

JEA PROJ NO.: 8002427

All construction shall be performed in accordance with the approved plans and comply with all standard city policies and practices. City approval is contingent upon any required state or federal permit approvals such as those from the Department of Environmental Protection or the St. Johns River Water Management District (SJRWD).

Plan approval through Development Services does not include utilities. Proposed water, sewer or electric construction must be approved separately through the respective utility company. In most cases, this will be:

JEA
JEA Tower - 4th Floor
21 W. Church Street
Jacksonville, FL 32202
<http://www.jea.com/business/services/devandbuild/developers.asp>

CITY: Except for new subdivision infrastructure construction, all work performed within a City of Jacksonville right-of-way or easement requires a Right-of-way Permit. The contractor performing the proposed work must have a current Right-of-way Bond on file with Development Services. Right-of-way Permit applications are processed at:

Development Services Customer Service Center
Edward Ball Building, 2nd Floor
214 N. Hogan St.
Jacksonville, FL 32202
(904) 255-8872
<http://www.jacksonville.net/>

STATE: All work performed within a state right-of-way requires a permit from the Florida Department of Transportation (FDOT). It is the developer's responsibility to obtain required FDOT permits or maintenance-of-traffic approvals for work within FDOT right-of-ways. The FDOT regional office can be contacted at (904) 360-5200 Any changes to the approved plans needed for FDOT approval must be submitted to Development Services as revisions.

Adjacent State Roads: _____

RAILROAD: Railroad companies may require special approvals or permits to work within their right-of-ways. It is the developer's responsibility to obtain permission from any railroad right-of-way owner before performing any work within their right-of-way.

Annual reports in compliance with the SJRWMD stormwater permits are required from the maintenance entity of all stormwater management facilities. Send copies of the reports to:

Engineering and Construction Management
Edward Ball Building, 10th Floor
214 N. Hogan St.
Jacksonville, FL 32202
<http://www.cjcei.net/Departments/Public%20Works/Engineering%20and%20Construction/Management/>

The owner of any project on (1) acre or larger is required to provide a Notice of Intent (NOI) in accordance with criteria set forth in the city's NPDES permit within 48 hours of beginning construction. Send NOI and NOI fee to:

Florida Department of Environmental Protection
NPDES Stormwater Notice Center, Mail Station #2510
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(866) 358-6312
<http://www.dep.state.fl.us/water/stormwater/npdes/>

The contractor shall contact the Environmental Quality Division, Erosion and Sedimentation Control Section (ESC) to provide verification that applicable stormwater permits have been obtained and to schedule a pre-construction ESC site inspection:

Environmental Quality Division
407 North Laura Street, Third Floor
Jacksonville, FL 32202
(904) 259-7222

Plan review and approval does not relieve the contractor of complying with all applicable State Fire Codes.

Underground mains and hydrants shall be installed, completed, and in service prior to construction work.

Underground contractor shall submit to the Fire Marshall for approval complete specs for all underground pipe and fittings relating to fire protection PRIOR to installation and inspection. Contractor shall include manufacturer's name and pipe ID along with contractor's state license number.

A Site Work Permit is required for this project.

| | | | |
|--------------------------|---------------------------------|--------------------|------------|
| <input type="checkbox"/> | Tree Fund payment is due: _____ | inches at \$ _____ | = \$ _____ |
| <input type="checkbox"/> | Article 25 funds are due: _____ | inches at \$ _____ | = \$ _____ |

TRAFFIC SIGNS

Metro Name (each) _____

Standard (each) _____

Stop/Yield (each) _____

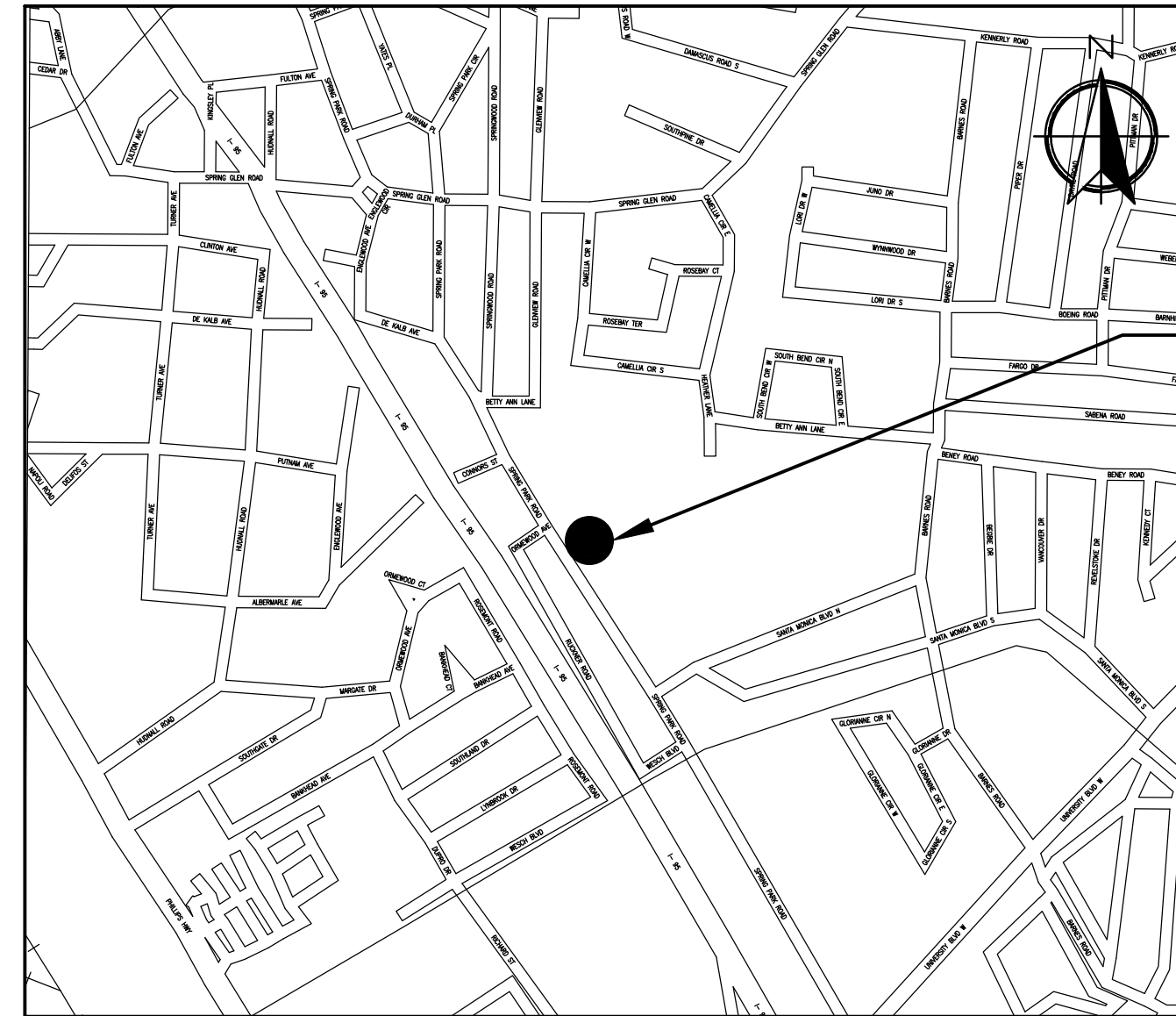
Design (per plat) 1 per plat

Installation (per hour) 1 per 2 signs (rounded up)

_____ Streetlights Required

NOTE: Traffic sign costs change from time to time. Consult Attachment 8 of the Land Development Procedures Manual (<http://dpm.jaxdev.com/>) for the current rates before paying for any sign installations.

No lane closures allowed from 7 a.m. till 9 a.m. and from 4 p.m. till 6 p.m.



– PROJECT LOCATION
4511 SPRING PARK ROAD
JACKSONVILLE, FL. 32207

JEAsm
Building Communitysm

CA# 11516-3 San Jose Blvd.
9952 Jacksonville, Florida 32223

_____ Date _____ Development Services Division (Chief)

_____ Date _____ Review Group (Reviewer)

Plan approval is valid for five years after the initial approval date. Revisions made after the initial approval date do not extend this five-year time frame.

[illegible]

| | |
|------------------------------------|-----------|
| <u>GENERAL</u> | |
| City Development Number | 4161.239 |
| Concurrency Application Number | |
| Property Appraiser Number (RE #) | |
| Zoning Designation | |
| Zoning Application(s) (if any) | |
| PUD Ordinance Number | |
| FIRM – Community – Panel | |
| Flood Zones (Show in Plans) | |
| Base Flood Elev. (Show in Plans) | |
| Vertical Datum Used for Project | |
| JEA Availability Number | 2017-XXXX |
| <u>SUBDIVISION</u> | |
| PSD Number | |
| City or Private Inspection | |
| Public or Private Roads | |
| Subdivision ("911") Disk Provided? | |
| <u>NON-SUBDIVISION</u> | |
| North American Industry | |
| Classification System (NAICS) | |
| Impervious Area (Sq. Ft.) | |

IFB BID NO.:

NOT APPLICABLE
APPLICABLE

SURVEY AND LOCATE DATA:

- ☐ ☒ 1. ALL ELEVATIONS ARE BASED ON U.S.C.&G.S. DATUM AND SHOWN IN FEET.
- ☐ ☒ 2. ELEVATIONS ARE BASED ON N.G.V.D. 1988.
- ☐ ☒ 3. LOCATION OF EXISTING UTILITIES OBTAINED BY SOFT DIG LOCATES WHERE SHOWN ON PLANS, OR INCLUDED WITH BID SPECS.
- ☐ ☒ 4. EXISTING WATER AND SEWER LINES ARE SHOWN AS PER FIELD LOCATES AND SUBDIVISION AS-BUILT PLANS.
- ☐ ☒ 5. UNDERGROUND UTILITIES WERE LOCATED UTILIZING GROUND PENETRATING RADAR (GPR) AND A DIGITAL LOCATOR. CONTRACTOR SHALL BE AWARE THAT IN SOME CASES UTILITIES HAVE BEEN LOCATED, AND SURVEY HAS BEEN COMPLETED ONLY ON ONE SIDE OF THE ROAD.
- ☒ ☐ 6. ALL PIPE LENGTHS SHOWN ON PLAN AND PROFILES ARE FROM CENTER TO CENTER OF MANHOLES, CATCH BASINS, INLETS ETC. OR ALONG THE CENTER LINE OF FORCE MAINS AND WATER MAINS.
- ☒ ☐ 7. INVERT ELEVATIONS SHOWN ON DRAWINGS REFER TO THE CENTERLINE OF MANHOLES, UNLESS OTHERWISE INDICATED.
- ☒ ☐ 8. THE LOCATION OF ALL EXISTING SEWER AND WATER SERVICE LINES MAY NOT BE INDICATED ON THESE PLANS. THE LOCATION OF NEW SERVICES SHALL BE VERIFIED IN THE FIELD.
- ☐ ☐ 9. BENCHMARK DATA: SEE SURVEY AND EXISTING SITE PLAN, DRAWING C-1.

PERMIT REQUIREMENTS (NOT ALL INCLUSIVE):

- ☐ ☒ 1. CONTRACTOR TO OBTAIN ALL REQUIRED RIGHT-OF-WAY PERMITS.
- ☒ ☐ 2. CONTRACTOR SHALL NOT OPEN CUT STREETS IN THE PROJECT AREA UNLESS SPECIFICALLY SHOWN ON PLANS
- ☐ ☒ 3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT THROUGH THE ST. JOHNS WATER MANAGEMENT DISTRICT SHOULD DEWATERING ACTIVITIES BE REQUIRED.
- ☒ ☐ 4. THE DEPARTMENT OF TRANSPORTATION, RAILROAD COMPANIES AND C.O.J. ARE TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION PER THEIR RESPECTIVE PERMIT CONDITIONS.
- ☐ ☒ 5. ALL WORK SHALL BE IN ACCORDANCE WITH BID DOCUMENTS, JEA WATER AND SEWER STANDARDS, DETAILS AND MATERIALS MANUAL, REV. 01/15, AND CITY OF JACKSONVILLE STANDARD SPECIFICATIONS AND DETAILS AND ALL APPLICABLE STATE AND LOCAL REGULATIONS.
- ☐ ☒ 6. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED.
- ☐ ☒ 7. THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY CONTACT PERSONNEL NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF FACILITIES IN THEIR RESPECTIVE AREAS.
- ☐ ☒ 8. TREE PROTECTION SHALL BE IN ACCORDANCE WITH JACKSONVILLE ORDINANCE CODE 656 AND/OR AS DETAILED ON SPECIFIC PLAN SHEETS. NO TRIMMING OF OVERHANGING TREE LIMBS WILL BE ALLOWED. USE SMALLER EQUIPMENT IF NECESSARY.
- ☐ ☒ 9. THE CONTRACTOR SHALL LOCATE THE DRAINAGE INLET STRUCTURES IN THE PROJECT AREA AND ERECT SEDIMENTATION CONTROL DEVICES AS NECESSARY PER THE CITY OF JACKSONVILLE STORMWATER POLLUTION PREVENTION PLAN.
- ☒ ☐ 10. CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITIES DURING CONSTRUCTION.

EXISTING UTILITY PROTECTION:

1. IN ORDER TO REDUCE THE DISRUPTION AND COST OF UTILITY DAMAGES OCCURRING IN THE DUVAL COUNTY RIGHT-OF-WAY AND EASEMENTS, THE CONTRACTOR SHALL PREVENT DAMAGES TO EXISTING UTILITIES CAUSED BY HIS WORK THROUGH FIELD VERIFICATION OF THE LOCATION OF THE EXISTING UTILITIES. IN THE CASE OF OPEN EXCAVATION, VERIFICATION MAY BE PERFORMED DURING THE CONTRACTORS WORK. IN THE CASE OF DIRECTIONAL DRILLING, VERIFICATION SHALL TAKE PLACE PRIOR TO MOBILIZATION OF THE DRILLING EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES AS NEEDED TO AVOID CONTACT. EXISTING UTILITIES SHALL BE EXPOSED USING DETECTION EQUIPMENT OR OTHER ACCEPTABLE MEANS, SUCH METHODS MAY INCLUDE BUT SHALL NOT BE LIMITED TO "SOFT DIG" EQUIPMENT AND GROUND PENETRATING RADAR (GPR). THE EXCAVATOR SHALL BE HELD LIABLE FOR DAMAGES CAUSED TO THE CITY'S/JEA'S INFRASTRUCTURE AND THE EXISTING FACILITIES OF OTHER UTILITY COMPANIES.
3. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID ALL UTILITIES, OTHER STRUCTURES AND OBSTRUCTIONS BOTH ABOVE AND BELOW GROUND SURFACE. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ABBREVIATIONS:

| | | | |
|------------|----------------------------------|---------------|---|
| AC | ASBESTOS CEMENT | INT. | INTERSECTION |
| A.G. | ALLEY GRATE | INV. | INVERT |
| B.B. | BASE LINE | I.P. | IRON PIPE |
| B.M. | BENCHMARK | J.W.W. | JACKSONVILLE WATER WORKS |
| BC | BOTTOM OF CURVE | LT. | LEFT |
| C.B. | CATCH BASIN | MB | MAIL BOX |
| C.I. | CAST IRON | M.H. | MANHOLE |
| C | CENTER LINE | NPW | NON-POTABLE WATER |
| C.E.P. | CITY ELECTRIC POLE | NTS | NOT TO SCALE |
| CONC. | CONCRETE | O.E. | OVERHEAD ELECTRIC |
| CONST. | CONSTRUCTION | O.T. | OVERHEAD TELEPHONE |
| C.M.P. | CORRUGATED METAL PIPE | P.R.M. | PERMANENT REFERENCE MONUMENT |
| C.M.P.A. | CORRUGATED METAL PIPE ARCH | P.V.C. | POLYVINYL CHLORIDE |
| CULV. | CULVERT | R | RADIUS |
| C&G | CURB & GUTTER | R | RATE |
| C | CUT | R.C.P. | RIGHT |
| D.B.I. | DITCH BOTTOM INVERT | RT | RIGHT |
| D.W. OR DR | DRIVEWAY | R/W | RIGHT OF WAY |
| D.I. | DUCTILE IRON | R.D. | ROOF DRAIN |
| E.O.P. | EDGE OF PAVEMENT | S/W | SIDE WALK |
| ELEV. | ELEVATION | S.B.T. | SOUTHERN BELL TELEPHONE |
| ERCP | ELLIPTICAL REINFORCED CONG. PIPE | STA | STATION |
| | EXPANSION JOINT | TC | TOP OF CURVE |
| EXP. JT. | FILL | U.G.E. | UNDERGROUND ELECTRIC |
| F | FIRE HYDRANT | U.G.T. | UNDERGROUND TELEPHONE |
| FL | FLOW LINE | U.S.C. & G.S. | UNITED STATES COASTAL & GEODETIC SURVEY |
| FM | FORCE MAIN | V.C. | VITRIFIED CLAY |
| FW | FLUSHING WATER | WM | WATER METER |
| GALV./GLV | GALVANIZED GAS LINE | W.V. | WATER VALVE |
| G | GAS VALVE | WLP | WOOD LIGHT POLE |
| G.V. | HOSE BIBB | WPP | WOOD POWER POLE |
| HB | HIGH DENSITY POLYETHYLENE PIPE | WTP | WOOD TELEPHONE POLE |
| HDPE | HIGH DENSITY POLYETHYLENE PIPE | | |
| H.W. | HEAD WALL | | |
| H.C. | HIGH CURB | | |

RESTORATION NOTES:

- THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LANDMARKS WHICH MAY BE DISTURBED BY CONSTRUCTION, KNOWN CORNER LOCATIONS ARE AVAILABLE FROM THE CITY OF JACKSONVILLE ENGINEERING DIVISION.
- THE CONTRACTOR SHALL RESTORE/REPLACE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION.
- TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH CITY OF JACKSONVILLE/FDOT STANDARD SPECIFICATIONS.
- SIDEWALKS, DRIVEWAYS AND CURBING DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH JACKSONVILLE STANDARD SPECIFICATIONS. SIDEWALKS REMOVED AND REPLACED IN CURB AND GUTTER AREAS AT INTERSECTIONS SHALL HAVE HANDICAP RAMPS INSTALLED. DRIVEWAYS AND SIDEWALKS SHALL BE SAWCUT ALONG THE RIGHT-OF-WAY LINE OR NEAREST JOINT AND REMOVED AND REPLACED TO THE EDGE OF STREET.
- GRASS SOD SHALL BE FURNISHED AND PLACED IN THE AREAS DISTURBED OR DAMAGED BY THE CONSTRUCTION OPERATION.
- ALL PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH THE CITY OF JACKSONVILLE/FDOT STANDARD DETAILS AND SPECIFICATIONS LATEST EDITION.
- UNLESS OTHERWISE NOTED, REMOVE AND REPLACE EXISTING PAVEMENT AS PER C.O.J. CASE X (10) PAVEMENT REPLACEMENT DETAIL.
- CONTRACTOR MUST MAINTAIN AND PRESERVE NEWLY GRADED AREAS AND REPAIR AREAS WHERE SETTLING AND EROSION HAVE OCCURRED.

UTILITY CONTACTS:

| | |
|--|--------------|
| A. AT&T - GENERAL NUMBER | 904-519-2529 |
| B. AT&T - ADAM DUGAN - NORTH DISTRICT | 904-781-0741 |
| C. AT&T - BILL LAKE - SOUTH DISTRICT | 904-303-8754 |
| D. CITY OF JACKSONVILLE - PUBLIC WORKS DEPT. | 904-255-8762 |
| E. CITY OF JACKSONVILLE - TRAFFIC OPERATIONS | 904-387-8861 |
| F. FLORIDA DEPT. OF TRANSPORTATION | 904-360-5200 |
| G. JEA - WATER COLLECTION & DISTRIBUTION - SCOTT BOYLE | 904-665-7907 |
| H. JEA - SEWER COLLECTION & DISTRIBUTION - MIKE JONES | 904-665-6052 |
| I. JEA - GENERAL INFORMATION | 904-665-6000 |
| J. JEA - PROJECT OUTREACH | 904-665-7500 |
| K. JEA - POWER OUTAGES | 904-665-6000 |
| L. JEA - SEWER PROBLEMS | 904-665-4802 |
| M. JEA - WATER PROBLEMS | 904-665-4801 |
| N. JEA - WATER & SEWER LOCATES | 904-665-8410 |
| O. NASSAU COUNTY - PUBLIC WORKS - CHARLES HOUSTON | 904-491-7334 |
| P. ST. JOHNS COUNTY - RIGHT-OF-WAY PERMITTING - RICK MAULDIN | 904-209-0134 |
| Q. ST. JOHNS COUNTY - TRAFFIC SIGNALS - HANK MEIN | 904-209-0173 |
| R. COMCAST - EMERGENCY HOTLINE | 904-380-6274 |
| S. TECO/PEOPLES GAS - BEN MOBLEY | 904-545-8958 |
| T. SUNSHINE ONE CALL | 811 |

UTILITY SYMBOLS

| EXISTING | PROPOSED | |
|---|----------|--|
| RIGHT OF WAY LINE | | |
| CENTER LINE | | |
| LIMITS OF CONSTRUCTION | | |
| FENCE (HEIGHT & MAT'L INDICATED) | | |
| DITCH OR SWALE | | |
| DRAIN PIPE | | |
| CATCH BASIN | | |
| STORM DRAIN GRATE | | |
| STORM SEWER (SIZE & MAT'L INDICATED) | | |
| STORM SEWER REPLACEMENT (IN CASE 10 TRENCH) SIZE, MAT'L INDICATED | | |
| STORM SEWER (SIZE & MAT'L INDICATED) | | |
| CULVERT WINDWALLS (SIZE & MAT'L INDICATED) | | |
| WATER MAIN SIZE, TYPE INDICATED | | |
| WATER MAIN (IN CASE 10 TRENCH) SIZE, TYPE INDICATED | | |
| GRAVITY SEWER SIZE, TYPE INDICATED | | |
| SEWER FORCE MAIN SIZE, TYPE INDICATED | | |
| LINE VALVE | | |
| CHECK VALVE | | |
| FIRE HYDRANT | | |
| VALVE (TYPE INDICATED) | | |
| END CAP | | |
| PLUG (AT END OF LINE) | | |
| REDUCER | | |
| FIRE HYDRANT | | |
| HOUSE CONNECTION (SEWER) | | |
| SPOT ELEVATION | | |
| MANHOLE - TYPE (IF INDICATED) | | |
| E - ELECTRIC S - SANITARY | | |
| O - STORM T - TELEPHONE | | |
| CLEAN OUT | | |
| SPRINKLER HEAD | | |
| TEMPORARY SAMPLING TAP POINT (BACTERIOLOGICAL SAMPLING POINT) | | |
| SILT HAY BARRIER | | |
| SIDEWALK | | |

NOTE:

THIS SHEET DEPICTS A STANDARD CIVIL LEGEND. SEE EXISTING SITE SURVEY, DRAWING C-1, FOR THE CIVIL LEGEND USED ON THIS PROJECT.

INSTALLATION NOTES:

- ☒ ☐ 1. CONTRACTOR TO REHABILITATE ALL MANHOLES ON PIPE BURST SEWERS VIA COATING/LINING PER JEA SPECIFICATION 446-2, UNLESS OTHERWISE NOTED ON THE PLANS.
- ☒ ☐ 2. CONTRACTOR TO RENEW, REHABILITATE, REPLACE OR REINSTALL AS APPLICABLE ALL SERVICE LATERALS TO R.O.W. LINE.
- ☒ ☐ 3. CONTRACTOR TO INSTALL SEWER SERVICE PIPING A MINIMUM OF 60 INCHES BELOW GRADE. WHERE NEW SANITARY SEWER MAIN IS LESS THAN 5 FEET DEEP, THE SEWER SERVICE PIPE SHALL BE INSTALLED AS DEEP AS POSSIBLE.
- ☒ ☐ 4. WHEN THE DISTANCE BETWEEN A POWER POLE AND THE TRENCH IS LESS THAN THE TRENCH DEPTH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH JEA ELECTRICAL PERSONNEL TO SECURE POWER POLES. THE CONTACTS FOR JEA ARE AS FOLLOWS:
SOUTHSIDE-SOUTH OF BEACH BLVD. TOM KERNS @ 665-6847 (mobile 334-7049)
SOUTHSIDE-BACKUP @ 334-7037 (mobile 334-7047)
A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED FOR AN OUTSIDE MEETING WITH JEA ELECTRICAL TO DISCUSS THE REQUIRED WORK. ADDITIONAL TIME WILL BE REQUIRED BY JEA ELECTRICAL FOR ANY REQUIRED WORK TO BE ACCOMPLISHED.
- ☒ ☐ 5. ALL NEW STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
- ☐ ☒ 6. THE DESIGN FOR THE PROJECT IS BASED UPON THE "OPEN-CUT" METHOD OF CONSTRUCTION. IF USING ALTERNATIVE MEANS OR METHODS, THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS FOR THAT MEANS OR METHOD.
- ☒ ☐ 7. THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS AT SERVICE CONNECTIONS. THE MEANS AND METHODS SHALL BE LEFT TO THE DISCRETION OF THE CONTRACTOR, SUBJECT TO THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. NO EXISTING ACTIVE SERVICE SHALL BE LEFT INTERRUPTED AT THE END OF THE WORK DAY.
- ☒ ☐ 8. CONTRACTOR SHALL PROVIDE ADDITIONAL CORPORATION STOPS FOR FILLING AND DRAINING PURPOSES DURING CONSTRUCTION AS NEEDED. CORPORATION STOPS ARE TO BE PLUGGED AND LEFT IN PLACE. INDICATE CORPORATION STOP LOCATIONS ON RECORD DRAWINGS (AS-BUILTS).
- ☒ ☐ 9. WATER AND SEWER SERVICES SHALL BE TRANSFERRED TO THE NEW MAIN UPON COMPLETION AND F.D.E.P./J.E.A. CERTIFICATION, AND PRIOR TO THE EXISTING MAINS BEING ABANDONED.
- ☒ ☐ 10. IF EXISTING VALVES ARE IN UNPAVED AREAS AND ARE TO BE TAKEN OUT OF SERVICE, THEY SHALL BE CLOSED AND THE VALVE BOX AND COVER SHALL BE REMOVED. IF THE VALVES ARE UNDER PAVED AREAS, THEY SHALL BE CLOSED, THE VALVE BOX GROUT FILLED AND THE COVER REMOVED.
- ☒ ☐ 11. CONTRACTOR SHALL REPLACE EXISTING WATER METER BOXES WHEN DEEMED NECESSARY BY THE JEA INSPECTOR.
- ☒ ☐ 12. CONTRACTOR TO PROVIDE ADDITIONAL DEPTH OF BURY VIA PIPE JOINT DEFLECTION TO ACCOMMODATE VALVE SELECTION PER JEA STANDARDS.
- ☐ ☒ 13. WATER METERS MAY REQUIRE RELOCATION FOR CONSTRUCTION, CONTRACTOR SHALL CONTACT JEA METER DEPARTMENT AND RELOCATE WATER METERS AS NECESSARY.
- ☐ ☒ 14. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL OBTAIN ALL GEOTECHNICAL AND TOPOGRAPHIC SURVEY DATA AND LOCATIONS OF ABOVE GROUND AND UNDERGROUND UTILITIES. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED.
- ☒ ☐ 15. SHEET PILING WILL BE REQUIRED ON ALL EXCAVATIONS DEEPER THAN 16 FEET.

INDEX OF DRAWINGS:

| SHEET NUMBER | DRAWING NUMBER | SHEET TITLE | SHEET NUMBER | DRAWING NUMBER | SHEET TITLE |
|--------------|----------------|--|--------------|----------------|--|
| 01 | G-1 | PROJECT COVER SHEET | 55 | E-1 | ELECTRICAL LEGEND AND SCHEDULES |
| 02 | G-2 | GENERAL NOTES, LEGEND, AND INDEX TO DRAWINGS | 56 | E-2 | SINGLE LINE DIAGRAM |
| 03 | G-3 | GENERAL STRUCTURAL AND MECHANICAL LEGENDS | 57 | E-3 | SINGLE LINE DIAGRAM |
| 04 | G-4 | PROCESS AND INSTRUMENTATION DIAGRAM | 58 | E-4 | CONTROL WIRING DIAGRAMS |
| 05 | C-1 | EXISTING SURVEY AND SITE PLAN | 59 | E-5 | CONTROL WIRING DIAGRAMS |
| 06 | C-2 | PUMP STATION AND PIPING - PHASE I BYPASS PLAN | 60 | E-6 | ELECTRICAL BUILDING - POWER AND LIGHTING PLANS |
| 07 | C-3 | PUMP STATION AND PIPING - PHASE II BYPASS PLAN | | | |
| 08 | C-4 | SITE MODIFICATIONS PLAN | 61 | E-7 | ELECTRICAL SITE PLAN |
| 09 | C-5 | PAVING REPLACEMENT AND GRADING PLAN | 62 | E-8 | PUMP BUILDING - UPPER LEVEL POWER PLAN |
| 10 | C-6 | PAVING REPLACEMENT AND GRADING PLAN | | | |
| 11 | C-7 | ELECTRICAL BUILDING PLANS | 63 | E-9 | PUMP BUILDING - LOWER LEVEL POWER PLAN |
| 12 | C-8 | ELECTRICAL BUILDING ELEVATIONS | | | |
| 13 | CP-1 | STORMWATER POLLUTION PREVENTION - SHEET 1 | 64 | E-10 | PUMP BUILDING LIGHTING PLANS |
| 14 | CP-2 | STORMWATER POLLUTION PREVENTION - SHEET 2 | 65 | E-11 | ELECTRICAL DETAILS |
| 15 | CP-3 | STORMWATER POLLUTION PREVENTION - SHEET 3 | | | JEA STANDARD REFERENCE DRAWINGS: |
| 16 | CD-1 | CIVIL STANDARD DETAILS | 66 | E-12 | PLC ENCLOSURE LAYOUT |
| 17 | CD-2 | CIVIL STANDARD DETAILS | 67 | E-13 | PLC 120 VAC VOLTAGE |
| 18 | PR-1 | PAINTING, COATING, DEMOLITION, AND REPAIRS - BUILDING PLANS | 68 | E-14 | PLC 24 VDC VOLTAGE |
| 19 | PR-2 | PAINTING, COATING, DEMOLITION, AND REPAIRS - BUILDING SECTIONS | 69 | E-15 | PLC DIGITAL INPUT |
| 20 | PD-1 | PAINTING, COATING, DEMOLITION, AND REPAIRS - PHOTO DETAILS | 70 | E-16 | PLC DIGITAL INPUT |
| 21 | PD-2 | PAINTING, COATING, DEMOLITION, AND REPAIRS - PHOTO DETAILS | 71 | E-17 | PLC DIGITAL INPUT |
| 22 | PD-3 | PAINTING, COATING, DEMOLITION, AND REPAIRS - PHOTO DETAILS | 72 | E-18 | PLC DIGITAL INPUT |
| 23 | PD-4 | PAINTING, COATING, DEMOLITION, AND REPAIRS - PHOTO DETAILS | 73 | E-19 | PLC ANALOG INPUT |
| 24 | PS-1 | PAINTING, COATING, DEMOLITION, AND REPAIRS - BUILDING DETAILS | 74 | E-20 | PLC AND RADIO CONNECTION |
| 25 | M-1 | MECHANICAL - FLOW METER VAULT DETAILS | 75 | E-21 | PROFIBUS AND VFD CONNECTION |
| 26 | M-2 | MECHANICAL - LOWER LEVEL FLOOR PLAN | 76 | E-22 | SCADA RADIO PANEL |
| 27 | M-3 | MECHANICAL - MEZZANINE FLOOR PLAN AND SECTION | 77 | E-23 | VFD ENCLOSURE LAYOUT |
| 28 | M-4 | MECHANICAL - UPPER LEVEL FLOOR PLAN | 78 | E-24 | VFD PANEL WIRING DIAGRAM |
| 29 | M-5 | MECHANICAL - BUILDING SECTIONS | 79 | E-25 | VFD CONTROL WIRING DIAGRAM |
| 30 | M-6 | MECHANICAL - BUILDING SECTION | 80 | E-26 | CONDUIT AND CABLE SCHEDULE |
| 31 | M-7 | MECHANICAL - BUILDING SECTION | | | |
| 32 | M-8 | MECHANICAL - BUILDING SECTIONS | | | |
| 33 | M-9 | SEAL WATER AND FLUSHING WATER SYSTEMS - PLAN | | | |
| 34 | M-10 | SEAL, FLUSHING, AND POTABLE WATER SYSTEMS - ISOMETRIC | | | |
| 35 | MD-1 | MECHANICAL STANDARD DETAILS | | | |
| 36 | MD-2 | MECHANICAL STANDARD DETAILS | | | |
| 37 | MD-3 | MECHANICAL STANDARD DETAILS | | | |
| 38 | MD-4 | MECHANICAL STANDARD DETAILS | | | |
| 39 | O-1 | ODOR CONTROL SYSTEM - MEZZANINE AND UPPER FLOOR PLANS | | | |
| 40 | O-2 | ODOR CONTROL SYSTEM - BUILDING SECTIONS | | | |
| 41 | O-3 | ODOR CONTROL SYSTEM - BUILDING SECTIONS | | | |
| 42 | O-4 | ODOR CONTROL SYSTEM - BUILDING SECTIONS | | | |
| 43 | OD-1 | ODOR CONTROL SYSTEM - CLOSURE PANEL DETAILS | | | |
| 44 | OD-2 | ODOR CONTROL SYSTEM - STANDARD DETAILS | | | |
| 45 | H-1 | HVAC NOTES, DETAILS, AND SCHEDULES | | | |
| 46 | H-2 | HVAC FLOOR PLANS - DEMO | | | |
| 47 | H-3 | HVAC FLOOR PLANS - NEW | | | |
| 48 | PL-1 | PLUMBING NOTES AND DETAILS | | | |
| 49 | PL-2 | PLUMBING FLOOR PLAN - NEW | | | |
| 50 | S01 | STRUCTURAL GENERAL NOTES | | | |
| 51 | S11 | LOWER LEVEL AND MEZZANINE FLOOR PLANS | | | |
| 52 | S12 | UPPER LEVEL FLOOR AND ROOF PLANS | | | |
| 53 | S13 | BUILDING SECTIONS | | | |
| 54 | S21 | SECTIONS AND DETAILS | | | |

NOTE:

STANDARD DRAWINGS ARE APPLICABLE FOR ALL PROJECTS, INCORPORATED BY REFERENCE AND ARE AVAILABLE AT JEA.COM



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
CJA
9952

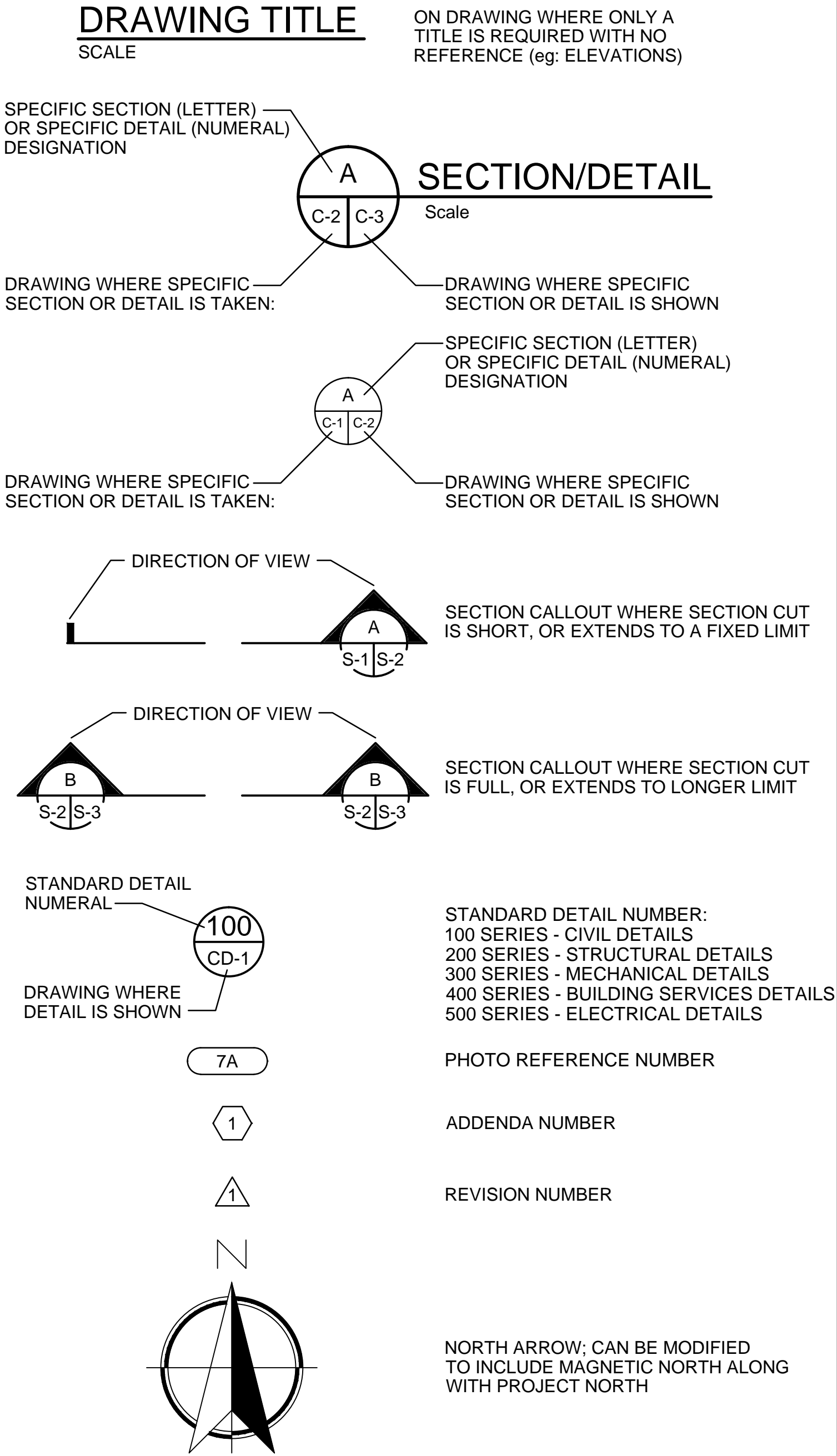
| REVISIONS | | DATE | |
|-----------|----|------|--|
| NO. | BY | DATE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |
| 29 | | | |
| 30 | | | |
| 31 | | | |
| 32 | | | |
| 33 | | | |
| 34 | | | |
| 35 | | | |
| 36 | | | |
| 37 | | | |
| 38 | | | |
| 39 | | | |
| 40 | | | |
| 41 | | | |
| 42 | | | |
| 43 | | | |
| 44 | | | |
| 45 | | | |
| 46 | | | |
| 47 | | | |
| 48 | | | |
| 49 | | | |
| 50 | | | |
| 51 | | | |
| 52 | | | |
| 53 | | | |
| 54 | | | |
| 55 | | | |
| 56 | | | |
| 57 | | | |
| 58 | | | |
| 59 | | | |
| 60 | | | |
| 61 | | | |
| 62 | | | |
| 63 | | | |
| 64 | | | |
| 65 | | | |
| 66 | | | |
| 67 | | | |
| 68 | | | |
| 69 | | | |
| 70 | | | |
| 71 | | | |
| 72 | | | |
| 73 | | | |
| 74 | | | |
| 75 | | | |
| 76 | | | |
| 77 | | | |
| 78 | | | |
| 79 | | | |
| 80 | | | |
| 81 | | | |
| 82 | | | |
| 83 | | | |
| 84 | | | |
| 85 | | | |
| 86 | | | |
| 87 | | | |
| 88 | | | |
| 89 | | | |
| 90 | | | |
| 91 | | | |
| 92 | | | |
| 93 | | | |
| 94 | | | |
| 95 | | | |
| 96 | | | |
| 97 | | | |
| 98 | | | |
| 99 | | | |
| 100 | | | |

| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |

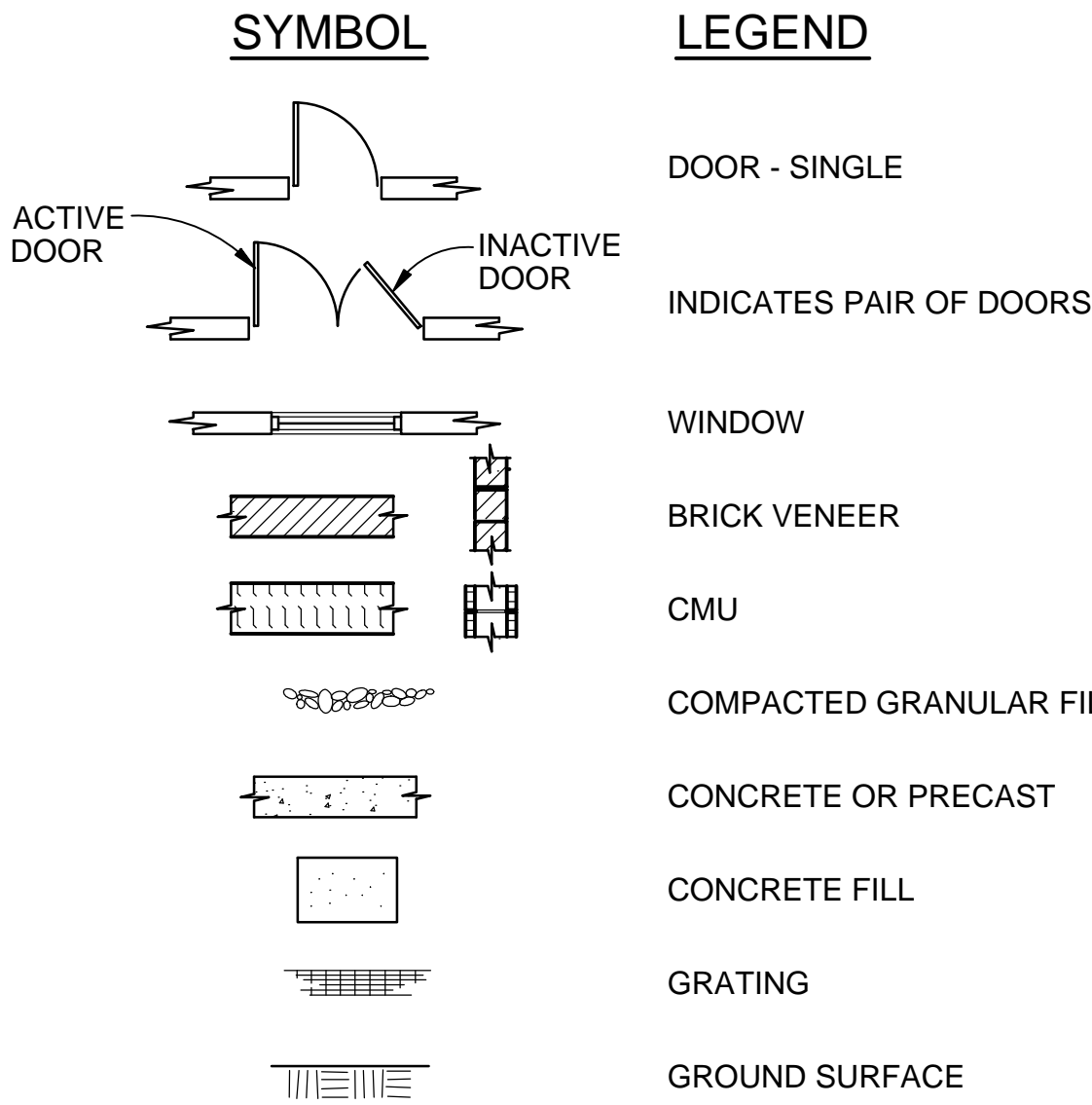
| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUFFREE |
| CHECKED BY | JE COLLINS |
| DATE | MAR 2020 |



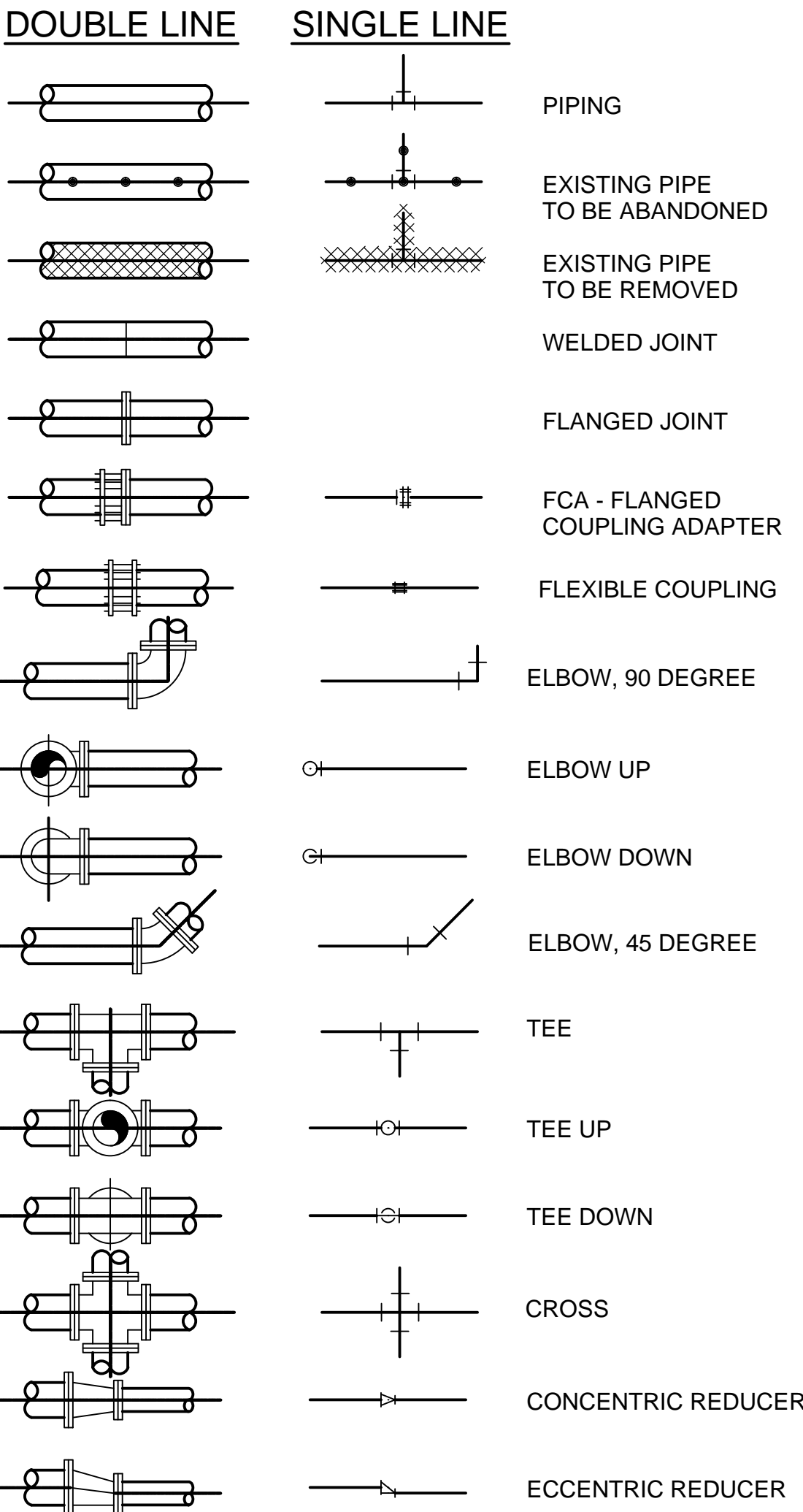
TITLE/SECTION/DETAIL DESIGNATIONS



BUILDING LEGEND



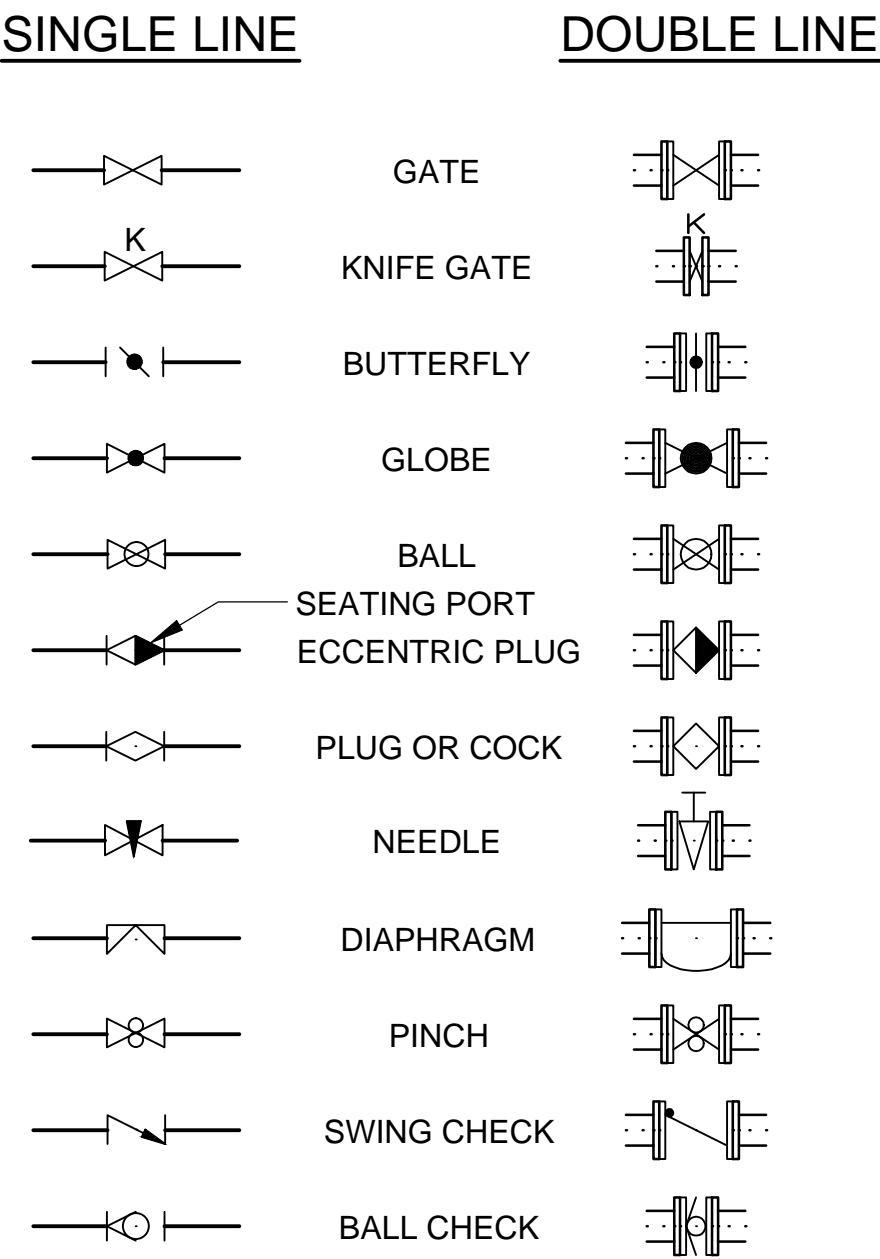
PIPE AND FITTING SYMBOLS



NOTES:

- ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
- SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
- EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

VALVE SYMBOLS



GENERAL NOTE:

- THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C.E.# 9952

| REVISIONS | | DATE | | BY | | NO. | |
|-----------|-----------|-----------|--|----|--|-----|--|
| 1 | EL DUPREE | 8/18/2020 | | | | 2 | |
| 2 | | | | | | 3 | |
| 3 | | | | | | 4 | |
| 4 | | | | | | 5 | |
| 5 | | | | | | 6 | |

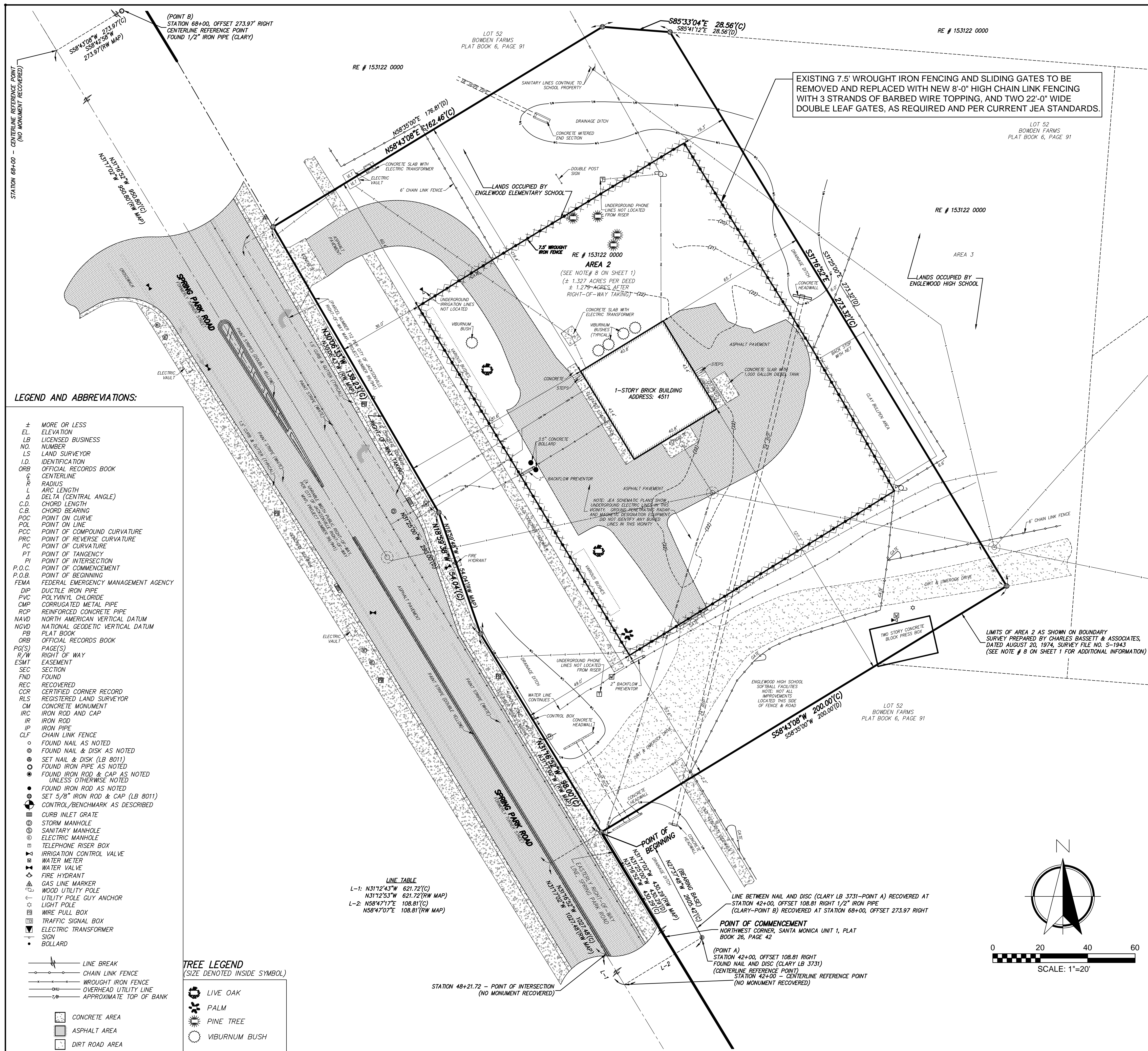
| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |

| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUPREE |
| DATE | MAR 2020 |
| CHECKED BY | JE COLLINS |
| DATE | MAR 2020 |





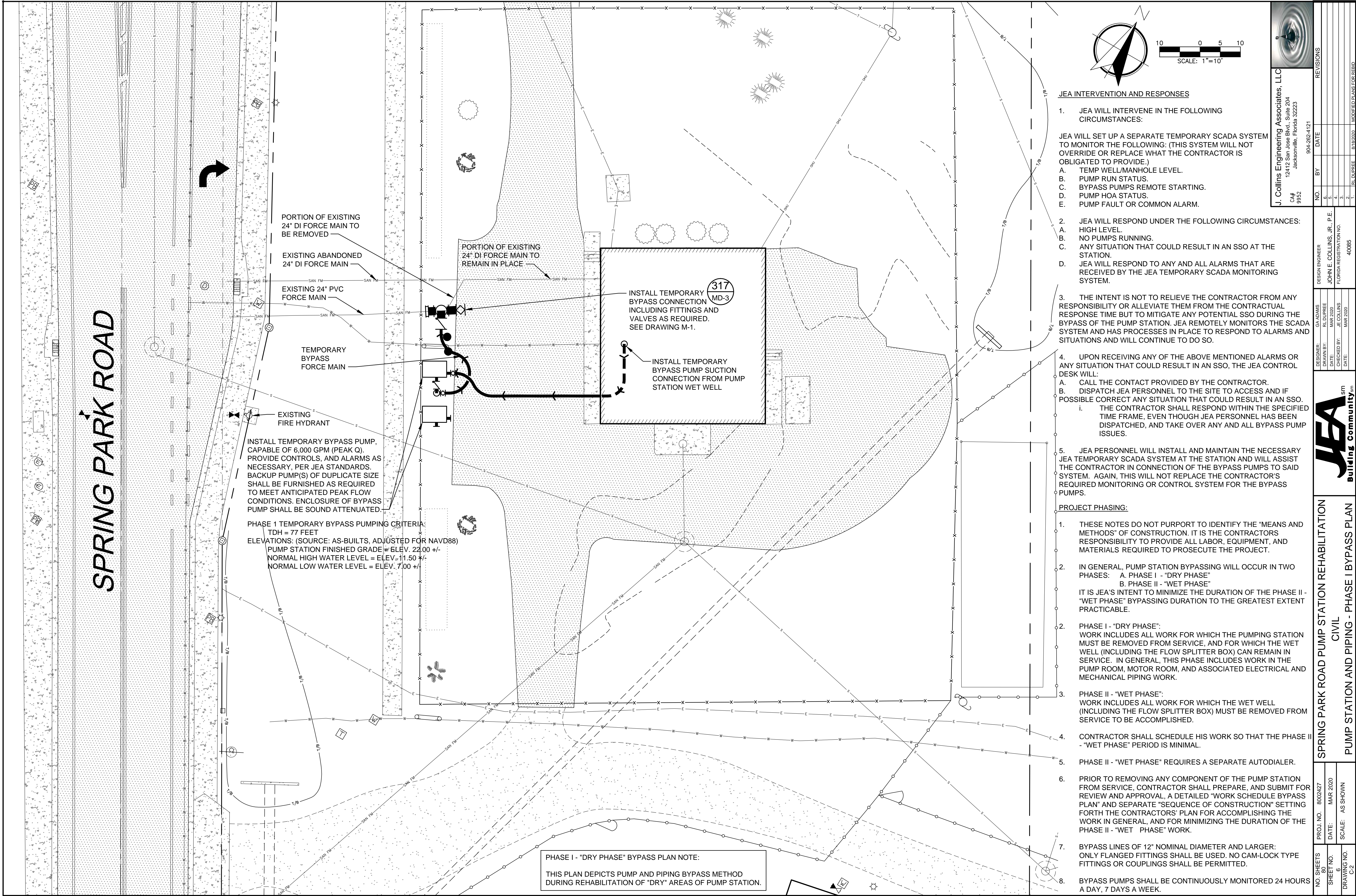
SPRING PARK ROAD PUMP STATION REHABILITATION
GENERAL, STRUCTURAL, AND MECHANICAL
LEGENDS

| | | | |
|-------------|-----|-----------|----------|
| NO. SHEETS | 80 | PROJ. NO. | 8002427 |
| SHEET NO. | | DATE | MAR 2020 |
| DRAWING NO. | G-3 | SCALE | AS SHOWN |



EXISTING 7.5' WROUGHT IRON FENCING AND SLIDING GATES TO BE REMOVED AND REPLACED WITH NEW 8'-0" HIGH CHAIN LINK FENCING WITH 3 STRANDS OF BARBED WIRE TOPPING, AND TWO 22'-0" WIDE DOUBLE LEAF GATES, AS REQUIRED AND PER CURRENT JEA STANDARDS.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|-------------------|--|--|--|----------------|--|---|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|-----|--|-----------|--|-----------|--|--------------------------|--|
| NO. SHEETS 80 | | PROJ. NO. 8002427 | | SPRING PARK ROAD PUMP STATION REHABILITATION | | | |  | | | | DESIGN ENGINEER JOHN E. COLLINS, JR., P.E. FLORIDA REGISTRATION NO. 40085 | | | | J. Collins Engineering Associates, LLC 1241 Sandline Road, Suite 200 Jacksonville, Florida 32223 CA# 9952 904-262-4121 | | | |  | | | | | | | | | | | |
| SHEET NO. | | DATE: MAR 2020 | | DRAWN BY: RL DUPREE | | DATE: MAR 2020 | | | | | | | | | | | | | | | | | | NO. | | BY | | DATE | | REVISIONS | |
| DRAWING NO. C-1 | | SCALE: AS SHOWN | | DATE: MAR 2020 | | DATE: MAR 2020 | | | | | | | | | | | | | | | | | | 1 | | RL DUPREE | | 8/12/2020 | | MODIFIED PLANS FOR REBID | |



SPRING PARK ROAD

PORTION OF EXISTING 24" DI FORCE MAIN TO BE REMOVED

EXISTING ABANDONED 24" DI FORCE MAIN

EXISTING 24" PVC FORCE MAIN

TEMPORARY BYPASS FORCE MAIN

EXISTING FIRE HYDRANT

INSTALL TEMPORARY BYPASS PUMP, CAPABLE OF 6,000 GPM (PEAK Q). PROVIDE CONTROLS, AND ALARMS AS NECESSARY, PER JEA STANDARDS. BACKUP PUMP(S) OF DUPLICATE SIZE SHALL BE FURNISHED AS REQUIRED TO MEET ANTICIPATED PEAK FLOW CONDITIONS. ENCLOSURE OF BYPASS PUMP SHALL BE SOUND ATTENUATED.

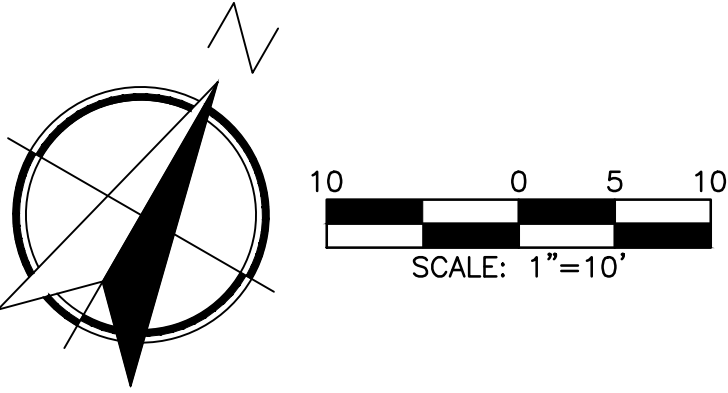
PHASE 1 TEMPORARY BYPASS PUMPING CRITERIA:
TDH = 77 FEET
ELEVATIONS: (SOURCE: AS-BUILTS, ADJUSTED FOR NAVD88)
PUMP STATION FINISHED GRADE = ELEV. 22.00 +/-
NORMAL HIGH WATER LEVEL = ELEV. 11.50 +/-
NORMAL LOW WATER LEVEL = ELEV. 7.00 +/-

PORTION OF EXISTING 24" DI FORCE MAIN TO REMAIN IN PLACE

INSTALL TEMPORARY BYPASS CONNECTION INCLUDING FITTINGS AND VALVES AS REQUIRED. SEE DRAWING M-1.

INSTALL TEMPORARY BYPASS PUMP SUCTION CONNECTION FROM PUMP STATION WET WELL

PHASE I - "DRY PHASE" BYPASS PLAN NOTE:
THIS PLAN DEPICTS PUMP AND PIPING BYPASS METHOD DURING REHABILITATION OF "DRY" AREAS OF PUMP STATION.



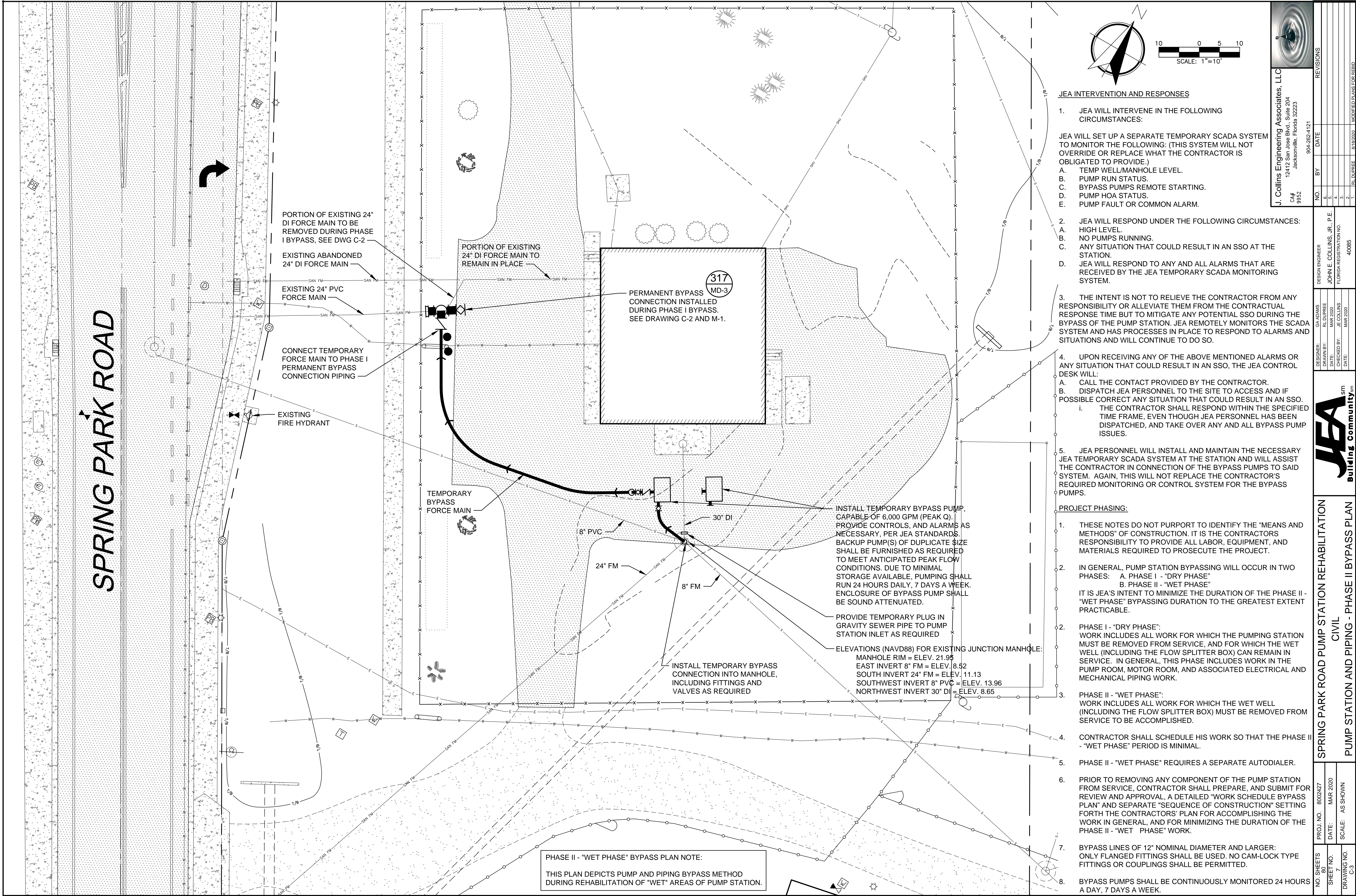
JEA INTERVENTION AND RESPONSES

- JEA WILL INTERVENE IN THE FOLLOWING CIRCUMSTANCES:

JEA WILL SET UP A SEPARATE TEMPORARY SCADA SYSTEM TO MONITOR THE FOLLOWING: (THIS SYSTEM WILL NOT OVERRIDE OR REPLACE WHAT THE CONTRACTOR IS OBLIGATED TO PROVIDE.)
A. TEMP WELL/MANHOLE LEVEL.
B. PUMP RUN STATUS.
C. BYPASS PUMPS REMOTE STARTING.
D. PUMP HOA STATUS.
E. PUMP FAULT OR COMMON ALARM.
 - JEA WILL RESPOND UNDER THE FOLLOWING CIRCUMSTANCES:
A. HIGH LEVEL.
B. NO PUMPS RUNNING.
C. ANY SITUATION THAT COULD RESULT IN AN SSO AT THE STATION.
D. JEA WILL RESPOND TO ANY AND ALL ALARMS THAT ARE RECEIVED BY THE JEA TEMPORARY SCADA MONITORING SYSTEM.
 - THE INTENT IS NOT TO RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY OR ALLEVIATE THEM FROM THE CONTRACTUAL RESPONSE TIME BUT TO MITIGATE ANY POTENTIAL SSO DURING THE BYPASS OF THE PUMP STATION. JEA REMOTELY MONITORS THE SCADA SYSTEM AND HAS PROCESSES IN PLACE TO RESPOND TO ALARMS AND SITUATIONS AND WILL CONTINUE TO DO SO.
 - UPON RECEIVING ANY OF THE ABOVE MENTIONED ALARMS OR ANY SITUATION THAT COULD RESULT IN AN SSO, THE JEA CONTROL DESK WILL:
A. CALL THE CONTACT PROVIDED BY THE CONTRACTOR.
B. DISPATCH JEA PERSONNEL TO THE SITE TO ACCESS AND IF POSSIBLE CORRECT ANY SITUATION THAT COULD RESULT IN AN SSO.
i. THE CONTRACTOR SHALL RESPOND WITHIN THE SPECIFIED TIME FRAME, EVEN THOUGH JEA PERSONNEL HAS BEEN DISPATCHED, AND TAKE OVER ANY AND ALL BYPASS PUMP ISSUES.
 - JEA PERSONNEL WILL INSTALL AND MAINTAIN THE NECESSARY JEA TEMPORARY SCADA SYSTEM AT THE STATION AND WILL ASSIST THE CONTRACTOR IN CONNECTION OF THE BYPASS PUMPS TO SAID SYSTEM. AGAIN, THIS WILL NOT REPLACE THE CONTRACTOR'S REQUIRED MONITORING OR CONTROL SYSTEM FOR THE BYPASS PUMPS.
- PROJECT PHASING:
- THESE NOTES DO NOT PURPORT TO IDENTIFY THE "MEANS AND METHODS" OF CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PROSECUTE THE PROJECT.
 - IN GENERAL, PUMP STATION BYPASSING WILL OCCUR IN TWO PHASES:
A. PHASE I - "DRY PHASE"
B. PHASE II - "WET PHASE"
IT IS JEA'S INTENT TO MINIMIZE THE DURATION OF THE PHASE II - "WET PHASE" BYPASSING DURATION TO THE GREATEST EXTENT PRACTICABLE.
 - PHASE I - "DRY PHASE":
WORK INCLUDES ALL WORK FOR WHICH THE PUMPING STATION MUST BE REMOVED FROM SERVICE, AND FOR WHICH THE WET WELL (INCLUDING THE FLOW SPLITTER BOX) CAN REMAIN IN SERVICE. IN GENERAL, THIS PHASE INCLUDES WORK IN THE PUMP ROOM, MOTOR ROOM, AND ASSOCIATED ELECTRICAL AND MECHANICAL PIPING WORK.
 - PHASE II - "WET PHASE":
WORK INCLUDES ALL WORK FOR WHICH THE WET WELL (INCLUDING THE FLOW SPLITTER BOX) MUST BE REMOVED FROM SERVICE TO BE ACCOMPLISHED.
 - CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT THE PHASE II - "WET PHASE" PERIOD IS MINIMAL.
 - PHASE II - "WET PHASE" REQUIRES A SEPARATE AUTODIALER.
 - PRIOR TO REMOVING ANY COMPONENT OF THE PUMP STATION FROM SERVICE, CONTRACTOR SHALL PREPARE, AND SUBMIT FOR REVIEW AND APPROVAL, A DETAILED "WORK SCHEDULE BYPASS PLAN" AND SEPARATE "SEQUENCE OF CONSTRUCTION" SETTING FORTH THE CONTRACTORS' PLAN FOR ACCOMPLISHING THE WORK IN GENERAL, AND FOR MINIMIZING THE DURATION OF THE PHASE II - "WET" PHASE" WORK.
 - BYPASS LINES OF 12" NOMINAL DIAMETER AND LARGER: ONLY FLANGED FITTINGS SHALL BE USED. NO CAM-LOCK TYPE FITTINGS OR COUPLINGS SHALL BE PERMITTED.
 - BYPASS PUMPS SHALL BE CONTINUOUSLY MONITORED 24 HOURS A DAY, 7 DAYS A WEEK.

