The Enclosed Document Is Provided For Your Convenience.

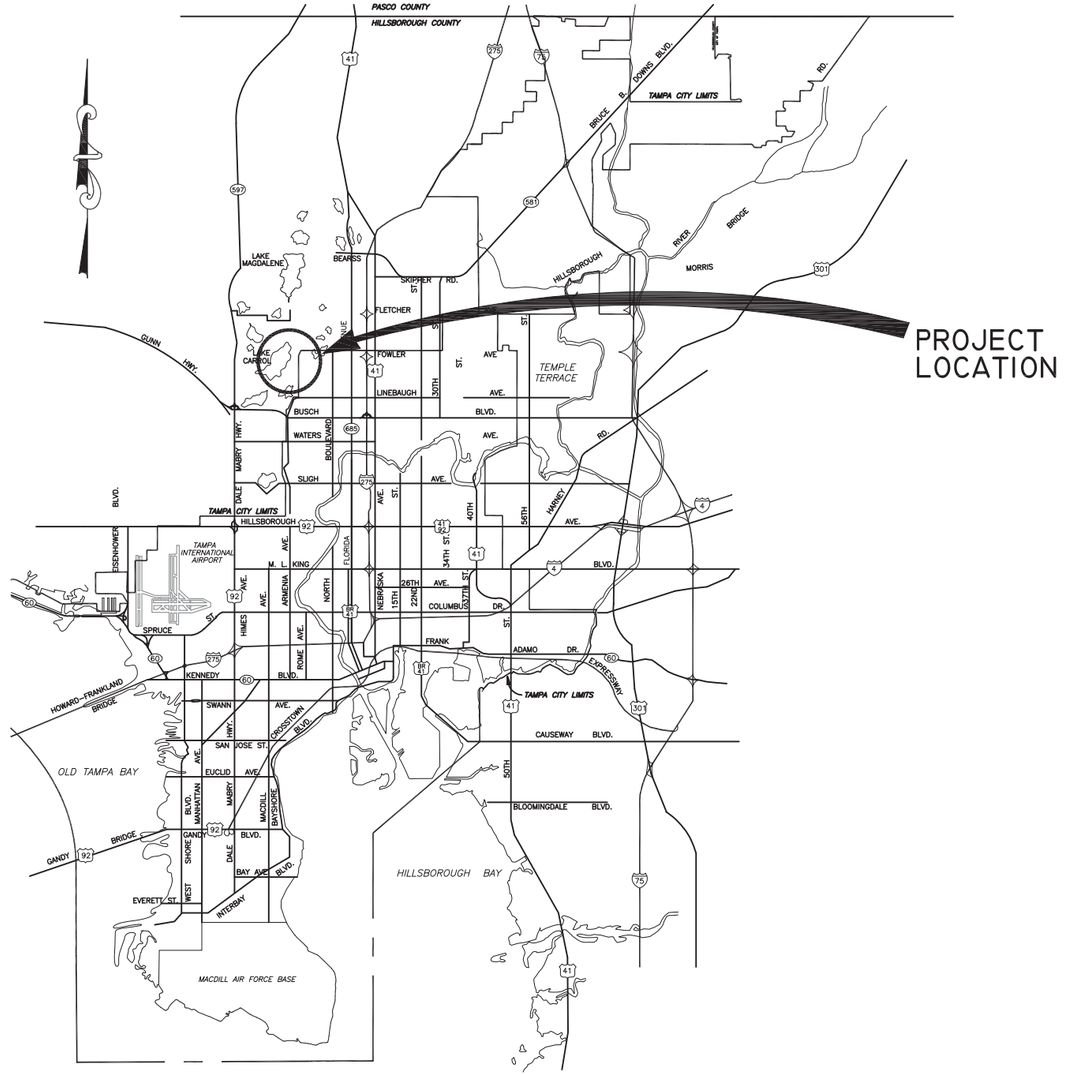
Please Email ALL Questions:

MailTo:ContractAdministration@TampaGov.net

Please Let Us Know If You Plan To Bid

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456

SW



CITY of TAMPA

CITY OF TAMPA FLORIDA
MASCOTTE
ORGANIZED JULY 15 1887

DEPARTMENT OF
TRANSPORTATION AND STORMWATER SERVICES
STORMWATER ENGINEERING DIVISION

PLANS FOR

EASTRIDGE PUMP STATION REPLACEMENT

CONTRACT # 18-C-00013

RICHARD ALFRED HOEL
LICENSE No. 41026
STATE OF FLORIDA
PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Richard Alfred Hoel, P.E. using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

	DES: MTM DRN: MP CKD: DATE:	No.	DATE	REVISIONS	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	COVER SHEET	SHEET 1 OF 21
		3					
		2					
		1					

SW

LEGEND

	UP to 18" & SMALLER	24" & LARGER
EX STORMWATER		
FORCE MAIN		
PIPES & MANHOLES		
CATCH BASIN, GRATE		
DITCHES, SWALES		
PROP STORMWATER		
FORCE MAIN		
PIPES & MANHOLES		
OTHER UTILITIES		
SAN SEWER & MANHOLES		
WATER LINE		
GAS LINE		
ELECTRICAL CABLE or DUCT		
TELEPHONE CABLE or DUCT		
TV CABLE		
VALVE		
HYDRANT		
CLEAN OUT		
EXISTING WYE		
POWER POLE		
TELEPHONE POLE		
GUY POLE		
GUY WIRE		
VALVE VAULT		
WATER METER		
ELECTRICAL MANHOLE or VAULT		
TELEPHONE MANHOLE or VAULT		
TRAFFIC BOX or VAULT		
OTHER FEATURES		
RIGHT of WAY LINE	R/W	
EDGE of PAVEMENT		
BUILDING LIMIT	1236	
PROPERTY OWNERSHIP		
FENCE		
CONIFER	6"	
PALM	8"	
OAK	10"	
OTHER	12"	
SHRUB		
HEDGE		
RAILROAD TRACKS		
IRON PIPE		
CONCRETE MONUMENT		

ABBREVIATIONS

TOP of PIPE	TP
INVERT ELEVATION	IE or INV EL
RIGHT of WAY	R/W
MANHOLE	MH
POLYVINYL CHLORIDE PIPE	PVCP
VITRIFIED CLAY PIPE	VCP
ADVANCED DRAINAGE SYSTEM	ADS
DUCTILE IRON PIPE	DIP
REINFORCED CONCRETE PIPE	RCP
CONCRETE PIPE	CP
APPROXIMATE LOCATION	AL
BENCH MARK	BM
POINT of INTERSECTION	PI

INDEX

LOCATION MAP

RICHARD ALFRED HOEL
LICENSE
No. 41026
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

LEGEND, INDEX & MAP

EASTRIDGE PUMPING STATION

SW

GENERAL NOTES

1. EXISTING DIMENSIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. TRUE DIMENSIONS SHALL BE DETERMINED IN THE FIELD PRIOR TO LAYOUT AND SHOP DRAWING SUBMITTALS.

2. LOCATION OF EXISTING FORCE MAIN AND OTHER UTILITIES TO BE VERIFIED BY CONTRACTOR AT TIME OF CONSTRUCTION. CONTRACTOR SHALL RELOCATE ALL UTILITIES ON SITE THAT ARE IN THE PATH OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE RELOCATIONS WITH THE DEPARTMENT AND WITH EACH UTILITY AS NECESSARY.

3. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE ORIGINALS OR HIGH QUALITY COPIES (EASILY READABLE). NO FAXED SHEETS OR POOR QUALITY COPIES WILL BE ACCEPTED FOR SUBMITTAL REVIEW.

4. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHT-OF-WAY PERMITS FOR WORK WITHIN THE RIGHT OF WAYS.

5. INSTALL THREE FLYGT NP3306 PUMPS, 70 HP, 3 PHASE, 480 VOLTS, AND ASSOCIATED ELECTRICAL CONTROL SYSTEM.

6. A STAINLESS STEEL TYPE 316 WELDED LINK CHAIN HAVING ONE INCH LINKS AND A WORKLOAD CAPACITY OF TWICE THE PUMP WEIGHT SHALL BE FASTENED TO PUMP. CONTRACTOR TO SUBMIT CERTIFICATION OF WORKLOAD CAPACITIES FOR APPROVAL. THE BITTER END OF CHAIN SHALL BE FASTENED TO CONCRETE TOP SLAB WITH STAINLESS ANCHORS. LENGTH OF CHAIN SHALL BE FROM THE PUMP TO THE SLAB PLUS SIX FEET.

7. INSTALL A STAINLESS STEEL BRACKET WITH STAINLESS STEEL "J" HOOKS ON CONCRETE SURFACE BELOW ALUMINUM HATCH TO SUPPORT VARIOUS CABLES. ALL "J" HOOKS SHALL BE MADE OF 3/8" DIAMETER ROD (MINIMUM). CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.

8. BACKFILL (NO CLAY OR CLAYEY MATERIAL) SHALL BE COMPACTED IN 12 INCH LAYERS TO 98% MAXIMUM DRY DENSITY OF MODIFIED PROCTOR IN CONFORMANCE WITH AASHTO T-180, METHOD A.

9. CONTRACTOR SHALL RESTORE ALL LANDSCAPING, SODDING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER. CONTRACTOR SHALL SOD ALL UNPAVED AREAS.

10. ALUMINUM ACCESS COVERS SHALL BE U.S. FOUNDRY, OR EQUAL. ACCESS COVERS SHALL HAVE STAINLESS STEEL HARDWARE AND SHALL OPEN IN THE DIRECTION CORRESPONDING TO THE HINGES SHOWN ON PLANS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE INSTALLATION AND CONFIGURATION.

11. PUMP STATION PIPING SHALL BE CLASS 53 FLANGED DIP CEMENT LINED. FORCE MAIN SHALL BE CLASS 52 DUCTILE IRON.

12. FORCE MAIN FITTINGS SHALL BE RMJ. RESTRAINING DEVICES SHALL BE "MEGA-LUG" OR EQUAL. ALL RESTRAINING DEVICES AND RELATED PARTS SHALL BE COATED WITH THE MEGA-BOND RESTRAINT COATING SYSTEM OR APPROVED EQUAL.

13. CHECK VALVES SHALL BE APCO, RUBBER FLAPPER SWING CHECK VALVES, SERIES 100. PLUG VALVES SHALL BE DeZURIK, 100% PORT, ECCENTRIC VALVES.

14. BOLTS, WASHERS, NUTS, SCREWS, HOOKS, BRACKETS, HINGES, ETC. INSTALLED WITHIN STRUCTURES SHALL BE TYPE 316 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED.

15. PIPES THAT PENETRATE WET WELL OR VALVE VAULT WALL SHALL BE PROVIDED AT ONE END WITH SERIES 2100 MEGA-FLANGE RESTRAINED FLANGE ADAPTER" WITH ALL STAINLESS STEEL HARDWARE.

16. ALL PIPE PENETRATIONS BETWEEN WETWELL & VALVE VAULT SHALL BE PROVIDED WITH GPT LINK SEAL® MODULAR SEAL LS-316.

17. CONTRACTOR SHALL COORDINATE WITH TECO REGARDING THE PROPOSED ELECTRICAL SERVICE EQUIPMENT (SEE SPECIFICATIONS).

18. ALL METAL PIPE, FITTINGS, SUPPORTS, VALVES, PUMP TUBES AND CHANNEL SHALL RECEIVE:
A) SHOP COAT - ONE COAT, 4-6 MILS, TNEMEC N-140 POTA POX EPOXY PRIMER- GRAY IN COLOR.
B) FIELD COAT - TWO COATS, FIRST COAT - TNEMEC SERIES 446 PERMA-SHIELD, 5-7 MILS. SECOND COAT TNEMEC 1074U ENDURA-SHIELD 4-6 MILS. - GRAY IN COLOR, STAINLESS STEEL WILL NOT BE COATED.

19. ALL METAL SURFACES COMING IN CONTACT WITH CONCRETE SHALL BE PROVIDED WITH NEOPRENE PADS OR 2 COATS OF COAL TAR EPOXY WITH PROPER SURFACE PREPARATION. CONTRACTOR SHALL SUBMIT SYSTEM(S) FOR APPROVAL.

20. THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2017 FLORIDA BUILDING CODE 6TH EDITION. △1

RICHARD ALFRED HOEL
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★
STATE OF
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PROFESSIONAL ENGINEER

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TREE NOTES

1. ALL WORK WITHIN THE PROTECTIVE RADIUS OF THE TREES MUST BE COORDINATED WITH PLANNING AND DEVELOPMENT, IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE AND NATURAL RESOURCES SECTION WHO CAN BE REACHED AT (813) 274-3100.
2. PRIOR TO ANY CONSTRUCTION ACTIVITIES, PROTECTIVE BARRICADES SHALL BE INSTALLED AROUND ALL PROTECTED TREES AND GRAND TREES WITHIN FIFTEEN FEET OF THE FORCE MAIN OR PUMP STATION.
   a) BARRICADES SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET FROM A PROTECTIVE TREE AND A MINIMUM OF TWENTY (20) FEET FROM A GRAND TREE.
3. NO CHANGES SHALL TAKE PLACE TO THE PREDEVELOPMENT CONDITIONS WITHIN THE PROTECTIVE ROOT ZONE DURING THE CONSTRUCTION PROCESS, UNLESS NOTED ON THE PLANS.
4. NO PARKING OR STORAGE OF VEHICLES, EQUIPMENT, OR MATERIALS IS ALLOWED WITHIN THE PROTECTIVE ROOT ZONE.
5. ALL TREE TRIMMING AND ROOT PRUNING MUST BE SUPERVISED BY A CERTIFIED ARBORIST AND PERFORMED CLEANLY WITH APPROVED CUTTING TYPE EQUIPMENT, SUCH AS A CHAINSAW, HAND SAW, OR OTHER CUTTING EQUIPMENT.

SURVEY NOTES

1. FIELD WORK PERFORMED BY POLARIS ASSOCIATES DATE OF SURVEY: APRIL 3, 2017.
2. ELEVATIONS ARE BASED ON A CITY OF TAMPA BENCHMARK, HV-02 0155, HAVING AN ELEVATION OF 26.610, NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88)..

No.	DATE	REVISIONS
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△1	3/9/18	ADDED NOTE 20 TO GENERAL NOTES.

DES: MTM
DRN: MP
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DATE:

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

GENERAL NOTES

SHEET 3 OF 21

STRUCTURAL CONSTRUCTION NOTES:

SW

1.0 GENERAL

1.1 ALL WORK IS TO BE PERFORMED IN A GOOD, WORKMANLIKE AND PROFESSIONAL MANNER.

1.2 ALL CONSTRUCTION SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE FLORIDA STATE BUILDING CODE, LATEST EDITION, LOCAL BUILDING CODES. FDOT SPECIFICATIONS AND INDICES AND COT SPECIFICATIONS, IF MORE STRINGENT.

1.3 THESE DRAWINGS DO NOT SHOW PROVISIONS FOR SAFETY DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THE REQUIRED BRACING, SHORING, AND SAFETY DEVICES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

2.0 COORDINATION

2.1 STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH GENERAL, ARCHITECTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS AND OTHER CONTRACT DOCUMENTS. IF COORDINATION OF INFORMATION PRESENTED ON DRAWINGS CONFLICTS w/ THE PROJECT SPECIFICATIONS, THE DRAWINGS WILL TAKE PRECEDENCE.

2.2 COORDINATE THE EXACT SIZE AND LOCATION OF ALL PIPES, SLEEVES AND OPENINGS THROUGH SLABS AND WALLS w/ GENERAL, ARCHITECTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.

2.3 ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS ARE TO BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE CONSTRUCTION WORK PROCEEDS, INCLUDING ORDERING AND FABRICATING MATERIALS.

3.0 FOUNDATIONS

3.1 FOOTING & SLAB ELEVATIONS SHALL NOT BE RAISED OR LOWERED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

3.2 ALL EXCAVATIONS SHALL BE ADEQUATELY DEWATERED BEFORE PLACEMENT OF CONCRETE. NO CONCRETE OR CONCRETE FILL SHALL BE PLACED IN STANDING WATER. WATER ACCUMULATION EXCEEDING 1 INCH SHALL BE PUMPED OUT.

3.3 FOOTING EXCAVATIONS AND FORMS SHALL BE REVIEWED BY AN OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.

3.4 ALL FOOTINGS SHALL BE CENTERED UNDER THE SUPPORTING MEMBER UNLESS NOTED OTHERWISE.

3.5 CONSTRUCTION JOINTS IN SLABS, WALLS & FOOTINGS SHALL BE MADE AT LOCATIONS SHOWN ON DRAWINGS.

3.6 CONTRACTOR IS TO VERIFY THE ELEVATION AND LOCATION OF ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. ANY "KNOWN" UTILITY LINES DAMAGED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IF ANY "UNKNOWN" UTILITY LINES ARE ENCOUNTERED WHEN EXCAVATING THE CONTRACTOR IS TO CEASE ALL EXCAVATION ACTIVITY UNTIL THE ENGINEER AND OWNER ARE NOTIFIED AND INSTRUCTIONS ARE PROVIDED ABOUT HOW TO PROCEED.

3.8 THE CONTRACTOR SHALL OBTAIN THE OWNER'S PERMISSION BEFORE ENCASING OR BACK FILLING AROUND ANY EXISTING UNDERGROUND STRUCTURE, PIPING, ELECTRICAL, OR OTHER UNDERGROUND WORK.

4.0 REINFORCING STEEL

4.1 BARS SHALL BE ROLLED FROM NEW BILLET–STEEL OF DOMESTIC MANUFACTURE CONFORMING TO "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT," ASTM A 615, GRADE 60 AND SUPPLEMENTARY REQUIREMENT S–1.

4.2 DETAIL AND FABRICATE REINFORCING STEEL IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL," LATEST PUBLICATION.

4.3 REINFORCING STEEL IN PLACE SHALL BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE. GENERAL "CLR" DISTANCES FOR CONCRETE COVER ARE PROVIDED ON THE DRAWINGS IN THE SECTIONS & DETAILS. FOR SECTIONS & DETAILS w/OUT CONCRETE COVER FOR REINFORCING BARS REFERENCE THE PROJECTS SPECIFICATIONS.

4.4 WELDED WIRE FABRIC SHALL CONFORM TO "STANDARD SPECIFICATION FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT," ASTM A–185.

4.5 PLACE WELDED WIRE FABRIC AT CENTER OF SLABS–ON–GRADE UNLESS NOTED OTHERWISE.

4.6 PROVIDE BARS AT CORNERS AND INTERSECTIONS OF WALLS & FOOTINGS OF THE SAME NUMBER AND SIZE AS LONGITUDINAL BARS, U.N.O. ON THE DRAWINGS.

4.7 FABRICATE CONTINUOUS BARS IN SLABS, WALLS & FOOTINGS TO THE LONGEST PRACTICABLE LENGTHS.

4.8 REINFORCING STEEL SHALL NOT BE BENT AFTER BEING PARTIALLY EMBEDDED IN HARDENED CONCRETE.

4.9 BARS SHALL BE COLD BENT AND SHALL NOT BE HEATED FOR ANY REASON.

4.10 REINFORCING BARS SHALL NOT BE WELDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

4.11 REFERENCE DRAWINGS FOR REQUIREMENTS FOR LAP REINFORCING STEEL IN CONCRETE. ALL "LCS" SHALL CONFORM TO CLASS B SPLICE CRITERIA. IT IS ACCEPTABLE TO LAP REINFORCING IN NON "LCS" STRUCTURES A MINIMUM 50 BAR DIAMETERS, UNLESS NOTED OTHERWISE.

4.12 LAP SPLICED BARS IN CONCRETE ARE TO BE WIRE TIED.

5.0 CONCRETE

5.1 CONCRETE SHALL BE TYPE III 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS NOTED BELOW. CONCRETE FOR PRECAST STRUCTURES SHALL BE CLASS II 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. CONCRETE FOR SIDEWALKS & DRIVEWAYS SHALL BE CLASS I 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. REFERENCE FDOT SPECIFICATION 346, EXCEPT SECTION 346.6.1, FOR APPLICATION & SPECIFIC CONCRETE MIX DESIGN REQUIREMENTS.

5.2 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 & TO "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES", ACI 350 (LATEST EDITIONS).

5.3 PLACE 1 /2 INCH EXPANSION JOINT MATERIAL BETWEEN EDGES OF SLABS AND VERTICAL SURFACES UNLESS NOTED OTHERWISE.

5.4 PROVIDE CONSTRUCTION OR CONTROL JOINTS IN SLABS & WALLS AT LOCATIONS SHOWN ON DRAWINGS, AT OFFSETS AND CHANGES IN DIRECTION AND AT THIRTY (30) FEET MAXIMUM U.N.O.. GENERAL CONTRACTOR TO PROVIDE CONSTRUCTION JOINT LAYOUT PLAN PER THE PROJECT SPECIFICATIONS PRIOR TO CONSTRUCTION, INCLUDING ORDERING & FABRICATING MATERIALS.

5.5 CHAMFER EXPOSED EDGES OF CONCRETE 3/4 INCH, UNLESS NOTED OTHERWISE.

5.6 CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER CURING OF ALL CONCRETE. CURING METHODS SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES" ACI 350 AND "STANDARD PRACTICE FOR CURING CONCRETE," ACI 308, LATEST EDITIONS.

5.7 UNLESS NOTED OTHERWISE DOWELS SHALL BE THE SAME NUMBER AND SIZE AS THE LARGEST VERTICAL BAR TO WHICH THEY ARE SPLICED.

5.8 REFERENCE PROJECT SPECIFICATIONS FOR REQUIRED FINISHES.

5.9 BONDING AGENT TO BE STRUCTURAL EPOXY ADHESIVE CONFORMING TO ASTM C–881 TYPE I AND II, GRADE 2, CLASS B AND C WITH A MINIMUM BOND STRENGTH OF 1900 PSI.

5.10 CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS FOR APPROVAL TO OWNER PRIOR TO FABRICATION. DO NOT FABRICATE REINFORCING PRIOR TO RECEIPT OF APPROVED SHOP DRAWINGS.

5.11 CONCRETE MIXES TO BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE. COMPRESSIVE STRENGTH TEST CYLINDERS TO BE REVIEWED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE THROUGHOUT CONCRETE CONSTRUCTION OF THE PROJECT.

6.0 GROUT

6.1 PROVIDE NON–SHRINK GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES AND ELSEWHERE AS INDICATED ON DRAWINGS. NON–SHRINK GROUT SHALL CONFORM TO ASTM C 1107.

6.2 GROUT SHALL BE NON–METALLIC AND NON–STAINING AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7000

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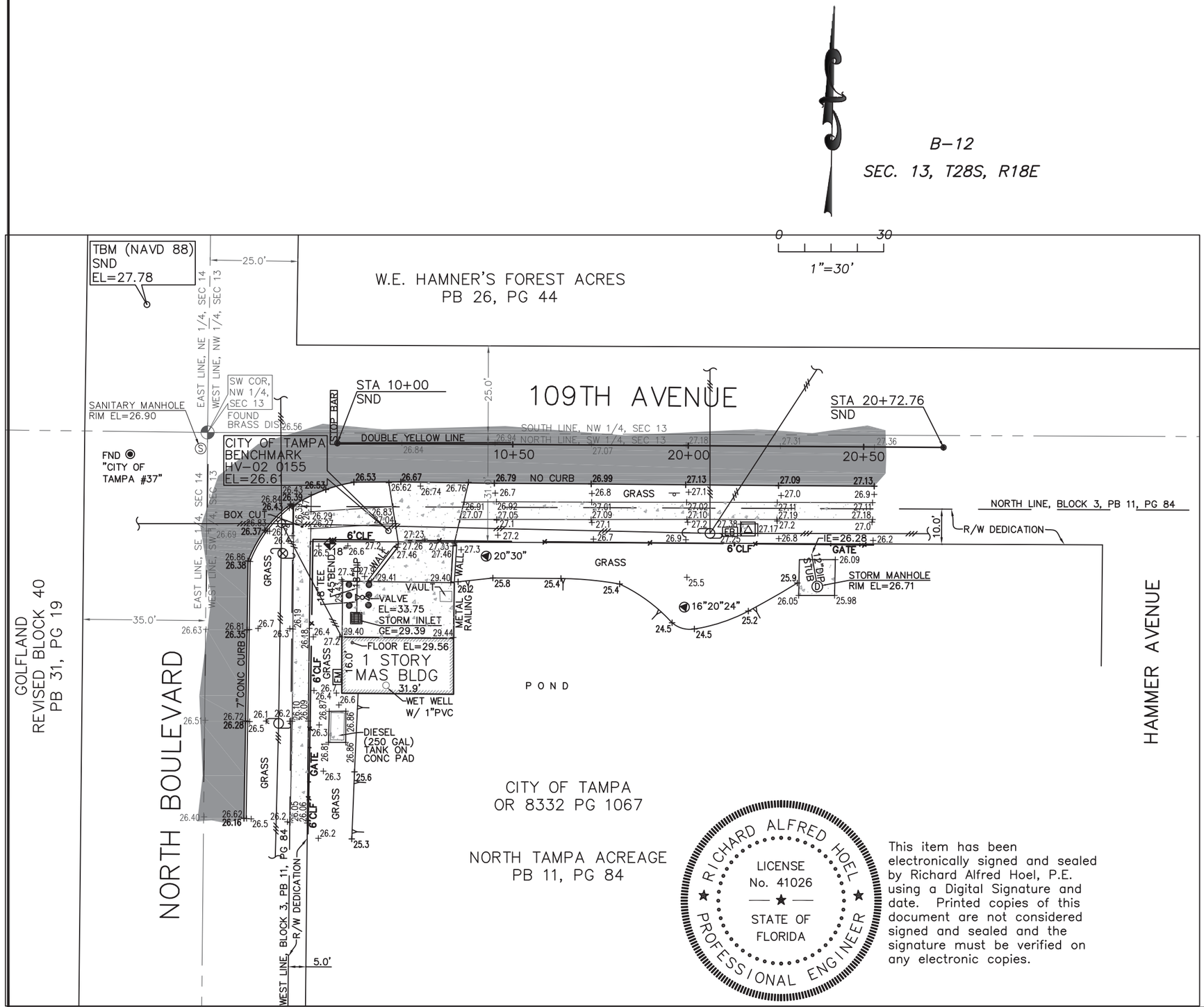
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

STRUCTURAL NOTES

SHEET 4 OF 21

Layout– Jan 04, 2018 – 2:02pm CTB – TampaStorm.ctb



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NOTES

SW

1. 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. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED.
2. NO EXCAVATION WAS PERFORMED TO VERIFY THE LOCATION OR EXISTENCE OF ANY UNDERGROUND UTILITIES, ENCROACHMENTS, IMPROVEMENTS, STRUCTURES OR FOUNDATIONS. UNDERGROUND UTILITY LINE LOCATIONS (IF SHOWN HEREON) ARE BASED UPON UTILITY PROVIDER ATLASES AND VISIBLE SURFACE EVIDENCE.
3. RE–USE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN VERIFICATION, WILL BE AT THE RE–USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING HEREIN SHALL BE CONSTRUED TO GIVE ANY RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE TO WHOM CERTIFIED.
4. ALL FOUND POINTS ARE UNMARKED UNLESS OTHERWISE NOTED. ALL PERIMETER BEARINGS AND DISTANCES ARE ALSO FIELD MEASURED UNLESS NOTED.
5. THIS SURVEY IS NOT INTENDED TO SHOW THE LOCATION OR EXISTENCE OF ANY JURISDICTIONAL, HAZARDOUS OR ENVIRONMENTALLY SENSITIVE AREAS.
6. ANY ZONING INFORMATION SHOWN OR NOTED HEREON IS BASED ON INFORMATION AVAILABLE DURING THE PREPARATION OF THE SURVEY. THIS INFORMATION SHOULD BE VERIFIED WITH THE GOVERNING AUTHORITY PRIOR TO ANY DETERMINATIONS OR DESIGN.
7. SHOWN ANYWHERE ON THIS SURVEY, THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF A PROFESSIONAL OPINION BASED UPON THE SURVEYOR'S BEST KNOWLEDGE, INFORMATION AND BELIEF, AND THAT IT THUS CONSTITUTES NEITHER A GUARANTEE NOR A WARRANTY.
8. UNLESS OTHERWISE INDICATED, THE PROPERTY DESCRIPTION AND EASEMENTS SHOWN WERE FURNISHED TO POLARIS ASSOCIATES, INC. AND ARE PRESUMED TO BE CORRECT. NO SEARCH OF ANY PUBLIC RECORDS, FOR EASEMENTS, DEEDS, ETC., WAS PERFORMED BY THIS FIRM FOR THE COMPLETION OF THIS SURVEY AND THERE MAY BE ADDITIONAL RESTRICTIONS THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
9. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND MAY BE SUBJECT TO EASEMENTS, RESTRICTIONS, RIGHTS–OF–WAY AND OTHER MATTERS OF RECORD.
10. ELEVATIONS ARE BASED ON A CITY OF TAMPA BENCHMARK, HV–02 0155, HAVING AN ELEVATION OF 26.610, NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).
11. TREES 4" IN DIAMETER AND LARGER HAVE BEEN LOCATED WITH COMMON NAME AND APPROXIMATE DIAMETER BREAST HIGH. SMALLER TREES, NON–PROTECTED SPECIES (INCLUDING ORNAMENTALS) AND TREES WITHIN JURISDICTIONAL AREAS (IF ANY) HAVE NOT BEEN LOCATED. TREES BY NATURE ARE IRREGULAR IN SIZE AND SHAPE. EVERY EFFORT IS MADE TO ACCURATELY LOCATE TREES. THE TREE LOCATION IS THE CENTER OF THE TREE. THIS LOCATION MAY BE DIFFERENT IF LOCATED FROM A DIFFERENT DIRECTION. ALL TREE LOCATIONS SHOULD BE FIELD CHECKED IF CRITICAL TO DESIGN.
12. THIS SURVEY IS BASED ON U.S. FEET.

