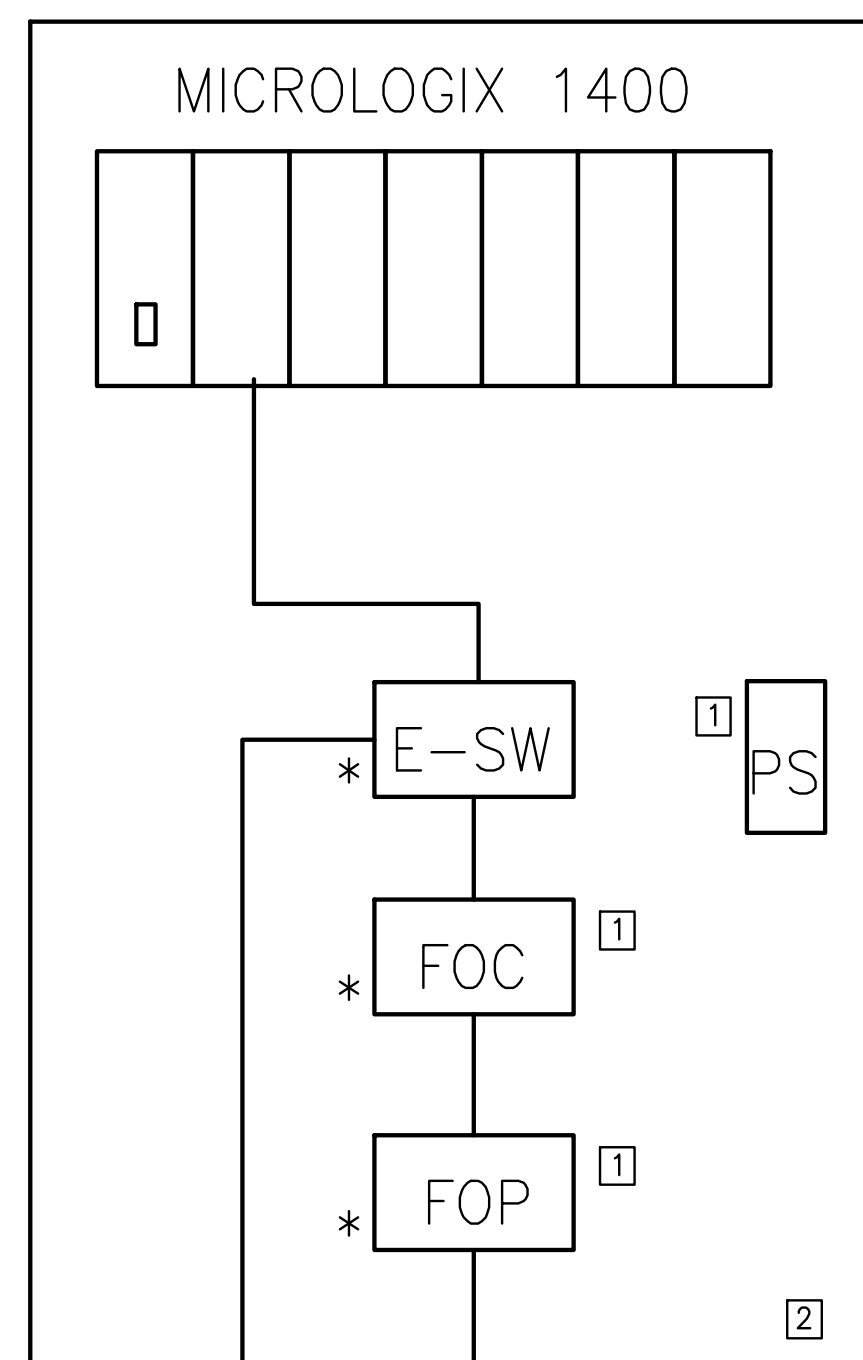
BID DOCUMENTS



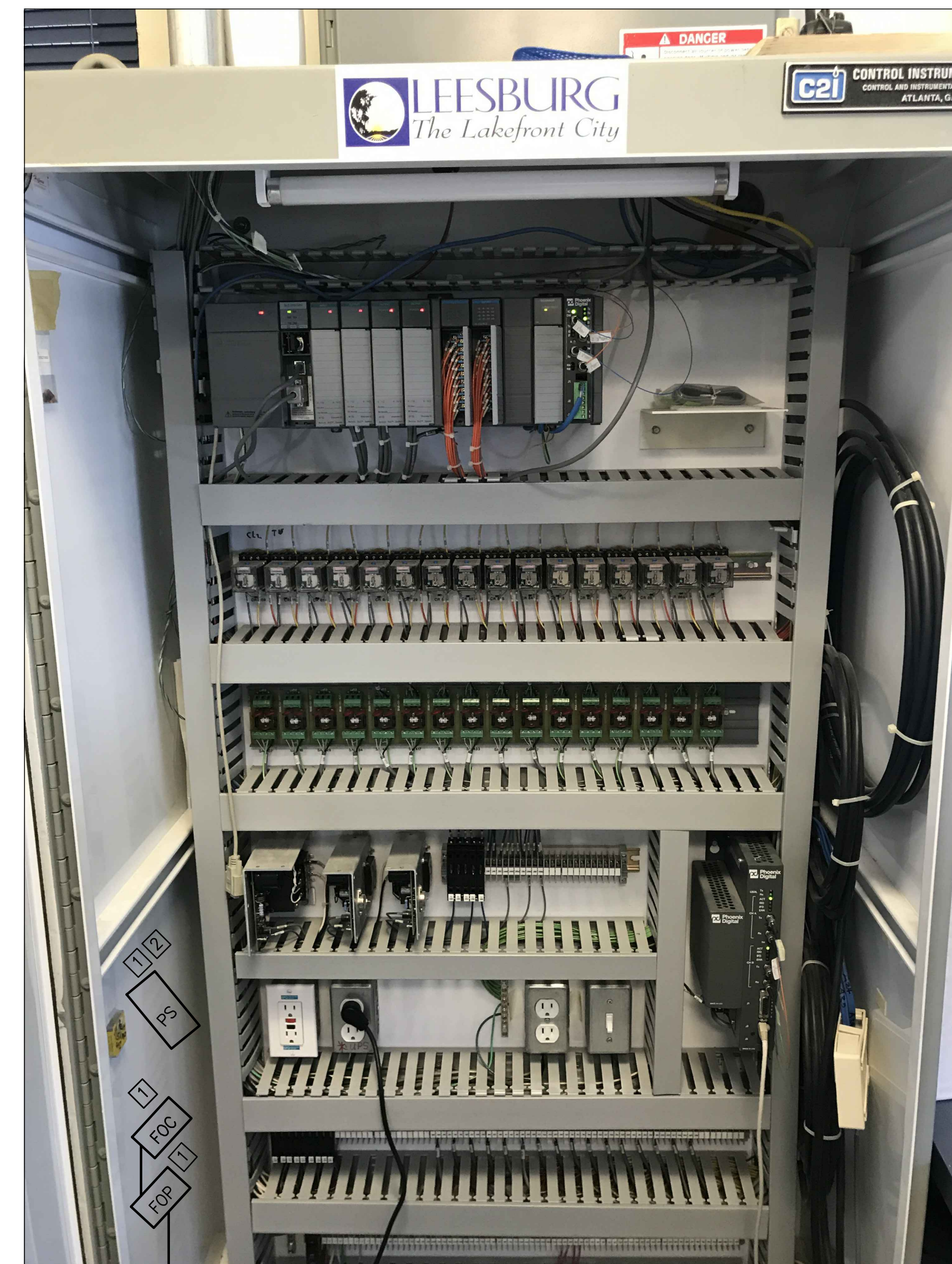