J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C.E. 9953

| | | | | | | | | | | | | | | | |
|--------------------|--|-------------------|--|--|--|----------------------------|--|-----|--|----------|--|-----------|--|--------------------------|--|
| NO. SHEETS 80 | | PROJ. NO. 8002427 | | SPRING PARK ROAD PUMP STATION REHABILITATION | | | | | | | | | | | |
| SHEET NO. 6 | | DATE: MAR 2020 | | CIVIL | | | | | | | | | | | |
| DRAWING NO. C-2 | | SCALE: AS SHOWN | | PUMP STATION AND PIPING - PHASE I BYPASS PLAN | | | | | | | | | | | |
| | | | |  | | | | | | | | | | | |
| | | | | DESIGNER: GA ADAMS | | DESIGN ENGINEER | | NO. | | BY | | DATE | | REVISIONS | |
| | | | | DRAWN BY: RL DUPEE | | JOHN E. COLLINS, JR., P.E. | | 6. | | | | | | | |
| | | | | DATE: MAR 2020 | | FLORIDA REGISTRATION NO. | | 5. | | | | | | | |
| | | | | CHECKED BY: JE COLLINS | | | | 4. | | | | | | | |
| | | | | DATE: MAR 2020 | | | | 3. | | | | | | | |
| | | | | | | | | 2. | | | | | | | |
| | | | | | | | | 1. | | RL DUPEE | | 8/18/2020 | | MODIFIED PLANS FOR REBID | |



JEA INTERVENTION AND RESPONSES

1. JEA WILL INTERVENE IN THE FOLLOWING CIRCUMSTANCES:

JEA WILL SET UP A SEPARATE TEMPORARY SCADA SYSTEM TO MONITOR THE FOLLOWING: (THIS SYSTEM WILL NOT OVERRIDE OR REPLACE WHAT THE CONTRACTOR IS OBLIGATED TO PROVIDE.)

- A. TEMP WELL/MANHOLE LEVEL.
- B. PUMP RUN STATUS.
- C. BYPASS PUMPS REMOTE STARTING.
- D. PUMP HOA STATUS.
- E. PUMP FAULT OR COMMON ALARM.

2. JEA WILL RESPOND UNDER THE FOLLOWING CIRCUMSTANCES:

- A. HIGH LEVEL.
- B. NO PUMPS RUNNING.
- C. ANY SITUATION THAT COULD RESULT IN AN SSO AT THE STATION.
- D. JEA WILL RESPOND TO ANY AND ALL ALARMS THAT ARE RECEIVED BY THE JEA TEMPORARY SCADA MONITORING SYSTEM.

3. THE INTENT IS NOT TO RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY OR ALLEVIATE THEM FROM THE CONTRACTUAL RESPONSE TIME BUT TO MITIGATE ANY POTENTIAL SSO DURING THE BYPASS OF THE PUMP STATION. JEA REMOTELY MONITORS THE SCADA SYSTEM AND HAS PROCESSES IN PLACE TO RESPOND TO ALARMS AND SITUATIONS AND WILL CONTINUE TO DO SO.

4. UPON RECEIVING ANY OF THE ABOVE MENTIONED ALARMS OR ANY SITUATION THAT COULD RESULT IN AN SSO, THE JEA CONTROL DESK WILL:

- A. CALL THE CONTACT PROVIDED BY THE CONTRACTOR.
- B. DISPATCH JEA PERSONNEL TO THE SITE TO ACCESS AND IF POSSIBLE CORRECT ANY SITUATION THAT COULD RESULT IN AN SSO.
 - i. THE CONTRACTOR SHALL RESPOND WITHIN THE SPECIFIED TIME FRAME, EVEN THOUGH JEA PERSONNEL HAS BEEN DISPATCHED, AND TAKE OVER ANY AND ALL BYPASS PUMP ISSUES.

5. JEA PERSONNEL WILL INSTALL AND MAINTAIN THE NECESSARY JEA TEMPORARY SCADA SYSTEM AT THE STATION AND WILL ASSIST THE CONTRACTOR IN CONNECTION OF THE BYPASS PUMPS TO SAID SYSTEM. AGAIN, THIS WILL NOT REPLACE THE CONTRACTOR'S REQUIRED MONITORING OR CONTROL SYSTEM FOR THE BYPASS PUMPS.

PROJECT PHASING:

1. THESE NOTES DO NOT PURPORT TO IDENTIFY THE "MEANS AND METHODS" OF CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PROSECUTE THE PROJECT.

2. IN GENERAL, PUMP STATION BYPASSING WILL OCCUR IN TWO PHASES: A. PHASE I - "DRY PHASE" B. PHASE II - "WET PHASE"

IT IS JEA'S INTENT TO MINIMIZE THE DURATION OF THE PHASE II - "WET PHASE" BYPASSING DURATION TO THE GREATEST EXTENT PRACTICABLE.

2. PHASE I - "DRY PHASE": WORK INCLUDES ALL WORK FOR WHICH THE PUMPING STATION MUST BE REMOVED FROM SERVICE, AND FOR WHICH THE WET WELL (INCLUDING THE FLOW SPLITTER BOX) CAN REMAIN IN SERVICE. IN GENERAL, THIS PHASE INCLUDES WORK IN THE PUMP ROOM, MOTOR ROOM, AND ASSOCIATED ELECTRICAL AND MECHANICAL PIPING WORK.

3. PHASE II - "WET PHASE": WORK INCLUDES ALL WORK FOR WHICH THE WET WELL (INCLUDING THE FLOW SPLITTER BOX) MUST BE REMOVED FROM SERVICE TO BE ACCOMPLISHED.

4. CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT THE PHASE II - "WET PHASE" PERIOD IS MINIMAL.

5. PHASE II - "WET PHASE" REQUIRES A SEPARATE AUTODIALER.

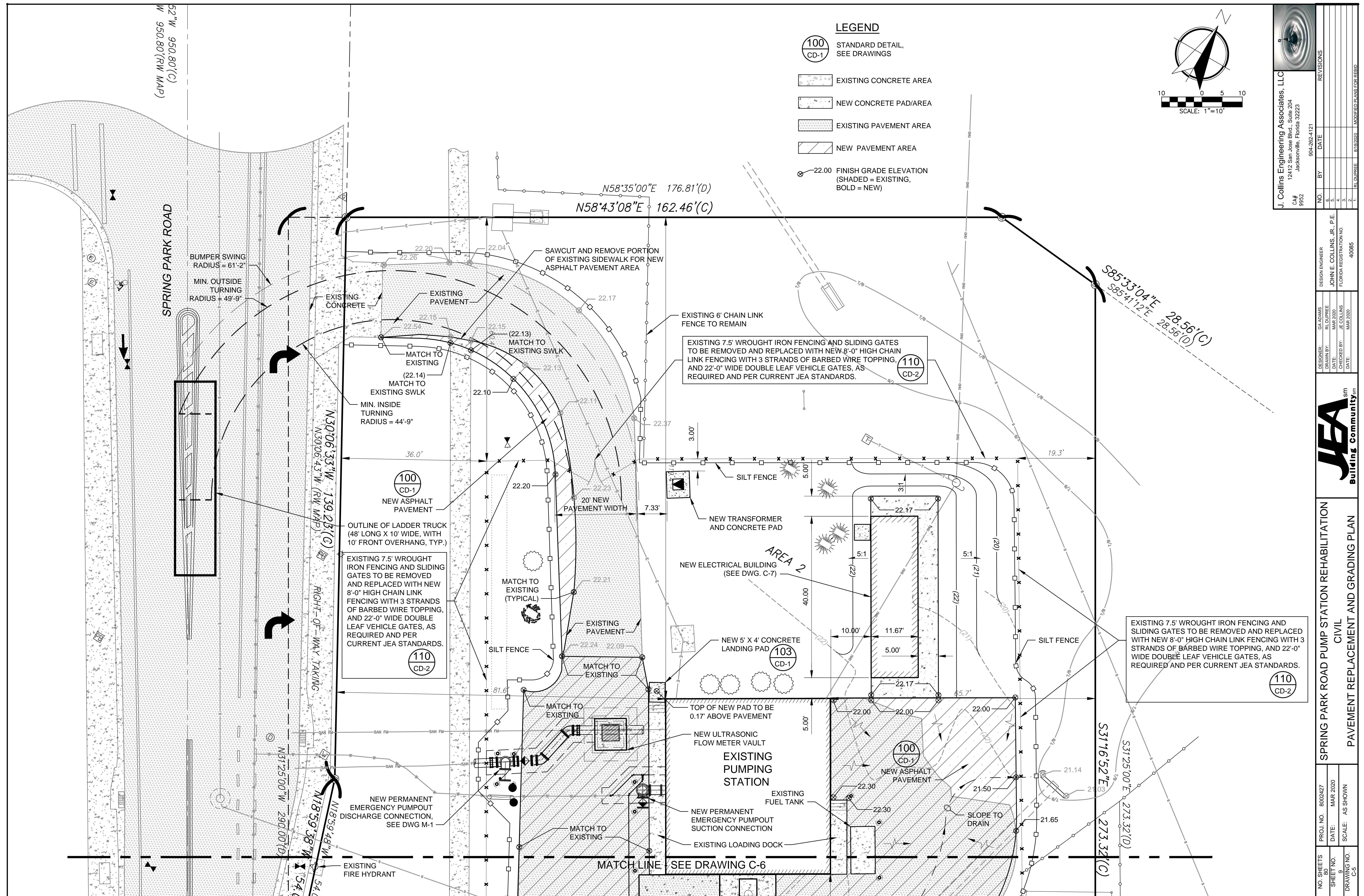
6. PRIOR TO REMOVING ANY COMPONENT OF THE PUMP STATION FROM SERVICE, CONTRACTOR SHALL PREPARE, AND SUBMIT FOR REVIEW AND APPROVAL, A DETAILED "WORK SCHEDULE BYPASS PLAN" AND SEPARATE "SEQUENCE OF CONSTRUCTION" SETTING FORTH THE CONTRACTORS' PLAN FOR ACCOMPLISHING THE WORK IN GENERAL, AND FOR MINIMIZING THE DURATION OF THE PHASE II - "WET PHASE" WORK.


7. BYPASS LINES OF 12" NOMINAL DIAMETER AND LARGER: ONLY FLANGED FITTINGS SHALL BE USED. NO CAM-LOCK TYPE FITTINGS OR COUPLINGS SHALL BE PERMITTED.

8. BYPASS PUMPS SHALL BE CONTINUOUSLY MONITORED 24 HOURS A DAY, 7 DAYS A WEEK.

J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C/E
9952

| NO. SHEETS | | PROJ. NO. | 8002427 | DATE: | MAR 2020 | SCALE: | AS SHOWN |
|--------------------------|--|----------------------------|---------|-------|----------|--------|----------|
| SHEET NO. | | DRAWING NO. | | | | | |
| DRAWING NO. | | C-3 | | | | | |
| DESIGNER | | GA ADAMS | | | | | |
| DRAWN BY | | RL DUPREE | | | | | |
| DATE | | MAR 2020 | | | | | |
| CHECKED BY | | JE COLLINS | | | | | |
| DATE | | MAR 2020 | | | | | |
| DESIGN ENGINEER | | JOHN E. COLLINS, JR., P.E. | | | | | |
| FLORIDA REGISTRATION NO. | | 40085 | | | | | |
| NO. | | BY | | | | | |
| DATE | | 9/4/2020 | | | | | |
| REVISIONS | | MODIFIED PLANS FOR REBID | | | | | |



| | | | |
|---|----|--|------------------------------------|
|  | | J. Collins Engineering Associates, LLC 12412 San Juan Ave., Suite 204 Jacksonville, Florida 32223 CA# 9852 | |
| 904-282-4121 | | NO. BY DATE REVISIONS | |
| 6 | | | |
| 5 | | | |
| 4 | | | |
| 3 | | | |
| 2 | | | |
| 1 | RL | EMPREE | 6/18/2020 MODIFIED PLANS FOR REBID |

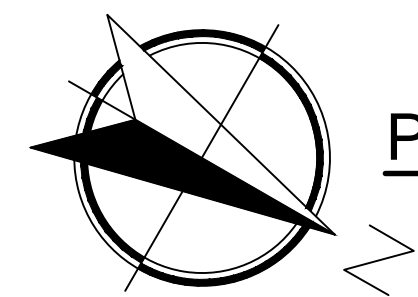
| |
|----------------------------|
| DESIGN ENGINEER |
| JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. |
| 40085 |

| | |
|-------------|------------|
| DESIGNER: | GA ADAMS |
| DRAWN BY: | RL DUPREE |
| DATE: | MAR 2020 |
| CHECKED BY: | JE COLLINS |
| DATE: | MAR 2020 |



| | |
|--|-------|
| SPRING PARK ROAD PUMP STATION REHABILITATION | CIVIL |
| PAVEMENT REPLACEMENT AND GRADING PLAN | |

| | | | |
|--------------------|-------------------|-----------------|--|
| NO. SHEETS 80 | PROJ. NO. 8002427 | | |
| | SHEET NO. 9 | DATE: MAR 2020 | |
| | | SCALE: AS SHOWN | |
| DRAWING NO. C-5 | | | |



2' 0 3'

SCALE: $\frac{3}{8}" = 1'-0"$

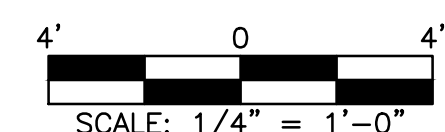
1. THE ELECTRICAL BUILDING SHALL BE A PRECAST CONCRETE BUILDING AS MANUFACTURED BY OLD CASTLE PRECAST, INC., OR EQUAL. THE BUILDING DIMENSIONS SHALL BE AS REQUIRED TO ACCOMMODATE THE EQUIPMENT FURNISHED BUT NO LESS THAN MINIMUMS INDICATED ABOVE.
2. SEE STRUCTURAL DRAWING FOR FOUNDATION DETAILS.
3. INTERIOR AND EXTERIOR COLORS OF ELECTRICAL BUILDING TO BE SPECIFIED BY JEA PROJECT MANAGER
4. BUILDING SHALL BE EQUIPPED WITH 7'-0" HIGH ALUMINUM DOORS AND DOOR FRAMES, 316 STAINLESS STEEL HARDWARE, AND JEA STANDARD DOOR LOCKSETS AND KEYS.
5. BUILDING INTERIOR SHALL BE SEALED AND PAINT FINISHED. BUILDING FLOOR SHALL BE SLIP RESISTANT GRAY AND WALLS & CEILINGS SHALL BE PAINTED WHITE.
6. BUILDING EXTERIOR SHALL HAVE TWO APPLICATIONS OF THOROSEAL FINISHED WITH ONE EXPOSED OF THOROCOAT. PAINT.

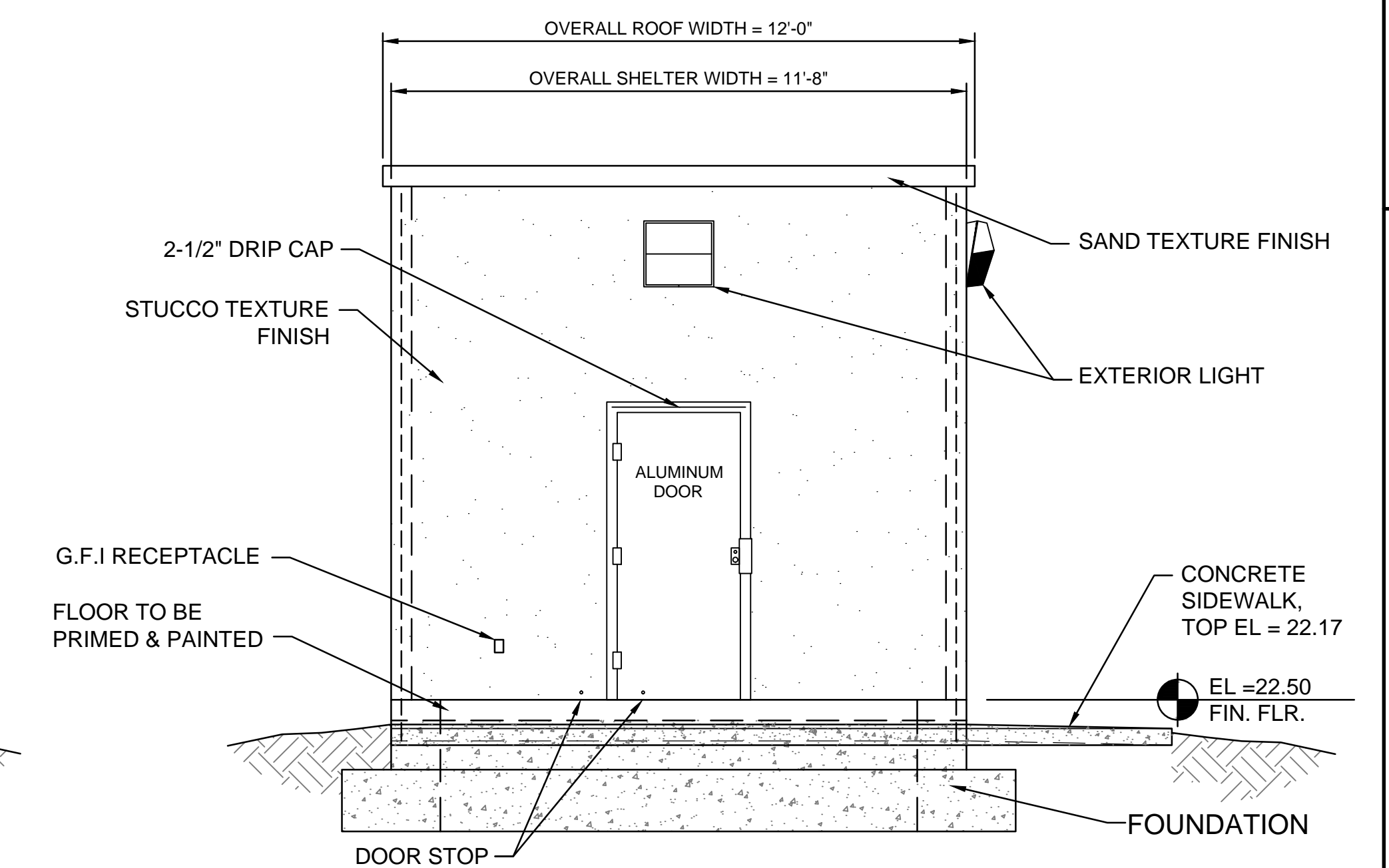
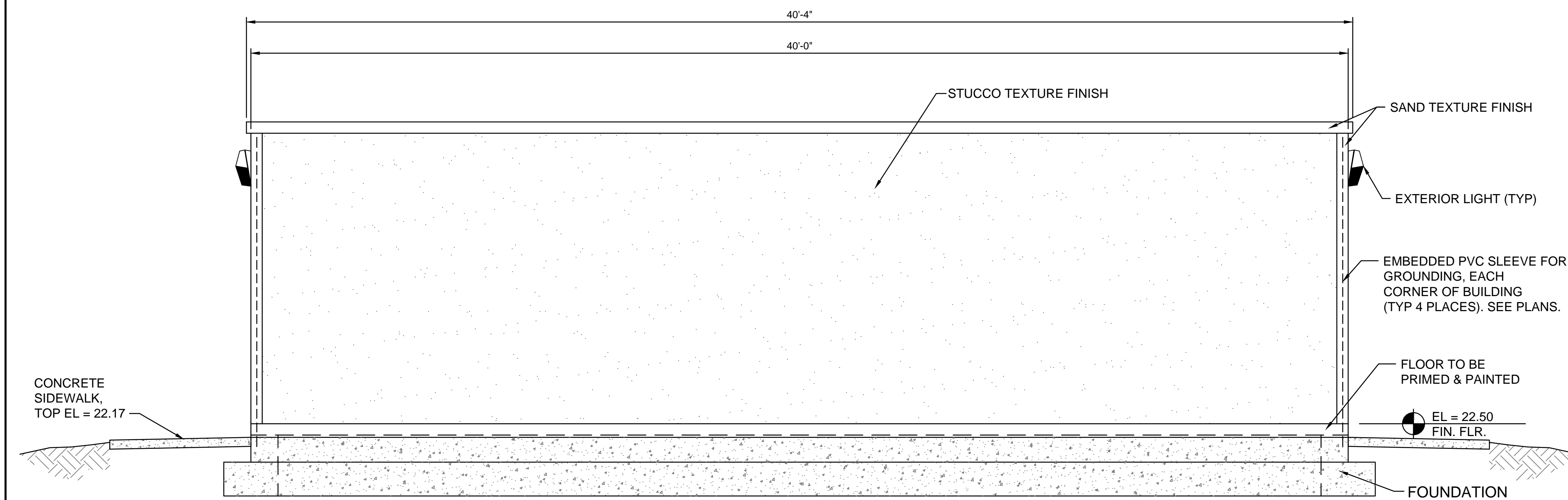
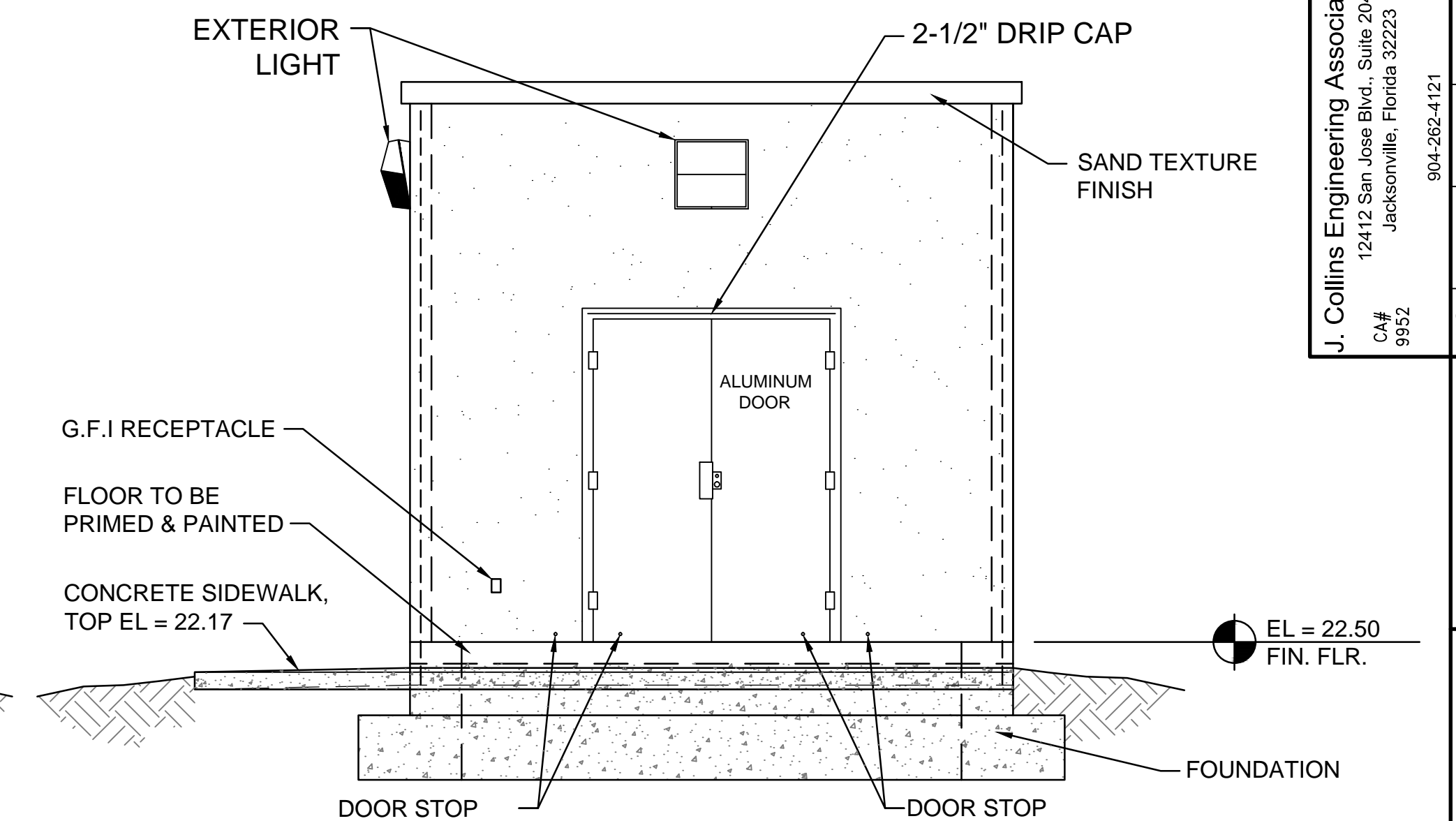
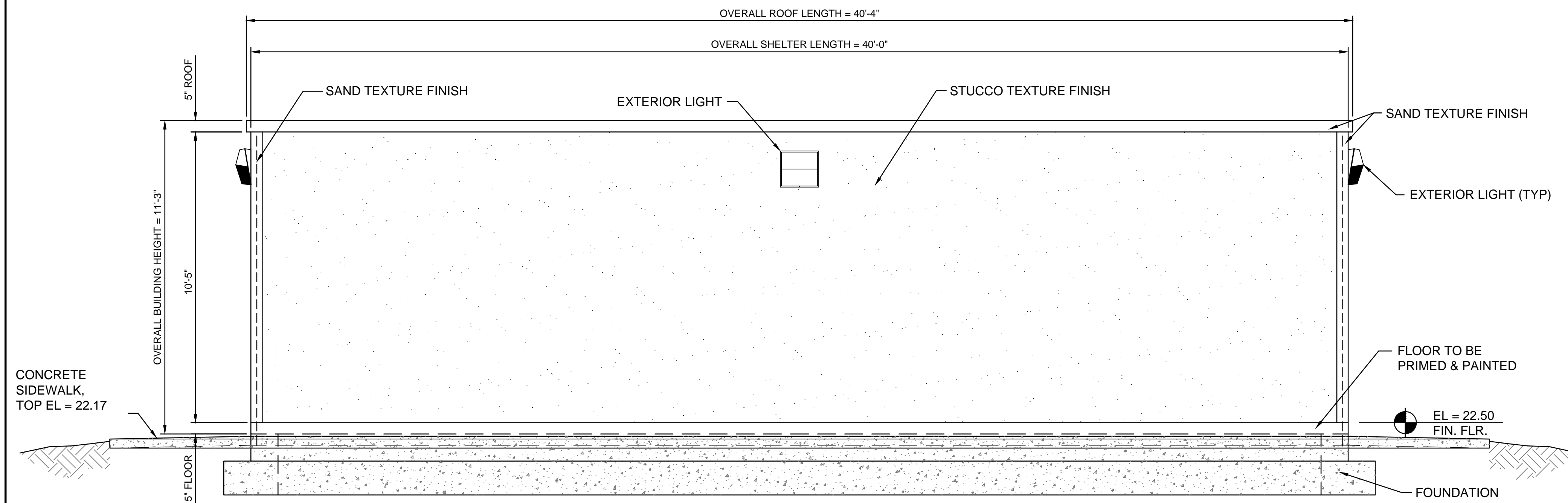
| | |
|-------------------------|---|
| STRUCTURAL: | |
| OUTSIDE DIMENSION: | 40'-0" LONG x 11'-8" WIDE x 10'-5" |
| HIGH FLOOR LOAD RATING: | 250 PSF ROOF LOAD RATING: 65 PSF |
| WIND LOAD RATING: | 150 MPH, EXP "C" |
| BULLET RESISTANCE: | UL752 LEVEL 4 |
| SEISMIC ZONE: | ZONE 4 |
| TIE DOWN KIT: | BRACKETS AND BOLTS. PROVIDED BY MANUFACTURER AS REQUIRED BY WIND LOAD |
| FINISHES: | |
| EXTERIOR WALLS: | EXPOSED AGGREGATE |
| INTERIOR WALLS: | 1/8" FRP MOUNTED ON 1/2" PLYWOOD. WHITE PAINT |
| INSULATION: | MIN R-15 ON WALLS AND R-22 ON CEILING FLOOR; PREPARED, PRIMED AND FINISHED. SLIP RESISTANT GRAY |
| COLOR ROOFING: | WHITE ELASTOMERIC COATING. SLOPED SO CENTER RIDGE LINE IS AT LEAST ONE INCH ABOVE SIDES |
| DOORS AND OPENINGS: | |
| DOORS: | SEE FLOOR PLAN. 1 3/4" THICK ALUMINUM |
| LOCKS: | JEA STANDARD LOCKSETS. INTERIOR PANIC BARS |
| HARDWARE: | ALL HARDWARE AND WEATHER STRIP SHALL BE 316 STAINLESS STEEL |
| DOOR HOOD: | DOOR DRIP CAPS - 2.5" WIDE |
| FLOOR: | PREPARED, PRIMED AND FINISHED SLIP RESISTANT GRAY COLOR |
| OPENINGS: | FLOOR AND WALL BLOCK-OUTS PER FLOOR PLAN |

PLATE S-53A
(MODIFIED)



NOTE:
FOR LOCATION AND GRADING,
SEE DRAWINGS C-3 AND C-4 .

[illegible]



NOTE:

1. SEE DWG C-6, PLATE 53A FOR PLAN AND NOTES

PREFABRICATED CONCRETE ENCLOSURE

JANUARY 2019

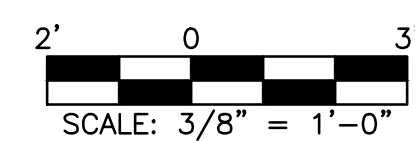


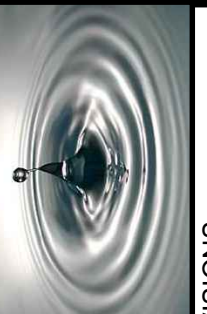
PLATE S-53B
(MODIFIED)

PREFABRICATED CONCRETE ENCLOSURE

JANUARY 2019



PLATE S-53C
(MODIFIED)



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223

CA#
9952

904-262-4121

| NO. | BY | DATE | REVISIONS |
|-----|-----------|-----------|--------------------------|
| 6. | | | |
| 5. | | | |
| 4. | | | |
| 3. | | | |
| 2. | | | |
| 1. | RL DUPREE | 8/18/2020 | MODIFIED PLANS FOR REBID |

DESIGN ENGINEER
JOHN E. COLLINS, JR., P.E.

FLORIDA REGISTRATION NO.

| | |
|-----------|-----------|
| DESIGNER: | GA ADAMS |
| DRAWN BY: | RL DUPREE |
| DATE: | MAR 2020 |

JEAsm
Building Communitysm

SPRING PARK ROAD PUMP STATION REHABILITATION

CIVIL

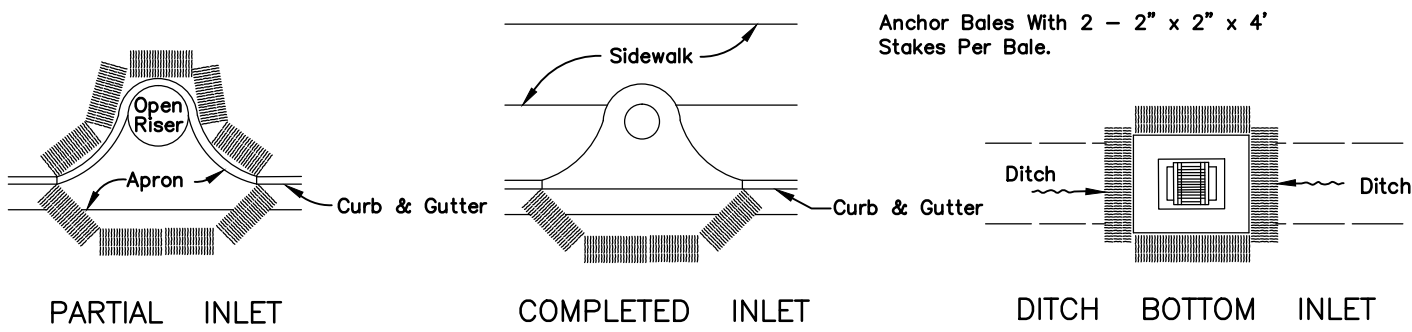
ELECTRICAL BUILDING ELEVATIONS

| | |
|------------------|-------------------|
| NO. SHEETS 80 | PROJ. NO. 8002427 |
| SHEET NO | DATE: MAR 2020 |

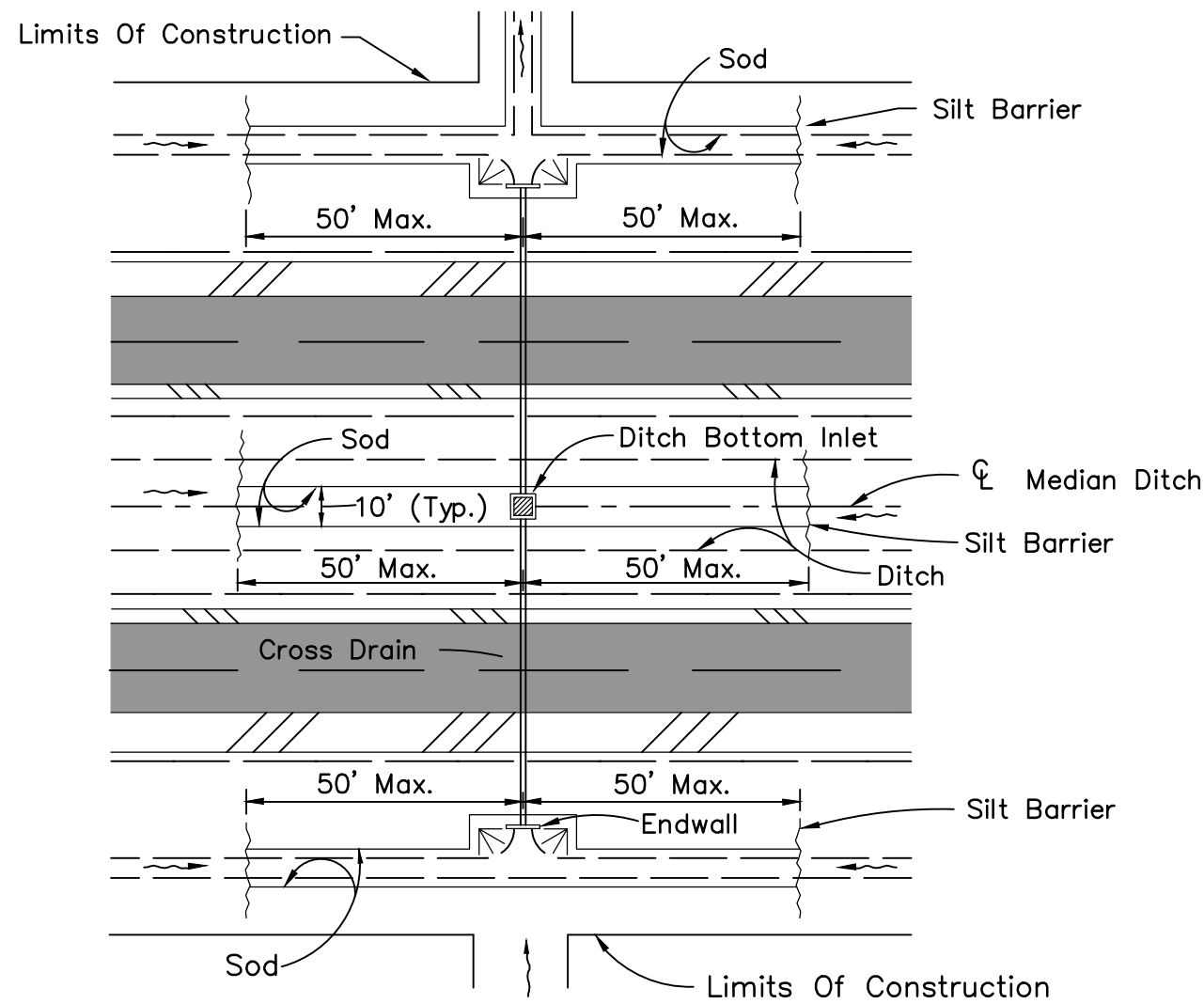
| |
|--------------------|
| NO. SHEETS 80 |
| SHEET NO. 12 |
| DRAWING NO. C-8 |

EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT RELEASABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION – ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED IN D-903. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE STRAW SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
17. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
18. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
19. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
20. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
21. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
22. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
23. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
24. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL – A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.R.) CHAPTER 6.
25. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
26. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
27. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
28. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
29. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
30. ALL DISTURBED AREAS TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, HAY BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
31. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
32. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
33. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SJRWMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.



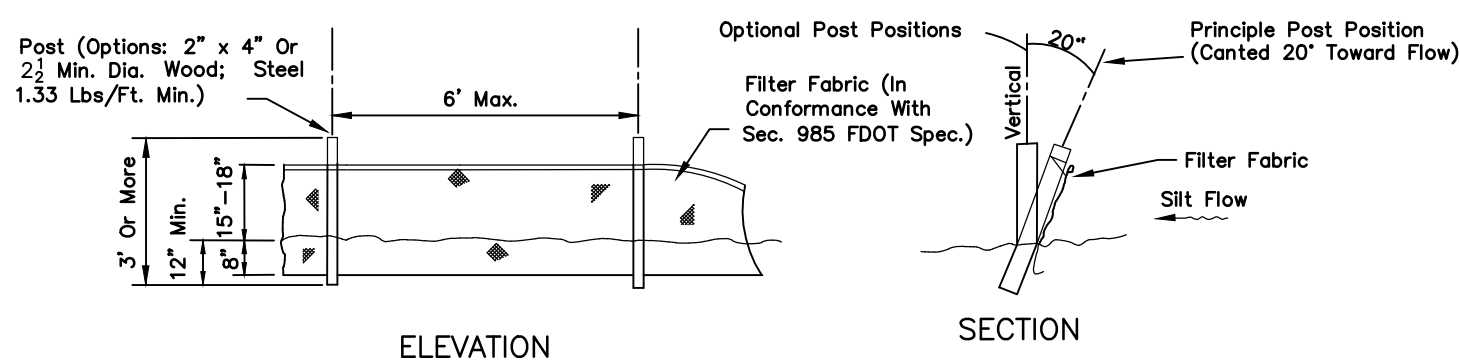
PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



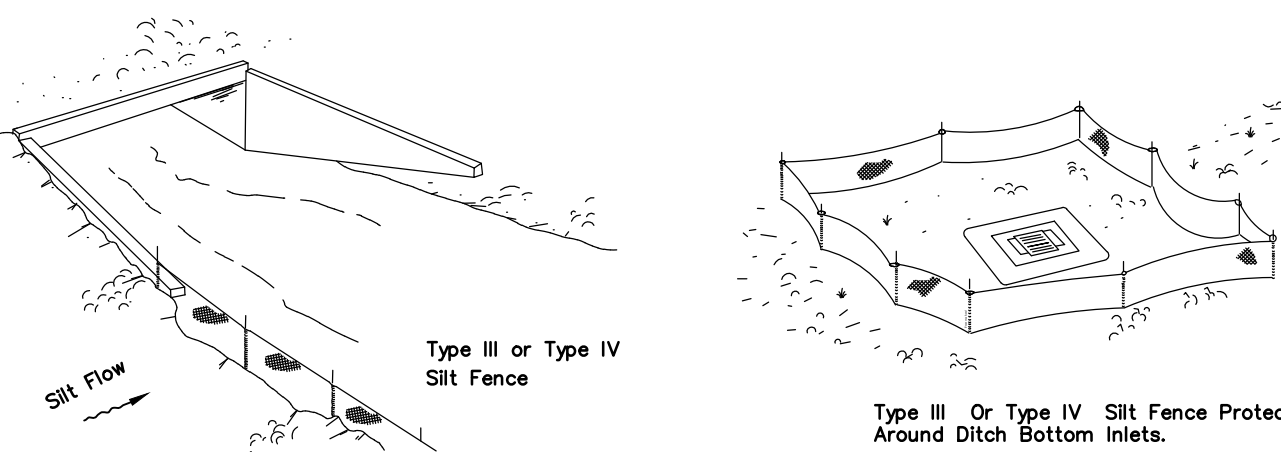
DITCH INSTALLATIONS AT DRAINAGE STRUCTURES

HAY BALE LOCATION

(D-901)
N.T.S.



TYPE III SILT FENCE

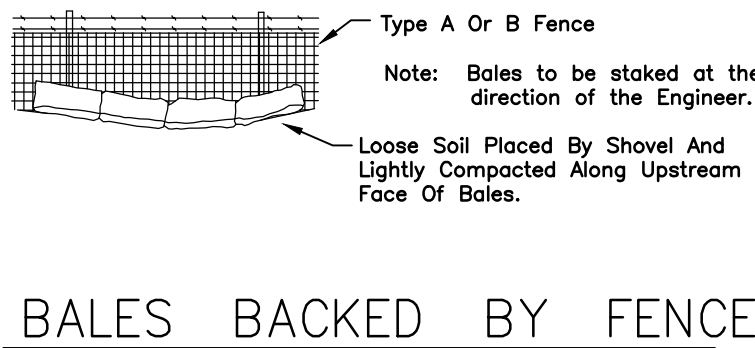


Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

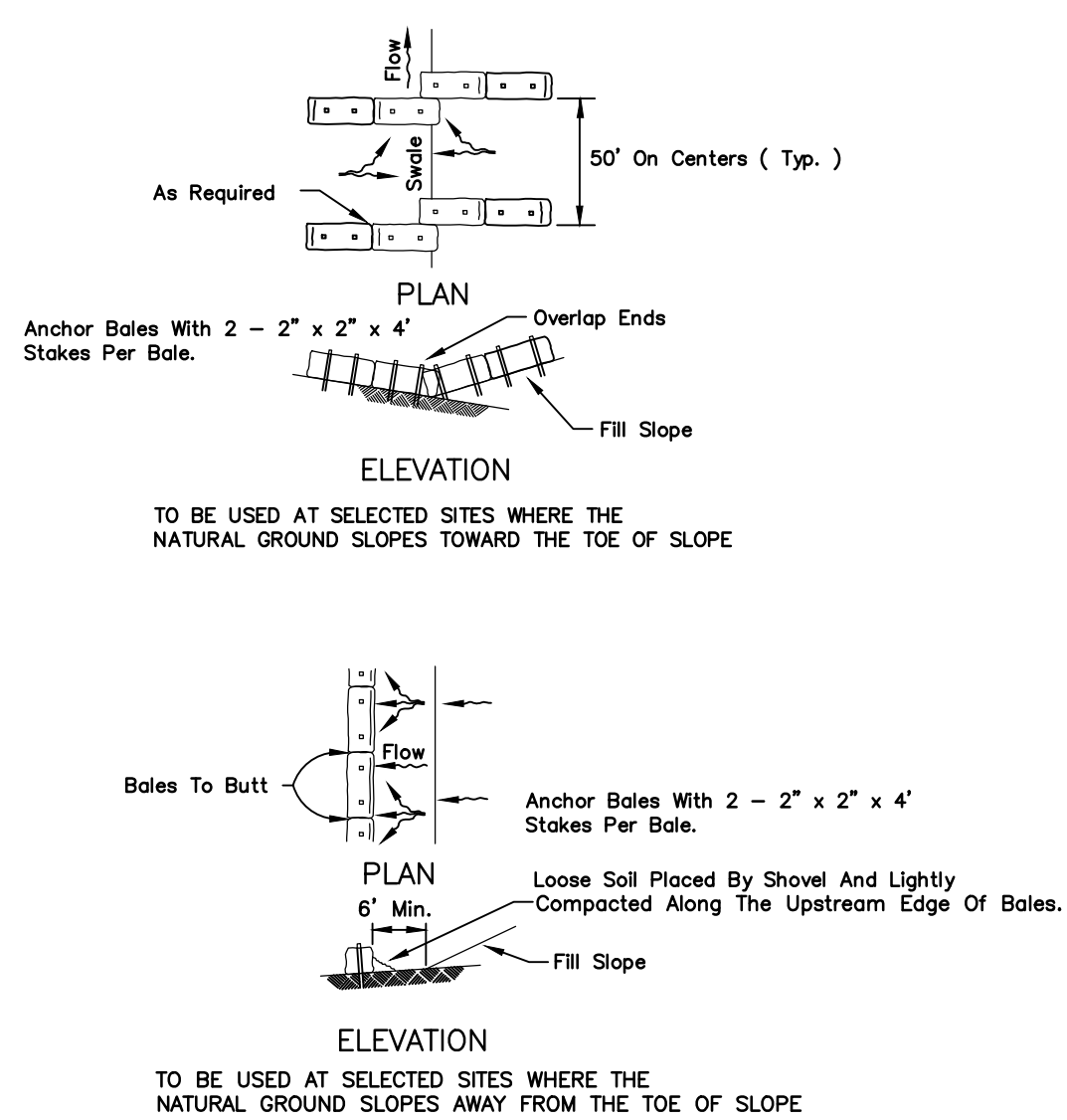
SILT FENCE APPLICATIONS

SILT FENCE TYPE III & IV

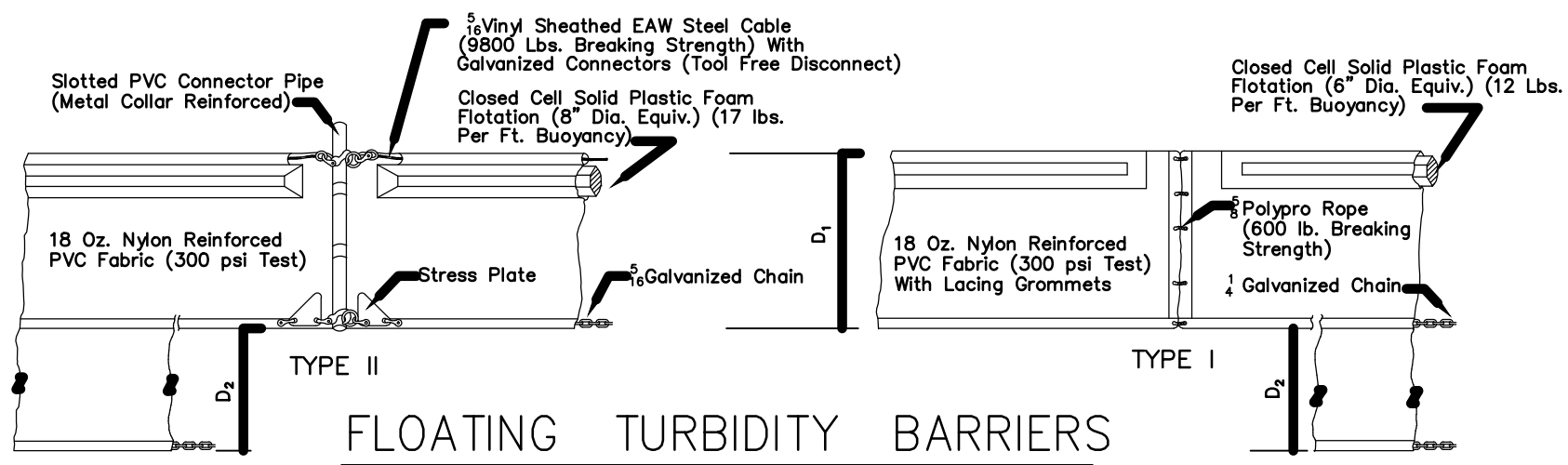
(D-908)
N.T.S.



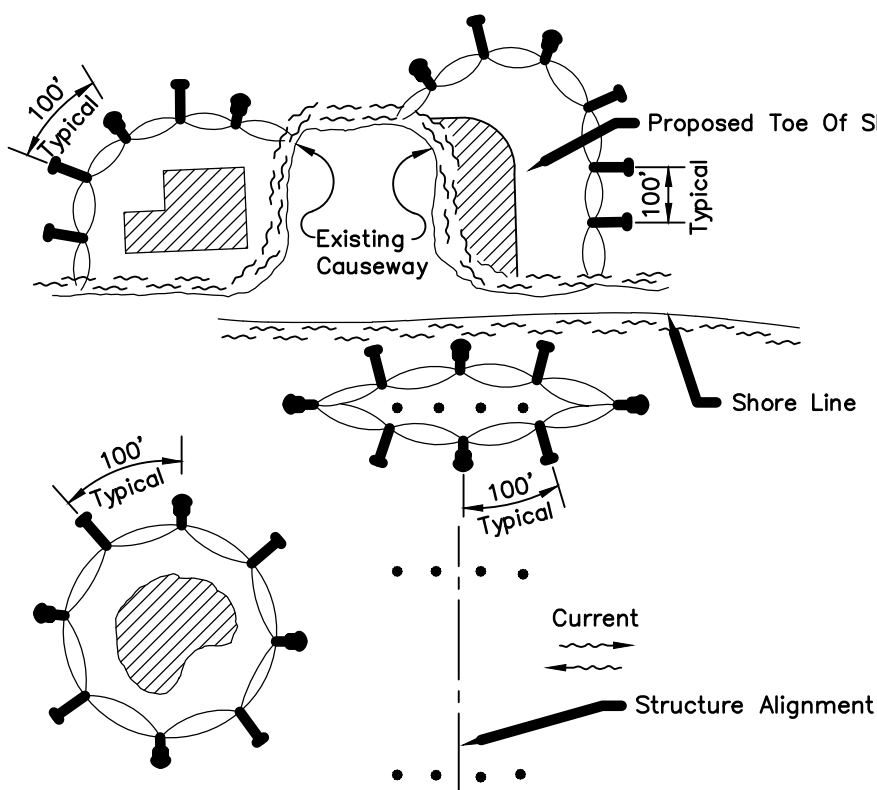
BALES BACKED BY FENCE



BARRIERS FOR FILL SLOPES



FLOATING TURBIDITY BARRIERS

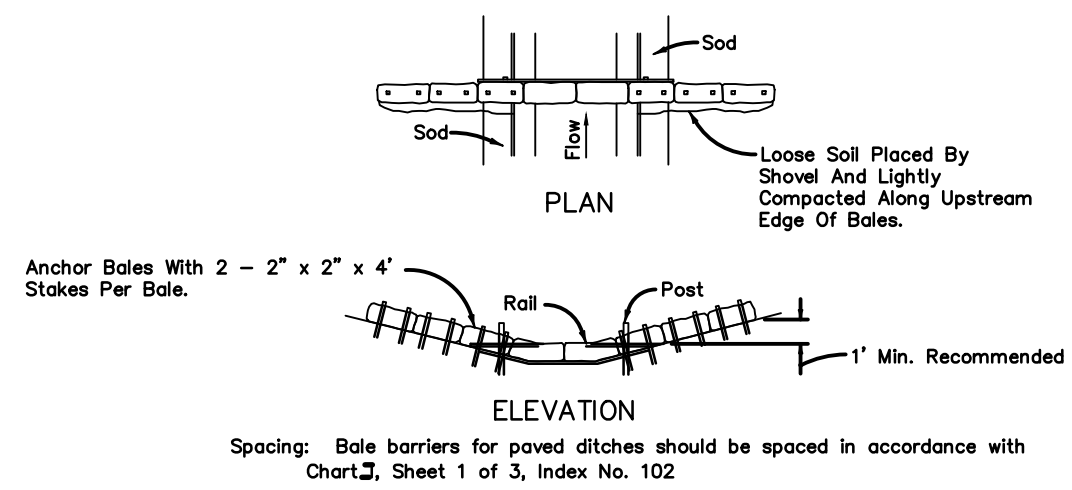


- NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the FDOT Standard Specifications.

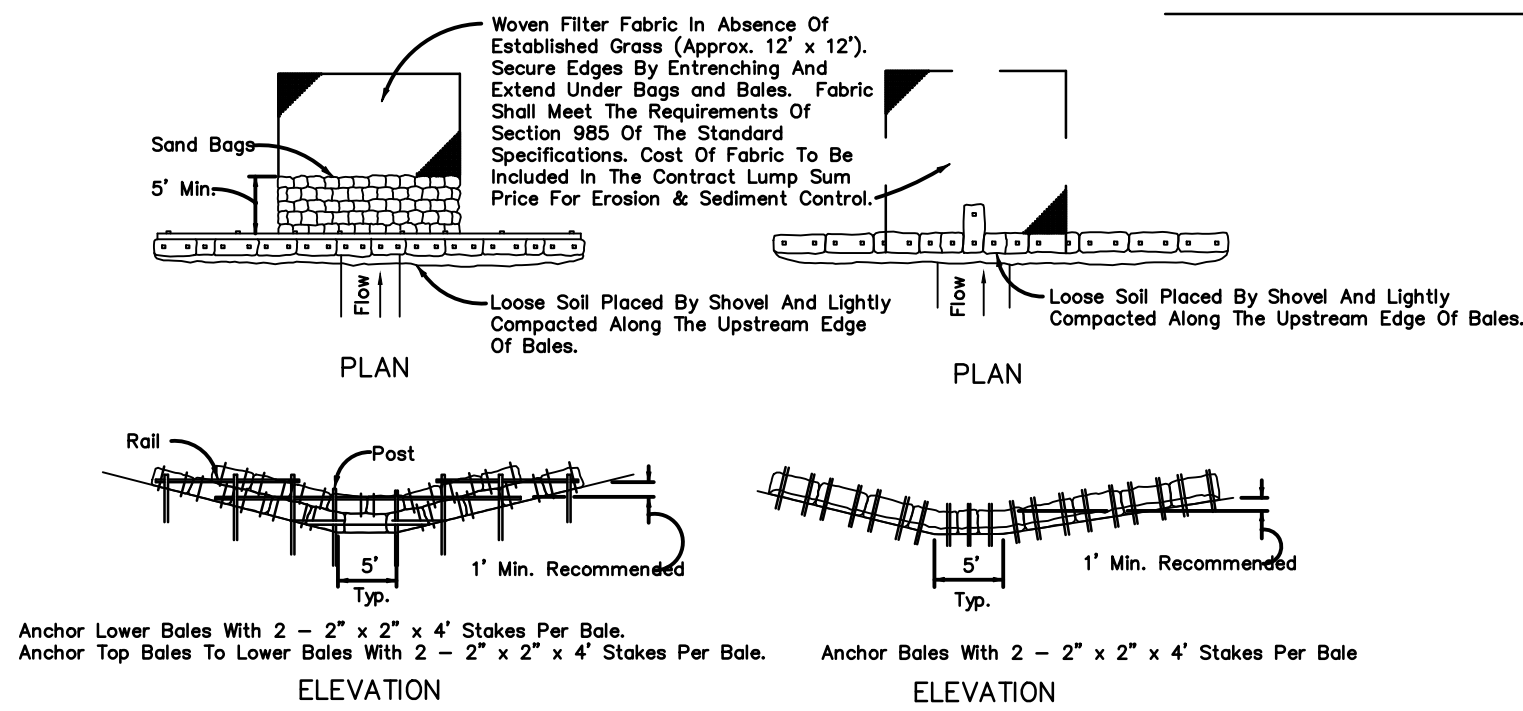
TURBIDITY BARRIER APPLICATIONS

TURBIDITY BARRIERS

(D-907)
N.T.S.



BARRIER FOR PAVED DITCH



BARRIER FOR UNPAVED DITCHES

HAY BALE BARRIERS TYPE I & II

(D-912)
N.T.S.

NOTE:
WHERE FDOT SPECS AND INDEX ARE REFERENCED, PLEASE REFER TO FDOT ROADWAY & TRAFFIC DESIGN STANDARDS, AND FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C.E.# 9952

| REVISIONS | | DATE | |
|-----------|-----------|-----------|--------------------------|
| NO. | BY | DATE | BY |
| 1 | EL DUFRRE | 8/18/2020 | MODIFIED PLANS FOR REBID |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

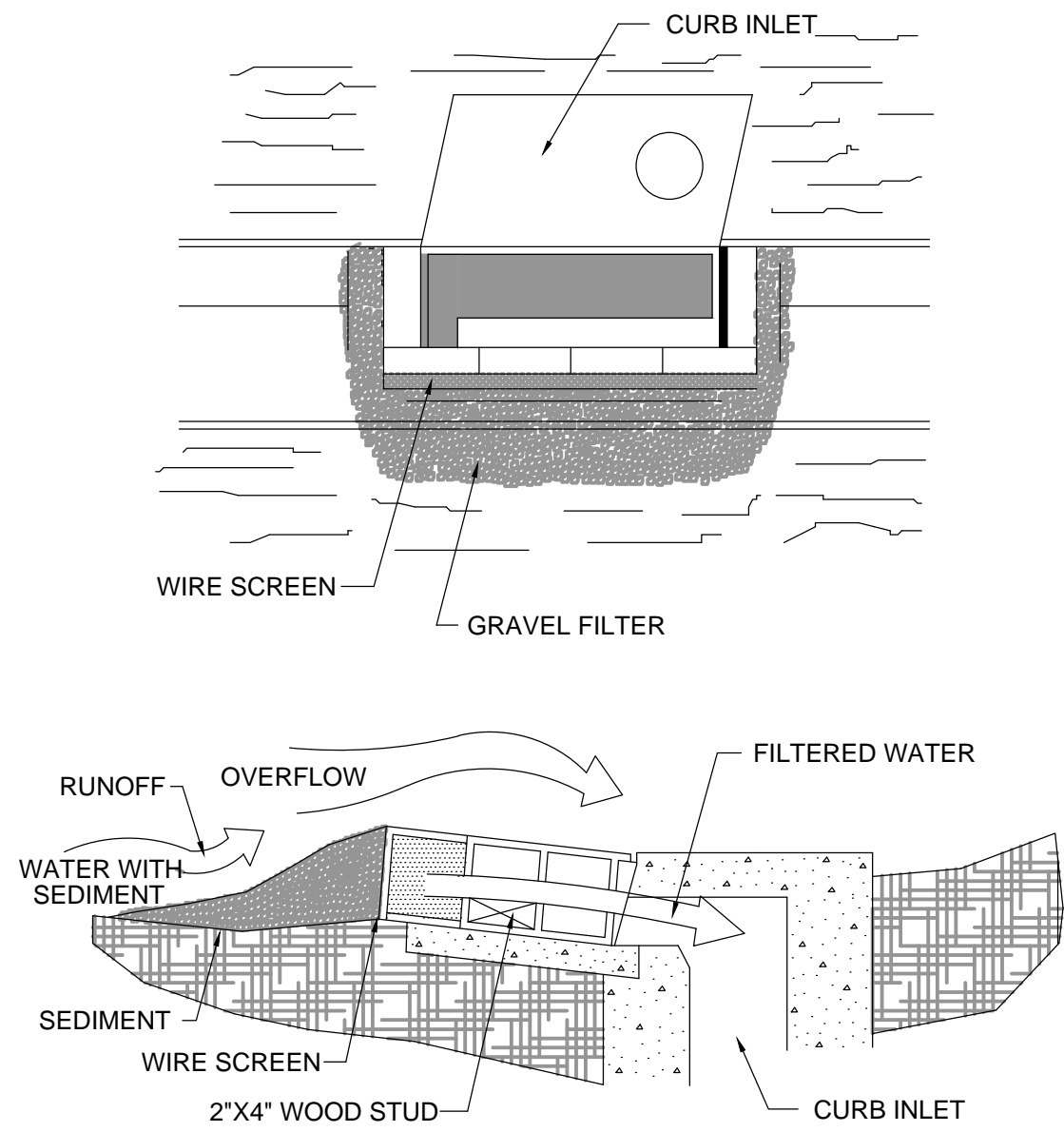
| | | | |
|-------------|------------|---------------------------|----------------------------|
| DESIGNER: | GA ADAMS | DESIGN ENGINEER: | JOHN E. COLLINS, JR., P.E. |
| DRAWN BY: | RL DUFRRE | FLORIDA REGISTRATION NO.: | 40085 |
| DATE: | MAR 2020 | | |
| CHECKED BY: | JE COLLINS | | |
| DATE: | MAR 2020 | | |

| | |
|-------------|------|
| NO. SHEETS | 80 |
| SHEET NO. | 80 |
| DRAWING NO. | CP-1 |

| | |
|-----------|----------|
| PROJ. NO. | 8002427 |
| DATE: | MAR 2020 |
| SCALE: | AS SHOWN |

| |
|--|
| SPRING PARK ROAD PUMP STATION REHABILITATION |
| CIVIL |
| STORMWATER POLLUTION PREVENTION - SHEET 1 |

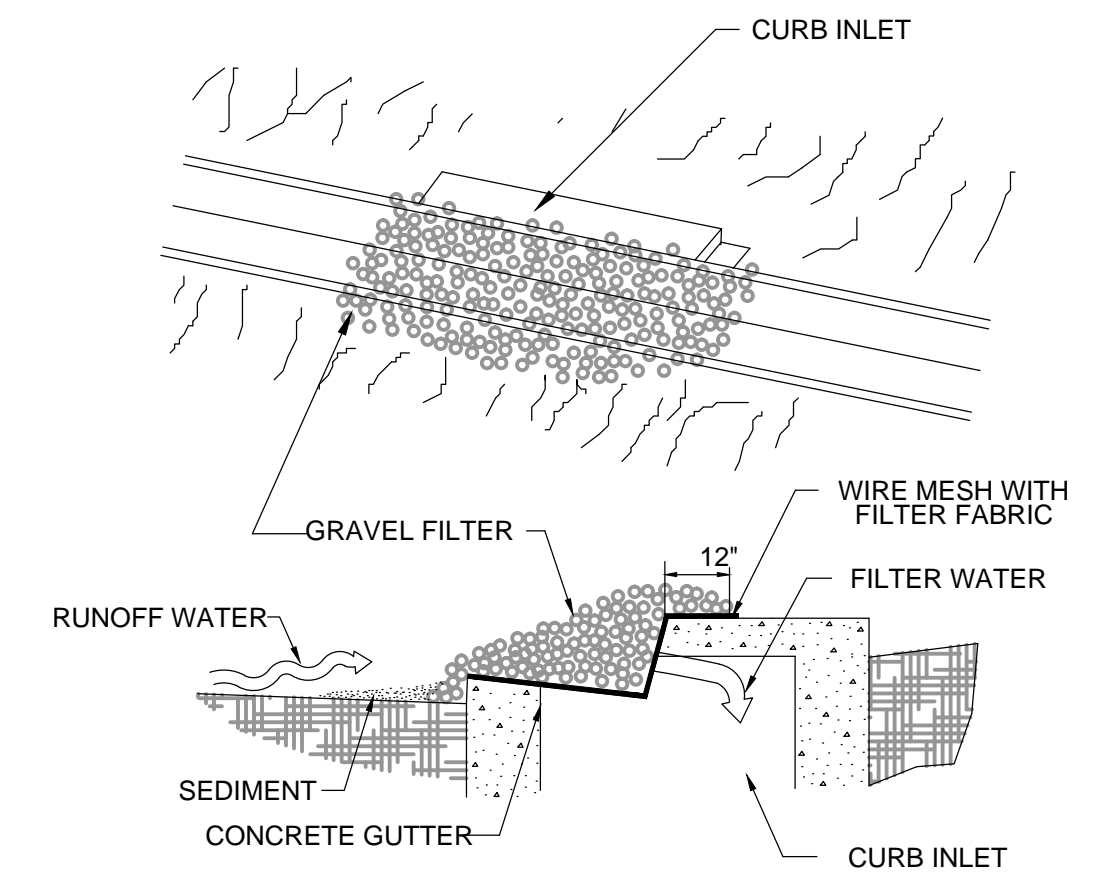
| | |
|-------------|------|
| NO. SHEETS | 80 |
| SHEET NO. | 80 |
| DRAWING NO. | CP-1 |



SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

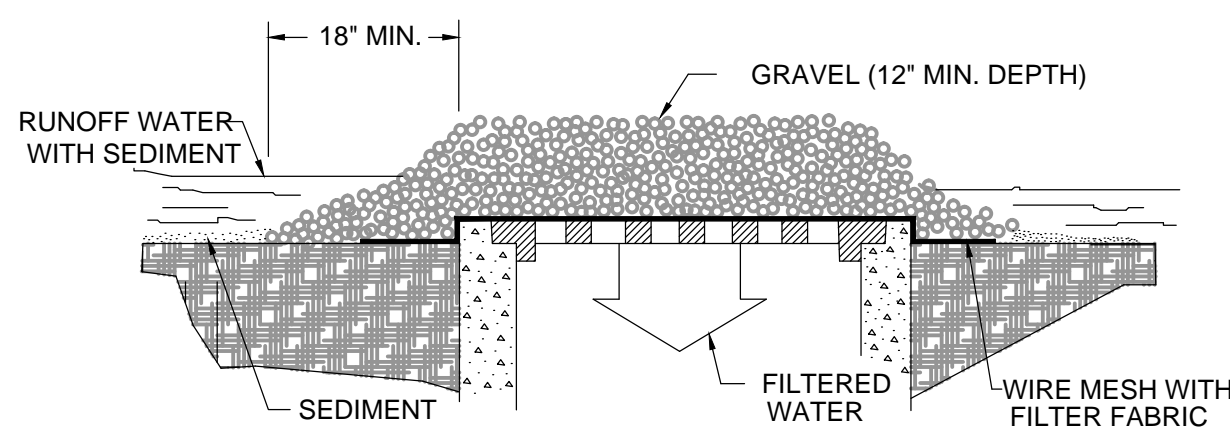
BLOCK & GRAVEL CURB INLET SEDIMENT FILTER

(D-902)
N.T.S.



GRAVEL CURB INLET SEDIMENT FILTER
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

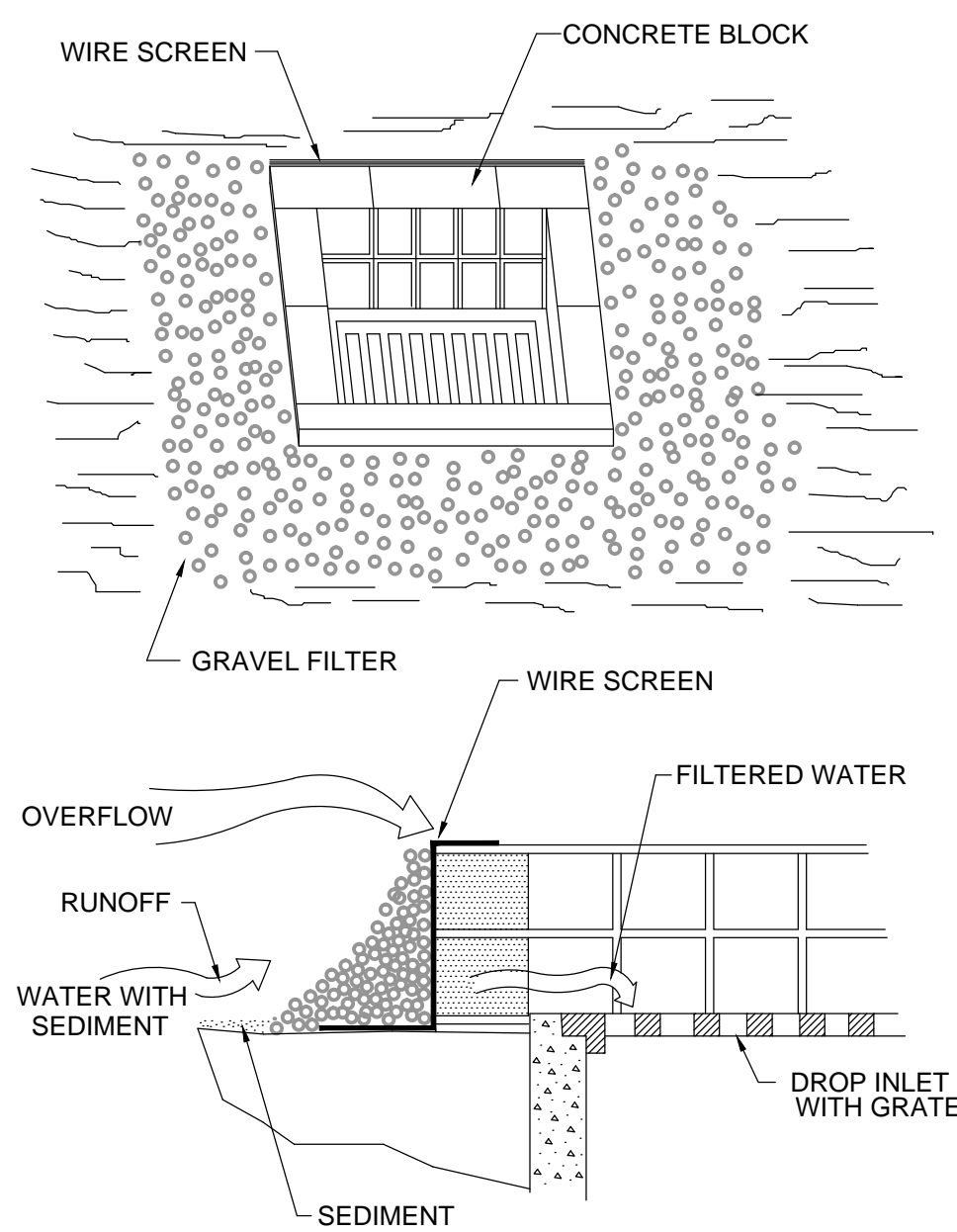


GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

GRAVEL INLET SEDIMENT TRAP

(D-903)
N.T.S.

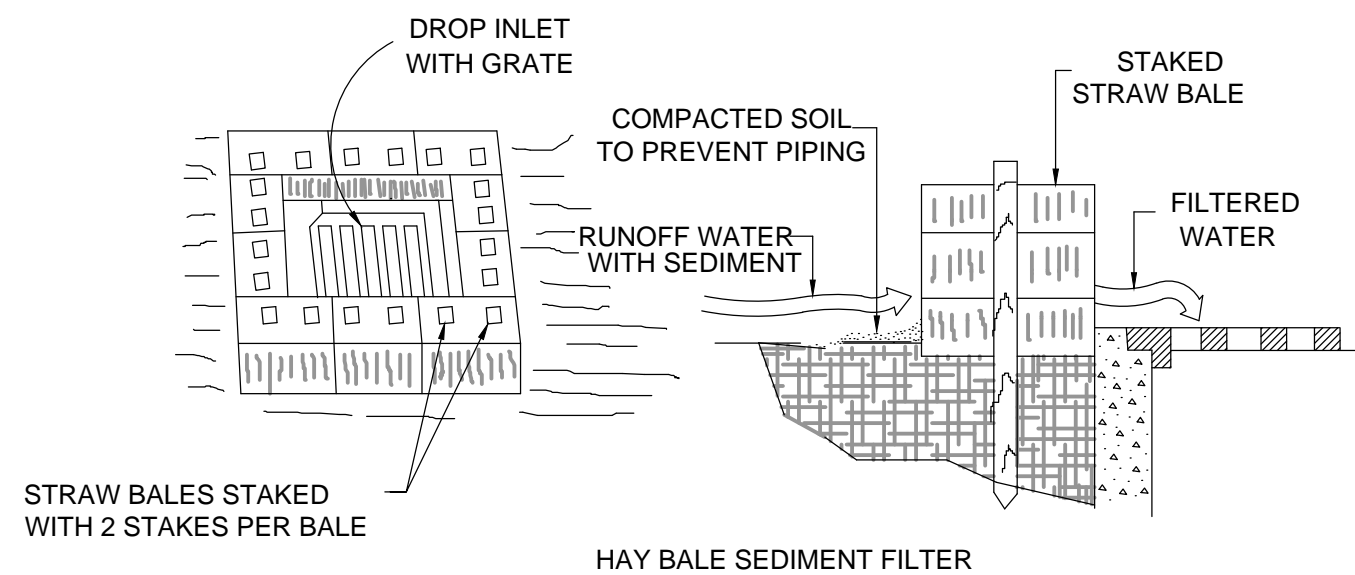


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

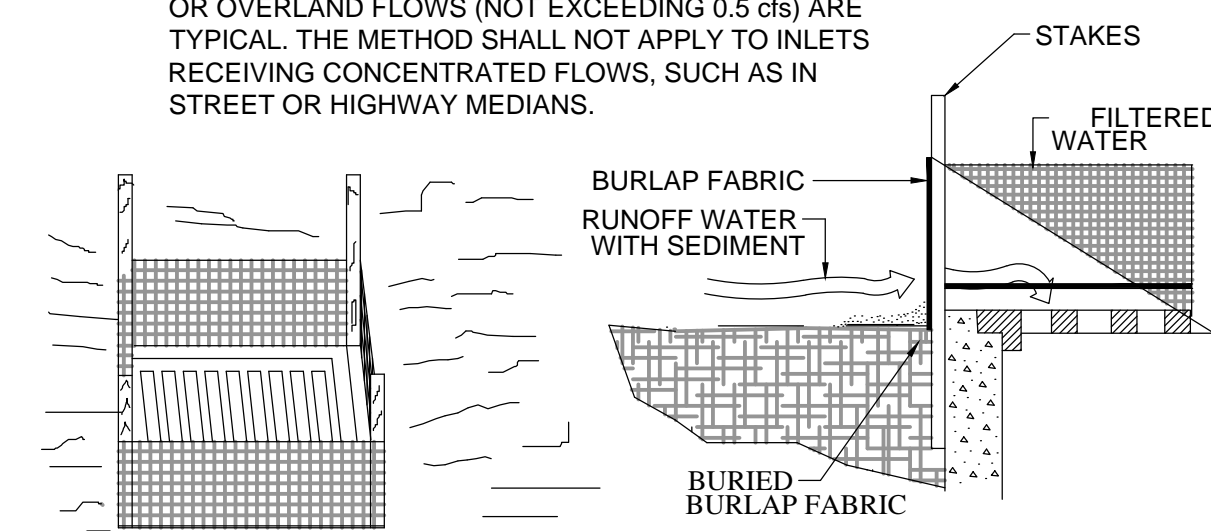
BLOCK & GRAVEL DROP INLET SEDIMENT FILTER

(D-904)
N.T.S.