CERTIFIED TO: CITY OF TAMPA

I HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J–17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

APRIL 3, 2017
DATE OF SURVEY

DAN H. RIZZUTO
PROFESSIONAL LAND SURVEYOR
LICENSE NUMBER LS 5227
STATE OF FLORIDA

No.	DATE	REVISIONS
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DES:
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

EXISTING CONDITIONS/SURVEY NOTES

SHEET C1 OF 21

L E G E N D

A/C = AIR CONDITIONER UNIT
BLDG = BUILDING
(C) = CALCULATED DATA
CCR = CERTIFIED CORNER RECORD
CLF = CHAIN LINK FENCE
CMP = CORRUGATED METAL PIPE
CONC = CONCRETE
COR = CORNER
CPB = CONDOMINIUM PLAT BOOK
C/T = CURB TIE
(D) = DEED DATA
DB = DEED BOOK
DIP = DUCTILE IRON PIPE
ECMP = ELLIPTICAL CORRUGATED METAL PIPE
EL = ELEVATION
EP = EDGE OF PAVEMENT
ERCP = ELLIPTICAL REINFORCE CONCRETE PIPE
(F) = FIELD DATA
FCM = FOUND CONCRETE MONUMENT
FDOT = FLORIDA DEPARTMENT OF TRANSPORTATION
FIR = FOUND IRON ROD
FND = FOUND NAIL & DISC
FOP = FOUND OPEN PIPE
FPP = FOUND PINCHED PIPE
FRRS = FOUND RAILROAD SPIKE
F/T = FENCE TIE
FXC = FOUND X-CUT
GE = GRATE ELEVATION
IE = INVERT ELEVATION
(L) = LEGAL DESCRIPTION DATA
LB = LICENSED BUSINESS
LS = LICENSED SURVEYOR
MAS = MASONRY
MHW = MEAN HIGH WATER
NP = NORMAL POOL
O/A = OVERALL
OR = OFFICIAL RECORDS BOOK
(P) = PLAT DATA
PB = PLAT BOOK
PG = PAGE
PLS = PROFESSIONAL LAND SURVEYOR
POB = POINT OF BEGINNING
POC = POINT OF COMMENCEMENT
PRM = PERMANENT REFERENCE MONUMENT
PSM = PROFESSIONAL SURVEYOR & MAPPER
P/T = PAVEMENT TIE
PVC = POLY VINYL CHLORIDE
RCP = REINFORCE CONCRETE PIPE
RLS = REGISTERED LAND SURVEYOR
R/W = RIGHT-OF-WAY
SEC = SECTION
SHW = SEASONAL HIGH WATER
SIR = SET IRON ROD 1/2" LB 6113
SND = SET NAIL & DISC LB 6113
SR = STATE ROAD
S/T = SIDEWALK TIE
STY = STORY
SW = SIDEWALK
TBM = TEMPORARY BENCH MARK
(TYP) = TYPICAL
VCP = VITRIFIED CLAY PIPE
W/ = WITH
WF = WOOD FENCE
W/T = WALL TIE
+ 25.25 = POINT OF ELEVATION
25.2' = DIMENSION FROM BUILDING TO BOUNDARY / RIGHT-OF-WAY LINE

BP = BACKFLOW PREVENTER
= BOLLARD or POST
CA = BOX, CABLE TELEVISION
EB = BOX, ELECTRIC UTILITY
= BOX, ELECTRIC UTILITY (TRANSFORMER)
TB = BOX, TELEPHONE
= DECORATIVE LIGHT POLE
= ELECTRIC OUTLET
= FIRE HYDRANT
= FLAGPOLE
= FLARED END SECTION
= GRATE INLET
= GROUND LIGHT
= GUY ANCHOR
= LIGHT POLE, CONCRETE
= LIGHT POLE, METAL
= LIGHT POLE, WOOD
MB = MAILBOX
E = MANHOLE, ELECTRIC
G = MANHOLE, GREASE TRAP
S = MANHOLE, SANITARY SEWER
D = STORM SEWER STRUCTURE
T = MANHOLE, TELEPHONE
EM = METER, ELECTRIC
GM = METER, GAS
RM = METER, RECLAIMED WATER
WM = METER, WATER
= MITERED END SECTION
MW = MONITORING WELL
= PEDESTRIAN CROSSING SIGNAL
= SANITARY CLEANOUT
= SCHEDULE B-2 ITEM
TR = TELEPHONE RISER
= TRAFFIC SIGN
TSB = TRAFFIC SIGNAL BOX
TSP = TRAFFIC SIGNAL POLE
= UNDERGROUND CABLE TELEVISION MARKER
CWS = UNDERGROUND CABLE TELEVISION WARNING SIGN
= UNDERGROUND ELECTRIC MARKER
EWS = UNDERGROUND ELECTRIC WARNING SIGN
= UNDERGROUND FIBER OPTIC MARKER
OWS = UNDERGROUND FIBER OPTIC WARNING SIGN
= UNDERGROUND FORCEMAIN MARKER
FWS = UNDERGROUND FORCEMAIN WARNING SIGN
= UNDERGROUND GAS MARKER
GWS = UNDERGROUND GAS WARNING SIGN
= UNDERGROUND RECLAIMED WATER MARKER
RWS = UNDERGROUND RECLAIMED WATER WARNING SIGN
= UNDERGROUND SANITARY SEWER MARKER
SWS = UNDERGROUND SANITARY SEWER WARNING SIGN
= UNDERGROUND TELEPHONE MARKER
TWS = UNDERGROUND TELEPHONE WARNING SIGN
= UNDERGROUND WATER MARKER
WWS = UNDERGROUND WATER WARNING SIGN
= UTILITY POLE, CONCRETE
= UTILITY POLE, METAL
= UTILITY POLE, WOOD
GV = VALVE, GAS
RV = VALVE, RECLAIMED WATER
SV = VALVE, SANITARY
WV = VALVE, WATER
W = WELL

SW

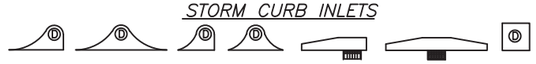
T R E E L E G E N D

= BAY TREE
= BOTTLE BRUSH TREE
= CAMPHOR TREE
= CEDAR
= CHINABERRY TREE
= CITRUS TREE
= CYPRESS TREE
= ELM TREE
= EUCALYPTUS TREE
= MAGNOLIA TREE
= MAPLE TREE
= MULBERRY TREE
= OAK TREE
= OTHER SPECIES
= PALM TREE
= PECAN TREE
= PERSIMMON TREE
= PINE TREE
= SYCAMORE TREE
= WAX MYRTLE TREE
= WILLOW TREE

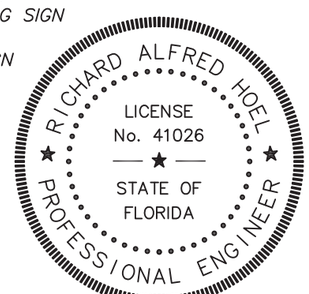
= CONCRETE
= ASPHALT
= CONCRETE PAVERS
= BRICK

52.15= BACK OF CURB
51.61= FLOWLINE
51.63= EDGE OF PAVEMENT

STORM CURB INLETS



= TOP OF BANK
= TOE OF SLOPE or CENTER LINE OF DITCH
= 6' CHAIN LINK FENCE UNLESS OTHERWISE NOTED
= OVERHEAD UTILITY LINES
= APPROXIMATE LOCATION OF UNDERGROUND GAS LINE
= APPROXIMATE LOCATION OF UNDERGROUND WATER LINE
= APPROXIMATE LOCATION OF UNDERGROUND FORCEMAIN
= APPROXIMATE LOCATION OF UNDERGROUND RECLAIMED WATER LINE
12" PVC = APPROXIMATE LOCATION OF UNDERGROUND SANITARY SEWER LINE
24" RCP = APPROXIMATE LOCATION OF UNDERGROUND STORM SEWER LINE



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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

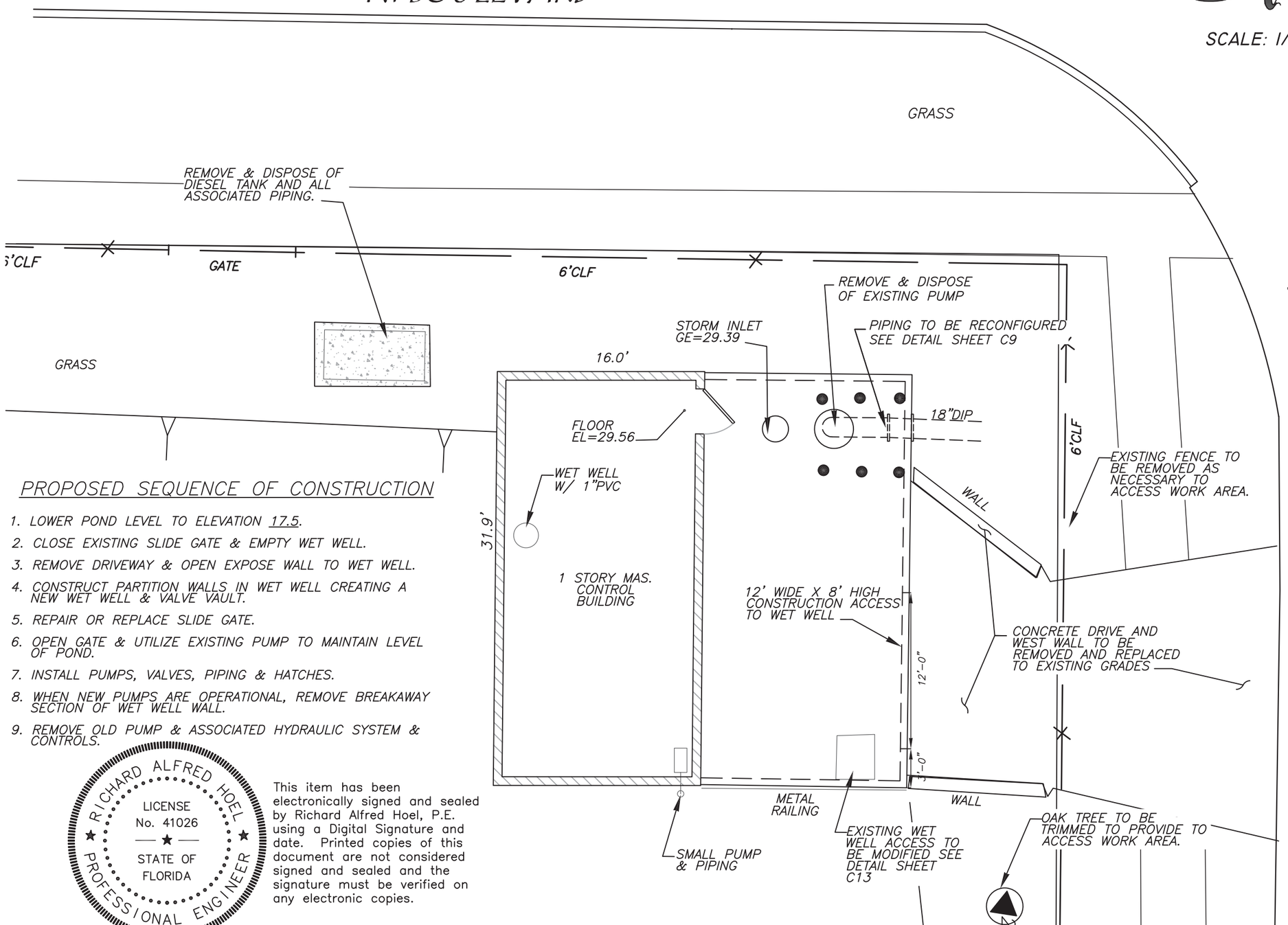
EASTRIDGE PUMP STATION REPLACEMENT

SURVEY LEGEND

SHEET C2 OF 21

SW

SCALE: 1/8"=1'-0"



PROPOSED SEQUENCE OF CONSTRUCTION

1. LOWER POND LEVEL TO ELEVATION 17.5.
2. CLOSE EXISTING SLIDE GATE & EMPTY WET WELL.
3. REMOVE DRIVEWAY & OPEN EXPOSE WALL TO WET WELL.
4. CONSTRUCT PARTITION WALLS IN WET WELL CREATING A NEW WET WELL & VALVE VAULT.
5. REPAIR OR REPLACE SLIDE GATE.
6. OPEN GATE & UTILIZE EXISTING PUMP TO MAINTAIN LEVEL OF POND.
7. INSTALL PUMPS, VALVES, PIPING & HATCHES.
8. WHEN NEW PUMPS ARE OPERATIONAL, REMOVE BREAKAWAY SECTION OF WET WELL WALL.
9. REMOVE OLD PUMP & ASSOCIATED HYDRAULIC SYSTEM & CONTROLS.

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DEMOLITION NOTES

1. DRIVEWAY & DRIVEWAY APRON TO BE REMOVED TO ACCESS THE WET WELL & INSTALL PIPING.
2. NORTH WALL OF WET WELL TO BE OPENED TO ALLOW ACCESS FOR CONSTRUCTION.
3. REMOVE & DISPOSE OF HYDRAULIC HOSES & PIPING IN WET WELL.
4. REMOVE & DISPOSE OF HYDRAULIC FLUID, FLUID STORAGE TANK, HYDRAULIC PUMP & ALL PIPING & APPURTENANCES IN THE CONTROL BUILDING.
5. REMOVE & DISPOSE OF OFFSITE THE SMALL PUMP & PIPING IN NORTHEAST CORNER OF CONTROL BUILDING. GROUT ALL WALL PENETRATIONS.
6. EXISTING CONTROL PANEL FOR PUMP CONTROL TO BE REMOVED & SALVAGED IN ITS ENTIRETY.

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EASTRIDGE PUMP STATION REPLACEMENT

DEMOLITION SHEET

SHEET C3 OF 21

SW

N. BOULEVARD

SCALE: 1/8"=1'-0"

B–12

SEC.17 T28S R18E

GRASS

INSTALL 1" WATERLINE WITH BACKFLOW PREVENTER

R/W

PIPING & VALVES TO BE RECONFIGURED SEE DETAIL SHEET C9

PROP. 2" CONDUIT W/FLOW METER CABLE

6'CLF

GATE

6'CLF

PROPOSED HOSE BIB

GRASS

16.0'

18"DIP

TOP OF WALL 29.41

109th AVE.

1 STORY MAS. CONTROL BUILDING

31.9'

FDOT INDEX 6011 SCHEME 2 GRAVITY WALL EXTENDING 24" BELOW GRADE

WALL

REPLACE 36"x72" STEEL DOOR & HARDWARE.

TOP OF WALL 27.46

6'CLF

PROP. FLOW METER VAULT MH COVER USF 1315–BK–M AO/M COT MH J–8 4'X5' TOP EL.= 26.75 INV. EL.= 18.00

34' OF 4" PVC DRAIN @ 1.47%

METAL RAILING

WALL

EXISTING WET WELL ACCESS TO BE MODIFIED SEE DETAIL SHEET C13

8" WM(AL)

NOTES:

1. INTERIOR & EXTERIOR WALLS, ROOF & DECK TO BE PRESSURE CLEANED.
2. INTERIOR FLOORS TO BE CLEANED PER SPECIFICATION W–36.
3. EXTERIOR SURFACES INCLUDING WALLS, DOORS, RAILING, & RETAINING WALLS TO BE PAINTED TO GROUND ELEVATION OR ELEVATION 20.0 ADJACENT TO POND. DO NOT PAINT DECK.
4. INTERIOR WALLS & DOORS TO BE PAINTED WITH TWO COLORS MATCHING EXISTING SCHEME.
5. PAINT SHALL COMPLY WITH SPECIFICATION W–36 FOR EXTERIOR CONCRETE: PRIMER – PORTER ACRI–PRO100 – 1.2 MIL & 2 COATS PORTER ACRISHIELD – 1.4 MIL EACH.
6. COLORS SHALL BE PPG 16–23 TAMPICO BROWN AND PPG 1074–2 MOROCCAN MOONLIGHT.

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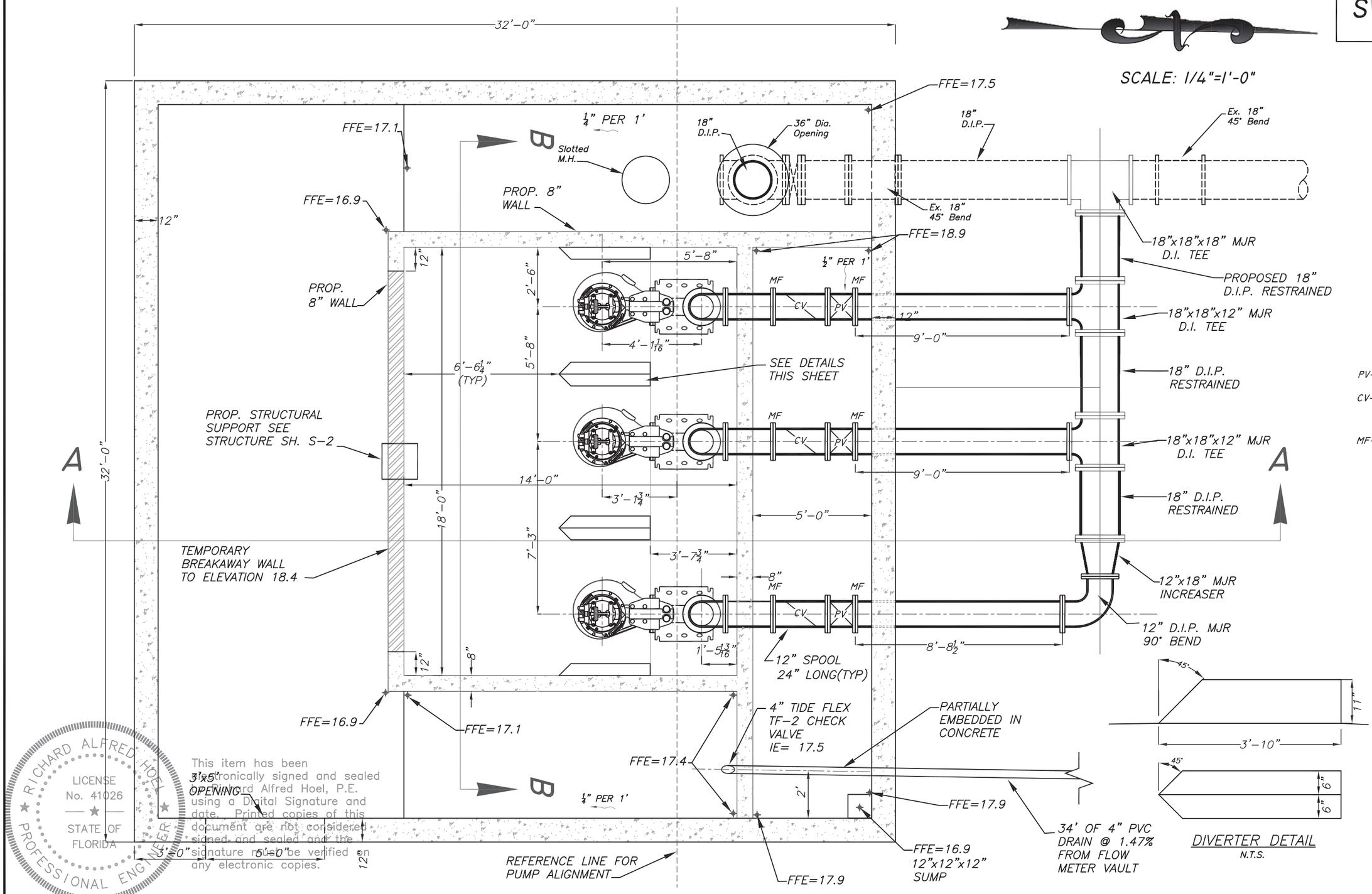
EASTRIDGE PUMP STATION REPLACEMENT

SITE PLAN

SHEET C4 OF 21

SW

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



PV- 12" PLUG VALVE.

CV- 1.2" APCO CHECK VALVE-SERIES 100 RUBBER FLAPPER.

MF- ABAA MEGA FLANGE SERIES 2100 W/SS BOLTS.

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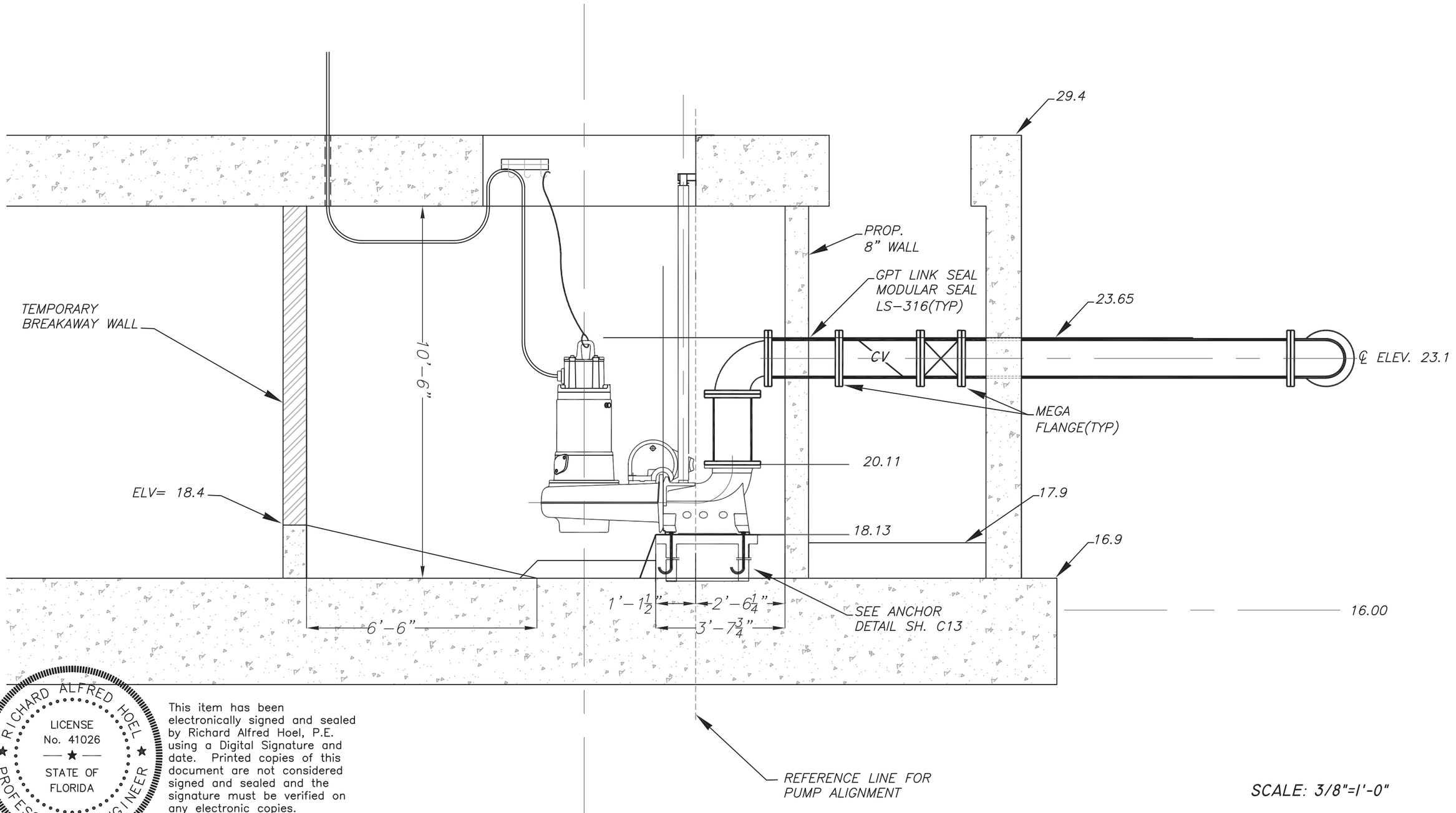
EASTRIDGE PUMP STATION REPLACEMENT

PLAN VIEW

SHEET C5 OF 21

SW



SCALE: 3/8"=1'-0"

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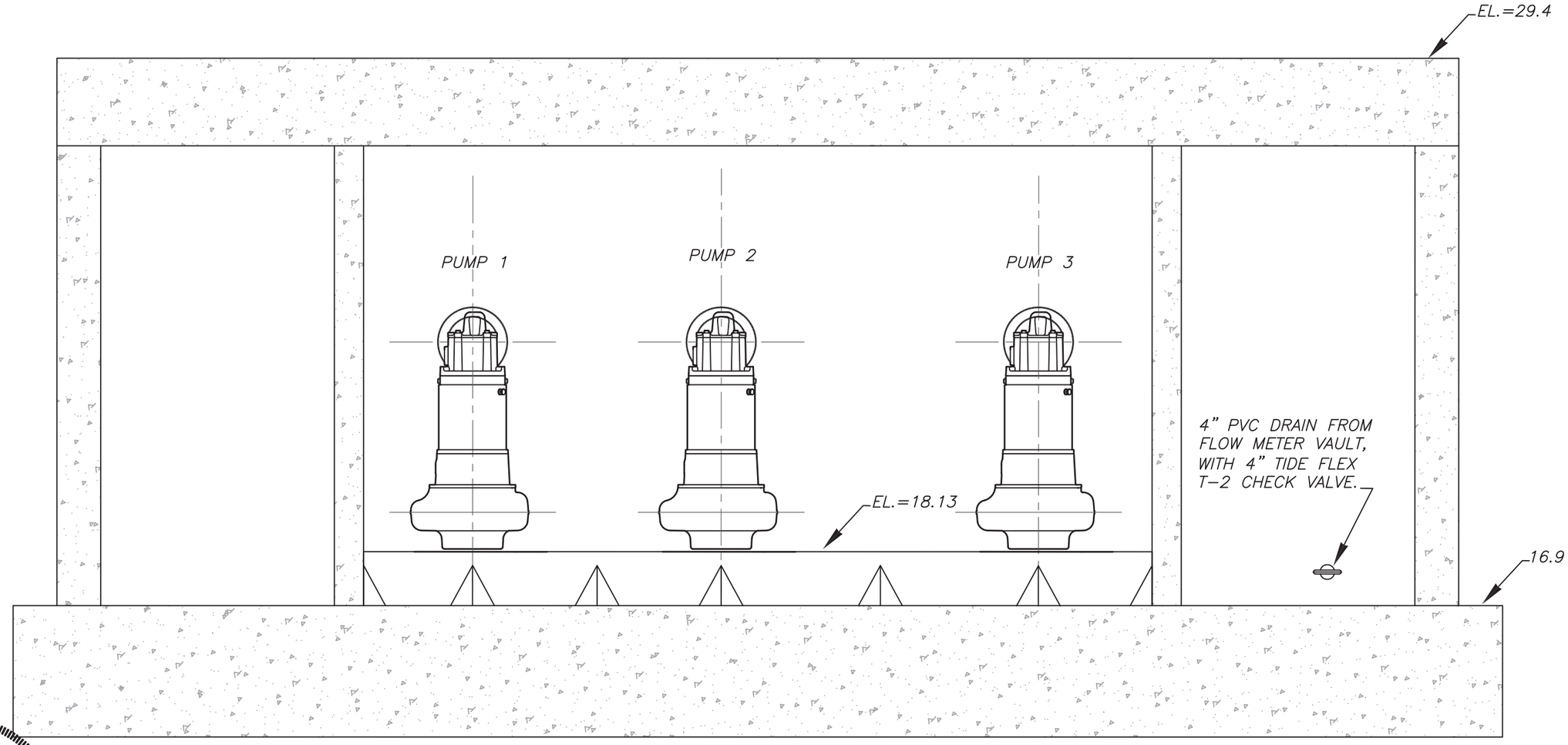
EASTRIDGE PUMP STATION REPLACEMENT

SECTION VIEW A-A

SHEET C6 OF 21

SW



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SCALE: 3/8"=1'-0"

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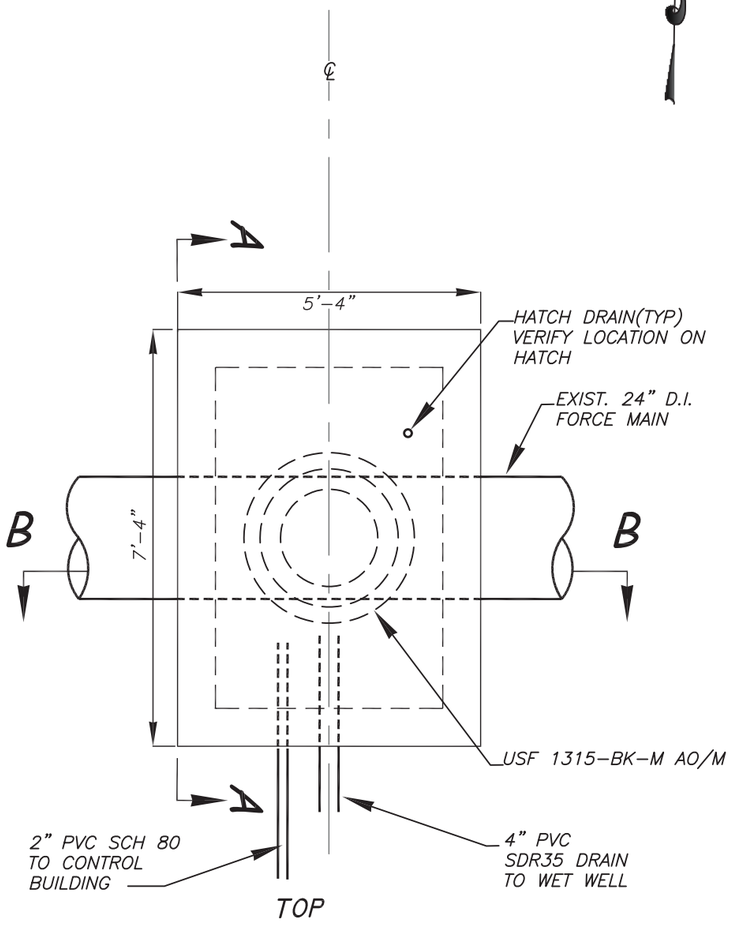
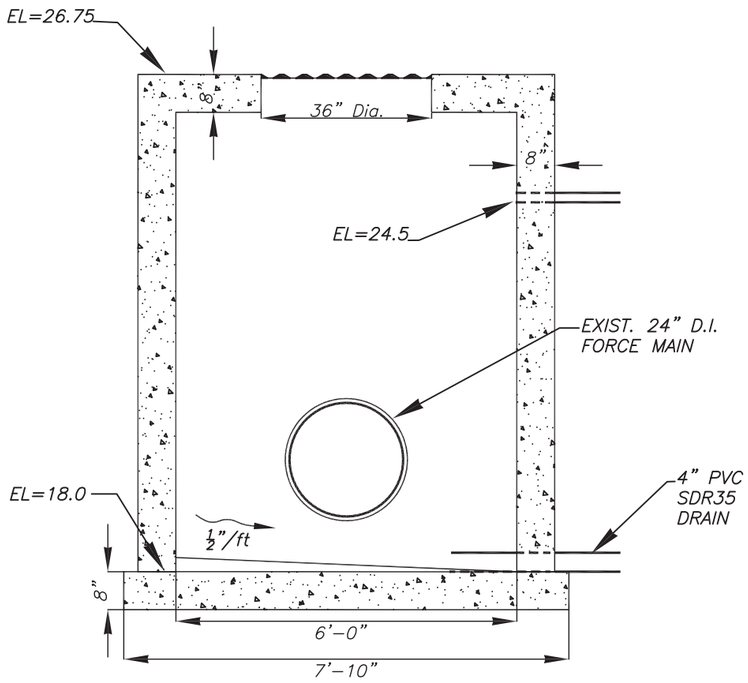
EASTRIDGE PUMP STATION REPLACEMENT

FRONT VIEW B-B

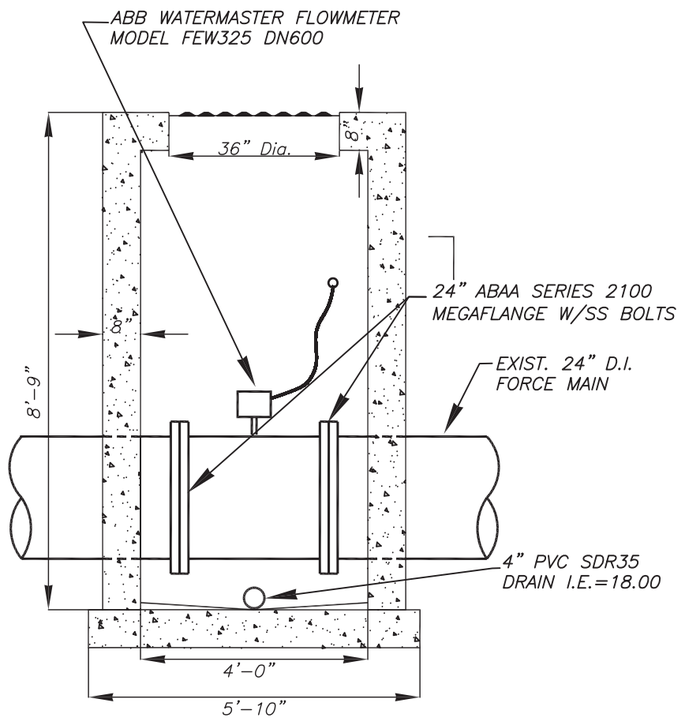
SHEET C7 OF 21



TOP



SECTION A-A



SECTION B-B

FLOW METER VAULT

SCALE: 3/8"=1'-0"

NOTE:

1. EXISTING 24" DI FORCE MAIN TO BE CUT AND INSTALL MEGA FLANGE TO ACCOMMODATE MAG METER INSTALLATION.
2. STRUCTURE TO BE INSTALLED AS A DOG HOUSE MAN HOLE.
3. CONTRACTOR SHOULD VERIFY DEPTH OF FORCE MAIN BEFORE ORDERING STRUCTURE.