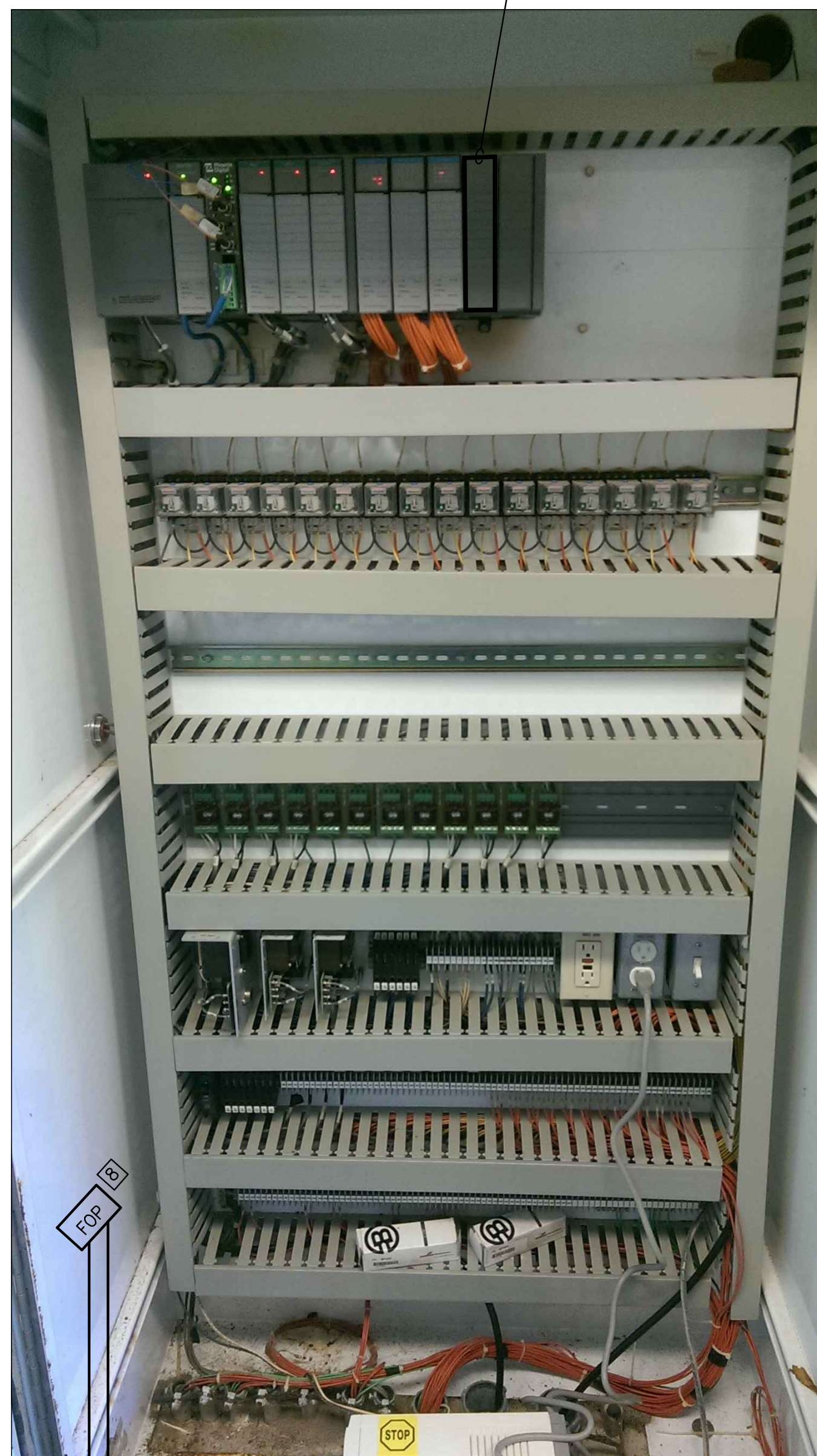
NEW BELT PRESS HMI