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

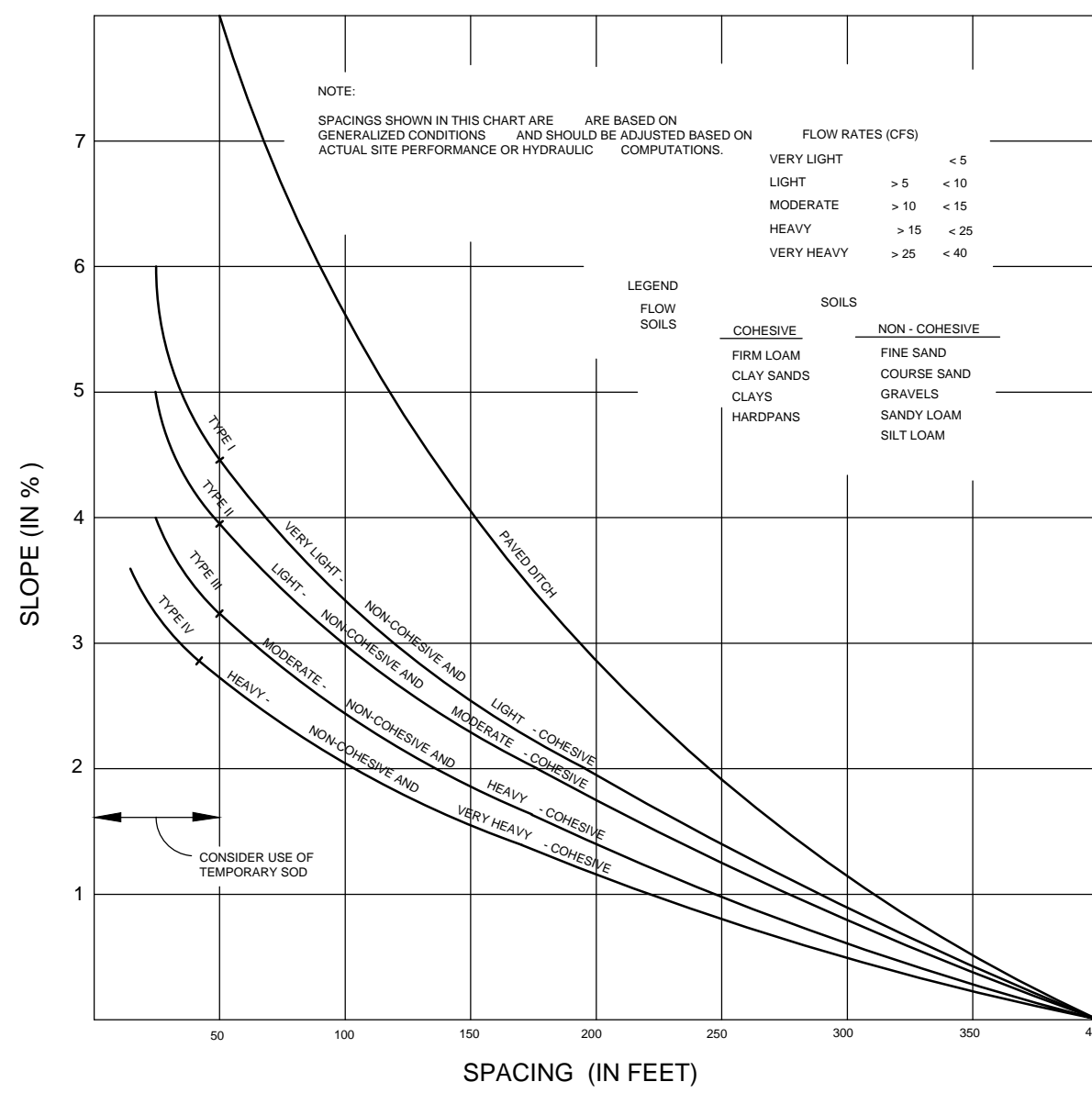


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

DROP INLET SEDIMENT TRAP

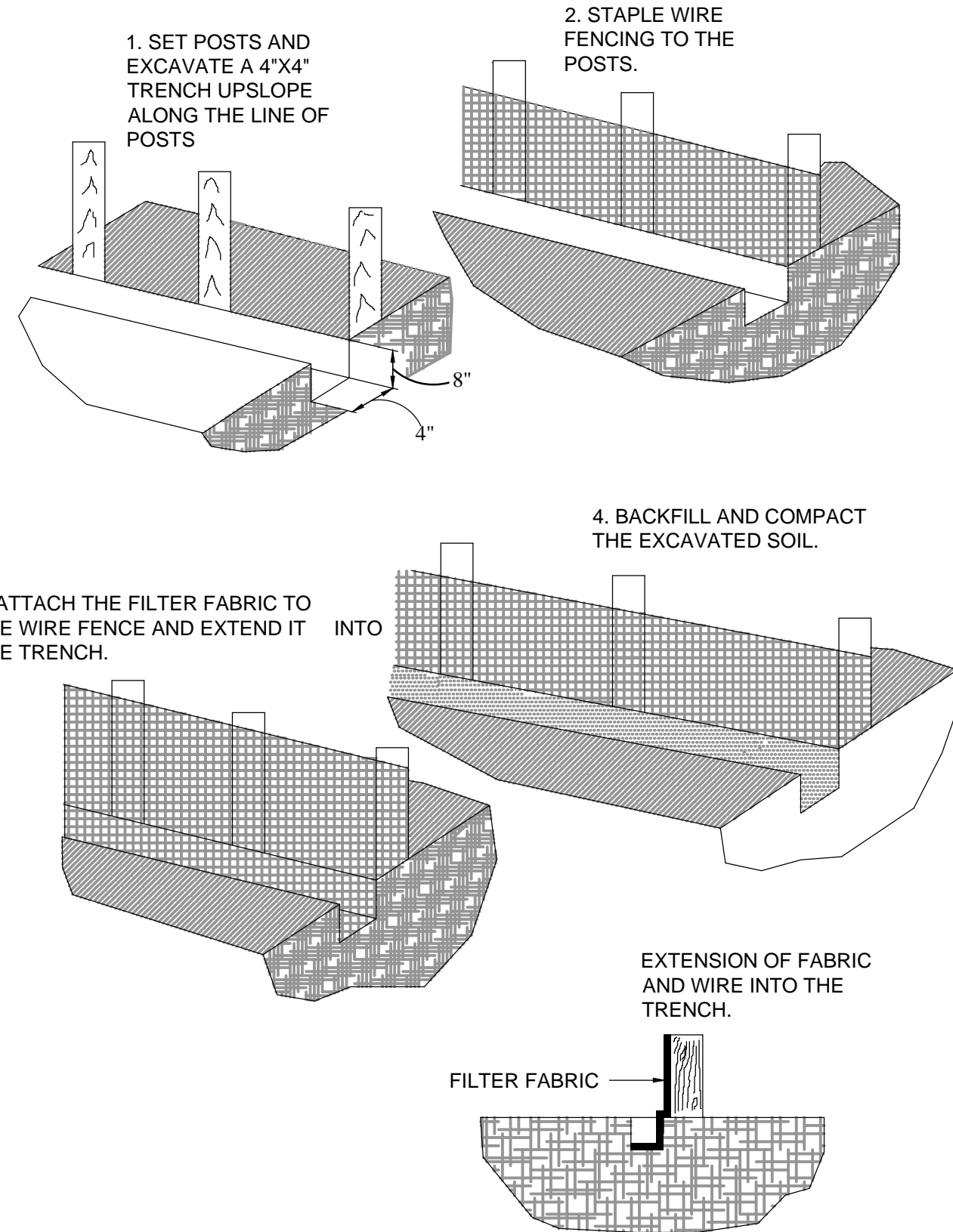
(D-905)
N.T.S.



RECOMMENDED SPACING FOR TYPE I AND TYPE II HAY BALE BARRIERS, AND TYPE III AND TYPE IV SILT FENCES AND PAVED DITCH HAY BALE BARRIERS

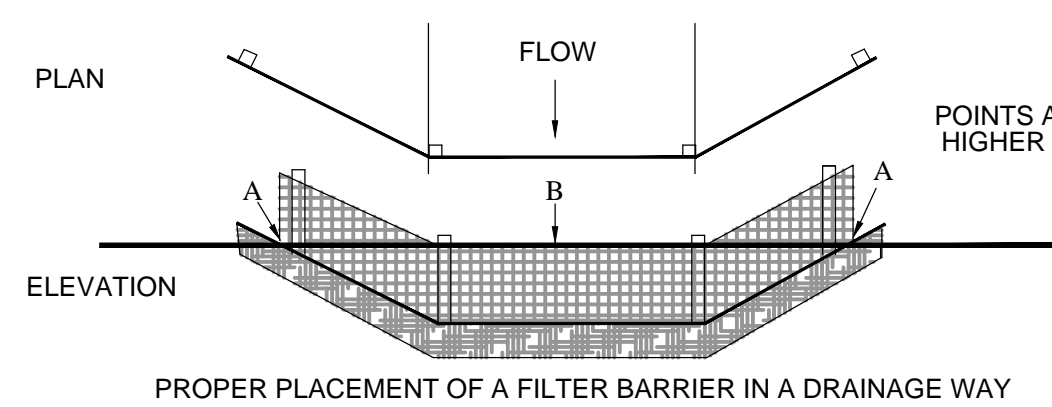
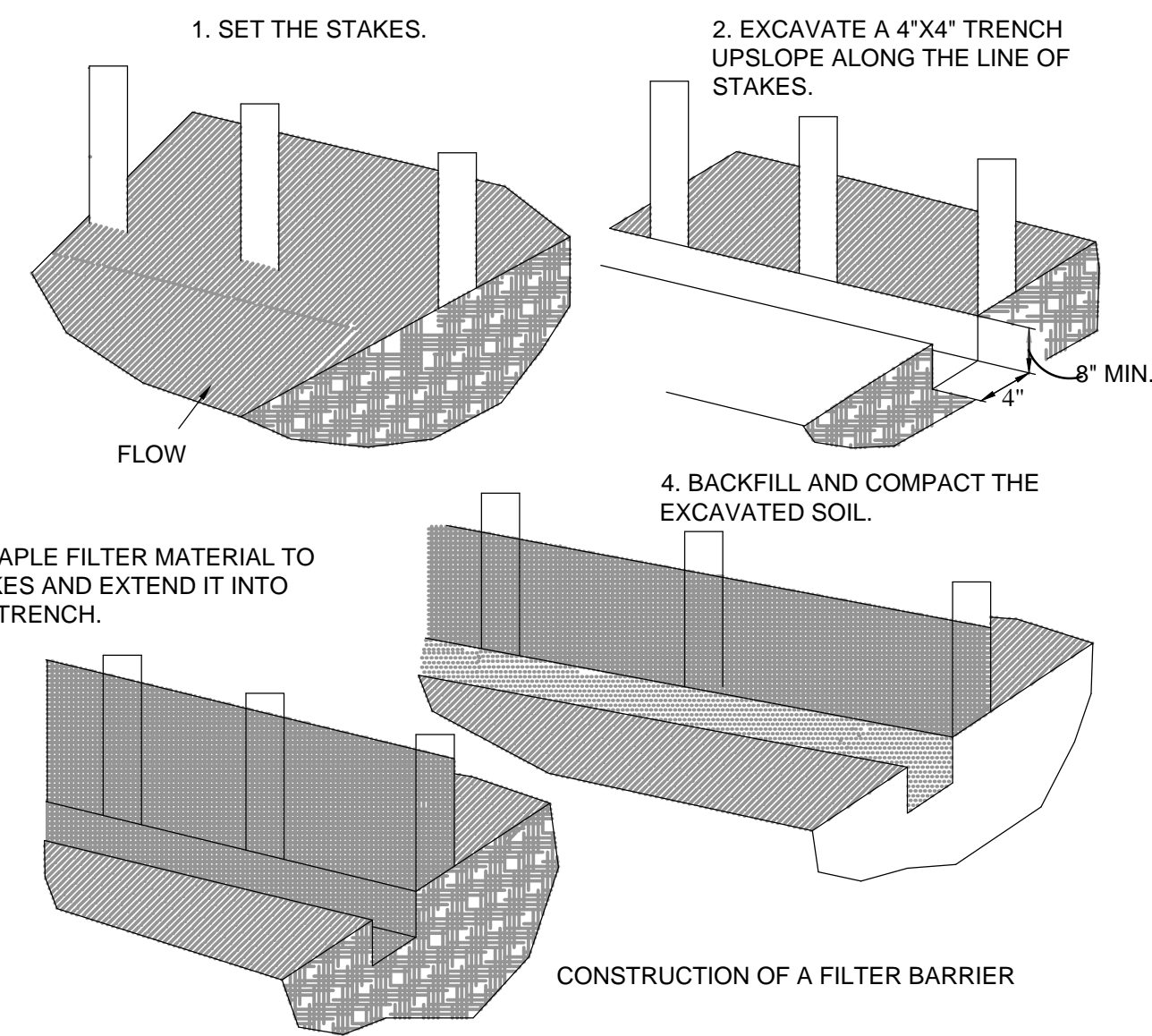
SPACING RECOMMENDATION FOR SILT FENCES & HAY BALES

(D-906)
N.T.S.



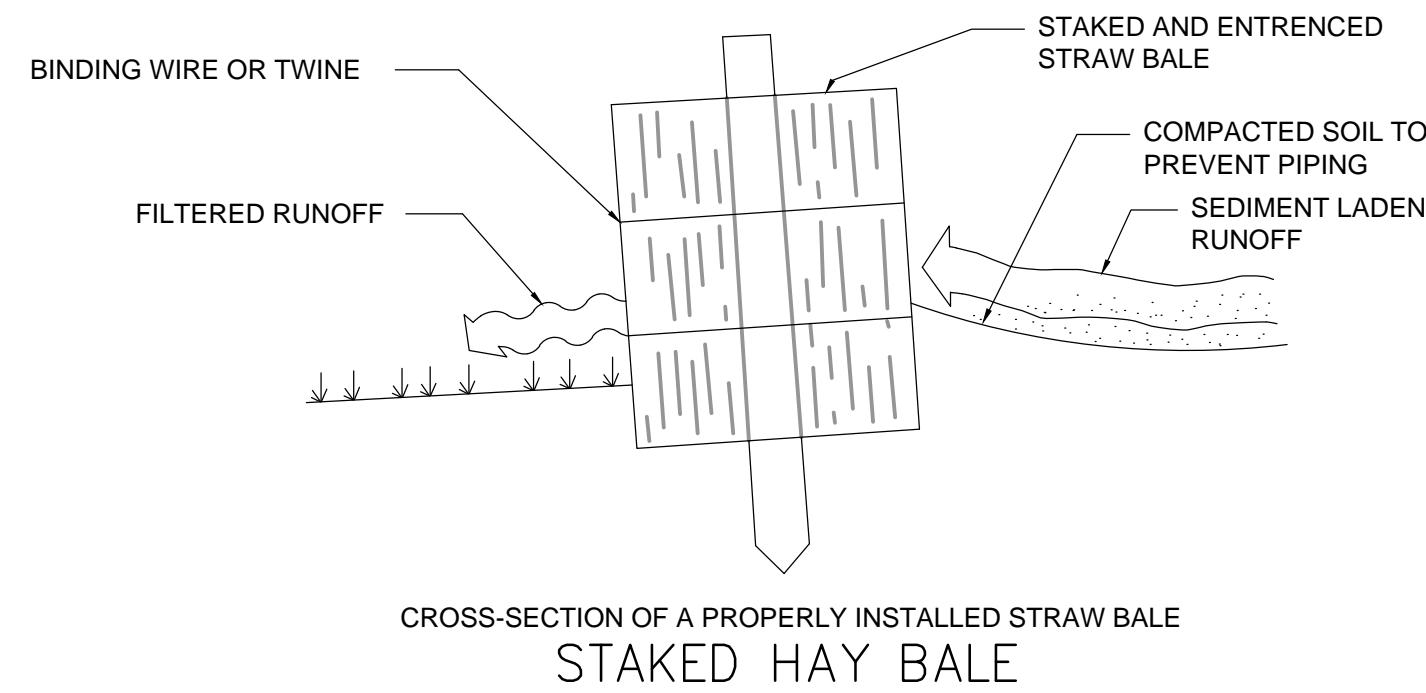
CONSTRUCTION DETAILS FOR SILT FENCES

(D-909)
N.T.S.



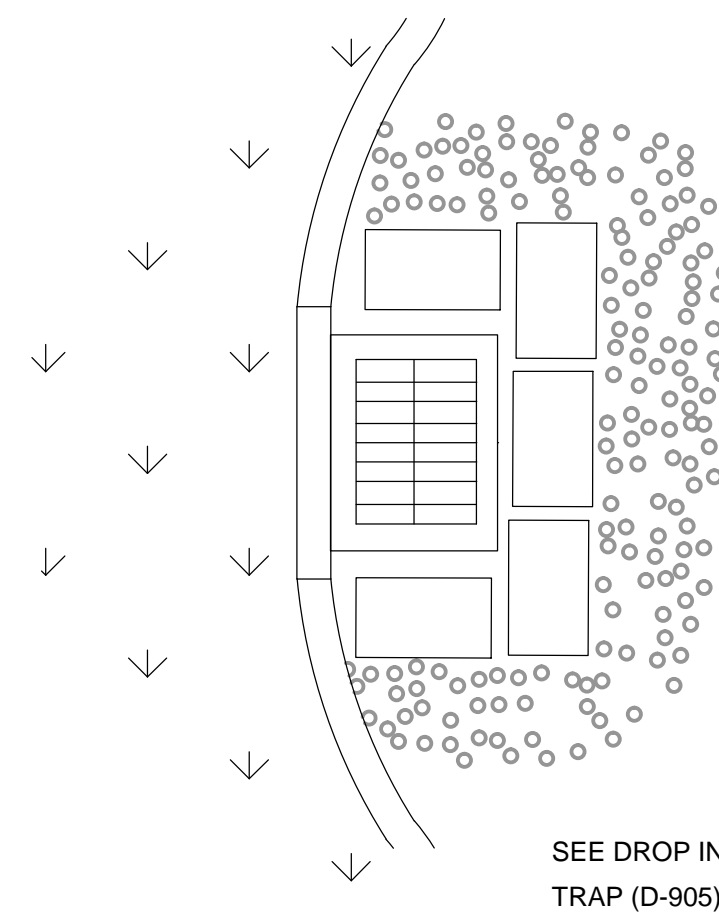
FILTER BARRIER CONSTRUCTION DETAIL

(D-910)
N.T.S.



CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE STAKED HAY BALE

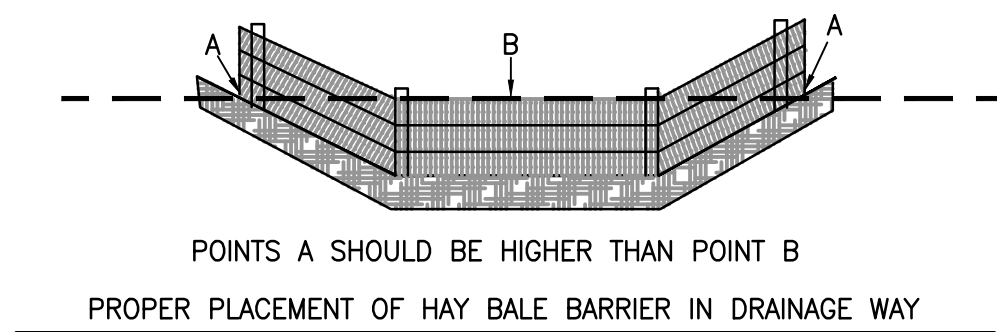
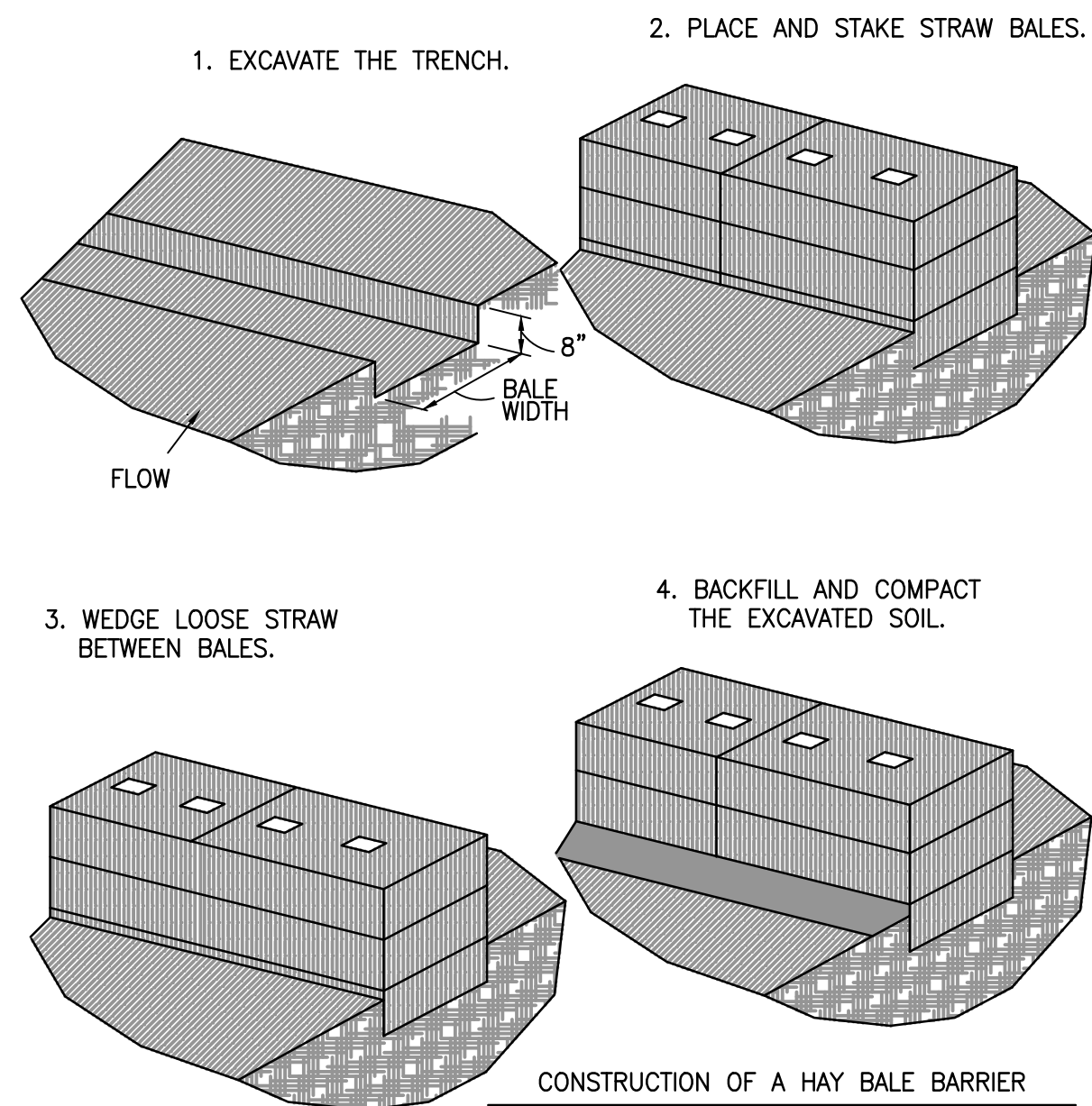
(D-911)
N.T.S.



ERECT SEDIMENT BARRIERS AT CATCH BASINS

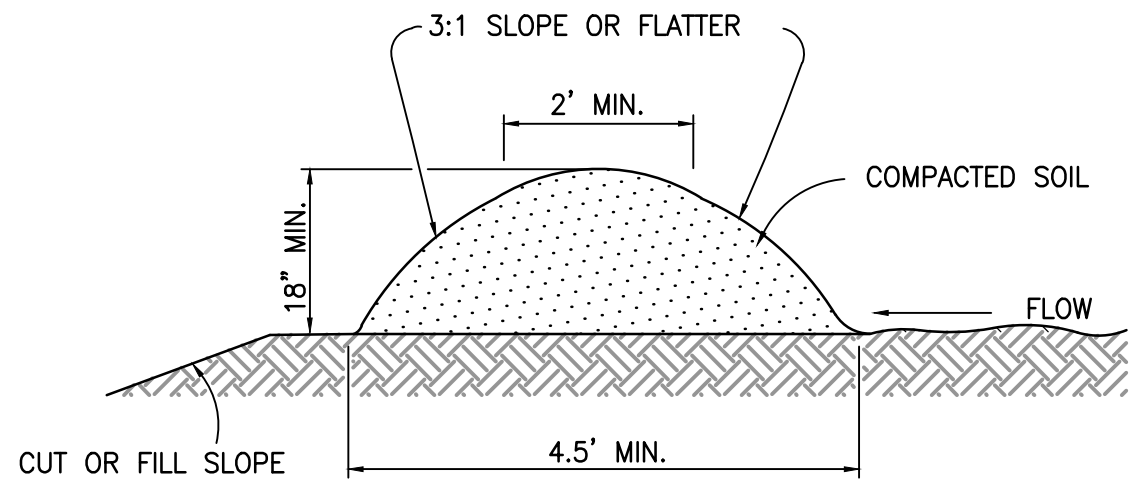
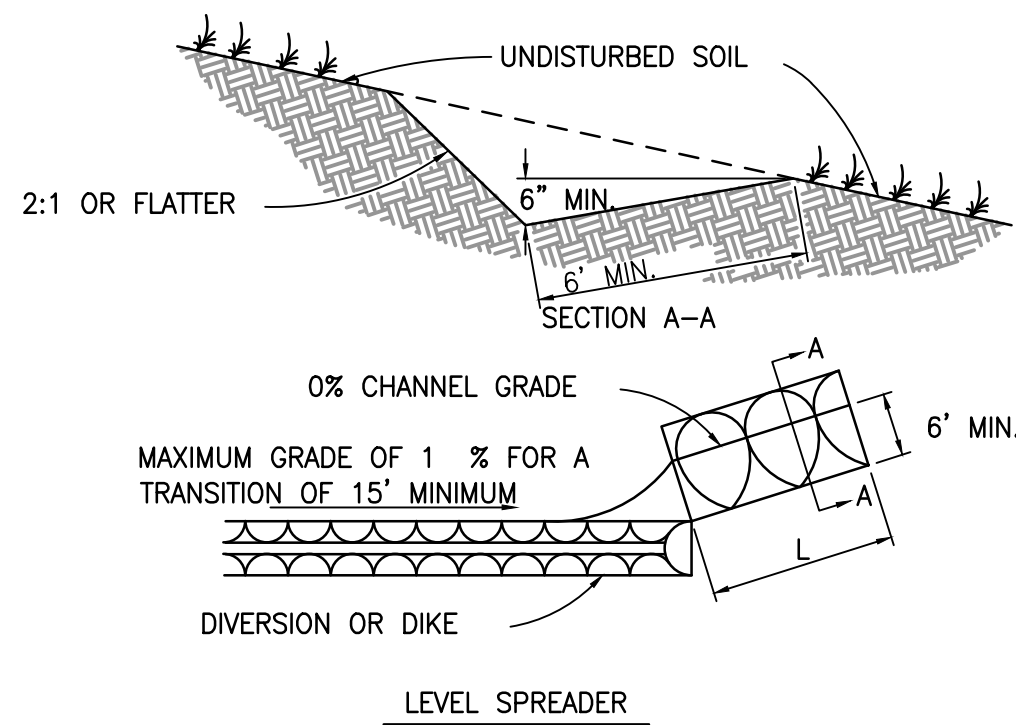
(TYPICAL)
N.T.S.

| | | | | | | | |
|--|-------------------|---|--------------------|-------------------|----------------------|---|--|
|  | | J. Collins Engineering Associates, LLC 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32233 C.E.# 9952 | | 904-262-4121 | | MODIFIED PLANS FOR REID | |
| NO. SHEETS 80 | SHEET NO. CP-2 | DRAWING NO. CP-2 | SCALE: AS SHOWN | DATE: MAR 2020 | PROJ. NO. 8002427 | DESIGN ENGINEER JOHN E. COLLINS, JR., P.E. FLORIDA REGISTRATION NO. 40085 | |
| | | | | | | BY DATE | |
| | | | | | | REVISIONS | |
| | | | | | | NO. BY DATE | |



HAY BALE BARRIER CONSTRUCTION DETAILS

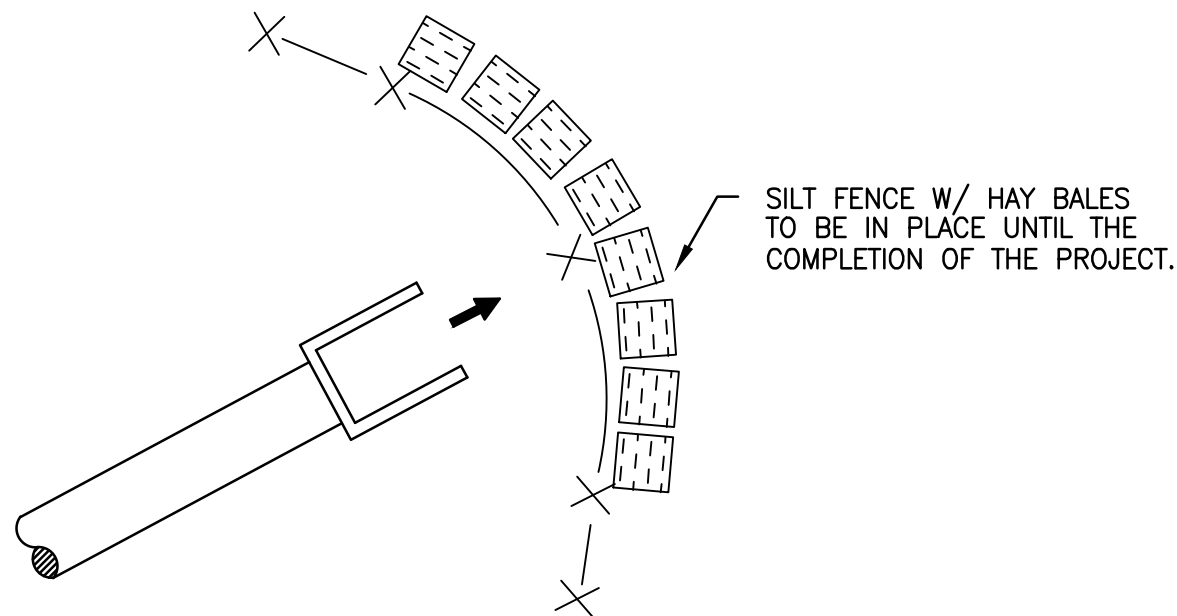
(D-913)
N.T.S.



TEMPORARY DIVERSION DIKE

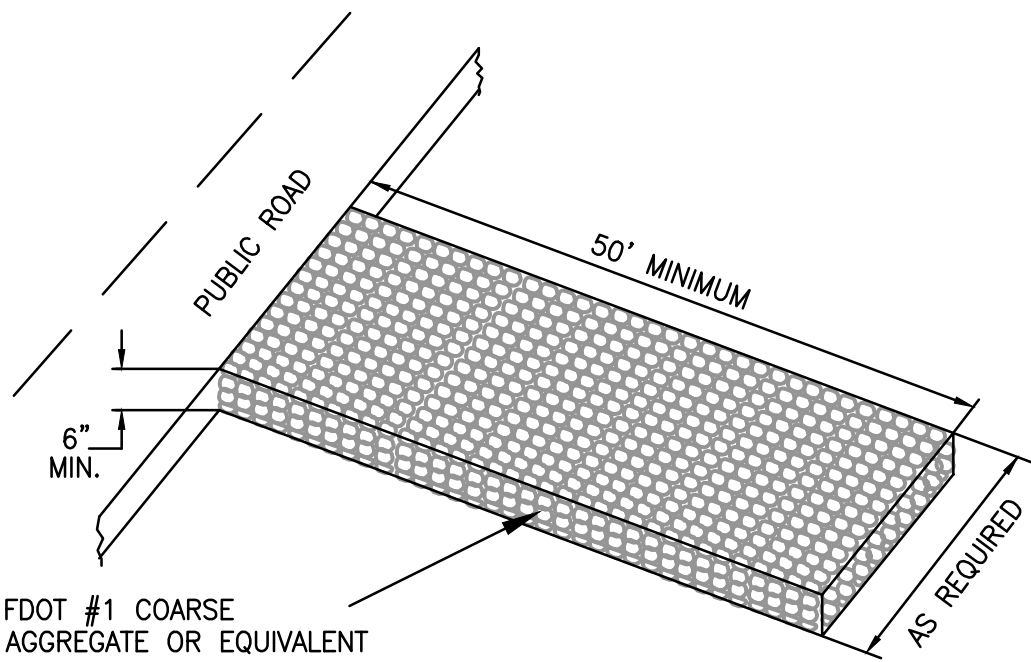
DIVERSION DIKE

(D-914)
N.T.S.



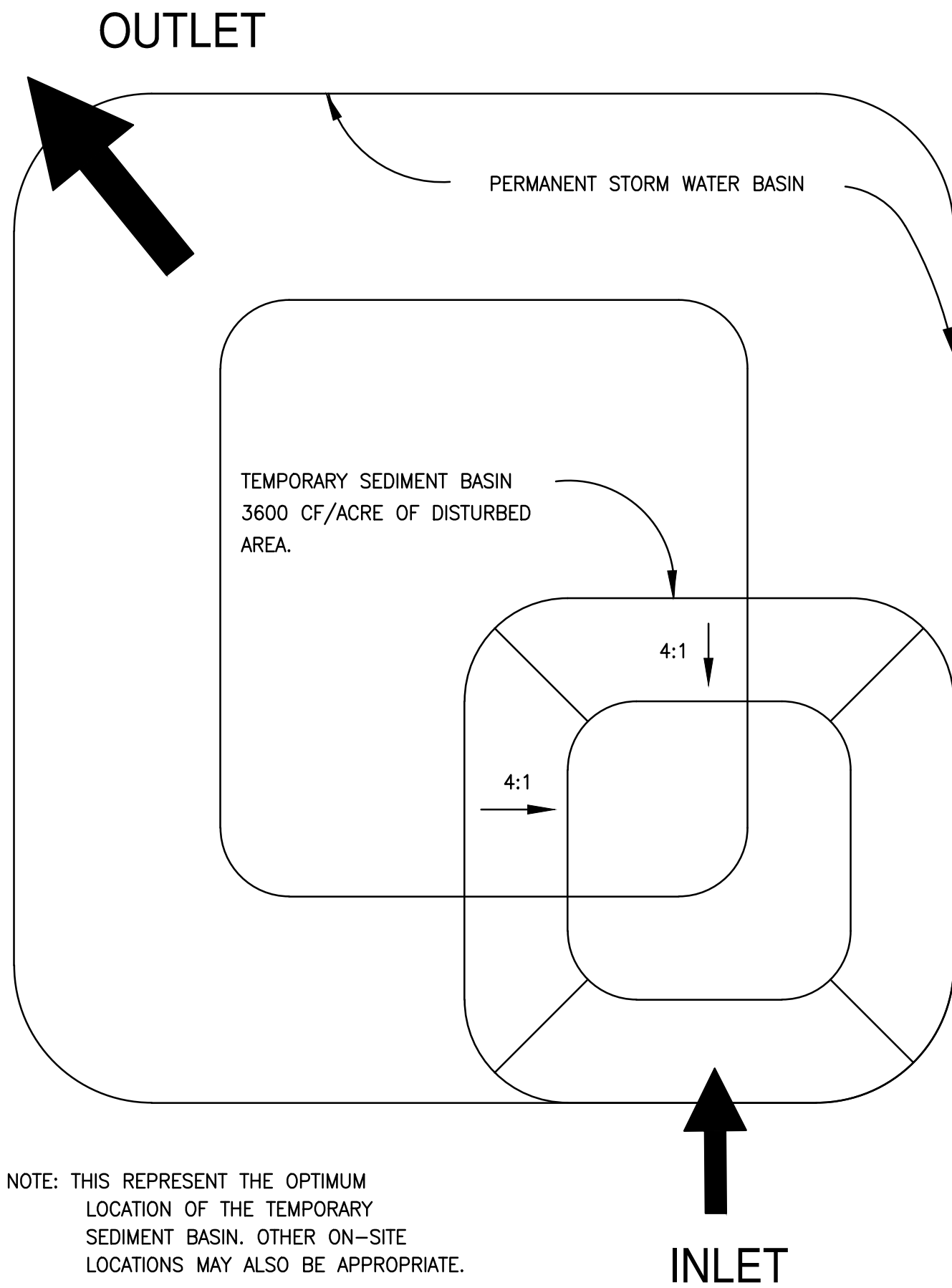
OUTLET PROTECTION

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



NOTE: THIS REPRESENT THE OPTIMUM LOCATION OF THE TEMPORARY SEDIMENT BASIN. OTHER ON-SITE LOCATIONS MAY ALSO BE APPROPRIATE.

TEMPORARY SEDIMENT BASIN

N.T.S.



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
CJA# 9952

904-262-4121

| NO. | BY | DATE | REVISIONS |
|-----|-----------|-----------|--------------------------|
| 6 | | | |
| 5 | | | |
| 4 | | | |
| 3 | | | |
| 2 | | | |
| 1 | RL DUPREE | 8/18/2020 | MODIFIED PLANS FOR REBID |

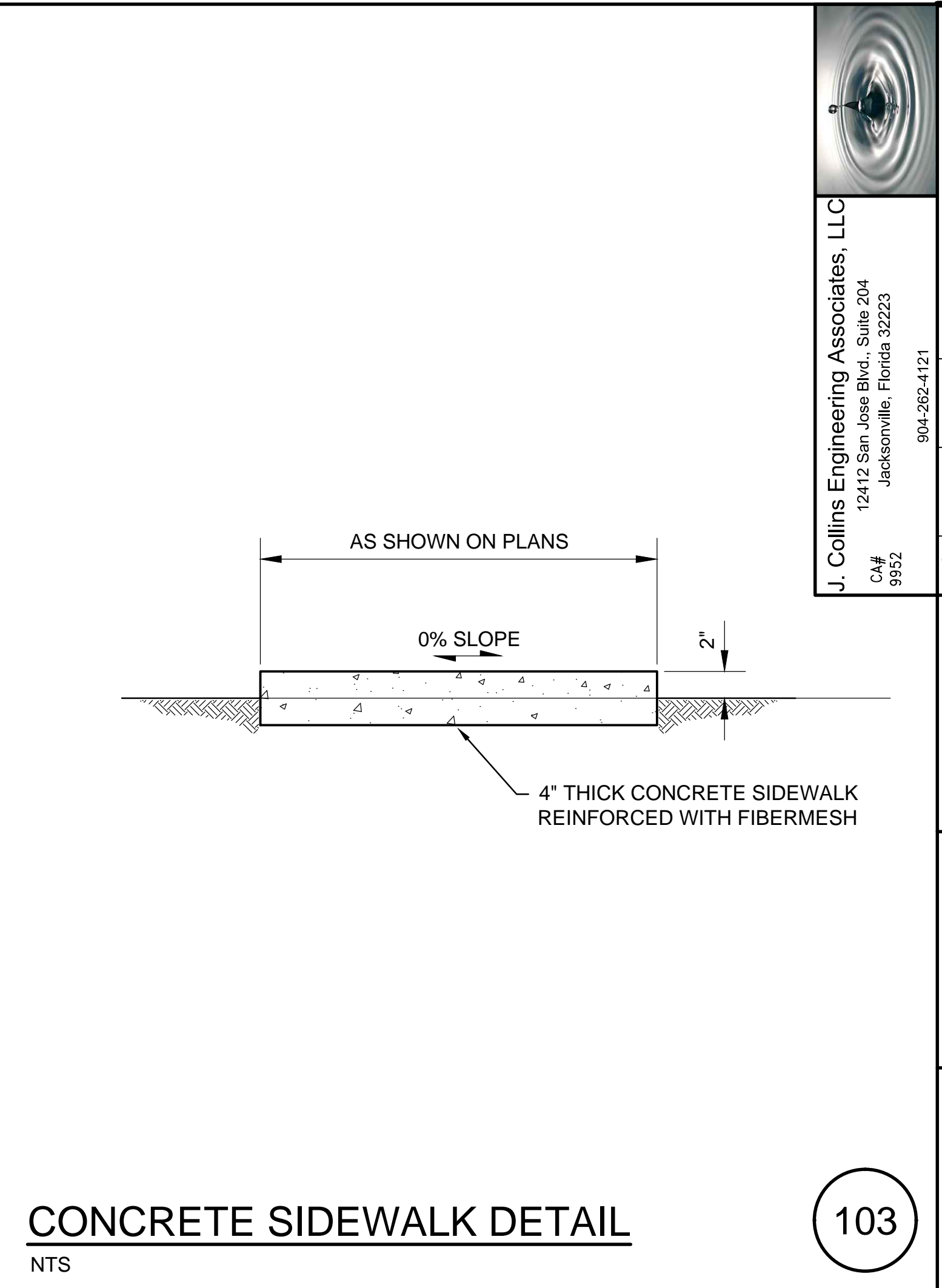
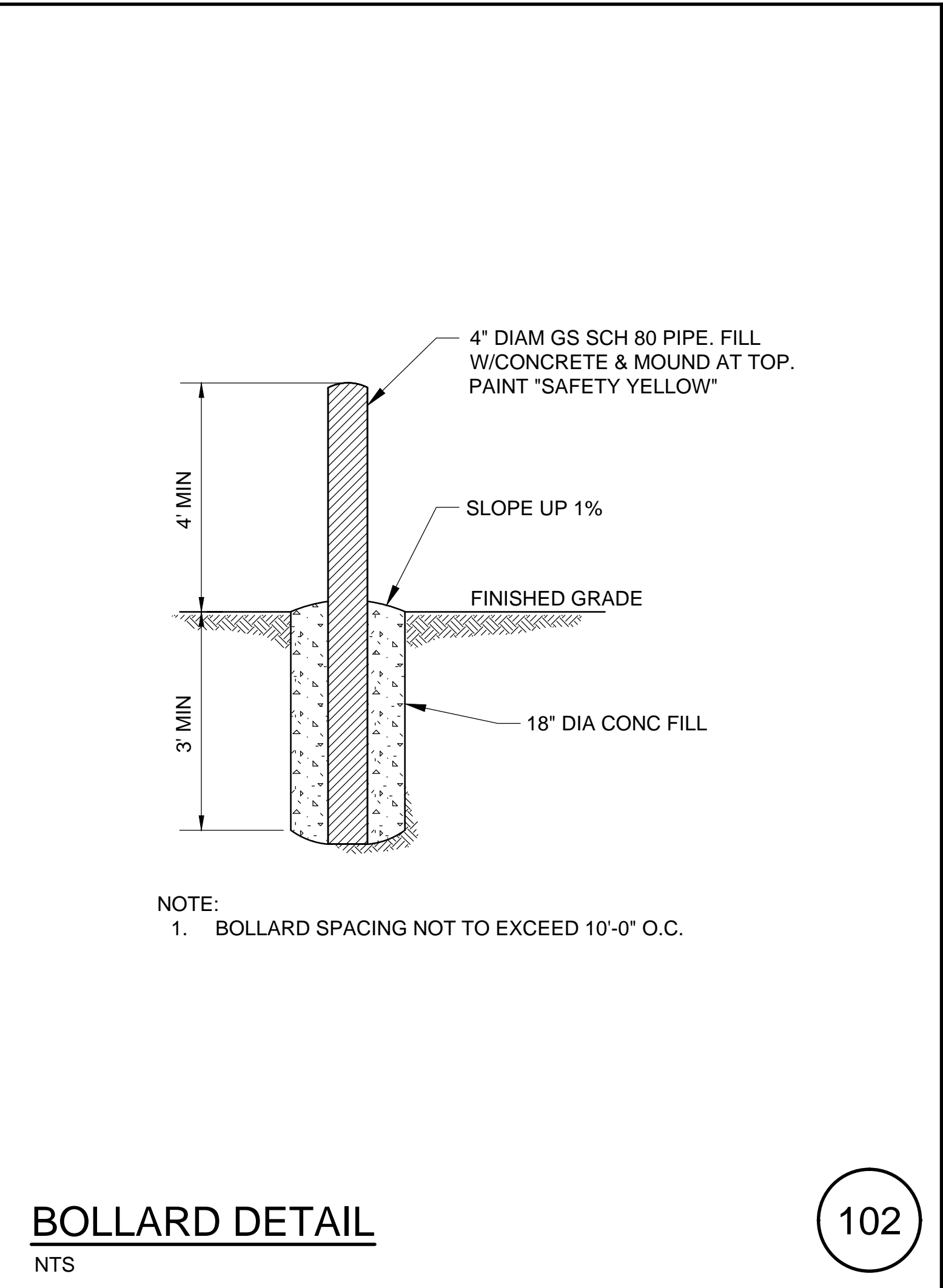
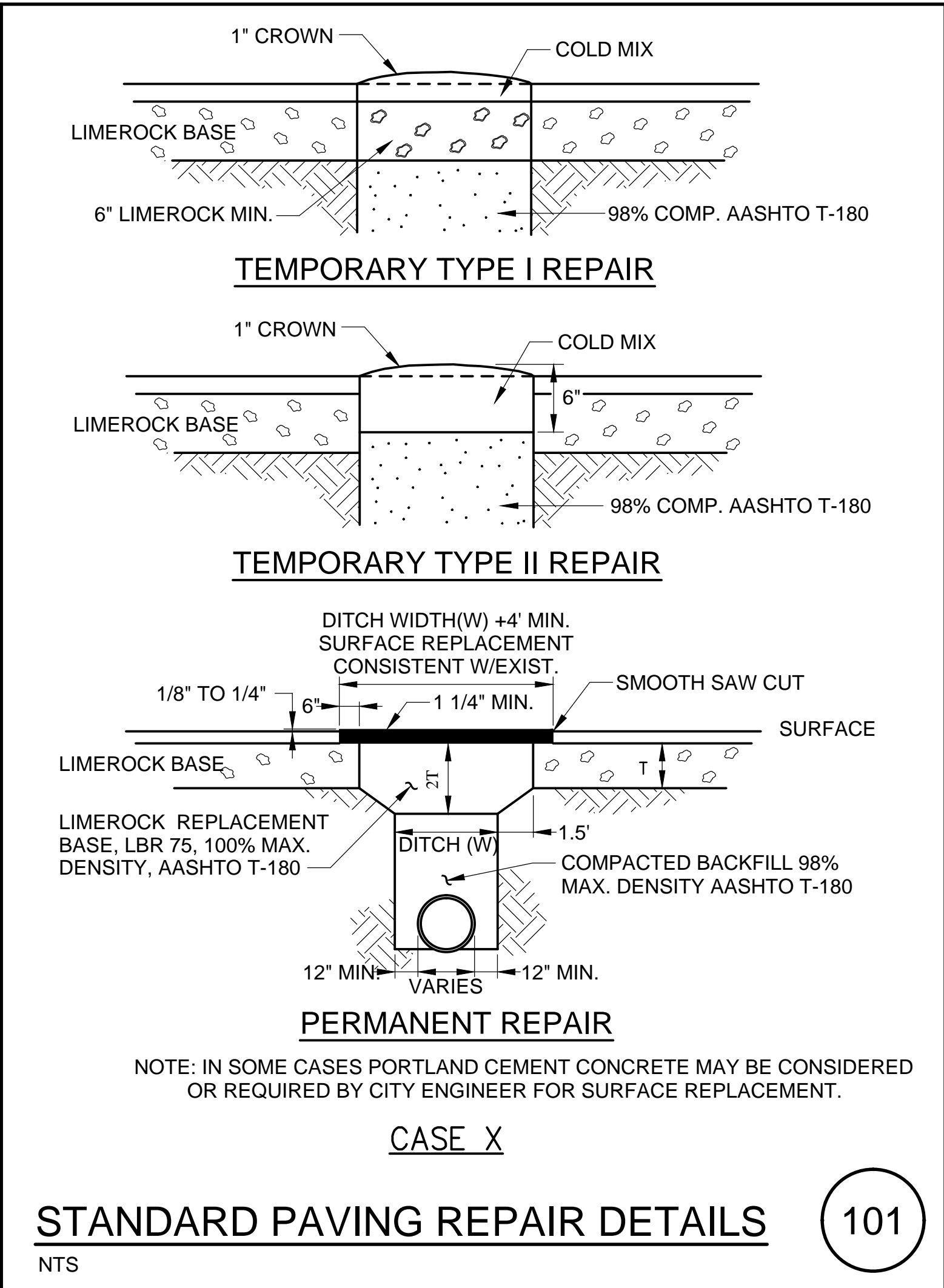
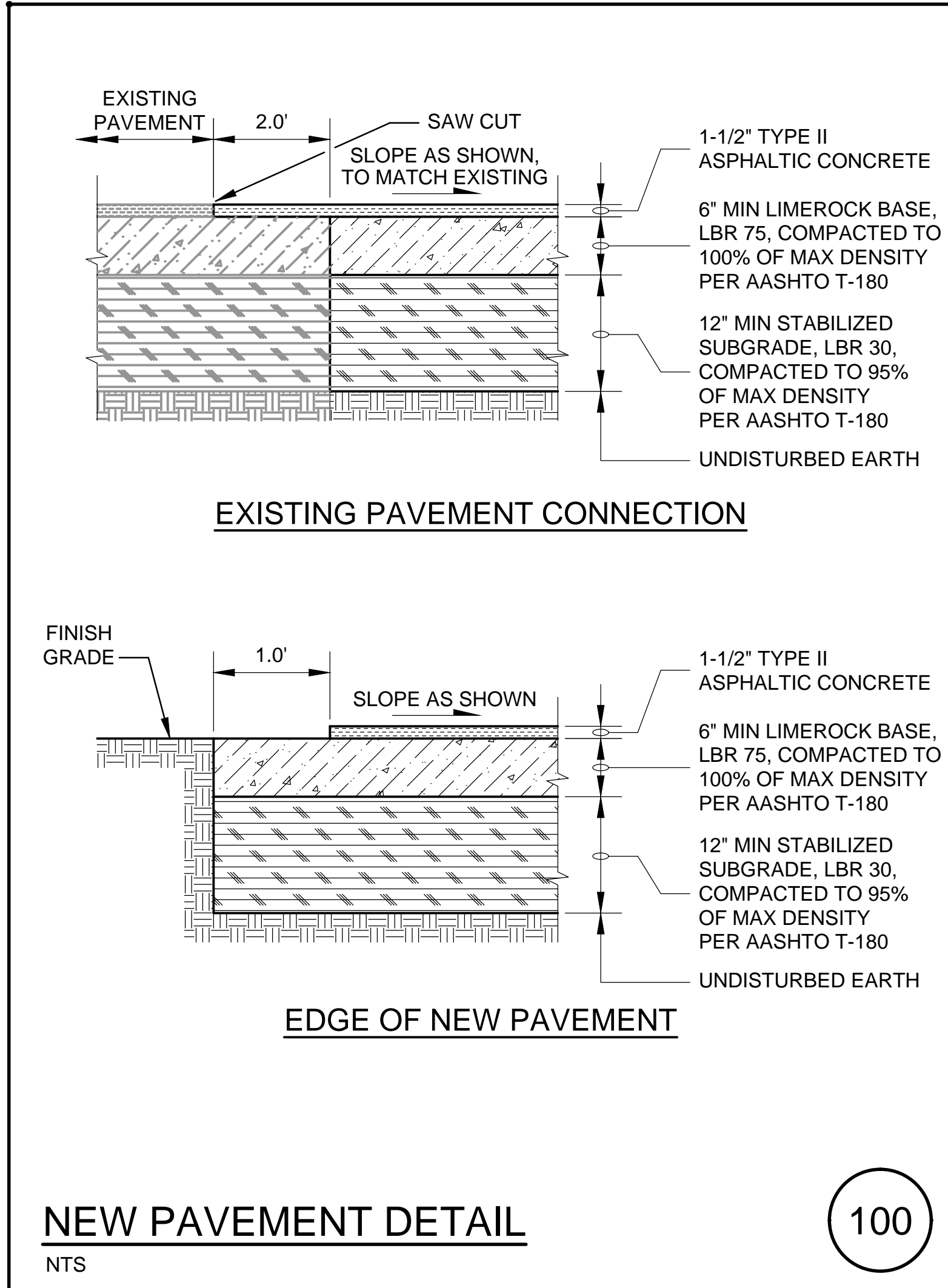
| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |


| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUPREE |
| DATE | MAR 2020 |
| CHECKED BY | JE COLLINS |
| DATE | MAY 2020 |

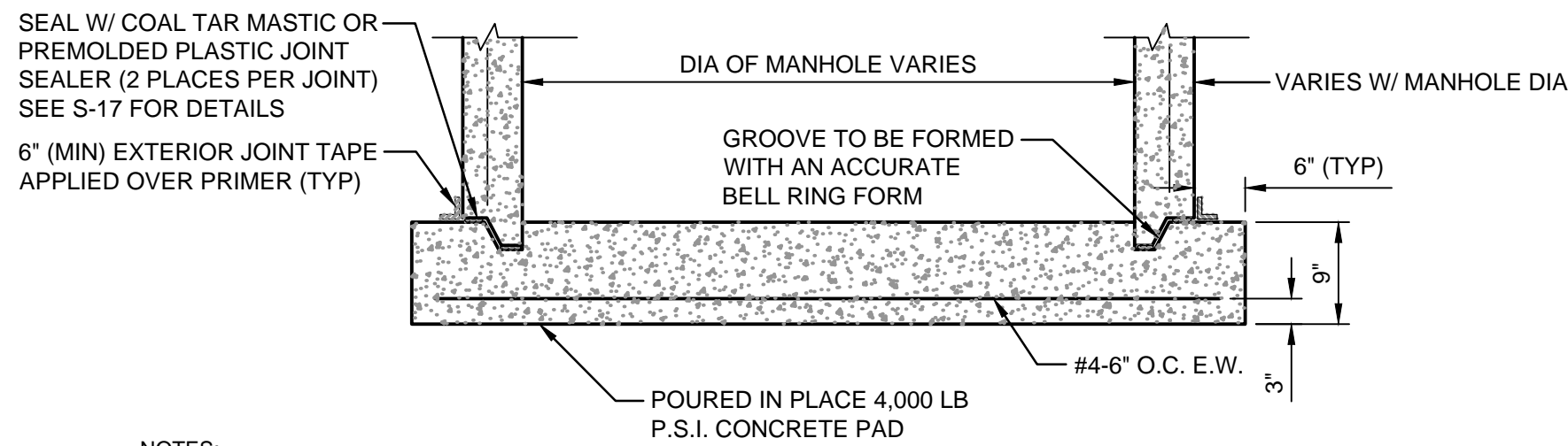
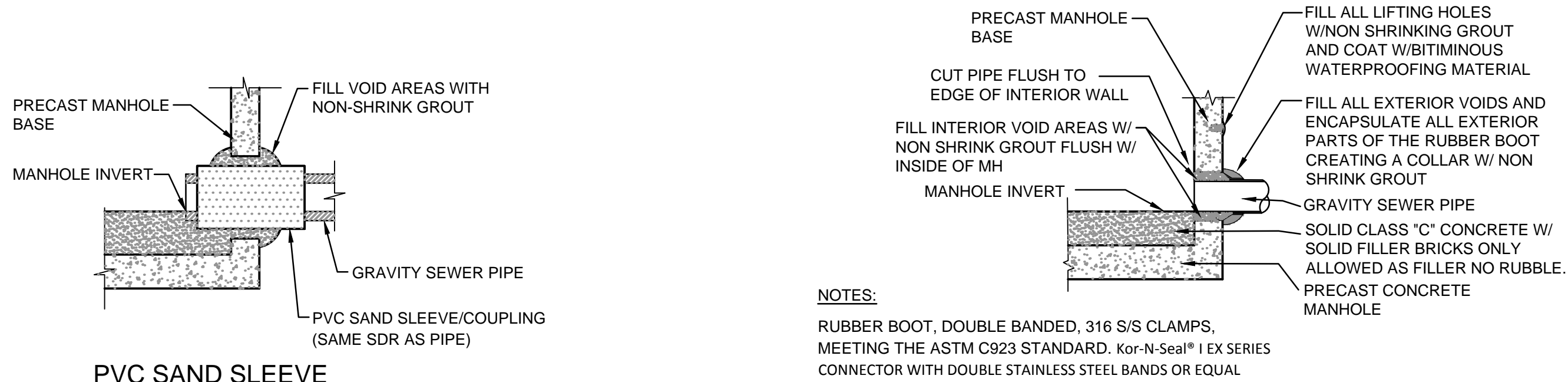


SPRING PARK ROAD PUMP STATION REHABILITATION
CIVIL
STORMWATER POLLUTION PREVENTION - SHEET 3

| | | |
|-------------|-----------|----------|
| NO. SHEETS | PROJ. NO. | 8002427 |
| 80 | DATE | MAR 2020 |
| SHEET NO. | SCALE | AS SHOWN |
| DRAWING NO. | | |
| CP-3 | | |

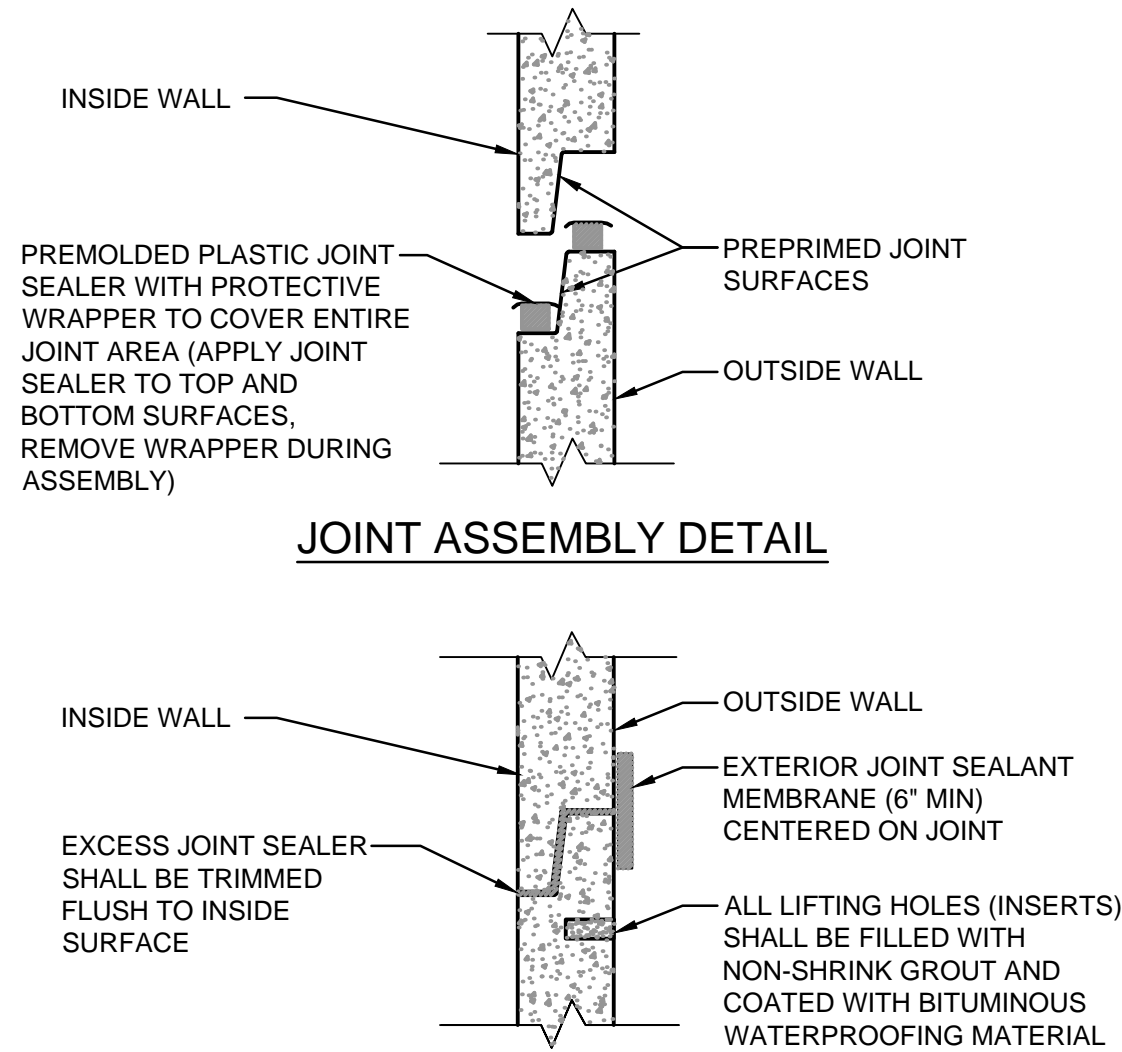


| | | | | |
|--|-----------|-----------|--|--|
|  | | | J. Collins Engineering Associates, LLC 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32223 9952 | |
| 904-262-4121 | | | | |
| NO. | BY | DATE | REVISIONS | |
| 6. | | | | |
| 5. | | | | |
| 4. | | | | |
| 3. | | | | |
| 2. | | | | |
| 1. | RL DUPREE | 8/18/2020 | MODIFIED PLANS FOR REBID | |



MANHOLE PIPE CONNECTION DETAIL
NTS (JEA STANDARD - PLATE S-15)

107

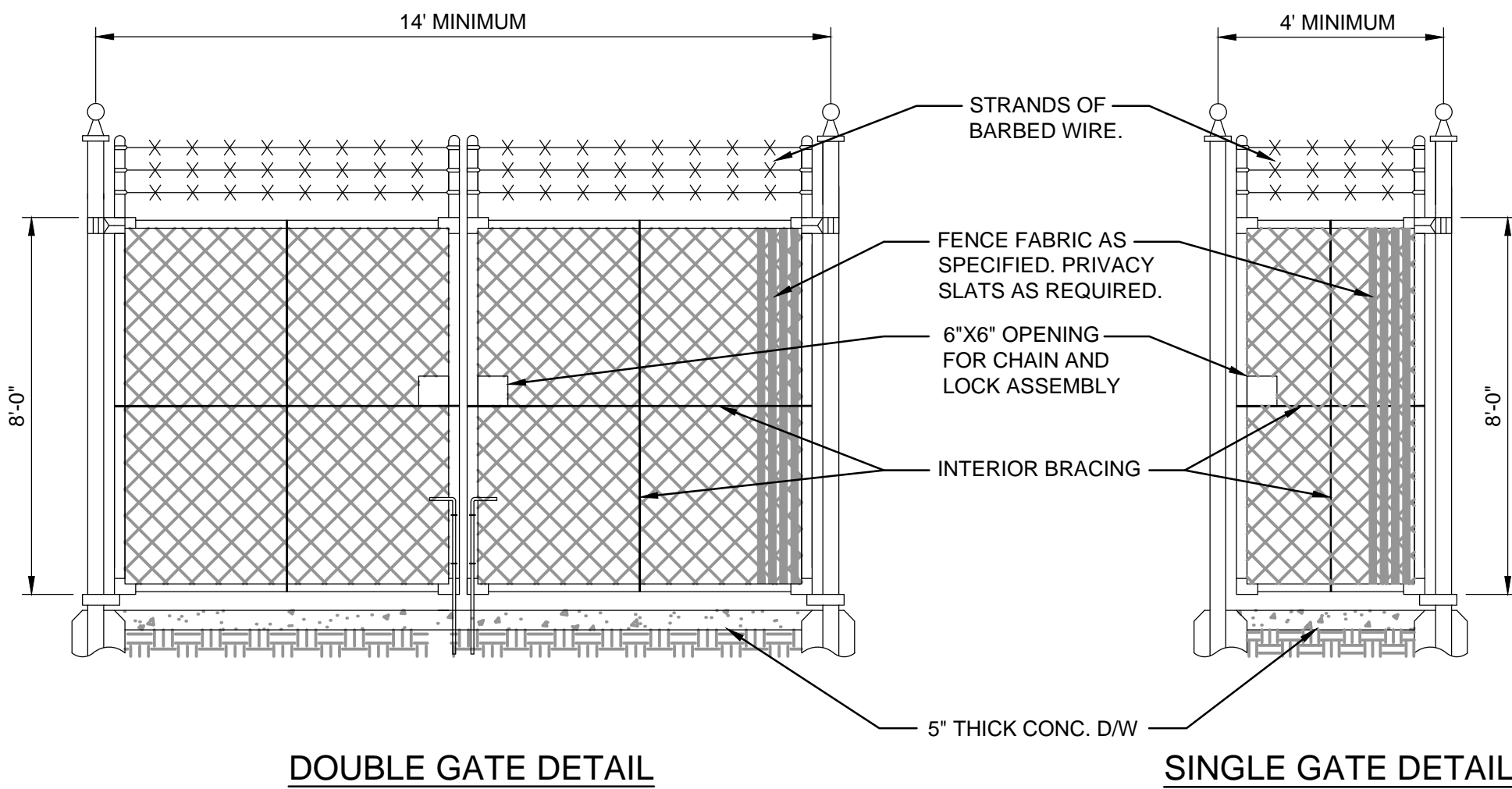


PRECAST SEWER MANHOLE JOINT
NTS (JEA STANDARD - PLATE S-17)

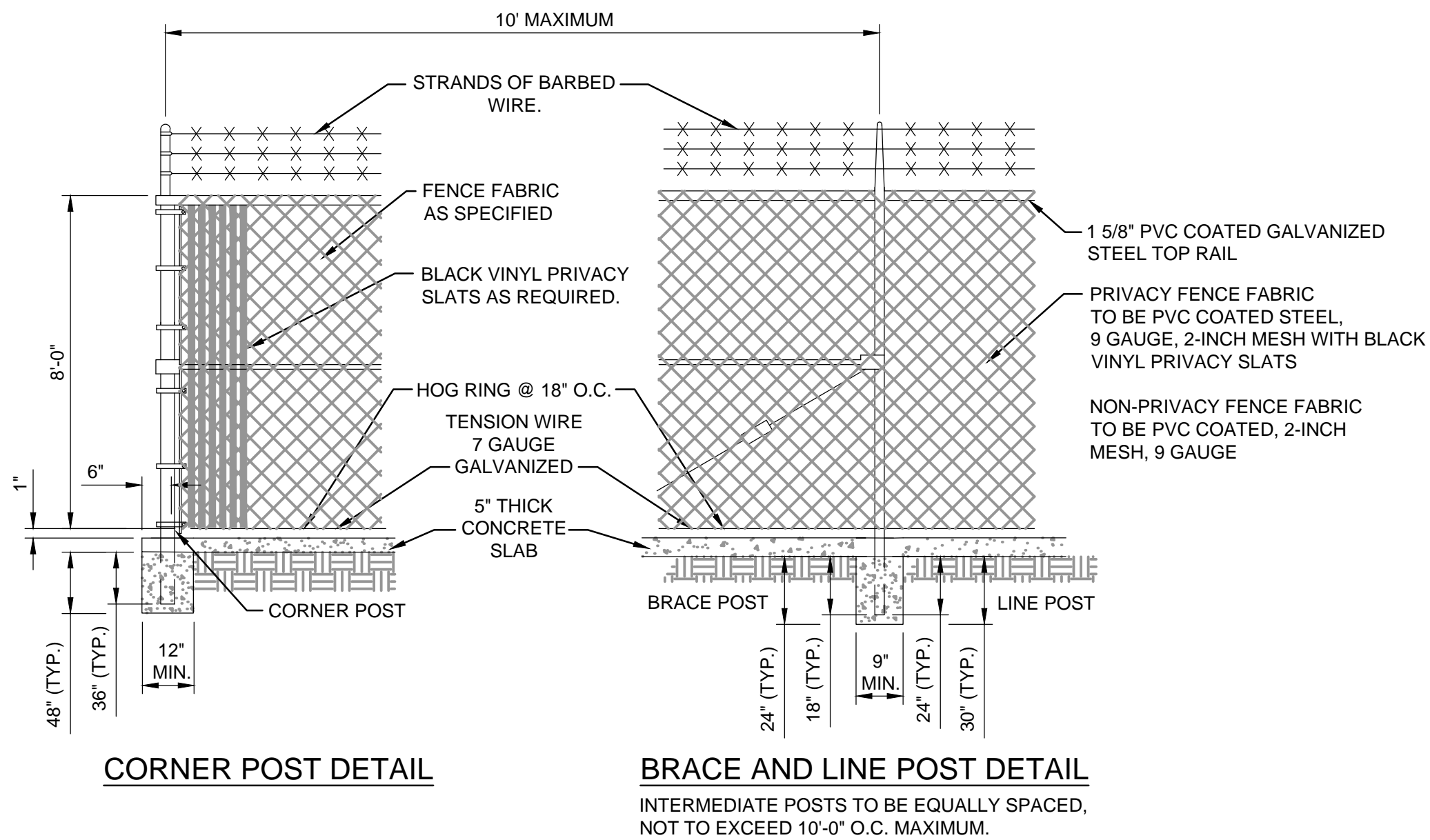
108

NOT USED
NTS

109



- FENCE NOTES**
- FENCE TO BE INSTALLED AS INDICATED ON SITE PLAN.
 - GATE POST TO BE 4" O.D. PVC COATED GALVANIZED STEEL PIPE. CORNER POST TO BE 3" O.D. PVC COATED GALVANIZED STEEL PIPE. LINE POST TO BE 2 1/2" O.D. PVC COATED GALVANIZED STEEL PIPE.
 - ALL FENCE SHALL BE GROUNDED IN ACCORDANCE WITH JEA GROUNDING STANDARDS.
 - BONDING WIRE BETWEEN GATE POST IS NOT REQUIRED WHERE EXISTING ROAD PAVING OR RAILROAD TRACKS WOULD MAKE INSTALLATION IMPRACTICAL.
 - ALL FENCING SHALL BE IN ACCORDANCE WITH LATEST JEA SECURITY FENCE REQUIREMENTS. CONTACT SECURITYSERVICE@JEA.COM FOR LATEST REQUIREMENTS. THE JEA SECURITY FENCE REQUIREMENTS TAKE PRECEDENCE OVER THOSE OF SPECIFICATION SECTION 02831 AND JEA STANDARD SPECIFICATION SECTION 492.
 - EMBEDDED CONCRETE PORTION OF FENCE POST SHALL HAVE MASTIC SEAL OR EQUAL COATING TO A MINIMUM OF 6" ABOVE FINISH GRADE.
 - FENCE FABRIC SHALL BE KNUCKLED ON TOP AND TWIST ON BOTTOM.
 - ALL FENCING, RAILS, POSTS, BRACKETS, BOLTS ETC. WILL BE PVC COATED

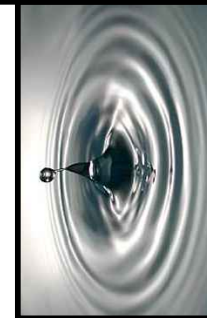


CHAINLINK GATE AND FENCE DETAILS
NTS

110

NOT USED
NTS

111



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C.E.# 9952

904-262-4121

| REVISIONS | |
|-----------|-----------|
| NO. | DATE |
| 6 | |
| 5 | |
| 4 | |
| 3 | |
| 2 | |
| 1 | 8/18/2020 |

DESIGN ENGINEER: JOHN E. COLLINS, JR., P.E.
FLORIDA REGISTRATION NO. 40065

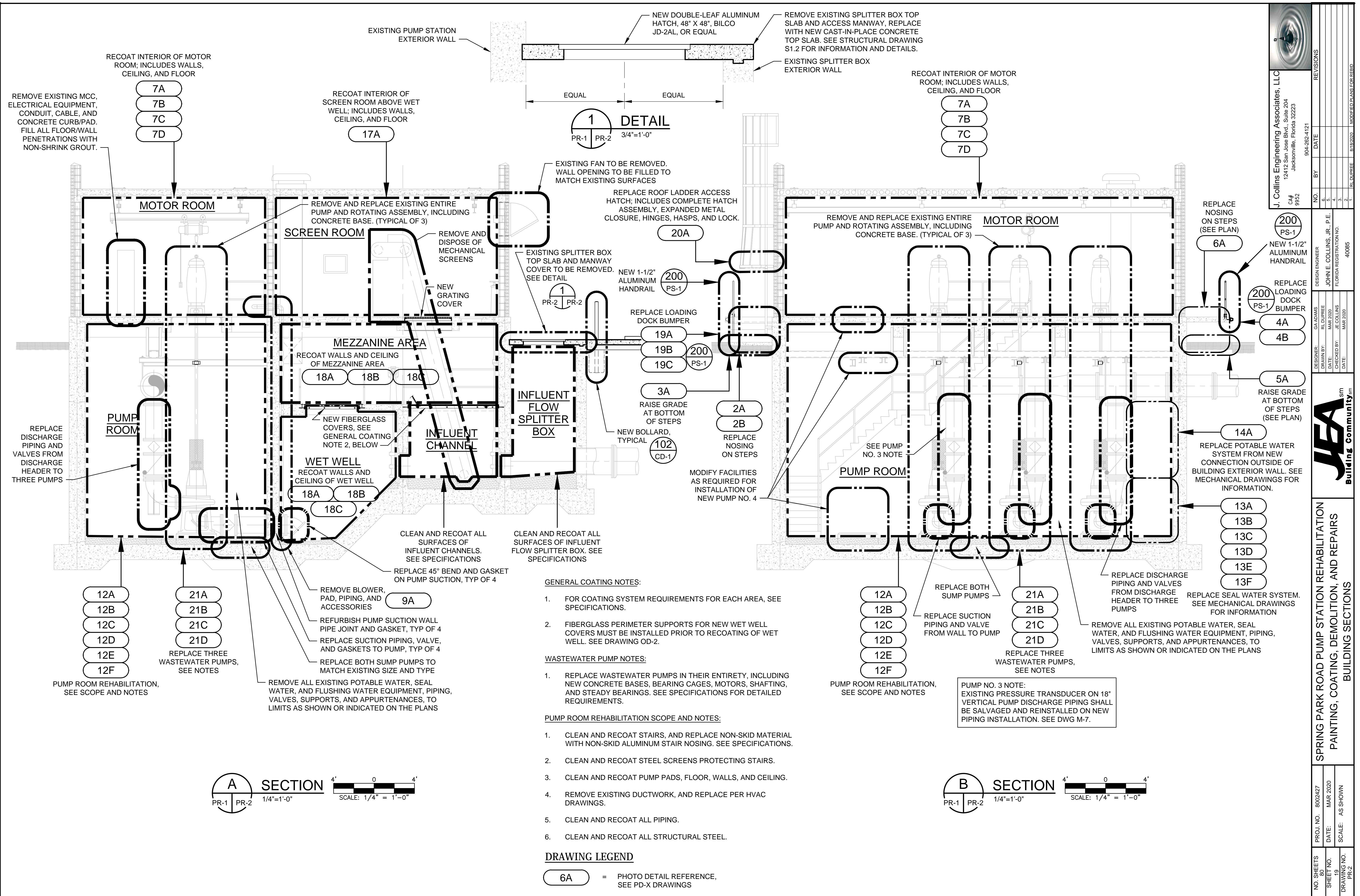
DESIGNER: G. ADAMS
DRAWN BY: R. L. DUPREE
DATE: MAR 2020
CHECKED BY: J. E. COLLINS
DATE: MAR 2020

JEA Building Community

SPRING PARK ROAD PUMP STATION REHABILITATION
CIVIL
STANDARD DETAILS

| | |
|-------------------|-----------------|
| PROJ. NO. 8002427 | DATE: MAR 2020 |
| SHEET NO. | SCALE: AS SHOWN |
| DRAWING NO. CD-2 | |

NO. SHEETS 80
SHEET NO.