SCALE: 3/8"=1'-0"

No.	DATE	REVISIONS
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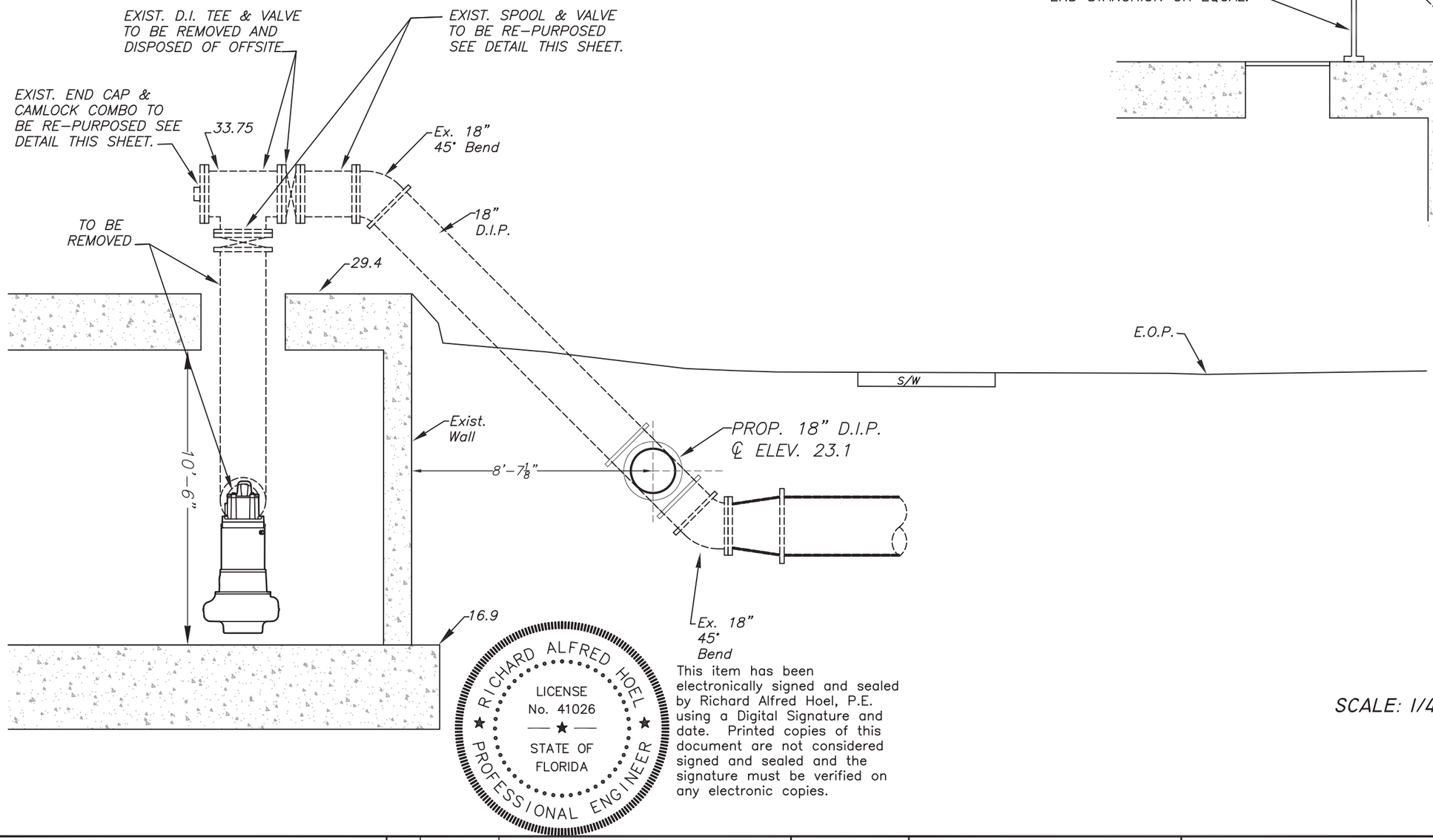
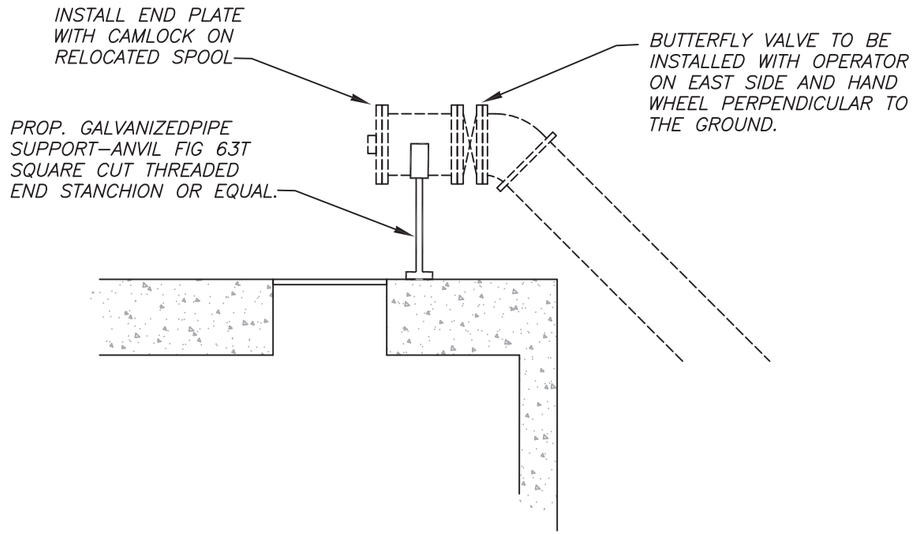
EASTRIDGE PUMP STATION REPLACEMENT

FLOW METER VAULT





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

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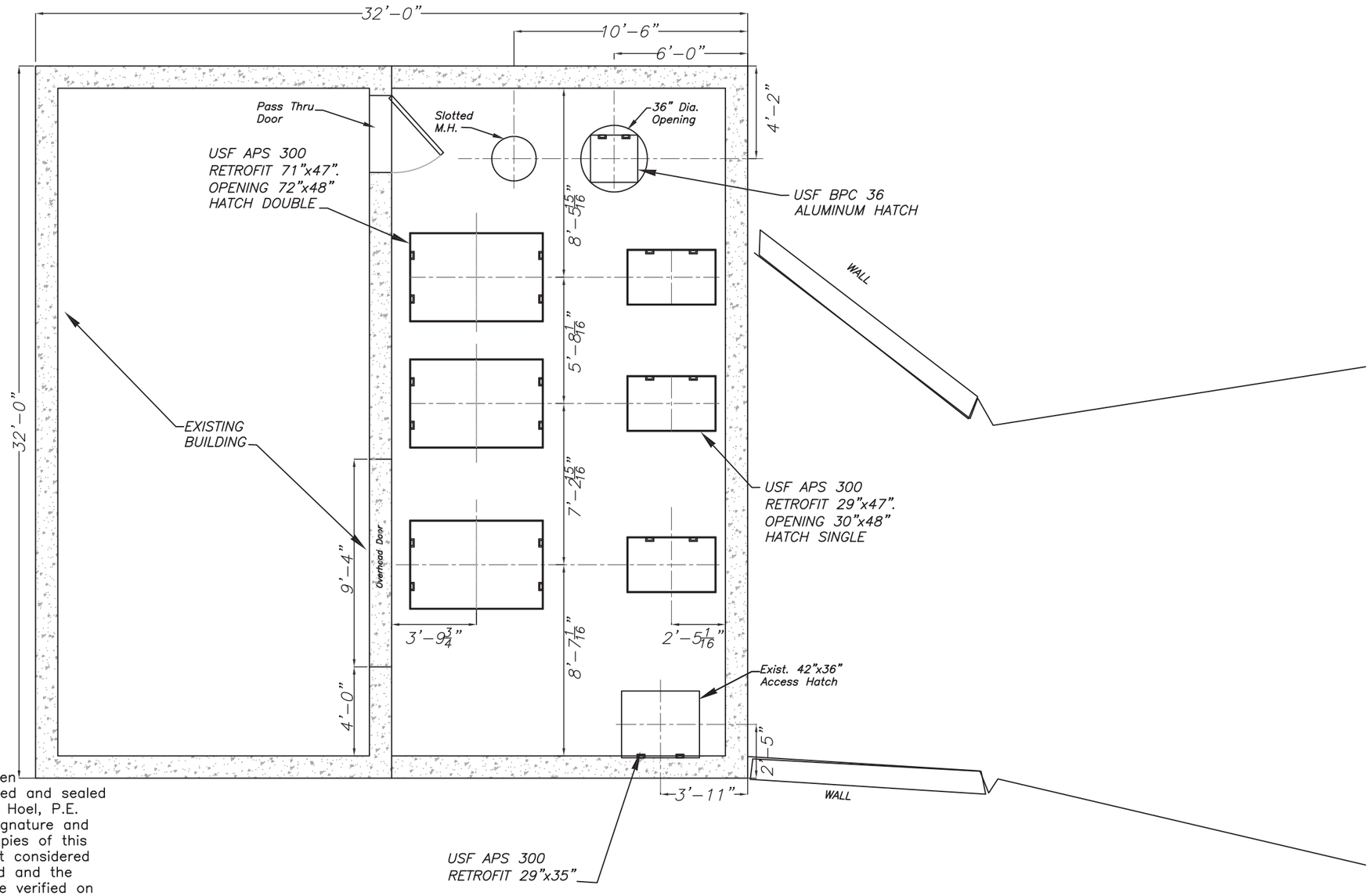
EASTRIDGE PUMP STATION REPLACEMENT

EXISTING WET WELL/PIPE

SHEET C9 OF 21

SW

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



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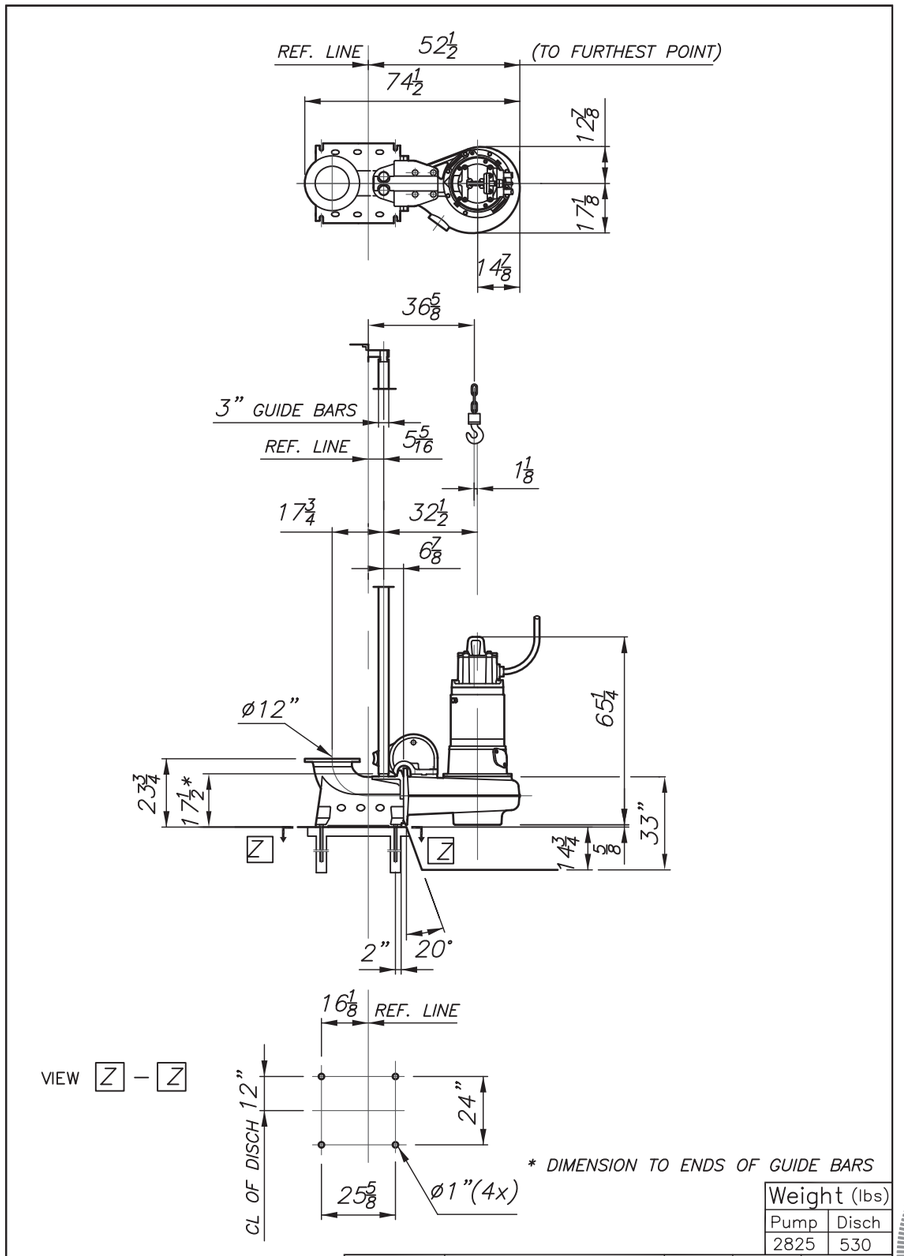
EASTRIDGE PUMP STATION REPLACEMENT

TOP SLAB/HATCHES

SHEET C10 OF 21

SW



Weight (lbs)	
Pump	Disch
2825	530

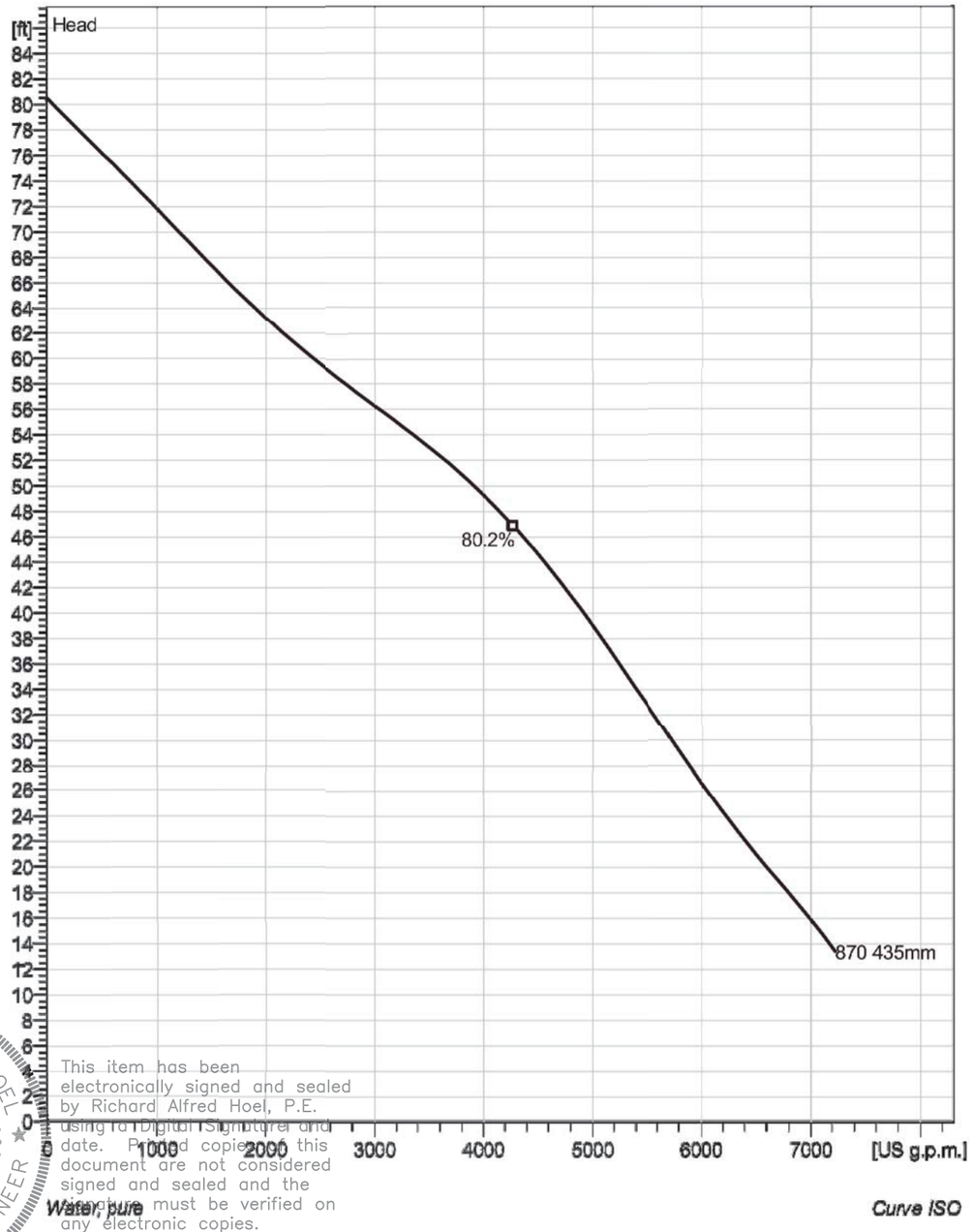
Rev.no	Revision	Date	Checked
8	text: min level deleted	090401	NK

AUTOCAD DRAWING

Denomination	Drawn by	Checked by	Date
Dimensional drwg CP,NP 3306 605/615 ø12"	NK		090401
	Scale		Reg no 5399
	6217300		8

NP 3306/605 3~ 870

Technical specification



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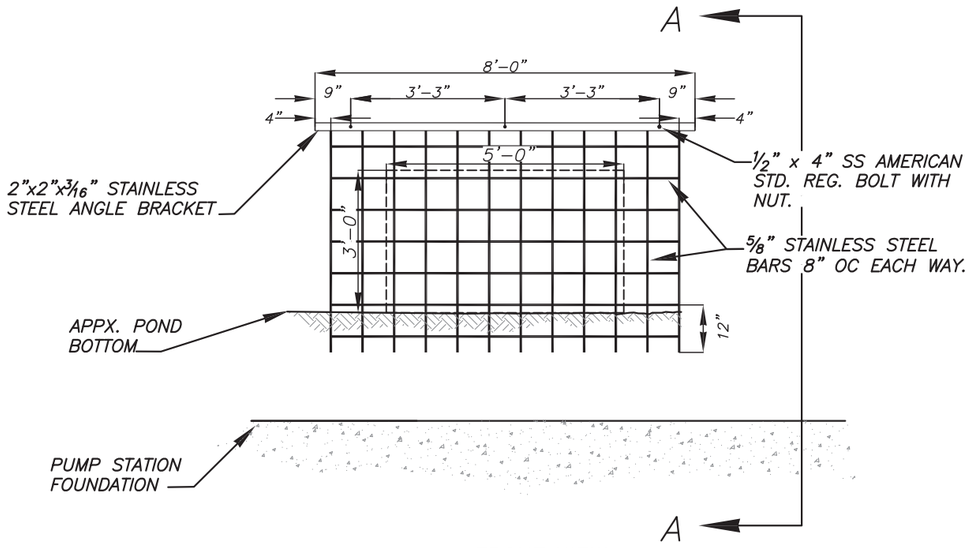
EASTRIDGE PUMP STATION REPLACEMENT

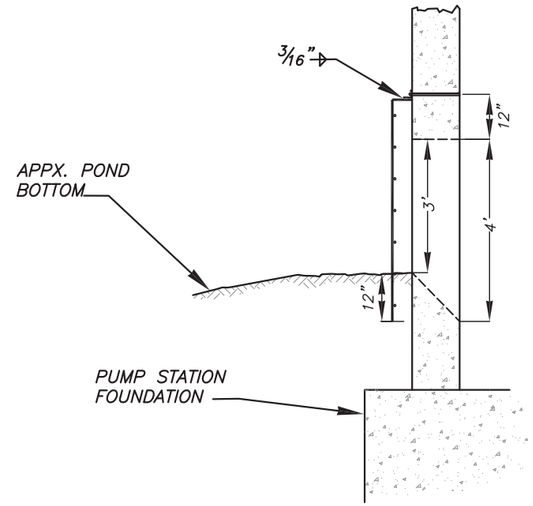
PUMP DETAILS

SHEET C11 OF 21

SW



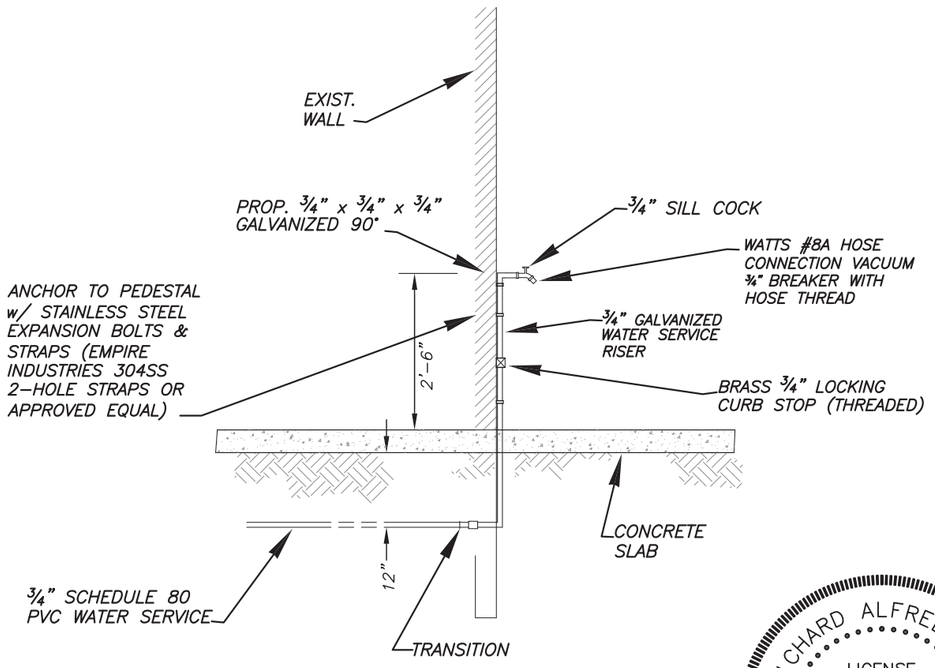
FRONT VIEW



VIEW A-A

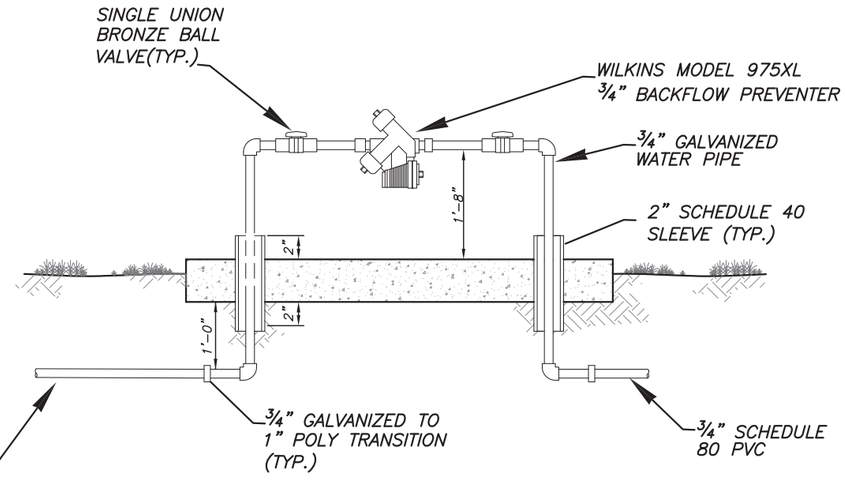
INTAKE GRATE

NOT TO SCALE



WATER SERVICE RISER DETAIL

NOT TO SCALE



BACKFLOW PREVENTER DETAIL

NOT TO SCALE

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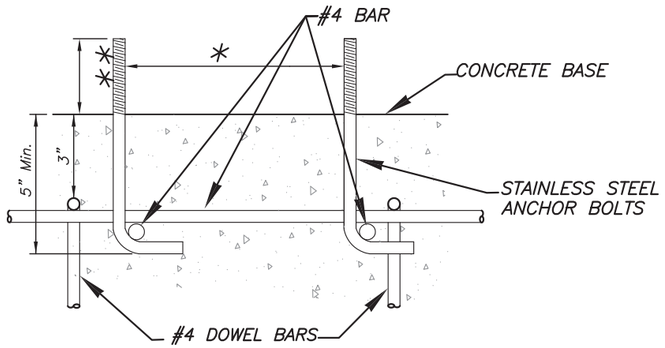
EASTRIDGE PUMP STATION REPLACEMENT

INTAKE GRATE & WATER SUPPLY DETAILS

SHEET C12 OF 21

SW

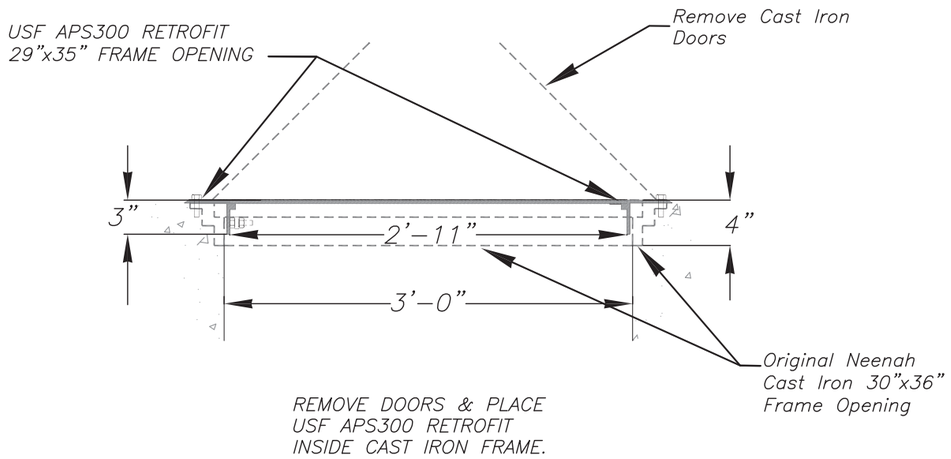


* ALIGNMENT OF ANCHOR BOLTS SHALL BE AS RECOMMENDED BY PUMP MANUFACTURER.

** CONTRACTOR SHALL PROVIDE A MINIMUM 1/2 INCH BOLT PROTRUSION ABOVE THE FINAL NUT LOCATION AFTER THE NUT IS TIGHTENED TO MANUFACTURER'S RECOMMENDATION.

ANCHOR BOLT DETAIL

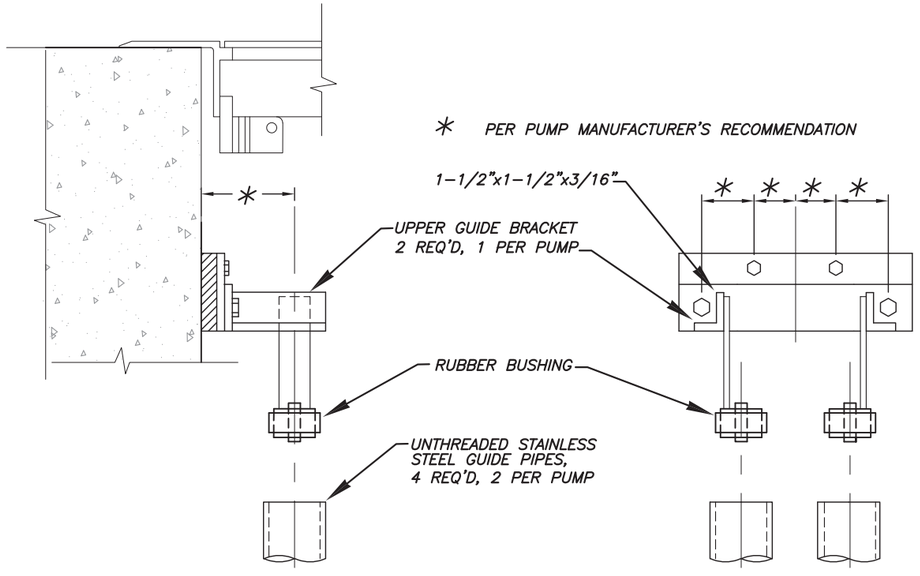
NOT TO SCALE



REMOVE DOORS & PLACE USF APS300 RETROFIT INSIDE CAST IRON FRAME.

NEENAH HATCH RETROFIT DETAIL

NOT TO SCALE



GUIDE BRACKET DETAIL (SUPPLIED WITH PUMPS)

NOT TO SCALE

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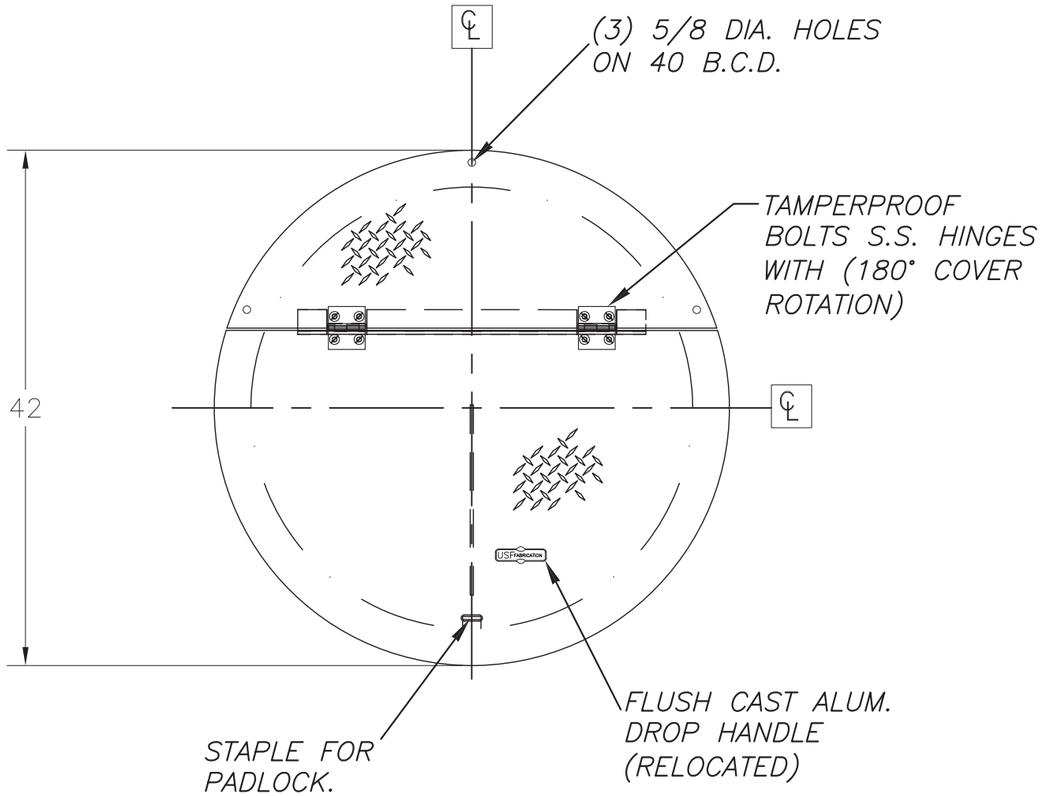
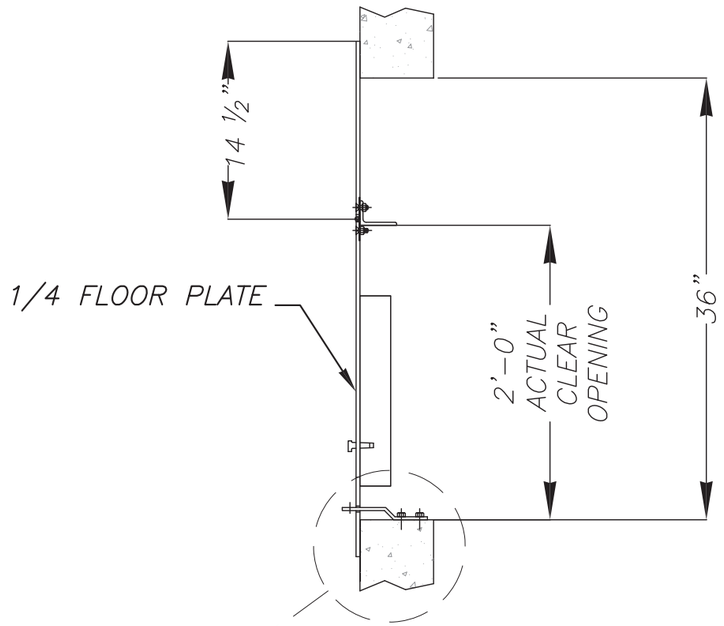
EASTRIDGE PUMP STATION REPLACEMENT

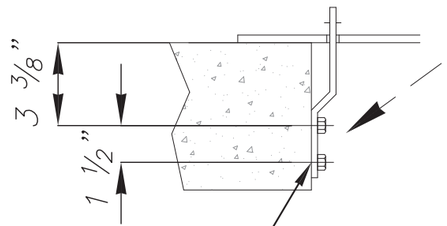
GUIDE BRACKET & ANCHOR BOLT

SHEET C13 OF 21

SW







NOTES:
1– MATERIAL: ALUMINUM
2– LOADING: 300 LBS. PER SQ. FT.
3– 316 STAINLESS STEEL NUTS & BOLTS 4– APPROXIMATE WEIGHT: 52.27 LBS.