\* NEW BELT FILTER PRESS CONTROL PANEL



\* SUPPLIED BY VENDOR



NEW WORK

- 1 PROVIDE AND INSTALL FIBER OPTIC MEDIA CONVERTER(FOC) – N-TRON #102MC-ST FIBER PATCH PANEL(FOP) – CORNING #SPH-01P, CCH-CP12-15T 12VDC POWER SUPPLY(PS) – N-TRON #ET-PS-024-02
- 2 LOCATION SHOWN IS NOT NECESSARILY THE IDEAL LOCATION. SUPPLIER TO SUBMIT ON LOCATION SUITABLE
- 3 NEW 12 STRAND MUTI-MODE FIBER CABLE, RUN IN EXISTING CONDUIT. EXISTING FIBER CABLE CAN BE USED FOR PULL
- 4 NEW 12 STRAND MUTI-MODE FIBER CABLE IN NEW CONDUIT SEE NOTE 17 ON DRAWING E2
- 5 PROVIDE AND INSTALL ONE (1) 1746-IA16 DISCRETE INPUT MODULE, 16 PT. COMPLETE WITH TERMINAL BLOCKS , LABELS AND ETC.
- 6 CAT5E ETHERNET CABLE
- 7 HMI AND PEDISTAL PROVIDED BY CITY CONTRACTOR TO PROVIDE INSTALLATION. THAT INCLUDES BUT IS NOT LIMITED TO SS ANCHORING BOLTS, GROUT FINISH ETC FOR A FINISHED INSTALLATION
- 8 PROVIDE AND INSTALL FIBER PATCH PANEL(FOP) CORNING #SPH-01P, CCH-CP12-15T

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324 SOUTH HYDE PARK AVENUE, TAMPA, FLORIDA 33606 / (813) 258-0703

**TURNPIKE WRF DEWATERING FACILITY IMPROVEMENTS  
CITY OF LEESBURG, FLORIDA**

**INSTRUMENTATION LOOP DIAGRAM**

CERTIFICATE OF AUTHORIZATION APPROVED BY  PAUL S. CARASTRO P.E. # 45830	DATE OCT 2017	PROJECT NO. 07810-084-01
	SCALE NONE	DWG. NO. 14

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