EXTERIOR WALL LOCATED AT BACK OF BUILDING.

REMOVE GRAFFITI ON EXTERIOR WALL

NTS

1A

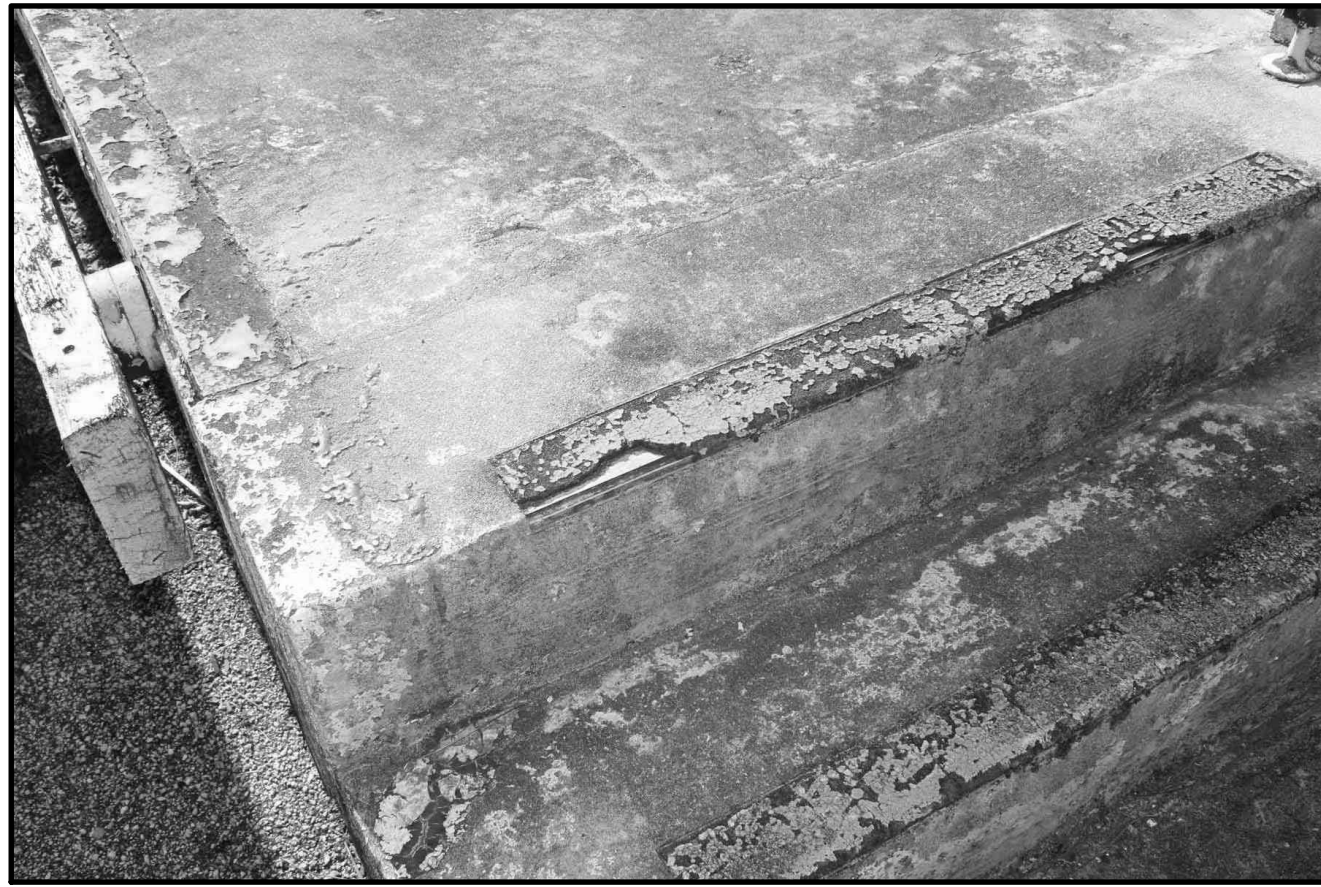


EXTERIOR WALL LOCATED AT BACK OF BUILDING.

REMOVE GRAFFITI ON EXTERIOR WALL

NTS

1B



STEPS LOCATED AT END OF LOADING DOCK ALONG BACK OF BUILDING. SEE SPECIFICATIONS FOR NOSING.

REPLACE NOSING ON STEPS - BACK

NTS

2A



STEPS LOCATED AT END OF LOADING DOCK ALONG BACK OF BUILDING. SEE SPECIFICATIONS FOR NOSING.

REPLACE NOSING ON STEPS - BACK

NTS

2B



STEPS LOCATED AT END OF LOADING DOCK ALONG BACK OF BUILDING. SEE SPECIFICATIONS FOR NOSING.

RAISE GRADE AT BOTTOM OF STEPS - BACK

NTS

3A



LOADING DOCK LOCATED ALONG FRONT OF BUILDING. REFURBISH NOSING, REPLACE DOCK BUMPER, INSTALL NEW ALUMINUM HANDRAIL AND TOEBOARD.

REPLACE LOADING DOCK BUMPER - FRONT

NTS

4A



LOADING DOCK LOCATED ALONG FRONT OF BUILDING. REFURBISH NOSING, REPLACE DOCK BUMPER, INSTALL NEW ALUMINUM HANDRAIL AND TOEBOARD.

REPLACE LOADING DOCK BUMPER - FRONT

NTS

4B



STEPS LOCATED AT END OF LOADING DOCK ALONG FRONT OF BUILDING.

REPLACE CONCRETE PAD AT STEPS - FRONT

NTS

5A

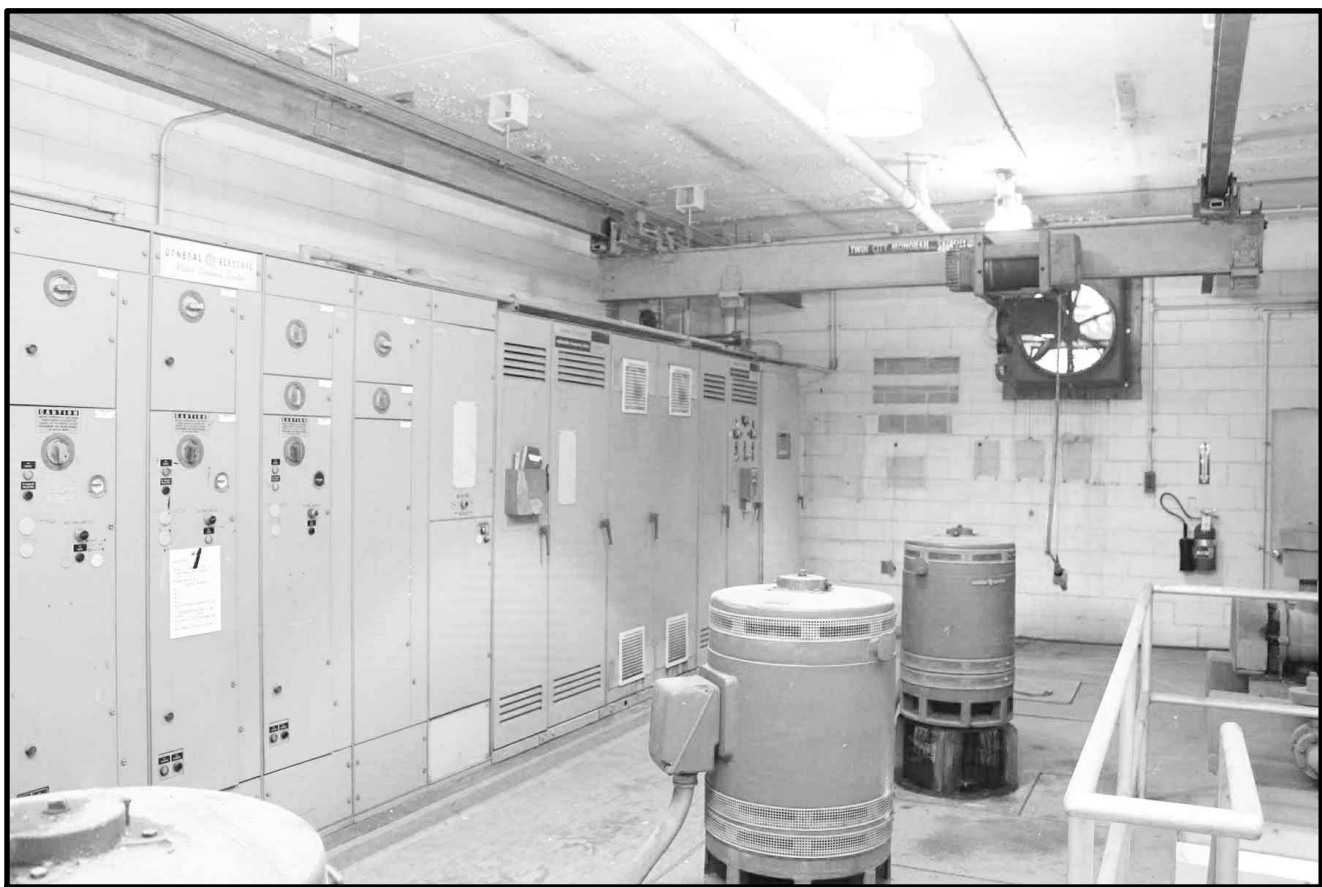


STEPS LOCATED AT END OF LOADING DOCK ALONG FRONT OF BUILDING.

REPLACE NOSING ON STEPS - FRONT

NTS

6A



RECOAT INTERIOR OF MOTOR ROOM

NTS

7A



RECOAT INTERIOR OF MOTOR ROOM

NTS

7B



RECOAT INTERIOR OF MOTOR ROOM

NTS

7C

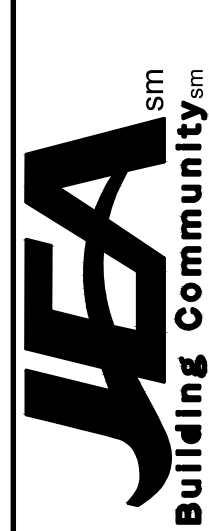


J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C.A.# 9952

| NO. | | BY | DATE | REVISIONS | |
|-----|-----------|----|-----------|-------------------------|--|
| 1 | EL DUPREE | | 8/18/2020 | MODIFIED PLANS FOR REID | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |

| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |

| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUPREE |
| DATE | MAR 2020 |
| CHECKED BY | JE COLLINS |
| DATE | MAR 2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION
PAINTING, COATING, DEMOLITION, AND REPAIRS
PHOTO DETAILS

| | |
|-------------|----------|
| NO. SHEETS | 8002427 |
| DATE | MAR 2020 |
| SCALE | AS SHOWN |
| SHEET NO. | |
| DRAWING NO. | PD-1 |



RECOAT INTERIOR OF MOTOR ROOM

NTS

7D



WORK INCLUDES FAUCETS, VALVES, P-TRAP, TOILET SHUTOFF, VALVES, PIPING, AND TOILET TANK INTERNALS.

REPLACE BATHROOM PLUMBING FIXTURES

NTS

8A



WORK INCLUDES BLOWER, VALVES, PIPING, ACCESSORIES, ASSOCIATED ELECTRICAL, AND CONCRETE EQUIPMENT PAD.

REMOVE BLOWER AND PIPING

NTS

9A



WORK INCLUDES JANITORS SINK, FIXTURES, VALVES AND PIPING, AND P-TRAP.

REPLACE JANITORS SINK

NTS

10A



WORK INCLUDES JANITORS SINK, FIXTURES, VALVES AND PIPING, AND P-TRAP.

REPLACE JANITORS SINK

NTS

10B



WORK INCLUDES JANITORS SINK, FIXTURES, VALVES AND PIPING, AND P-TRAP.

REPLACE JANITORS SINK

NTS

10C



WORK INCLUDES WASHDOWN BOOSTER PUMP, AND ALL ASSOCIATED BUILDING INTERIOR PIPING AND VALVES. HOSES SHALL BE REPLACED WITH JEA STANDARD 1-1/2" HOSE.

REPLACE WASHDOWN BOOSTER PUMP

NTS

11A



PUMP ROOM REHABILITATION SCOPE AND NOTES:

CLEAN AND RECOAT STAIRS, AND REPLACE NON-SKID NOSING; CLEAN AND RECOAT STEEL SCREENS PROTECTING STAIRS; CLEAN AND RECOAT FLOOR, WALLS, AND CEILING; REMOVE AND REPLACE DUCTWORK AND GRILLE; CLEAN AND RECOAT ALL PIPING; CLEAN AND RECOAT ALL STRUCTURAL STEEL. NEW PADS FOR PUMPS AND EQUIPMENT TO BE COATED.

RECOAT PUMP ROOM INTERIOR

NTS

12A



FOR PUMP ROOM REHABILITATION SCOPE AND NOTES, SEE DETAIL

12A

RECOAT PUMP ROOM INTERIOR

NTS

12B



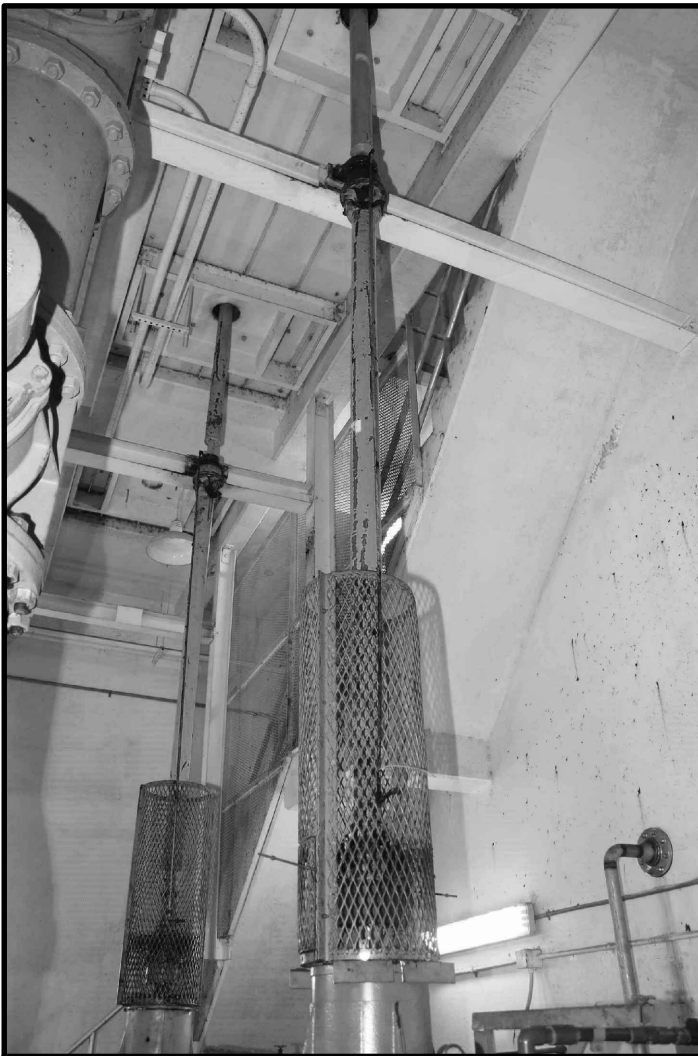
FOR PUMP ROOM REHABILITATION SCOPE AND NOTES, SEE DETAIL

12A

RECOAT PUMP ROOM INTERIOR

NTS

12C



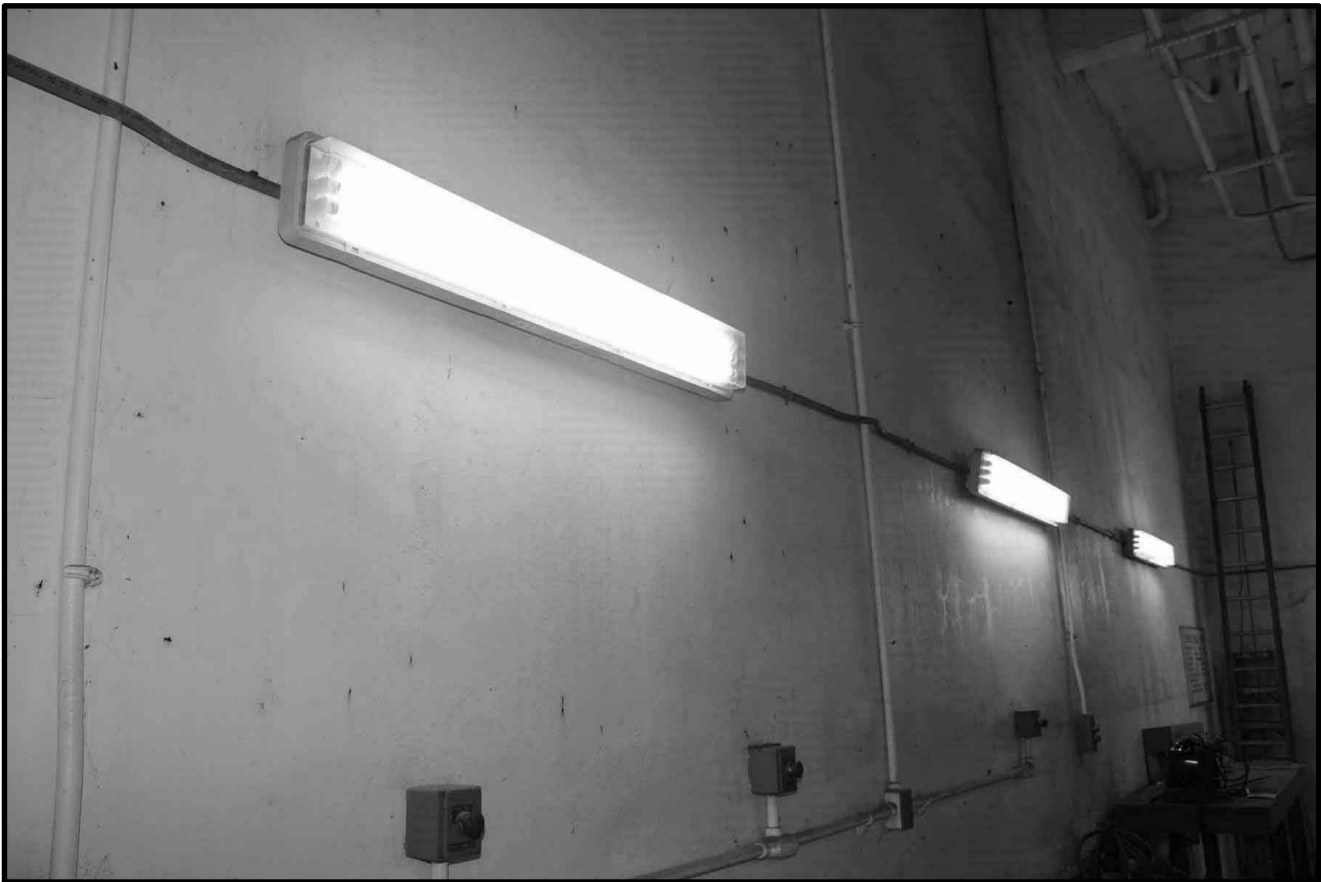
FOR PUMP ROOM REHABILITATION SCOPE AND NOTES, SEE DETAIL

12A

RECOAT PUMP ROOM INTERIOR

NTS

12D



FOR PUMP ROOM REHABILITATION SCOPE AND NOTES, SEE DETAIL

12A

RECOAT PUMP ROOM INTERIOR

NTS

12E

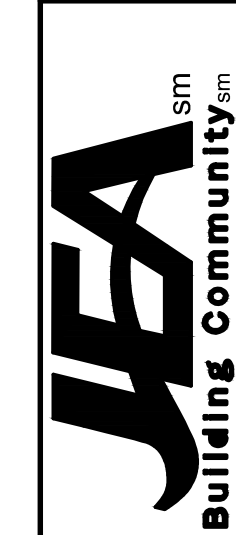


J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C.A.# 9952

| NO. | | BY | DATE | REVISIONS | |
|-----|----------|----|-----------|-------------------------|--|
| 1 | EL DUPEE | | 8/18/2020 | MODIFIED PLANS FOR REID | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |

| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |

| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUPEE |
| DATE | MAR 2020 |
| CHECKED BY | JE COLLINS |
| DATE | MAR 2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION
PAINTING, COATING, DEMOLITION, AND REPAIRS
PHOTO DETAILS

| | | |
|-------------|-----------|----------|
| NO. SHEETS | PROJ. NO. | 8002427 |
| 80 | DATE | MAR 2020 |
| SHEET NO. | SCALE | AS SHOWN |
| DRAWING NO. | | PD-2 |



PUMP ROOM
REHABILITATION
SCOPE AND NOTES:

CLEAN AND RECOAT STAIRS, AND REPLACE NON-SKID NOSING; CLEAN AND RECOAT STEEL SCREENS PROTECTING STAIRS; CLEAN AND RECOAT FLOOR, WALLS, AND CEILING; REMOVE AND REPLACE DUCTWORK AND GRILLE; CLEAN AND RECOAT ALL PIPING; CLEAN AND RECOAT ALL STRUCTURAL STEEL. NEW PADS FOR PUMPS AND EQUIPMENT TO BE COATED.

RECOAT PUMP ROOM INTERIOR

NTS

12F



WORK INCLUDES ALL PUMPS, MOTORS, VALVES, PIPING AND ALL SUPPORTS, AND ACCESSORIES.

REPLACE SEAL / FLUSHING WATER SYSTEMS

NTS

NOTE: DEMOLISH SEAL WATER AND FLUSHING WATER SYSTEMS. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

13A



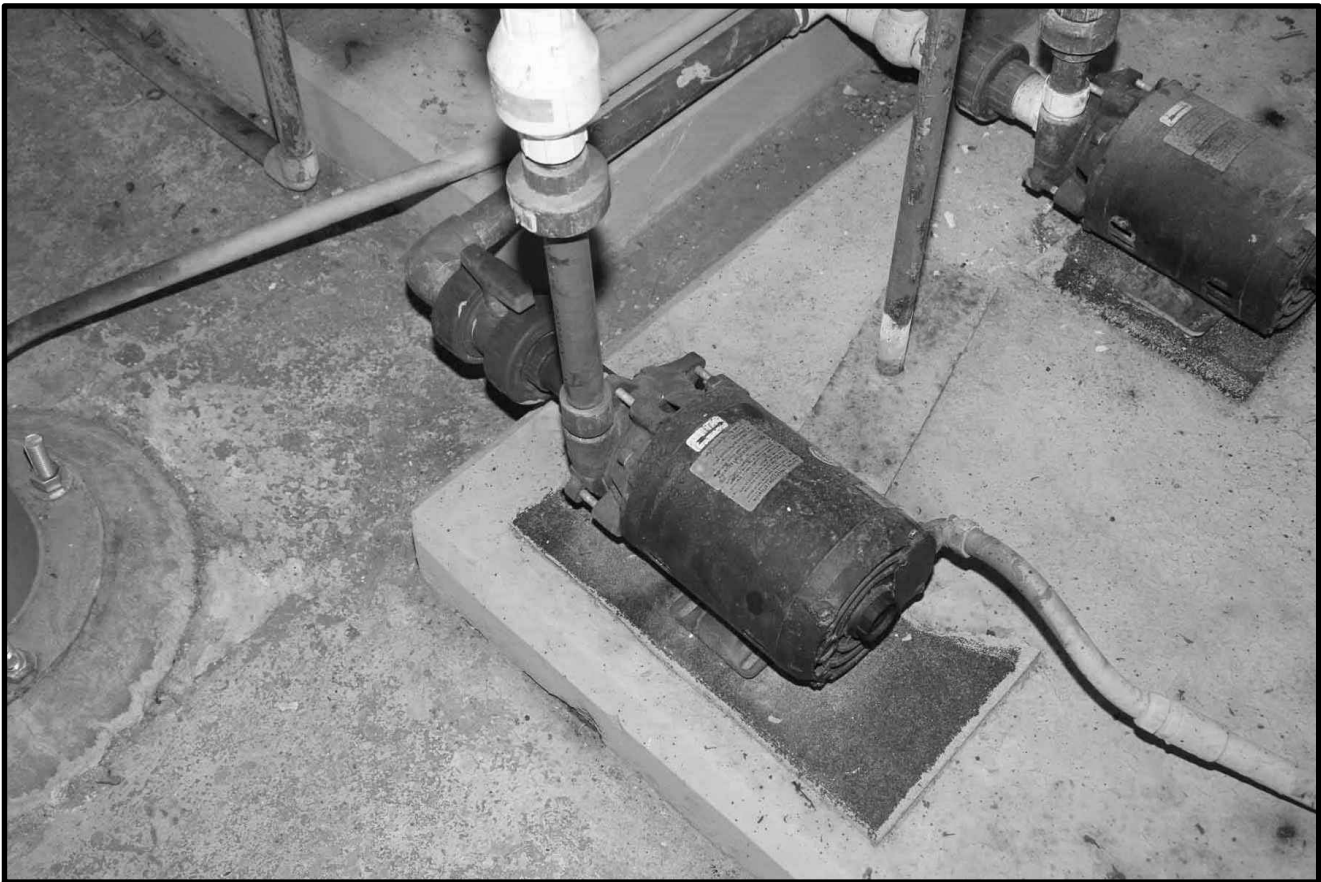
WORK INCLUDES ALL PUMPS, MOTORS, VALVES, PIPING AND ALL SUPPORTS, AND ACCESSORIES.

REPLACE SEAL / FLUSHING WATER SYSTEMS

NTS

NOTE: DEMOLISH SEAL WATER AND FLUSHING WATER SYSTEMS. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

13B



WORK INCLUDES ALL PUMPS, MOTORS, VALVES, PIPING AND ALL SUPPORTS, AND ACCESSORIES.

REPLACE SEAL / FLUSHING WATER SYSTEMS

NTS

NOTE: DEMOLISH SEAL WATER AND FLUSHING WATER SYSTEMS. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

13C



WORK INCLUDES ALL PUMPS, MOTORS, VALVES, PIPING AND ALL SUPPORTS, AND ACCESSORIES.

REPLACE SEAL / FLUSHING WATER SYSTEMS

NTS

NOTE: DEMOLISH SEAL WATER AND FLUSHING WATER SYSTEMS. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

13D



WORK INCLUDES ALL PUMPS, MOTORS, VALVES, PIPING AND ALL SUPPORTS, AND ACCESSORIES.

REPLACE SEAL / FLUSHING WATER SYSTEMS

NTS

NOTE: DEMOLISH SEAL WATER AND FLUSHING WATER SYSTEMS. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

13E



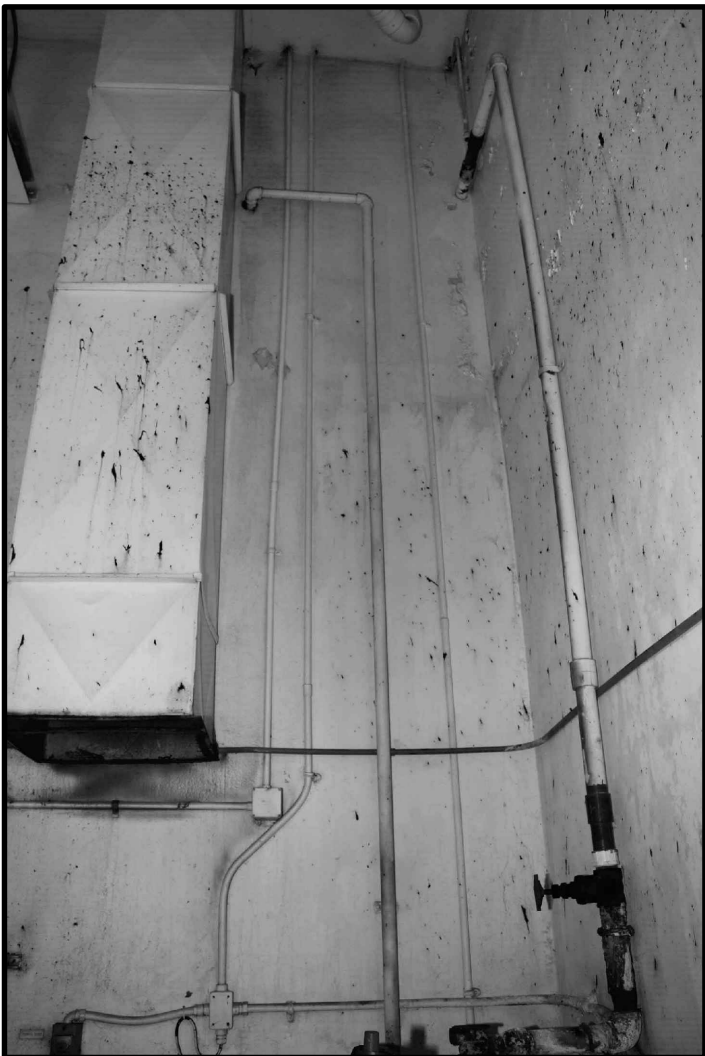
WORK INCLUDES PUMPS, MOTORS, VALVES, PIPING AND ALL SUPPORTS, AND ACCESSORIES.

REPLACE SEAL / FLUSHING WATER SYSTEMS

NTS

NOTE: DEMOLISH SEAL WATER AND FLUSHING WATER SYSTEMS. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

13F



WORK INCLUDES BUILDING INTERIOR PIPING, VALVES, SUPPORTS, AND ALL ACCESSORIES, FROM 5-FEET OUTSIDE OF BUILDING WALL.

REPLACE POTABLE WATER SYSTEM

NTS

NOTE: DEMOLISH COMPLETE INTERIOR POTABLE WATER SYSTEM. SEE MECHANICAL DRAWINGS FOR NEW INSTALLATION.

14A



WORK INCLUDES INTERIOR STAIR NOSING FROM MOTOR ROOM FLOOR DOWN TO PUMP ROOM FLOOR. SEE SPECIFICATIONS FOR NOSING.

REPLACE NON-SKID INTERIOR STAIR NOSING

NTS

15A



WORK INCLUDES INTERIOR STAIR NOSING FROM MOTOR ROOM FLOOR DOWN TO PUMP ROOM FLOOR. SEE SPECIFICATIONS FOR NOSING.

REPLACE NON-SKID INTERIOR STAIR NOSING

NTS

15B

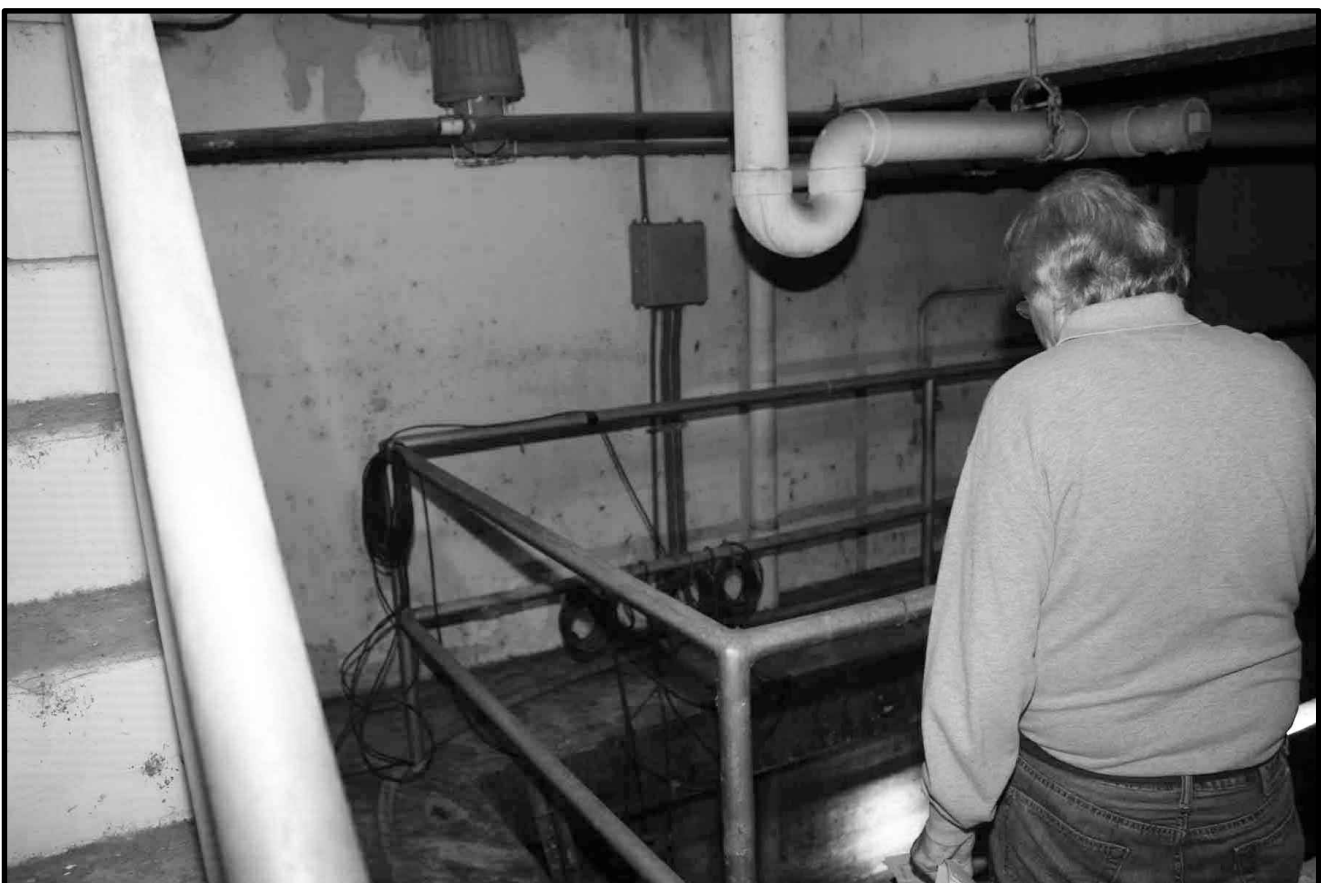


WORK INCLUDES INTERIOR STAIR NOSING FROM MOTOR ROOM FLOOR DOWN TO PUMP ROOM FLOOR. SEE SPECIFICATIONS FOR NOSING.

REPLACE NON-SKID INTERIOR STAIR NOSING

NTS

15C



WORK INCLUDES INTERIOR STAIR NOSING FROM WET WELL MAIN FLOOR TO MEZZANINE FLOOR. SEE SPECIFICATIONS FOR NOSING.

REPLACE NON-SKID INTERIOR STAIR NOSING

NTS

16A



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
CJA# 9952

| NO. | | DATE | | REVISIONS | |
|-----|-----------|-----------|--|-----------|--------------------------|
| 1 | EL DUPREE | 8/18/2020 | | 1 | MODIFIED PLANS FOR REBID |
| 2 | | | | 2 | |
| 3 | | | | 3 | |
| 4 | | | | 4 | |
| 5 | | | | 5 | |
| 6 | | | | 6 | |

| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |

| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUPREE |
| DATE | MAR 2020 |
| CHECKED BY | JE COLLINS |
| DATE | MAR 2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION
PAINTING, COATING, AND REPAIRS
PHOTO DETAILS

| | |
|-------------|-----------------|
| NO. SHEETS | 8002427 |
| 80 | |
| SHEET NO. | MAR 2020 |
| DRAWING NO. | SCALE: AS SHOWN |
| PD-3 | |

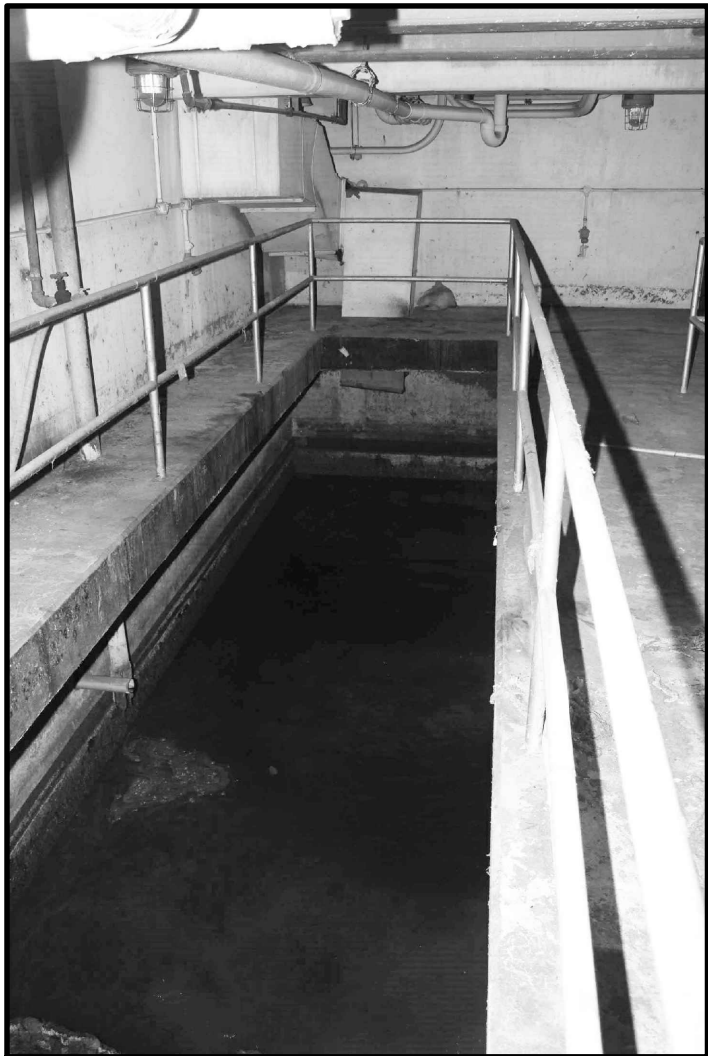


WORK INCLUDES ALL FLOORS, WALLS AND CEILING OF SCREEN ROOM AND MEZZANINE LEVELS.

RECOAT INTERIOR WALLS AND CEILING

NTS

17A

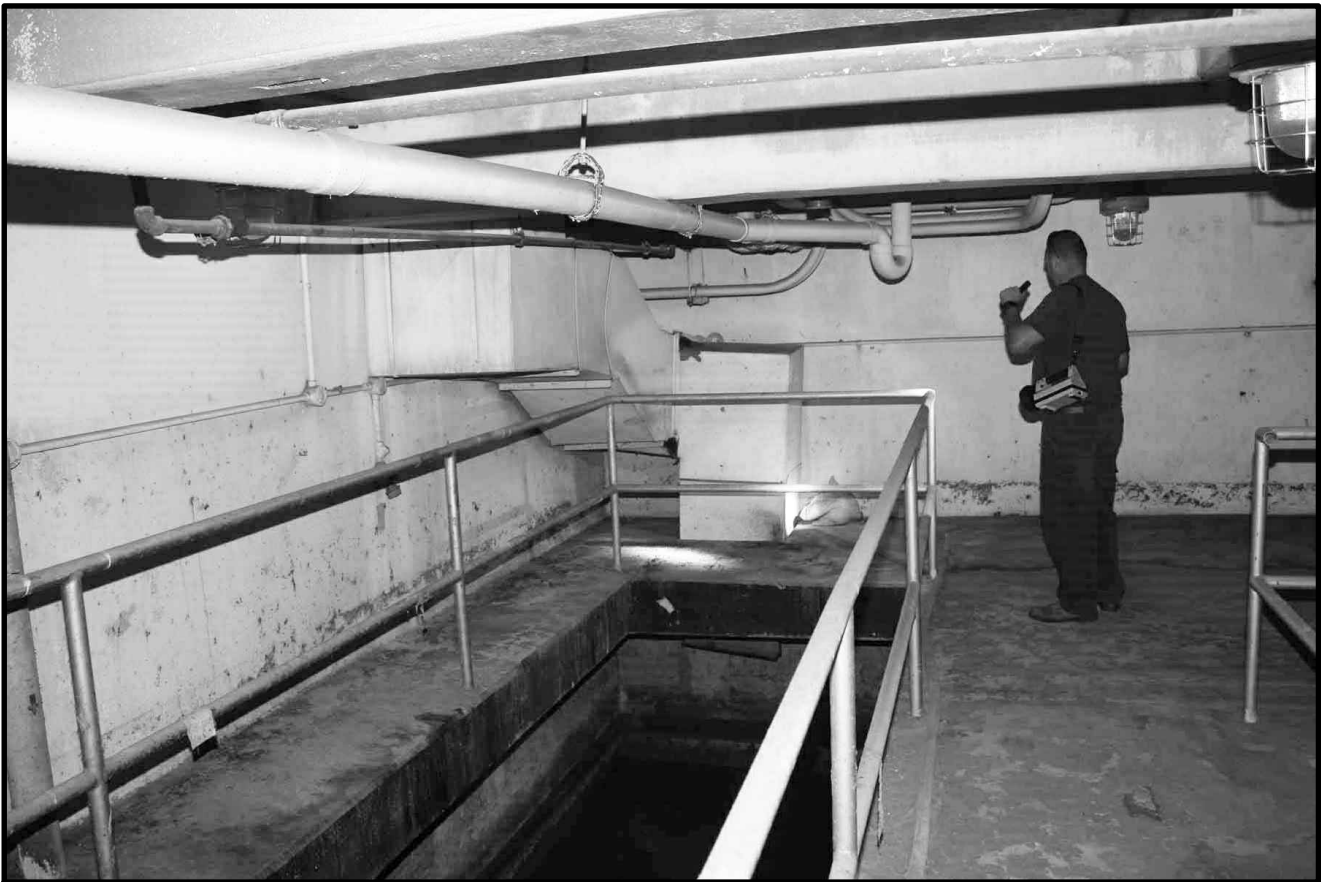


WORK INCLUDES ALL FLOORS, WALLS AND CEILING OF WET WELL AND MEZZANINE AREAS.

RECOAT INTERIOR WALLS AND CEILING

NTS

18A



WORK INCLUDES ALL FLOORS, WALLS AND CEILING OF WET WELL AND MEZZANINE AREAS.

RECOAT INTERIOR WALLS AND CEILING

NTS

18B



WORK INCLUDES ALL FLOORS, WALLS AND CEILING OF WET WELL AND MEZZANINE AREAS.

RECOAT INTERIOR WALLS AND CEILING

NTS

18C



WORK INCLUDES COMPLETE LOADING DOCK BUMPER AT REAR OF BUILDING. REFURBISH NOSING, REPLACE DOCK BUMPER, INSTALL NEW ALUMINUM HANDRAIL.

REPLACE LOADING DOCK BUMPER

NTS

19A



WORK INCLUDES COMPLETE LOADING DOCK BUMPER AT REAR OF BUILDING. REFURBISH NOSING, REPLACE DOCK BUMPER, INSTALL NEW ALUMINUM HANDRAIL.

REPLACE LOADING DOCK BUMPER

NTS

19B



REMOVE FAN, FILL WALL OPENING TO MATCH

WORK INCLUDES COMPLETE LOADING DOCK BUMPER AT REAR OF BUILDING. REFURBISH NOSING, REPLACE DOCK BUMPER, INSTALL NEW ALUMINUM HANDRAIL.

REPLACE LOADING DOCK BUMPER

NTS

19C



WORK INCLUDES COMPLETE ROOF LADDER ACCESS HATCH ASSEMBLY INCLUDING EXPANDED METAL, HINGES, LOCK AND HASP.

REPLACE ROOF LADDER ACCESS HATCH

NTS

20A



REMOVE AND REPLACE PUMP SUCTION AND DISCHARGE PIPING FROM DISCHARGE HEADER TO WALL PIPE ON PUMP SUCTION PIPING.

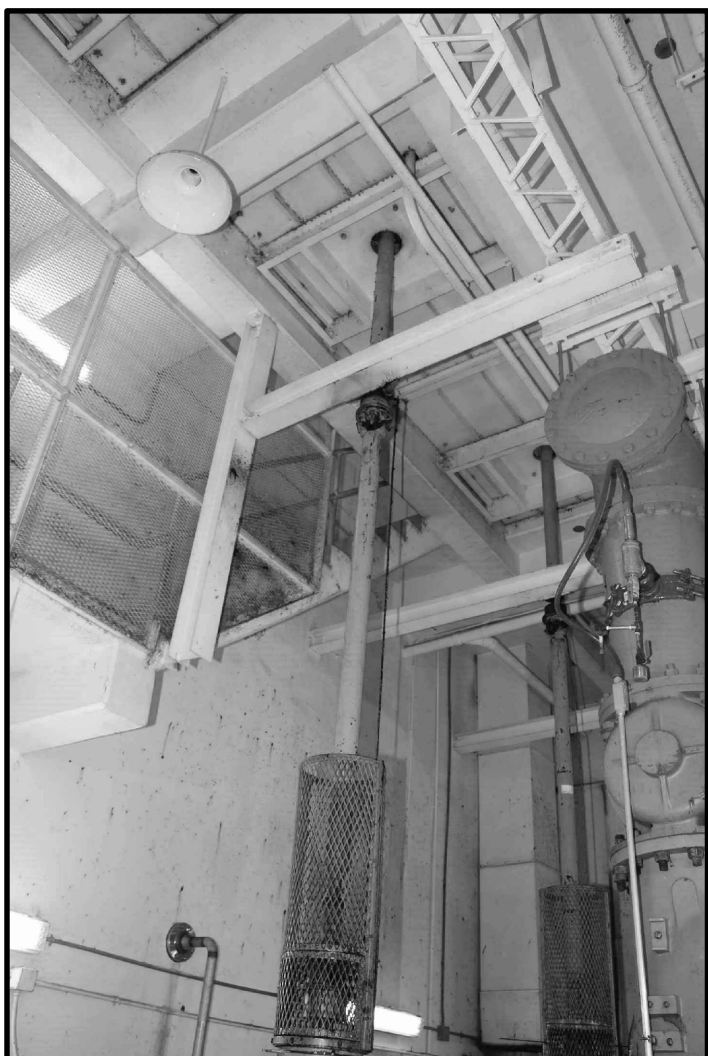
REMOVE AND REPLACE WASTEWATER PUMPS IN THEIR ENTIRETY.

WORK TO INCLUDE NEW CONCRETE BASES, BEARING CAGES, MOTORS, SHAFTING, AND STEADY BEARINGS.

WASTEWATER PUMP AND PUMP MOTOR REMOVAL/REPLACEMENT

NTS

21A



REMOVE AND REPLACE PUMP SUCTION AND DISCHARGE PIPING FROM DISCHARGE HEADER TO WALL PIPE ON PUMP SUCTION PIPING.

REMOVE AND REPLACE WASTEWATER PUMPS IN THEIR ENTIRETY.

WORK TO INCLUDE NEW CONCRETE BASES, BEARING CAGES, MOTORS, SHAFTING, AND STEADY BEARINGS.

WASTEWATER PUMP AND PUMP MOTOR REMOVAL/REPLACEMENT

NTS

21B



REMOVE AND REPLACE PUMP SUCTION AND DISCHARGE PIPING FROM DISCHARGE HEADER TO WALL PIPE ON PUMP SUCTION PIPING.

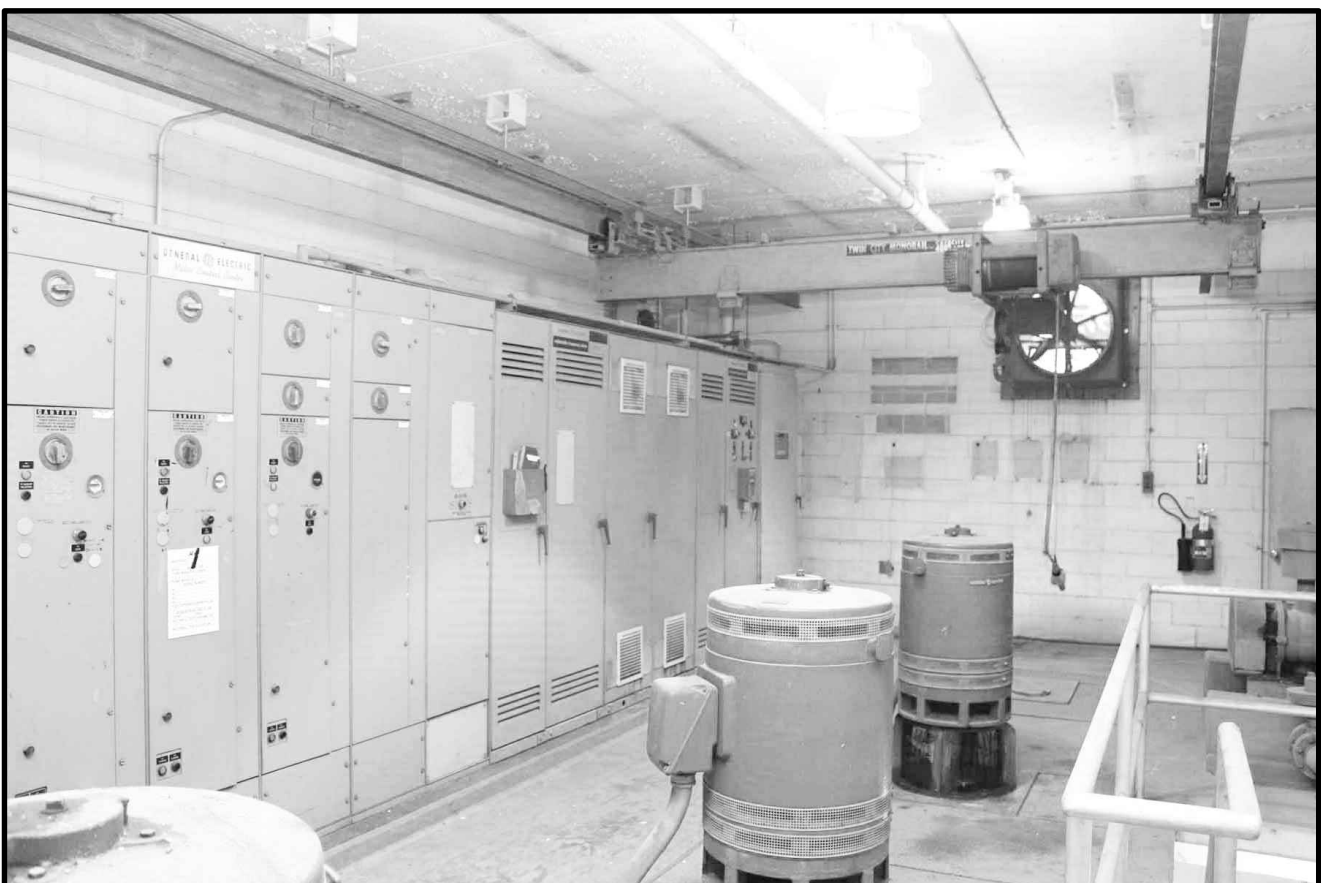
REMOVE AND REPLACE WASTEWATER PUMPS IN THEIR ENTIRETY.

WORK TO INCLUDE NEW CONCRETE BASES, BEARING CAGES, MOTORS, SHAFTING, AND STEADY BEARINGS.

WASTEWATER PUMP AND PUMP MOTOR REMOVAL/REPLACEMENT

NTS

21C



(SEE NOTES ON PHOTOS 21A THROUGH 21C.)

WASTEWATER PUMP AND PUMP MOTOR REMOVAL/REPLACEMENT

NTS

21D



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
CJA# 9952

| NO. | BY | DATE | REVISIONS |
|-----|-----------|-----------|--------------------------|
| 1 | EL DUPREE | 8/18/2020 | MODIFIED PLANS FOR REBID |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

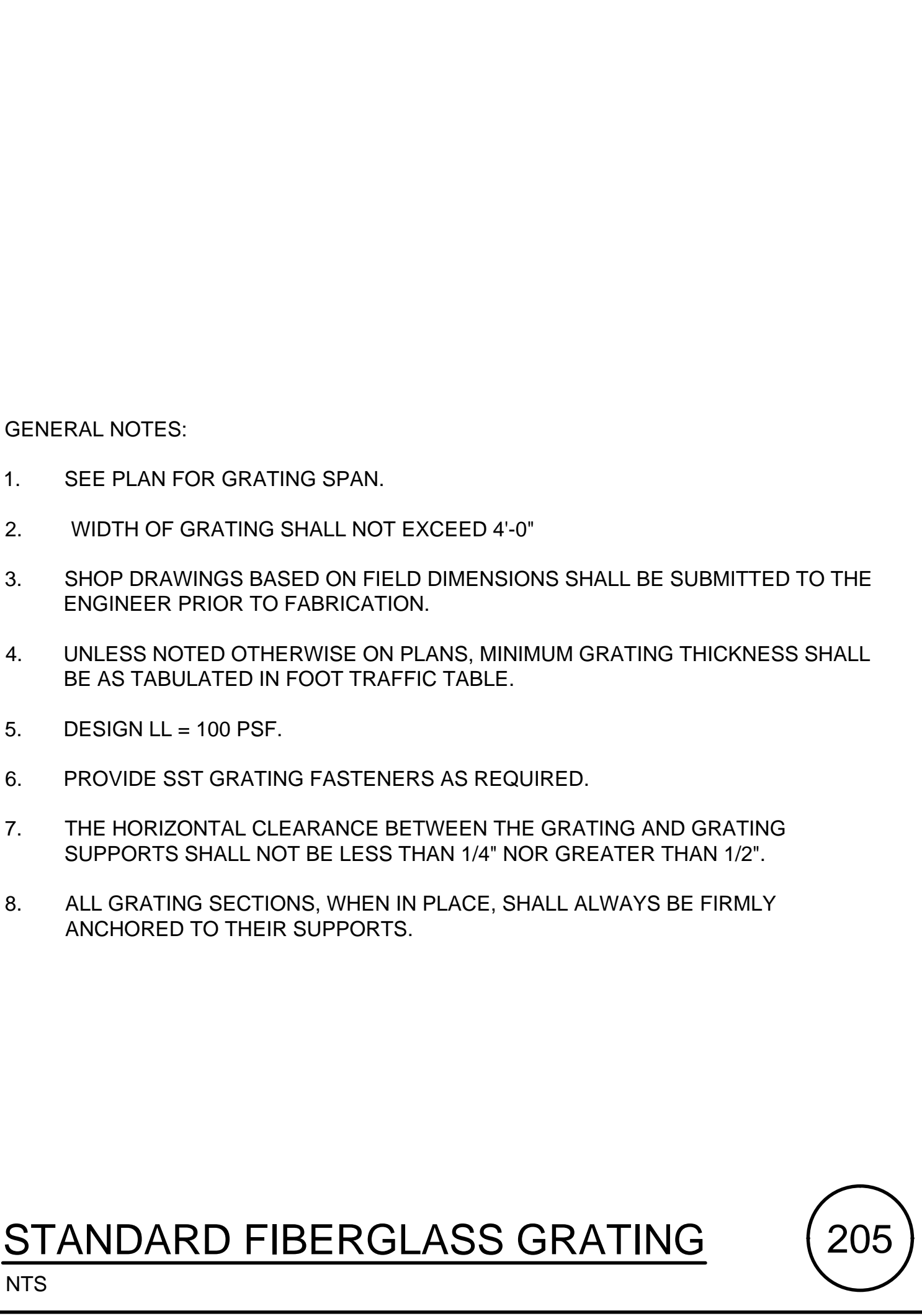
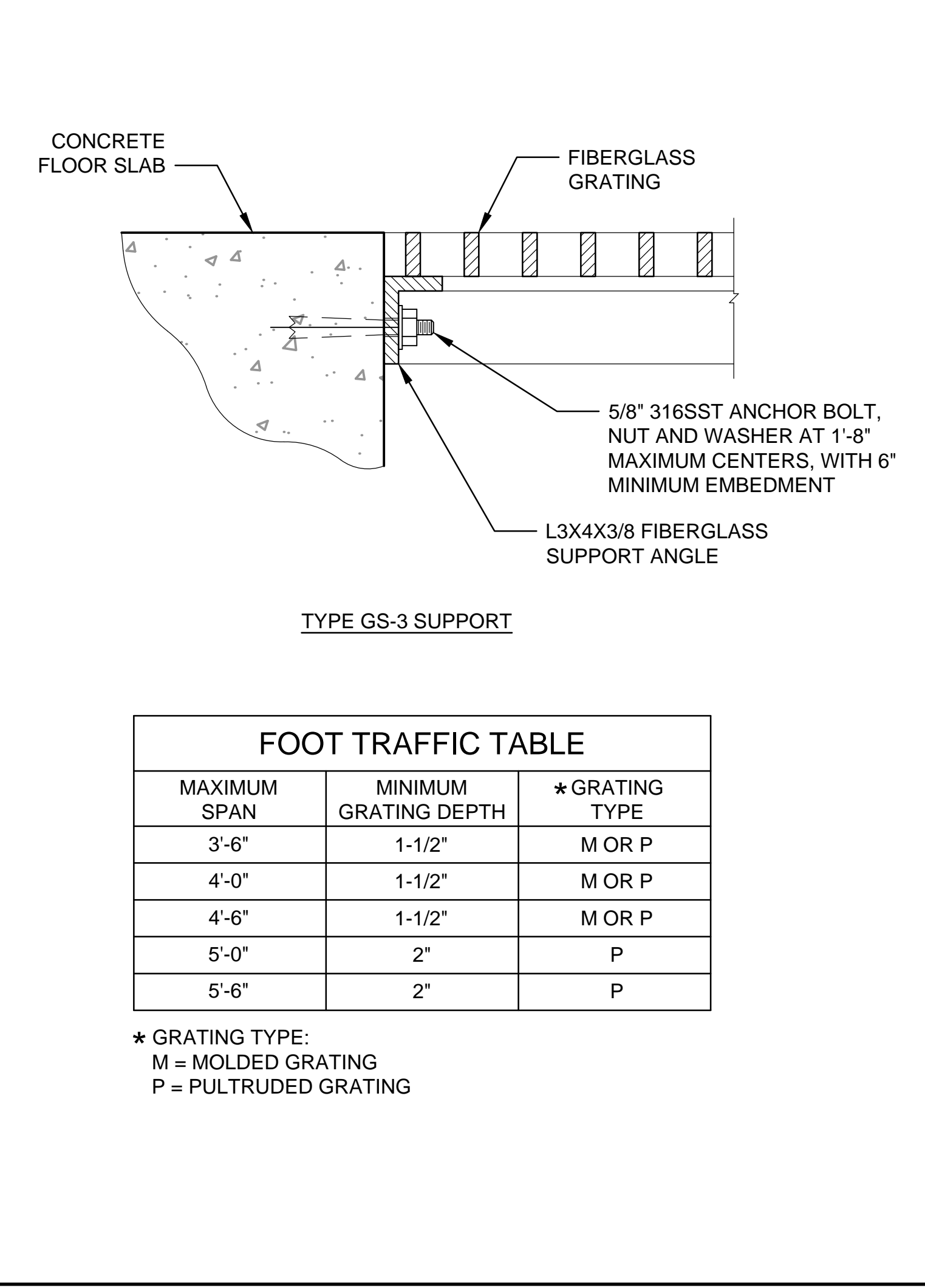
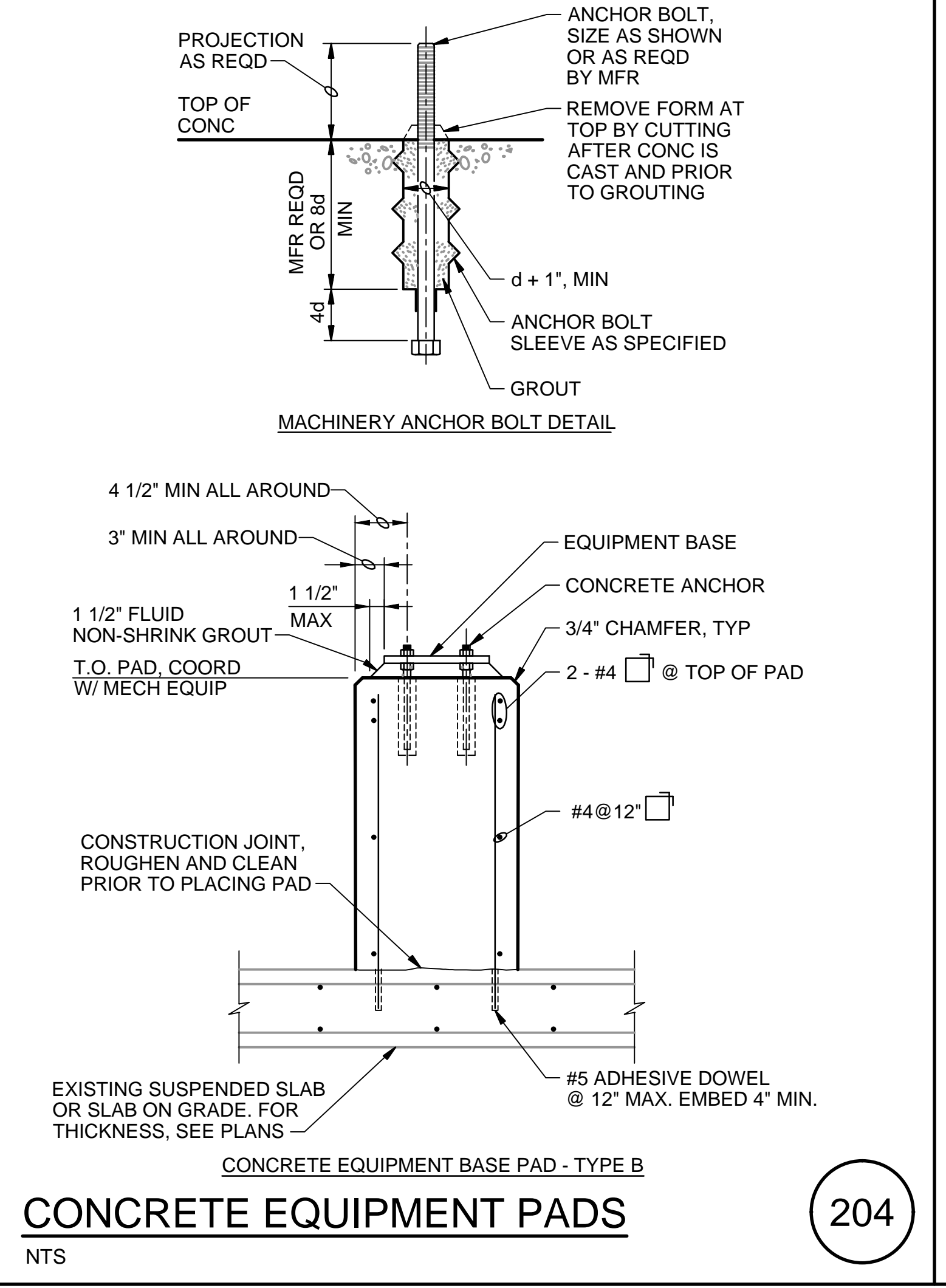
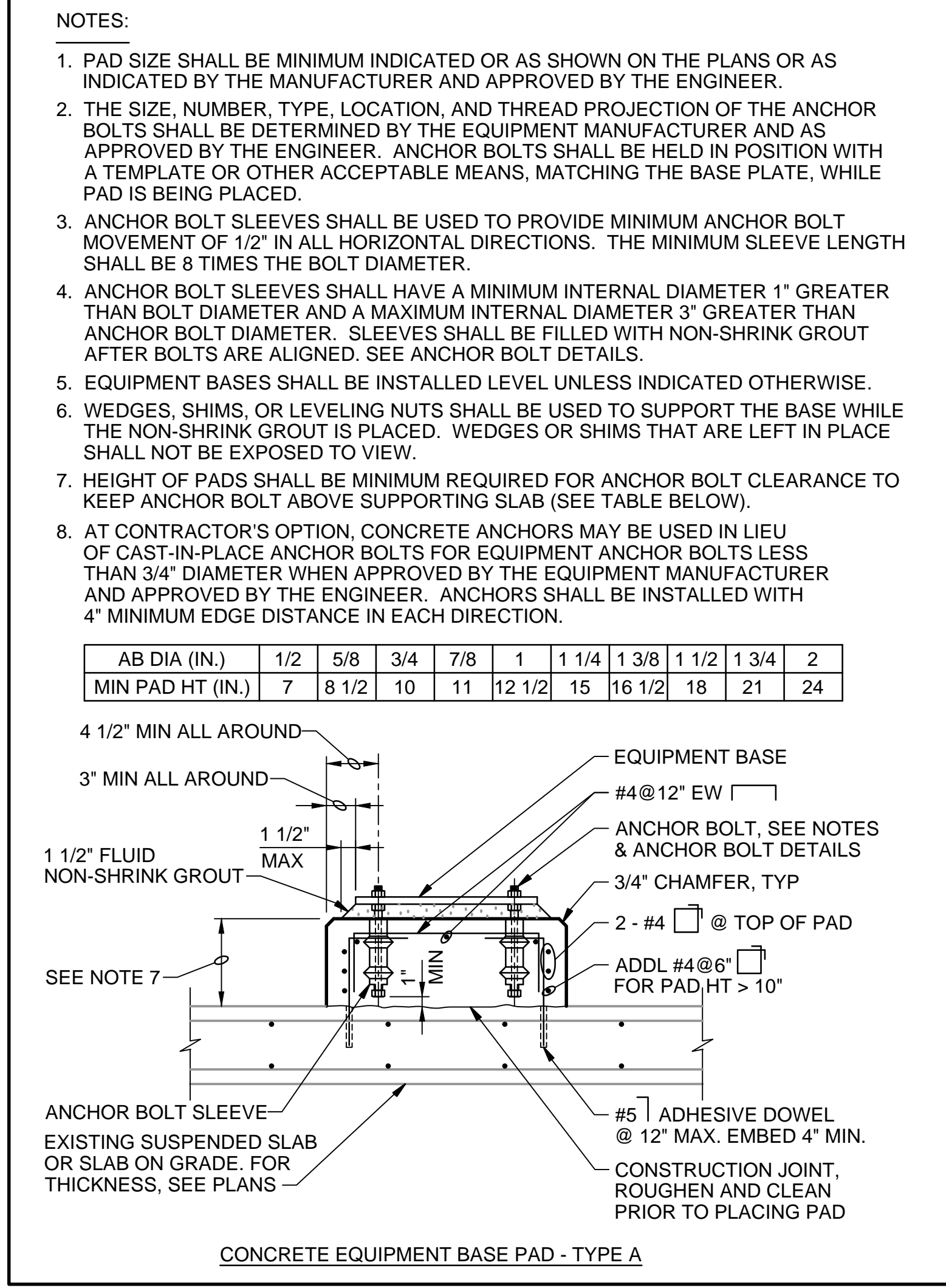
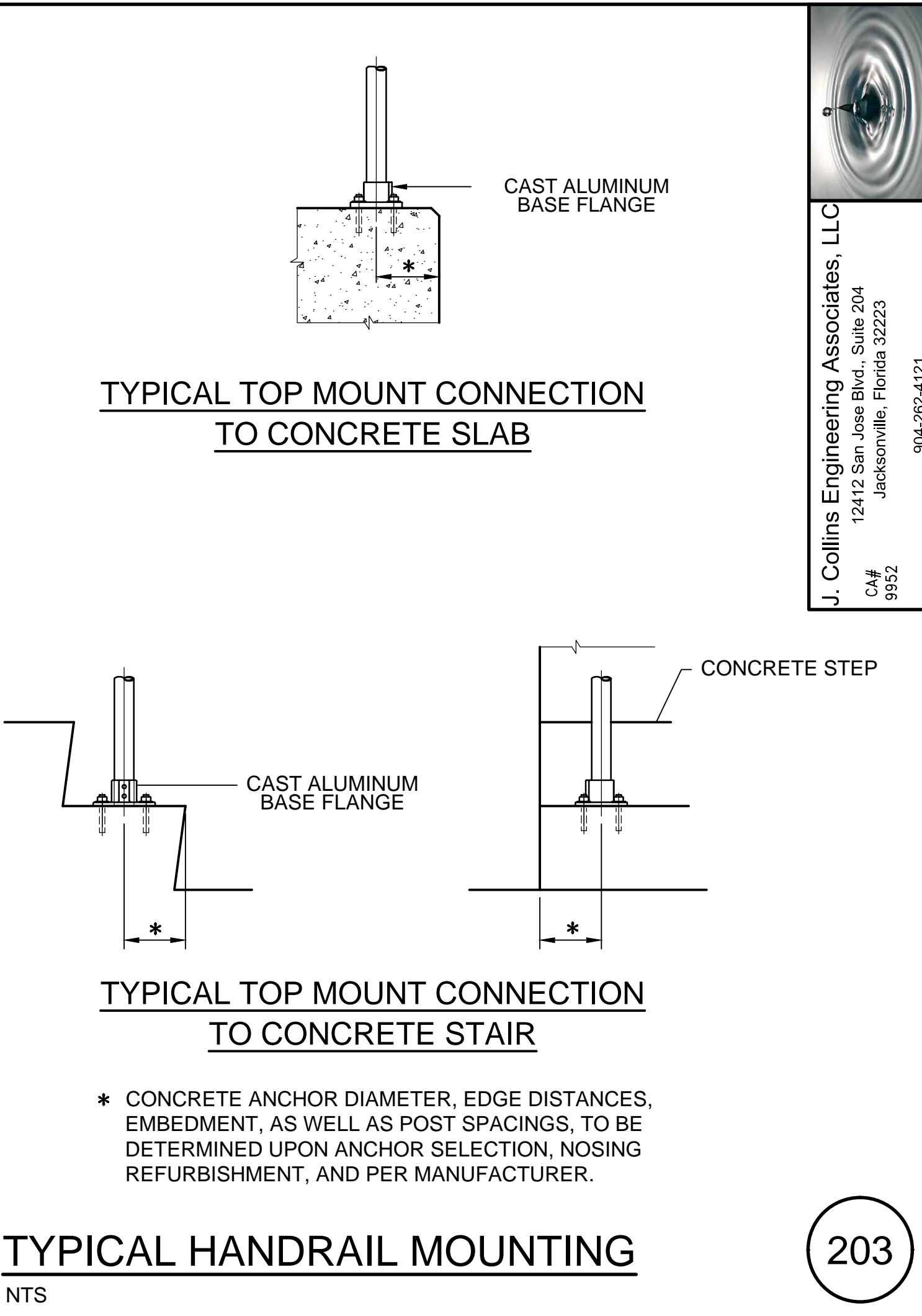
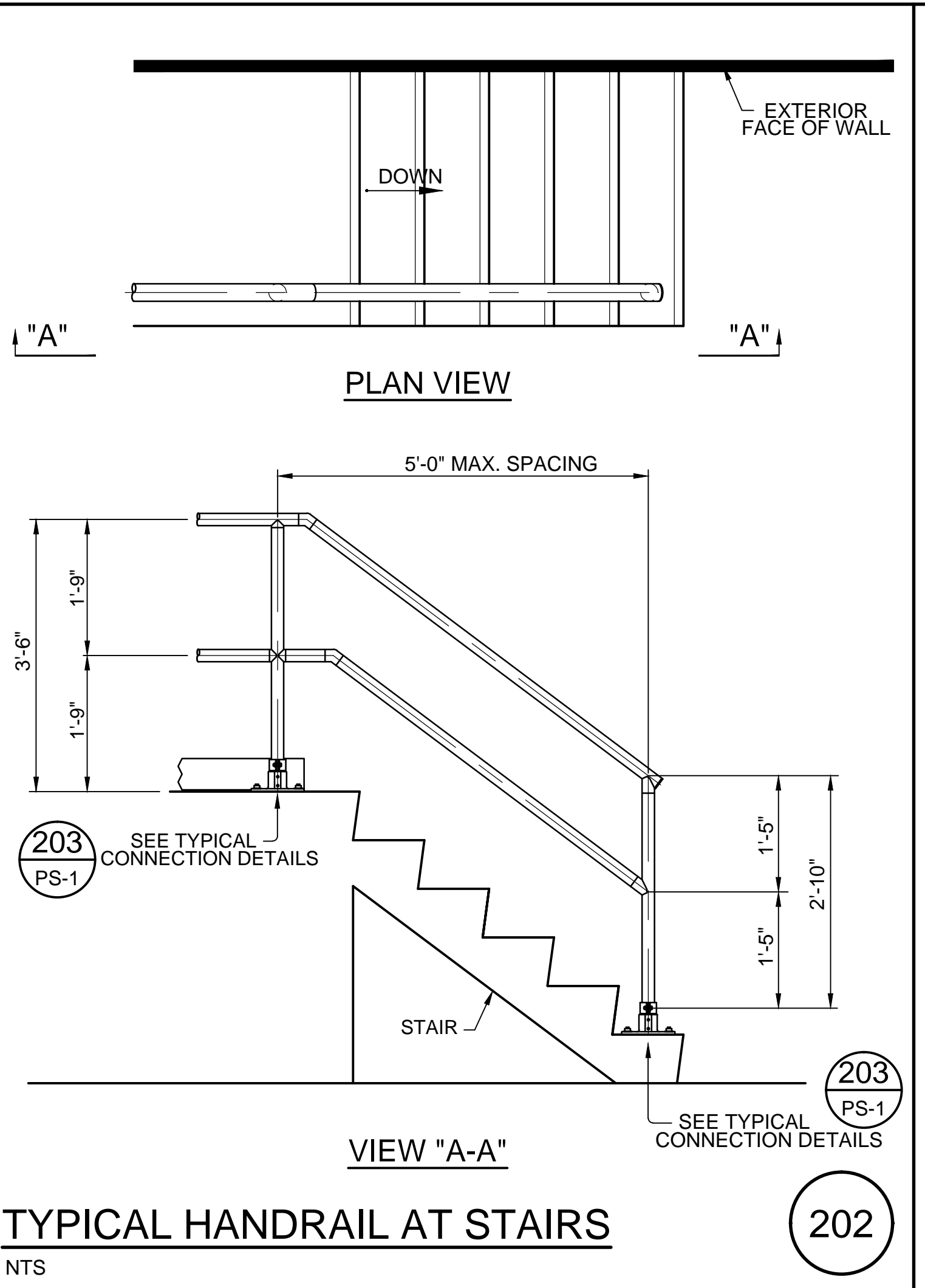
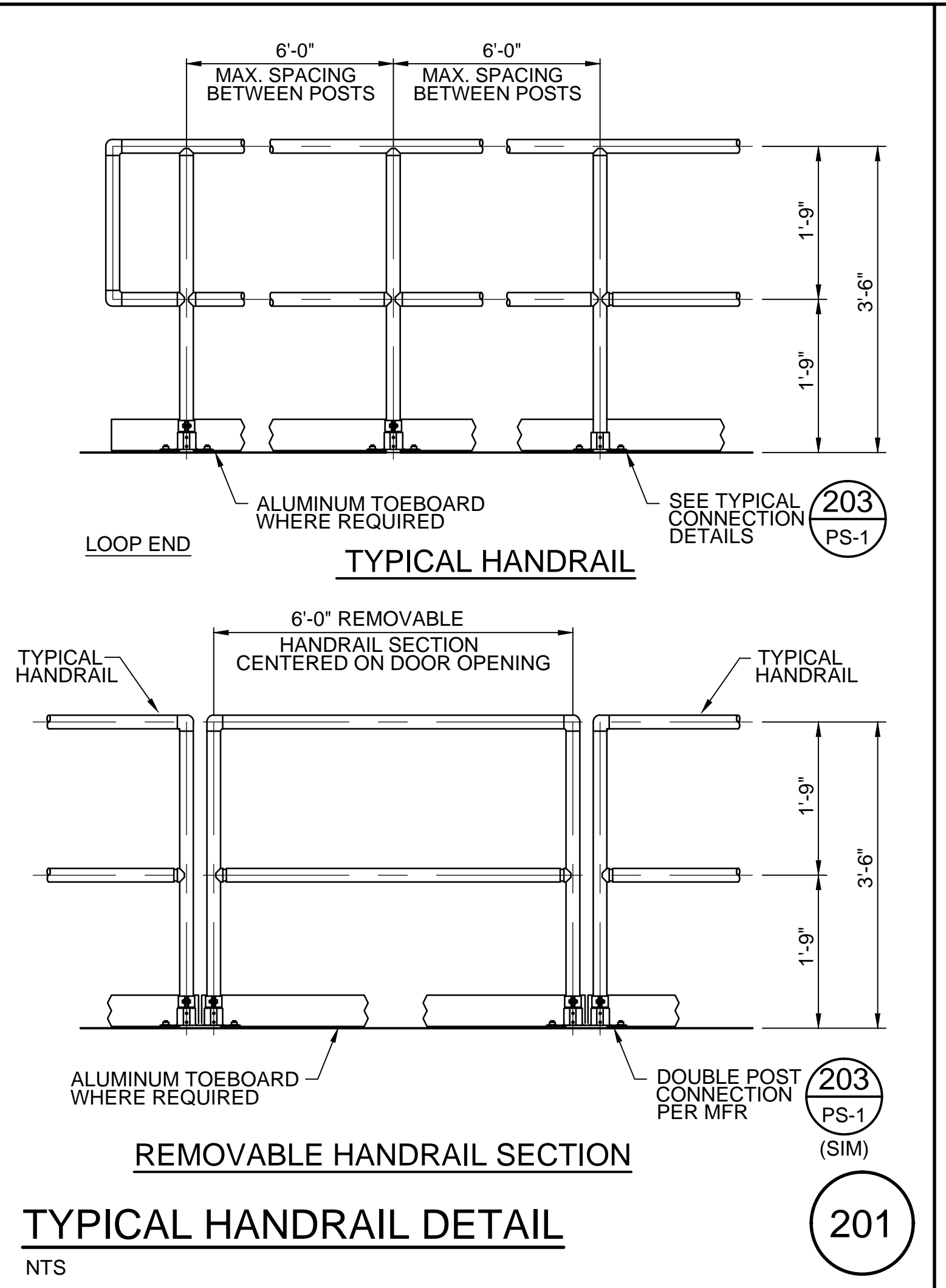
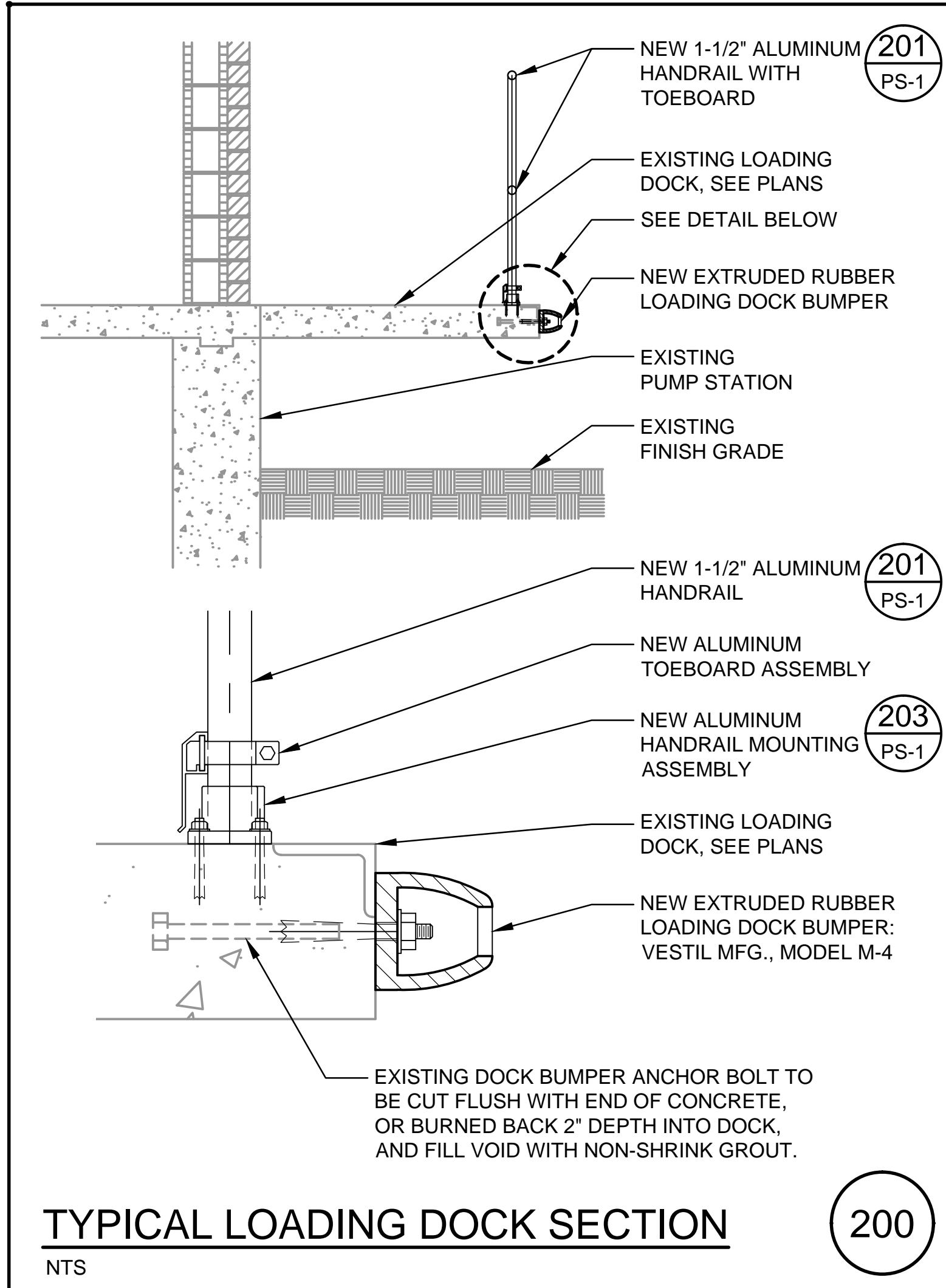
DESIGN ENGINEER
JOHN E. COLLINS, JR., P.E.
FLORIDA REGISTRATION NO. 40085