STAPLE INSTALLATION IN FIELD BY OTHERS

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INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
BREAK ALL SHARP CORNERS & EDGES TO 0.01
TOLERANCES UNLESS OTHERWISE SPECIFIED:
INCHES = ± 1/16
1/16 = ± 1/32
1/32 = ± 1/64

NO.	REVISIONS
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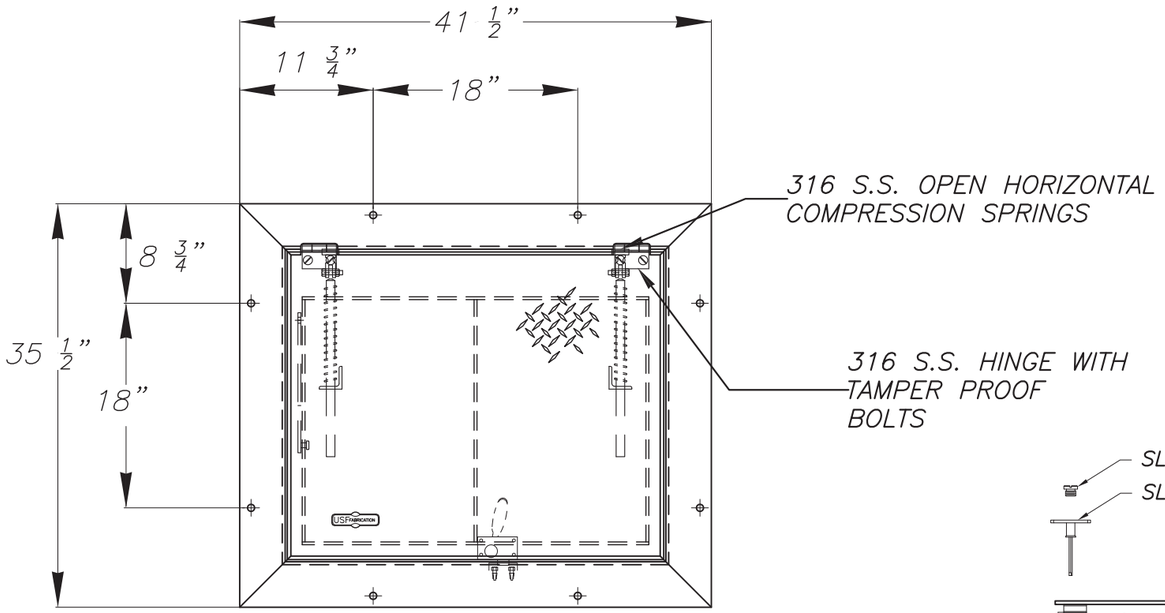
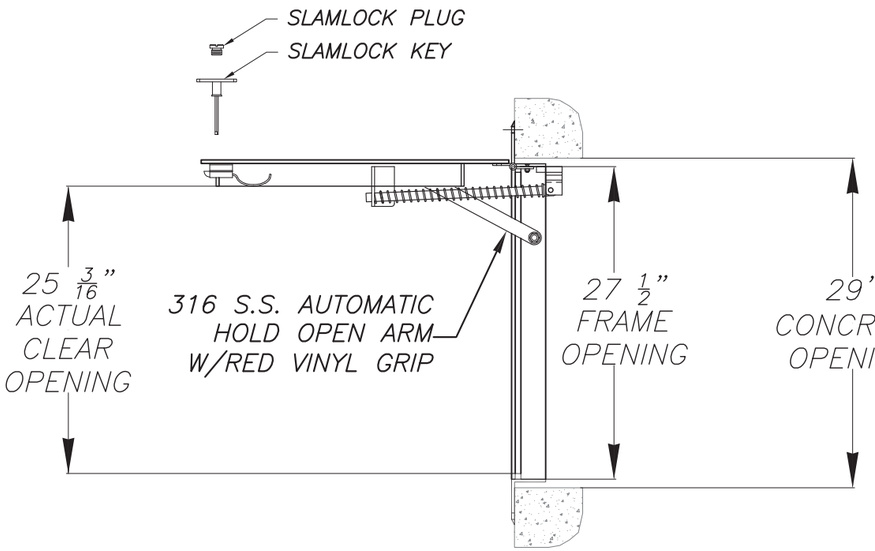
EASTRIDGE PUMP STATION REPLACEMENT

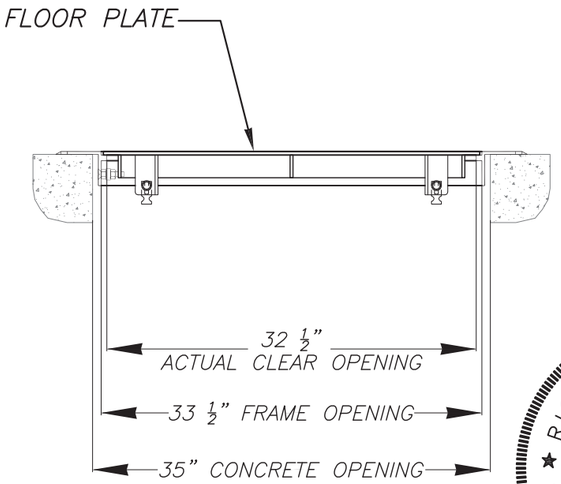
ROUND HATCH BPC 36- ALUM. 36 I.D. X 42 O.D.

SHEET C14 OF 21

SW

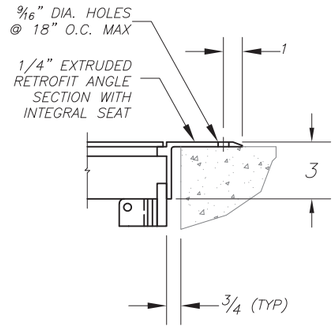






SELECTED FEATURES
1. OPEN HORIZONTAL SPRINGS
2. SLAMLOCK

NOTES
1. MATERIAL: ALUMINUM
2. FINISH: MILL
3. LOADING: 300 PSF
4. 316 SS NUTS & BOLTS
5. APPROX HATCH WT: 173.95 LBS



FRAME DETAIL

SHIM AS REQ'D @ SPRINGS AFTER FRAME IS INSTALLED (BY OTHERS)

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STATE OF FLORIDA
PROFESSIONAL ENGINEER

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INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M

BREAK ALL SHARP CORNERS & EDGES TO 0.01

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL
INCHES = ± 1/16
1/16 = ± 1/32
1/32 = ± 1/64

No.	DATE	REVISIONS
3		
2		
1		

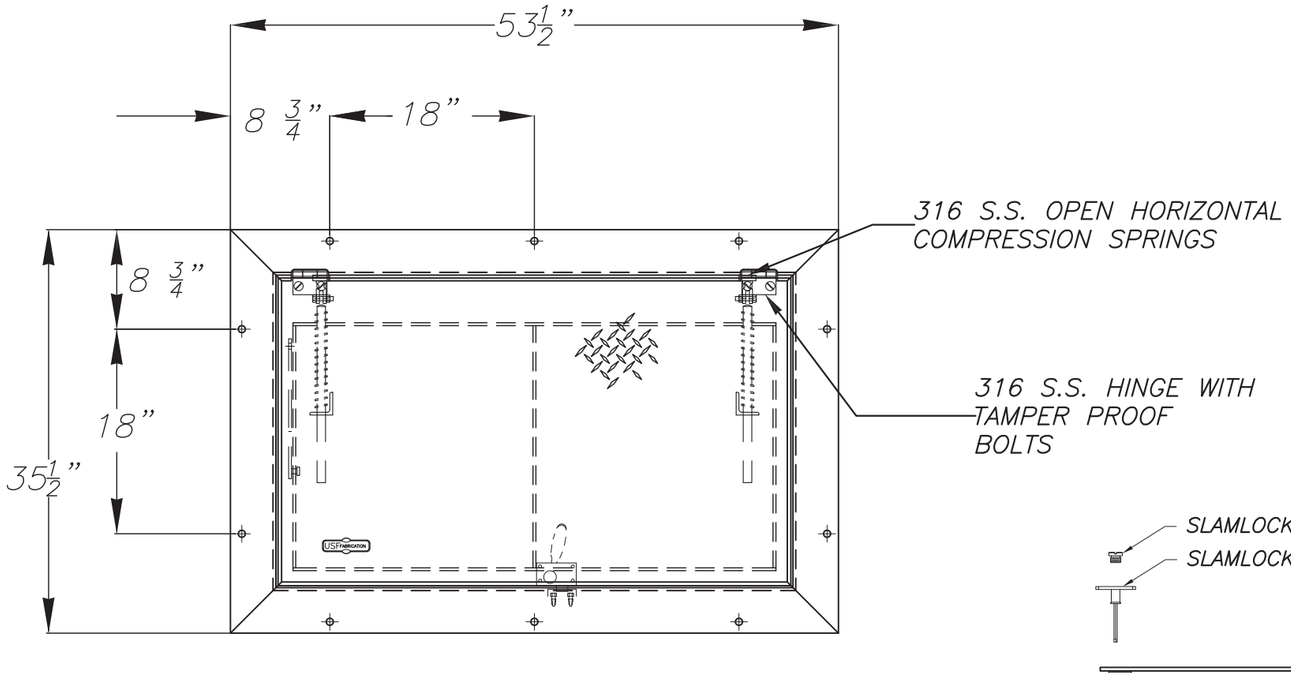
DES: MTM
DRN: MP
CKD:
DATE:

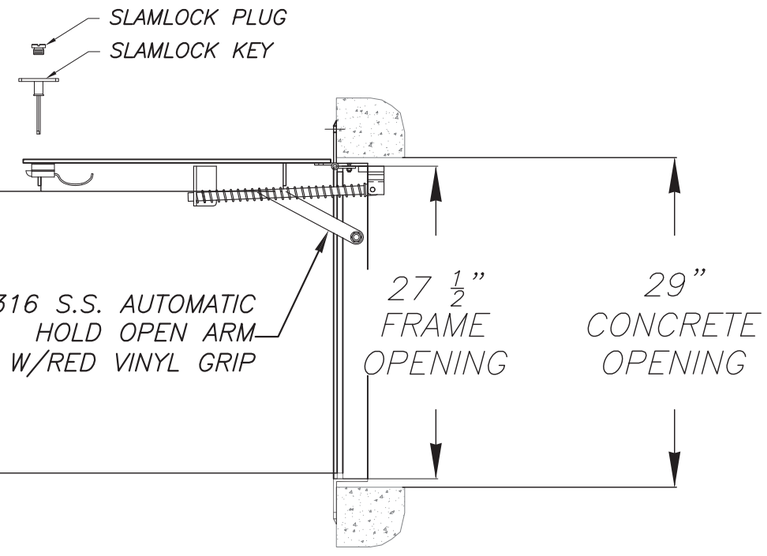
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

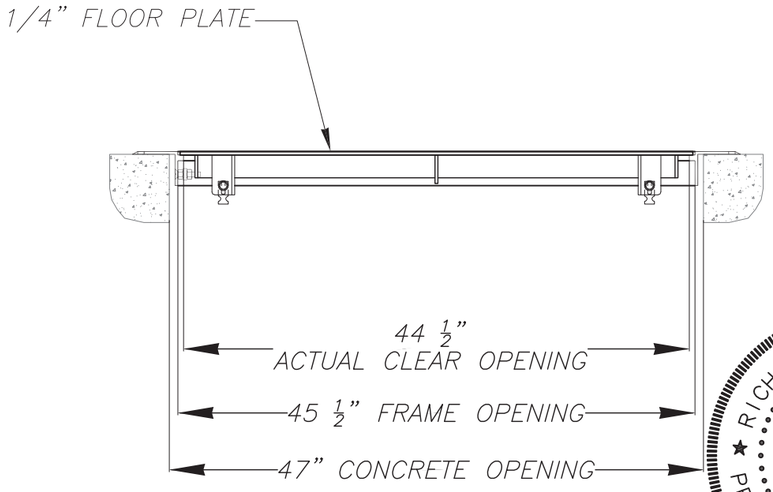
EASTRIDGE PUMP STATION REPLACEMENT
RETROFIT HATCH APS 300
ALUM FOR 29X35 OPENING

SHEET C15 OF 21

SW







SELECTED FEATURES
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2. SLAMLOCK

NOTES
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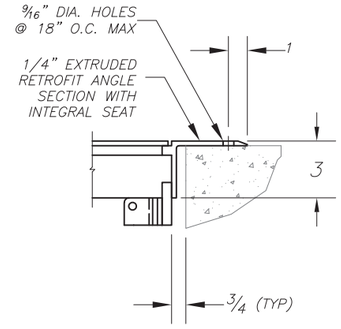
2. FINISH: MILL
3. LOADING: 300 PSF
4. 316 SS NUTS & BOLTS
5. APPROX HATCH WT: 173.95 LBS



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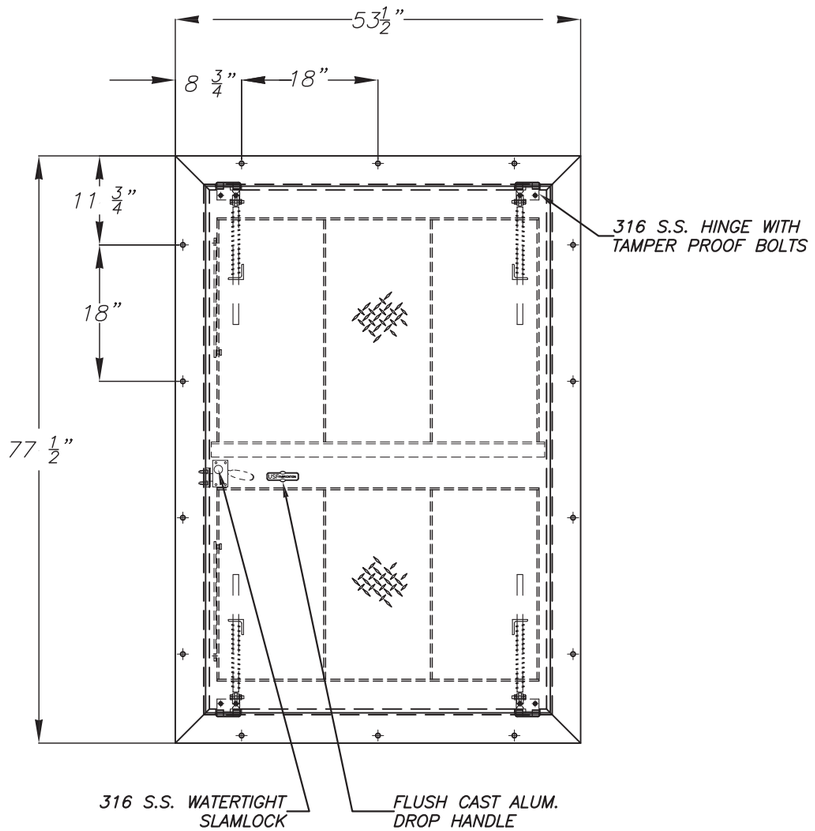
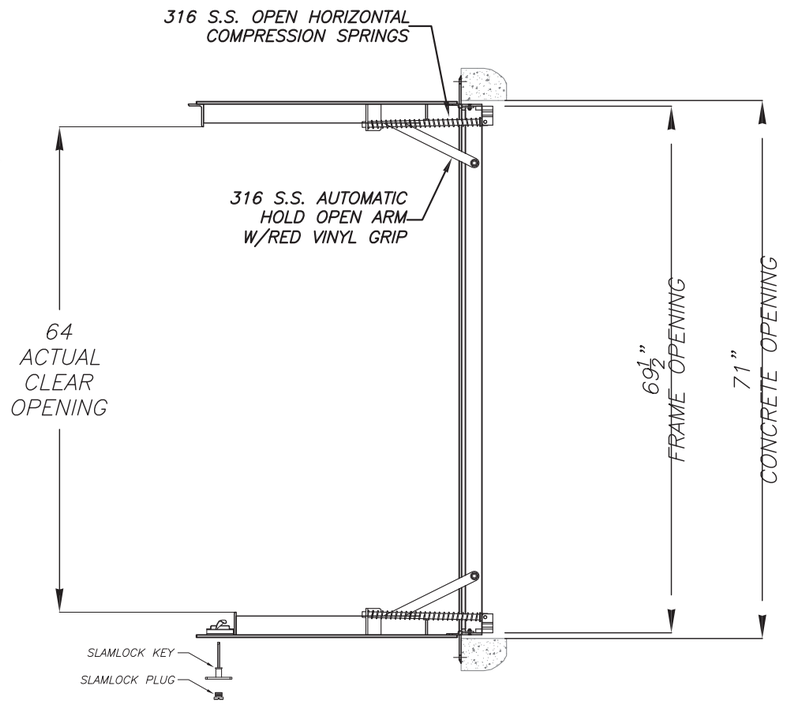
Department of Transportation and Stormwater Services
Stormwater Engineering Division

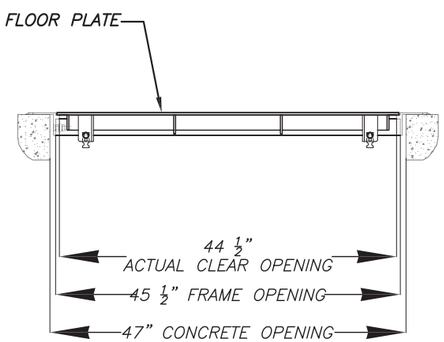
EASTRIDGE PUMP STATION REPLACEMENT
RETROFIT HATCH APS 300
ALUM FOR 29X47 OPENING

SHEET C16 OF 21

SW







SELECTED FEATURES
1. OPEN HORIZONTAL SPRINGS
2. SLAMLOCK

NOTES
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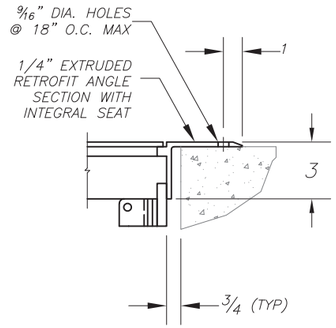

FRAME DETAIL

SHIM AS REQ'D @ SPRINGS AFTER FRAME IS INSTALLED (BY OTHERS)

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

RETROFIT HATCH APD ALUM FOR 47X71 OPENING

SHEET C17 OF 21

SW

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS BEFORE PROCEEDING WITH WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEERS.
2. DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS AND CONDITIONS UNLESS NOTED OTHERWISE.
3. ALL STRUCTURAL ITEMS FOR THIS PROJECT HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROPRIATE PROVISIONS OF EACH OF THE FOLLOWING:

   A. ACI STANDARD 318-11 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
   B. ASCE 7-10 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".
   C. AASHTO H-20 WHEEL LOADS = 16,000 LBS OVER 8"x20" AREA + 30% IMPACT FACTOR.
   D. THE FLORIDA BUILDING CODE, SIXTH EDITION (2017).

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER PRIOR TO PERFORMING WORK. IN CASE OF CONFLICT THE MOST STRINGENT CONDITION SHALL APPLY.
5. ALL DIMENSIONS MUST BE COORDINATED WITH CITY OF TAMPA PUMP STATION DRAWINGS AND WITH EQUIPMENT MANUFACTURER. CONTRACTOR MUST OBTAIN AN CITY OF TAMPA, STORMWATER ENGINEERING DIRECTIVE IN CASE OF ANY CONFLICT. REFER TO CITY OF TAMPA DRAWINGS FOR DIMENSIONS NOT SHOWN IN STRUCTURAL DRAWINGS.

CONCRETE AND REINFORCING:

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI-318".
2. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI.
3. ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE, NEW BILLET STEEL, DEFORMED BARS, CONFORMING TO ASTM A-615, GRADE 60. ALL BARS SHALL BE SECURELY SUPPORTED AND WIRED IN PLACE. PRIOR TO POURING CONCRETE. ALL REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706.
4. UNLESS NOTED, ALL BARS MARKED CONTINUOUS SHALL BE SPLICED AT ALL LAP POINTS AND CORNERS AND DEVELOPED AT NON-CONTINUOUS ENDS AS PER TYPICAL DETAILS. SPLICE CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AND SPLICE CONTINUOUS BOTTOM BARS AT SUPPORTS.
5. CONCRETE COVER FOR REINFORCING BARS SHOWN IN TYPICAL DETAILS.
6. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED JUST BEFORE PLACING NEW CONCRETE IN ACCORDANCE WITH THE BUILDING CODE.
7. FLY ASH - ASTMC618, TYPE C OR TYPE F SHOULD BE USED BUT NOT TO EXCEED 20% CEMENTITIOUS CONTENT.
8. ALL EXPOSED CONCRETE SLABS SHALL RECEIVE A CURING COMPOUND. THE CURING COMPOUND SHALL CONFORM TO ASTM C309 AND SHALL HAVE 30% SOLIDS MINIMUM. WATER/BLANKET CURING AS PER ACI RECOMMENDATION MAY BE USED AS ALTERNATE.
9. CONCRETE WATERSTOPS: USE SIKASWELL S-2 ONE PART POLYURETHANE , EXTRUDABLE SWELLING WATERSTOP (BENTONITE-FREE). WATERSTOPS FOR RETROFIT APPLICATIONS SEAL JOINTS WHERE NEW CONSTRUCTION MEETS AN EXISTING STRUCTURE AND CAN BE SUITABLE FOR MOVING JOINTS. SYSTEMS INCLUDE STAINLESS STEEL BATTEN BARS AND FASTENERS FOR ANCHORING TO THE EXISTING STRUCTURE WITH THE AID OF AN EPOXY GEL.

MASONRY:

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530.1-13 ASCE 5-13 OR CURRENT EDITION).
2. MINIMUM NET COMPRESSIVE STRENGTH OF BLOCK ASSEMBLY SHALL BE 1500 P.S.I. (f'm) MORTAR FOR MASONRY SHALL BE TYPE "S" OR "M".
3. FOR ALL EXTERIOR AND INTERIOR BEARING, BED JOINTS ARE TO COVER 100% OF THE MASONRY SURFACES AND ALL HEAD JOINTS ARE TO COVER 100% OF THE PROJECTED AREA OF THE FACE SHELLS.
4. WALLS ARE DESIGNED TO BE BRACED BY FLOOR OR ROOF MEMBERS, CONTRACTOR SHALL PROVIDE TEMPORARY BRACING DURING CONSTRUCTION.

SHOP DRAWINGS:

1. NO STRUCTURAL DRAWINGS SHALL BE REPRODUCED FOR USE AS SHOP DRAWINGS.
2. ALL DIMENSIONAL COORDINATION SHALL BE DONE BY THE CONTRACTOR AND/OR HIS DETAILER.
3. DETAILER SHALL CHECK ALL CIVIL AND MECHANICAL DRAWINGS FOR ALL ATTACHMENTS, CLIPS, OPENINGS, OR DUCT WORK AFFECTING STRUCTURAL MEMBERS. ALL ITEMS SHALL BE SHOWN ON SHOP DRAWINGS.

SEAL:

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Project No. 11151064

No.	DATE	REVISIONS
3		
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DRN: STM
CKD: JDS
DATE: 12/13/17

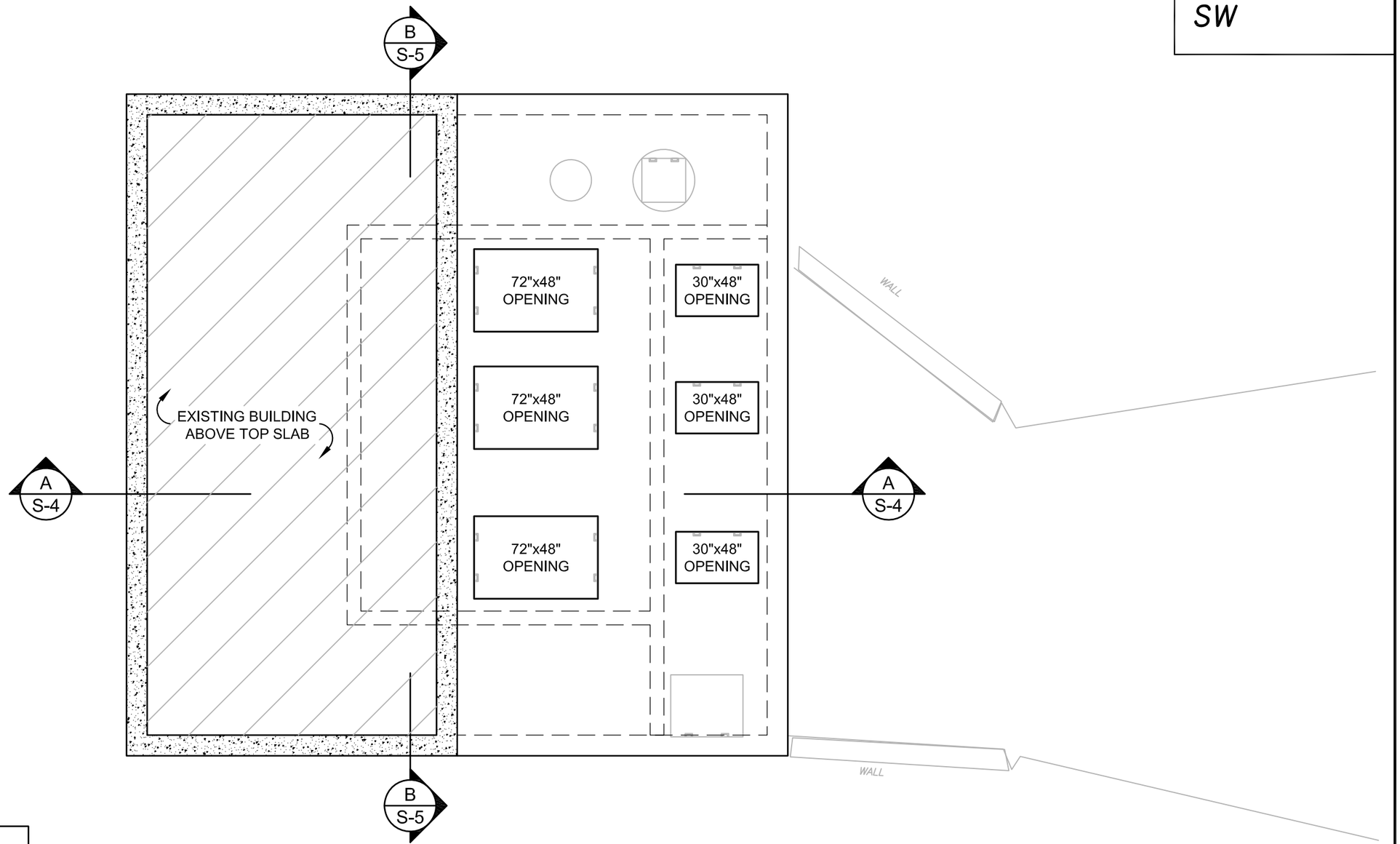
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

STRUCTURAL NOTES

SHEET S-1 OF 5

SW



EXISTING TOP SLAB PLAN

SCALE: 3/16" = 1'-0"

N

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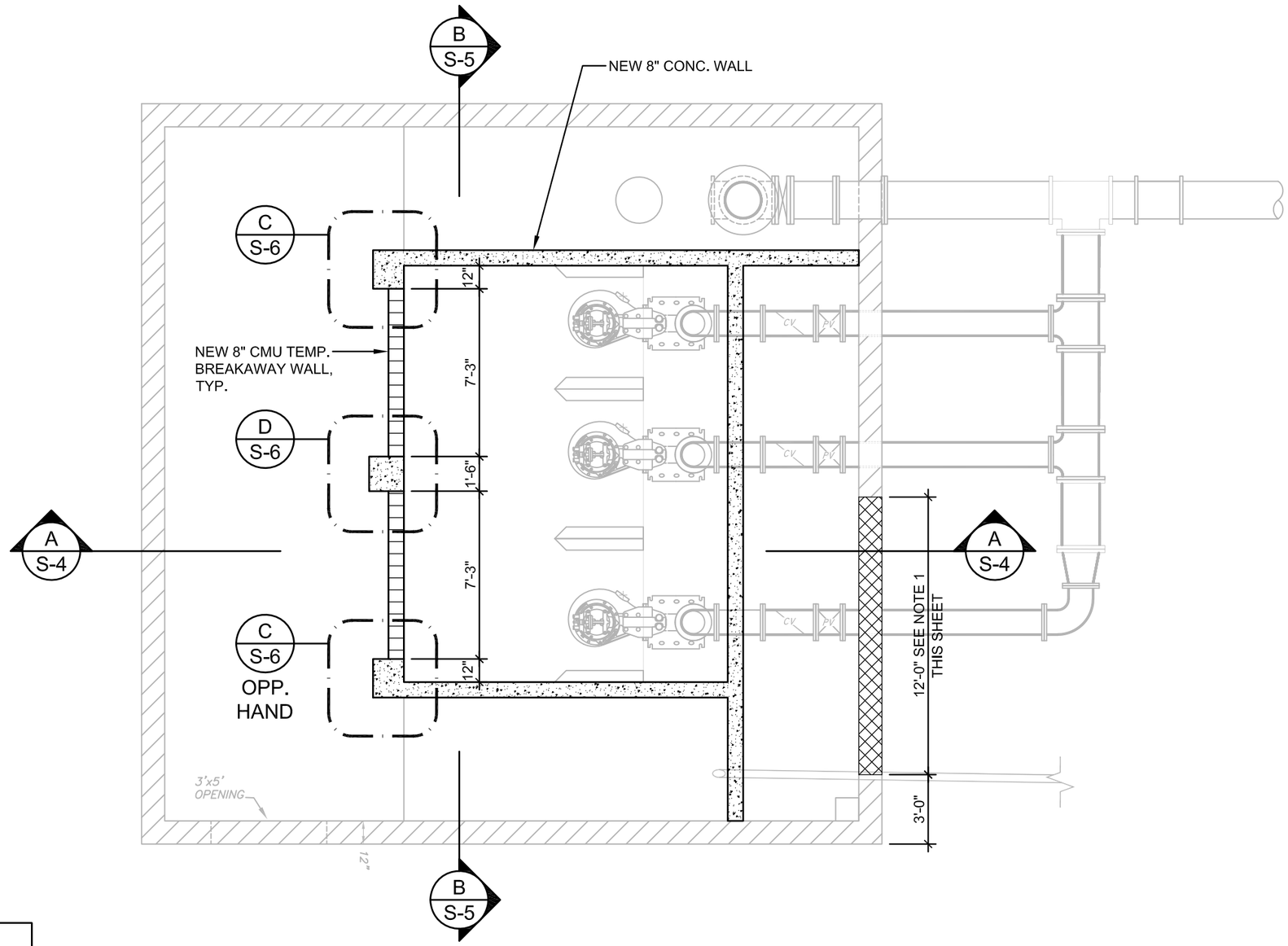
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

EXISTING TOP SLAB RETROFIT

SHEET S-2 OF 5

SW



WALL REPLACEMENT PLAN

SCALE: 3/16" = 1'-0"

N

NOTE:

1. REMOVE 12'-0" WIDE X 8'-0" HIGH EXISTING CONCRETE WALL DURING CONSTRUCTION AND REPLACE AFTER CONSTRUCTION IS COMPLETED. SEE SECTION A/S-4.