| | |
|------------|------------|
| DESIGNER | GA ADAMS |
| DRAWN BY | RL DUPREE |
| DATE | MAR 2020 |
| CHECKED BY | JE COLLINS |
| DATE | MAR 2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION
PAINTING, COATING, AND REPAIRS
PHOTO DETAILS

| | | |
|-------------|-----------|----------|
| NO. SHEETS | PROJ. NO. | 8002427 |
| 80 | DATE | MAR 2020 |
| SHEET NO. | SCALE | AS SHOWN |
| DRAWING NO. | | PD-4 |



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C/E 9952

DESIGNER: GA ADAMS
DRAWN BY: RL DUPREE
DATE: MAR 2020
CHECKED BY: JE COLLINS
DATE: MAR 2020

DESIGN ENGINEER: JOHN E. COLLINS, JR., P.E.
FLORIDA REGISTRATION NO. 40085

REVISED PLANS FOR REBID

NO. BY DATE

1. EL. DUPREE 8/18/2020

2. EL. DUPREE 8/18/2020

3. EL. DUPREE 8/18/2020

4. EL. DUPREE 8/18/2020

5. EL. DUPREE 8/18/2020

6. EL. DUPREE 8/18/2020

7. EL. DUPREE 8/18/2020

8. EL. DUPREE 8/18/2020

9. EL. DUPREE 8/18/2020

10. EL. DUPREE 8/18/2020

11. EL. DUPREE 8/18/2020

12. EL. DUPREE 8/18/2020

13. EL. DUPREE 8/18/2020

14. EL. DUPREE 8/18/2020

15. EL. DUPREE 8/18/2020

16. EL. DUPREE 8/18/2020

17. EL. DUPREE 8/18/2020

18. EL. DUPREE 8/18/2020

19. EL. DUPREE 8/18/2020

20. EL. DUPREE 8/18/2020

21. EL. DUPREE 8/18/2020

22. EL. DUPREE 8/18/2020

23. EL. DUPREE 8/18/2020

24. EL. DUPREE 8/18/2020

25. EL. DUPREE 8/18/2020

26. EL. DUPREE 8/18/2020

27. EL. DUPREE 8/18/2020

28. EL. DUPREE 8/18/2020

29. EL. DUPREE 8/18/2020

30. EL. DUPREE 8/18/2020

31. EL. DUPREE 8/18/2020

32. EL. DUPREE 8/18/2020

33. EL. DUPREE 8/18/2020

34. EL. DUPREE 8/18/2020

35. EL. DUPREE 8/18/2020

36. EL. DUPREE 8/18/2020

37. EL. DUPREE 8/18/2020

38. EL. DUPREE 8/18/2020

39. EL. DUPREE 8/18/2020

40. EL. DUPREE 8/18/2020

41. EL. DUPREE 8/18/2020

42. EL. DUPREE 8/18/2020

43. EL. DUPREE 8/18/2020

44. EL. DUPREE 8/18/2020

45. EL. DUPREE 8/18/2020

46. EL. DUPREE 8/18/2020

47. EL. DUPREE 8/18/2020

48. EL. DUPREE 8/18/2020

49. EL. DUPREE 8/18/2020

50. EL. DUPREE 8/18/2020

51. EL. DUPREE 8/18/2020

52. EL. DUPREE 8/18/2020

53. EL. DUPREE 8/18/2020

54. EL. DUPREE 8/18/2020

55. EL. DUPREE 8/18/2020

56. EL. DUPREE 8/18/2020

57. EL. DUPREE 8/18/2020

58. EL. DUPREE 8/18/2020

59. EL. DUPREE 8/18/2020

60. EL. DUPREE 8/18/2020

61. EL. DUPREE 8/18/2020

62. EL. DUPREE 8/18/2020

63. EL. DUPREE 8/18/2020

64. EL. DUPREE 8/18/2020

65. EL. DUPREE 8/18/2020

66. EL. DUPREE 8/18/2020

67. EL. DUPREE 8/18/2020

68. EL. DUPREE 8/18/2020

69. EL. DUPREE 8/18/2020

70. EL. DUPREE 8/18/2020

71. EL. DUPREE 8/18/2020

72. EL. DUPREE 8/18/2020

73. EL. DUPREE 8/18/2020

74. EL. DUPREE 8/18/2020

75. EL. DUPREE 8/18/2020

76. EL. DUPREE 8/18/2020

77. EL. DUPREE 8/18/2020

78. EL. DUPREE 8/18/2020

79. EL. DUPREE 8/18/2020

80. EL. DUPREE 8/18/2020

81. EL. DUPREE 8/18/2020

82. EL. DUPREE 8/18/2020

83. EL. DUPREE 8/18/2020

84. EL. DUPREE 8/18/2020

85. EL. DUPREE 8/18/2020

86. EL. DUPREE 8/18/2020

87. EL. DUPREE 8/18/2020

88. EL. DUPREE 8/18/2020

89. EL. DUPREE 8/18/2020

90. EL. DUPREE 8/18/2020

91. EL. DUPREE 8/18/2020

92. EL. DUPREE 8/18/2020

93. EL. DUPREE 8/18/2020

94. EL. DUPREE 8/18/2020

95. EL. DUPREE 8/18/2020

96. EL. DUPREE 8/18/2020

97. EL. DUPREE 8/18/2020

98. EL. DUPREE 8/18/2020

99. EL. DUPREE 8/18/2020

100. EL. DUPREE 8/18/2020

101. EL. DUPREE 8/18/2020

102. EL. DUPREE 8/18/2020

103. EL. DUPREE 8/18/2020

104. EL. DUPREE 8/18/2020

105. EL. DUPREE 8/18/2020

106. EL. DUPREE 8/18/2020

107. EL. DUPREE 8/18/2020

108. EL. DUPREE 8/18/2020

109. EL. DUPREE 8/18/2020

110. EL. DUPREE 8/18/2020

111. EL. DUPREE 8/18/2020

112. EL. DUPREE 8/18/2020

113. EL. DUPREE 8/18/2020

114. EL. DUPREE 8/18/2020

115. EL. DUPREE 8/18/2020

116. EL. DUPREE 8/18/2020

117. EL. DUPREE 8/18/2020

118. EL. DUPREE 8/18/2020

119. EL. DUPREE 8/18/2020

120. EL. DUPREE 8/18/2020

121. EL. DUPREE 8/18/2020

122. EL. DUPREE 8/18/2020

123. EL. DUPREE 8/18/2020

124. EL. DUPREE 8/18/2020

125. EL. DUPREE 8/18/2020

126. EL. DUPREE 8/18/2020

127. EL. DUPREE 8/18/2020

128. EL. DUPREE 8/18/2020

129. EL. DUPREE 8/18/2020

130. EL. DUPREE 8/18/2020

131. EL. DUPREE 8/18/2020

132. EL. DUPREE 8/18/2020

133. EL. DUPREE 8/18/2020

134. EL. DUPREE 8/18/2020

135. EL. DUPREE 8/18/2020

136. EL. DUPREE 8/18/2020

137. EL. DUPREE 8/18/2020

138. EL. DUPREE 8/18/2020

139. EL. DUPREE 8/18/2020

140. EL. DUPREE 8/18/2020

141. EL. DUPREE 8/18/2020

142. EL. DUPREE 8/18/2020

143. EL. DUPREE 8/18/2020

144. EL. DUPREE 8/18/2020

145. EL. DUPREE 8/18/2020

146. EL. DUPREE 8/18/2020

147. EL. DUPREE 8/18/2020

148. EL. DUPREE 8/18/2020

149. EL. DUPREE 8/18/2020

150. EL. DUPREE 8/18/2020

151. EL. DUPREE 8/18/2020

152. EL. DUPREE 8/18/2020

153. EL. DUPREE 8/18/2020

154. EL. DUPREE 8/18/2020

155. EL. DUPREE 8/18/2020

156. EL. DUPREE 8/18/2020

157. EL. DUPREE 8/18/2020

158. EL. DUPREE 8/18/2020

159. EL. DUPREE 8/18/2020

160. EL. DUPREE 8/18/2020

161. EL. DUPREE 8/18/2020

162. EL. DUPREE 8/18/2020

163. EL. DUPREE 8/18/2020

164. EL. DUPREE 8/18/2020

165. EL. DUPREE 8/18/2020

166. EL. DUPREE 8/18/2020

167. EL. DUPREE 8/18/2020

168. EL. DUPREE 8/18/2020

169. EL. DUPREE 8/18/2020

170. EL. DUPREE 8/18/2020

171. EL. DUPREE 8/18/2020

172. EL. DUPREE 8/18/2020

173. EL. DUPREE 8/18/2020

174. EL. DUPREE 8/18/2020

175. EL. DUPREE 8/18/2020

176. EL. DUPREE 8/18/2020

177. EL. DUPREE 8/18/2020

178. EL. DUPREE 8/18/2020

179. EL. DUPREE 8/18/2020

180. EL. DUPREE 8/18/2020

181. EL. DUPREE 8/18/2020

182. EL. DUPREE 8/18/2020

183. EL. DUPREE 8/18/2020

184. EL. DUPREE 8/18/2020

185. EL. DUPREE 8/18/2020

186. EL. DUPREE 8/18/2020

187. EL. DUPREE 8/18/2020

188. EL. DUPREE 8/18/2020

189. EL. DUPREE 8/18/2020

190. EL. DUPREE 8/18/2020

191. EL. DUPREE 8/18/2020

192. EL. DUPREE 8/18/2020

193. EL. DUPREE 8/18/2020

194. EL. DUPREE 8/18/2020

195. EL. DUPREE 8/18/2020

196. EL. DUPREE 8/18/2020

197. EL. DUPREE 8/18/2020

198. EL. DUPREE 8/18/2020

199. EL. DUPREE 8/18/2020

200. EL. DUPREE 8/18/2020

201. EL. DUPREE 8/18/2020

202. EL. DUPREE 8/18/2020

203. EL. DUPREE 8/18/2020

204. EL. DUPREE 8/18/2020

205. EL. DUPREE 8/18/2020

206. EL. DUPREE 8/18/2020

207. EL. DUPREE 8/18/2020

208. EL. DUPREE 8/18/2020

209. EL. DUPREE 8/18/2020

210. EL. DUPREE 8/18/2020

211. EL. DUPREE 8/18/2020

212. EL. DUPREE 8/18/2020

213. EL. DUPREE 8/18/2020

214. EL. DUPREE 8/18/2020

215. EL. DUPREE 8/18/2020

216. EL. DUPREE 8/18/2020

217. EL. DUPREE 8/18/2020

218. EL. DUPREE 8/18/2020

219. EL. DUPREE 8/18/2020

220. EL. DUPREE 8/18/2020

221. EL. DUPREE 8/18/2020

222. EL. DUPREE 8/18/2020

223. EL. DUPREE 8/18/2020

224. EL. DUPREE 8/18/2020

225. EL. DUPREE 8/18/2020

226. EL. DUPREE 8/18/2020

227. EL. DUPREE 8/18/2020

228. EL. DUPREE 8/18/2020

229. EL. DUPREE 8/18/2020

230. EL. DUPREE 8/18/2020

231. EL. DUPREE 8/18/2020

232. EL. DUPREE 8/18/2020

233. EL. DUPREE 8/18/2020

234. EL. DUPREE 8/18/2020

235. EL. DUPREE 8/18/2020

236. EL. DUPREE 8/18/2020

237. EL. DUPREE 8/18/2020

238. EL. DUPREE 8/18/2020

239. EL. DUPREE 8/18/2020

240. EL. DUPREE 8/18/2020

241. EL. DUPREE 8/18/2020

242. EL. DUPREE 8/18/2020

243. EL. DUPREE 8/18/2020

244. EL. DUPREE 8/18/2020

245. EL. DUPREE 8/18/2020

246. EL. DUPREE 8/18/2020

247. EL. DUPREE 8/18/2020

248. EL. DUPREE 8/18/2020

249. EL. DUPREE 8/18/2020

250. EL. DUPREE 8/18/2020

251. EL. DUPREE 8/18/2020

252. EL. DUPREE 8/18/2020

253. EL. DUPREE 8/18/2020

254. EL. DUPREE 8/18/2020

255. EL. DUPREE 8/18/2020

256. EL. DUPREE 8/18/2020

257. EL. DUPREE 8/18/2020

258. EL. DUPREE 8/18/2020

259. EL. DUPREE 8/18/2020

260. EL. DUPREE 8/18/2020

261. EL. DUPREE 8/18/2020

262. EL. DUPREE 8/18/2020

263. EL. DUPREE 8/18/2020

264. EL. DUPREE 8/18/2020

265. EL. DUPREE 8/18/2020

266. EL. DUPREE 8/18/2020

267. EL. DUPREE 8/18/2020

268. EL. DUPREE 8/18/2020

269. EL. DUPREE 8/18/2020

270. EL. DUPREE 8/18/2020

271. EL. DUPREE 8/18/2020

272. EL. DUPREE 8/18/2020

273. EL. DUPREE 8/18/2020

274. EL. DUPREE 8/18/2020

275. EL. DUPREE 8/18/2020

276. EL. DUPREE 8/18/2020

277. EL. DUPREE 8/18/2020

278. EL. DUPREE 8/18/2020

279. EL. DUPREE 8/18/2020

280. EL. DUPREE 8/18/2020

281. EL. DUPREE 8/18/2020

282. EL. DUPREE 8/18/2020

283. EL. DUPREE 8/18/2020

284. EL. DUPREE 8/18/2020

285. EL. DUPREE 8/18/2020

286. EL. DUPREE 8/18/2020

287. EL. DUPREE 8/18/2020

288. EL. DUPREE 8/18/2020

289. EL. DUPREE 8/18/2020

290. EL. DUPREE 8/18/2020

291. EL. DUPREE 8/18/2020

292. EL. DUPREE 8/18/2020

293. EL. DUPREE 8/18/2020

294. EL. DUPREE 8/18/2020

295. EL. DUPREE 8/18/2020

296. EL. DUPREE 8/18/2020

297. EL. DUPREE 8/18/2020

298. EL. DUPREE 8/18/2020

299. EL. DUPREE 8/18/2020

300. EL. DUPREE 8/18/2020

301. EL. DUPREE 8/18/2020

302. EL. DUPREE 8/18/2020

303. EL. DUPREE 8/18/2020

304. EL. DUPREE 8/18/2020

305. EL. DUPREE 8/18/2020

306. EL. DUPREE 8/18/2020

307. EL. DUPREE 8/18/2020

308. EL. DUPREE 8/18/2020

309. EL. DUPREE 8/18/2020

310. EL. DUPREE 8/18/2020

311. EL. DUPREE 8/18/2020

312. EL. DUPREE 8/18/2020

313. EL. DUPREE 8/18/2020

314. EL. DUPREE 8/18/2020

315. EL. DUPREE 8/18/2020

316. EL. DUPREE 8/18/2020

317. EL. DUPREE 8/18/2020

318. EL. DUPREE 8/18/2020

319. EL. DUPREE 8/18/2020

320. EL. DUPREE 8/18/2020

321. EL. DUPREE 8/18/2020

322. EL. DUPREE 8/18/2020

323. EL. DUPREE 8/18/2020

324. EL. DUPREE 8/18/2020

325. EL. DUPREE 8/18/2020

326. EL. DUPREE 8/18/2020

327. EL. DUPREE 8/18/2020

328. EL. DUPREE 8/18/2020

329. EL. DUPREE 8/18/2020

330. EL. DUPREE 8/18/2020

331. EL. DUPREE 8/18/2020

332. EL. DUPREE 8/18/2020

333. EL. DUPREE 8/18/2020

334. EL. DUPREE 8/18/2020

335. EL. DUPREE 8/18/2020

336. EL. DUPREE 8/18/2020

337. EL. DUPREE 8/18/2020

338. EL. DUPREE 8/18/2020

339. EL. DUPREE 8/18/2020

340. EL. DUPREE 8/18/2020

341. EL. DUPREE 8/18/2020

342. EL. DUPREE 8/18/2020

343. EL. DUPREE 8/18/2020

344. EL. DUPREE 8/18/2020

345. EL. DUPREE 8/18/2020

346. EL. DUPREE 8/18/2020

347. EL. DUPREE 8/18/2020

348. EL. DUPREE 8/18/2020

349. EL. DUPREE 8/18/2020

350. EL. DUPREE 8/18/2020

351. EL. DUPREE 8/18/2020

352. EL. DUPREE 8/18/2020

353. EL. DUPREE 8/18/2020

354. EL. DUPREE 8/18/2020

355. EL. DUPREE 8/18/2020

356. EL. DUPREE 8/18/2020

357. EL. DUPREE 8/18/2020

358. EL. DUPREE 8/18/2020

359. EL. DUPREE 8/18/2020

360. EL. DUPREE 8/18/2020

361. EL. DUPREE 8/18/2020

362. EL. DUPREE 8/18/2020

363. EL. DUPREE 8/18/2020

364. EL. DUPREE 8/18/2020

365. EL. DUPREE 8/18/2020

366. EL. DUPREE 8/18/2020

367. EL. DUPREE 8/18/2020

368. EL. DUPREE 8/18/2020

369. EL. DUPREE 8/18/2020

370. EL. DUPREE 8/18/2020

371. EL. DUPREE 8/18/2020

372. EL. DUPREE 8/18/2020

373. EL. DUPREE 8/18/2020

374. EL. DUPREE 8/18/2020

375. EL. DUPREE 8/18/2020

376. EL. DUPREE 8/18/2020

377. EL. DUPREE 8/18/2020

378. EL. DUPREE 8/18/2020

379. EL. DUPREE 8/18/2020

380. EL. DUPREE 8/18/2020

381. EL. DUPREE 8/18/2020

382. EL. DUPREE 8/18/2020

383. EL. DUPREE 8/18/2020

384. EL. DUPREE 8/18/2020

385. EL. DUPREE 8/18/2020

386. EL. DUPREE 8/18/2020

387. EL. DUPREE 8/18/2020

388. EL. DUPREE 8/18/2020

389. EL. DUPREE 8/18/2020

390. EL. DUPREE 8/18/2020

391. EL. DUPREE 8/18/2020

392. EL. DUPREE 8/18/2020

393. EL. DUPREE 8/18/2020

394. EL. DUPREE 8/18/2020

395. EL. DUPREE 8/18/2020

396. EL. DUPREE 8/18/2020

397. EL. DUPREE 8/18/2020

398. EL. DUPREE 8/18/2020

399. EL. DUPREE 8/18/2020

400. EL. DUPREE 8/18/2020

401. EL. DUPREE 8/18/2020

402. EL. DUPREE 8/18/2020

403. EL. DUPREE 8/18/2020

404. EL. DUPREE 8/18/2020

405. EL. DUPREE 8/18/2020

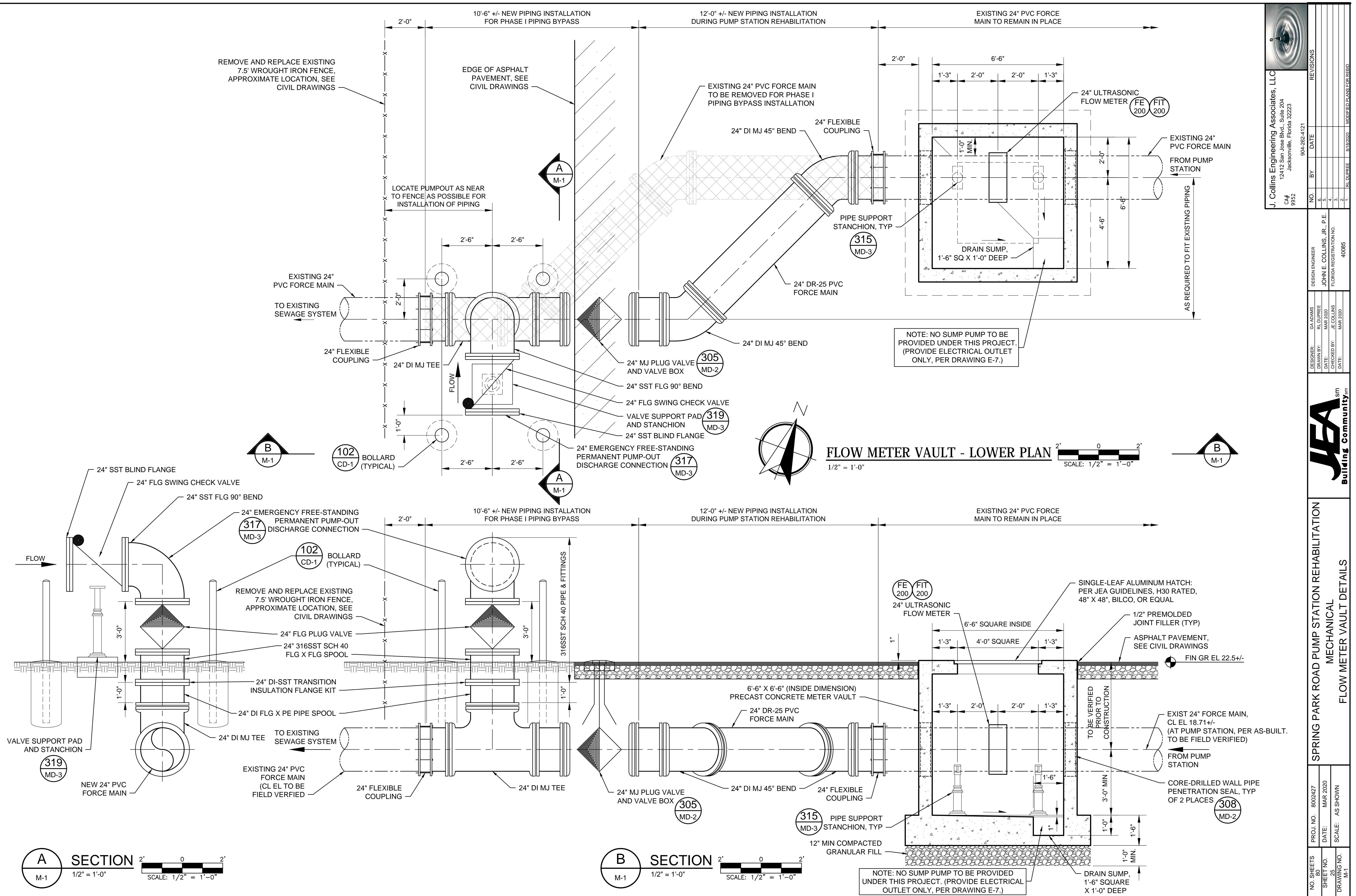
406. EL. DUPREE 8/18/2020

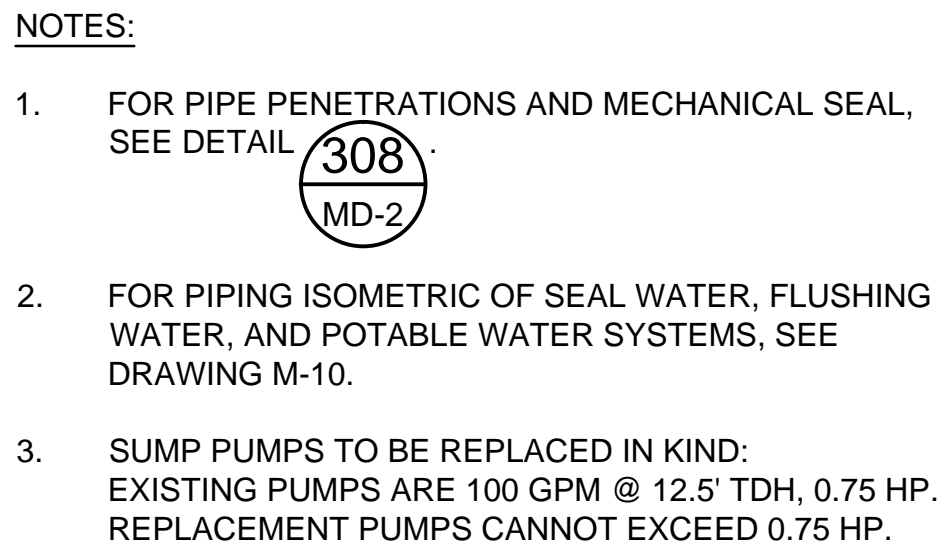
407. EL. DUPREE 8/18/2020

408. EL. DUPREE 8/18/2020

409. EL. DUPREE 8/18/2020

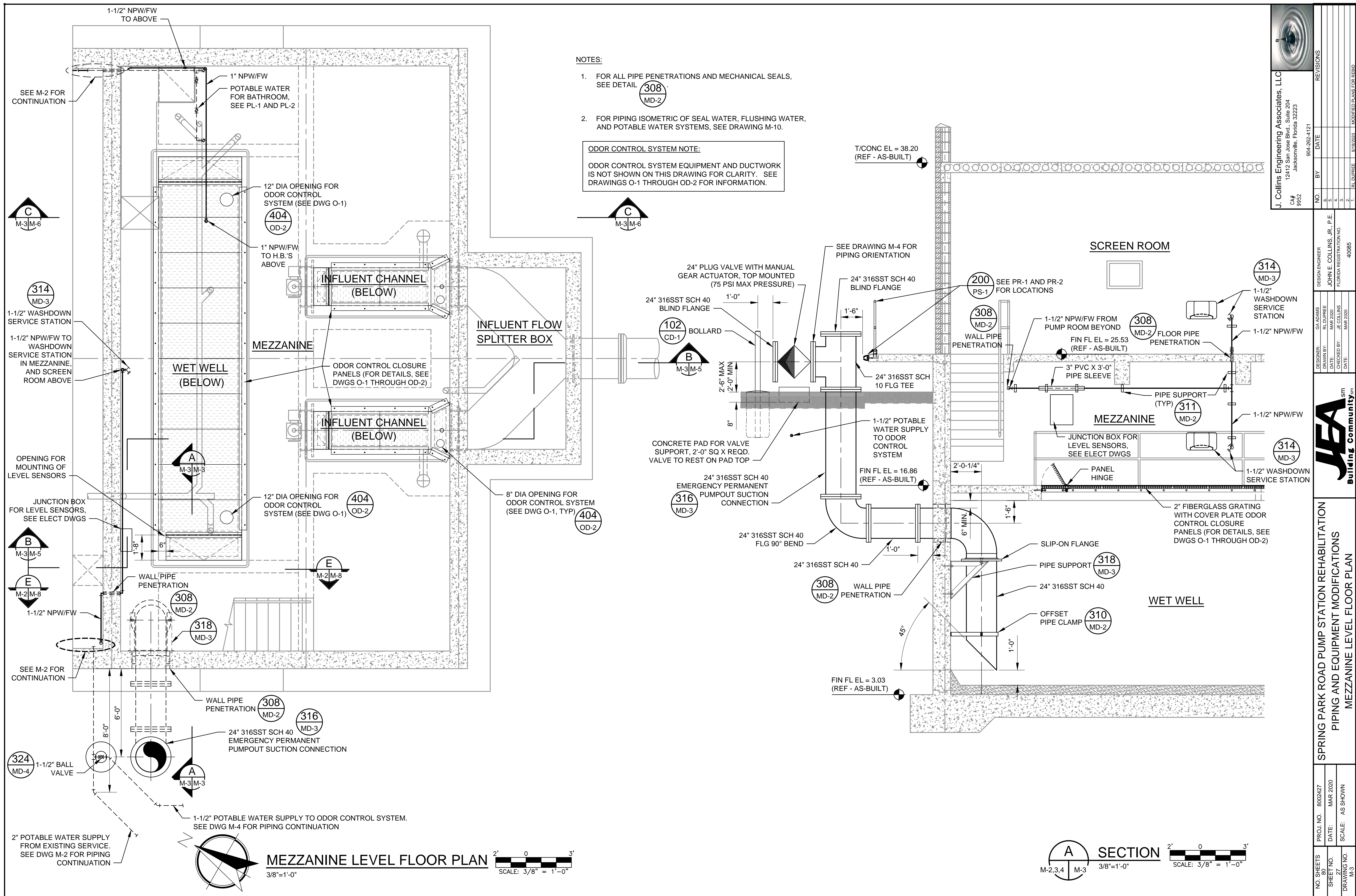
410. EL.















































































































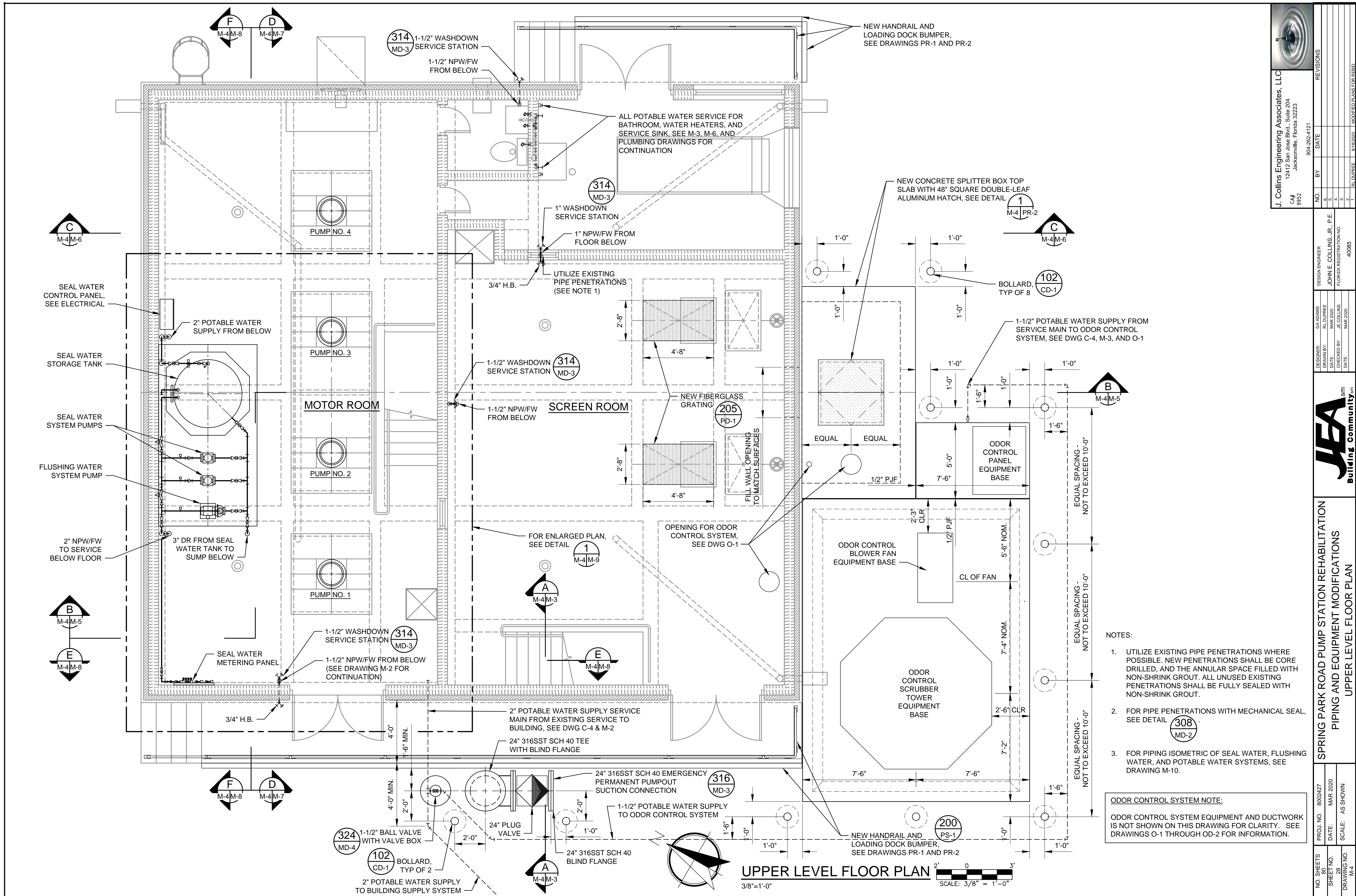




ODOR CONTROL SYSTEM NOTE:

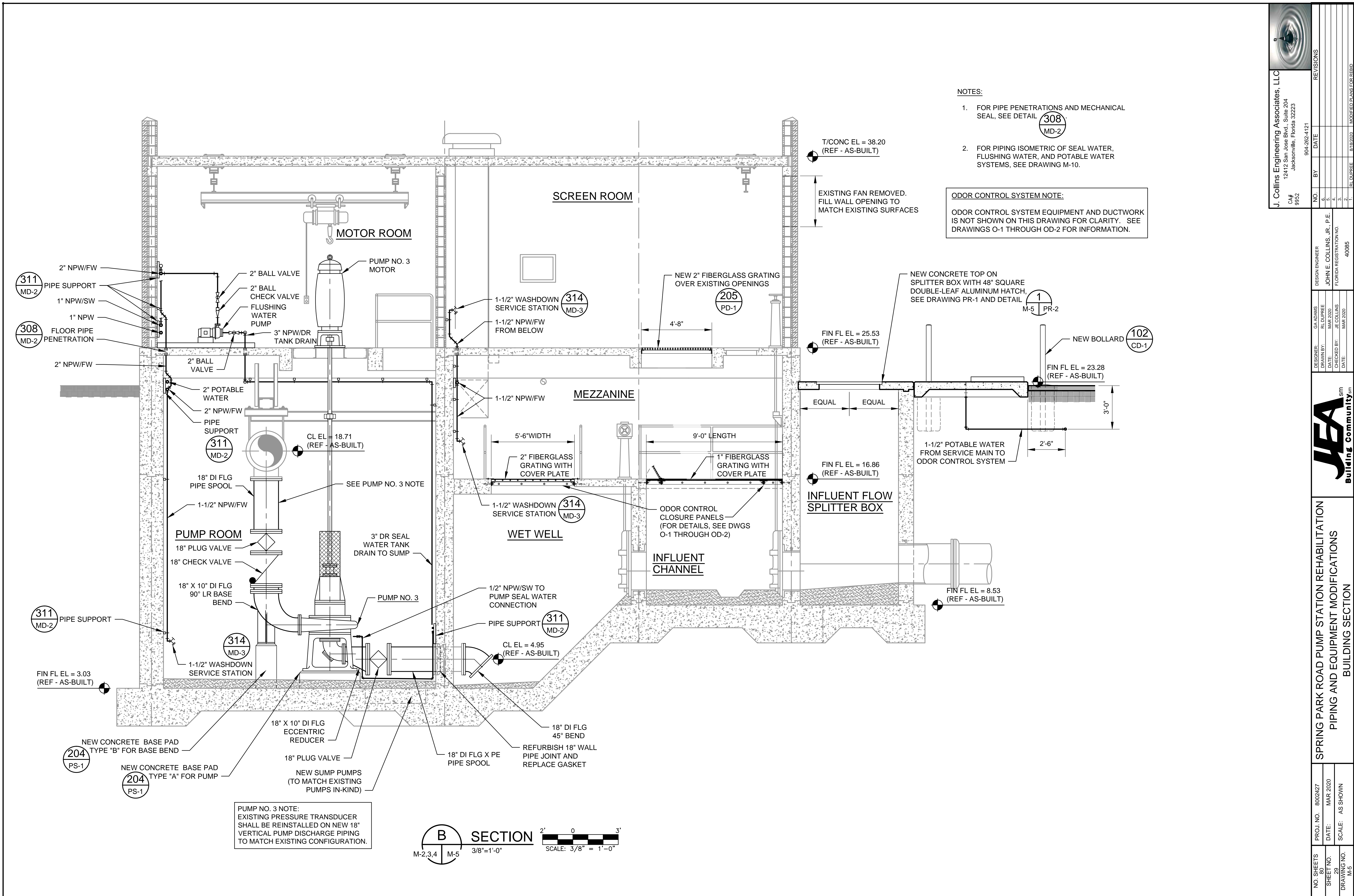
ODOR CONTROL SYSTEM EQUIPMENT AND DUCTWORK IS NOT SHOWN ON THIS DRAWING FOR CLARITY. SEE DRAWINGS Q-1 THROUGH QD-2 FOR INFORMATION.



| | | | | | | | | | | | | | |
|---|--|-------------------|--|--|--|---|--|---|--|---|--|----------|--|
| NO. SHEETS 80 | | PROJ. NO. 8002427 | | SPRING PARK ROAD PUMP STATION REHABILITATION PIPING AND EQUIPMENT MODIFICATIONS MEZZANINE LEVEL FLOOR PLAN | |  | | DESIGNER: GA ADAMS DRAWN BY: RL DUPREE DATE: MAR 2020 CHECKED BY: JE COLLINS DATE: MAR 2020 | | NO. BY DATE 6. 5. 4. 3. 2. 1. | | REVISONS | |
| SHEET NO. 27 | | DATE: MAR 2020 | | | | | | | | | | | |
| DRAWING NO. M-3 | | SCALE: AS SHOWN | | | | | | | | | | | |
| <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div> " NPW/FW</div> <div>WASHDOWN ICE STATION</div> <div></div> | | | | | | | | | | | | | |



| | | | | | | | | | | | | | |
|--------------------|--|-------------------|--|--|--|--|--|---|--|---|--|--|--|
| NO. SHEETS 80 | | PROJ. NO. 8002427 | | SPRING PARK ROAD PUMP STATION REHABILITATION | |  | | DESIGN ENGINEER JOHN E. COLLINS, JR., P.E. FLORIDA REGISTRATION NO. 40085 | | J. Collins Engineering Associates, LLC 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32223 CJA# 9952 | |  | |
| SHEET NO. 28 | | DATE: MAR 2020 | | PIPING AND EQUIPMENT MODIFICATIONS | | | | DRAWN BY: GA ADAMS RL DUPREE MAR 2020 | | NO. BY DATE | | REVISIONS | |
| DRAWING NO. M-4 | | SCALE: AS SHOWN | | UPPER LEVEL FLOOR PLAN | | | | CHECKED BY: JE COLLINS MAR 2020 | | 1. RL DUPREE 8/18/2020 | | MODIFIED PLANS FOR REBID | |





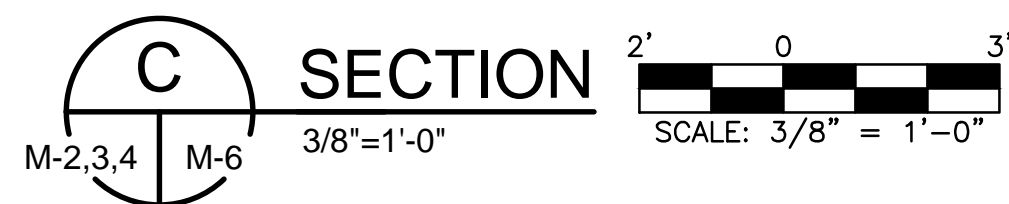
NOTES:

1. FOR PIPE PENETRATIONS AND MECHANICAL SEAL, SEE DETAIL 308 MD-2
2. FOR PIPING ISOMETRIC OF SEAL WATER, FLUSHING WATER, AND POTABLE WATER SYSTEMS, SEE DRAWING M-10.

ODOR CONTROL SYSTEM NOTE:

ODOR CONTROL SYSTEM EQUIPMENT AND DUCTWORK IS NOT SHOWN ON THIS DRAWING FOR CLARITY. SEE DRAWINGS O-1 THROUGH OD-2 FOR INFORMATION.

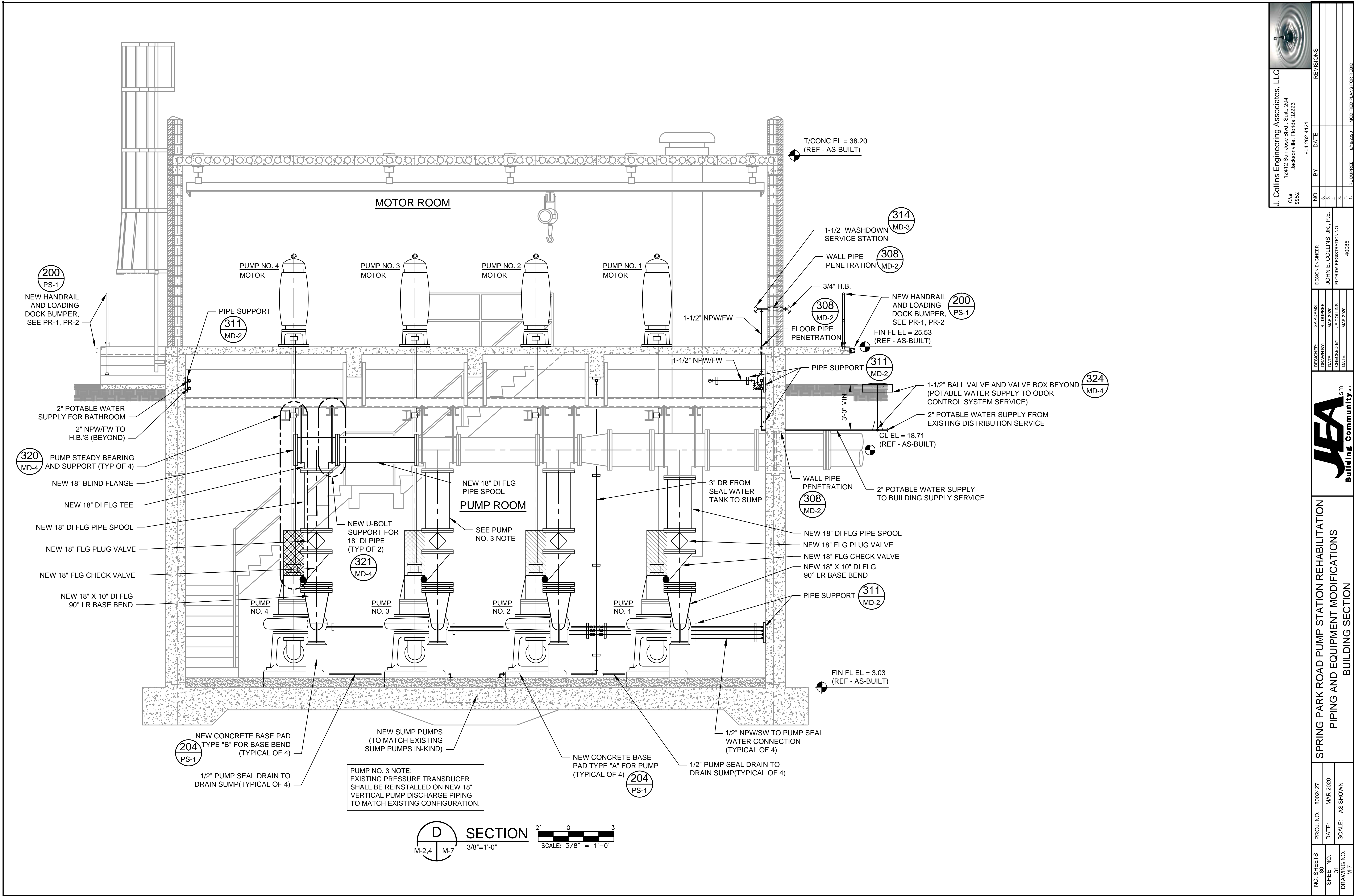
| | | | | | | | | | | | | | | | | | |
|---|--|---|--|---|--|---|--|--|--|--|--|---|--|--|--|--|--|
| <div>NO. SHEETS 80</div> <div>SHEET NO. 29</div> <div>DRAWING NO. M-5</div> | | <div>PROJ. NO. 8002427</div> <div>DATE: MAR 2020</div> <div>SCALE: AS SHOWN</div> | | <div>SPRING PARK ROAD PUMP STATION REHABILITATION PIPING AND EQUIPMENT MODIFICATIONS BUILDING SECTION</div> | | <div></div> | | <div>DESIGN ENGINEER JOHN E. COLLINS, JR., P.E. FLORIDA REGISTRATION NO. 40085</div> | | <div>DESIGNER: G.A. ADAMS DRAWN BY: RL DUFRÉE DATE: MAR 2020 CHECKED BY: JE COLLINS DATE: MAR 2020</div> | | <div>NO. BY DATE</div> <div>6. 5. 4. 3. 2. 1. RL DUFRÉE 8/18/2020</div> | | <div>REVISIONS</div> <div>MODIFIED PLANS FOR REBID</div> | | <div>J. Collins Engineering Associates, LLC 12412 San Jose Blvd, Suite 204 Jacksonville, Florida 32223 CA# 9952 904-262-4121</div> <div></div> | |
| | | | | | | | | | | | | | | | | | |

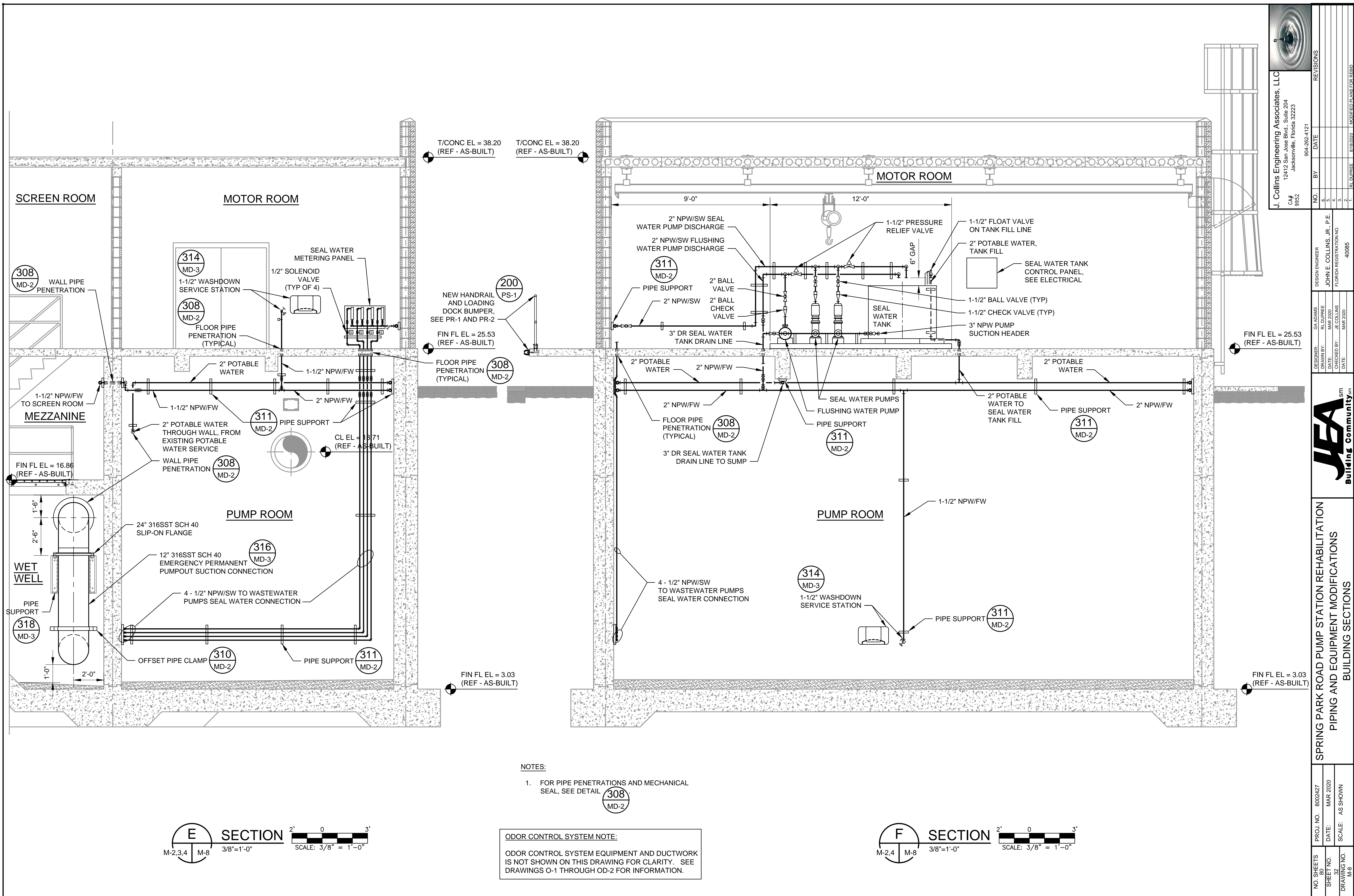



L 308
MD-2

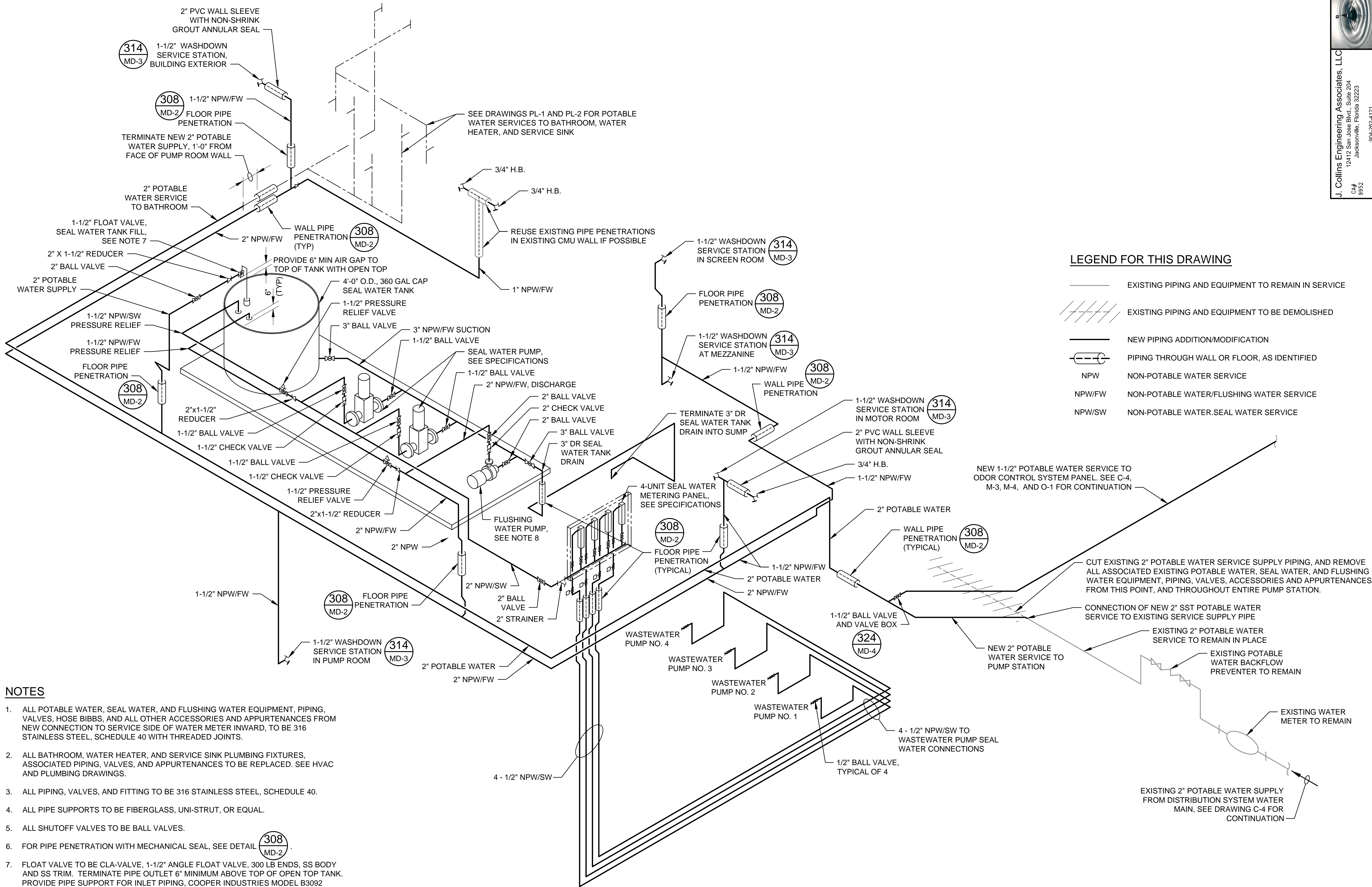
ODOR CONTROL SYSTEM EQUIPMENT AND DUCTWORK
IS NOT SHOWN ON THIS DRAWING FOR CLARITY. SEE
DRAWINGS O-1 THROUGH OD-2 FOR INFORMATION.

[illegible]





| | | | | | | | | | | | | | |
|--------------------|--|-------------------|--|--|--|--|--|----------------------------|--|--------------|--|--------------------------|--|
| NO. SHEETS 80 | | PROJ. NO. 8002427 | | SPRING PARK ROAD PUMP STATION REHABILITATION | |  | | DESIGN ENGINEER | | NO. BY DATE | | REVISIONS | |
| SHEET NO. 32 | | DATE: MAR 2020 | | PIPING AND EQUIPMENT MODIFICATIONS | | | | JOHN E. COLLINS, JR., P.E. | | | | | |
| DRAWING NO. M-8 | | SCALE: AS SHOWN | | BUILDING SECTIONS | | | | FLORIDA REGISTRATION NO. | | | | | |
| | | | | | | | | CHECKED BY: J.E. COLLINS | | | | | |
| | | | | | | | | DATE: MAR 2020 | | | | | |
| | | | | | | | | | | 1. RL DUPIRE | | MODIFIED PLANS FOR REBID | |
| | | | | | | | | | | 2. RL DUPIRE | | | |
| | | | | | | | | | | 8/18/2020 | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |



NOTES

- ALL POTABLE WATER, SEAL WATER, AND FLUSHING WATER EQUIPMENT, PIPING, VALVES, HOSE BIBBS, AND ALL OTHER ACCESSORIES AND APPURTENANCES FROM NEW CONNECTION TO SERVICE SIDE OF WATER METER INWARD, TO BE 316 STAINLESS STEEL, SCHEDULE 40 WITH THREADED JOINTS.
- ALL BATHROOM, WATER HEATER, AND SERVICE SINK PLUMBING FIXTURES, ASSOCIATED PIPING, VALVES, AND APPURTENANCES TO BE REPLACED. SEE HVAC AND PLUMBING DRAWINGS.
- ALL PIPING, VALVES, AND FITTING TO BE 316 STAINLESS STEEL, SCHEDULE 40.
- ALL PIPE SUPPORTS TO BE FIBERGLASS, UNI-STRUT, OR EQUAL.
- ALL SHUTOFF VALVES TO BE BALL VALVES.
- FOR PIPE PENETRATION WITH MECHANICAL SEAL, SEE DETAIL **308 MD-2**.
- FLOAT VALVE TO BE CLA-VALVE, 1-1/2" ANGLE FLOAT VALVE, 300 LB ENDS, SS BODY AND SS TRIM. TERMINATE PIPE OUTLET 6" MINIMUM ABOVE TOP OF OPEN TOP TANK. PROVIDE PIPE SUPPORT FOR INLET PIPING, COOPER INDUSTRIES MODEL B3092 ADJUSTABLE PIPE SADDLE SUPPORT WITH YOKE, AND MODEL B3088T THREADED BASE STAND. HOT-DIP GALVANIZE AFTER FABRICATION.
- FLUSHING WATER PUMP TO BE GOULDS SSH-9SH, CAPACITY 50 GPM @ 133' TDH, 5 HP.

SEAL WATER, FLUSHING WATER, AND POTABLE WATER SYSTEMS - ISOMETRIC

NTS

LEGEND FOR THIS DRAWING

- EXISTING PIPING AND EQUIPMENT TO REMAIN IN SERVICE
- EXISTING PIPING AND EQUIPMENT TO BE DEMOLISHED
- NEW PIPING ADDITION/MODIFICATION
- PIPING THROUGH WALL OR FLOOR, AS IDENTIFIED
- NPW NON-POTABLE WATER SERVICE
- NPW/FW NON-POTABLE WATER/FLUSHING WATER SERVICE
- NPW/SW NON-POTABLE WATER/SEAL WATER SERVICE

| | | | |
|--|------------|--|-------------------------|
| J. Collins Engineering Associates, LLC | | 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32223 | |
| CA# | 9952 | 904-262-4121 | |
| NO. | BY | DATE | REVISIONS |
| 1 | EL. DUPREE | 8/18/2020 | MODIFIED PLANS FOR REID |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

| | |
|--------------------------|----------------------------|
| DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| FLORIDA REGISTRATION NO. | 40085 |

| | |
|------------|-------------|
| DESIGNER | GA. ADAMS |
| DRAWN BY | RL. DUPREE |
| DATE | MAR 2020 |
| CHECKED BY | JE. COLLINS |
| DATE | MAR 2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION
MECHANICAL
SEAL, FLUSHING, AND POTABLE WATER SYSTEMS

| | |
|-------------|----------|
| PROJ. NO. | 8002427 |
| DATE | MAR 2020 |
| SCALE | AS SHOWN |
| NO. SHEETS | 80 |
| SHEET NO. | |
| DRAWING NO. | M-10 |

PVC PIPE RESTRAINT NOTES:

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, LU IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. LI IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
- THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERLOOING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

LENGTH (L) TO BE RESTRAINED

| NOMINAL PIPE SIZE (IN.) | HORIZONTAL BENDS / VERTICAL OFFSETS | | | | REDUCERS | | VALVES OR DEAD ENDS | |
|----------------------------------|-------------------------------------|-------------------------|---------------------------|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | 90° BENDS L (FT.) | 45° BENDS L (FT.) | 22.5° BENDS L (FT.) | 11.25° BENDS L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) |
| 4 | 20 | 8 | 4 | 2 | 20 | 3 | 50 | |
| 6 | 28 | 10 | 5 | 2 | 28 | 4 | 20 | |
| 8 | 36 | 14 | 6 | 3 | 36 | 5 | 90 | |
| 10 | 40 | 18 | 8 | 4 | 45 | 6 | 110 | |
| 12 | 50 | 20 | 9 | 4 | 52 | 8 | 120 | |
| 14 | 56 | 23 | 10 | 5 | 60 | 9 | 140 | |
| 16 | 60 | 26 | 11 | 6 | 67 | 10 | 160 | |
| 18 | 69 | 29 | 12 | 6 | 74 | 12 | 180 | |
| 20 | 75 | 32 | 13 | 7 | 80 | 13 | 195 | |
| 24 | 76 | 33 | 15 | 7 | 81 | 14 | 200 | |
| 30 | 88 | 36 | 18 | 9 | 97 | 16 | 235 | |
| 36 | 100 | 40 | 20 | 10 | 110 | 20 | 270 | |
| 42 | 115 | 48 | 23 | 11 | 125 | 24 | 300 | |
| 48 | 125 | 52 | 25 | 12 | 140 | 30 | 340 | |

(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)

| TEES | |
|---------------|---------|
| SIZE (IN.) | L (FT.) |
| 6x4 | 35 |
| 8x6 | 35 |
| 8x4 | 65 |
| 10x8 | 35 |
| 10x6 | 65 |
| 12x10 | 35 |
| 12x8 | 65 |
| 16x12 | 65 |
| 16x10 | 95 |
| 20x18 | 35 |
| 20x16 | 65 |
| 20x12 | 120 |
| 24x20 | 65 |
| 24x18 | 95 |
| 24x16 | 120 |
| 30x24 | 80 |
| 30x20 | 150 |
| 36x30 | 80 |
| 36x24 | 150 |
| 42x36 | 80 |
| 42x30 | 150 |
| 48x42 | 80 |
| 48x36 | 150 |

| SEE NOTE 5 | |
|----------------------|-------------------------|
| RUN SIZE (IN.) | BRANCH SIZE (IN.) |
| 4 | 4 |
| 4 | 6 |
| 4 | 8 |
| 8 | 8 |
| 10 | 10 |
| 12 | 12 |
| 16 | 16 |
| 20 | 20 |
| 24 | 24 |
| 30 | 30 |
| 36 | 36 |
| 42 | 42 |
| 48 | 48 |

F.O. = FITTING ONLY

DUCTILE IRON PIPE RESTRAINT NOTES:

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: DUCTILE IRON PIPE (WITHOUT POLY WRAP), SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE. FOR D.I.P. W/POLY WRAP, USE RESTRAINT JOINT SCHEDULE FOR PVC PIPE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, LU IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. LI IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HDPE TO D.I.P. TRANSITIONS: THE D.I.P. PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).

LENGTH (L) TO BE RESTRAINED

| NOMINAL PIPE SIZE (IN.) | HORIZONTAL BENDS / VERTICAL OFFSETS | | | | REDUCERS | | VALVES OR DEAD ENDS | |
|----------------------------------|-------------------------------------|-------------------------|---------------------------|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | 90° BENDS L (FT.) | 45° BENDS L (FT.) | 22.5° BENDS L (FT.) | 11.25° BENDS L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) | 45° BENDS (SEE NOTE 4) L (FT.) |
| 4 | 18 | 6 | 4 | 2 | 12 | 2 | 30 | |
| 6 | 22 | 10 | 5 | 2 | 17 | 3 | 40 | |
| 8 | 30 | 13 | 6 | 3 | 22 | 4 | 50 | |
| 10 | 35 | 14 | 7 | 4 | 26 | 5 | 64 | |
| 12 | 42 | 16 | 8 | 4 | 31 | 6 | 75 | |
| 14 | 46 | 20 | 9 | 5 | 35 | 7 | 85 | |
| 16 | 53 | 22 | 11 | 5 | 40 | 8 | 95 | |
| 18 | 57 | 24 | 12 | 6 | 44 | 9 | 105 | |
| 20 | 62 | 26 | 13 | 6 | 48 | 10 | 110 | |
| 24 | 64 | 27 | 14 | 6 | 50 | 11 | 111 | |
| 30 | 73 | 30 | 15 | 7 | 57 | 13 | 137 | |
| 36 | 85 | 34 | 18 | 8 | 66 | 17 | 159 | |
| 42 | 93 | 38 | 20 | 9 | 75 | 20 | 176 | |
| 48 | 102 | 43 | 22 | 10 | 82 | 22 | 198 | |

(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)

| TEES | |
|---------------|---------|
| SIZE (IN.) | L (FT.) |
| 6x4 | 20 |
| 8x6 | 20 |
| 8x4 | 40 |
| 10x8 | 20 |
| 10x6 | 40 |
| 12x10 | 20 |
| 12x8 | 40 |
| 16x12 | 40 |
| 16x10 | 57 |
| 20x18 | 20 |
| 20x16 | 40 |
| 20x12 | 73 |
| 24x20 | 40 |
| 24x18 | 50 |
| 24x16 | 60 |
| 30x24 | 50 |
| 30x20 | 76 |
| 36x30 | 50 |
| 36x24 | 88 |
| 42x36 | 40 |
| 42x30 | 88 |
| 48x42 | 40 |
| 48x36 | 88 |

| SEE NOTE 5 | |
|----------------------|-------------------------|
| RUN SIZE (IN.) | BRANCH SIZE (IN.) |
| 4 | 4 |
| 4 | 6 |
| 4 | 8 |
| 8 | 8 |
| 10 | 10 |
| 12 | 12 |
| 16 | 16 |
| 20 | 20 |
| 24 | 24 |
| 30 | 30 |
| 36 | 36 |
| 42 | 42 |
| 48 | 48 |

F.O. = FITTING ONLY

PVC PIPE RESTRAINT JOINT SCHEDULE

NTS

JE A PLATE S-38A

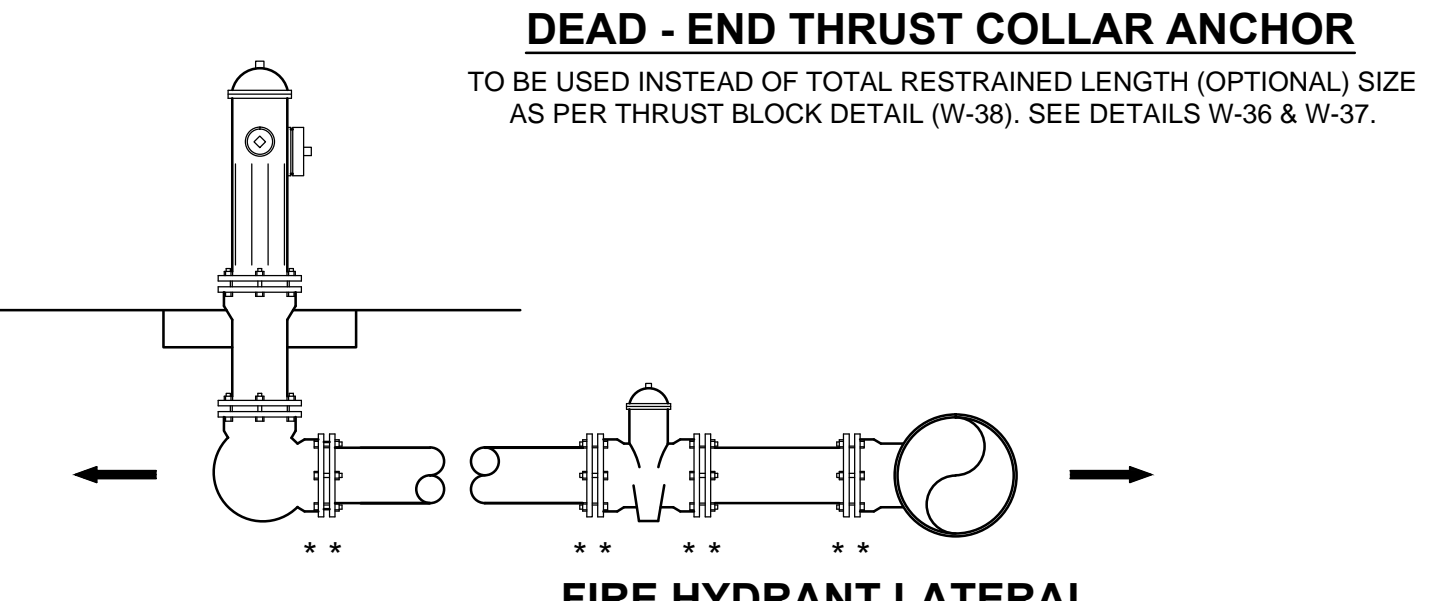
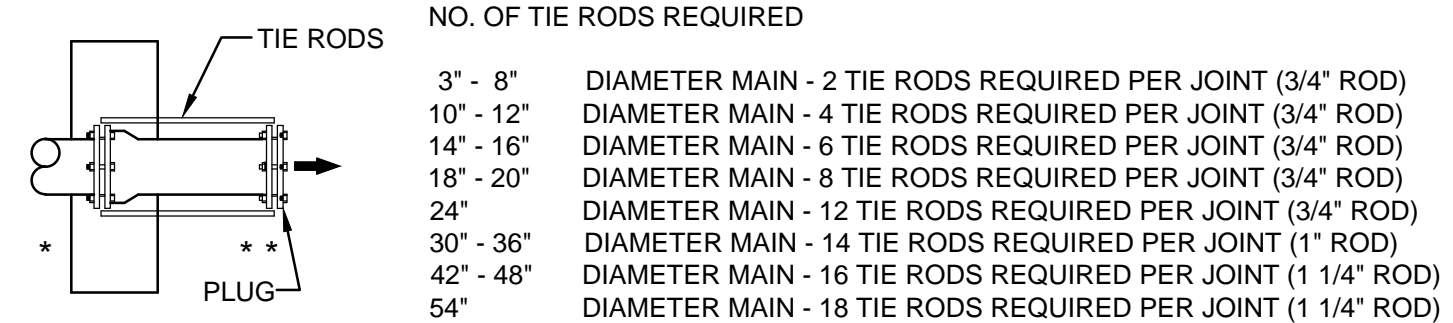
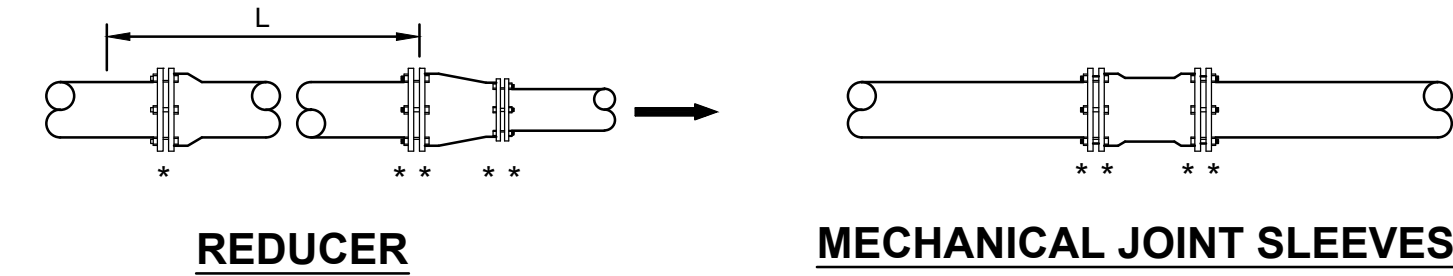
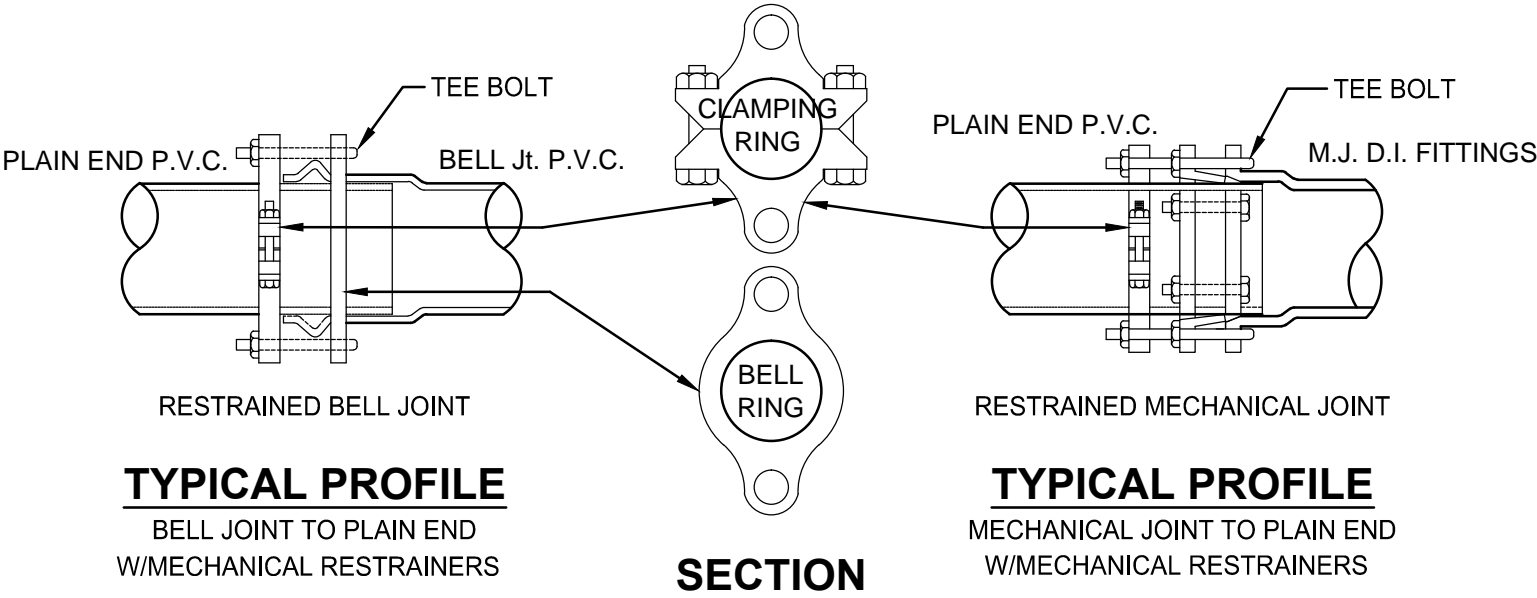
300

DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE

NTS

JE A PLATE S-38B

301



- GENERAL NOTE:
- PAY ITEM *** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
 - PAY ITEM **** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
 - INDICATES DIRECTION OF THRUST FORCE.

MECHANICAL RESTRAINT DETAILS - I

NTS

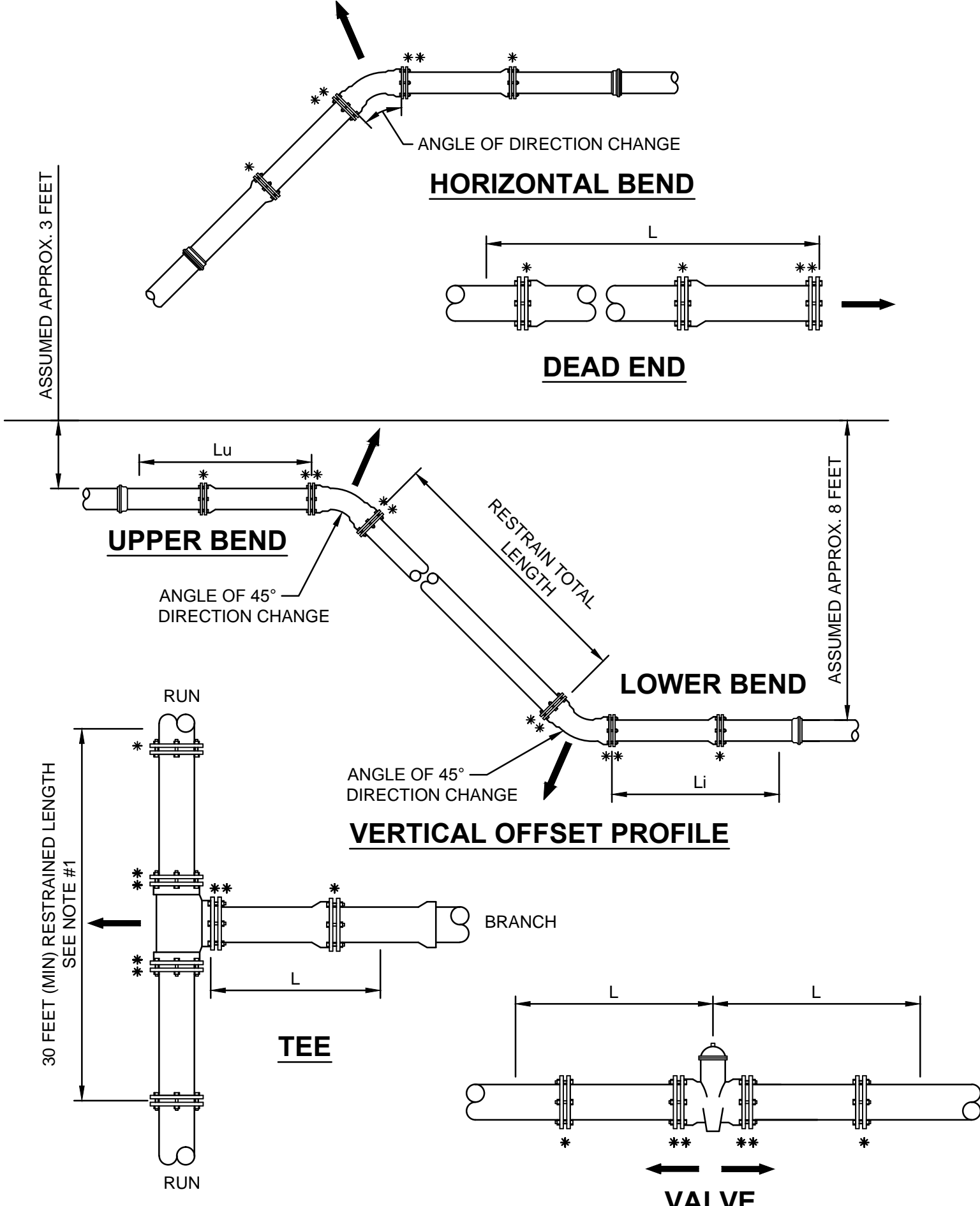
JE A PLATE S-38C

302

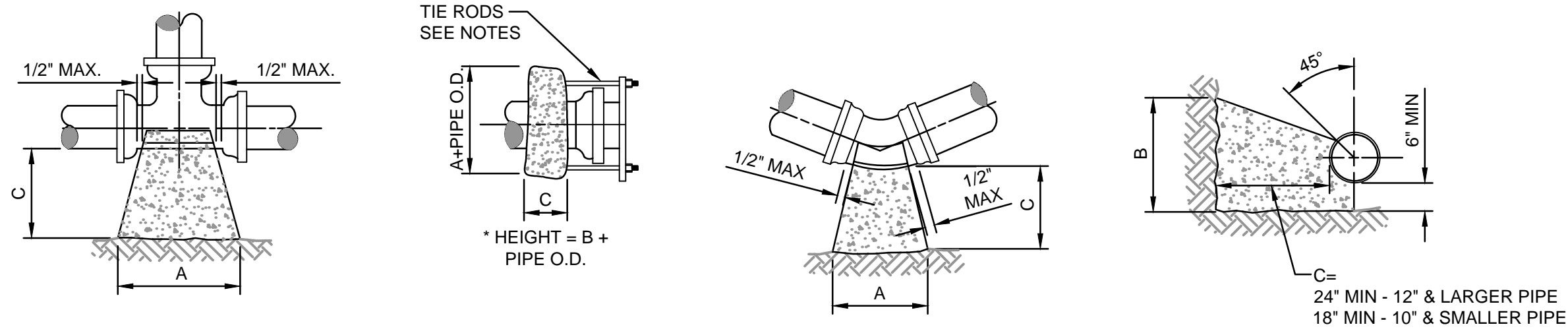
MECHANICAL RESTRAINT DETAILS - II

NTS

JE A PLATE S-38D



- NOTES:
- TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN.).
 - PAY ITEM **** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
 - PAY ITEM ***** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.



| THRUST BLOCK FOR TEES & PLUGS | |
|-------------------------------|----------|
| SIZE | 90° BEND |
| 4" | 16" |
| 6" | 20" |
| 8" | 26" |
| 10" | 32" |
| 12" | 36" |
| 14" | 40" |
| 16" | 48" |
| 18" | 56" |
| 20" | 60" |
| 24" | 72" |
| 30" | 86" |
| 36" | 116" |

| THRUST BLOCK FOR BENDS | |
|------------------------|----------|
| SIZE | 90° BEND |
| 4" | 16" |
| 6" | 22" |
| 8" | 32" |
| 10" | 36" |
| 12" | 44" |
| 14" | 52" |
| 16" | 58" |
| 18" | 64" |
| 20" | 72" |
| 24" | 96" |
| 30" | 122" |
| 36" | 166" |

THRUST BLOCK SIZE CHART

NTS

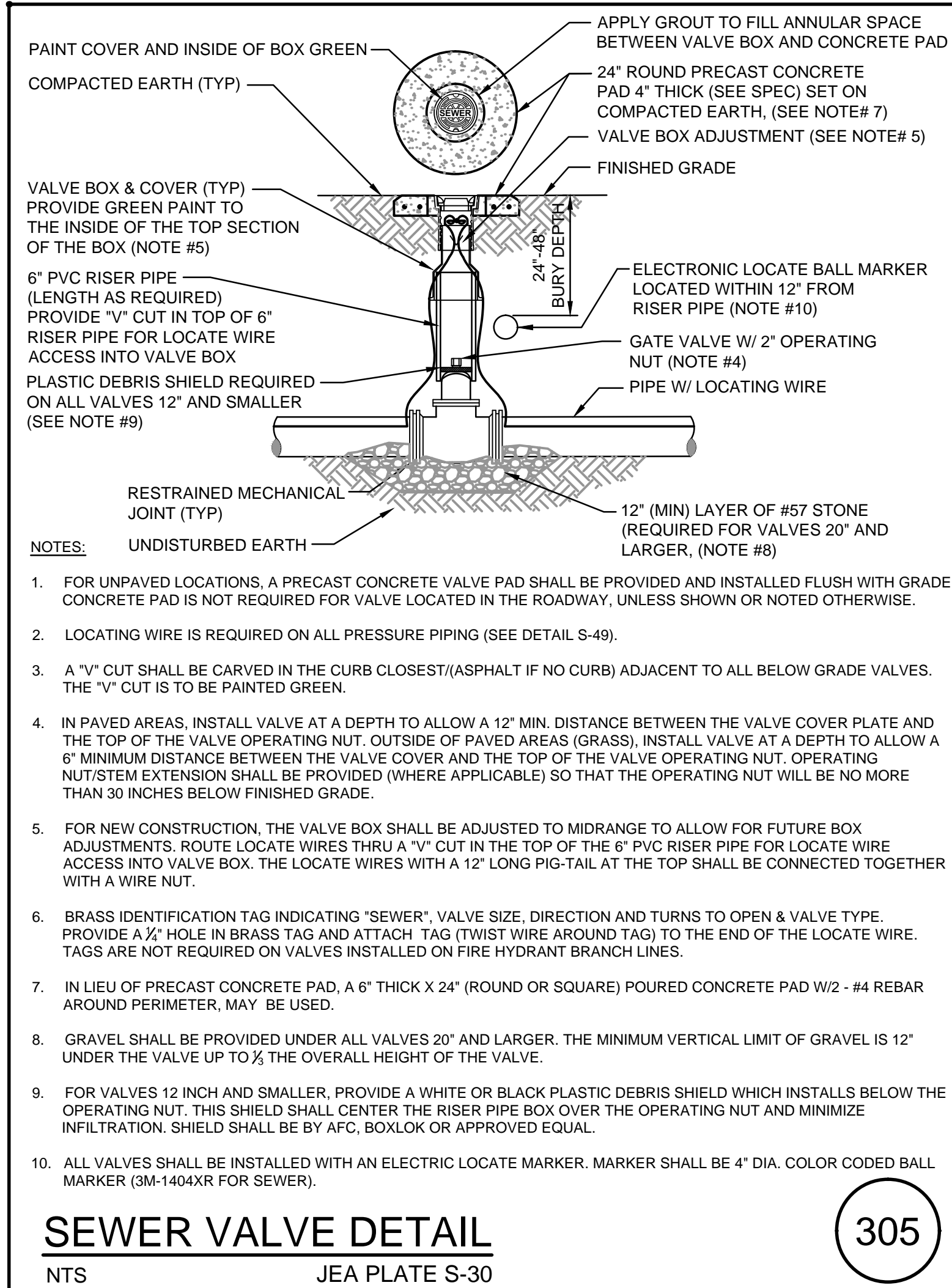
JE A PLATE S-45

304



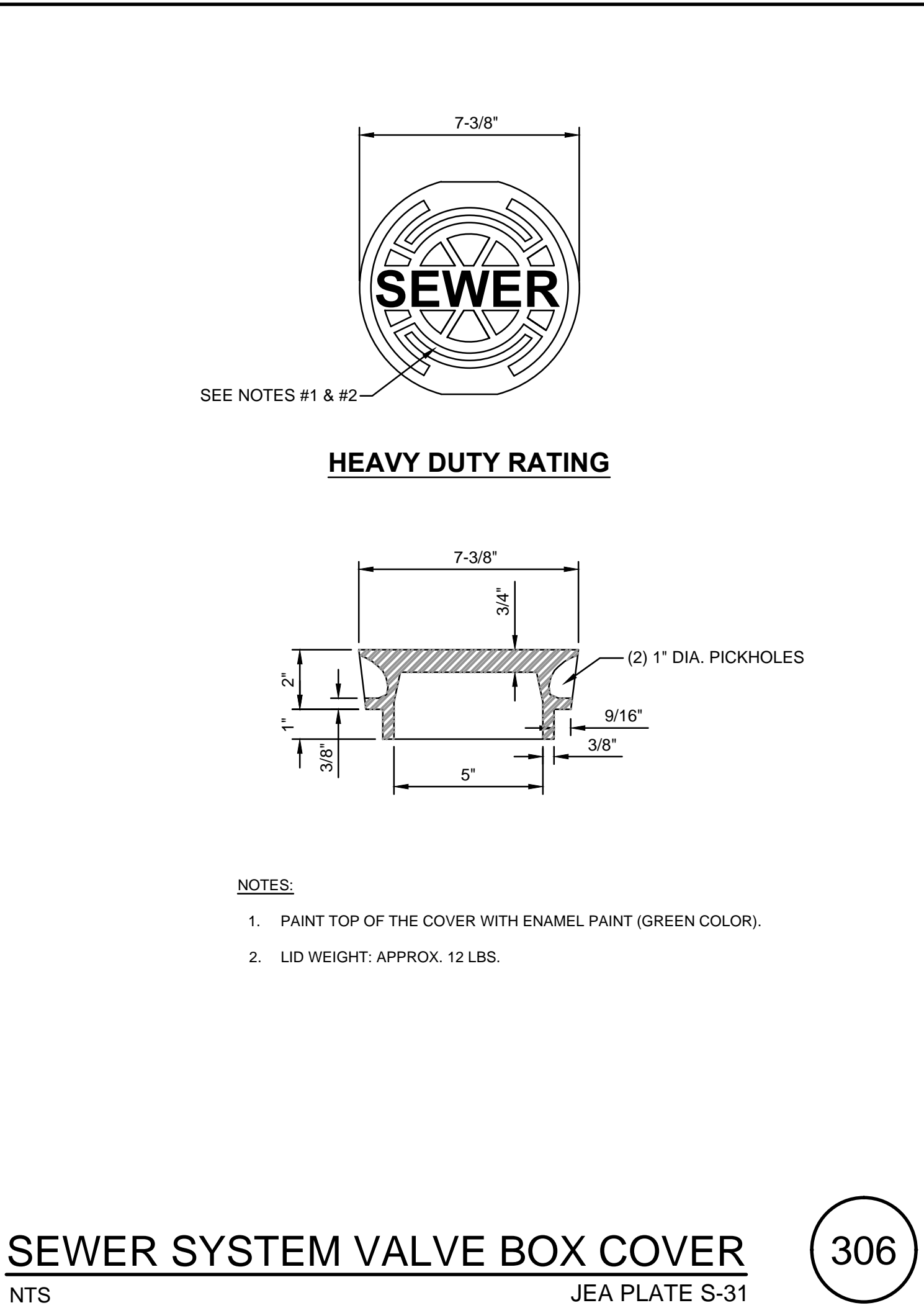
J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
CJA# 9952

| REVISIONS | |
|-----------|-----------|
| NO. | DATE |
| 1 | 8/18/2020 |
| 2 | 8/18/2020 |
| 3 | 8/18/2020 |
| 4 | 8/18/2020 |
| 5 | 8/18/2020 |
| 6 | 8/18/2020 |
| 7 | 8/18/2020 |
| 8 | 8/18/2020 |
| 9 | 8/18/2020 |
| 10 | 8/18/2020 |
| 11 | 8/18/2020 |
| 12 | 8/18/2020 |
| 13 | 8/18/2020 |
| 14 | 8/18/2020 |
| 15 | 8/18/2020 |
| 16 | 8/18/2020 |
| 17 | 8/18/2020 |
| 18 | 8/18/2020 |
| 19 | 8/18/2020 |
| 20 | 8/18/2020 |
| 21 | 8/18/2020 |
| 22 | 8/18/2020 |
| 23 | 8/18/2020 |
| 24 | 8/18/2020 |
| 25 | 8/18/2020 |
| 26 | 8/18/2020 |
| 27 | 8/18/2020 |
| 28 | 8/18/2020 |
| 29 | 8/18/2020 |
| 30 | 8/18/2020 |
| 31 | 8/18/2020 |
| 32 | 8/18/2020 |
| 33 | 8/18/2020 |
| 34 | 8/18/2020 |
| 35 | 8/18/2020 |
| 36 | 8/18/2020 |
| 37 | 8/18/2020 |
| 38 | 8/18/2020 |
| 39 | 8/18/2020 |
| 40 | 8/18/2020 |
| 41 | 8/18/2020 |
| 42 | 8/18/2020 |
| 43 | 8/18/2020 |
| 44 | 8/18/2020 |
| 45 | 8/18/2020 |
| 46 | 8/18/2020 |
| 47 | 8/18/2020 |
| 48 | 8/18/2020 |
| 49 | 8/18/2020 |
| 50 | 8/18/2020 |
| 51 | 8/18/2020 |
| 52 | 8/18/2020 |
| 53 | 8/18/2020 |
| 54 | 8/18/2020 |
| 55 | 8/18/2020 |
| 56 | 8/18/2020 |
| 57 | 8/18/2020 |
| 58 | 8/18/2020 |
| 59 | 8/18/2020 |
| 60 | 8/18/2020 |
| 61 | 8/18/2020 |
| 62 | 8/18/2020 |
| 63 | 8/18/2020 |
| 64 | 8/18/2020 |
| 65 | 8/18/2020 |
| 66 | 8/18/2020 |
| 67 | 8/18/2020 |
| 68 | 8/18/2020 |
| 69 | 8/18/2020 |
| 70 | 8/18/2020 |
| 71 | 8/18/2020 |
| 72 | 8/18/2020 |
| 73 | 8/18/2020 |
| 74 | 8/18/2020 |
| 75 | 8/18/2020 |
| 76 | 8/18/2020 |
| 77 | 8/18/2020 |
| 78 | 8/18/2020 |
| 79 | 8/18/2020 |
| 80 | 8/18/2020 |
| 81 | 8/18/2020 |
| 82 | 8/18/2020 |
| 83 | 8/18/2020 |
| 84 | 8/18/2020 |
| 85 | 8/18/2020 |
| 86 | 8/18/2020 |
| 87 | 8/18/2020 |
| 88 | 8/18/2020 |
| 89 | 8/18/2020 |
| 90 | 8/18/2020 |
| 91 | 8/18/2020 |
| 92 | 8/18/2020 |
| 93 | 8/18/2020 |
| 94 | 8/18/2020 |
| 95 | 8/18/2020 |
| 96 | 8/18/2020 |
| 97 | 8/18/2020 |
| 98 | 8/18/2020 |
| 99 | 8/18/2020 |
| 100 | 8/18/2020 |
| 101 | 8/18/2020 |
| 102 | 8/18/2020 |
| 103 | 8/18/2020 |
| 104 | 8/18/2020 |
| 105 | 8/18/2020 |
| 106 | 8/18/2020 |
| 107 | 8/18/2020 |
| 108 | 8/18/2020 |
| 109 | 8/18/2020 |
| 110 | 8/18/2020 |
| 111 | 8/18/2020 |
| 112 | 8/18/2020 |
| 113 | 8/18/2020 |
| 114 | 8/18/2020 |
| 115 | 8/18/2020 |
| 116 | 8/18/2020 |
| 117 | 8/18/2020 |
| 118 | 8/18/2020 |
| 119 | 8/18/2020 |
| 120 | 8/18/2020 |
| 121 | 8/18/2020 |
| 122 | 8/18/2020 |
| 123 | 8/18/2020 |
| 124 | 8/18/2020 |
| 125 | 8/18/2020 |
| 126 | 8/18/2020 |
| 127 | 8/18/2020 |
| 128 | 8/18/2020 |
| 129 | 8/18/2020 |
| 130 | 8/18/2020 |
| 131 | 8/18/2020 |
| 132 | 8/18/2020 |
| 133 | 8/18/2020 |
| 134 | 8/18/2020 |
| 135 | 8/18/2020 |
| 136 | 8/18/2020 |
| 137 | 8/18/2020 |
| 138 | 8/18/2020 |
| 139 | 8/18/2020 |
| 140 | 8/18/2020 |
| 141 | 8/18/2020 |
| 142 | 8/18/2020 |
| 143 | 8/18/2020 |
| 144 | 8/18/2020 |
| 145 | 8/18/2020 |
| 146 | 8/18/2020 |
| 147 | 8/18/2020 |
| 148 | 8/18/2020 |
| 149 | 8/18/2020 |
| 150 | 8/18/2020 |
| 151 | 8/18/2020 |
| 152 | 8/18/2020 |
| 153 | 8/18/2020 |
| 154 | 8/18/2020 |
| 155 | 8/18/2020 |
| 156 | 8/18/2020 |
| 157 | 8/18/2020 |
| 158 | 8/18/2020 |
| 159 | 8/18/2020 |
| 160 | 8/18/2020 |
| 161 | 8/18/2020 |
| 162 | 8/18/2020 |
| 163 | 8/18/2020 |
| 164 | 8/18/2020 |
| 165 | 8/18/2020 |
| 166 | 8/18/2020 |
| 167 | 8/18/2020 |
| 168 | 8/18/2020 |
| 169 | 8/18/2020 |
| 170 | 8/18/2020 |
| 171 | 8/18/2020 |
| 172 | 8/18/2020 |
| 173 | 8/18/2020 |
| 174 | 8/18/2020 |
| 175 | 8/18/2020 |
| 176 | 8/18/2020 |
| 177 | 8/18/2020 |
| 178 | 8/18/2020 |
| 179 | 8/18/2020 |
| 180 | 8/18/2020 |



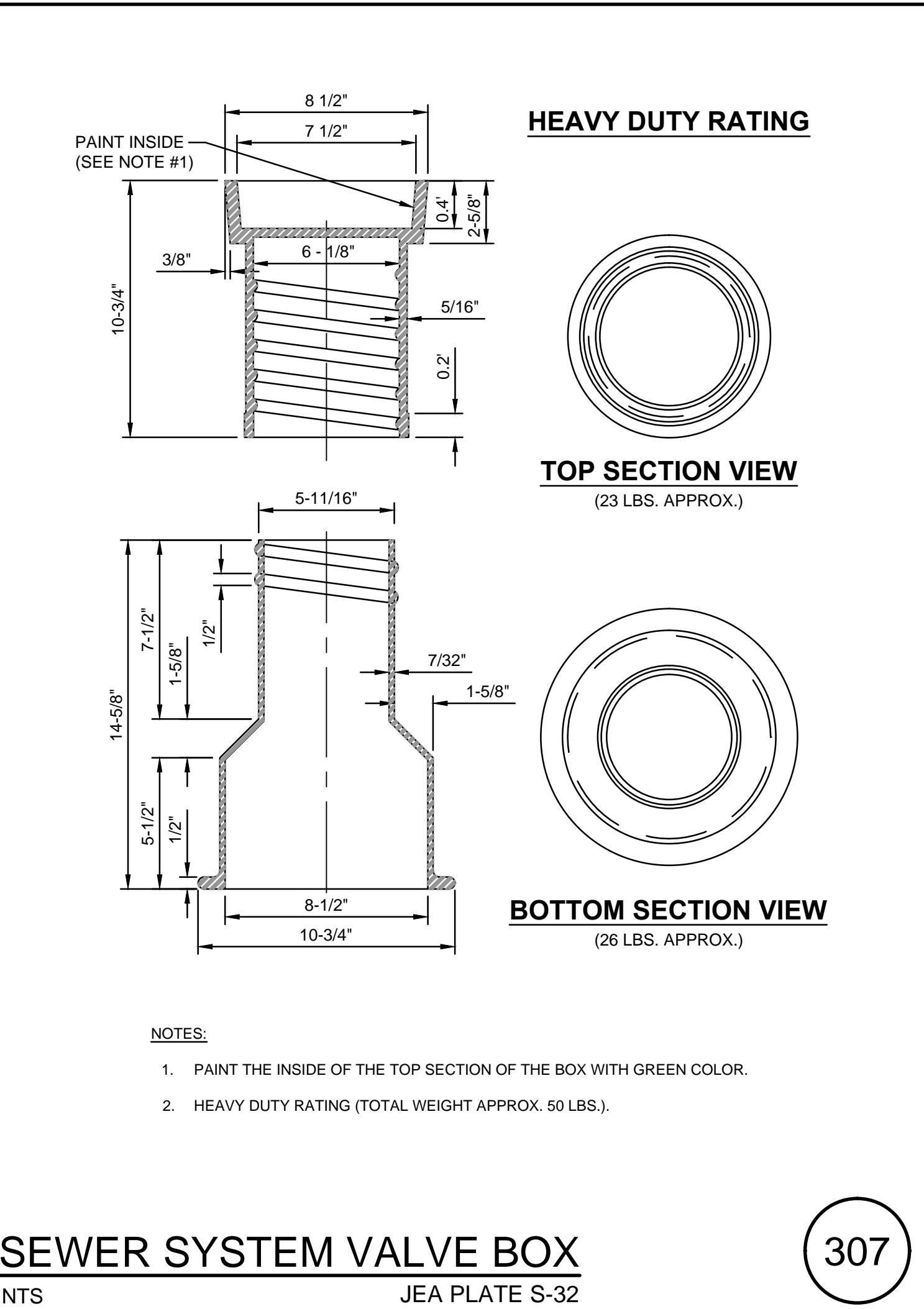
SEWER VALVE DETAIL
NTS JEA PLATE S-30

305



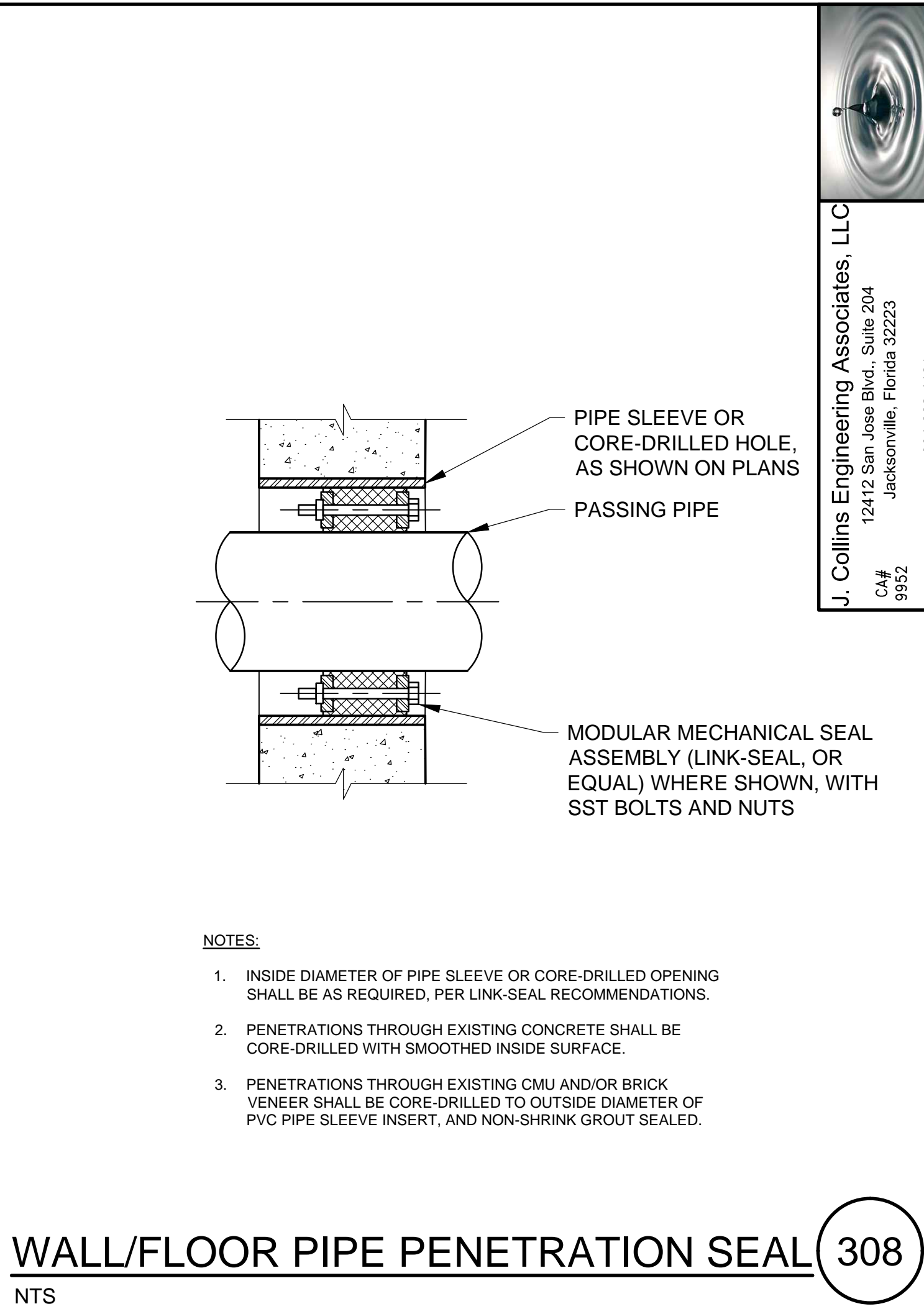
SEWER SYSTEM VALVE BOX COVER
NTS JEA PLATE S-31

306



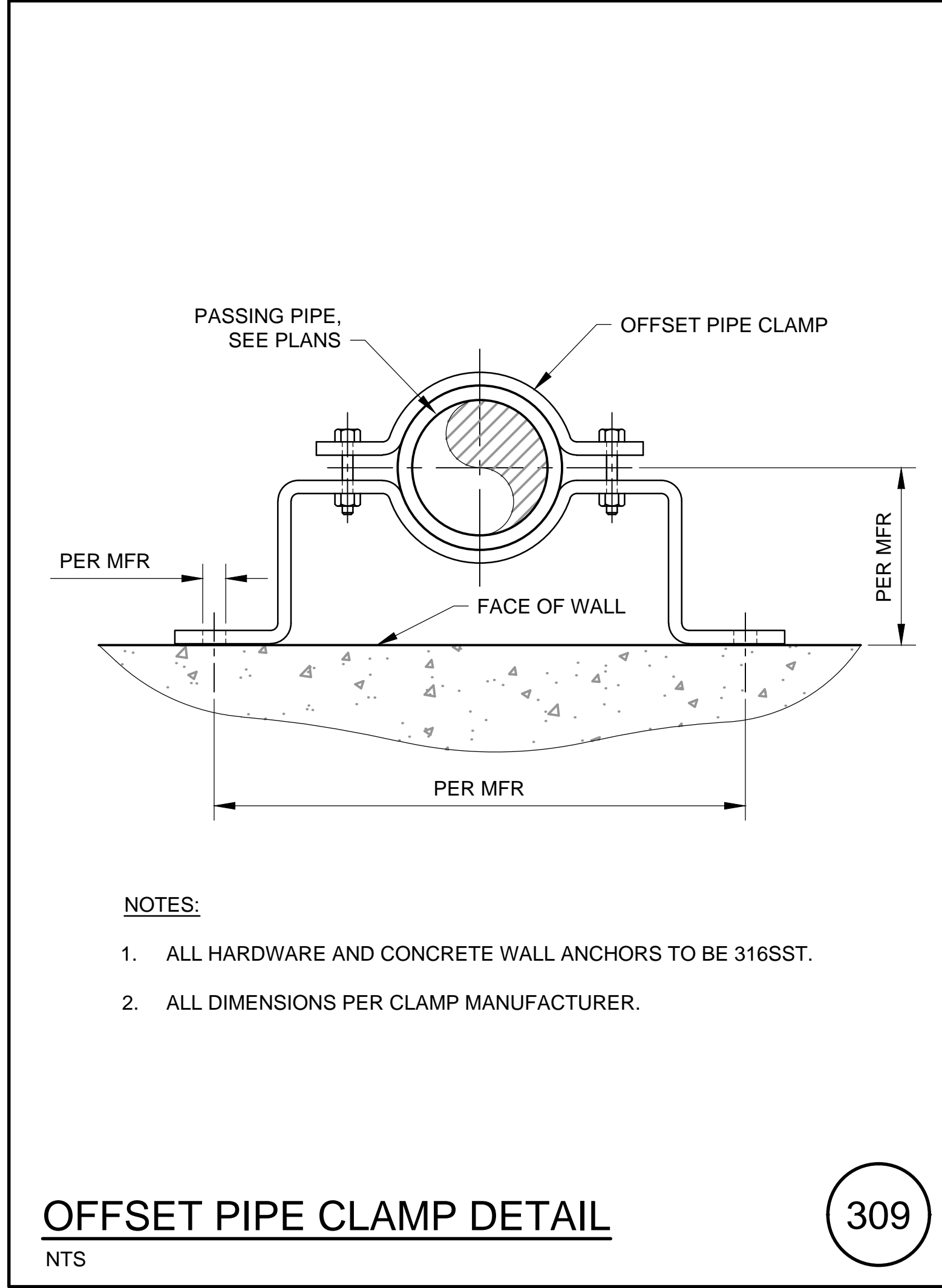
SEWER SYSTEM VALVE BOX
NTS JEA PLATE S-32

307



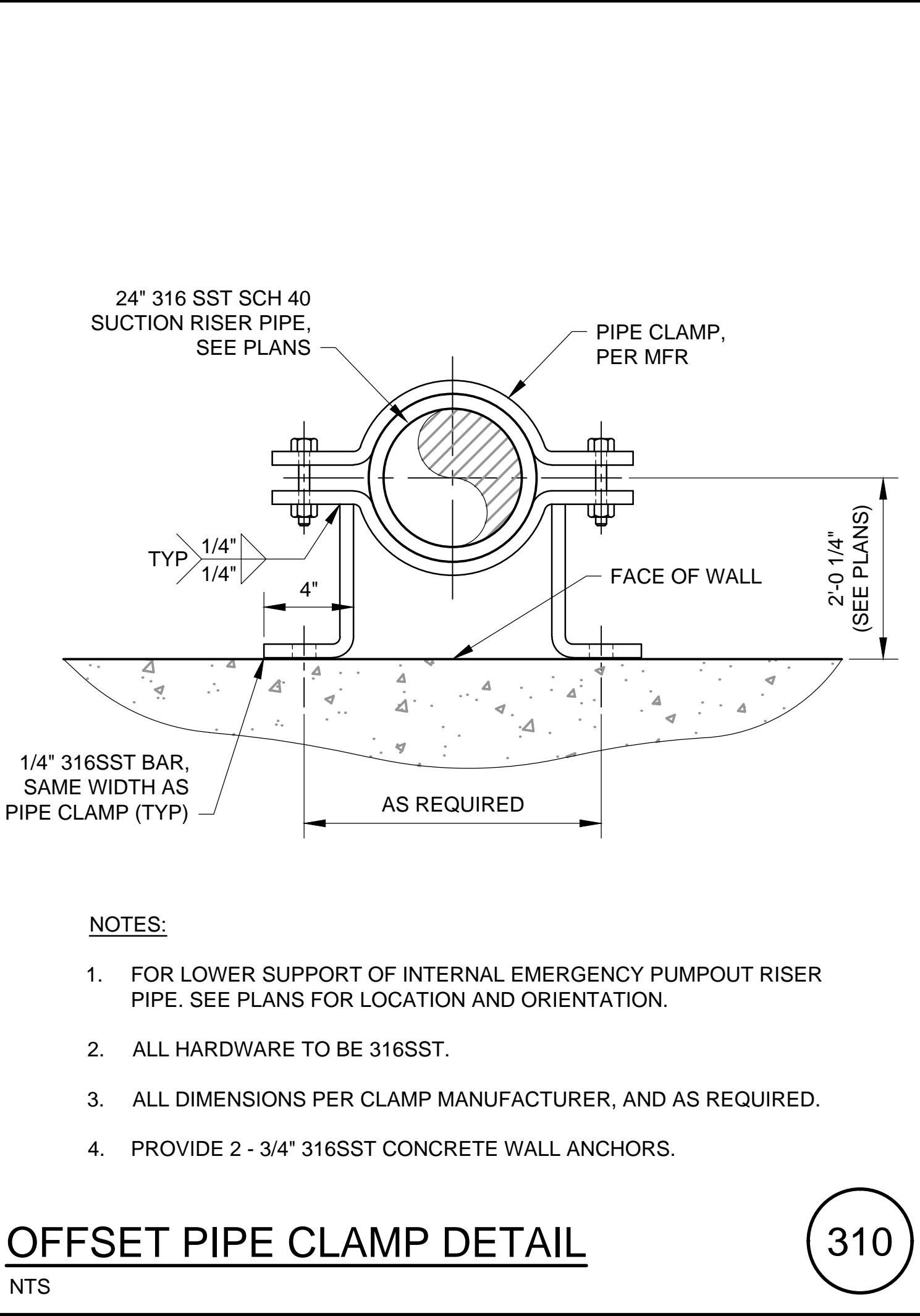
WALL/FLOOR PIPE PENETRATION SEAL
NTS

308



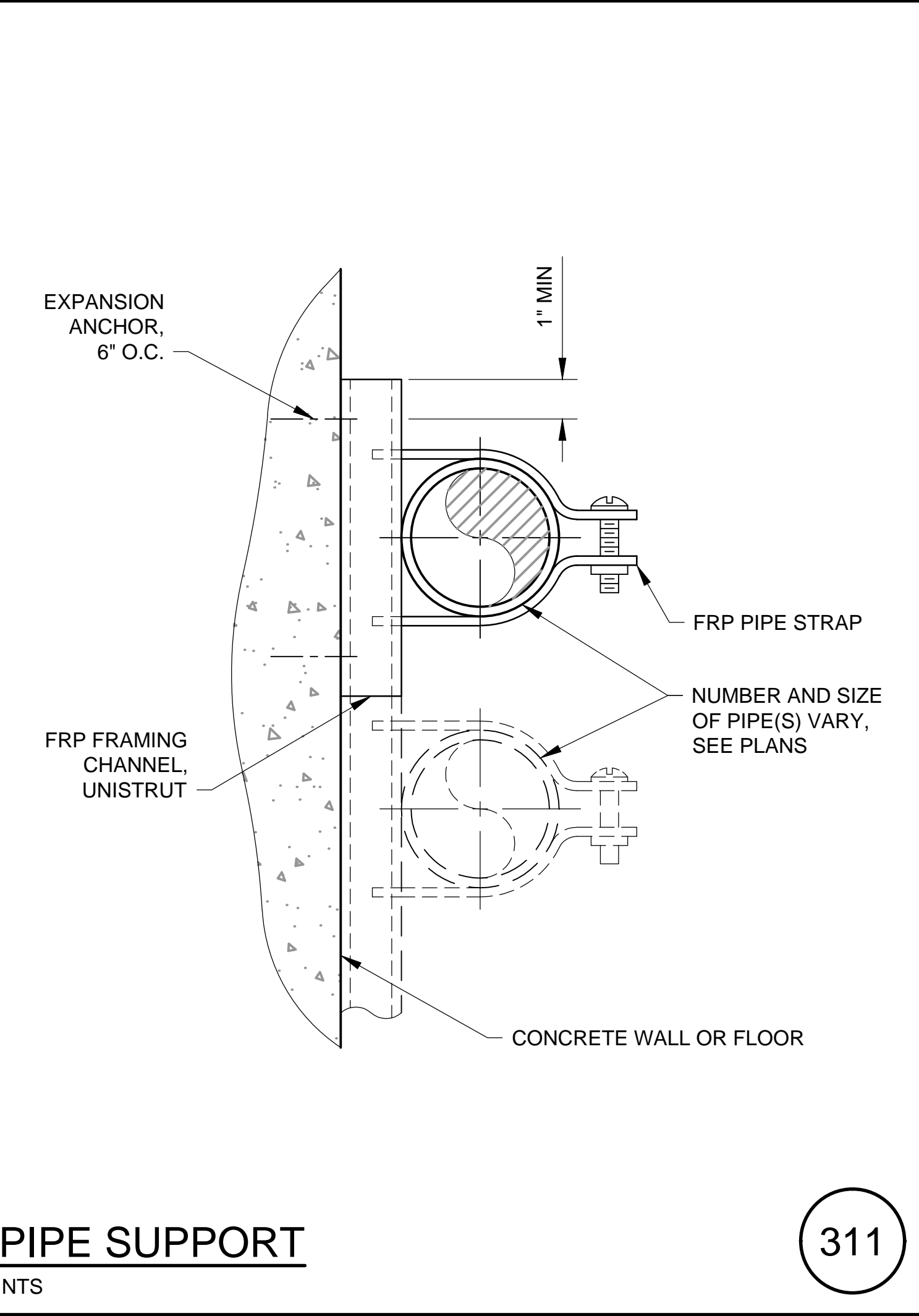
OFFSET PIPE CLAMP DETAIL
NTS

309



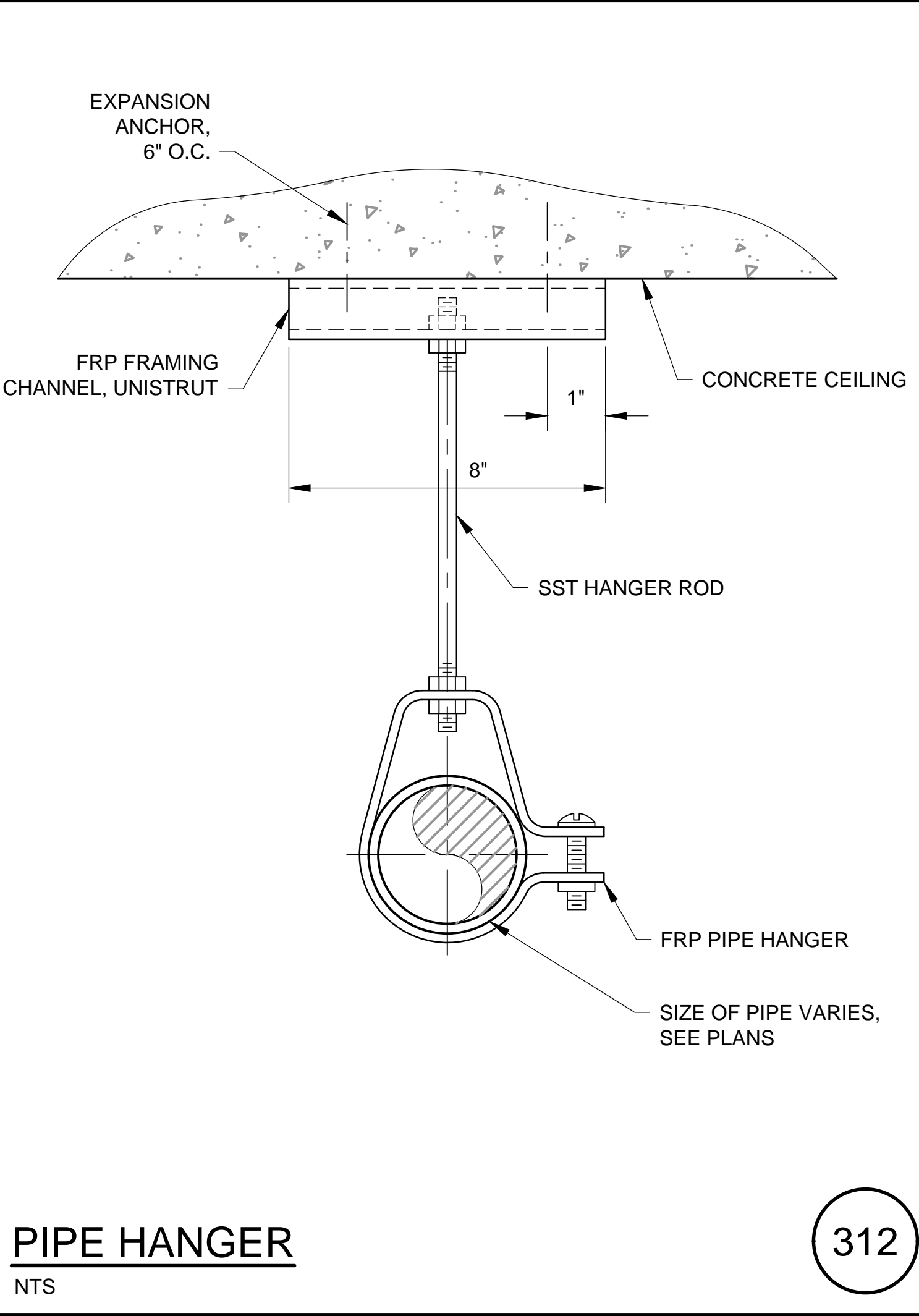
OFFSET PIPE CLAMP DETAIL
NTS

310



PIPE SUPPORT
NTS

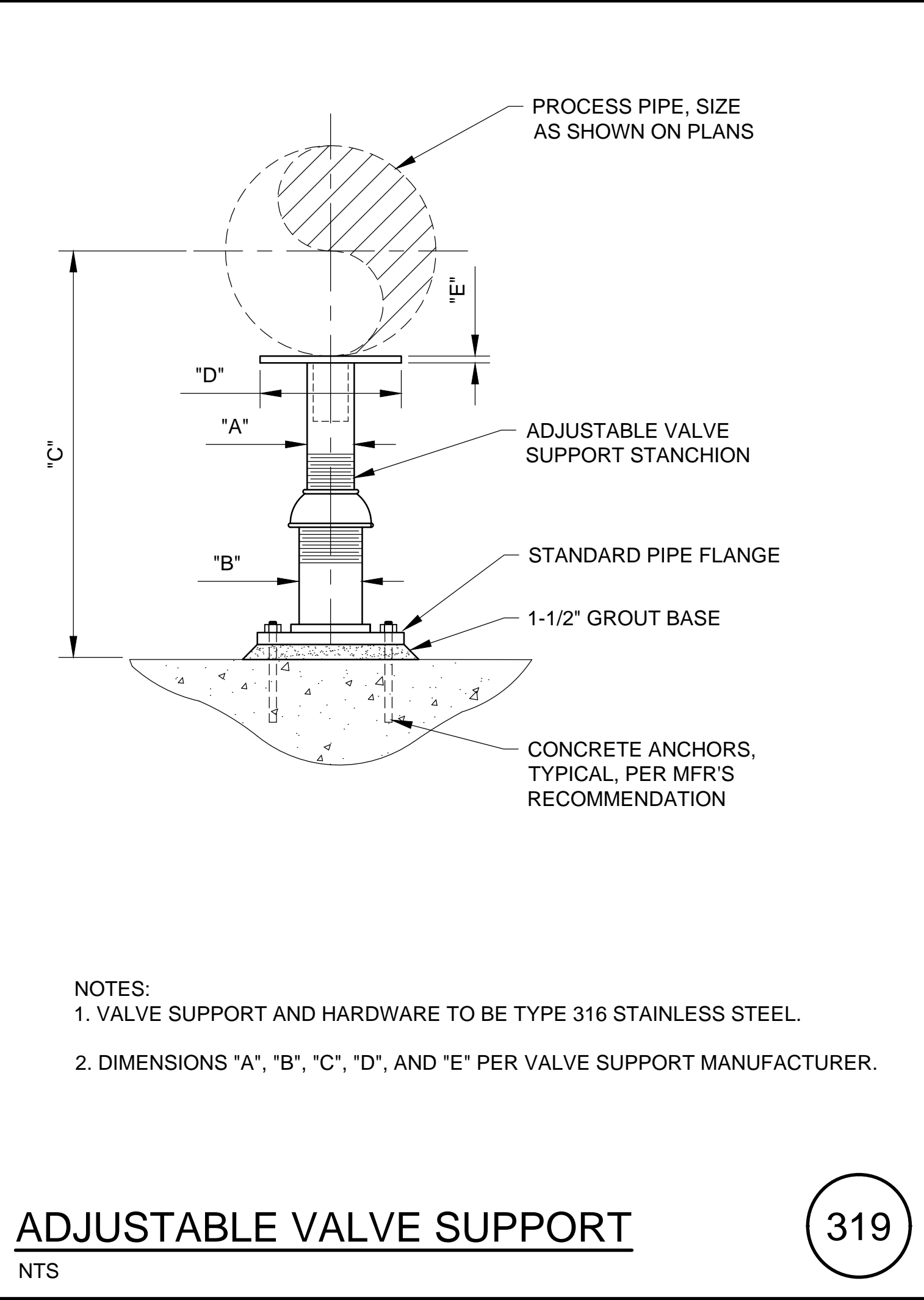
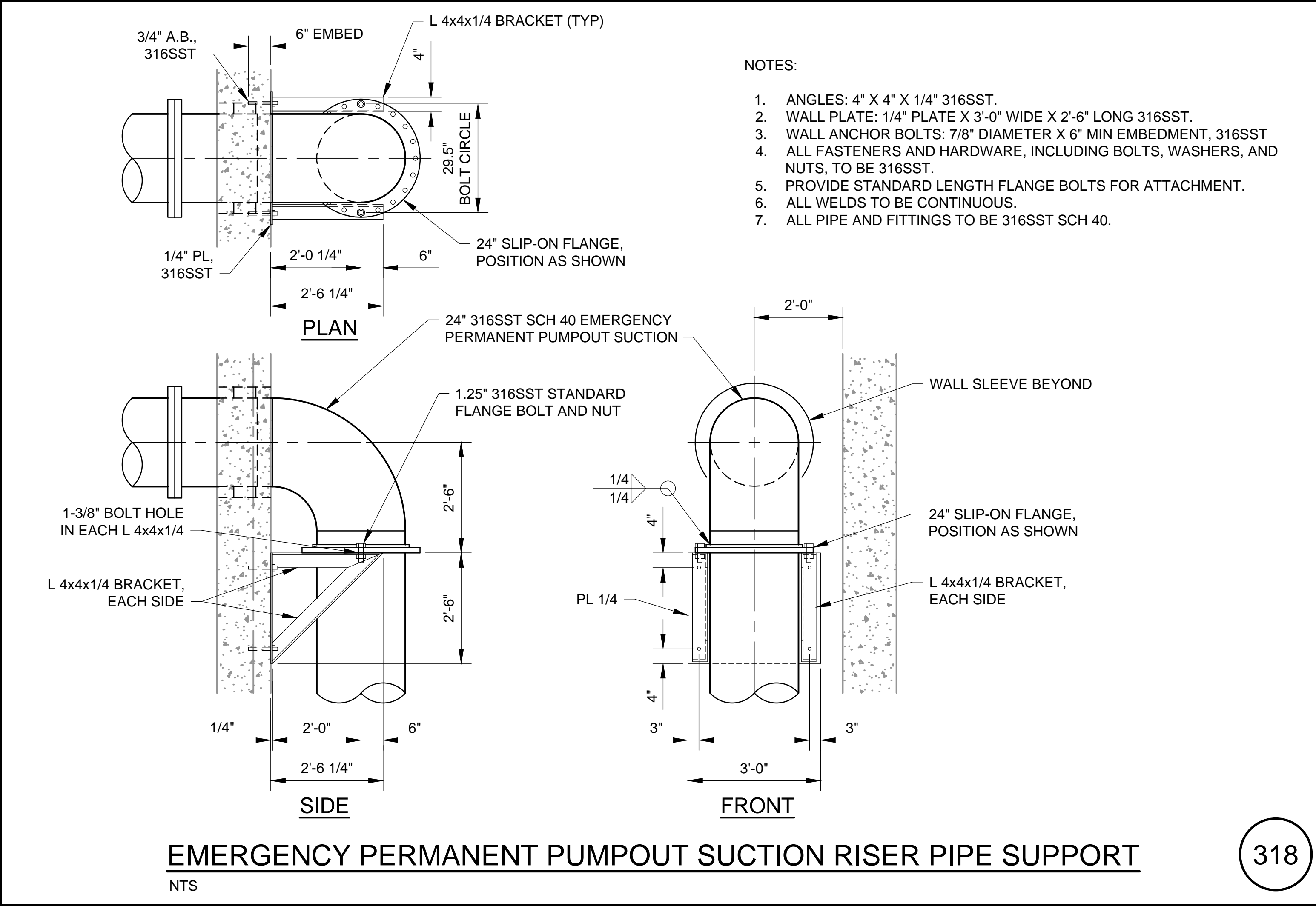
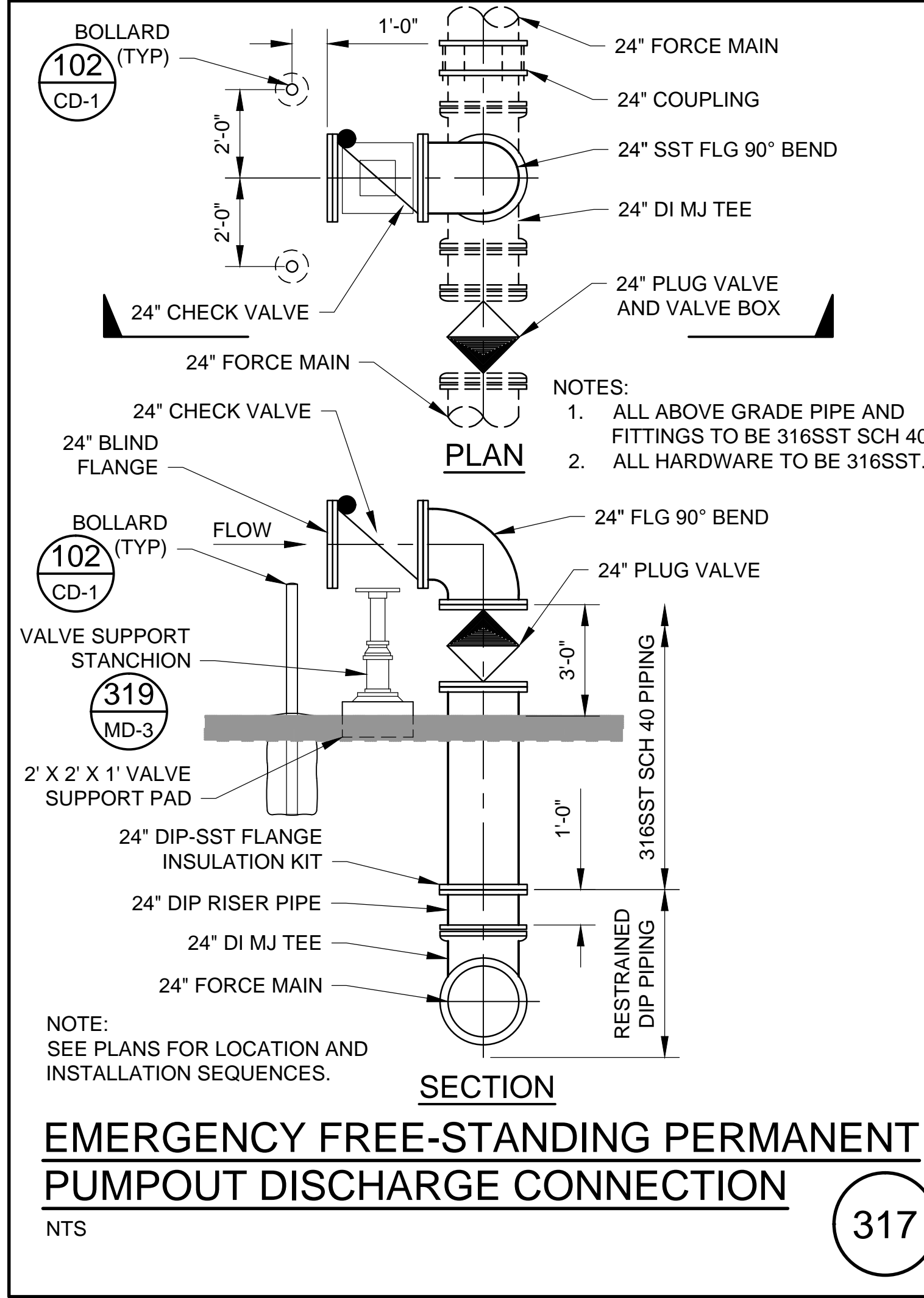
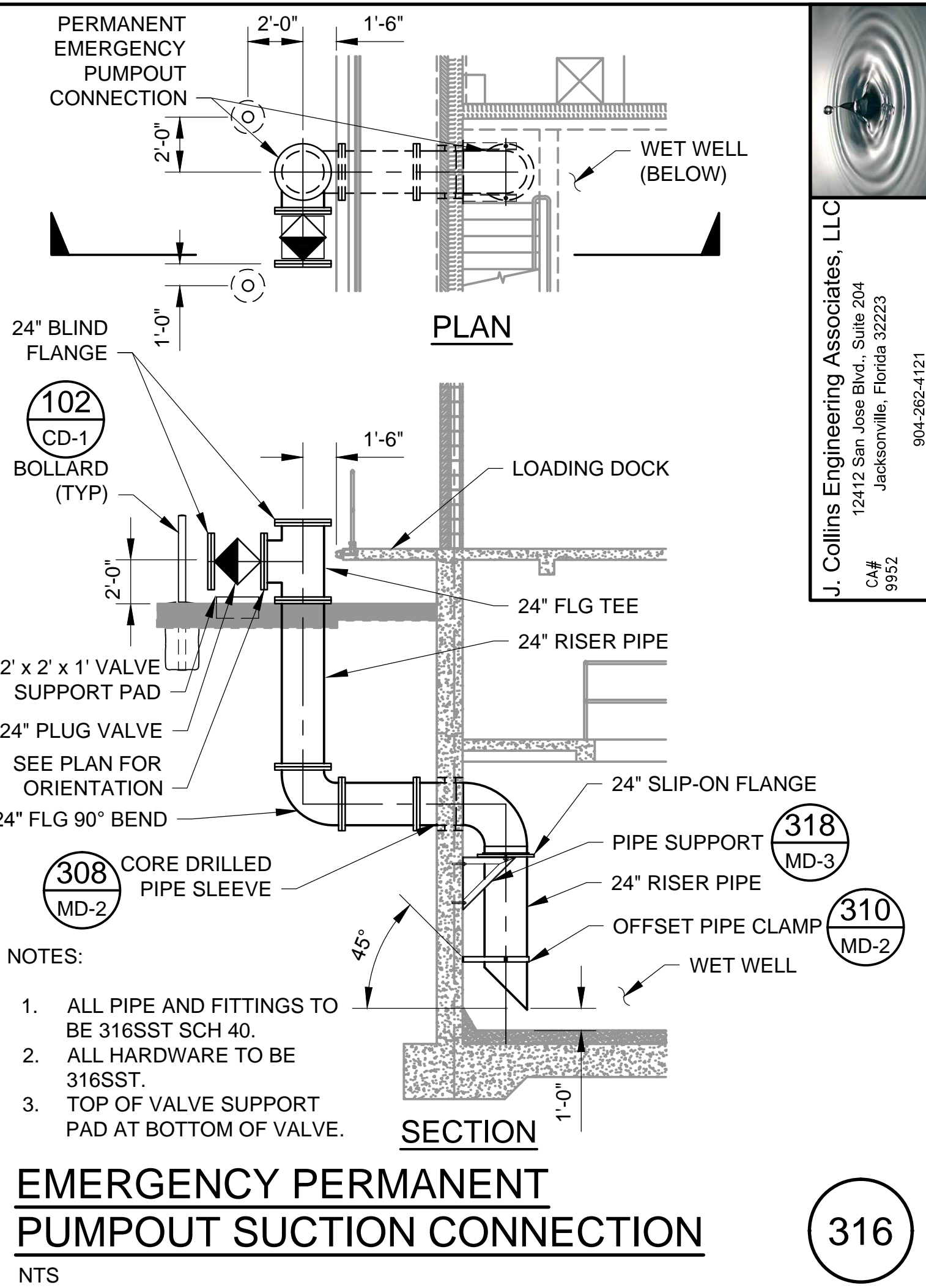
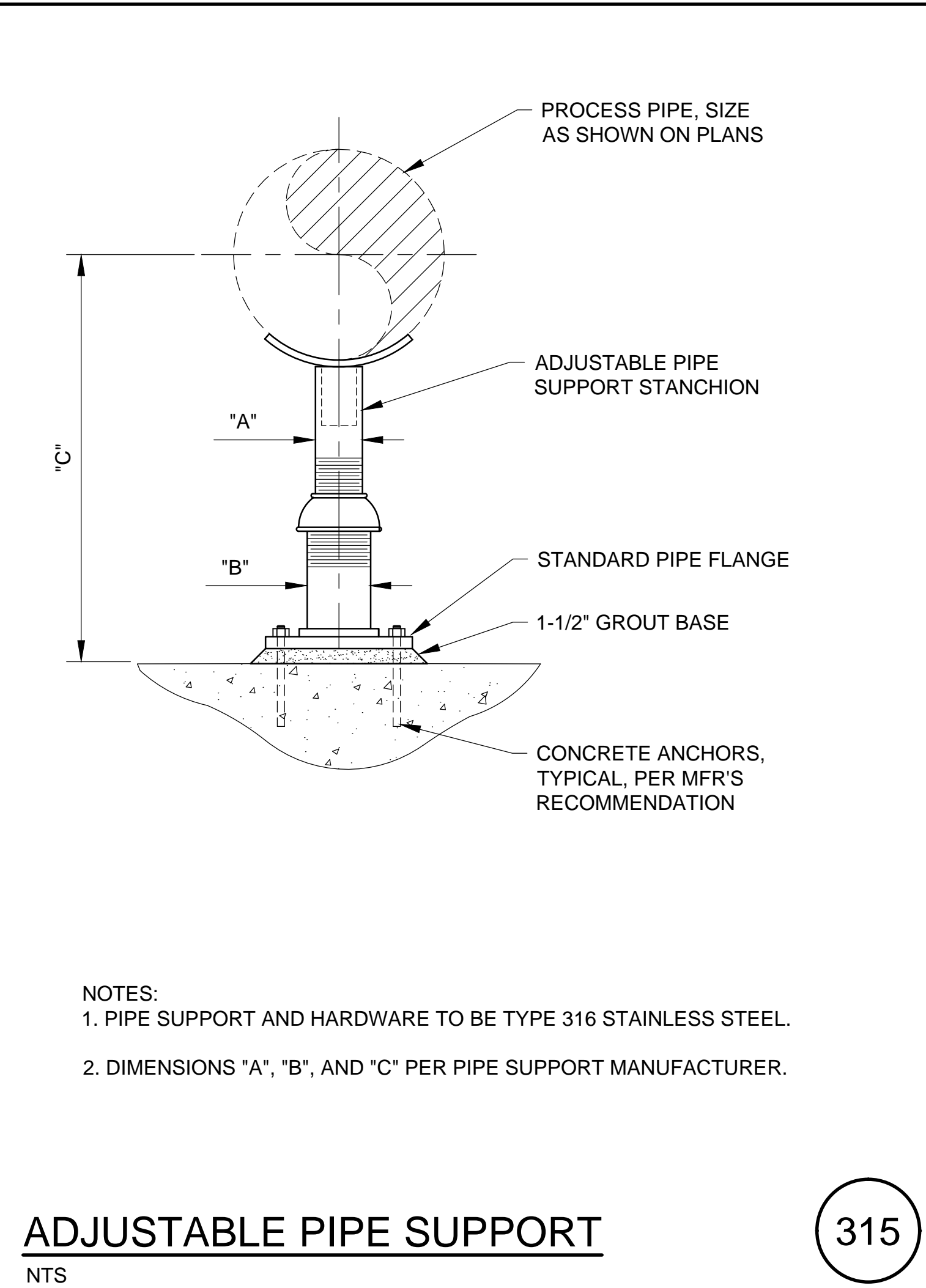
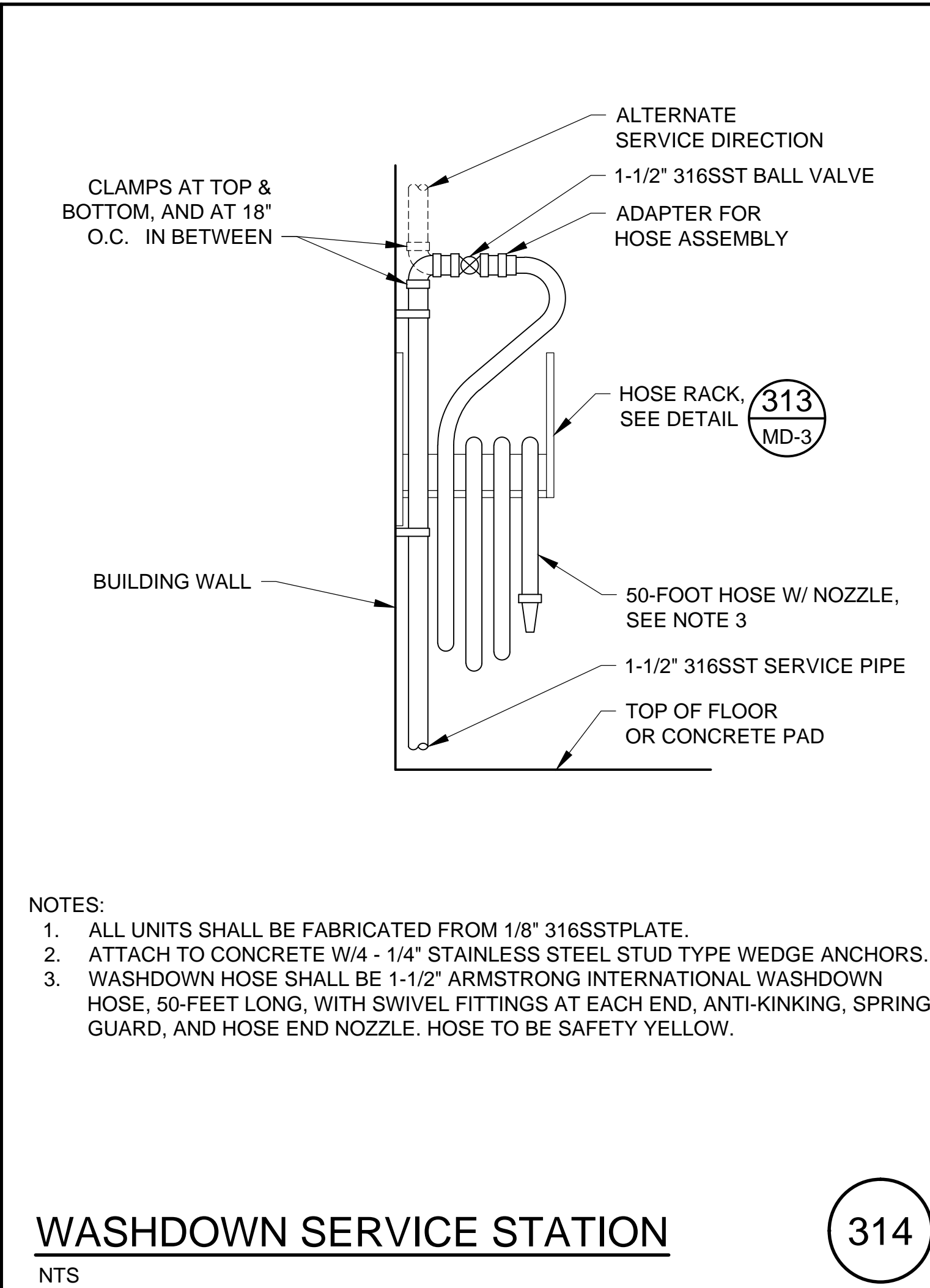
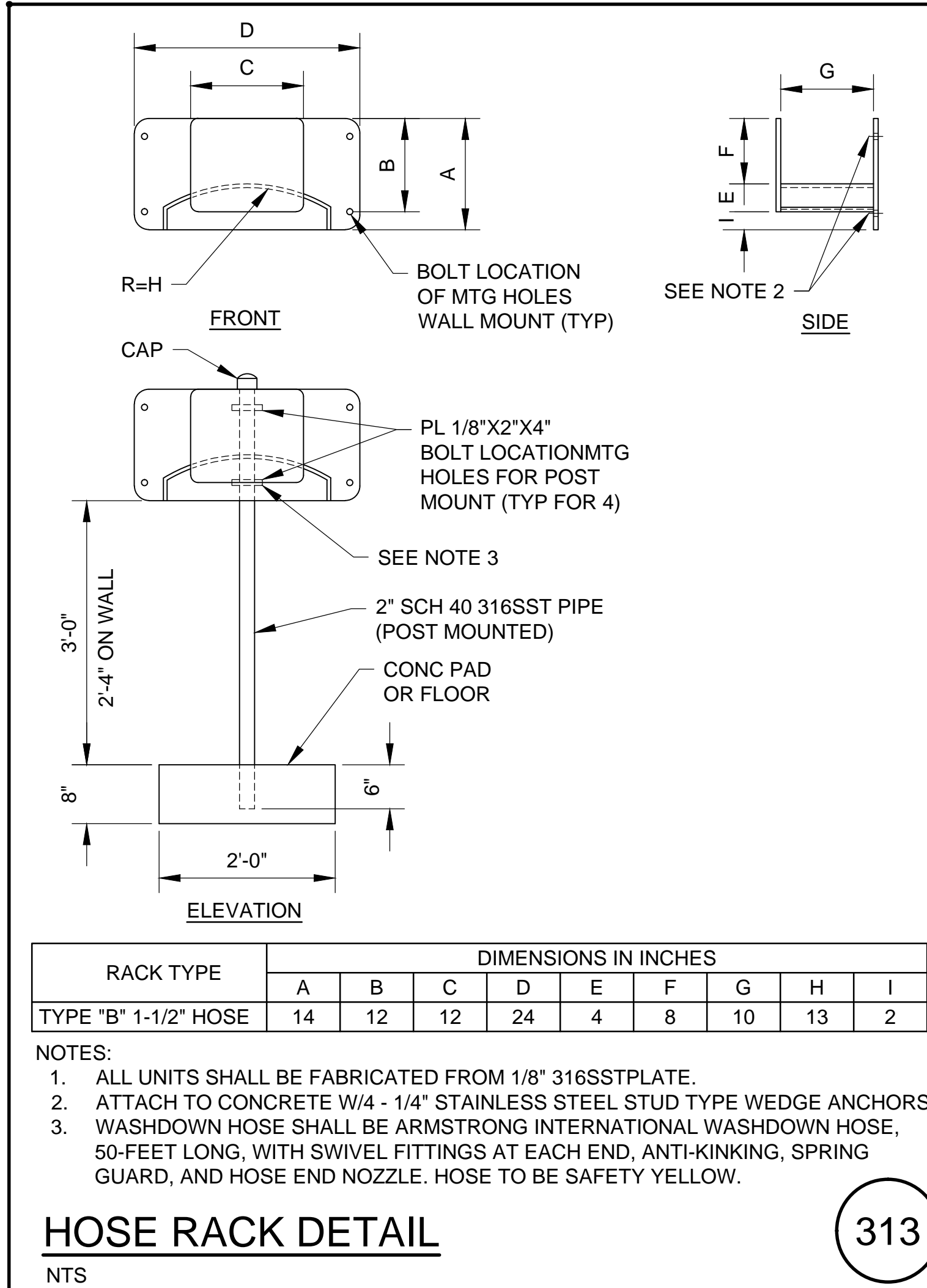
311