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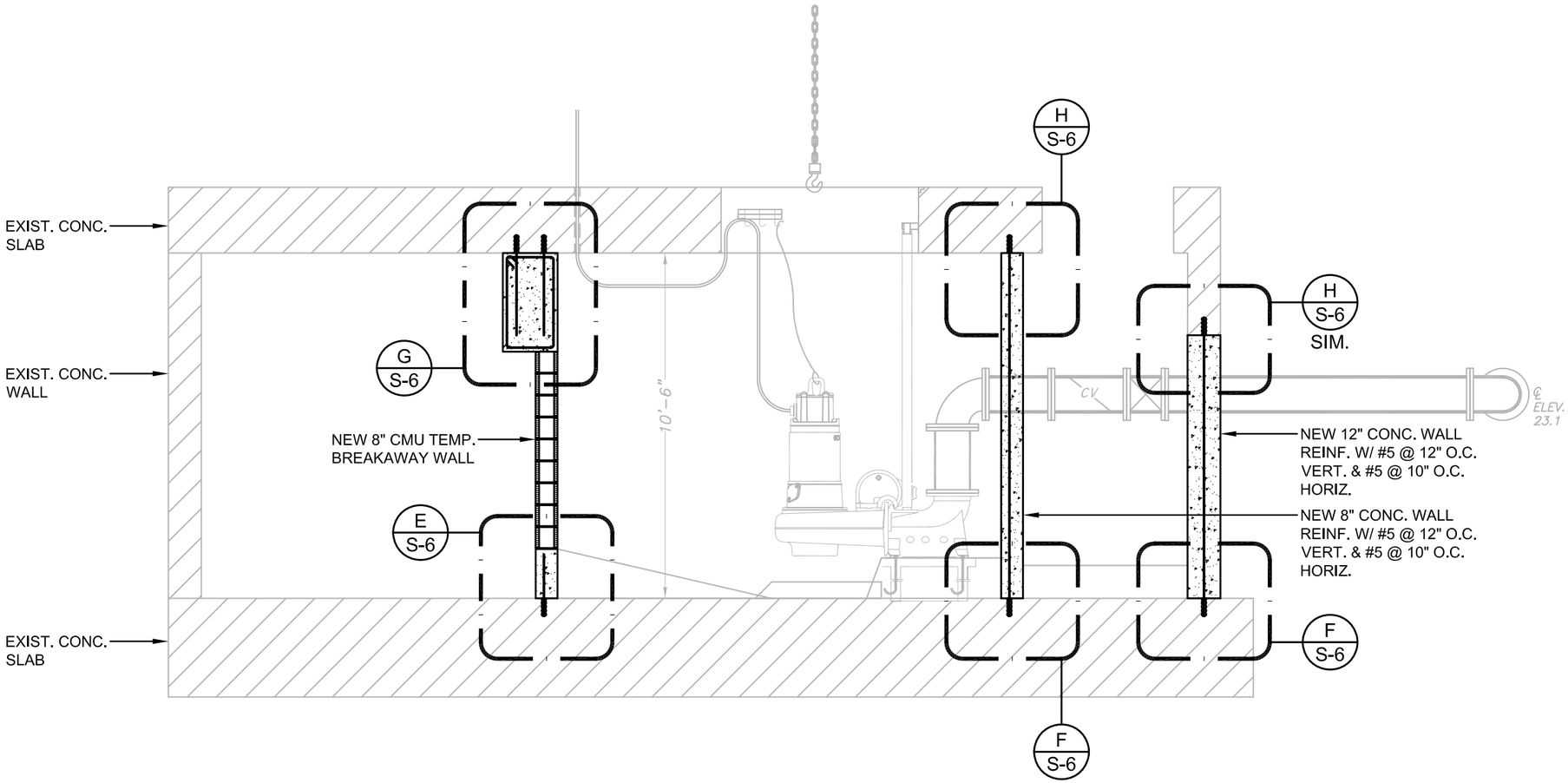
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

WALL REPLACEMENT PLAN

SHEET S-3 OF 5



A S-4 SECTION DETAIL
SCALE: 1/4" = 1'-0"

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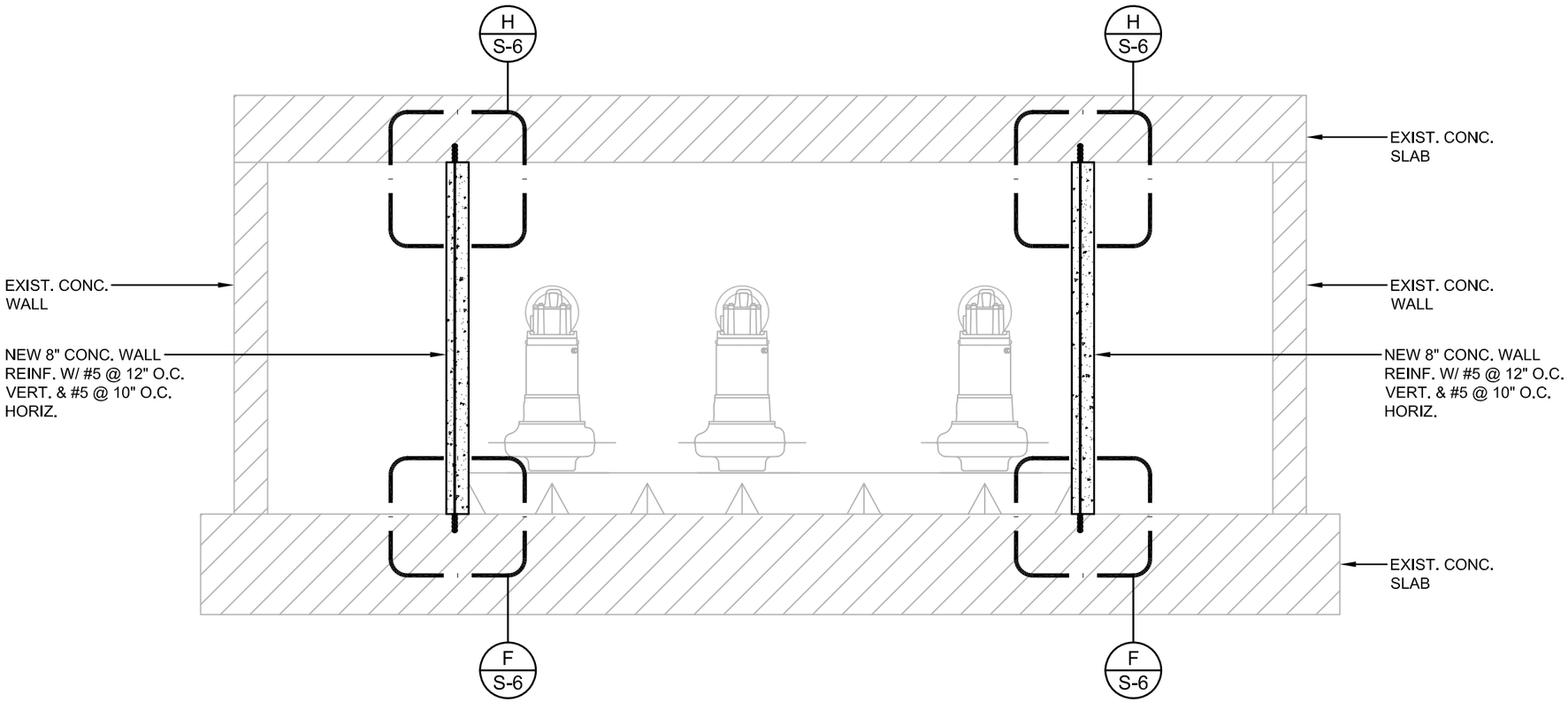
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

SECTION DETAIL

SW



B / S-5 SECTION DETAIL
SCALE: 1/4" = 1'-0"

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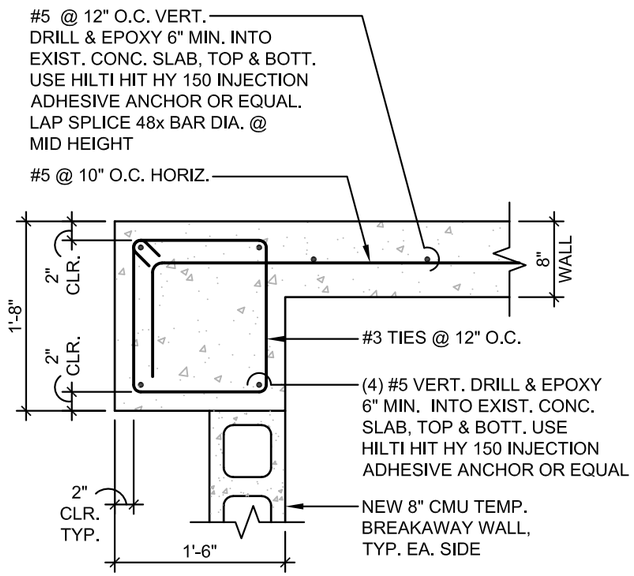
Stormwater Engineering Division

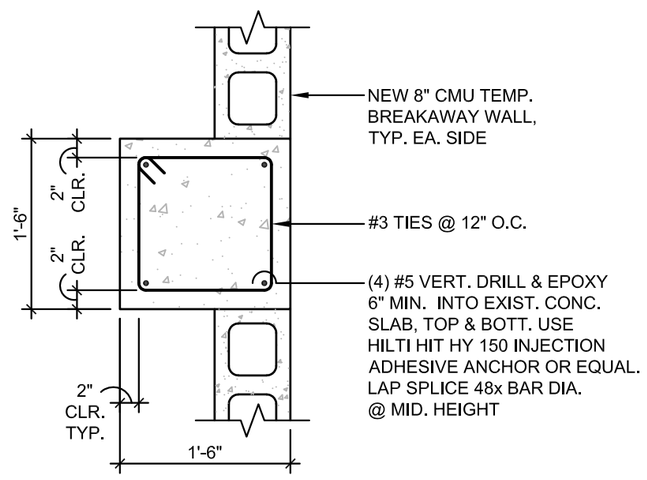
EASTRIDGE PUMP STATION REPLACEMENT

SECTION DETAIL

SHEET S-5 OF 5



C S-6 SECTION DETAIL
SCALE: 3/4" = 1'-0"



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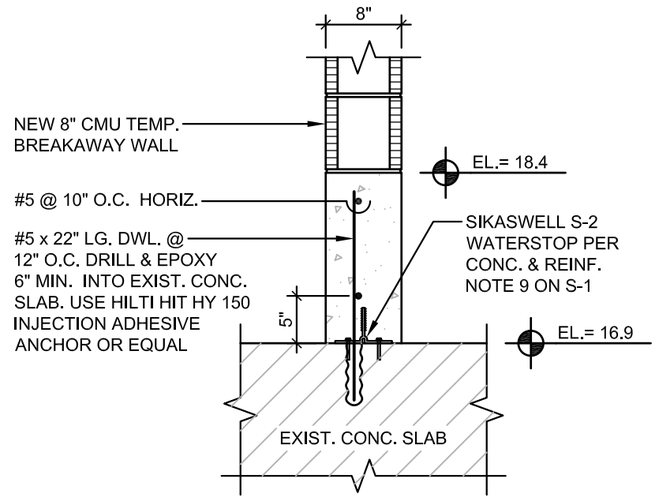
SCALE: 3/4" = 1'-0"



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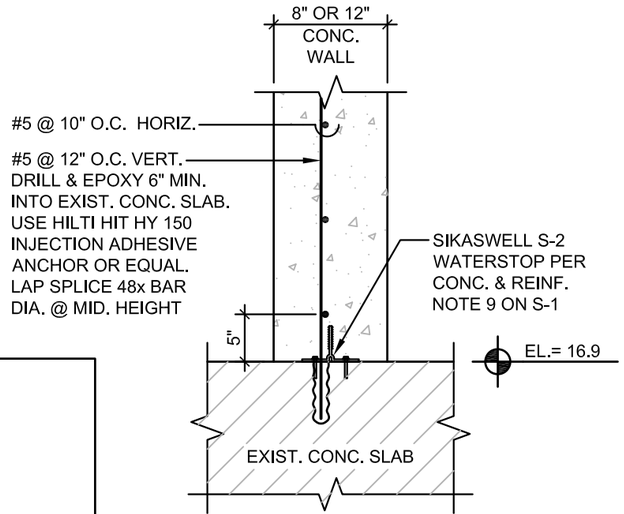
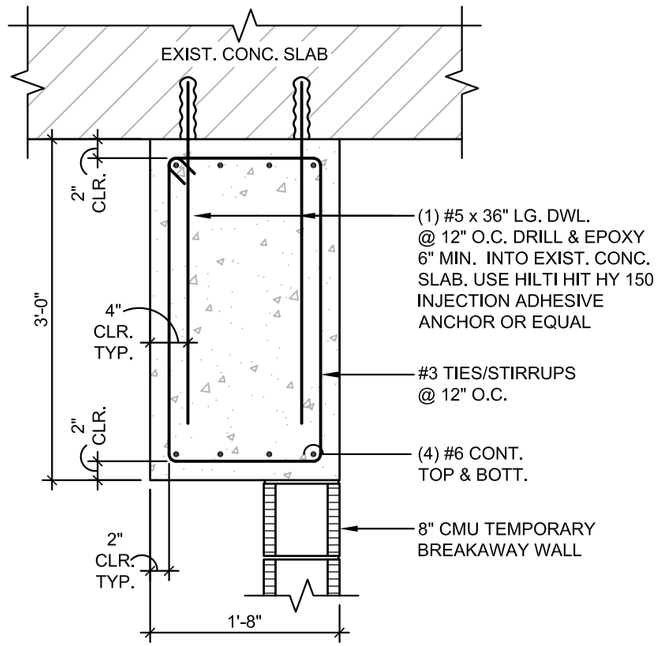
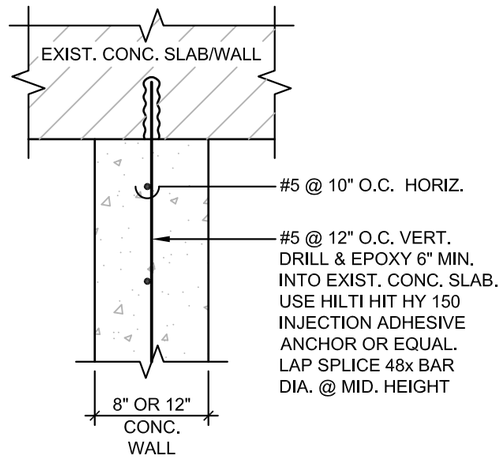


F S-6 SECTION DETAIL
SCALE: 3/4" = 1'-0"



G S-6 SECTION DETAIL
SCALE: 3/4" = 1'-0"



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EASTRIDGE PUMP STATION REPLACEMENT

SECTION DETAIL

SHEET S-6 OF 6

SW

CONDUIT RUN EXPOSED

CONDUIT RUN CONCEALED UNDERGROUND

CONDUIT RUN CONCEALED IN FLOOR OR SLAB

G — G GROUNDING ELECTRODE CONDUCTOR

CONDUIT STUB OUT AND CAP

GROUND ROD

JUNCTION BOX

JUNCTION BOX WITH FLEXIBLE CONNECTION

480V
15 KVA, 1*
120/240V

TRANSFORMER, 480V INDICATED PRIMARY VOLTAGE, 120/240V INDICATES SECONDARY VOLTAGE, 15 KVA REPRESENTS POWER RATING, AND 1* INDICATES SINGLE PHASE (THREE PHASE IF NOT INDICATED)

3P
30A

THERMAL MAGNETIC CIRCUIT BREAKER WITH NUMBER OF POLES AND AMPERE RATING

XX

COMBINATION MAGNETIC STARTER WITH CONTROL POWER TRANSFORMER (SIZED FOR LOAD). LETTERS INDICATE TYPE :
N – NON–REVERSING
R – REVERSING
2S – TWO–SPEED
C – CONTACTOR
SS – SOLID STATE SOFT START

XXX

XXX DEVICE	DESCRIPTION
HLS	HIGH LEVEL SWITCH
HOA	HAND–OFF–AUTO
LD	LEAK DETECTION
LLS	LOW LEVEL SWITCH
LOR	LOCAL–OFF–REMOTE
PB	PUSH BUTTON
RTU	REMOTE TERMINAL UNIT
SS	SOFT STARTER
SS/B	SOFT START OR BYPASS
TS	TEMPERATURE SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
ZS	POSTION SENSOR (LIMIT SWITCH)

FUSE

XX MOTOR

THERMAL OVERLOAD

UTILITY METER

TRANSFER SWITCH

ELECTRIC PANELBOARD

DISCONNECT OR SAFETY SWITCH

FLOAT SWITCH. OPENS ON LOW LEVEL.

FLOAT SWITCH. OPENS ON HIGH LEVEL.

NORMALLY OPEN (N.O.) CONTACT

NORMALLY CLOSED (N.C.) CONTACT

GROUND CONNECTION

R INDICATING PILOT LIGHT LETTER INDICATES COLOR OF LENS

DISCONNECT OR TOGGLE SWITCH

NORMALLY OPEN MOMENTARY CIRCUIT CLOSING PUSH–BUTTON SWITCH. SPRING OPEN. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC

NORMALLY CLOSED MOMENTARY CIRCUIT OPENING PUSH–BUTTON SWITCH. SPRING CLOSE. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC

LIMIT SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED

TORQUE SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED

PUMP THERMAL SENSOR

EXISTING EXTERIOR LIGHT FIXTURE (TO REMAIN)

EXISTING EXTERIOR LIGHT FIXTURE (TO REMAIN)

A 4' FLUORESCENT LIGHT FIXTURE. LETTER DESIGNATES FIXTURE TYPE. REFER TO FIXTURE SCHEDULE.

B AREA LIGHTING FIXTURE. REFER TO FIXTURE SCHEDULE.

EM EMERGENCY LIGHTING FIXTURE. REFER TO FIXTURE SCHEDULE.

X EXIT LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE.

DUPLEX RECEPTACLE: 20A, 125VAC

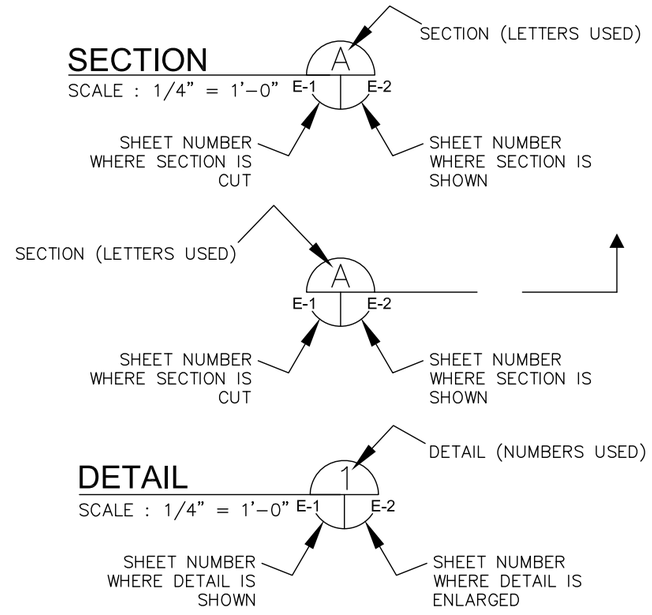
$ SWITCH: SINGLE–POLE OR AS NOTED, 20A, 120/277VAC

LIGHTING AND RECEPTACLE WIRING INDICATED AS FOLLOWS:

- TWO WIRES:
- THREE WIRES:
- FOUR WIRES, ETC.
- NEUTRAL WIRE
- ISOLATED GR. WIRE

PROVIDE 2#12 THWN CU. IN 3/4" C. UNLESS OTHERWISE NOTED AND EQUIPMENT GROUND WIRE (NOT INDICATED) IN ALL POWER AND LIGHTING RACEWAYS.

EXAMPLE OF SECTION CUT AND DETAIL



ABBREVIATIONS:

A	AMPS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ATL	ACROSS–THE–LINE
C	CONDUIT
CU	COPPER
EX	EXISTING
ELEC	ELECTRICAL
EXP	EXPLOSION PROOF
FU	FUSE
GFI	GROUND FAULT INTERRUPTER
GND	GROUNDING CONDUCTOR
HP	HORSEPOWER
HZ	HERTZ
IG	ISOLATED GROUND
KVA	KILOVOLT AMPERES
KW	KILOWATTS
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
PH	PHASE
RECP	RECEPTACLE
RPM	REVOLUTIONS PER MINUTE
RTU	REMOTE TERMINAL UNIT
SPD	SURGE PROTECTION DEVICE
TYP	TYPICAL
V	VOLTS
WP	WEATHERPROOF

TRICON CONSULTING ENGINEERS
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Suite 250
Tampa, FL 33602
813.227.9190
Certificate of Authorization No. 8363

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DES: TDT
DRN: JLH
CKD: TDT
DATE:

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL LEGEND AND ABBREVIATIONS

SHEET E-1 OF

SW

GENERAL NOTES:

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR TO COMMENCING CONSTRUCTION.
2. ALL CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. W/XHHW-2 INSULATION, UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE IDENTIFIED W/NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
4. VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
5. FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
6. PLANS ARE DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2017, 6TH EDITION AND THE NATIONAL ELECTRICAL CODE 2014. CONTRACTOR(S) SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.
7. ALL THREADED CONNECTIONS SHALL BE COATED W/ ALUMA- SHIELD ANTI-SEIZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B) OR EQUAL.
8. ALL PANELS, DISCONNECTS, SWITCHES, AND EQUIPMENT COVERPLATES SHALL BE LABELED W/ NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MIN. EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.
9. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
10. ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT W/ POWER CONDUCTORS.
11. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
12. NEATLY COIL ALL SPARE CONDUCTORS & TAPE W/ VINYL ELECTRICAL TAPE (SCOTCH 33+).
13. PROVIDE A MINIMUM OF 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE W/ ARTICLE 110 OF THE NEC.
14. ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS, ETC.) SHALL BE 316-STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
15. EXPOSED CONDUITS SHALL BE NON-COATED RIGID ALUMINUM CONDUIT, UNLESS OTHERWISE NOTED (UON). INSTALL PVC COATED RIGID ALUMINUM CONDUIT TO THE WET WELL.
16. DIRECT BURIED CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED, WITH A TRANSITION TO RIGID ALUMINUM IN THE VERTICAL RUN AT LEAST ONE FOOT PRIOR TO EMERGENCE. ALL ALUMINUM SURFACES IN CONTACT WITH SOIL, CONCRETE, AND OTHER INCOMPATIBLE MATERIALS SHALL BE COATED WITH TWO COATS OF BITUMASTIC OR OTHER APPROVED INSULATING MATERIAL.
17. ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO PUMP CONTROL PANEL, MOTOR CONTROL PANEL, HIGH VOLTAGE JUNCTION BOXES, ETC.
18. A 316-STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316-STAINLESS STEEL MOUNTING HARDWARE.
19. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
21. ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTOR'S REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
22. PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND AVOID EXCESSIVE PULLING TENSION ON WIRING. IN NO CASE SHALL CONDUIT LENGTHS EXCEED 150' OR THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) WITHOUT A PULL BOX. PULL BOXES SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 314 OF THE NEC.
23. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED AND AS SPECIFIED, OR AS APPROVED BY THE ENGINEER. THE PANEL BUILDER SHALL BE UL-508A CERTIFIED AND A UL LABEL SHALL BE ATTACHED TO THE INSIDE OF THE ENCLOSURE.
24. THE ENCLOSURES SHALL BE NEMA 4X, THEY SHALL BE CONSTRUCTED OF MINIMUM 14 GAUGE 304 SS, AND THE CLOSING SURFACES SHALL HAVE ROLLED LIPS, PROVIDE HINGED DOORS WITH 3-POINT LATCH AND LOCKABLE HANDLES. REFERENCE PARTS SCHEDULE ON SHEET E-16.
25. ALL COMPONENTS TO BE MOUNTED ON PANEL USING TAPPED HOLES.
26. ALL WIRING SHALL BE COPPER, ALL CONTROL WIRING SHALL BE STRANDED XHHW-2 COPPER, MINIMUM AWG # 14, AND SHALL HAVE SPADE LUG TERMINATIONS.
27. DIMENSIONS, ITEMS, OR ELEVATIONS MARKED '*' TO BE DETERMINED AFTER EQUIPMENT SELECTION.
28. ALL MECHANICAL CONNECTORS SHALL BE TORQUED PER NEC, UL OR MANUFACTURERS SPECIFICATIONS.
29. INSTALL LAMINATED SCHEMATIC, LAMINATED DATA SHEET AND LAMINATED SOFT STARTER SETUP PARAMETERS ON BACK FACE OF THE DOOR INSIDE THE ENCLOSURE.
30. ENSURE THAT LINE CONNECTIONS TO DOUBLE-POLE TRANSFER SWITCH (FDTS) PROVIDES CORRECT MOTOR ROTATION.
31. CONDUCTORS WITHIN THE ENCLOSURE AND NOT ROUTED IN WIREWAYS, SHALL BE SECURED TO THE BACKPANEL WITH MECHANICAL FASTENERS, FASTENERS SECURED WITH ADHESIVE ARE NOT ACCEPTABLE.
32. ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.
33. THE EXISTING MOTOROLA ACE3600 RTU AND ALL ASSOCIATED EQUIPMENT SHALL BE REMOVED FROM THE EXISTING RTU ENCLOSURE AND INSTALLED IN THE NEW PUMP CONTROL PANEL (PCP).
34. PROVIDE 1/4" MINIMUM THICKNESS LEXAN SHIELDS OVER POWER DISTRIBUTION BLOCK AND OTHER EXPOSED CABLE TERMINATIONS.
35. XHHW-2 CONDUCTORS (3-#1 AWG + 1-#6 AWG GND. CU FOR EACH MOTOR) SHALL EXTEND FROM THE CONTROL PANEL TO ASSOCIATED HIGH VOLTAGE JUNCTION BOX.
36. ALUMINUM CONDUIT SURFACE THAT IS IN CONTACT WITH SOIL OR CONCRETE SHALL BE COATED WITH TWO COATS ASPHALT VARNISH (FED. SPEC. TT-V-51) EXTENDING 4" BEYOND FINAL CONTACT POINT.

SCOPE OF WORK:

1. THE SERVICE VOLTAGE TO THIS FACILITY SHALL REMAIN 277/480 VAC. 3-PHASE, 4-WIRE, WYE.
2. REMOVE ALL EQUIPMENT AS INDICATED AND ALL ASSOCIATED CONDUIT AND CONDUCTORS, AS SHOWN ON PLANS.
3. ANY SALVAGEABLE MATERIALS, AS DETERMINED BY THE ENGINEER, SHALL BE DELIVERED, BY THE CONTRACTOR, TO THE CIT YOF TAMPA. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL OTHER REMOVED EQUIPMENT.
4. PREPARE THE SITE FOR THE INSTALLATION OF THE PROPOSED PUMP CONTROLS/ MOTOR CONTROLS ENCLOSURES.
5. PROVIDE AND INSTALL A NEW PUMP CONTROL PANEL. THE PUMP CONTROL PANEL SHALL CONTAIN CONTROL COMPONENTS, INDICATOR LIGHTS AND ANCILLARY EQUIPMENT AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
6. PROVIDE AND INSTALL A NEW MOTOR CONTROL PANEL. THE MOTOR CONTROL PANEL SHALL CONTAIN CIRCUIT BREAKERS, REDUCED VOLTAGE SOFT STARTERS AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
7. REUSE EXISTING MOTORLA ACE3600 RTU COMPONENTS AND SCADA ANTENNA/ MAST AS INDICATED.
8. CALIBRATE AND ADJUST SETPOINTS AND ALL SENSING DEVICES, ALARM DEVICES, AND TIMERS. CALIBRATIONS AND SETPOINTS SHALL BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. PROVIDE FOR PROPER GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED.
10. PROVIDE AND INSTALL ALL NECESSARY CONDUITS AND CONDUCTORS AS SHOWN, SPECIFIED, AND REQUIRED.
11. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE ADOPTED BY THE STATE OF FLORIDA AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
12. REFER TO CIVIL/MECHANICAL SHEETS FOR BYPASS PUMPING REQUIREMENTS. IF ELECTRICALLY DRIVEN BYPASS PUMPS ARE UTILIZED, THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY ELECTRICAL SERVICE REQUIREMENTS WITH TAMPA ELECTRIC COMPANY (TECO).

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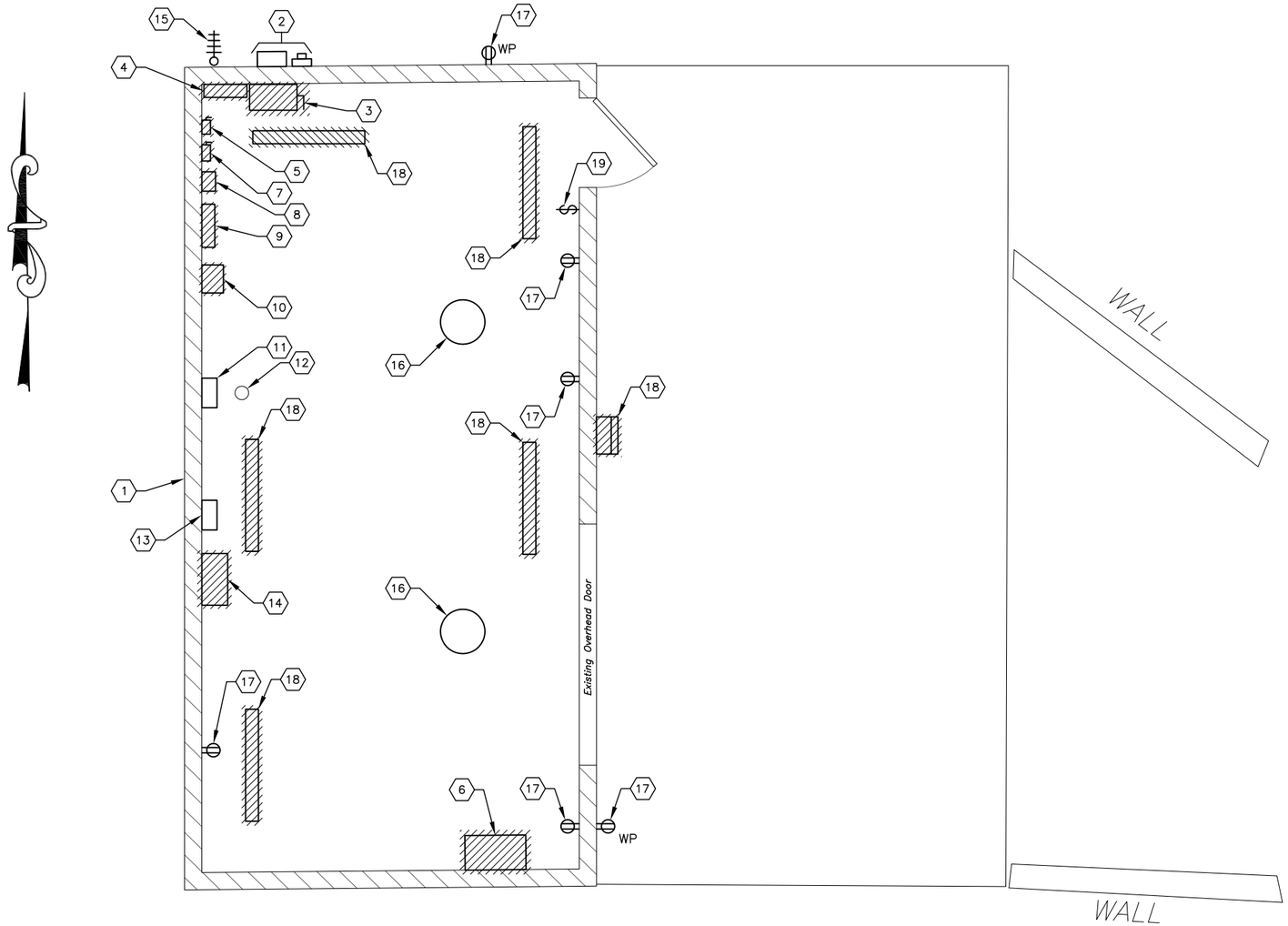
EASTRIDGE PUMP STATION REPLACEMENT

GENERAL NOTES & SCOPE OF ELECTRICAL WORK

SHEET E-2 OF

SW



EXISTING CONDITIONS AND DEMOLITION WORK

SCALE : 3/16" = 1'-0"

KEYED NOTES:

1. EXISTING PUMP STATION BUILDING. REFER TO CIVIL PLANS FOR PROPOSED STRUCTURAL CHANGES. REFER TO SHEETS E-4 AND E-5 FOR NEW ELECTRICAL WORK REQUIRED.
2. EXISTING ELECTRICAL SERVICE METER AND CT CABINET TO REMAIN.
3. EXISTING 480V, 3-POLE, 400 AMPERE DISCONNECT SWITCH (SERVICE ENTRANCE DISCONNECT) TO BE REMOVED (ALONG WITH WIREWAY DIRECTLY BELOW). REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS. REMOVE EXISTING LINE-SIDE CONDUCTORS BACK TO THE CT CABINET.
4. EXISTING 277/480V, 3ø, 100 AMPERE PANELBOARD TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS BACK TO DISCONNECT IN KEYED NOTE #3.
5. EXISTING 480V, 3-POLE, 30 AMPERE DISCONNECT TO BE REMOVED. DISCONNECT FEEDS PUMP CONTROLLER ON NORTHEAST WALL (KEYED NOTE #6). ALL ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED.
6. EXISTING PUMP CONTROLLER AND ALL ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED.
7. EXISTING 480V, 3-POLE, 60 AMPERE DISCONNECT (TRANSFORMER DISCONNECT) AND ALL ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED.
8. EXISTING 480-120/240V, 15 KVA TRANSFORMER AND ALL ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED.
9. EXISTING 120/240V SINGLE-PHASE PANELBOARD AND ALL ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED.
10. EXISTING BATTERY CHARGER AND ALL ASSOCIATED CONDUIT AND CONDUCTORS TO BE REMOVED.
11. EXISTING LEVEL TRANSMITTER AND FLOAT SWITCH JUNCTION BOX TO REMAIN.
12. EXISTING WET WELL WITH 1" PVC TO REMAIN.
13. EXISTING FANS CONTROLS TO REMAIN. REFER TO KEYED NOTE #16 ON SHEET E-4 FOR NEW CONDUIT/CONDUCTORS REQUIRED.
14. EXISTING MOSCAD SCADA RTU TO BE REMOVED. THE CONTRACTOR SHALL REUSE THE EXISTING MOTOROLA ACE3600 RTU, ASSOCIATED RADIO, TWO (2) WILKERSON INSTRUMENT CO. SIB-V245 AUXILIARY I/O BOARDS, PULSAR UNIT (BLACKBOX 130), BATTERY, AND BATTERY CHARGER. THIS EQUIPMENT SHALL BE RELOCATED TO THE NEW PUMP CONTROL PANEL (REFER TO SHEET E-7 FOR DETAILS). ALL OTHER EQUIPMENT DEEMED UNNECESSARY FOR THE PROPER OPERATION OF THE NEW PUMP CONTROL PANEL SHALL BE DELIVERED TO THE CITY OF TAMPA FOR MAINTENANCE INVENTORY. ALL CONDUIT AND CONDUCTORS ASSOCIATED WITH THE RTU SHALL BE REMOVED WITH THE EXCEPTION THAT THE EXISTING CONDUIT UTILIZED FOR THE RADIO ANTENNA WILL BE EXTENDED TO THE NEW PUMP CONTROL PANEL. THE CONTRACTOR SHALL PROVIDE A NEW COAXIAL CABLE (TO MATCH THE EXISTING) AND INSTALL THE NEW COAXIAL CABLE FROM THE EXISTING ANTENNA TO THE NEW PUMP CONTROL PANEL.
15. EXISTING ANTENNA FOR MOSCAD SCADA RTU TO REMAIN. CONTRACTOR TO PROVIDE NEW COAXIAL CABLE. REFER ALSO TO KEYED NOTE #14 ON THIS SHEET.
16. APPROXIMATE LOCATION FOR EXISTING FAN TO REMAIN. REFER ALSO TO KEYED NOTE #13 ON THIS SHEET.
17. EXISTING RECEPTACLE TO REMAIN. CONTRACTOR TO REMOVE POWER CONDUCTORS AND CONDUIT. NEW POWER CONDUCTORS TO BE PROVIDED. REFER TO SHEET E-4.
18. EXISTING LIGHTING FIXTURE TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
19. EXISTING SINGLE-POLE LIGHT SWITCH TO REMAIN. CONTRACTOR TO REMOVE POWER CONDUCTORS AND CONDUIT. NEW POWER CONDUCTORS TO BE PROVIDED. REFER TO SHEET E-5.

DEMOLITION NOTES:

1. HATCHING AS INDICATED BY:

   IDENTIFIES ITEMS OR MATERIALS TO BE REMOVED BY THE CONTRACTOR. COORDINATE ANY ITEMS TO BE SALVAGED WITH THE CITY OF TAMPA.
2. REFER TO CIVIL SHEETS FOR OTHER DEMOLITION REQUIREMENTS.

GENERAL NOTES:

1. EXISTING LIGHTING FIXTURE LOCATIONS, EXISTING SWITCH LOCATIONS AND EXISTING RECEPTACLE LOCATIONS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FIXTURE LOCATION/QUANTITIES, SWITCH LOCATIONS/QUANTITIES AND RECEPTACLE LOCATINS/QUANTITIES.

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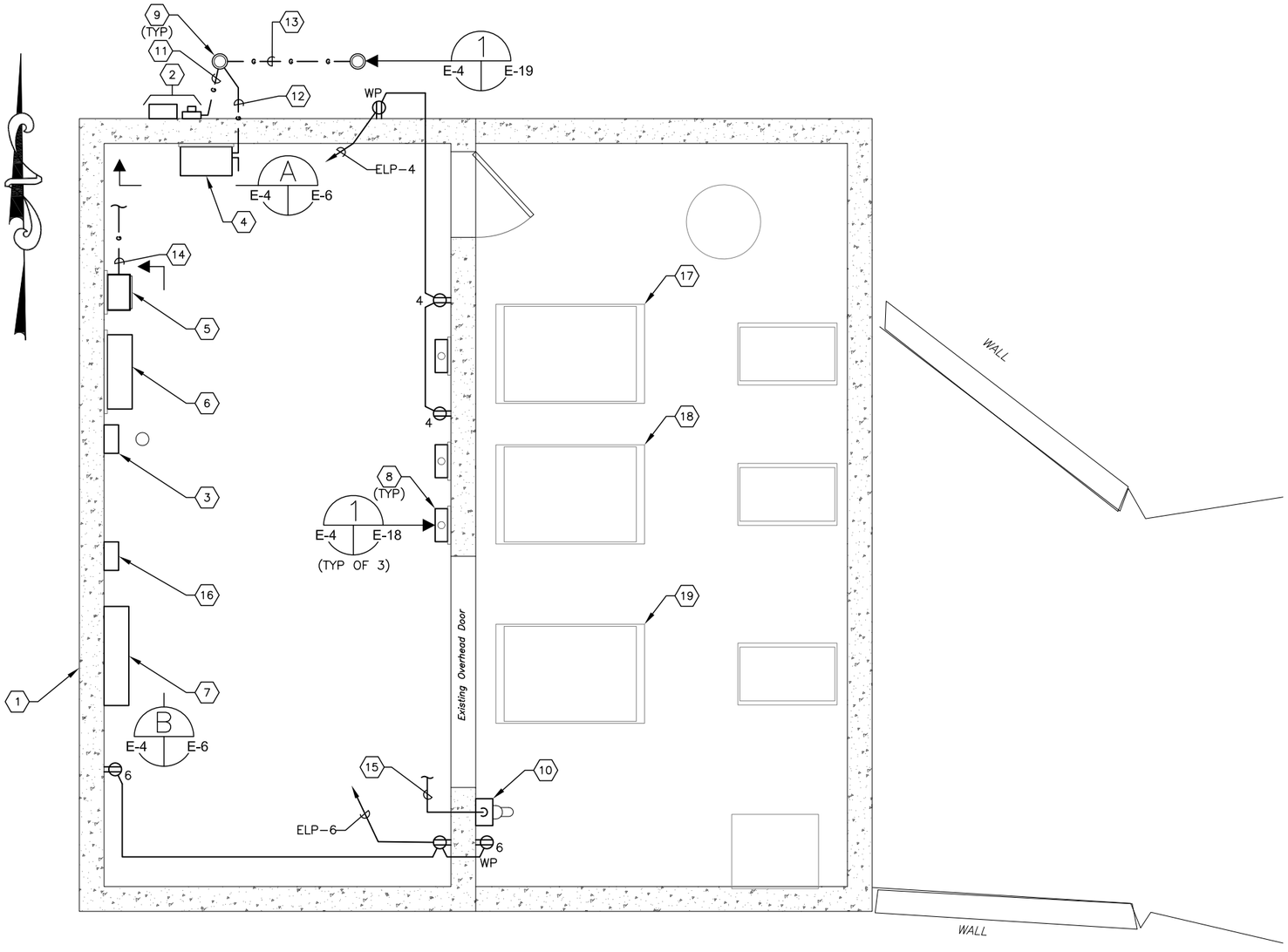
Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

EXISTING CONDITIONS AND DEMOLITION WORK

SHEET E-3 OF

SW



PROPOSED ELECTRICAL PLAN

SCALE : 3/16" = 1'–0"

KEYED NOTES:

1. EXISTING PUMP STATION BUILDING. REFER TO CIVIL PLANS FOR PROPOSED STRUCTURAL CHANGES.
2. EXISTING ELECTRICAL SERVICE METER AND CT CABINET.
3. EXISTING LEVEL TRANSMITTER AND FLOAT SWITCH JUNCTION BOX. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTORS AS REQUIRED FROM THE EXISTING JUNCTION BOX TO THE NEW PUMP CONTROL PANEL. NEW CONDUIT AND CONDUCTORS SHALL MATCH EXISTING IN TYPE AND QUANTITY.
4. PROVIDE AND INSTALL HEAVY DUTY, DOUBLE THROW, SERVICE ENTRANCE RATED FUSIBLE SWITCH, 3–POLE, 600 VAC, 400 AMP IN NEMA 4X TYPE ENCLOSURE. PROVIDE 600 VOLT, 400A, DUAL–ELEMENT, TIME–DELAY CLASS RK5 FUSES; SWITCH––EATON DT365FWK, DT800NK–NEUTRAL KIT, DS468GK–GROUND LUG KIT, DS66FK–"R" FUSE ADAPTER KIT. CONTRACTOR SHALL ADJUST INSTALLATION LOCATION TO ACCOMMODATE EXISTING CONDUIT FROM CT CABINET.
5. PROVIDE AND INSTALL 480V–120/240V, 1ø, 15KVA MINI POWER–ZONE (PANEL 'ELP') WITH INTEGRAL 60A PRIMARY CIRCUIT BREAKER AND 80A SECONDARY CIRCUIT BREAKER IN NEMA 3R ENCLOSURE. REFER TO SHEET E–18 FOR PANEL SCHEDULE.
6. PROVIDE AND INSTALL PUMP CONTROL PANEL. REFER TO DETAIL ON SHEET E–7.
7. PROVIDE AND INSTALL MOTOR CONTROL PANEL. REFER TO DETAIL ON SHEET E–8.
8. CONTRACTOR TO PROVIDE AND INSTALL HIGH VOLTAGE JUNCTION BOX FOR ASSOCIATED PUMP. TYPICAL OF 3. REFER TO TYPICAL DETAIL ON SHEET E–18. REFER TO CIVIL SHEETS FOR CORING OF FLOOR SLAB FOR POWER CABLE AND CONTROL WIRING.
9. PROVIDE AND INSTALL GROUND ROD TEST WELL, OLDCASTLE PRECAST ENCLOSURE SOLUTIONS #F08 BOX WITH #F08C CAST IRON LID MARKED "GROUND". MINIMUM SPACING BETWEEN GROUND ROD TEST WELLS/GROUND RODS SHALL BE 6'–0".
10. PROVIDE AND INSTALL A NEW WATERPROOF 600V, 400A, 3–POLE, 4–WIRE GENERATOR PLUG WITH ANGLE ADAPTER AND JUNCTION BOX ASSEMBLY. MOUNT TO PUMP STATION BUILDING WALL. COORDINATE LOCATION WITH THE CITY OF TAMPA.
11. PROVIDE AND INSTALL #4 BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCHEDULE 80 PVC CONDUIT FROM METER TO GROUND ROD TEST WELL. CONFIRM CONDUCTOR SIZE WITH TECO.
12. PROVIDE AND INSTALL #2/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 80 PVC CONDUIT FROM FDTS TO GROUND ROD TEST WELL.
13. PROVIDE AND INSTALL #2/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM GROUND ROD TEST WELL TO GROUND TEST WELL. DIRECT BURY CONDUCTOR.
14. PROVIDE AND INSTALL #8 BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCHEDULE 80 PVC CONDUIT FROM MINI POWER–ZONE TO GROUND ROD TEST WELL.
15. PROVIDE AND INSTALL (3)–600 kcmil XHHW–2 CU + (1)–350 kcmil XHHW–2 CU NEUTRAL + (1)–#3 XHHW–2 CU GND. IN 4" CONDUIT FROM DOUBLE THROW SWITCH TO GENERATOR PLUG.
16. EXISTING FAN CONTROLS. CONTRACTOR SHALL PROVIDE AND INSTALL 2–#12 + 1–#12 GND IN 3/4"C. FROM PANELBOARD ELP (CIRCUIT #3) TO FANS CONTROLS FOR FAN POWER. THE REMAINING CONDUIT AND CONDUCTORS TO THE EXISTING FANS SHALL REMAIN.
17. PROPOSED 72" X 48" OPENING WITH 480V, 3ø, 70 HP PUMP #1 BELOW. REFER ALSO TO CIVIL DRAWINGS.
18. PROPOSED 72" X 48" OPENING WITH 480V, 3ø, 70 HP PUMP #2 BELOW. REFER ALSO TO CIVIL DRAWINGS.
19. PROPOSED 72" X 48" OPENING WITH 480V, 3ø, 70 HP PUMP #3 BELOW. REFER ALSO TO CIVIL DRAWINGS.

GENERAL NOTES:

1. NOT ALL CONDUIT/CONDUCTORS SHOWN FOR CLARITY. REFER ALSO TO SHEET E–5, SHEET E–6 AND SHEET E–9.

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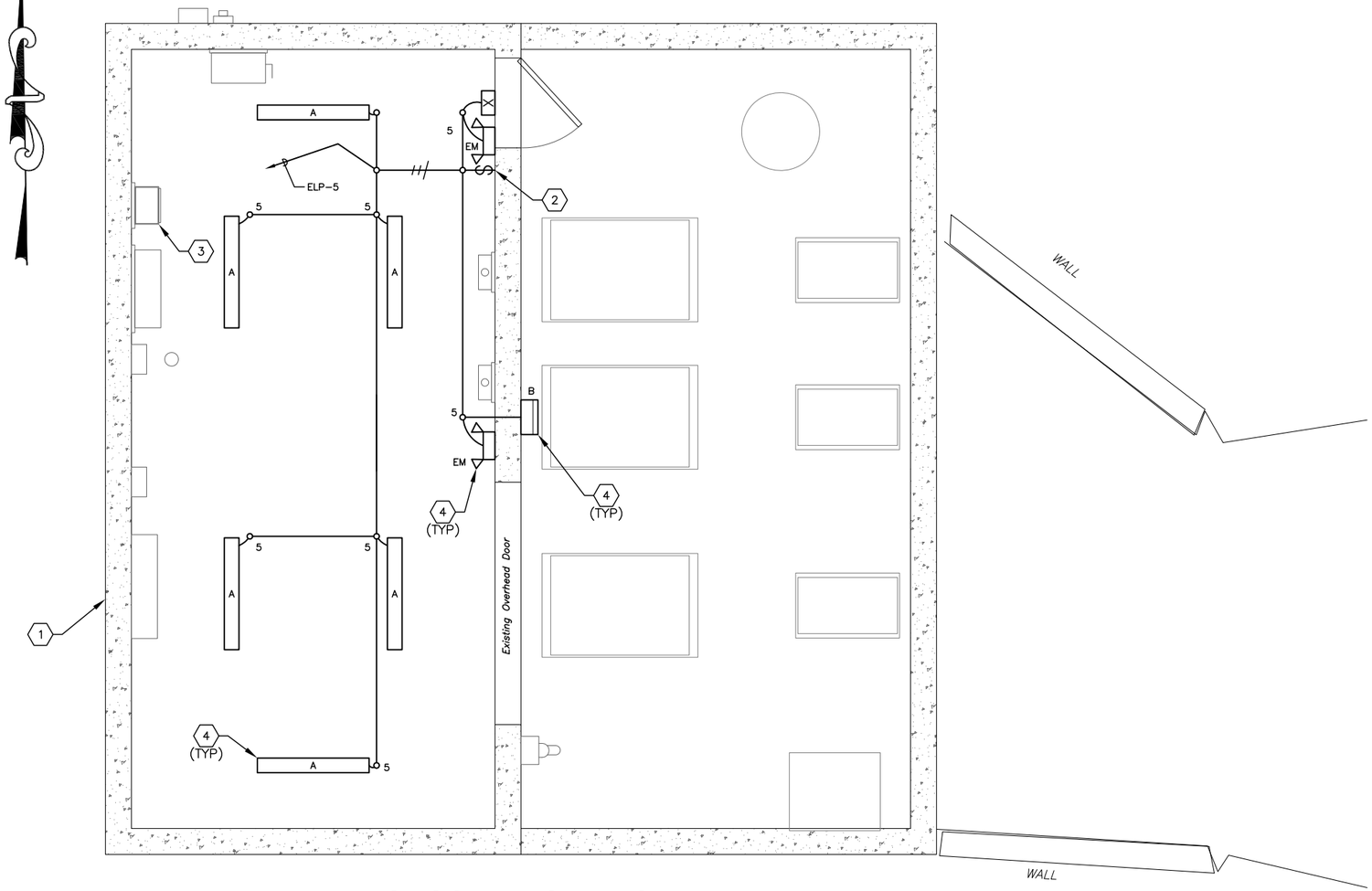
EASTRIDGE PUMP STATION REPLACEMENT

PROPOSED ELECTRICAL PLAN

SHEET E-4 OF



PROPOSED LIGHTING PLAN

SCALE : 3/16" = 1'-0"

KEYED NOTES:

1. EXISTING PUMP STATION BUILDING. REFER TO CIVIL PLANS FOR PROPOSED STRUCTURAL CHANGES.
2. EXISTING SWITCH TO BE REUSED.
3. PROPOSED MINI POWER-ZONE (PANEL 'ELP').
4. PROPOSED LIGHTING FIXTURE. REFER TO LIGHTING FIXTURE SCHEDULE ON THIS SHEET FOR TYPE.

GENERAL NOTES:

1. NOT ALL CONDUIT/CONDUCTORS SHOWN FOR CLARITY. REFER ALSO TO SHEET E-4, SHEET E-6 AND SHEET E-9.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMP(S)	VOLTS	MOUNTING	REMARKS
A	COLUMBIA	LXEM-40ML-RA-EU	38W LED	120	CEILING	LED ENCLOSED AND GASKETED
B	LITHONIA	TWH LED 30C 1000 40K T3M 120 PE DDBXD	(1) 104W DRIVER	120/277	WALL	LED WALL PACK, UL WET LABEL, DARK BRONZE WITH INTEGRAL PHOTOCELL. PROVIDE WIREGUARD - LITHONIA TWHNGU
X	LITHONIA	LQMP3R120/277ELN	(1) 1W DRIVER	120/277	UNIVERSAL	LED EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP
EM	LITHONIA	ELM2 LED	(1) 1W DRIVER	120/277	WALL	LED EMERGENCY LIGHT

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EASTRIDGE PUMP STATION REPLACEMENT

PROPOSED LIGHTING PLAN

SHEET E-5 OF

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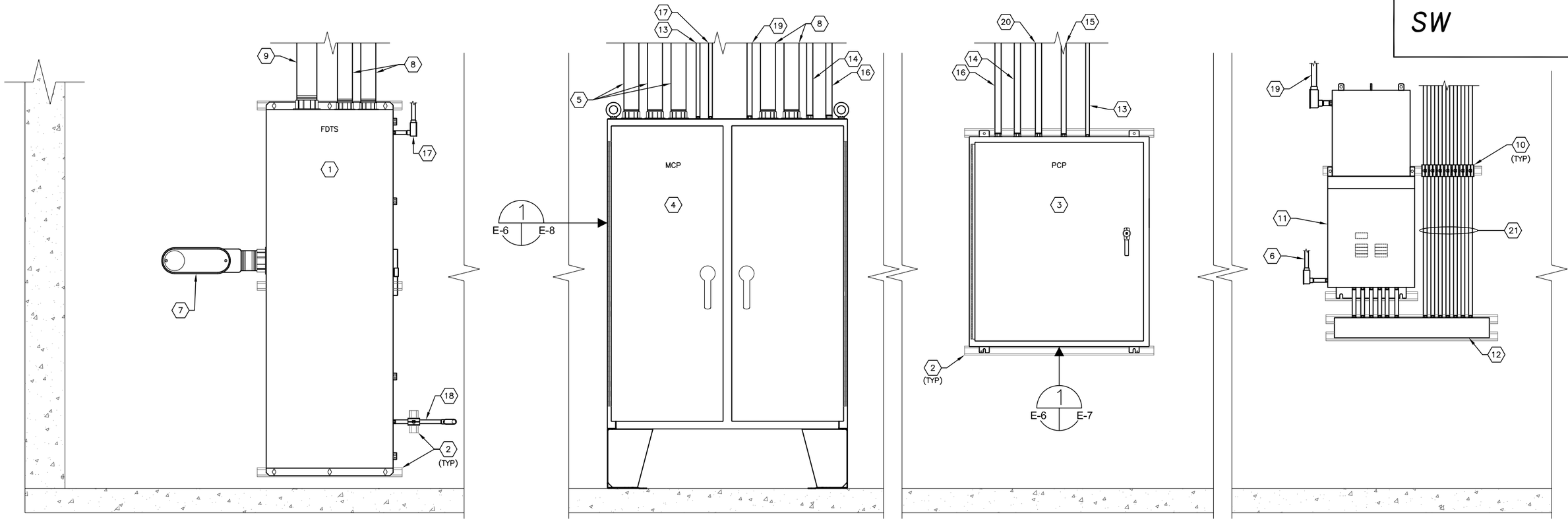

NORTH WALL ELEVATION (A)
SCALE : N.T.S
E-4 | E-6

WEST WALL ELEVATION (B)
SCALE : N.T.S
E-4 | E-6

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KEYED NOTES:

1. PROVIDE AND INSTALL HEAVY DUTY, DOUBLE THROW, SERVICE ENTRANCE RATED FUSIBLE SWITCH 'FDTS'. 3–POLE, 600 VAC, 400 AMP IN NEMA 4X TYPE ENCLOSURE PROVIDE 400A, 600 VOLT, DUAL–ELEMENT, TIME–DELAY CLASS RK5 FUSES; SWITCH––EATON DT365FWK, DT000NK–NEUTRAL KIT, DS468GK–GROUND LUG KIT, DS66FK–"R" FUSE ADAPTER KIT. PROVIDE 'FDTS' WITH SUITABLE LUGS FOR CONNECTION TO 'MCP'.
2. PROVIDE AND INSTALL 1–5/8" x 1–5/8" 316 STAINLESS STEEL UNISTRUT WITH 316 STAINLESS STEEL HARDWARE.
3. PROVIDE AND INSTALL PUMP CONTROL PANEL. REFER TO DETAIL ON SHEET E–7.
4. PROVIDE AND INSTALL MOTOR CONTROL PANEL. REFER TO DETAIL ON SHEET E–8.
5. PROVIDE AND INSTALL 3–#1 XHHW–2 CU + 1–#6 XHHW–2 CU GND + 2–#12 XHHW–2 CU (LEAK/TEMP) IN 3" CONDUIT FOR SUBMERSIBLE PUMP POWER TO ASSOCIATED PUMP HIGH VOLTAGE JUNCTION BOX.
6. PROVIDE AND INSTALL #8 BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCHEDULE 80 PVC CONDUIT FROM MINI POWER–ZONE TO GROUND ROD TEST WELL.
7. PROVIDE AND INSTALL (3)–600 kcmil XHHW–2 CU + (1)–350 kcmil XHHW–2 CU NEUTRAL IN 4"C. FROM DOUBLE THROW SWITCH 'FDTS' TO EXISTING CT CABINET. CONTRACTOR SHALL FIELD ADJUST CONDUIT AS REQUIRED TO ACCOMMODATE TRANSITION FROM 'FDTS' TO CT CABINET.
8. PROVIDE AND INSTALL TWO (2) PARALLEL RUNS OF (3)–350 kcmil XHHW–2 CU + (1)–1/0l XHHW–2 CU NEUTRAL + (1)–#3 XHHW–2 CU GND. IN 3" CONDUIT FROM DOUBLE THROW SWITCH 'FDTS' TO MOTOR CONTROL PANEL 'MCP'.
9. PROVIDE AND INSTALL (3)–600 kcmil XHHW–2 CU + (1)–350 kcmil XHHW–2 CU NEUTRAL + (1)–#3 XHHW–2 CU GND. IN 4"C. FROM 'FDTS' TO GENERATOR PLUG.
10. PROVIDE AND INSTALL ALUMINUM CONDUIT STRAPS (TYPICAL).
11. PROVIDE AND INSTALL NEW MINI POWER–ZONE (PANEL 'ELP'). REFER TO SHEET E–18 FOR PANEL SCHEDULE.
12. PROVIDE AND INSTALL NEW 4" X 4" NEMA 3R WIREWAY (LENGTH AS REQUIRED) TO FACILITATE INSTALLATION OF PANEL 'ELP' CIRCUITS.
13. PROVIDE AND INSTALL 2–#12 + 1–#12 GND IN 3/4"C. TO PANEL 'ELP' FOR 120V AC POWER.
14. PROVIDE AND INSTALL 40–#14 + 1–#14 GND IN 1–1/4"C. FROM THE 'MCP' TO THE 'PCP' FOR 120V AC CONTROL WIRING. CONDUCTOR COUNT INCLUDES SPARES.
15. PROVIDE AND INSTALL NEW COAXIAL CABLE IN 1"C. FROM NEW PUMP CONTROL PANEL 'PCP' TO EXISTING SCADA ANTENNA.
16. PROVIDE AND INSTALL 30–#14 + 1–#14 GND IN 1–1/4"C. FROM THE 'MCP' TO THE 'PCP' FOR 24V DC CONTROL WIRING.
17. PROVIDE AND INSTALL 3–#12 + 1–#12 GND IN 3/4"C. FROM 'FDTS' TO MOTOR CONTROL PANEL FOR UTILITY POWER MONITORING.
18. PROVIDE AND INSTALL #2/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 80 PVC CONDUIT FROM 'FDTS' TO GROUND ROD TEST WELL.
19. PROVIDE AND INSTALL 2–#6 + 1–#8 GND IN 1"C. TO MOTOR CONTROL PANEL 'MCP' FOR MINI POWER–ZONE FEEDER.
20. PROVIDE AND INSTALL (1)–3/C–#18 TWISTED SHIELDED CABLE AND (3)–#14 XHHW–2 CU + (1)–#14 XHHW–2 CU GND IN 1–1/4" CONDUIT FROM 'PCP' TO LEVEL TRANSMITTER JUNCTION BOX FOR LEVEL TRANSMITTER SIGNAL AND WET WELL HIGH AND NOT HIGH INDICATION. CONTRACTOR TO UTILIZE EXISTING TERMINAL BLOCKS WITHIN THE LEVEL TRANSMITTER JUNCTION BOX FOR NEW CONDUCTORS REQUIRED.
21. PROVIDE AND INSTALL CONDUITS AS REQUIRED FOR 120V AC CIRCUITS.

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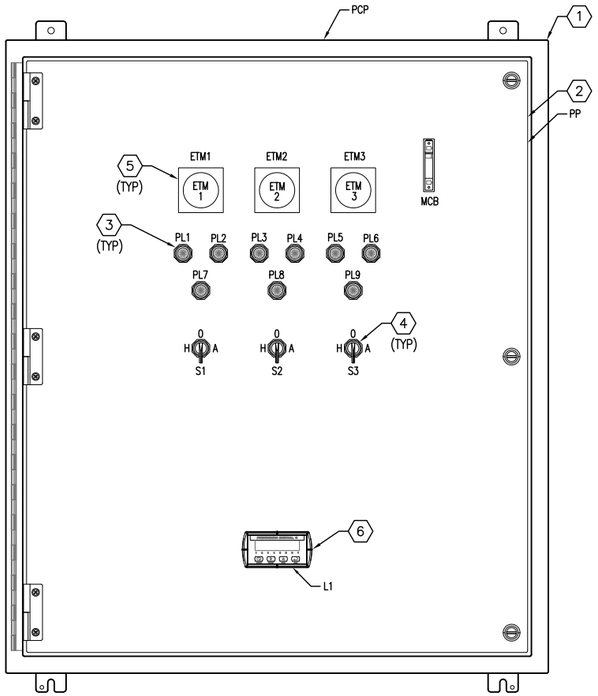
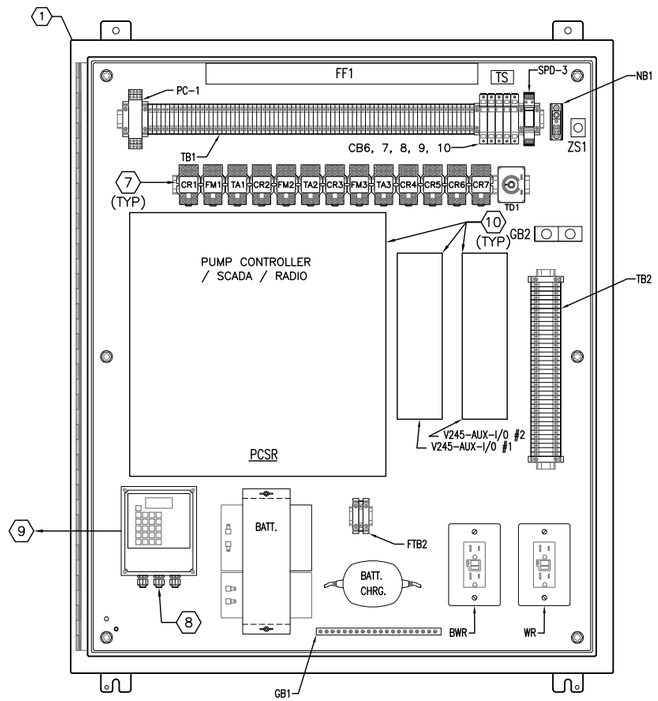
EASTRIDGE PUMP STATION REPLACEMENT

EQUIPMENT ELEVATIONS

SHEET E-6 OF

SW





INTERIOR VIEW

PUMP CONTROL PANEL DETAIL

SCALE : N.T.S

INTERIOR DEADFRONT VIEW

1
E-6 | E-7

LEGEND PLATE SCHEDULE

SYMBOL	DEVICE	LEGEND
ETM1	ELAPSED TIME METER	PUMP NO. 1 HOURS
ETM2	ELAPSED TIME METER	PUMP NO. 2 HOURS
ETM2	ELAPSED TIME METER	PUMP NO. 2 HOURS
PL1	YELLOW PILOT LIGHT	PUMP NO. 1 ON
PL2	RED ILLUMINATED PUSH BUTTON	PUMP NO. 1 TEMP. ALARM
PL3	YELLOW PILOT LIGHT	PUMP NO. 2 ON
PL4	RED ILLUMINATED PUSH BUTTON	PUMP NO. 2 TEMP. ALARM
PL5	YELLOW PILOT LIGHT	PUMP NO. 3 ON
PL6	RED ILLUMINATED PUSH BUTTON	PUMP NO. 3 TEMP. ALARM
PL7	RED PILOT LIGHT	PUMP NO. 1 SEAL LEAK ALARM
PL8	RED PILOT LIGHT	PUMP NO. 2 SEAL LEAK ALARM
PL9	RED PILOT LIGHT	PUMP NO. 3 SEAL LEAK ALARM
S1	3 POSITION SWITCH	PUMP NO. 1 HAND-OFF-AUTO
S2	3 POSITION SWITCH	PUMP NO. 2 HAND-OFF-AUTO
S3	3 POSITION SWITCH	PUMP NO. 3 HAND-OFF-AUTO
MCB	PUMP CONTROL PANEL MAIN CIRCUIT BREAKER	MAIN CIRCUIT BREAKER
L1	DIGITAL PROCESS METER	WET WELL LEVEL

KEYED NOTES:

1. PUMP CONTROL PANEL. 42" X 36 X 12" NEMA 4X SS, PAINTED WHITE.
2. PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
3. PROVIDE AND INSTALL NEW PILOT LIGHT. REFER ALSO TO PARTS SCHEDULE ON SHEET E-16.
4. PROVIDE AND INSTALL NEW SELECTOR SWITCH. REFER ALSO TO PARTS SCHEDULE ON SHEET E-16.
5. PROVIDE AND INSTALL NEW ELAPSED TIME METER. REFER ALSO TO PARTS SCHEDULE ON SHEET E-16.
6. PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6X3-00 WITH 4-20mA OUTPUT. REFER ALSO TO PARTS SCHEDULE ON SHEET E-17.
7. PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
8. LEVEL DETECTION SYSTEM (LEV) BLACKBOX 130 (RELOCATED FROM DIESEL/ELECTRICAL CONTROL PANEL).
9. TO dB10 ULTRASONIC SENSOR (VIA RELOCATED LEVEL TRANSMITTER AND FLOAT SWITCH JUNCTION BOX).
10. EXISTING MOTOROLA ACE3600 RTU, ASSOCIATED RADIO AND THE TWO (2) WILKERSON INSTRUMENT CO. SIB-V245 AUXILIARY I/O BOARDS RELOCATED FROM EXISTING RTU ENCLOSURE. REFER ALSO TO KEYED NOTE #14 ON SHEET E-3.

NOTE:
PROVIDE AND INSTALL A #12 AWG GREEN BONDING JUMPER BETWEEN THE ENCLOSURE DOOR AND GROUNDING LUG. ALSO PROVIDE AND INSTALL A #12 AWG GREEN BONDING JUMPER BETWEEN THE DEADFRONT DOOR AND GROUNDING LUG.