PIPE HANGER
NTS

312

| | | | | | |
|--|------|--|----------|--------------------------|----------------------------|
| | | J. Collins Engineering Associates, LLC 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32223 C/E 9952 | | 904-262-4121 | |
| NO. SHEETS | 80 | PROJ. NO. | 8002427 | DESIGN ENGINEER | JOHN E. COLLINS, JR., P.E. |
| SHEET NO. | | DATE: | MAR 2020 | FLORIDA REGISTRATION NO. | 40085 |
| DRAWING NO. | MD-2 | SCALE: | AS SHOWN | | |
| SPRING PARK ROAD PUMP STATION REHABILITATION MECHANICAL STANDARD DETAILS | | | | | |
| REVISED PLANS FOR REBID | | | | | |



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
C/E
9952

REVISIONS

| NO. | BY | DATE |
|-----|-----------|-----------|
| 1 | EL DUPREE | 8/18/2020 |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

DESIGNER: GA ADAMS
DRAWN BY: RL DUPREE
DATE: MAR 2020
CHECKED BY: JE COLLINS
DATE: MAR 2020

DESIGN ENGINEER: JOHN E. COLLINS, JR., P.E.
FLORIDA REGISTRATION NO. 40085

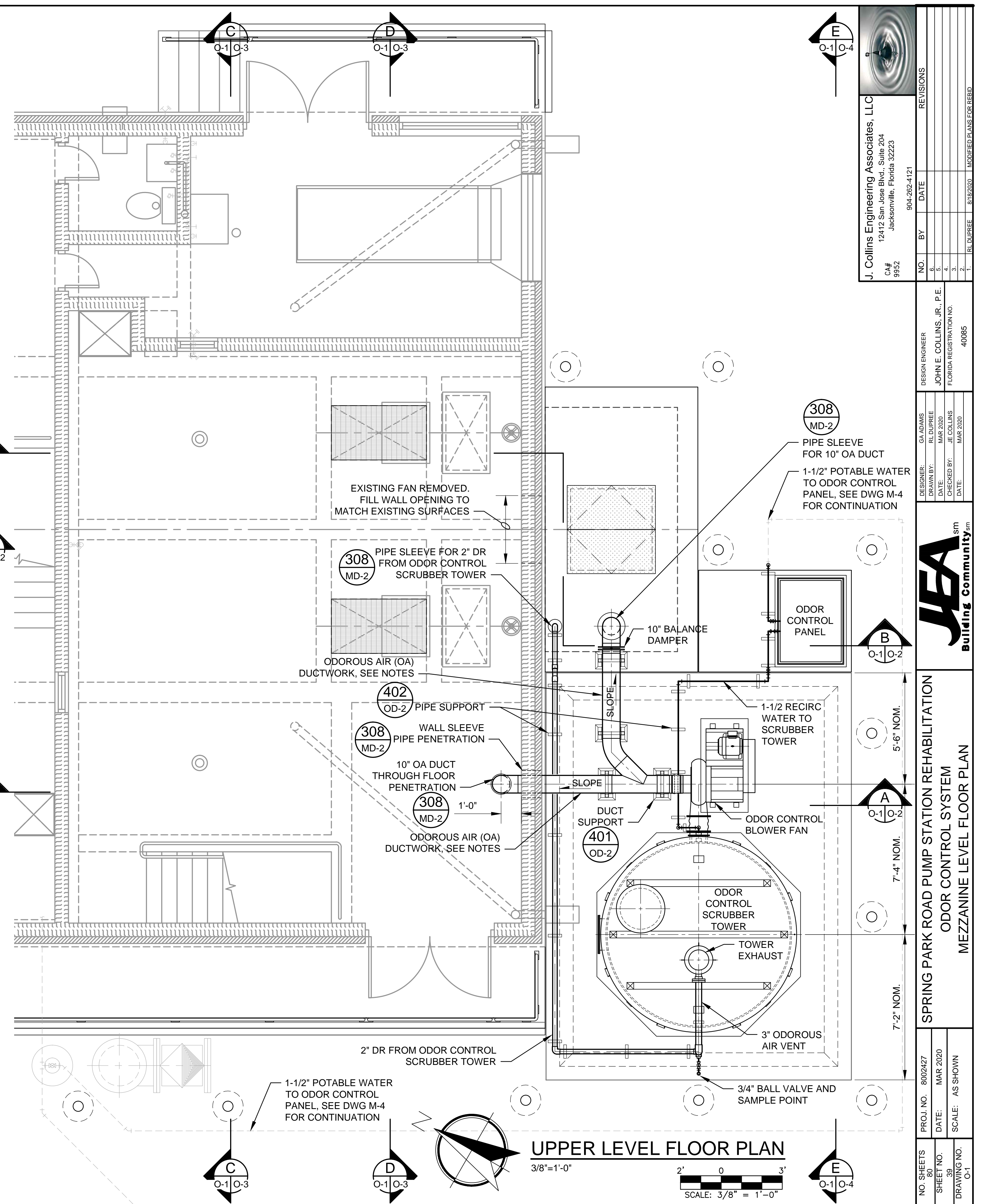
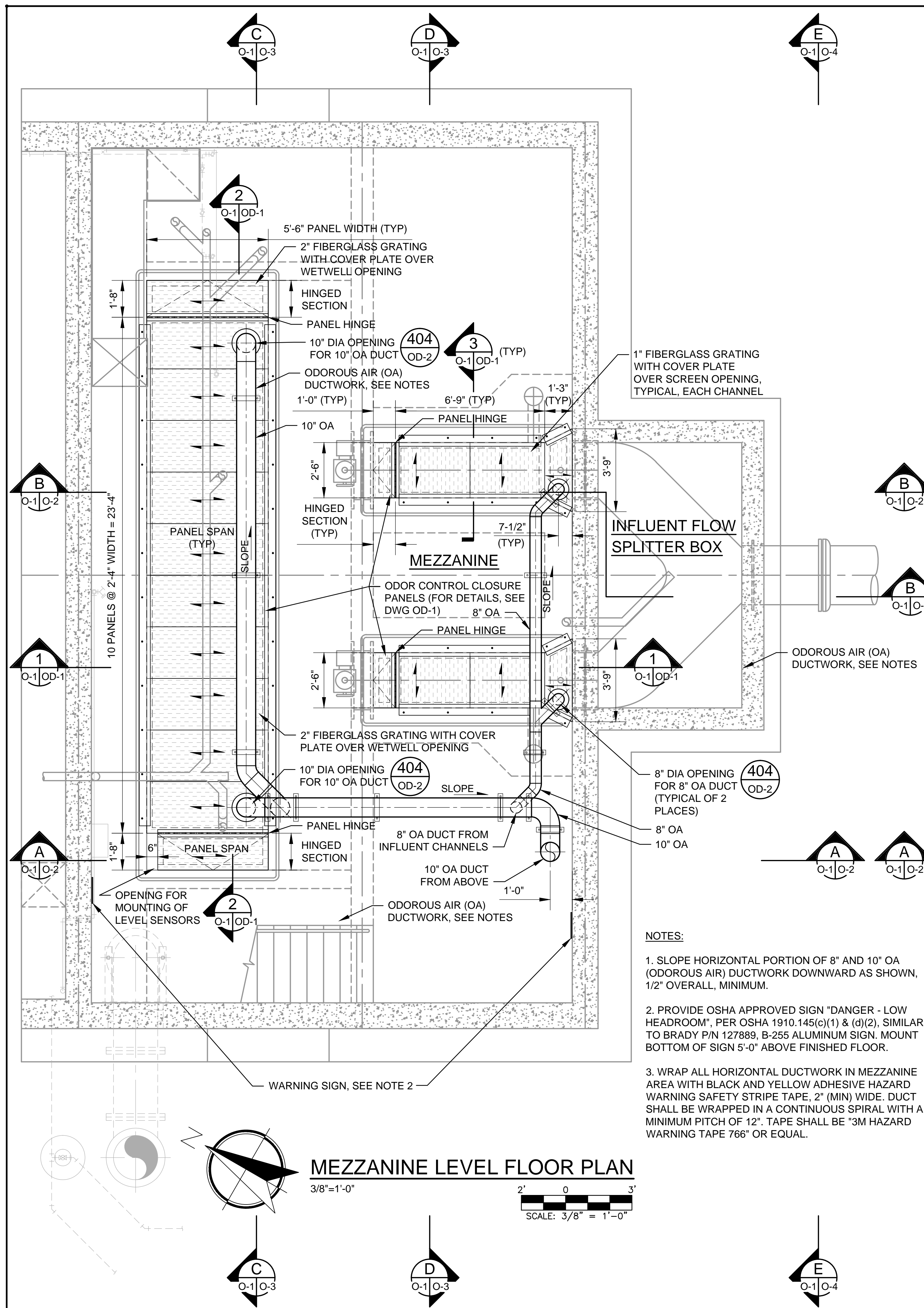
PROJECT: SPRING PARK ROAD PUMP STATION REHABILITATION
MECHANICAL
STANDARD DETAILS


PROJ. NO.: 8002427
DATE: MAR 2020
SCALE: AS SHOWN



NO. SHEETS: 80
SHEET NO.: MD-3
DRAWING NO.: MD-3

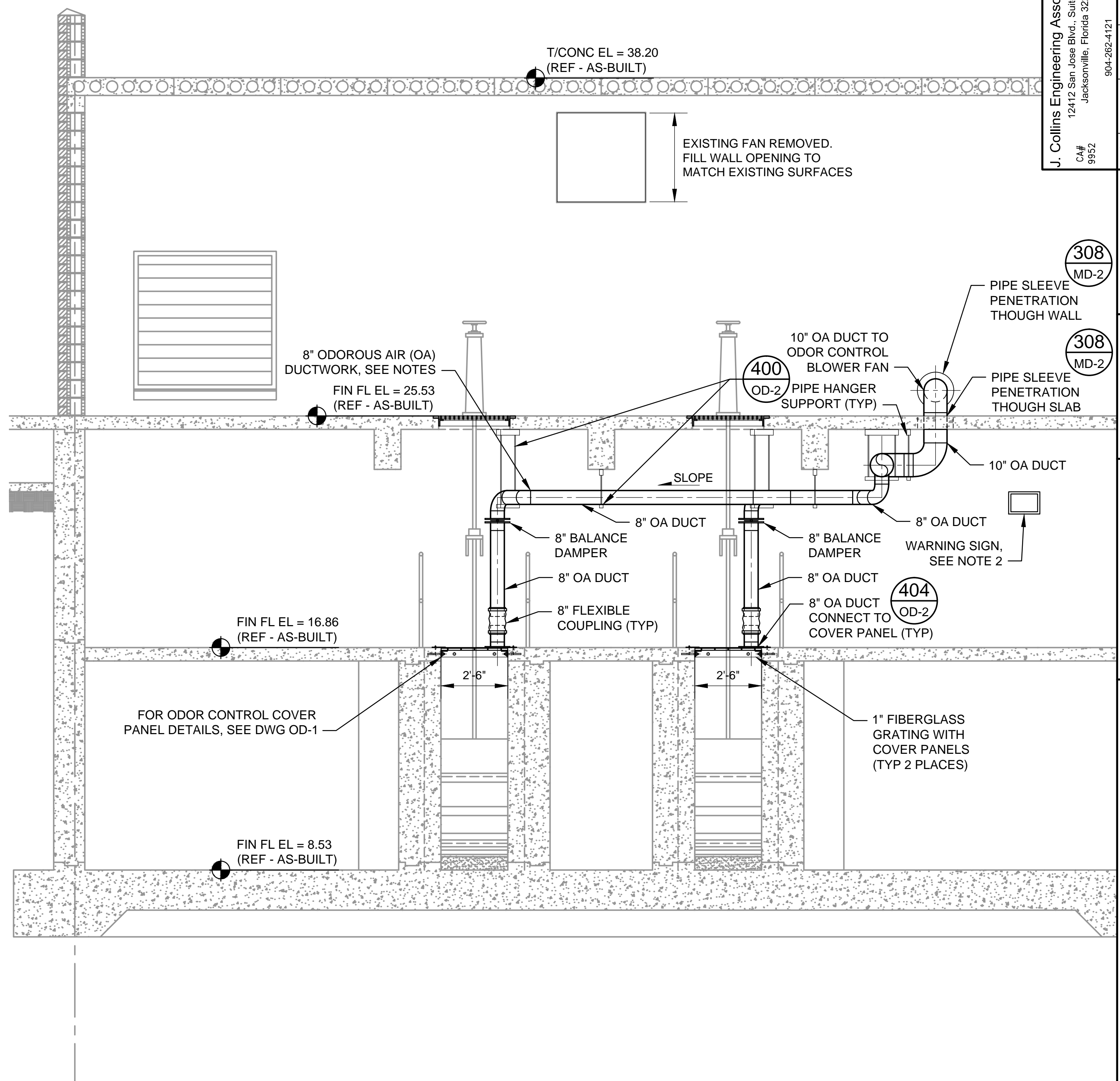
MODIFIED PLANS FOR REBID

[illegible]

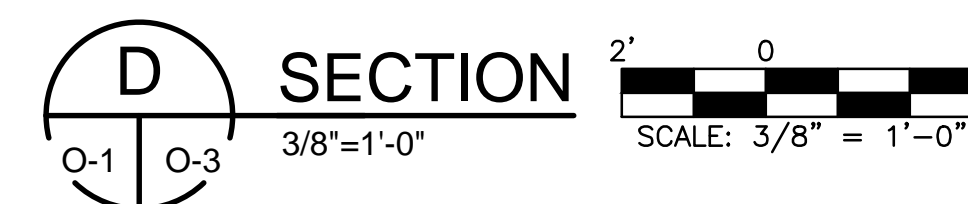


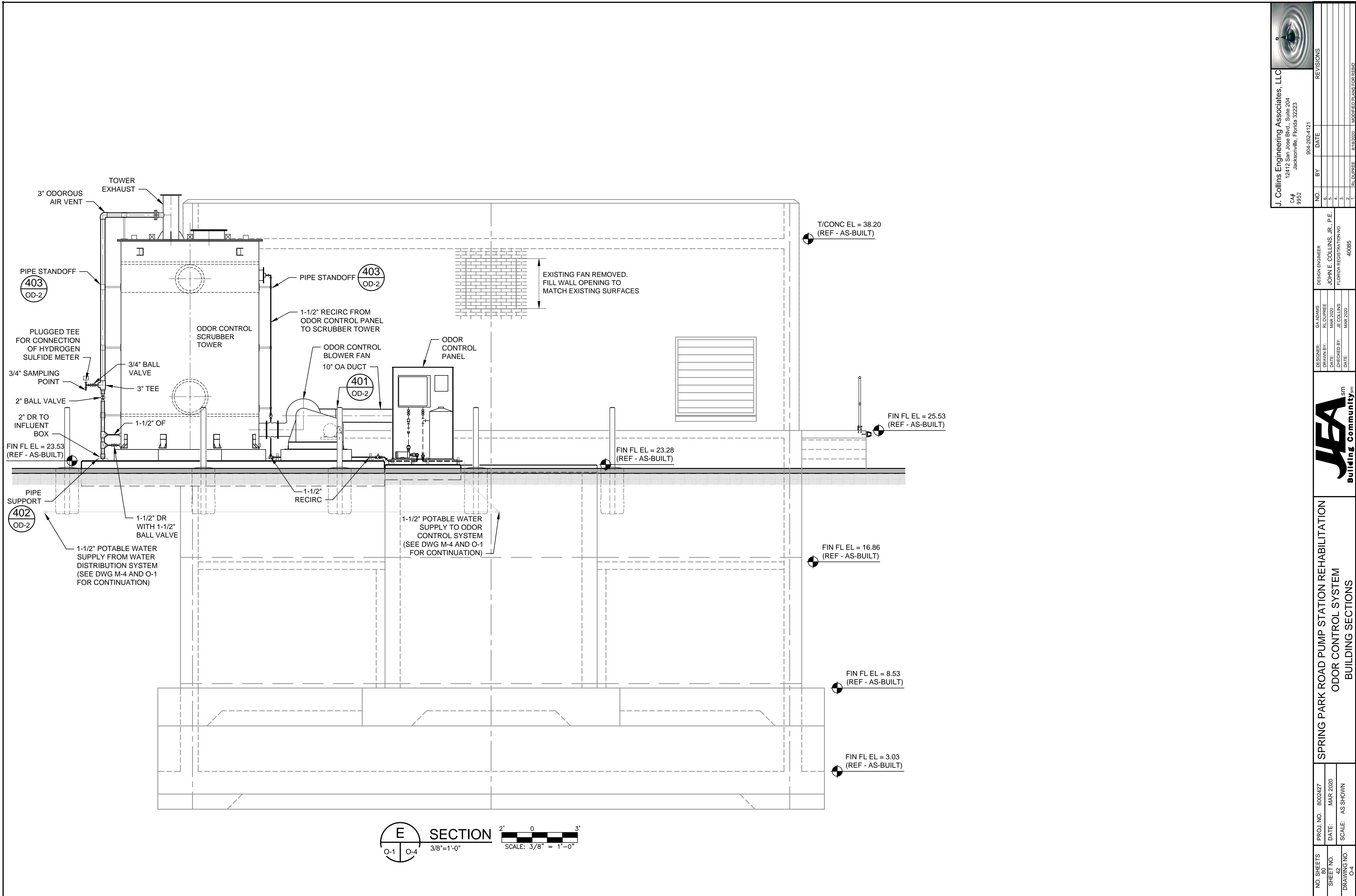
| | | | | | |
|--|--|---|--|--|--|
|  J. Collins Engineering Associates, LLC 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32233 C/E 9952 | | DESIGN ENGINEER JOHN E. COLLINS, JR., P.E. FLORIDA REGISTRATION NO. 40085 | | NO. 8002427 SHEET NO. 80 DRAWING NO. 0-1 | |
| | | DATE: MAR 2020 SCALE: AS SHOWN | | PROJECT NO. 8002427 DATE: MAR 2020 SCALE: AS SHOWN | |
| REVISIONS | | GA ADAMS RL DUPREE DATE: MAR 2020 CHECKED BY: JE COLLINS DATE: MAR 2020 | | PROJECT: SPRING PARK ROAD PUMP STATION REHABILITATION ODOR CONTROL SYSTEM | |
| NO. 8002427 | | DATE: MAR 2020 | | PROJECT: SPRING PARK ROAD PUMP STATION REHABILITATION | |
| SHEET NO. 80 | | SCALE: AS SHOWN | | ODOR CONTROL SYSTEM | |
| DRAWING NO. 0-1 | | PROJECT: SPRING PARK ROAD PUMP STATION REHABILITATION | | MEZZANINE LEVEL FLOOR PLAN | |
| MODIFIED PLANS FOR REBID | | 8/18/2020 | | JEA Building Community | |

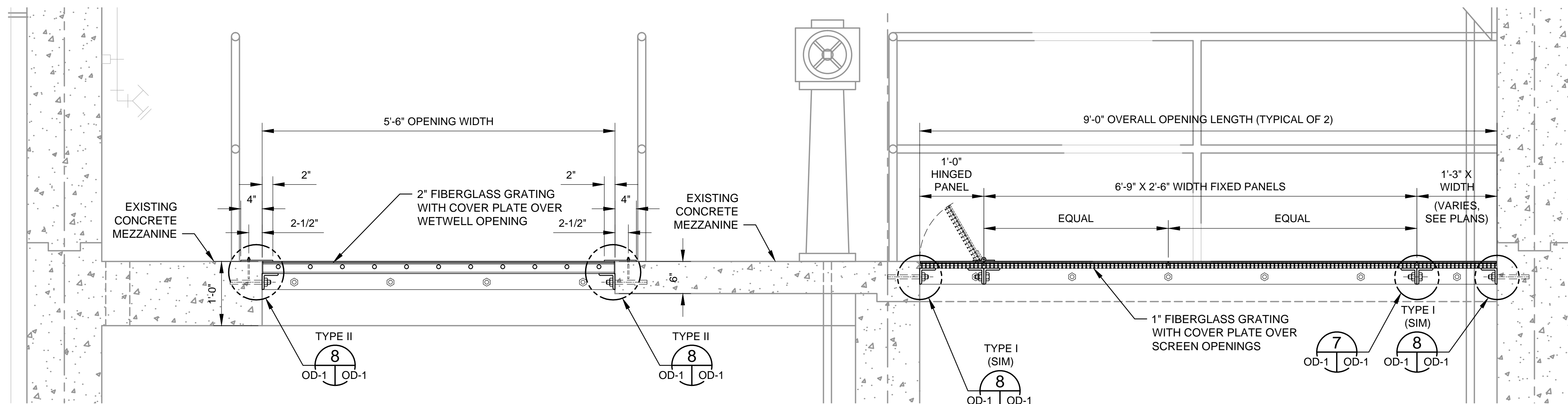
| | | | | | | | | | | | | | | | |
|-----------------|--|-------------------|--|--|--|---|--|--------------------------|--|----------------------------|--|--|--|--|--|
| NO. SHEETS | | PROJ. NO. 8002427 | | SPRING PARK ROAD PUMP STATION REHABILITATION ODOR CONTROL SYSTEM BUILDING SECTIONS | |  | | DESIGNER: G.A. ADAMS | | DESIGN ENGINEER | | NO. BY DATE REVISIONS | |  | |
| SHEET NO. 40 | | DATE: MAR 2020 | | | | | | DRAWN BY: R. DUPREE | | JOHN E. COLLINS, JR., P.E. | | | | | |
| DRAWING NO. O-2 | | SCALE: AS SHOWN | | | | | | CHECKED BY: J.E. COLLINS | | FLORIDA REGISTRATION NO. | | | | | |
| | | | | | | | | DATE: MAR 2020 | | 40085 | | | | | |
| | | | | | | | | | | | | J. Collins Engineering Associates, LLC | | 12412 San Jose Blvd., Suite 204 Jacksonville, Florida 32223 CA# 9952 904-262-4121 | |



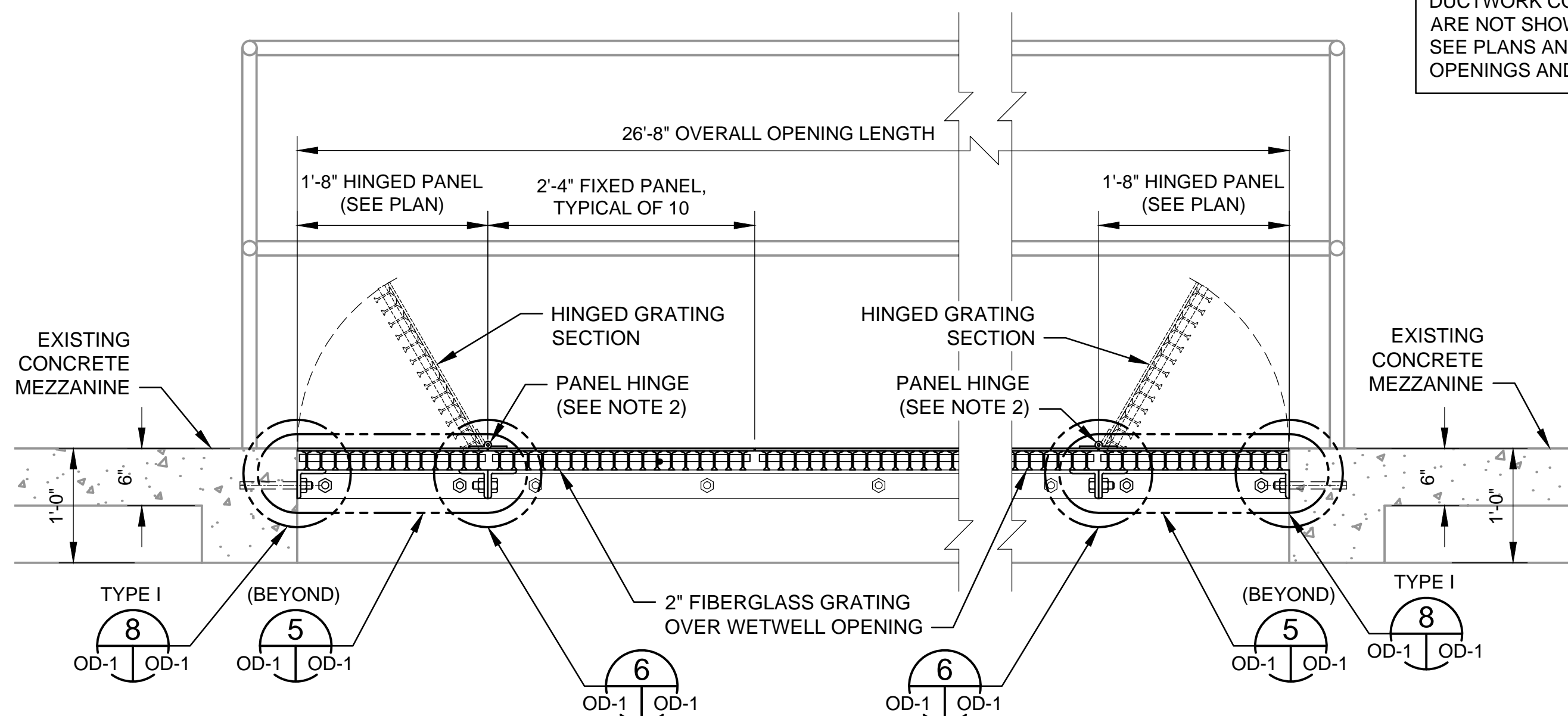
3. WRAP ALL HORIZONTAL DUCTWORK IN MEZZANINE AREA WITH BLACK AND YELLOW ADHESIVE HAZARD WARNING SAFETY STRIPE TAPE, 2" (MIN) WIDE. DUCT SHALL BE WRAPPED IN A CONTINUOUS SPIRAL WITH A MINIMUM PITCH OF 12". TAPE SHALL BE "3M HAZARD WARNING TAPE 766" OR EQUAL.

[illegible]

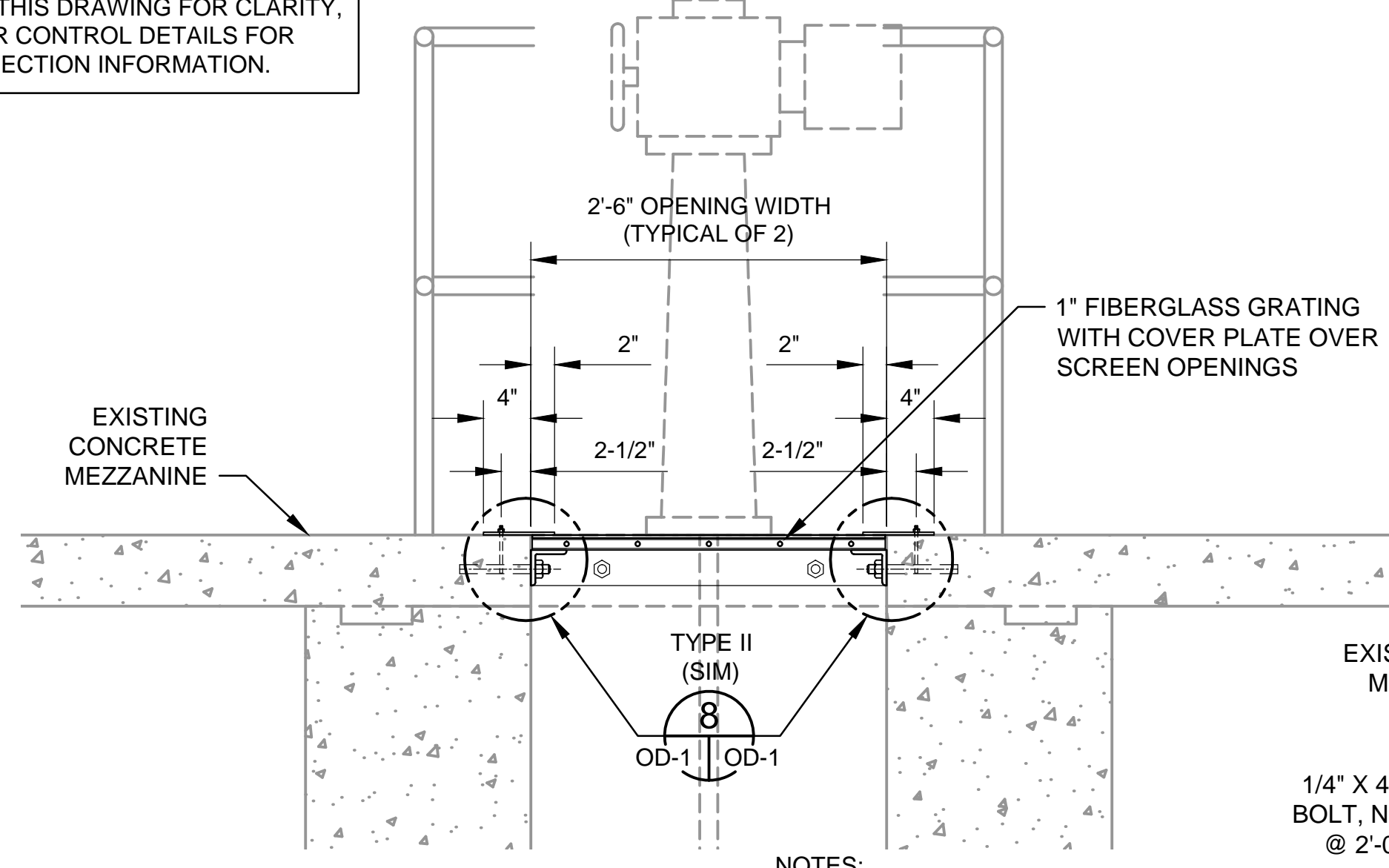




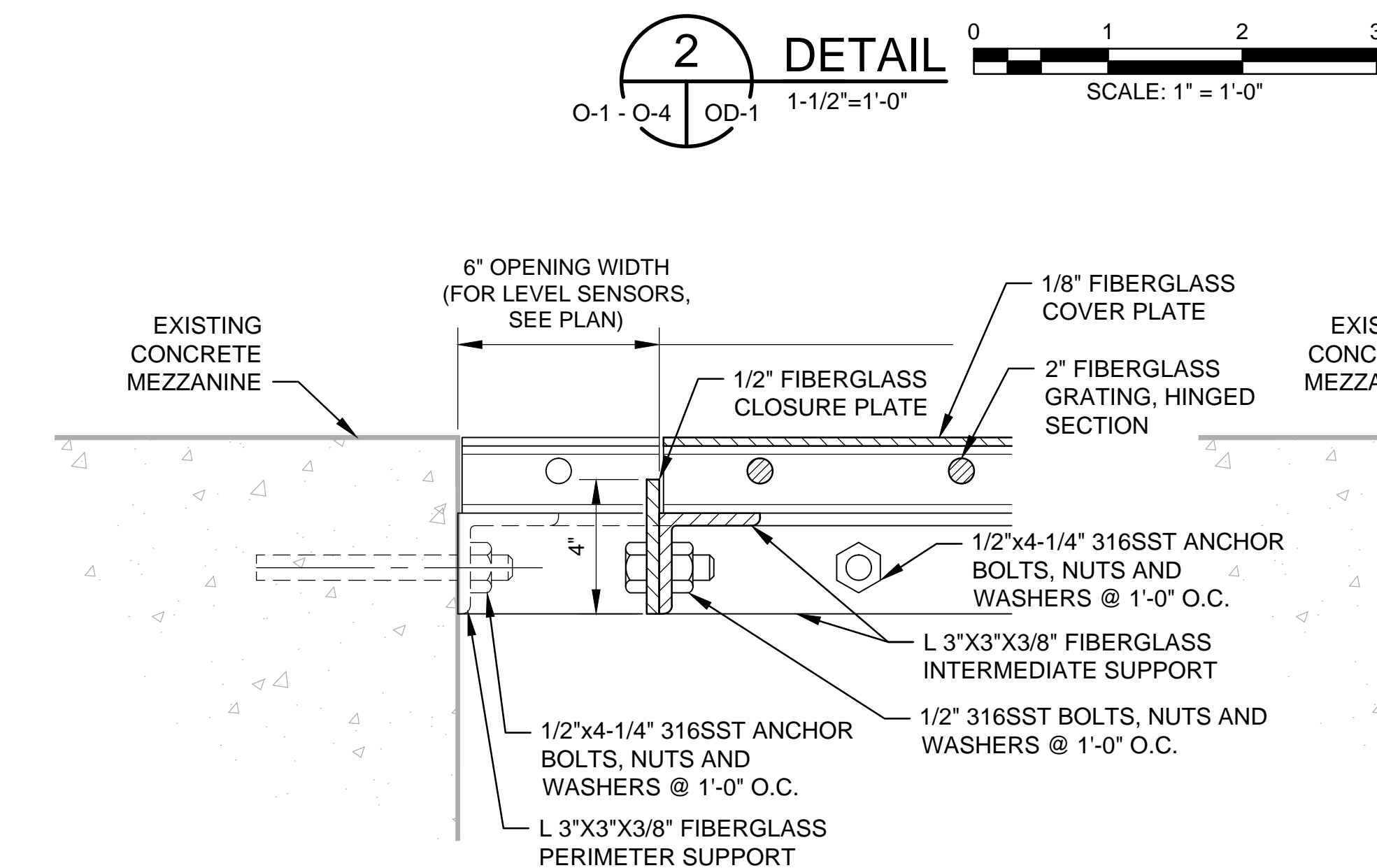
1 DETAIL
O-1 - O-4 OD-1 1-1/2"=1'-0"



2 DETAIL
O-1 - O-4 OD-1 1-1/2"=1'-0"



3 DETAIL
O-1 - O-4 OD-1 1-1/2"=1'-0"

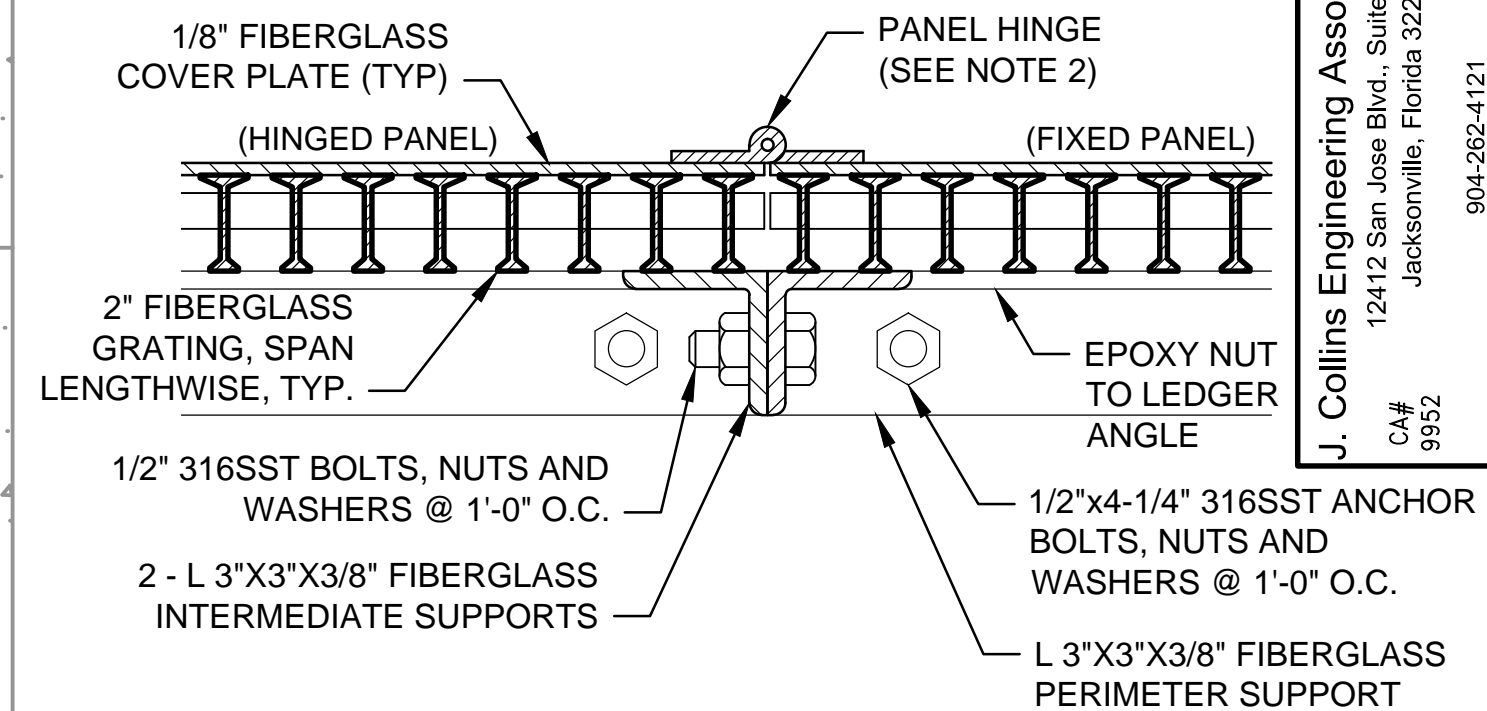


4 DETAIL
OD-1 OD-1 3"=1'-0"

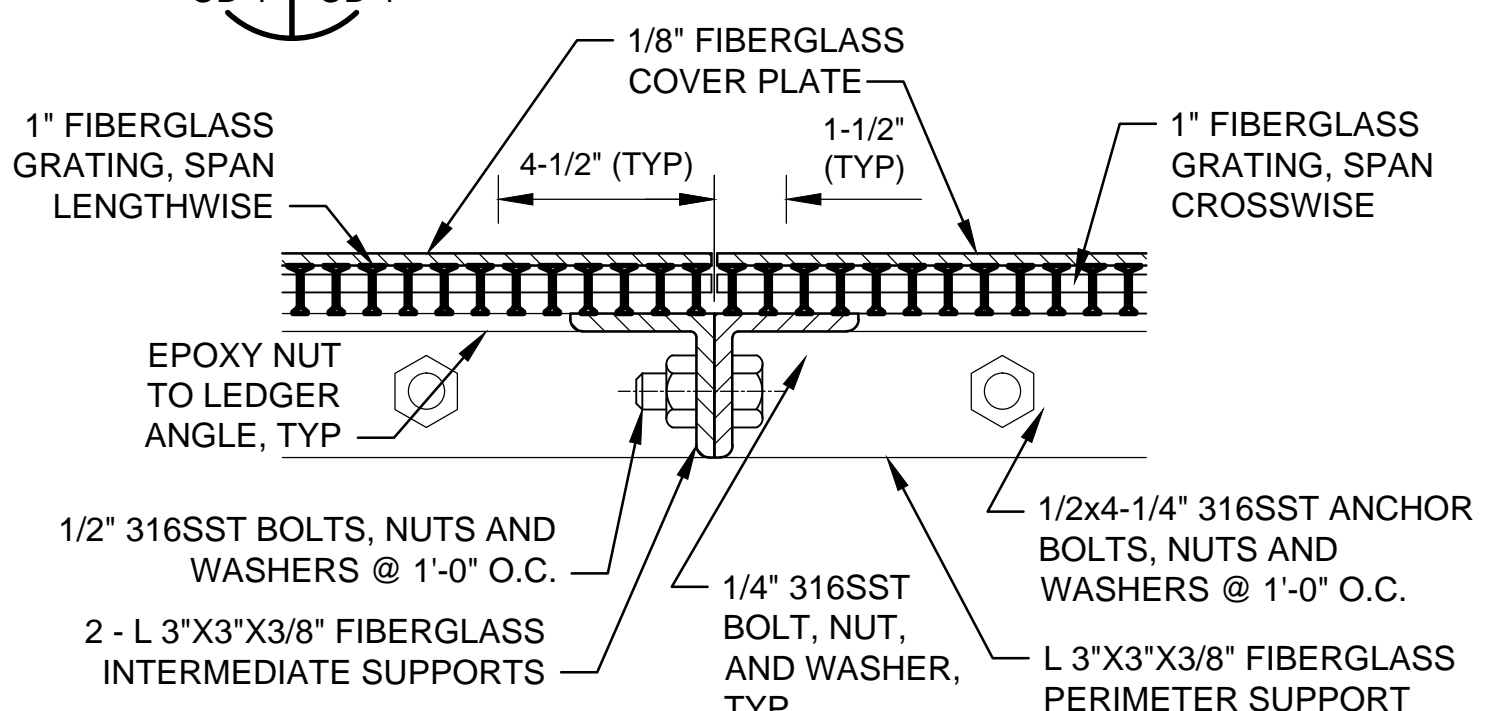
5 DETAIL
OD-1 OD-1 3"=1'-0"

ODOR CONTROL SYSTEM NOTE:

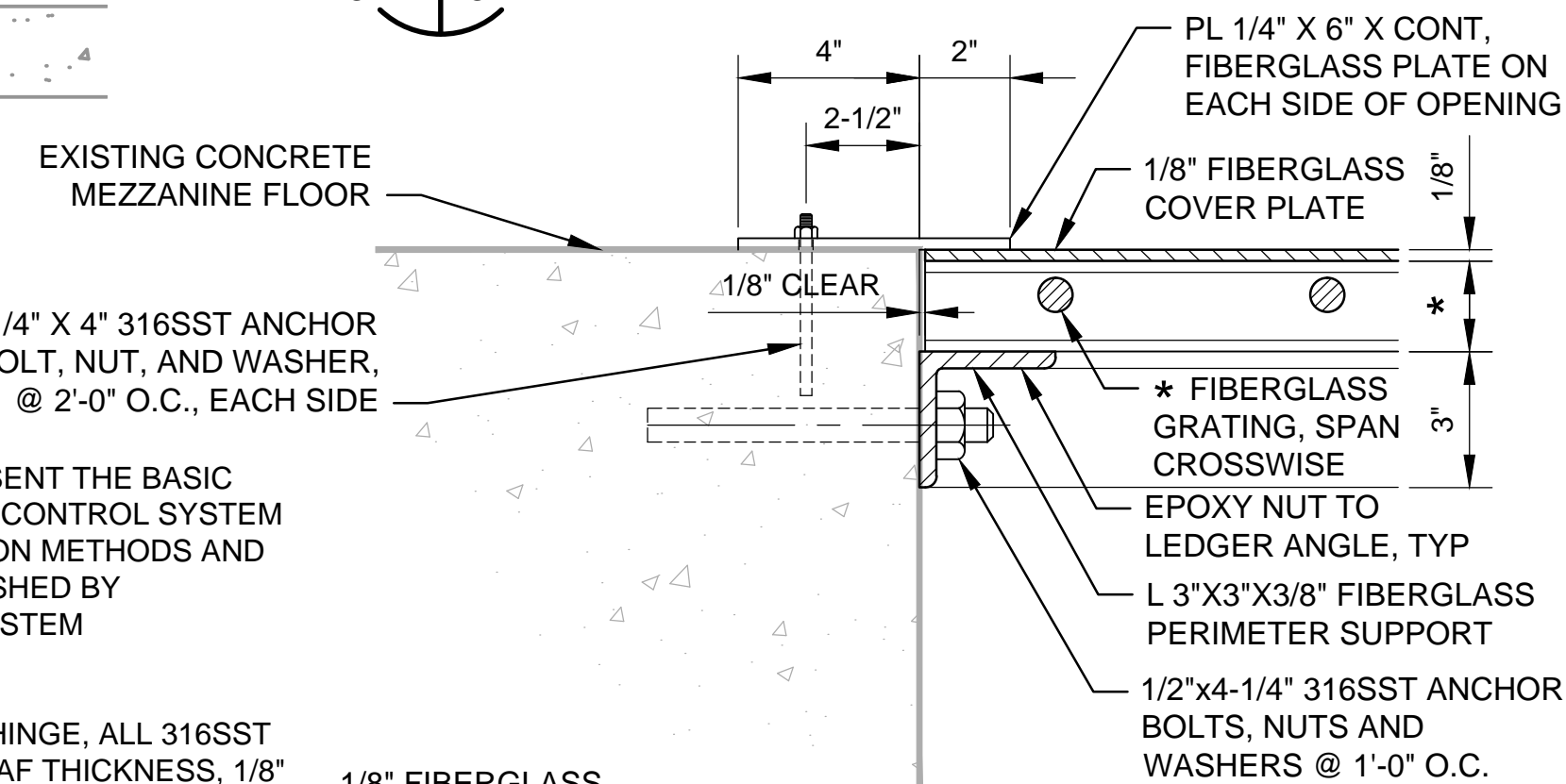
ODOR CONTROL SYSTEM EQUIPMENT AND DUCTWORK IS NOT SHOWN ON THIS DRAWING FOR CLARITY. SEE DRAWINGS O-1 THROUGH O-4 FOR INFORMATION.



6 DETAIL
OD-1 OD-1 3"=1'-0"



7 DETAIL
OD-1 OD-1 3"=1'-0"



8 DETAIL
OD-1 OD-1 3"=1'-0"

NOTES:

1. THESE DETAILS ARE INTENDED TO REPRESENT THE BASIC LAYOUT AND CONFIGURATION OF THE ODOR CONTROL SYSTEM COVER PANELS. THE SPECIFIC CONSTRUCTION METHODS AND DETAILS SHALL BE ESTABLISHED AND FURNISHED BY FIBERGLASS GRATING AND COVER PANEL SYSTEM MANUFACTURER.
2. PANEL HINGE: CONTINUOUS PIANO-TYPE HINGE, ALL 316SST CONSTRUCTION, 2" OVERALL WIDTH, 0.06" LEAF THICKNESS, 1/8" PIN DIAMETER, 1/2" LONG KNUCKLE, 180° (MIN.) RANGE OF MOTION. MCMASTER-CARR MODEL 1605A-SERIES, LENGTH AS REQUIRED.
3. FIBERGLASS PULTRUDED COVER PLATE: 1/8" THICK PLATE WITH ANTI-SKID GRIT SURFACE, BONDED AND PINNED TO TOP OF FIBERGLASS GRATING. TOP OF COVER PLATE TO BE FLUSH WITH FLOOR SURFACE. COVER PLATE TO SPAN FULL SIZE OF GRATING AS REQUIRED, AND AS SHOWN ON PLANS. STRONGWELL SAFPLATE, BEIGE, WITH GRAY GRIT TOP SURFACE.
4. FIBERGLASS PULTRUDED GRATING:
 - A. 2" DEPTH OVER WETWELL OPENING.
 - B. 1" DEPTH OVER SCREEN CHANNEL OPENINGS.
 STRONGWELL DURAGRIT T-3300, GRAY GRATING WITH T-BEARING BARS ON 1-1/2" CENTERS, AND CROSS RODS ON 6" CENTERS. TO SPAN FULL WIDTH OF OPENING AS SHOWN ON PLANS.
5. FIBERGLASS LEDGER SUPPORT ANGLES: STRONGWELL EXTREN 625 SERIES, BEIGE, TO BE CONTINUOUS ALL AROUND OPENINGS, WITH SIZES AND CONFIGURATIONS AS SHOWN ON PLANS.
6. FIBERGLASS ODOR CONTROL CLOSURE PANELS SHALL BE EQUIPPED WITH 316SST HARDWARE, LIFTING HANDLES AS REQUIRED, AND PANEL HINGES AS INDICATED.

TYPE I

* = GRATING THICKNESS VARIES, SEE NOTE 4.

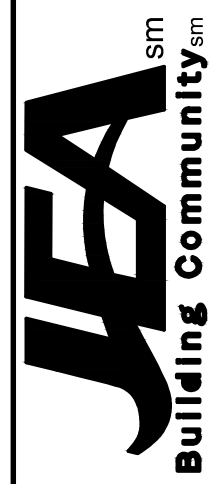
8 TYPICAL COVER DETAILS
OD-1 OD-1 3"=1'-0"

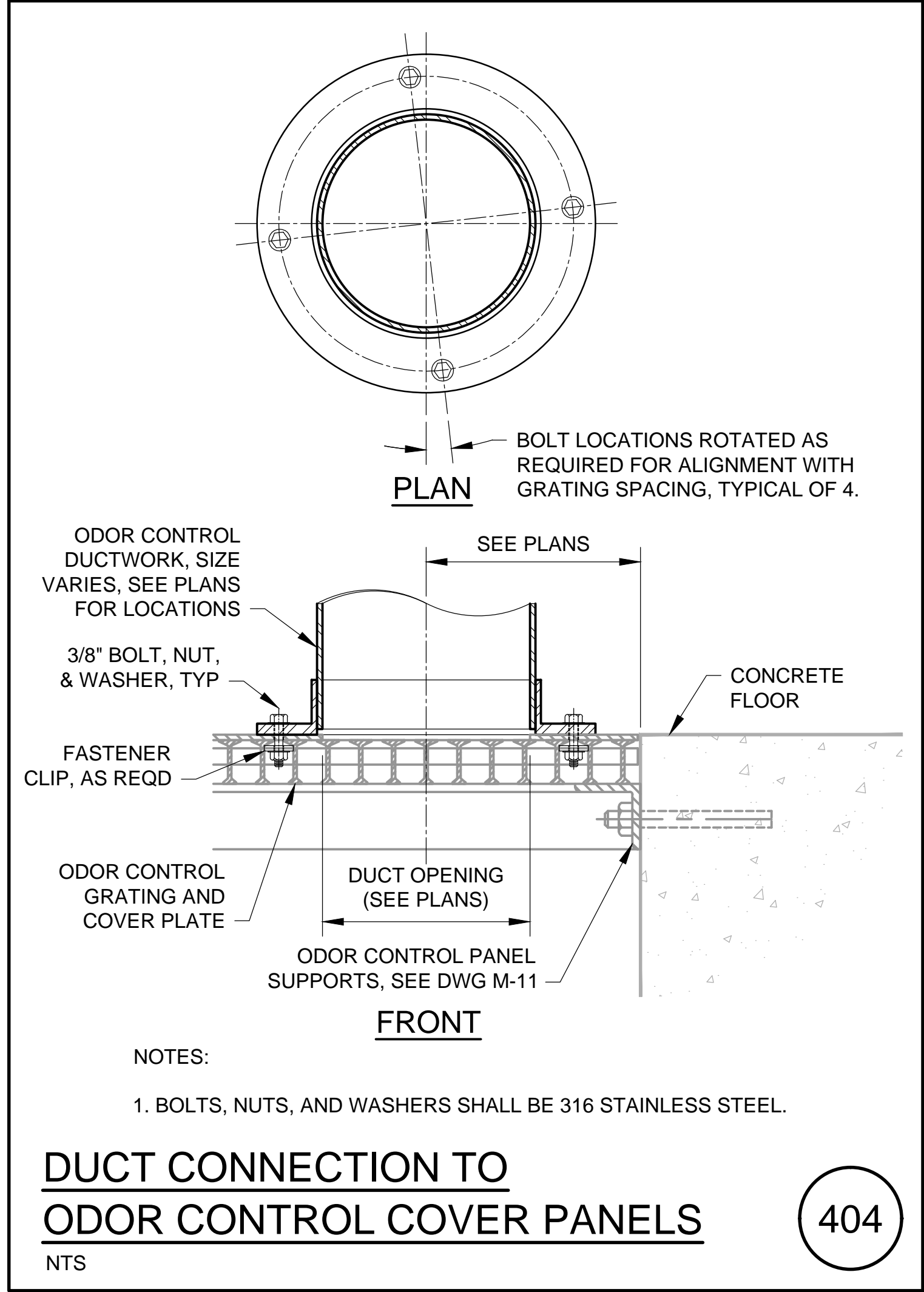
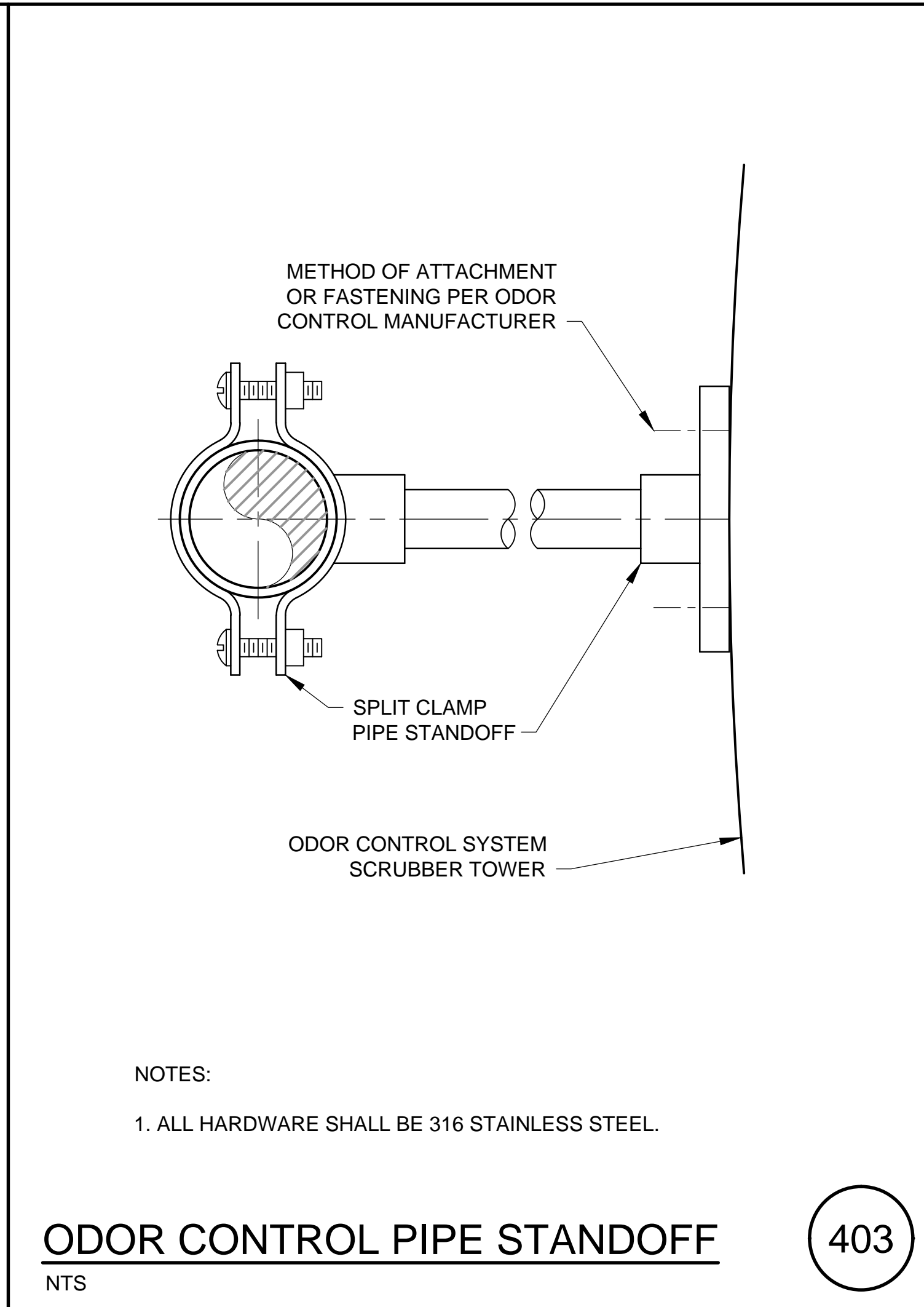
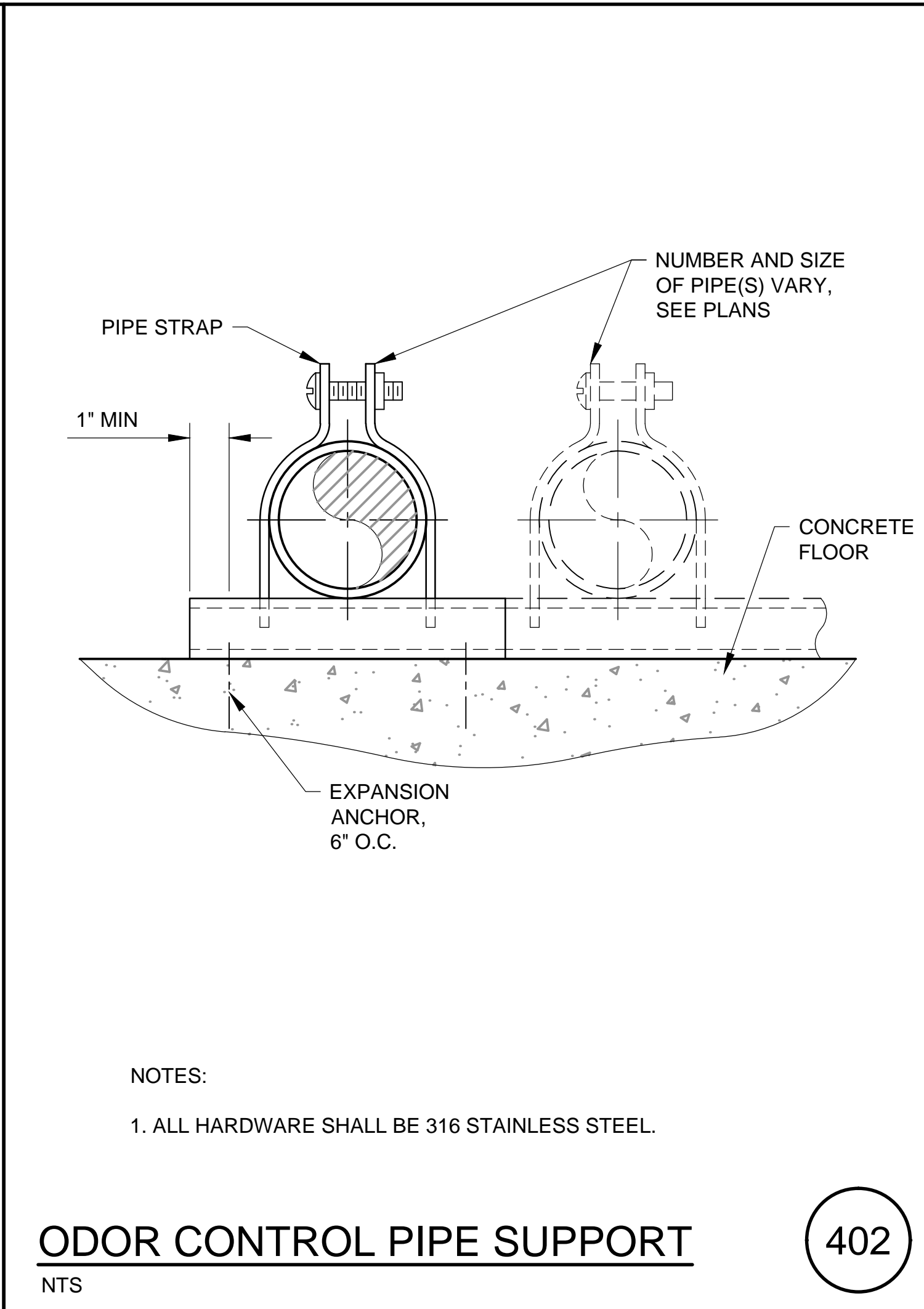
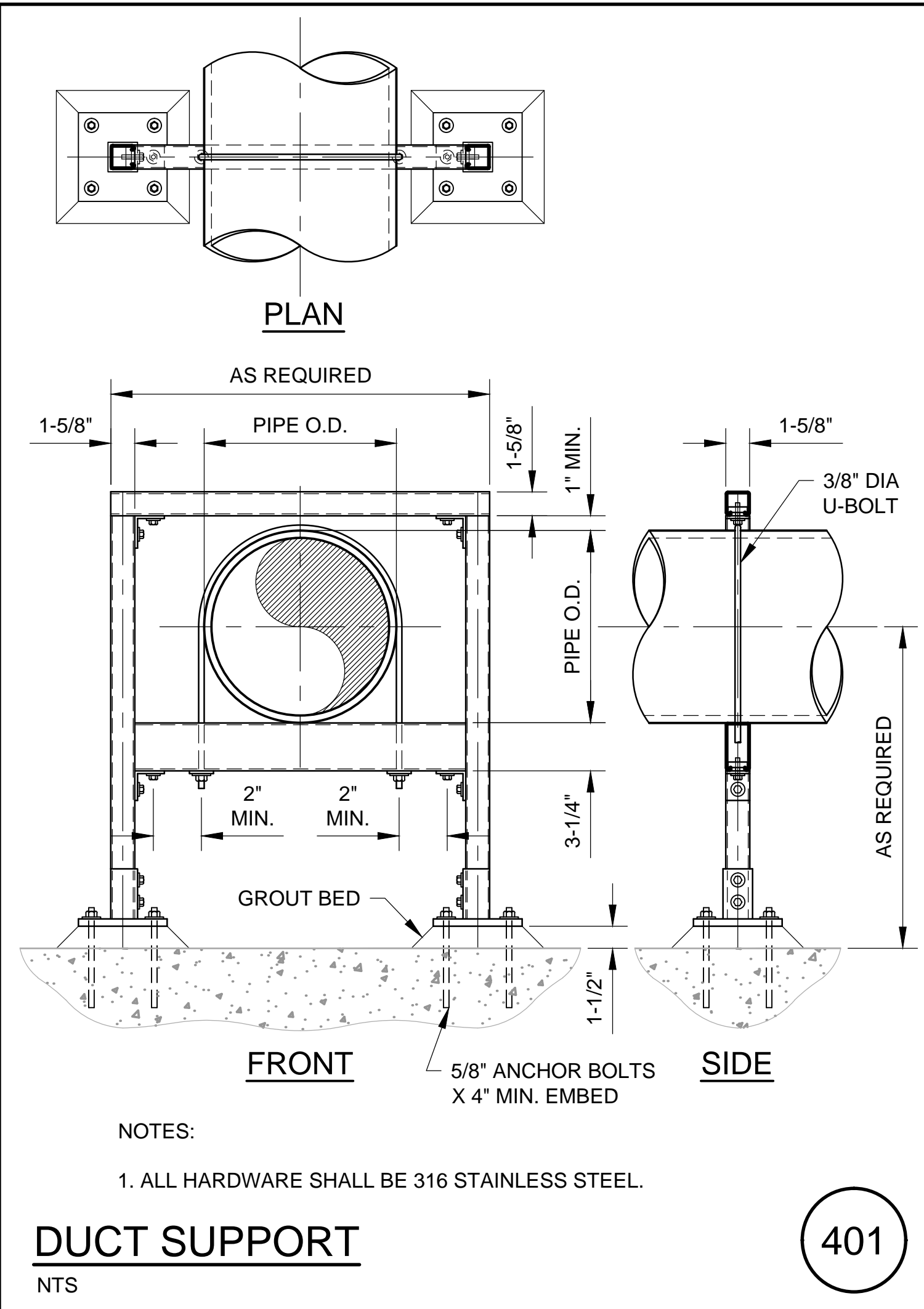
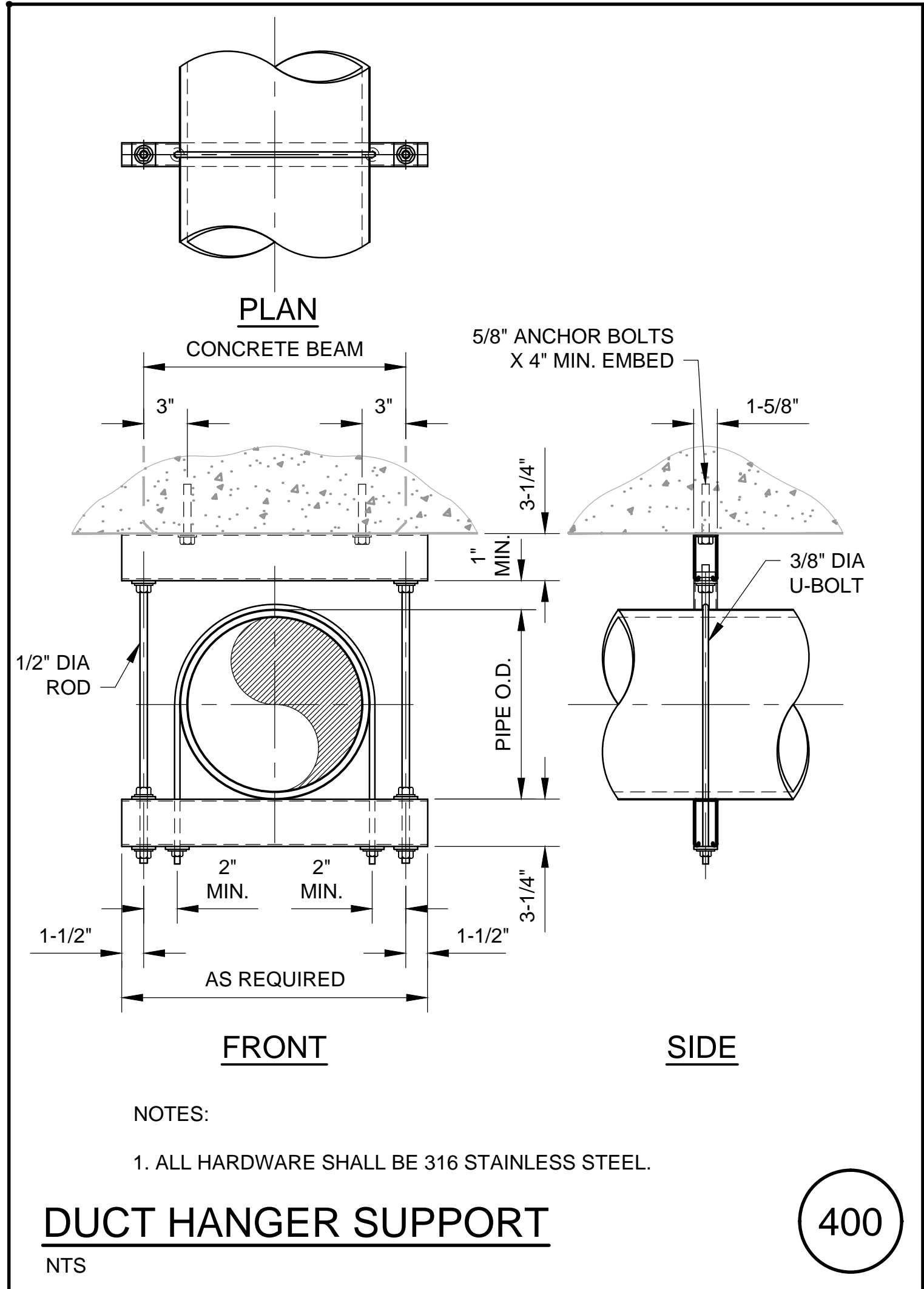