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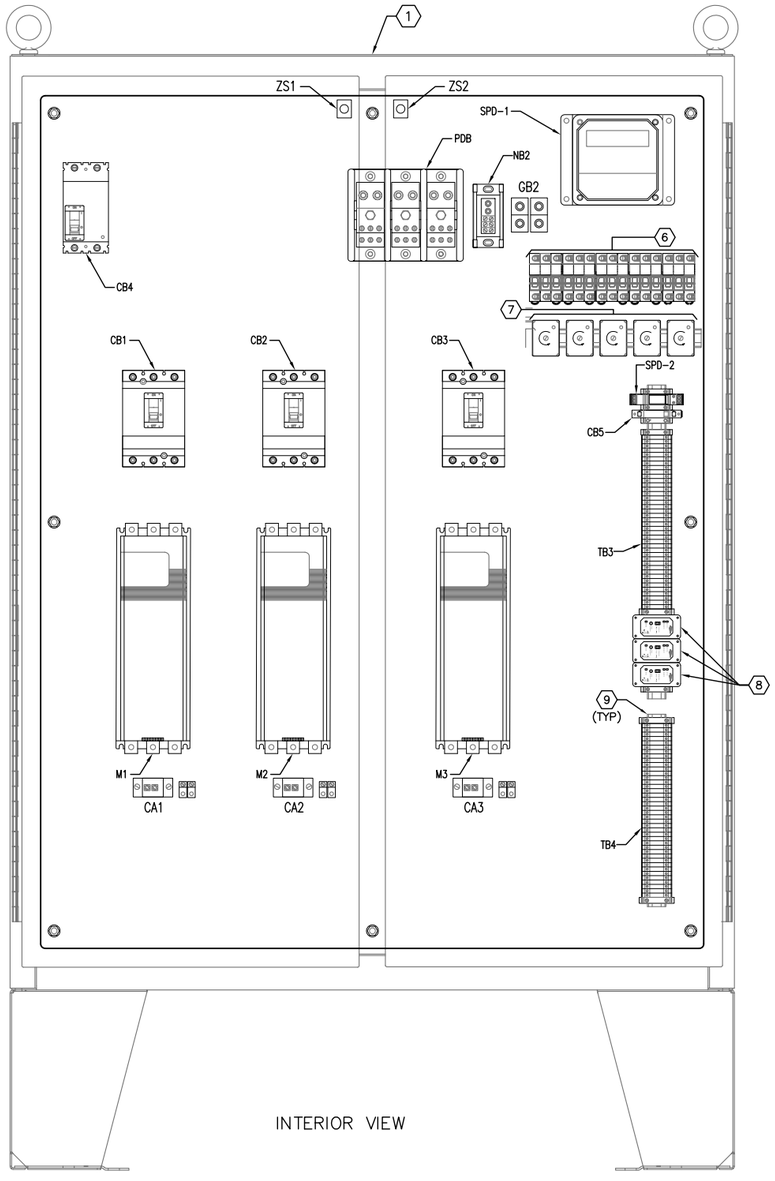
EASTRIDGE PUMP STATION REPLACEMENT

PUMP CONTROL PANEL DETAILS

SHEET E-7 OF



INTERIOR VIEW

LEGEND PLATE SCHEDULE

SYMBOL	DEVICE	LEGEND
CB1	CIRCUIT BREAKER	PUMP NO. 1 CIRCUIT BREAKER
CB2	CIRCUIT BREAKER	PUMP NO. 2 CIRCUIT BREAKER
CB3	CIRCUIT BREAKER	PUMP NO. 3 CIRCUIT BREAKER
CB4	CIRCUIT BREAKER	MINI POWER-ZONE 480V FEEDER
SS1	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 1 KEYPAD
SS2	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 2 KEYPAD
SS3	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 3 KEYPAD

KEYED NOTES:

1. MOTOR CONTROL CABINET. 62" X 48 X 12" NEMA 4X SS ENCLOSURE.
2. PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
3. PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #1. REFER ALSO TO PARTS SCHEDULE ON SHEET E-16.
4. PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #2. REFER ALSO TO PARTS SCHEDULE ON SHEET E-16.
5. PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #3. REFER ALSO TO PARTS SCHEDULE ON SHEET E-16.
6. PROVIDE AND INSTALL FUSE DISTRIBUTION BLOCKS FDB1, FBD2, FBD3, FBD4 AND FBD5.
7. PROVIDE AND INSTALL PHASE MONITORS PM1, PM2, PM3, PM4 AND PM5.
8. PROVIDE AND INSTALL XYLEM MINI CAS 120 MODULES SLD1, SLD2 AND SLD3.
9. PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.

NOTE:
PROVIDE AND INSTALL A #12 AWG GREEN BONDING JUMPER BETWEEN THE ENCLOSURE DOORS AND GROUNDING LUG. ALSO PROVIDE AND INSTALL A #12 AWG GREEN BONDING JUMPER BETWEEN THE DEADFRONT DOORS AND GROUNDING LUG.

MOTOR CONTROL PANEL DETAIL

SCALE : N.T.S

INTERIOR DEADFRONT VIEW

1 E-6 E-8

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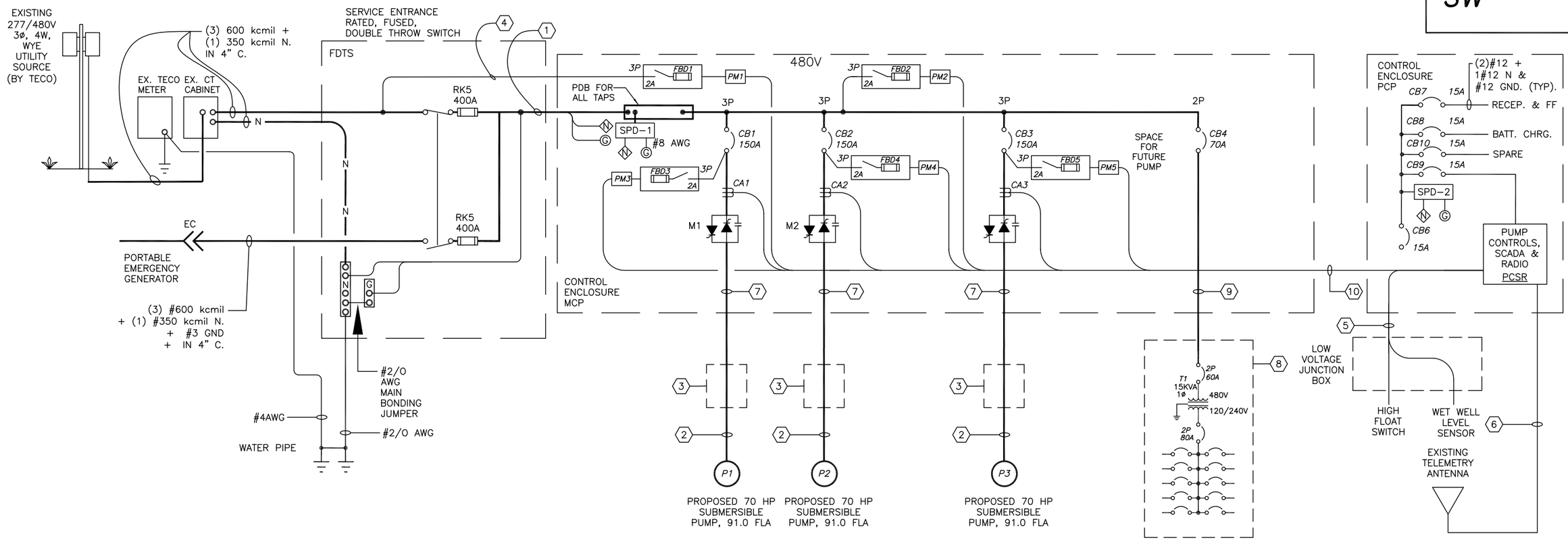
EASTRIDGE PUMP STATION REPLACEMENT

MOTOR CONTROL PANEL DETAILS

SHEET E-8 OF

SW



ONE LINE DIAGRAM NOTES:

1. PROVIDE AND INSTALL TWO (2) PARALLEL RUNS OF 3–350 kcmil + 1–#1/0 NEUTRAL + 1–#3 GND. IN 4"C. CONDUIT, REFER TO DETAILS ON SHEET E–6.
2. NEW SUBMERSIBLE PUMP POWER CABLE IN NEW 3" CONDUIT.
3. NEW HIGH VOLTAGE JUNCTION BOX.
4. PROVIDE AND INSTALL 3–#12 + 1–#12 GND IN 3/4"C. FROM FDTS TO MOTOR CONTROL PANEL FOR UTILITY POWER MONITORING.
5. PROVIDE NEW 1–1/4" CONDUIT FROM NEW PUMP CONTROL PANEL TO WET WELL FOR FLOAT SWITCH AND LEVEL SENSOR CABLES. REFER TO DETAILS ON SHEET E–6.
6. PROVIDE NEW 1" CONDUIT FROM NEW PUMP CONTROL PANEL TO EXISTING ANTENNA FOR NEW COAX CABLE, REFER TO DETAIL ON SHEET E–6.
7. (3)–#1 AWG & #6 GND. + 2–#12 (LEAK/TEMP).
8. PROVIDE AND INSTALL 480V–120/240V, 1ø, 15KVA MINI POWER–ZONE (PANEL 'ELP') WITH INTEGRAL 60A PRIMARY CIRCUIT BREAKER AND 80A SECONDARY CIRCUIT BREAKER IN NEMA 1. REFER TO SHEET E–18 FOR PANEL SCHEDULE.
9. PROVIDE AND INSTALL 2–#6 + 1–#8 GND IN 1"C. TO MOTOR CONTROL PANEL 'MCP' FOR MINI POWER–ZONE FEEDER.
10. FOR CONDUCTORS REQUIRED TO PUMP CONTROL CABINET REFER TO SHEET E–14.

ELECTRICAL SERVICE LOAD SUMMARY

480 VAC, 3ø, 4W

LOAD	CONNECTED	DEMAND	APPROX. PHASE CURRENTS L1	L2	L3
NEW PUMP #1	76.4 KVA	76.4 KVA	91.0 A	91.0 A	91.0 A
NEW PUMP #2	76.4 KVA	76.4 KVA	91.0 A	91.0 A	91.0 A
NEW PUMP #3	76.4 KVA	76.4 KVA	91.0 A	91.0 A	91.0 A
SINGLE PHASE LOADS	5.4 KVA	5.4 KVA	0.0 A	11.3 A	11.23 A
TOTAL	234.6 KVA	234.6 KVA	273.0 A	284.3 A	284.3 A

SHORT CIRCUIT CALCULATIONS

AVAILABLE SHORT–CIRCUIT CURRENT AT 480V UTILITY SERVICE IS 13,532 AMPERES.

UTILITY SERVICE: THREE – 480/277, 3 PH, 75 KVA POLE MOUNTED TRANSFORMERS.TRANSFORMER AVAILABLE FAULT CURRENT AT SECONDARY SIDE OF TECO'S TRANSFORMERS: 13,532 AMP RMS SYM. SERVICE CONDUCTOR LENGTH: 50 FEET SERVICE CONDUCTOR SIZE: 600 kcmil CU.
FUSE RATING: 400 AMPS
ISCA AT LINE SIDE OF FTDS:

$$ISCA = \left[\frac{1}{1 + \left[\frac{(1.73)(50)(13{,}532)}{(21{,}500)(480)}\right]}\right] * 13{,}532 = 12{,}154$$

SHORT CIRCUIT CURRENT AVAILABLE AT MAIN LUGS OF MCP=12,154 AMPS RMS, SYMMETRICAL

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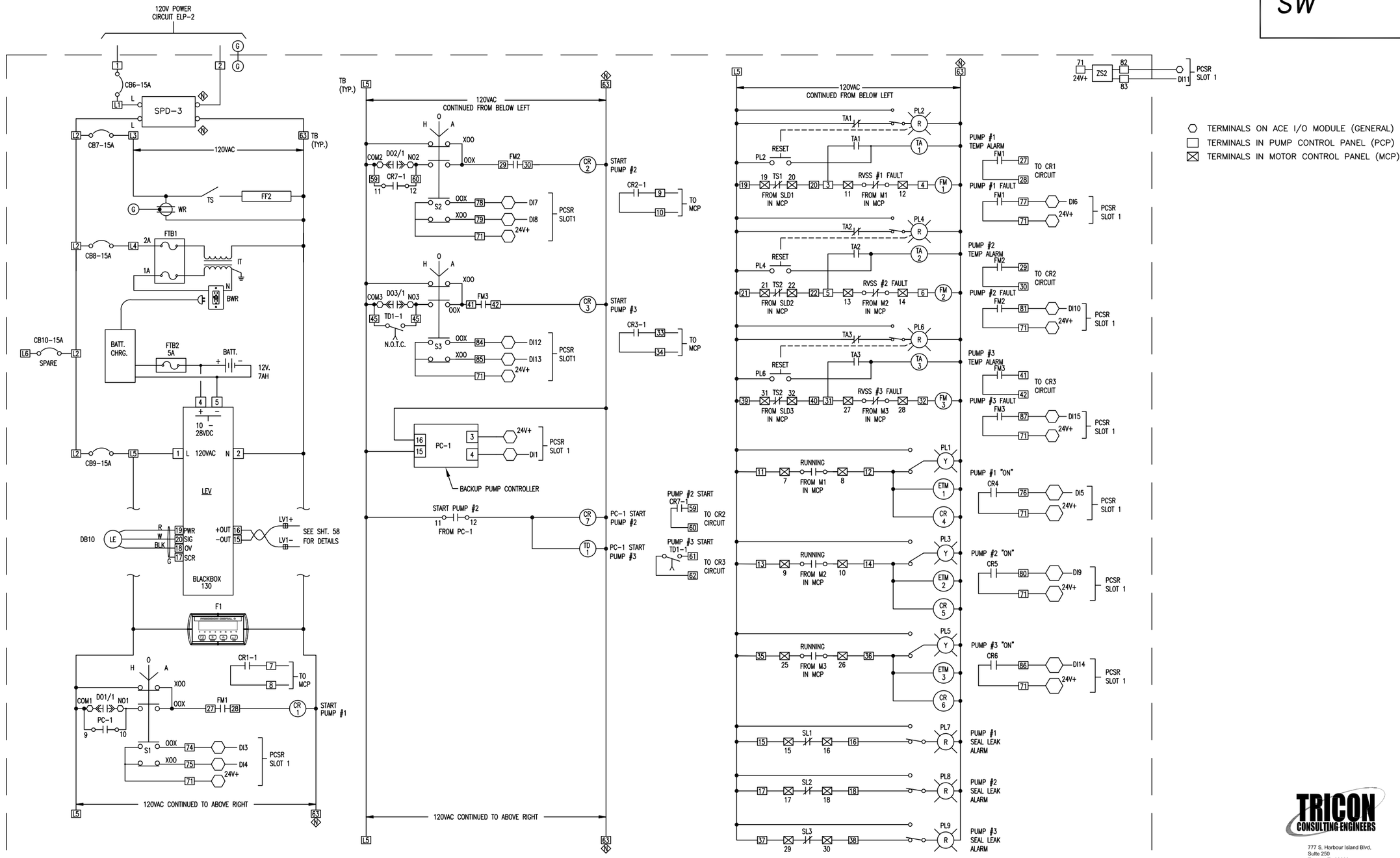
EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL ONE-LINE DIAGRAM

SHEET E-9 OF

SW



PUMP CONTROL PANEL PCP

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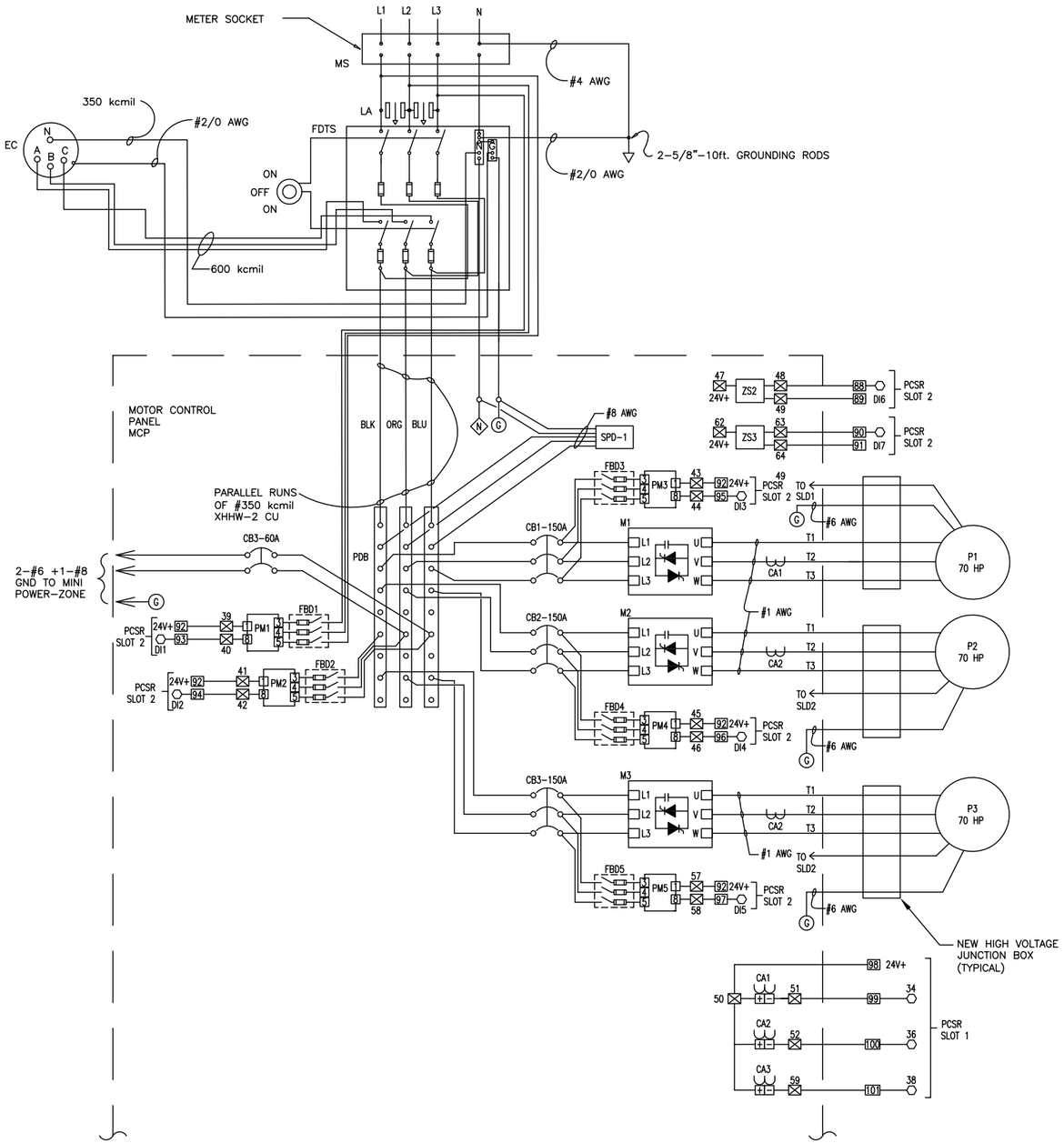
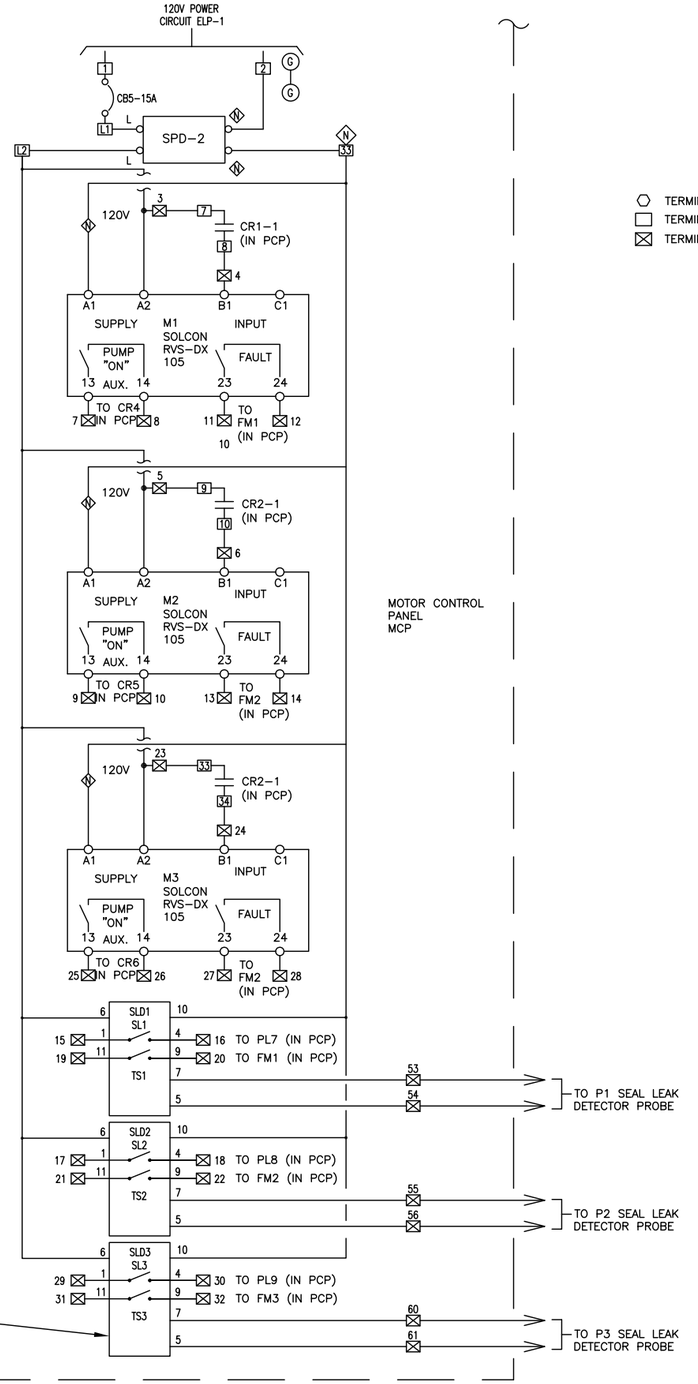
EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL SCHEMATIC (1 OF 4 - PCP)

SHEET E-10 OF





MOTOR CONTROL PANEL MCP

- ⬡ TERMINALS ON ACE I/O MODULE (GENERAL)
- ▭ TERMINALS IN PUMP CONTROL PANEL
- ⊠ TERMINALS IN MOTOR CONTROL PANEL

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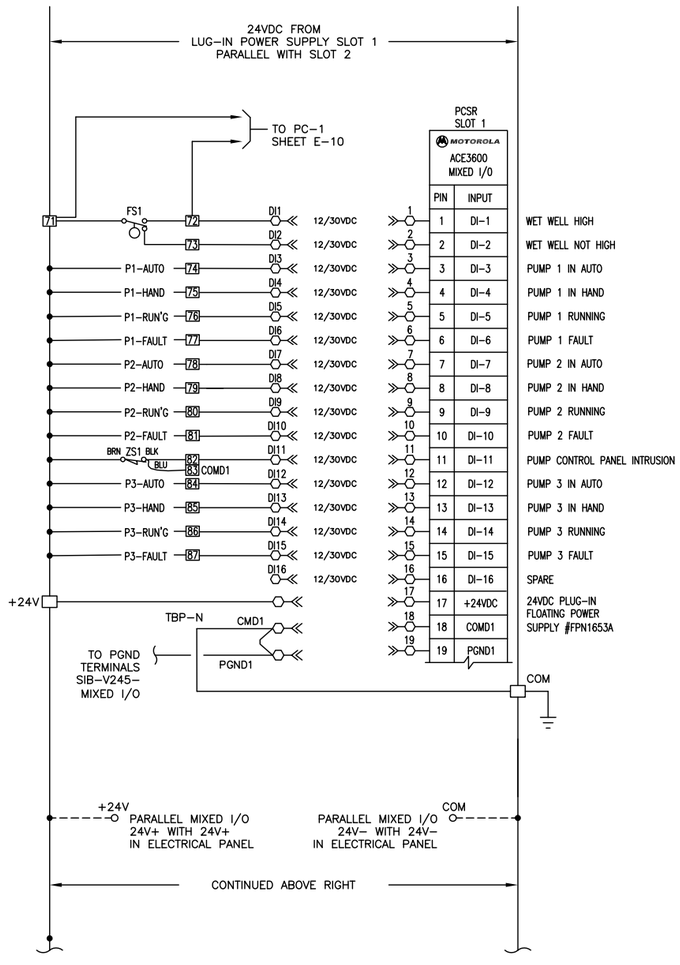
EASTRIDGE PUMP STATION REPLACEMENT

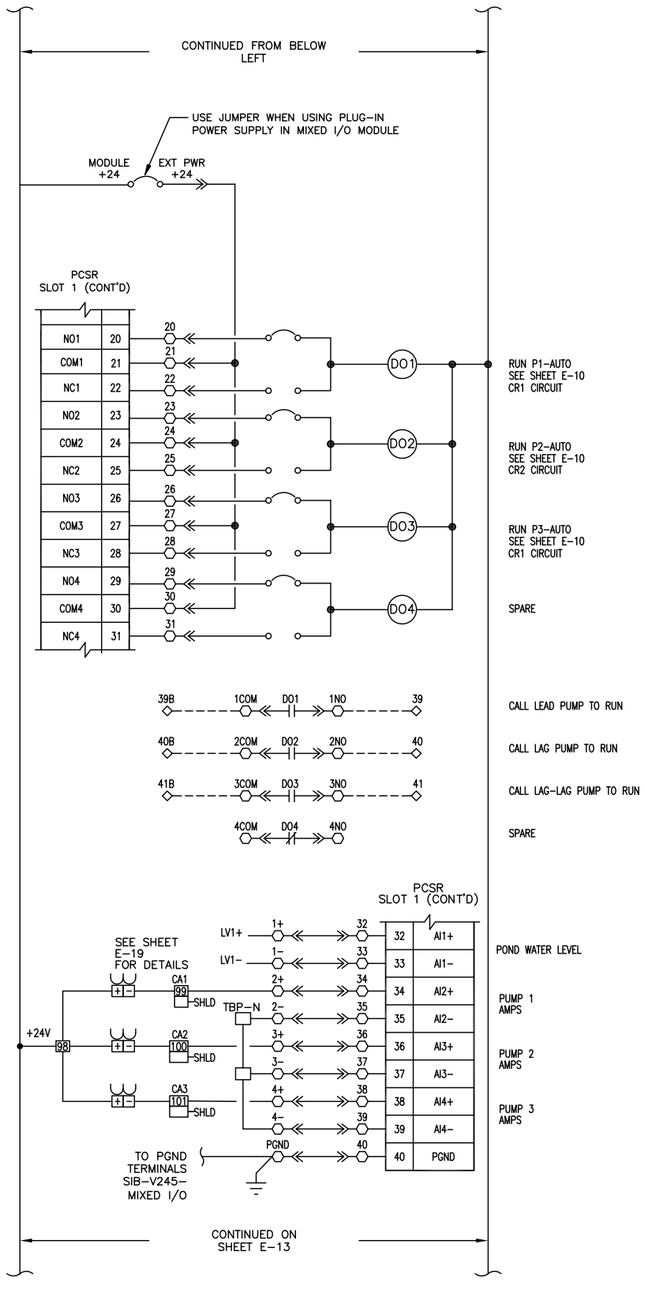
ELECTRICAL SCHEMATIC (2 OF 4 - MCP)

SHEET E-11 OF

SW

⬡ TERMINALS ON ACE I/O MODULE (GENERAL)
□ TERMINALS IN PUMP CONTROL PANEL
⊠ TERMINALS IN MOTOR CONTROL PANEL





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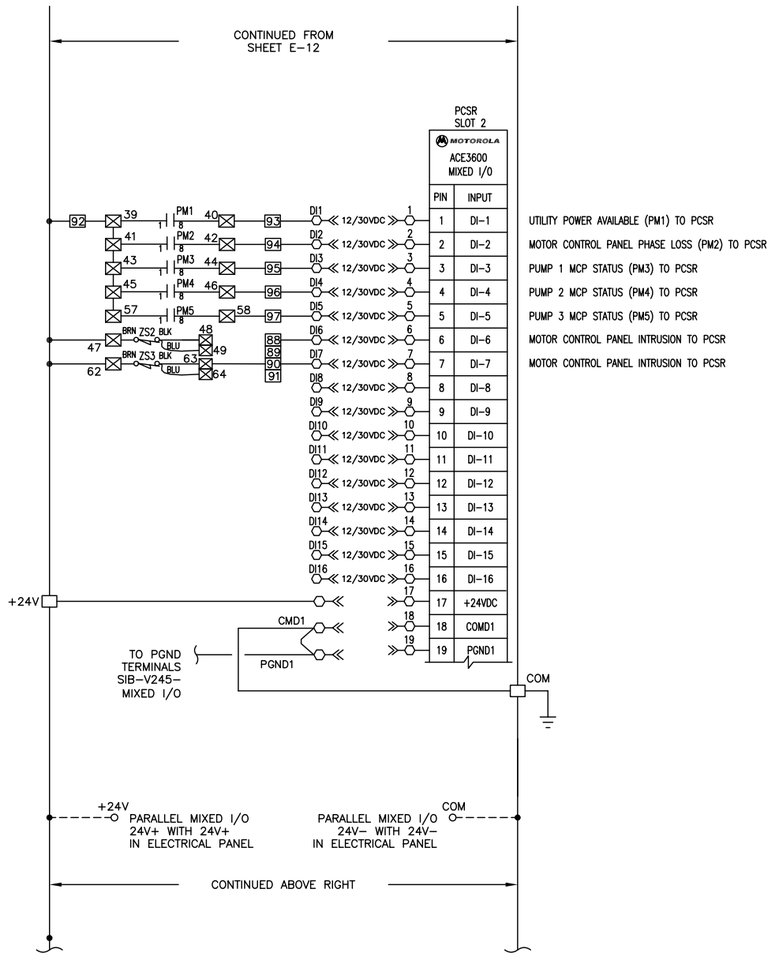
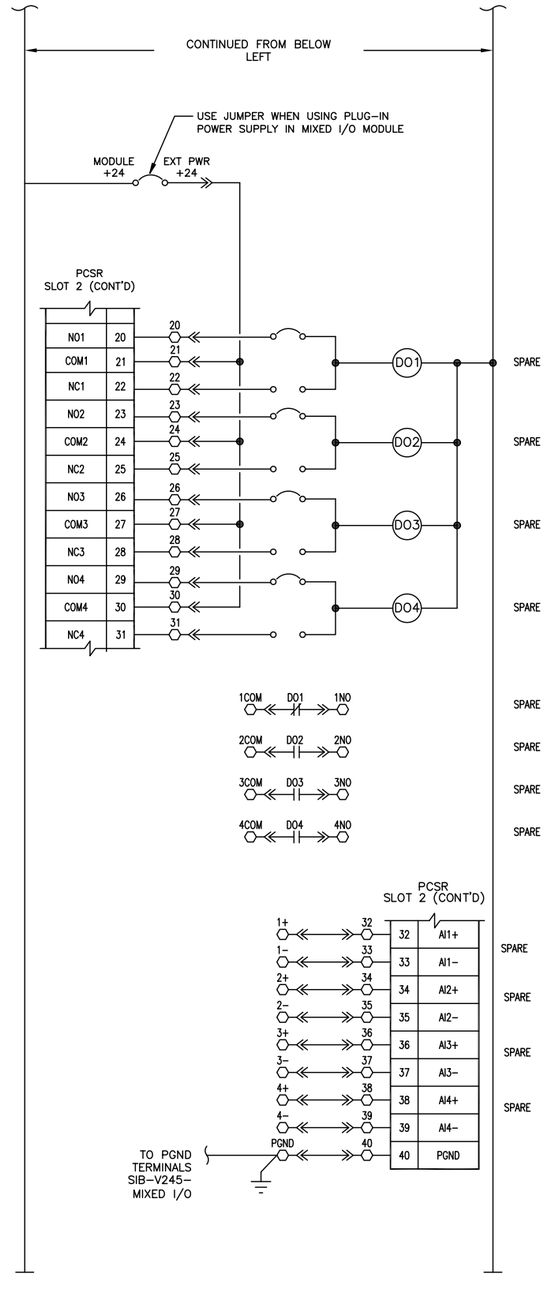
EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL SCHEMATIC (3 OF 4 - RTU)

SHEET E-12 OF

⬡ TERMINALS ON ACE I/O MODULE (GENERAL)
□ TERMINALS IN PUMP CONTROL PANEL
⊠ TERMINALS IN MOTOR CONTROL PANEL





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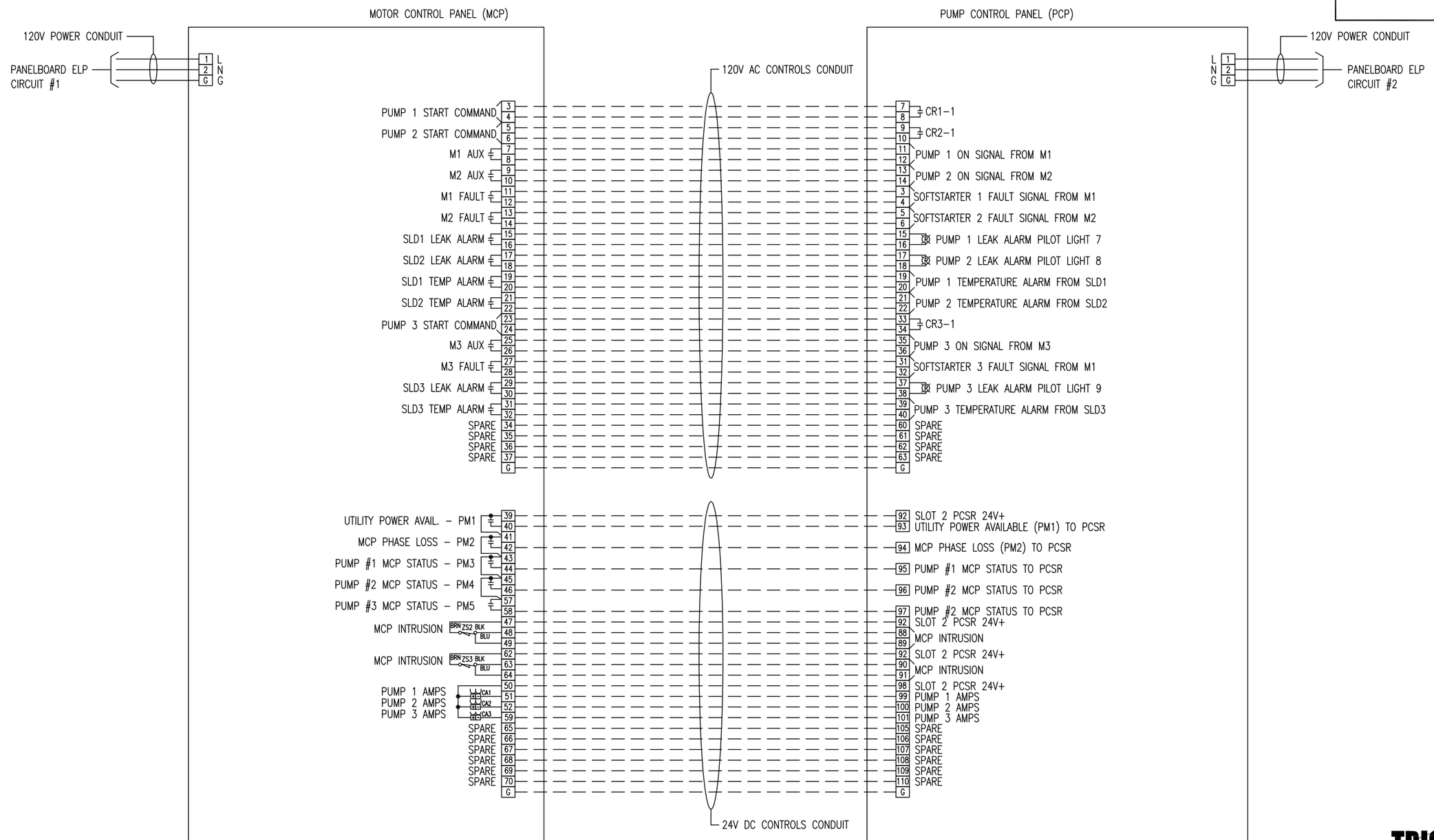
EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL SCHEMATIC (4 OF 4 - RTU)

SHEET E-13 OF

SW



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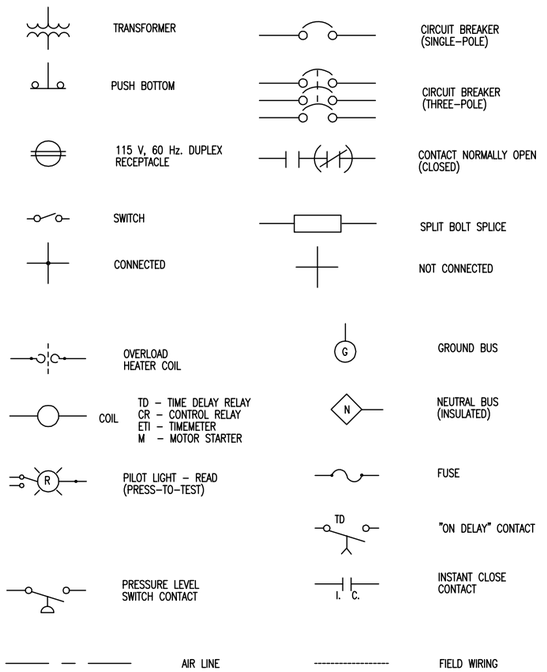
EASTRIDGE PUMP STATION REPLACEMENT

INTERCONNECTION DIAGRAM

SHEET E-14 OF

CONTROL SCHEMATIC SYMBOLS



TB1 (▭) (120V AC) MOUNTED ON PUMP CONTROL PANEL (PCP)

TERM.	DESCRIPTION
1	120V FROM PANELBOARD ELP CIR #2
2	NEUTRAL FROM PANELBOARD ELP
3	SOFTSTARTER NO. 1 FAULT FROM M1
4	SOFTSTARTER NO. 1 FAULT FROM M1
5	SOFTSTARTER NO. 2 FAULT FROM M2
6	SOFTSTARTER NO. 2 FAULT FROM M2
7	PUMP 1 START COMMAND TO M1 (IN MCP)
8	PUMP 1 START COMMAND TO M1 (IN MCP)
9	PUMP 2 START COMMAND TO M2 (IN MCP)
10	PUMP 2 START COMMAND TO M2 (IN MCP)
11	P1 "ON" SIGNAL FROM M1 (IN MCP)
12	P1 "ON" SIGNAL FROM M1 (IN MCP)
13	P2 "ON" SIGNAL FROM M2 (IN MCP)
14	P2 "ON" SIGNAL FROM M2 (IN MCP)
15	PUMP 1 LEAK ALARM FROM MCP
16	PUMP 1 LEAK ALARM FROM MCP
17	PUMP 2 LEAK ALARM FROM MCP
18	PUMP 2 LEAK ALARM FROM MCP
19	PUMP 1 TEMPERATURE ALARM FROM MCP
20	PUMP 1 TEMPERATURE ALARM FROM MCP
21	PUMP 2 TEMPERATURE ALARM FROM MCP
22	PUMP 2 TEMPERATURE ALARM FROM MCP
23	SPARE
24	SPARE
25	SPARE
26	SPARE
27	PUMP 1 FAULT RELAY CONTACT
28	PUMP 1 FAULT RELAY CONTACT
29	PUMP 2 FAULT RELAY CONTACT
30	PUMP 2 FAULT RELAY CONTACT
31	SOFTSTARTER NO. 3 FAULT FROM M3
32	SOFTSTARTER NO. 3 FAULT FROM M3
33	PUMP 3 START COMMAND TO M3 (IN MCP)
34	PUMP 3 START COMMAND TO M3 (IN MCP)
35	P3 "ON" SIGNAL FROM M3 (IN MCP)
36	P3 "ON" SIGNAL FROM M3 (IN MCP)
37	PUMP 3 LEAK ALARM FROM MCP
38	PUMP 3 LEAK ALARM FROM MCP
39	PUMP 3 TEMPERATURE ALARM FROM MCP
40	PUMP 3 TEMPERATURE ALARM FROM MCP
41	PUMP 3 FAULT RELAY CONTACT
42	PUMP 3 FAULT RELAY CONTACT

CONTINUED ABOVE RIGHT

TB1 (▭) CONTINUED FROM BELOW LEFT

TERM.	DESCRIPTION
43	SPARE
44	SPARE
45	SPARE
46	SPARE
47	SPARE
48	SPARE
49	SPARE
50	SPARE
51	SPARE
52	SPARE
53	SPARE
54	SPARE
55	SPARE
56	SPARE
57	SPARE
58	SPARE
59	PUMP 2 START FROM PC–1 (CR7)
60	PUMP 2 START FROM PC–1 (CR7)
61	PUMP 3 START FROM PC–1 (TD1)
62	PUMP 3 START FROM PC–1 (TD1)
63	SPD–3 NEUTRAL OUT
64–70	SPARE
L1	MAIN BREAKER CB6 OUT
L2	SPD–2 120V LINE OUT
L3	CB7 OUT
L4	CB8 OUT
L5	CB9 OUT
L6	SPARE CB10 BREAKER

TB2 (▭) (24V DC) MOUNTED ON PUMP CONTROL PANEL (PCP)

TERM.	DESCRIPTION
71	SLOT 1 PCSR 24V+
72	FS1 SOUTH WET WELL HIGH
73	FS1 SOUTH WET WELL NOT HIGH
74	PUMP 1 "AUTO" TO PCSR
75	PUMP 1 "HAND" TO PCSR
76	PUMP 1 "ON" TO PCSR
77	PUMP 1 "FAULT" TO PCSR
78	PUMP 2 "AUTO" TO PCSR
79	PUMP 2 "HAND" TO PCSR
80	PUMP 2 "ON" TO PCSR
81	PUMP 2 "FAULT" TO PCSR
82	PUMP CONTROL PANEL INTRUSION
83	
84	PUMP 3 "AUTO" TO PCSR
85	PUMP 3 "HAND" TO PCSR
86	PUMP 3 "ON" TO PCSR
87	PUMP 3 "FAULT" TO PCSR
88	MOTOR CONTROL PANEL INTRUSION
89	
90	MOTOR CONTROL PANEL INTRUSION
91	
92	SLOT 2 PCSR 24V+
93	UTIL. POWER AVAILABLE (PM1) TO PCSR
94	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR
95	PUMP #1 MCP STATUS PHASE LOSS (PM3) TO PCSR
96	PUMP #2 MCP STATUS PHASE LOSS (PM4) TO PCSR
97	PUMP #3 MCP STATUS PHASE LOSS (PM5) TO PCSR
98	SLOT 2 PCSR 24V+
99	PUMP 1 AMPS
100	PUMP 2 AMPS
101	PUMP 3 AMPS
102	SLOT 2 PCSR 24V+
103–112	SPARES

X–Y TERMINAL POINT MOUNTED ON PCP (INTERFACE TO PCSR)
TERMINAL POINT ON PCSR
TERMINAL POINT IN PUMP CONTROL PANEL (PCP)
TERMINAL POINT IN MOTOR CONTROL PANEL (MCP)

TB3 (⊠) (120V AC) MOUNTED ON MOTOR CONTROL PANEL (MCP)

TERM.	DESCRIPTION
1	120V FRM PANELBOARD ELP CIR #1
2	NEUTRAL FROM PANELBOARD ELP
3	PUMP 1 START COMMAND FROM CR1–1 (IN PCP)
4	PUMP 1 START COMMAND FROM CR1–1 (IN PCP)
5	PUMP 2 START COMMAND FROM CR2–1 (IN PCP)
6	PUMP 2 START COMMAND FROM CR2–1 (IN PCP)
7	PUMP 1 'ON' SIGNAL TO CR4 (IN PCP)
8	PUMP 1 'ON' SIGNAL TO CR4 (IN PCP)
9	PUMP 2 'ON' SIGNAL TO CR5 (IN PCP)
10	PUMP 2 'ON' SIGNAL TO CR5 (IN PCP)
11	SOFTSTART 1 FAULT SIGNAL TO PCP
12	SOFTSTART 1 FAULT SIGNAL TO PCP
13	SOFTSTART 2 FAULT SIGNAL TO PCP
14	SOFTSTART 2 FAULT SIGNAL TO PCP
15	PUMP 1 LEAK DETECTED TO PILOT LIGHT 7 (IN PCP)
16	PUMP 1 LEAK DETECTED TO PILOT LIGHT 7 (IN PCP)
17	PUMP 2 LEAK DETECTED TO PILOT LIGHT 8 (IN PCP)
18	PUMP 2 LEAK DETECTED TO PILOT LIGHT 8 (IN PCP)
19	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)
20	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)
21	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)
22	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)
23	PUMP 3 START COMMAND FROM CR3–1 (IN PCP)
24	PUMP 3 START COMMAND FROM CR3–1 (IN PCP)
25	PUMP 3 'ON' SIGNAL TO CR6 (IN PCP)
26	PUMP 3 'ON' SIGNAL TO CR6 (IN PCP)
27	SOFTSTART 3 FAULT SIGNAL TO PCP
28	SOFTSTART 3 FAULT SIGNAL TO PCP
29	PUMP 3 LEAK DETECTED TO PILOT LIGHT 9 (IN PCP)
30	PUMP 3 LEAK DETECTED TO PILOT LIGHT 9 (IN PCP)
31	PUMP 3 TEMPERATURE ALARM TO FM3 (IN PCP)
32	PUMP 3 TEMPERATURE ALARM TO FM3 (IN PCP)
34–38	SPARE
33	SPD–2 NEUTRAL OUT
L1	MAIN BREAKER CB5 OUT
L2	SPD–2 120V LINE OUT

TB4 (⊠) (24V DC) MOUNTED ON MOTOR CONTROL PANEL (MCP)

TERM.	DESCRIPTION
39	SLOT 2 PCSR 24V+
40	UTILITY POWER AVAILABLE (PM1) TO PCSR
41	SLOT 2 PCSR 24V+
42	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR
43	SLOT 2 PCSR 24V+
44	PUMP #1 MCP STATUS PHASE LOSS (PM3) TO PCSR
45	SLOT 2 PCSR 24V+
46	PUMP #2 MCP STATUS PHASE LOSS (PM4) TO PCSR
47	SLOT 2 PCSR 24V+
48	MOTOR CONTROL PANEL INTRUSION
49	
50	SLOT 2 PCSR 24V+
51	PUMP 1 AMPS
52	PUMP 2 AMPS
53	PUMP 1 SEAL LEAK DETECTOR PROBE
54	PUMP 1 SEAL LEAK DETECTOR PROBE
55	PUMP 2 SEAL LEAK DETECTOR PROBE
56	PUMP 2 SEAL LEAK DETECTOR PROBE
57	SLOT 2 PCSR 24V+
58	PUMP #3 MCP STATUS PHASE LOSS (PM5) TO PCSR
59	PUMP 3 AMPS
60	PUMP 3 SEAL LEAK DETECTOR PROBE
61	PUMP 3 SEAL LEAK DETECTOR PROBE
62	SLOT 2 PCSR 24V+
63	MOTOR CONTROL PANEL INTRUSION
64	
65–75	SPARE

X–Y TERMINAL POINT MOUNTED ON PCP (INTERFACE TO PCSR)
TERMINAL POINT ON PCSR
TERMINAL POINT IN PUMP CONTROL PANEL (PCP)
TERMINAL POINT IN MOTOR CONTROL PANEL (MCP)

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Stormwater Engineering Division

EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL SCHEMATIC LEGEND

SHEET E-15 OF

SW

PARTS SCHEDULE

SYMBOL	NAME	PART				REMARKS
		MAKE	TYPE	MODEL OR CAT. #	RATING	
CB 1	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36150	600 V, 150A	18 KAIC @ 480VAC
CB 2	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36150	600 V, 150A	
CB 3	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36150	600 V, 150A	
CB 4	CIRCUIT BREAKER	SQUARE D	TWO POLE	HDL 26030	600 V, 30A	
CB 5 AND 6	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
CB 6, 7, 8, 9, 10	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
M1, M2, M3	MOTOR STARTER	SOLCON	RVSS	RVS-DX 105-480-115-8-U-S	105 A	PROVIDE REMOTE KEYPAD
CA1, CA2, CA3	CIRCUIT SENSOR	ENERCORP INSTRUMENTS	4-20 mA OUTPUT	SC200-2	0 - 100A	ADJUSTABLE RANGE
PL1, PL3, PL5	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LYA9	120 V, LED TYPE	YELLOW LENS & PRESS TEST
PL2, PL4, PL6	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LRR9	120 V, LED TYPE	RED LENS & PRESS TEST
PL7, PL8, PL9	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LRR9	120 V, LED TYPE	RED LENS & PRESS TEST
S1, S2, S3	HOA SWITCH ASSEMBLY	SQUARE D	OIL-TIGHT CLASS 9001	SKS - 43B H2	10A @ 120V	
ETM1, ETM2, ETM3	ELAPSED TIME METER	CRAMER	ROUND BEZEL, NON RESET	635E&S	120 V	W.W. GRANGER CAT. NO. 6X144
ZS1, ZS2, ZS3	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F-X5F1 (GRAINGER-1EA77)	12-24VDC, 3-WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER - 5B233)
FF1, FF2 & TS	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH-TS
WR1, WR2	WALL RECEPTACLE	HUBBELL	DUPLEX W/GFI	GF5262	120V AC, 15A GFI	W/ALUMINUM OUTLET BOX AND COVER
SPD-1	SURGE PROTECTIVE DEVICE TYPE 1	ADVANCED PROTECTION TECHNOLOGIES	MOTOR CONTROL PANEL SPD	TE04XDS104X	277/480 V, 3ø, 4W	
SPD-2, SPD-3	SURGE PROTECTIVE DEVICE TYPE 1	PHOENIX CONTACT	#2858357	TE04XDS104X	120V AC, SINGLE-PHASE	
TB1, TB2, TB3, TB4	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	50 CONTACTS (MIN)
ITS	INSULATED TERMINAL STRIP	ALLEN-BRADLEY	STYLE AA	1492-15-T	600 V AC NEUTRAL BLOCK	4 CONTACTS (MIN) W/ SHORTING BARS
MCP	MOTOR CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 62"x48"x12"	62"x48"x12" SS	304 SS	3P LATCH W/STOP KIT.
MP	ENCLOSURE PANEL	HOFFMAN	57" X 44", STEEL	A60P48	STEEL, 12 GAUGE	
GB1	GROUND BAR SYSTEM	PANDUIT	12 PORT WITH MAIN LUG	UGB2/0-414-12		COPPER CONSTRUCTION
GB2	GROUNDING BLOCK	ILSCO	AS REQUIRED	AS REQUIRED		
IT	ISOLATION TRANSFORMER	SQUARE D	120V/120V ISOLATION	9070 T100D24		
TA1, TA2, TA3, CR1, CR2, CR3, CR7	CONTROL RELAY	POTTER & BRUMFIELD	8 PIN PLUG-IN	KRPA-11AG-120	120V AC COIL, 10A CONTACTS	DPDT W/ SOCKET AND HOLD DOWN SPRING
FM1, FM2, FM3, CR4, CR5, CR6	CONTROL RELAY	POTTER & BRUMFIELD	8 PIN PLUG-IN	KRPA-14AG-120	120V AC COIL, 10A CONTACTS	3PDT W/ SOCKET AND HOLD DOWN SPRING
TD1	TIME DELAY RELAY	SQUARE-D	8 PIN PLUG-IN	9050JCK60V20	120V AC COIL, 10A CONTACTS	DPDT W/ SOCKET AND HOLD DOWN SPRING. 0.1-99.9 MIN ADJUST
LEV	WET WELL LEVEL SENSOR	PULSAR, INC.	ULTRASONIC	dB10 TRANSDUCER W/ BLACKBOX 130 TRANSMITTER PART #: 130-110-300-00P-KP-TROP	1 TD 32.8 FT RANGE 115VAC/24VDC POWERED W/ 4-20MA AND (2) RELAY OUT W/ KEY PAD, DISPLAY, AND TROPICALIZATION	EXISTING TO BE RELOCATED TO PCP

PARTS SCHEDULE IS CONTINUED ON SHEET E-17

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NOTES:

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EASTRIDGE PUMP STATION REPLACEMENT

PARTS SCHEDULE (SHEET 1 OF 2)

SHEET E-16 OF

SW

PARTS SCHEDULE (CONTINUED)

SYMBOL	NAME	PART				REMARKS
		MAKE	TYPE	MODEL OR CAT. #	RATING	
PM1, 2, 3, 4, 5	3–PHASE POWER MONITOR	ATC DIVERSIFIED ELECTRONICS	8 PIN PLUG–IN	SUA–440–ASA	440 VAC	WITH OPTIONAL 5–SEC RELEASE AND DIN RAIL SOCKET
PDB	PWR DIST. BLOCK	ILSCO	THREE POLE	PDB–26–350–3	600 V, 620 AMP	WITH LEXAN COVER
FBD1, 2, 3, 4, 5	FUSE BLOCK / DISCONNECT	ALLEN BRADLEY	THREE PHASE– HIGH INTER. CAP.	1492–FB3C30–L	600 VAC, 200KAIC	WITH BUSSMANN KTK–R–2 FAST ACTING, REJECTION FUSES
BATT.	BATTERY	POWERSONIC	ABSORBENT GLASS MAT (AGM)	PS–1270 F2	12 VOLT, 7.0 AH	WITH 0.25" x 0.032" TABS
BATT. CHRG.	BATTERY CHARGER	DELTRAN CORP.	BATTERY TENDER	WATERPROOF 800	120VOLT, 800 mADC	QUALIFICATION, BULK, & FLOAT CHARGING
PC–1	BACKUP PUMP CONTROLLER	WILKERSON	DUPLEX PUMP STATION	DR1920	10 AMP CONTACTS	DIN RAIL MOUNTING
FL	FLOAT SWITCH	ANCHOR SCIENTIFIC	SPDT	S20NONC	10 A @ 120 V	PROVIDED BY THE CITY INSTALLED BY CONTRACTOR
FTB1, 2	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5–HESI	PROVIDE 1, 2, & 5A FUSES	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
SLD1, SLD2	PUMP MONITORING UNIT	XYLEM		MINI–CAS 120	10A AT 240V AC	
BWR	BATTERY WALL RECEPTACLE	HUBBELL	DUPLEX WITH GFI	GF5262	120V AC, 15A GFI	WITH ALUMINUM OUTLET BOX AND COVER
PCP	PUMP CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 42"x36"x12"	42"x36"x12" SS	304 SS, POWDER COATED WHITE	3P LATCH WITH STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT.
PP	ENCLOSURE PANEL	HOFFMAN	39" X 33", STEEL	A42P36	STEEL, 12 GAUGE	
NB1	NEUTRAL DISTRIBUTION BLOCK	BUSSMANN	SINGLE POLE	16220–1	600V, 175A	
NB2	NEUTRAL DISTRIBUTION BLOCK	ILSCO	AS REQUIRED	AS REQUIRED	600V, 175A	
L1	PROCESS METER	PRECISION DIGITAL	4 DIGIT, 1.2" DISPLAY	PD765–6X3–00		PROVIDE 4–20mA OUTPUT
ALS	AREA LIGHT SWITCH	HUBBELL	SINGLE–POLE	HBL1221	277V, 20A	
SPD–2	SURGE PROTECTION DEVICE TYPE 3	PHOENIX CONTACT	3 CONDUCTOR SYSTEM (L, N, G)	2856812	120V, 25A	
PTB	POWER TERMINAL BLOCK	MARATHON	THREE POLE	1423121	600V, 150A	
FDTS	FUSED DOUBLE THROW DISCONNECT SWITCH	EATON	SERVICE ENTRANCE RATED, HEAVY DUTY	DT365FWK	DS800 NK NEUTRAL KIT DS468 GK GROUND KIT DS66 FK R FUSE ADAPTOR KIT	TIME DELAY CLASS RK5 FUSES (6) EDISON ECSR200 (PROVIDE (6) SPARES)
EC	EMERGENCY CONNECTOR	CROUSE & HINDS	ARKTITE	AREX4041210–S22 WITH BACK BOX, ANGLE ADAPTER, 4" HUB AND SPRING COVER	600V 400 AMP	

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EASTRIDGE PUMP STATION REPLACEMENT

PARTS SCHEDULE (SHEET 2 OF 2)

SHEET E-17 OF

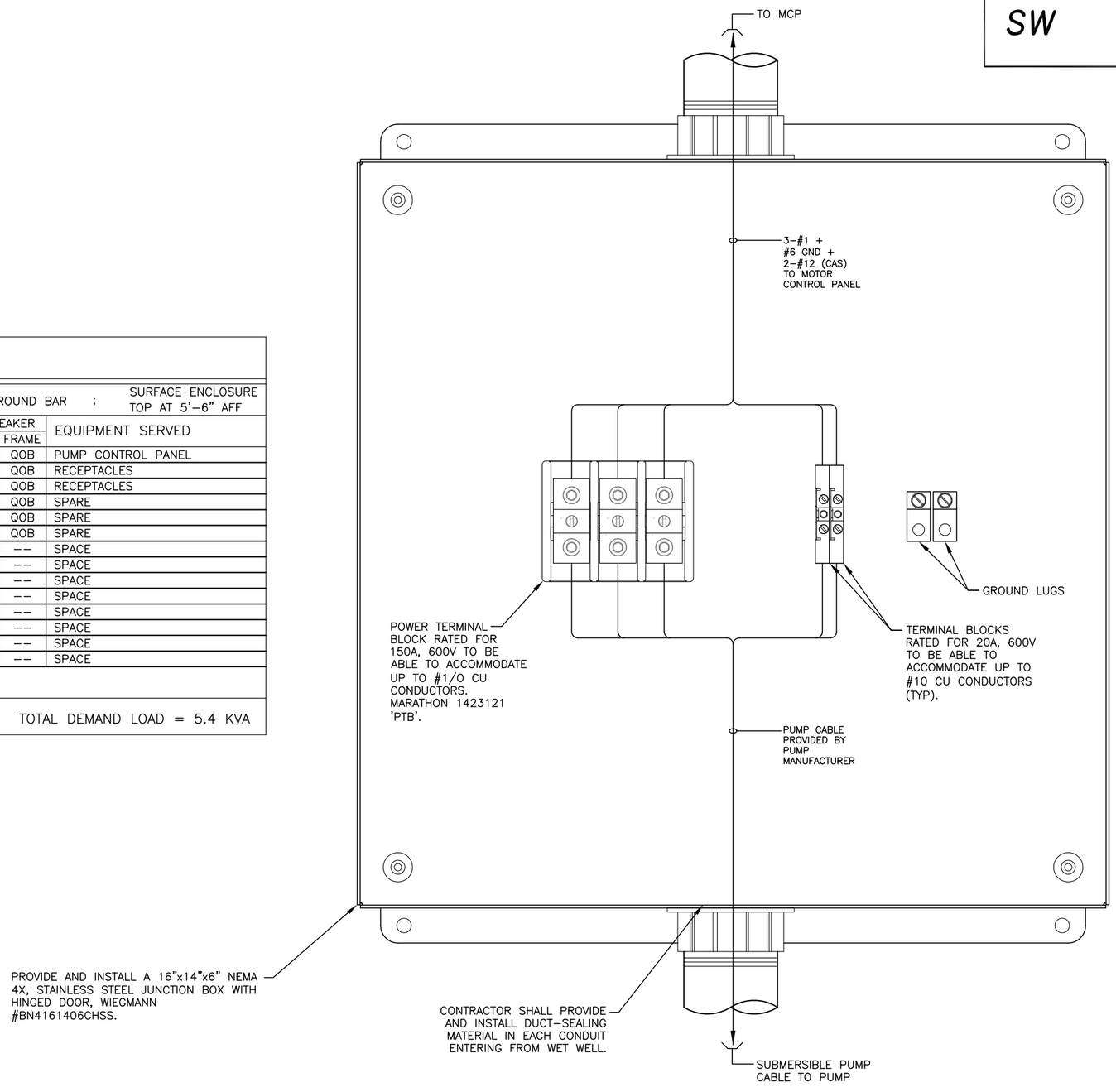
SW

PROPOSED PANEL 'ELP' SCHEDULE

PANEL 'ELP'; SQUARE D CO. MINI POWER-ZONE 120/240 VOLTS, 1ø, 3W 60 AMP MAIN CIRCUIT BREAKER PROVIDE EQUIPMENT GROUND BAR ; SURFACE ENCLOSURE TOP AT 5'-6" AFF

EQUIPMENT SERVED	CIRCUIT BREAKER			KVA/PHASE		CIRC.	CIRC.	KVA/PHASE		CIRCUIT BREAKER			EQUIPMENT SERVED
	POLE	AMPS	FRAME	A	B	NO.	NO.	A	B	POLE	AMPS	FRAME	
MOTOR CONTROL PANEL	1	20	QOB	1.0		1	2	0.8		1	20	QOB	PUMP CONTROL PANEL
FANS	1	20	QOB		1.2	3	4		0.6	1	20	QOB	RECEPTACLES
INTERIOR LIGHTING	1	20	QOB	1.2		5	6	0.6		1	20	QOB	RECEPTACLES
SPACE	--	--	--		.	7	8		.	1	20	QOB	SPARE
SPACE	--	--	--	.		9	10	.		1	20	QOB	SPARE
SPACE	--	--	--		.	11	12		.	1	20	QOB	SPARE
SPACE	--	--	--	.		13	14	.		--	--	--	SPACE
SPACE	--	--	--		.	15	16		.	--	--	--	SPACE
SPACE	--	--	--	.		17	18	.		--	--	--	SPACE
SPACE	--	--	--		.	19	20		.	--	--	--	SPACE
SPACE	--	--	--	.		21	22	.		--	--	--	SPACE
SPACE	--	--	--		.	23	24		.	--	--	--	SPACE
SPACE	--	--	--	.		25	26	.		--	--	--	SPACE
SPACE	--	--	--		.	27	28		.	--	--	--	SPACE
SUB-TOTAL KVA				2.2	1.2			1.4	0.6				

TOTAL CONNECTED LOAD = 5.4 KVA TOTAL DEMAND LOAD = 5.4 KVA



HIGH VOLTAGE JUNCTION BOX DETAIL

SCALE : N.T.S

1 E-4 E-18

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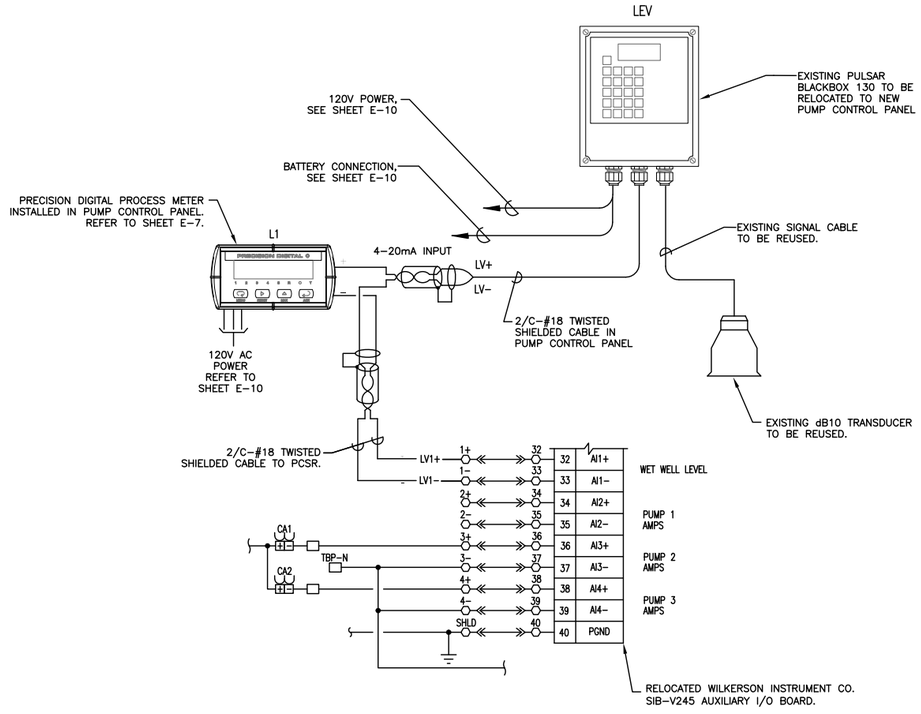
EASTRIDGE PUMP STATION REPLACEMENT

ELECTRICAL DETAILS (SHEET 1 OF 2)

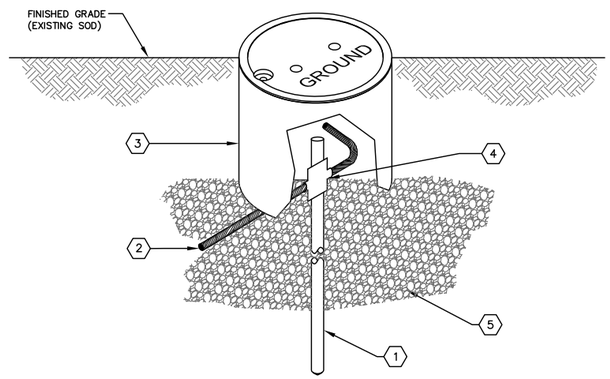
SHEET E-18 OF

SW



1+	32	32	AI1+
1-	33	33	AI1-
2+	34	34	AI2+
2-	35	35	AI2-
3+	36	36	AI3+
3-	37	37	AI3-
4+	38	38	AI4+
4-	39	39	AI4-
SHLD	40	40	PGND

LEVEL TRANSMITTER WIRING SCHEMATIC



GROUND TEST WELL DETAIL (1)

SCALE : N.T.S.

E-4 | E-19

GROUND TEST WELL DETAIL KEYED NOTES:

1. NEW GROUND ROD, STAINLESS STEEL, 5/8" X 10'-0" (TYP).
2. #4 BARE STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR (TYP).
3. PROVIDE AND INSTALL OLDCASTLE PRECAST ENCLOSURE SOLUTIONS #F08 BOX WITH #F08C CAST IRON LID MARKED "GROUND".
4. EXOTHERMIC WELD.
5. PROVIDE 6" MINIMUM OF CRUSHED STONE.

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ELECTRICAL DETAILS (SHEET 2 OF 2)

SHEET E-19 OF