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32233
C.E. 9952

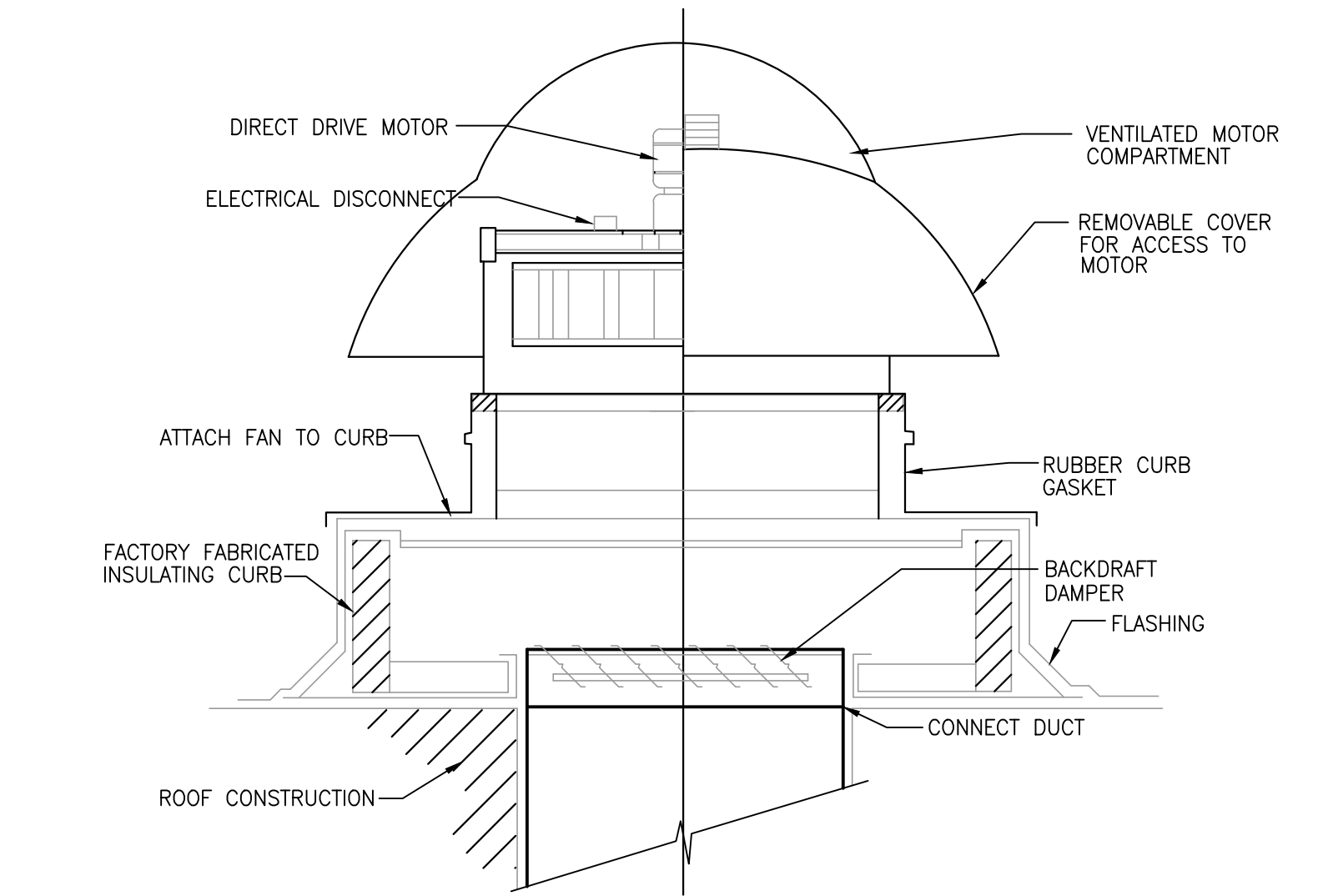
| NO. SHEETS | | PROJ. NO. | | DATE | | SCALE | | DRAWING NO. | |
|-------------|--|----------------------------|--|--------------------------|--|------------|--|--------------------------|--|
| 80 | | 8002427 | | MAR 2020 | | AS SHOWN | | OD-1 | |
| SHEET NO. | | DESIGNER | | DRAWN BY | | CHECKED BY | | DATE | |
| 1 | | GA ADAMS | | RL DUPREE | | JE COLLINS | | MAR 2020 | |
| DRAWING NO. | | DESIGN ENGINEER | | FLORIDA REGISTRATION NO. | | DATE | | MODIFIED PLANS FOR REBID | |
| OD-1 | | JOHN E. COLLINS, JR., P.E. | | 40085 | | MAR 2020 | | MODIFIED PLANS FOR REBID | |
| REVISIONS | | NO. | | BY | | DATE | | DESCRIPTION | |
| 1 | | 1 | | RL DUPREE | | 8/18/2020 | | MODIFIED PLANS FOR REBID | |

SPRING PARK ROAD PUMP STATION REHABILITATION
ODOR CONTROL SYSTEM
ODOR CONTROL CLOSURE PANEL DETAILS





| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

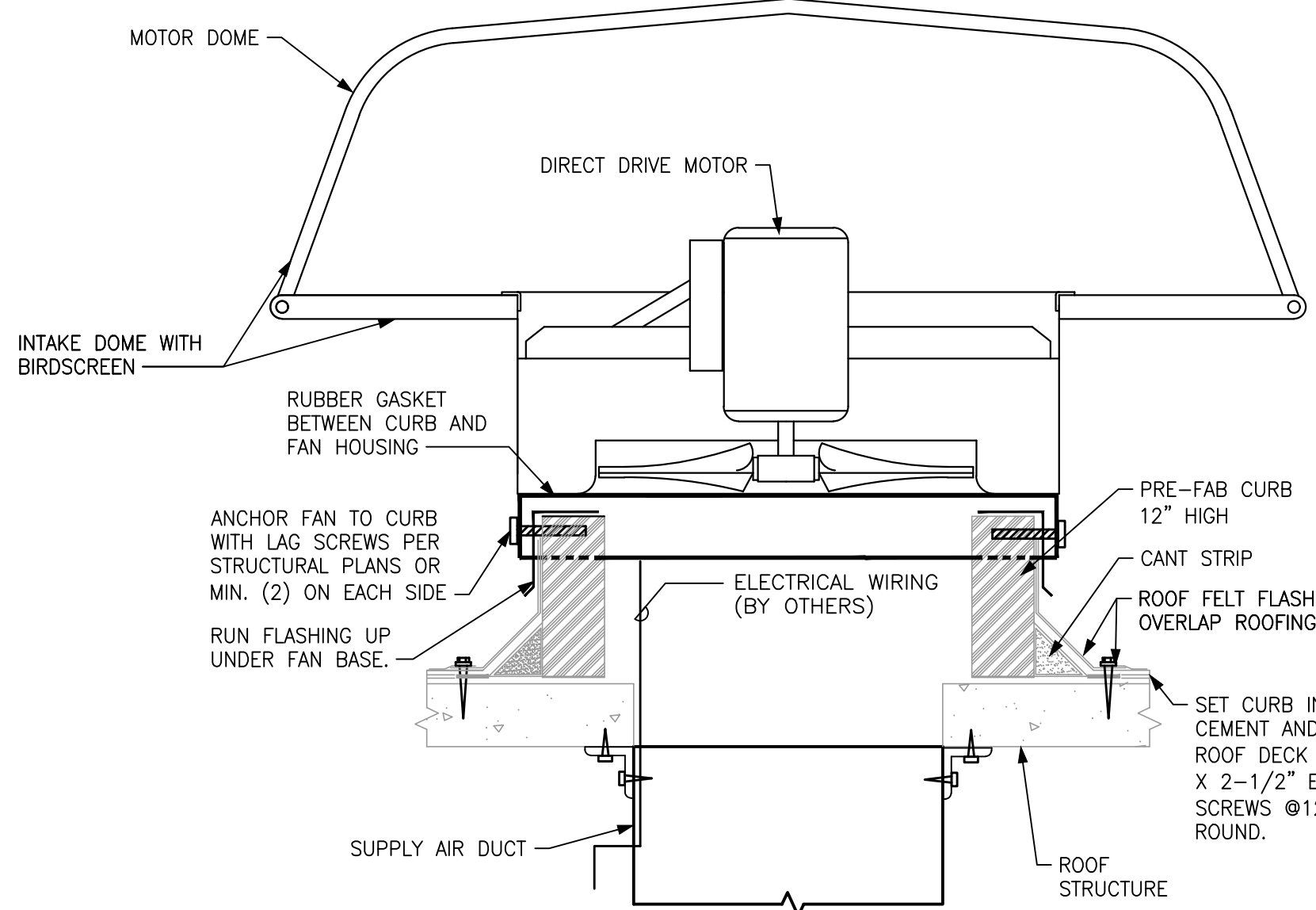


EXHAUST FAN DETAIL

NOT TO SCALE

1

H-1

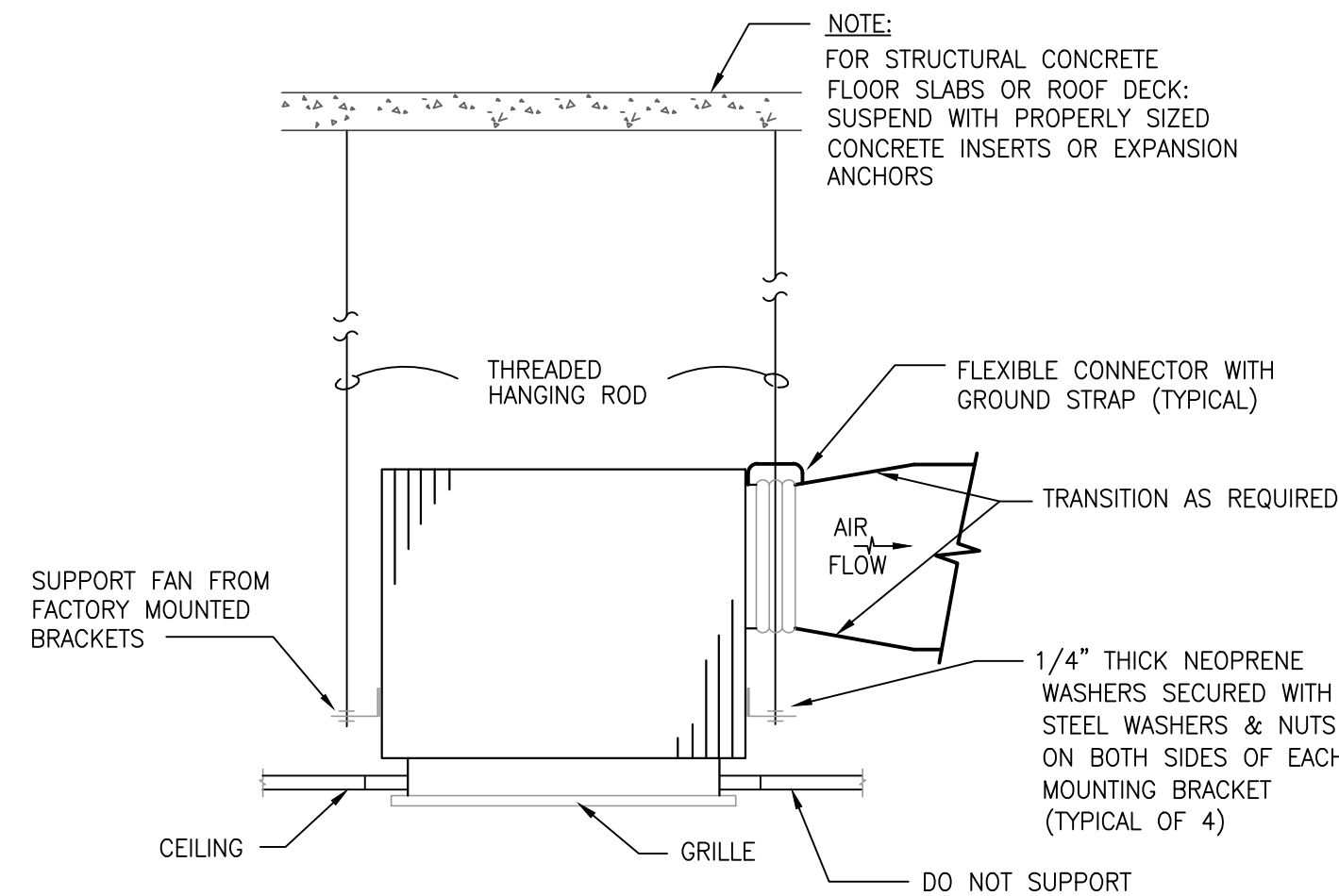


ROOF MOUNTED SUPPLY FAN DETAIL

NOT TO SCALE

2

H-1

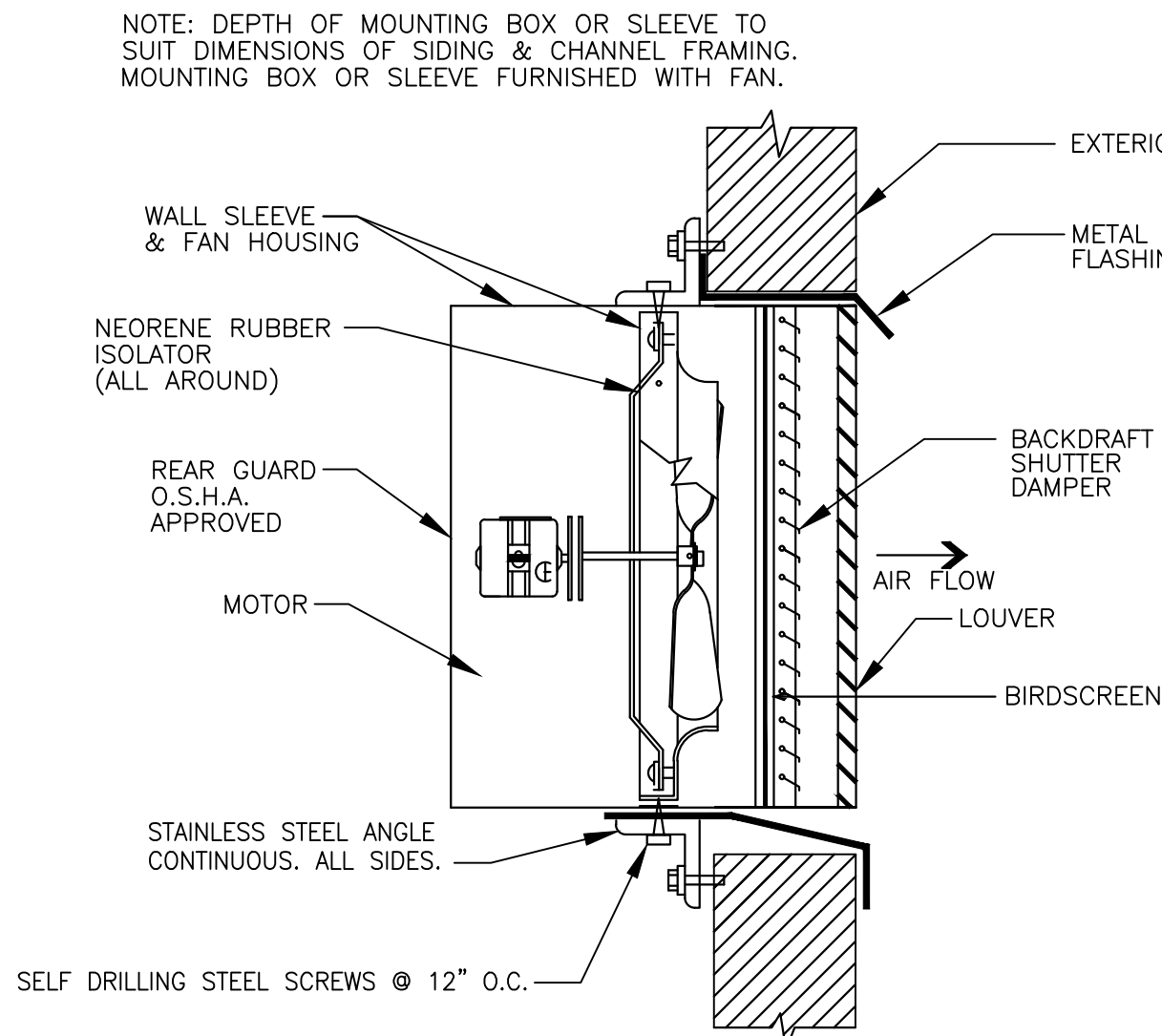


CABINET FAN MOUNTING DETAIL

NOT TO SCALE

3

H-1

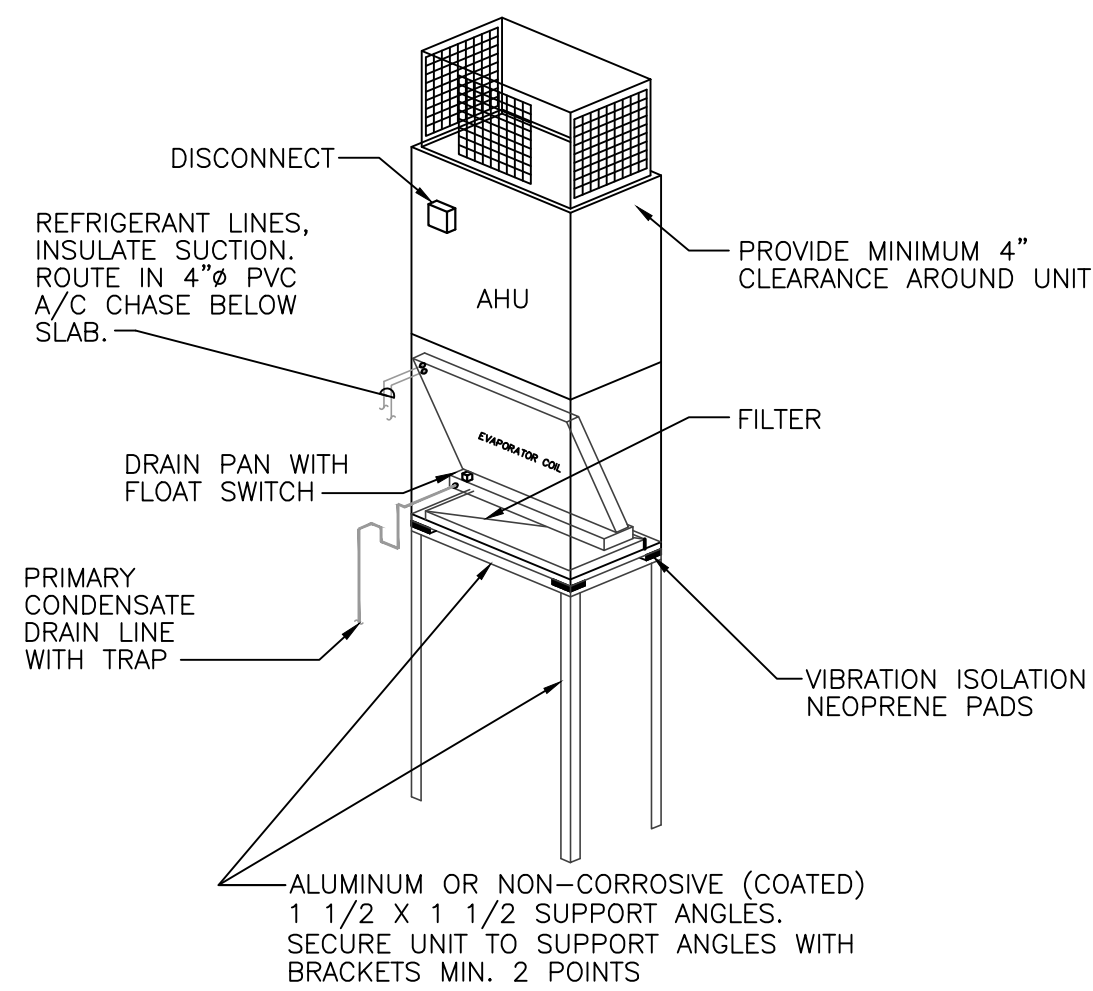


SIDEWALL FAN DETAIL

NOT TO SCALE

4

H-1



AIR HANDLING UNIT DETAIL

NOT TO SCALE

5

H-1

SPLIT SYSTEM SCHEDULE

| | |
|------------------------------|----------------------|
| UNIT NO. | AHU-1 / CU-19 |
| SERVES | ELECTRICAL BUILDING |
| SUPPLY AIR/OUTSIDE AIR (CFM) | 1600 / 0 |
| EXTERNAL S.P. (IN. W.G.) | 0.125 |
| FAN DATA | |
| HORSEPOWER | 3/4 |
| VOLTS/PHASE/HERTZ | 208/1/60 |
| COOLING DATA | |
| TOTAL CAPACITY (MBH) | 48.2 |
| SENSIBLE CAPACITY (MBH) | 48.2 |
| ENT. AIR TEMP. (FdB/FwB) | 75.0 / 62.5 |
| LVG. AIR TEMP. (FdB/FwB) | 53.5 / 52.2 |
| CONDENSER UNIT DATA | |
| MINIMUM SEER | 14.0 |
| VOLTS/PHASE/HERTZ | 208/1/60 |
| COMPRESSOR LRA | 105.7 |
| MANUFACTURER | CARRIER |
| MODEL NO. (AHU/CPU) | FX4DNFO49 / 24ACC448 |
| NOTES | 1, 2 |

- NOTES:
1. PROVIDE SEVEN DAY PROGRAMMABLE THERMOSTAT.
2. EXTEND PRIMARY CONDENSATE TO EXTERIOR.

SUPPLY FAN SCHEDULE

| | | |
|--------------------------|--------------|-----------------|
| UNIT NO. | SF-1 | SF-2 |
| TYPE | ROOF MOUNTED | ROOF MOUNTED |
| SERVES ROOM | PUMP ROOM | WET WELL SUPPLY |
| AIR FLOW (CFM) | 13,500 | 3525 |
| EXTERNAL S.P. (IN. W.G.) | 0.125 | 0.125 |
| FAN DATA | | |
| HP | 1-1/2 | 1/3 |
| DRIVE | DIRECT | DIRECT |
| SPEED (RPM) | 900 | 1200 |
| dBA AT 5FT | 81 | 14 |
| VOLTS/PHASE/HERTZ | 460/3/60 | 460/3/60 |
| MANUFACTURER | AEROVENT | AEROVENT |
| MODEL NO. | HD53-36L428 | HD53-24L232 |
| NOTES | 1, 2, 4 | 1, 3 |

- NOTES:
1. PROVIDE WITH: BACKDRAFT DAMPER AND VIBRATION ISOLATION.
2. PROVIDE BIRD SCREEN, WEATHER HOOD.
3. FAN TO BE FIBERGLASS CONSTRUCTION WITH STAINLESS STEEL FASTENERS
4. FAN TO BE ALUMINUM CONSTRUCTION.

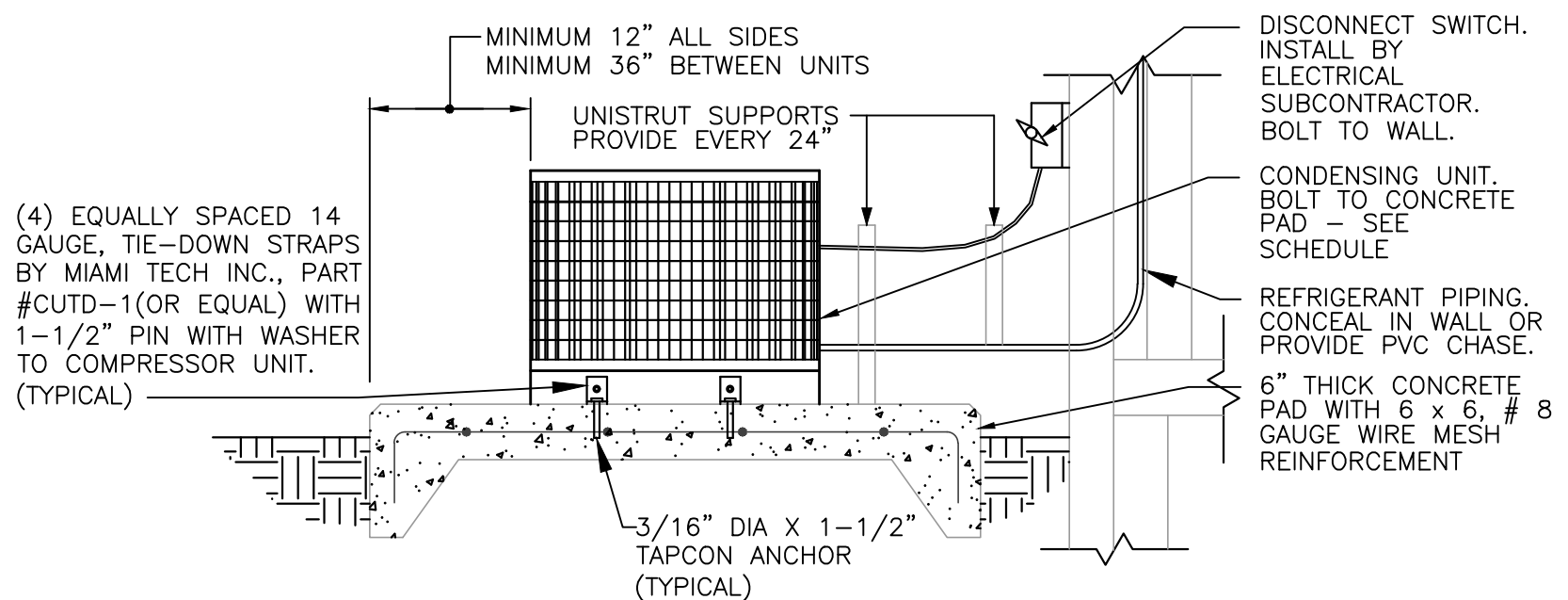
EXHAUST FAN SCHEDULE

| | | | |
|--------------------------|------------|-------------|-----------|
| UNIT NO. | EF-1 | EF-2 | EF-3 |
| TYPE | SIDEWALL | PRV | CABINET |
| SERVES (ROOM NO.) | MOTOR ROOM | SCREEN ROOM | BATHROOM |
| AIR FLOW (CFM) | 13,500 | 2,000 | 50 |
| EXTERNAL S.P. (IN. W.G.) | 0.125 | 0.125 | 0.1 |
| FAN DATA | | | |
| HP | 2 | 1/2 | 1/15 |
| DRIVE | DIRECT | DIRECT | DIRECT |
| SPEED (RPM) | 1200 | 1725 | 860 |
| dBA @ 5 FT | 79 | 2.3 | 1 |
| VOLTS/PHASE/HERTZ | 460/3/60 | 460/3/60 | 115/1/60 |
| MANUFACTURER | AEROVENT | TWIN CITY | TWIN CITY |
| MODEL NO. | DDP-30L432 | 14FA-3 | 081H |
| NOTES | 1 | 2, 3 | 4, 5 |

- NOTES:
1. FAN TO BE ALL ALUMINUM CONSTRUCTION. FURNISH WITH ALUMINUM BACKDRAFT DAMPER AND MOTOR SIDE COVER, ALUMINUM WEATHERHOOD AND BIRD SCREEN.
2. FAN TO BE ALL FIBERGLASS CONSTRUCTION AND STAINLESS STEEL FASTENERS. PROVIDE WITH PVC COATED BIRDSCREEN.
3. PROVIDE INSULATED FIBERGLASS ROOF CURB WITH DAMPER TRAY AND FIBERGLASS BACKDRAFT DAMPER.
4. PROVIDE WITH: BACKDRAFT DAMPER, VIBRATION ISOLATION KIT.
5. INTERLOCK WITH LIGHT SWITCH.

HVAC LEGEND

| | |
|--------|--|
| AFF | ABOVE FINISHED FLOOR |
| ASHRAE | AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS |
| CFM | CUBIC FEET PER MINUTE |
| EF-1 | EXHAUST FAN #1 |
| ENT. | ENTERING |
| F. | FAHRENHEIT |
| HP | HORSEPOWER |
| HVAC | HEATING, VENTILATION, AND AIR CONDITIONING |
| KW | KILOWATTS |
| LVG | LEAVING |
| MBH | BTUH/1000 |
| RPM | ROTATIONS PER MINUTE |
| SP | STATIC PRESSURE |
| WB | WET BULB |
| UH | UNIT HEATER |
| Ⓢ | THERMOSTAT |

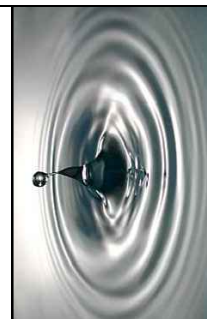


CONDENSING UNIT DETAIL

NOT TO SCALE

6

H-1



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA 9952

HADDA ENGINEERING INC.
2902 HADDA ROAD, SUITE 200
HADDONSBURG, VIRGINIA 22420
ELECTRICAL
SPECIALTY CONTRACTOR
FLORIDA LICENSE NO. 4000
SUSANNE LEVINSKY P.E. - LICENSE NO. 36123

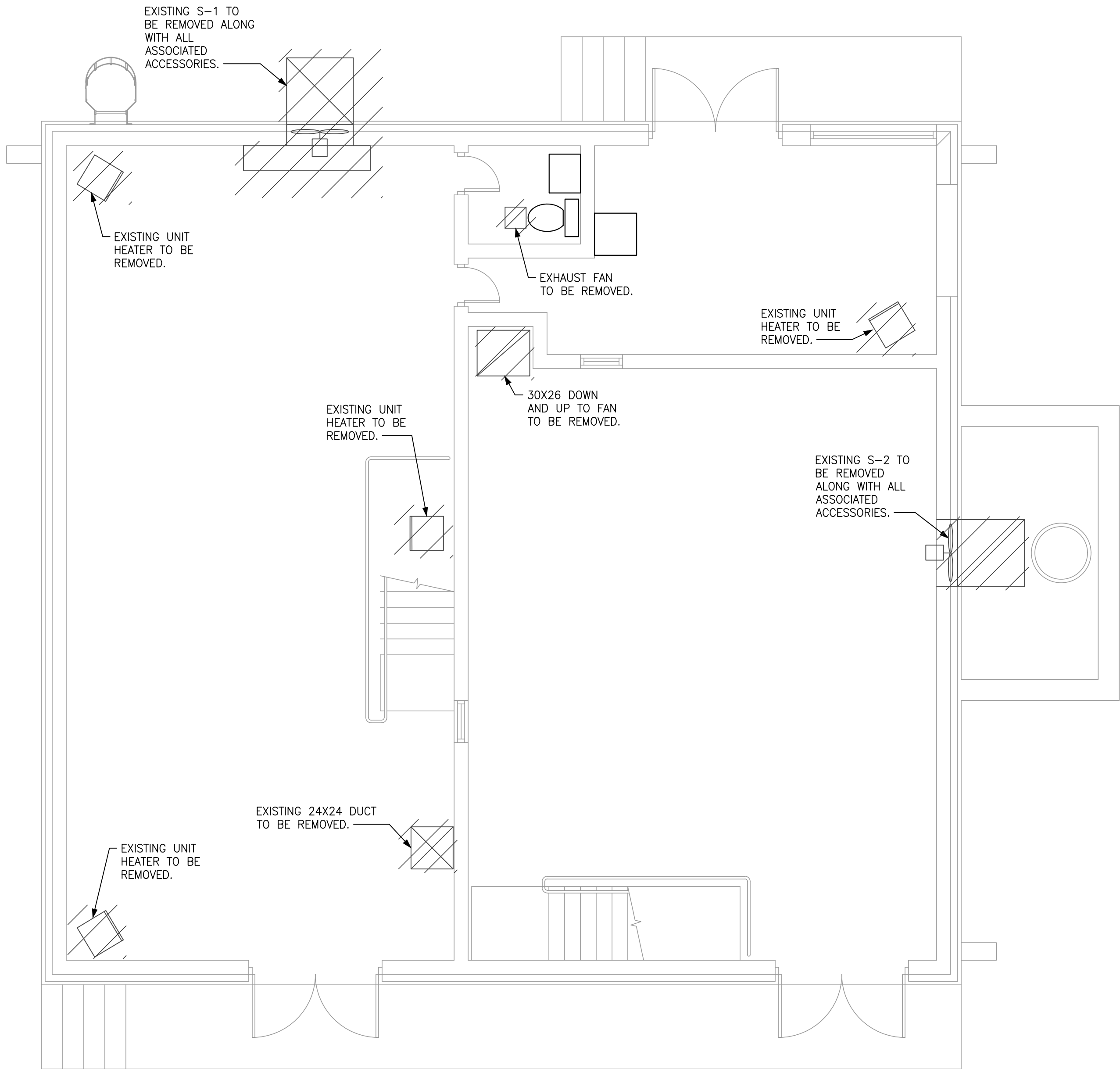
| REVISIONS | | DESIGN ENGINEER | | FLORIDA REGISTRATION NO. | |
|-----------|----|-----------------|-----|--------------------------|--|
| NO. | BY | DATE | NO. | DATE | |
| | | 8/18/20 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|------------|----|------|------------|
| DESIGNER | SL | DATE | 02.21.2020 |
| DRAWN BY | NH | DATE | 02.21.2020 |
| CHECKED BY | SL | DATE | 02.21.2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION
HVAC
HVAC NOTES, DETAILS, LEGEND, AND SCHEDULES

| | | | |
|-------------|-----|-----------|--|
| NO. SHEETS | 52 | PROJ. NO. | |
| SHEET NO. | | DATE | |
| DRAWING NO. | H-1 | SCALE | |



MOTOR ROOM FLOOR PLAN - MECHANICAL DEMOLITION

SCALE 1/4" = 1'-0" FLOOR ELEVATION 25.13 FT

HATCHING INDICATES MECHANICAL ITEMS TO BE REMOVED.

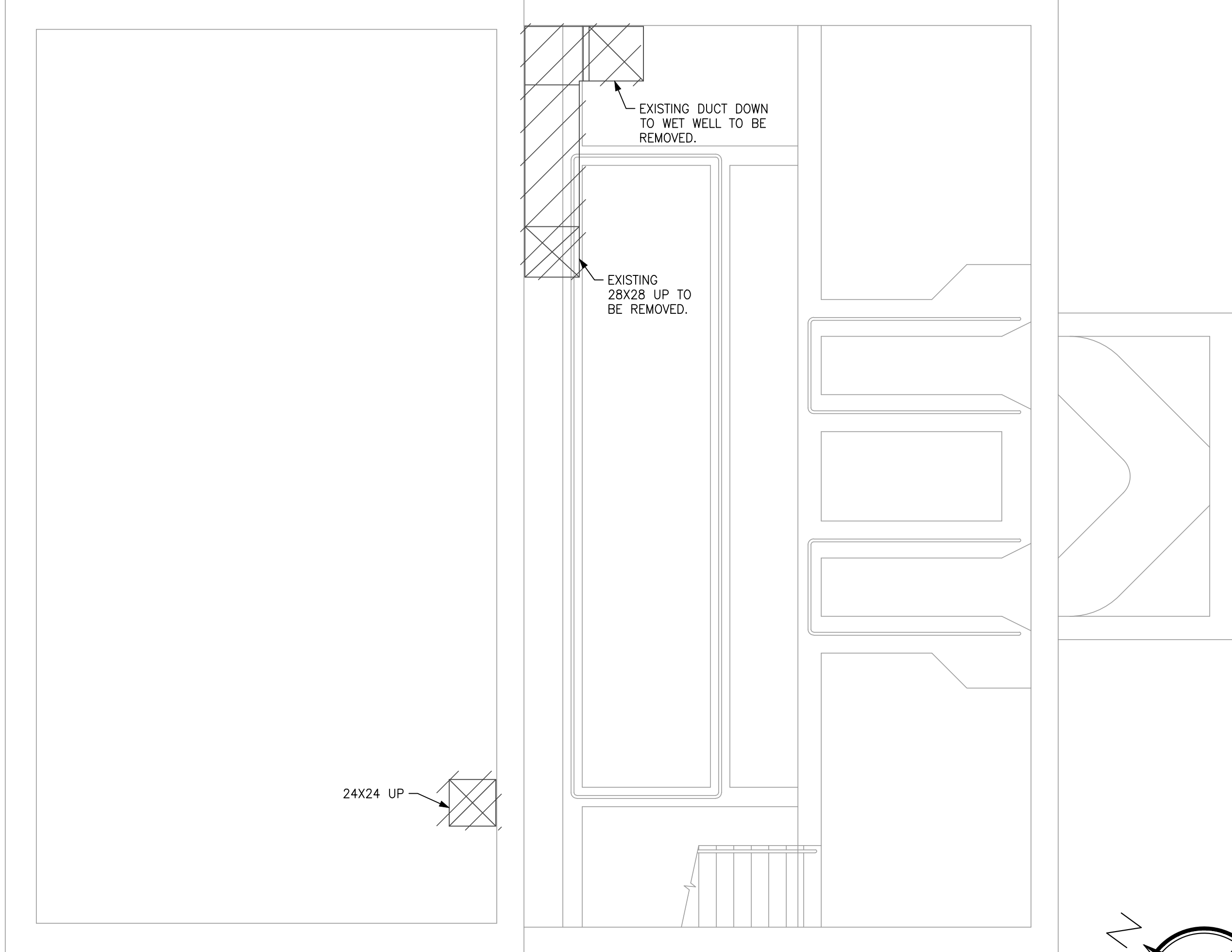
ROOF REPAIR NOTES:

- IN ORDER TO MAINTAIN EXISTING 20 YEAR NDL ROOF MEMBRANE SYSTEM WARRANTY, ALL ROOF REPAIR WORK SHALL BE PERFORMED IN ACCORDANCE WITH JOHNS MANVILLE'S SPECIFICATIONS, RECOMMENDATIONS, REQUIREMENTS, AND INSTRUCTIONS.
- PROVIDE PRODUCTS AS MANUFACTURED BY JOHNS MANVILLE.
- ALL WORK SHALL BE PERFORMED BY A QUALIFIED INSTALLER THAT IS CERTIFIED BY JOHNS MANVILLE TO INSTALL THE APPLICABLE JOHNS MANVILLE ROOF MEMBRANE SYSTEM.
- PROTECT EXISTING BUILDING SURFACES AGAINST DAMAGE FROM ROOFING REPAIR WORK.
- SEQUENCE INSTALLATION OF ROOF HATCH, ROOF-CURBS AND ROOF REPAIR WORK TO INSURE THAT ROOF ASSEMBLIES ARE PROTECTED AGAINST DAMAGE FROM EFFECTS OF WEATHER, CORROSION, AND ADJACENT CONSTRUCTION ACTIVITY.
- ALL ROOF WORK MUST BE FULLY COMPLETED ON EACH DAY.
- EXAMINE SUBSTRATE SURFACES TO RECEIVE ROOF REPAIRS AND ASSOCIATED WORK AND CONDITIONS UNDER WHICH ROOFING WILL BE INSTALLED. DO NOT PROCEED WITH ROOFING UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE ROOFING SYSTEM MANUFACTURER. START OF WORK MEANS INSTALLER ACCEPTS EXISTING SUBSTRATE.
- WHEN THE PROJECT IS IN PROGRESS, THE ROOFING SYSTEM MANUFACTURER'S REGISTERED ROOF OBSERVER (RRO) WILL KEEP THE JEA REPRESENTATIVE INFORMED AS TO THE PROGRESS AND QUALITY OF THE WORK OBSERVED, PROVIDE JOB SITE INSPECTIONS ON A DAILY BASIS, AND REPORT TO THE JEA REPRESENTATIVE IN WRITING ANY FAILURE OR REFUSAL OF THE CONTRACTOR TO CORRECT UNACCEPTABLE PRACTICES CALLED TO THE CONTRACTOR'S ATTENTION.
- FINAL ROOF INSPECTION: ARRANGE FOR THE ROOFING SYSTEM MANUFACTURER'S REGISTERED ROOF OBSERVER (RRO) TO INSPECT ROOFING INSTALLATION ON COMPLETION AND SUBMIT REPORT TO BOTH THE JEA REPRESENTATIVE AND THE ENGINEER.
- REPAIR OR REMOVE AND REPLACE COMPONENTS OF ROOFING SYSTEM WHERE INSPECTIONS INDICATE THAT THEY DO NOT COMPLY WITH SPECIFIED REQUIREMENTS.
- SPECIAL PROJECT WARRANTY: SUBMIT ROOFING INSTALLER'S WARRANTY COVERING ALL COMPONENTS OF ROOF SYSTEM ASSOCIATED WITH THE ROOF REPAIRS FOR A PERIOD OF TWO YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION.

ROOF PLAN - MECHANICAL DEMOLITION

SCALE 1/4" = 1'-0"

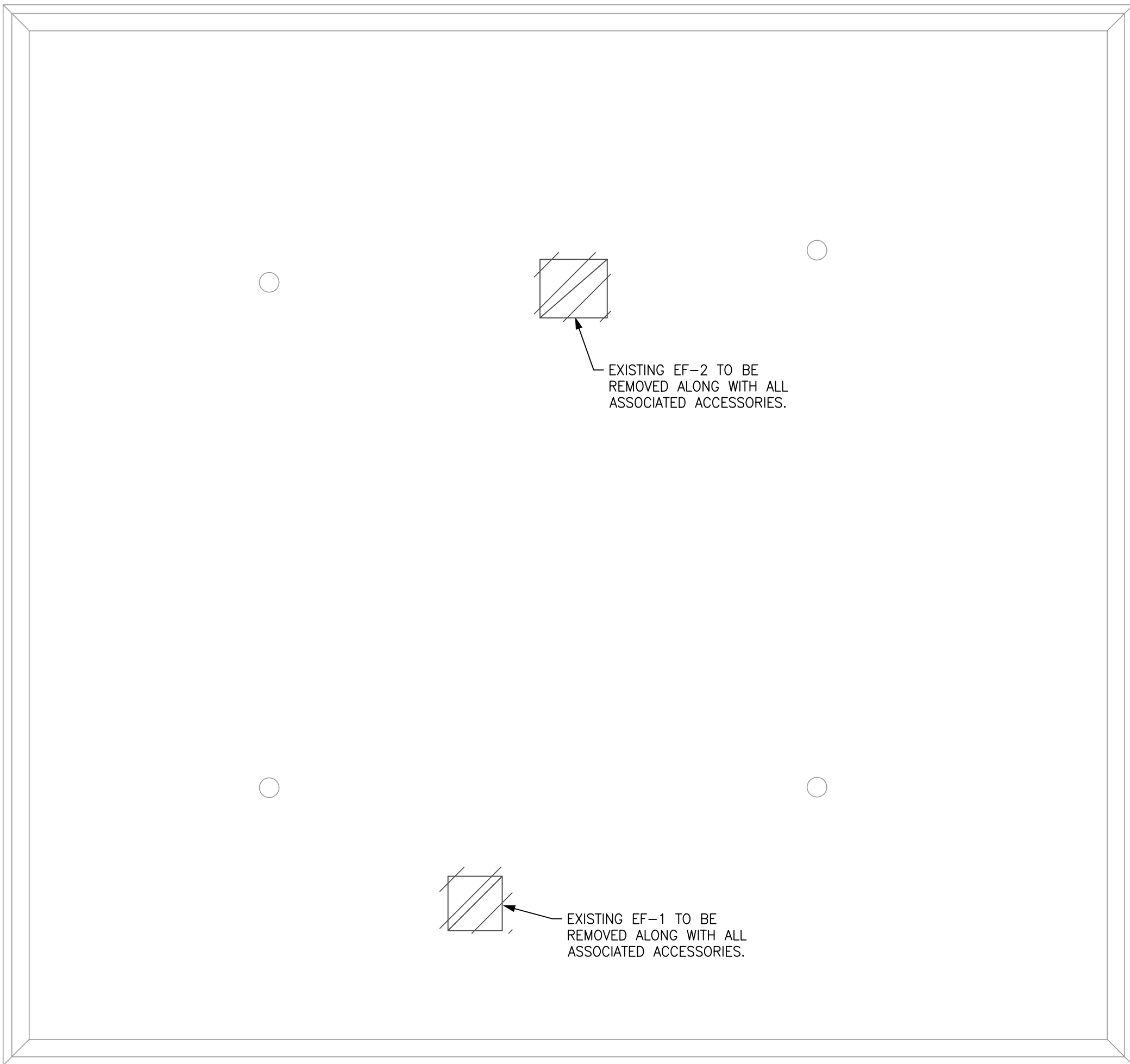
HATCHING INDICATES MECHANICAL ITEMS TO BE REMOVED.

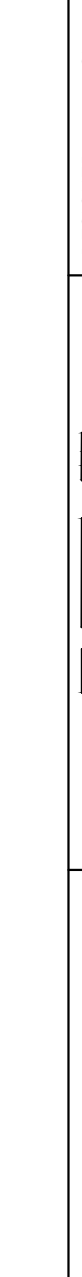
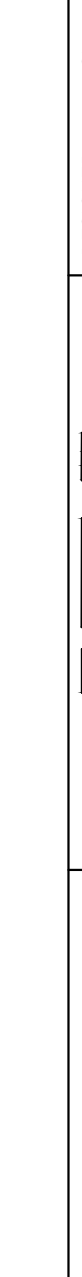
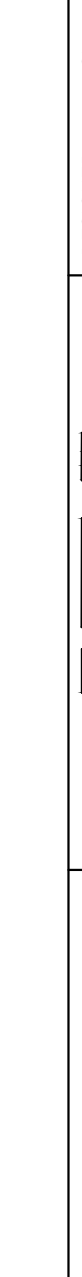


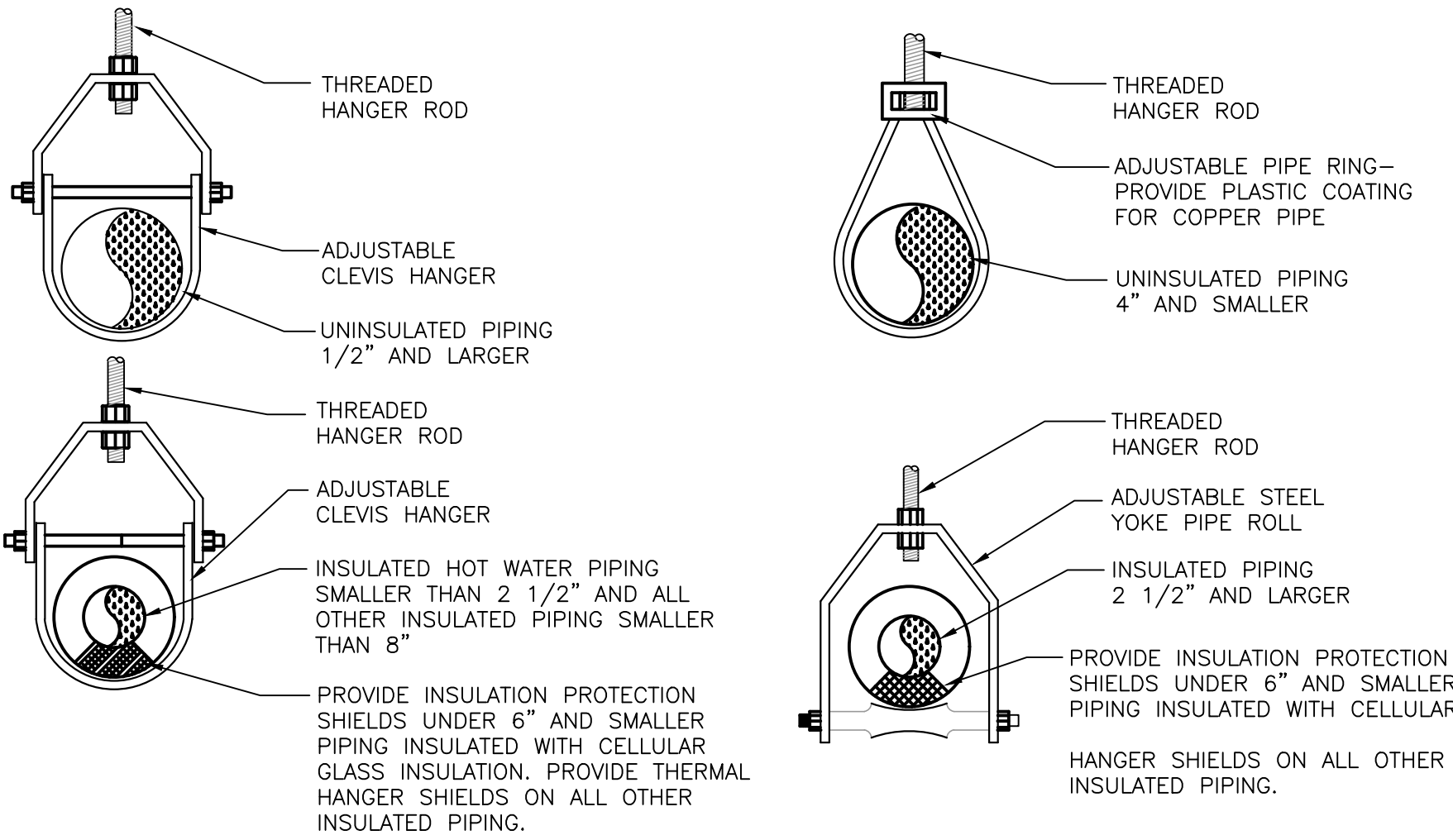
PUMP ROOM FLOOR PLAN - MECHANICAL DEMOLITION

SCALE 1/4" = 1'-0" FLOOR ELEVATION 16.86 FT

HATCHING INDICATES MECHANICAL ITEMS TO BE REMOVED.



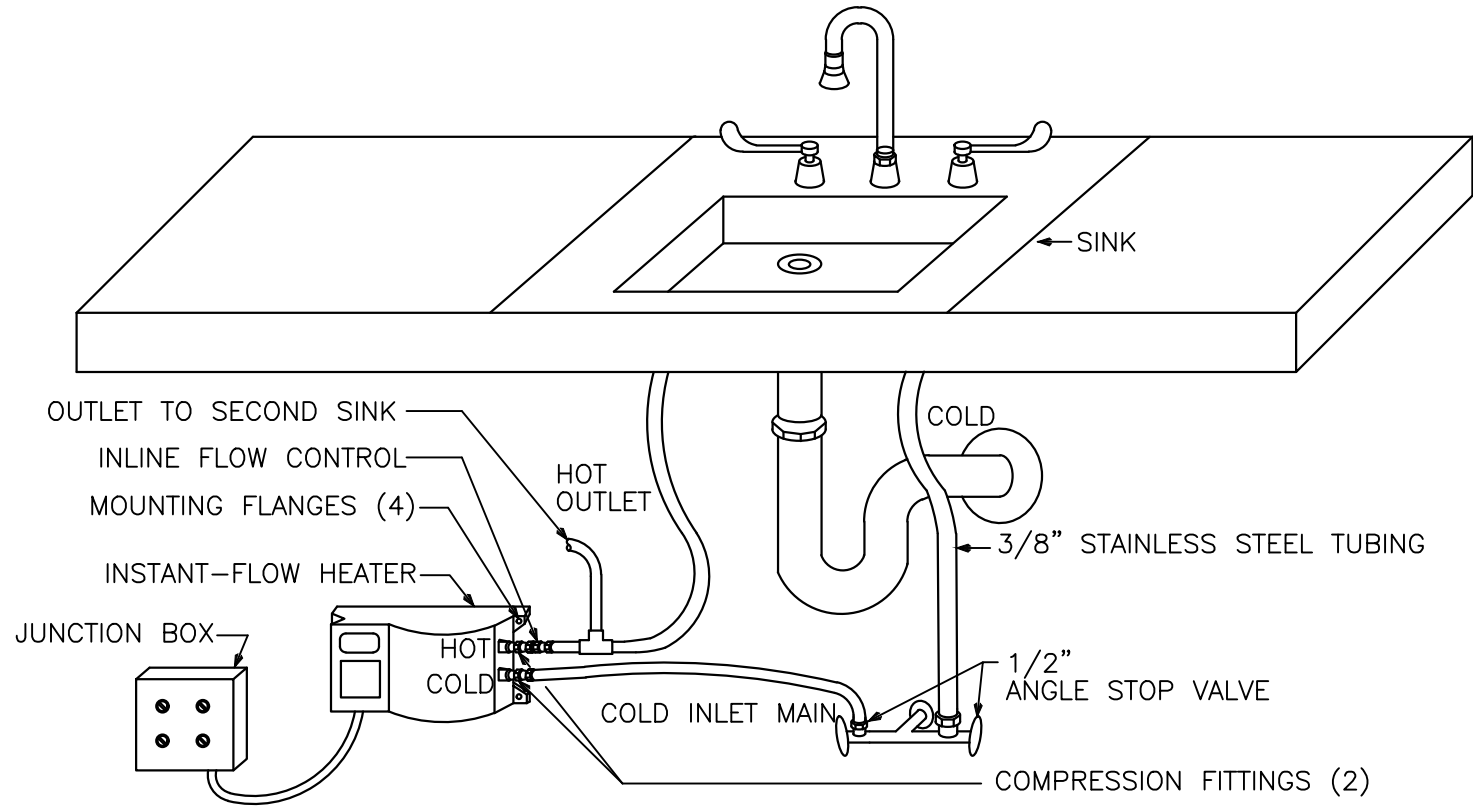
| | | | | | | | | | | | | | | | | | | | |
|------------|--|-----------|--|--|--|-----------------------|--|--|--|--------------------------|--|--|--|--|--|--|--|--|--|
| NO. SHEETS | | PROJ. NO. | | SPRING PARK ROAD PUMP STATION REHABILITATION | | JEA | | SUZANNE LENSEN, P.E., LICENSE NO. 36,120 | | HADDAD ENGINEERING INC | | J. Collins Engineering Associates, LLC | |  | |  | |  | |
| 52 | | DATE: | | HVAC | | Building Community sm | | DESIGNER: SL | | CA# | | 115165 San Jose Blvd | | 115165 San Jose Blvd | | 115165 San Jose Blvd | | 115165 San Jose Blvd | |
| 57 | | SCALE: | | | | | | DRAWN BY: NH | | 9952 | | ELECTRICAL ROAD, SUITE 205 | | ELECTRICAL ROAD, SUITE 205 | | ELECTRICAL ROAD, SUITE 205 | | ELECTRICAL ROAD, SUITE 205 | |
| H-2 | | | | | | | | CHECKED BY: SL | | FLORIDA REGISTRATION NO. | | JACOBSON, LISA A 32267 | | JACOBSON, LISA A 32267 | | JACOBSON, LISA A 32267 | | JACOBSON, LISA A 32267 | |
| | | | | | | | | DATE: 02.21.2020 | | | | 09/01/16, 09/01/16 | | 09/01/16, 09/01/16 | | 09/01/16, 09/01/16 | | 09/01/16, 09/01/16 | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |



PIPE HANGER DETAILS

NOT TO SCALE

1
P-1



INSTANTANEOUS WATER HEATER CONNECTIONS (IWH-1)

NOT TO SCALE

1
P-1

PLUMBING BASIS OF DESIGN

- WC-1 WATER CLOSET (FLOOR MOUNTED, FLUSH TANK) AMERICAN STANDARD 1.28/0.92 GPF H₂OPTION SIPHONIC DUAL FLUSH RIGHT HEIGHT MODEL 2886.218 WITH ELONGATED FRONT, CHURCH MODEL 9500-SSC WHITE SOLID PLASTIC SEAT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE, AND CHROME FINISHED SUPPLY TUBE. TRIP LEVER ON APPROACH SIDE.
- LAV-1 LAVATORY (WALL HUNG, SINGLE LEVER FAUCET) AMERICAN STANDARD MODEL 0355.012 LUCERNE WITH 4" FAUCET CENTER. PROVIDE DELTA MODEL 501 FAUCET. PROVIDE STRAINER DRAIN WITH TAILPIECE AND BOCA FLOW REGULATORS FOR 1/2" GPM, ANGLE STOPS WITH LOOSE KEYS, STAINLESS STEEL SUPPLY TUBES AND 1-1/4" PVC P-TRAP AND TUBING OUTLET. PROVIDE ZURN MODEL Z-1231 CONCEALED ARM MOUNTING KIT.
- SS-1 SERVICE SINK - AMERICAN STANDARD MODEL 7695.008 (19-7/8"x16-3/8"x10-1/2") ENAMELED CAST IRON SUPPLIED WITH WALL HANGER AND RIM GUARD WITH DRILLED BACK FOR FAUCET. PROVIDE AMERICAN STANDARD ROUGH FINISH FAUCET MODEL 8341.076 EXPOSED YOKE WALL-MOUNT WITH VACUUM BREAKER AND STOPS IN SHANK. ALSO FURNISH AMERICAN STANDARD CAST IRON "P" TRAP STANDARD TO WALL AND STRAINER FOR 3" CAST IRON PIPE.
- IWH-1 ELECTRIC INSTANTANEOUS WATER HEATER - PROVIDE EEMAX SERIES ONE SINGLE POINT AND CONTROLLED FLOW MODEL NO. EX3512 (CORROSION RESISTANT). UNIT SHALL HAVE ONE REMOVABLE HEATING MODULE ENERGIZED AT 0.3 GPM. ELEMENT SHALL PROVIDE 3.5kW OF HEATING CAPACITY (48°F RISE FOR 0.5 GPM)
- HB-1 CHICAGO FAUCETS #387 WITH WATTS NO. 8A BACKFLOW PREVENTER.

PLUMBING LEGEND

- _____ DOMESTIC COLD WATER PIPING
_____ DOMESTIC HOT WATER PIPING
_____ VENT PIPING
_____ WASTE PIPING (SANITARY SEWER)
C _____ PIPE TURNING DOWN
O _____ PIPE TURNING UP
P-1 _____ FIXTURE DESIGNATION
CW _____ COLD WATER
HB _____ HOSE BIBB
HW _____ HOT WATER
SAN _____ SANITARY
VTR _____ VENT THRU ROOF
WH _____ WALL HYDRANT
• _____ POINT OF NEW CONNECTION

GENERAL NOTES

- THE DRAWINGS ARE PARTLY DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW IN DETAIL ALL FEATURES OF THE WORK. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE SPECIFICATIONS, THE DRAWINGS AND LOCAL GOVERNING CODES.
- CONTRACTOR SHALL VISIT SITE AND VERIFY EXISTING ITEMS PRIOR TO BIDDING AND ADVISE ARCHITECT OF ANY DISCREPANCIES.
- ITEMS SHOWN AS PROVIDED UNDER ANOTHER DIVISION SHALL BE CONNECTED IN THIS WORK. OBTAIN EXACT ROUGH-IN INFORMATION BEFORE CONSTRUCTION ON ALL ITEMS REQUIRING PLUMBING CONNECTIONS.
- THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS INCLUDES ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE THE PLUMBING SYSTEM AS SHOWN ON THE DRAWINGS & HEREIN SPECIFIED. ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER IN ACCORDANCE WITH GOOD PRACTICE, MANUFACTURER'S RECOMMENDATIONS AND THE DEPARTMENT OF PUBLIC HEALTH.
- FURNISH (1) ONE YEAR SERVICE AND GUARANTEE ON ALL LABOR, MATERIALS AND EQUIPMENT.
- OFFSET PIPING TO AVOID STRUCTURAL MEMBERS, CANTS, FLASHINGS, MECHANICAL AND ELECTRICAL, EQUIPMENT, ETC.
- ALL VENTS THRU ROOF SHALL BE INSTALLED A MINIMUM OF 10'-0". FROM ALL FRESH AIR INTAKE TO AIR HANDLING EQUIPMENT AND OFFSET MINIMUM OF 3'-0" FROM EDGE OF ROOF LINE AND PARAPETS.
- INDIRECT WASTE PIPING FROM EQUIPMENT, WHICH PRODUCES A COLD WASTEWATER, (SUCH AS ICE MACHINES, COOLING COIL, DRAIN PANS, ETC.) SHALL BE INSULATED WITH 3/8" ARMAFLEX INSULATION. SEAL ALL LONGITUDINAL AND BUTT JOINTS WITH ADHESIVE APPROVED BY THE INSULATION MANUFACTURER.
- PROVIDE FLEX-LINE FOR FINAL CONNECTIONS TO EQUIPMENT ITEMS.
- ALL TESTING & STERILIZATION SHALL COMPLY W/LOCAL GOVERNING CODES & RECOMMENDATION OF THE AMERICAN WATER WORKS ASSOC. ALL PLUMBING TESTS SHALL BE WITNESSED BY THE PLUMBING INSPECTOR, AND A COPY OF THE DISINFECTION REPORT SHALL BE PROVIDED TO THE PLUMBING INSPECTOR.
- PROVIDE ESCUTCHEON PLATES FOR ALL EXPOSED PIPE PASSING THRU WALLS, FLOORS, OR CEILINGS.
- ALL PIPING PENETRATIONS THRU FIRE RATED WALL SHALL BE SEALED WITH FIRE BARRIER CAULK (3M OR EQUAL).
- HOT & COLD WATER SUPPLIES TO EACH INDIVIDUAL OR GROUP OF PLUMBING FIXTURES SHALL BE FITTED WITH AIR CHAMBERS OF AMPLE SIZE TO PREVENT WATER HAMMER. AIR CHAMBERS SHALL NOT BE LESS THAN 12" LENGTH. WATER HAMMER ARRESTORS, ZURN SHOKTROL SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION, WILL ALSO BE ACCEPTABLE.
- PIPE HANGERS SHALL BE ADJUSTABLE TEARDROP TYPE HANGER AND RODS. GRINNELL OR EQUAL.
- PROVIDE ALL STOPS, TRAPS, ESCUTCHEONS, CONNECTIONS, CARRIERS, ETC., FOR ALL FIXTURES AS NECESSARY TO COMPLETE THE INSTALLATION OF EACH FIXTURE, WHETHER SUCH ITEMS ARE LISTED OR NOT.
- ALL FURNISHED EXPOSED FAUCETS; TRAPS CONNECTING PIPING, STOPS AND OTHER FIXTURE TRIM SHALL BE PVC UNLESS OTHERWISE SPECIFIED. ALL FASTENING SHALL BE 302 STAINLESS STEEL.
- ALL FITTINGS SHALL BE INSTALLED BY NO LESS THAN A JOURNEYMAN LEVEL PLUMBER.
- NO HORIZONTAL DOUBLE-WYE FITTINGS ARE ACCEPTABLE.



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA 9952
904-262-4121

HADDO ENGINEERING INC.
2002 HAWLEY ROAD, SUITE 200
JACKSONVILLE, FLORIDA 32218
813-943-1111
FLORIDA PROFESSIONAL ENGINEERING LICENSE NO. 4000
SUZANNE LEVINSKY P.E. - LICENSE NO. 36120

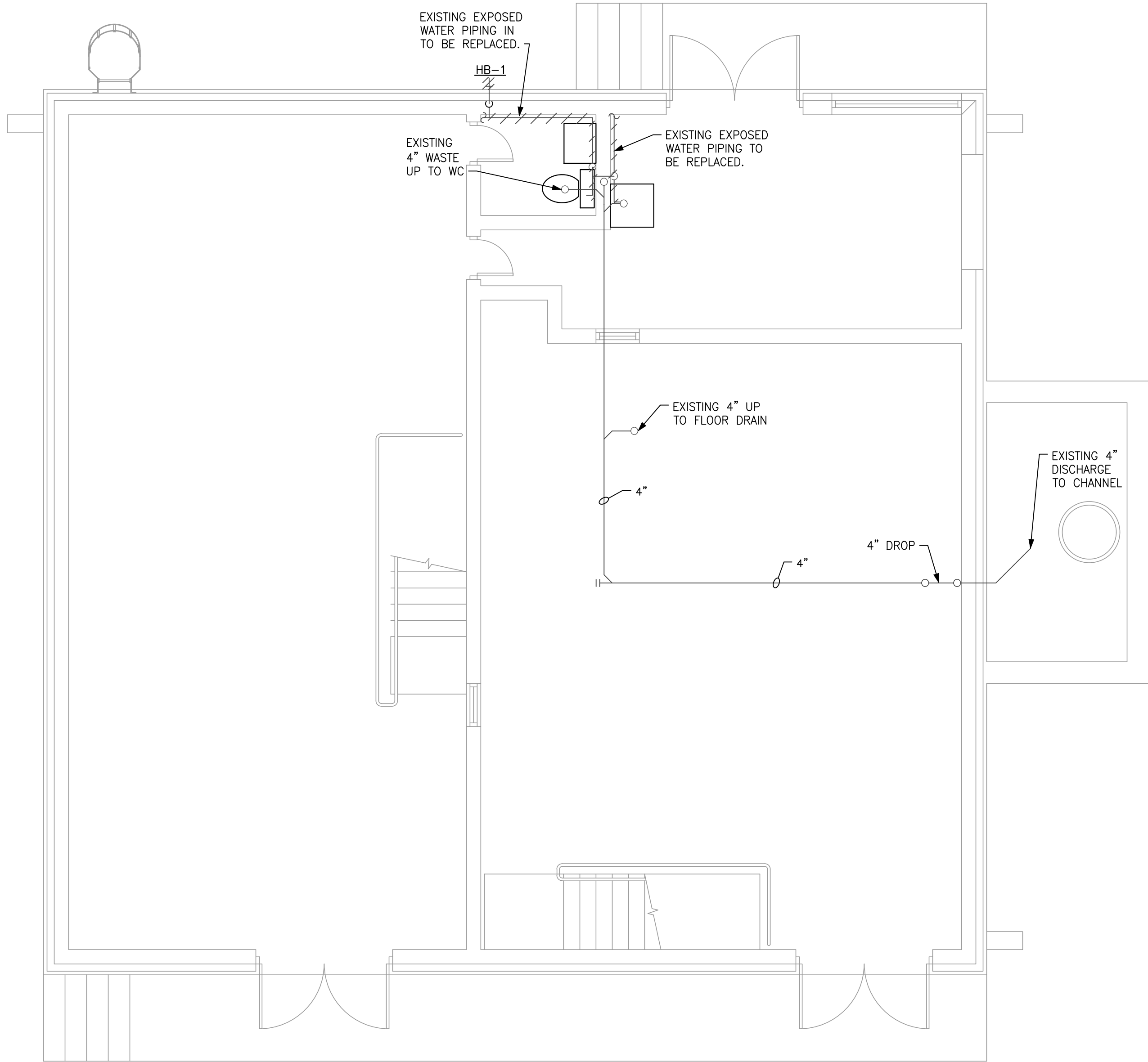
| DESIGNER | | DATE | | BY | | DATE | | REVISIONS | |
|--------------------------|----|------------|--|----|--|---------|--|--------------------------|--|
| SL | NH | 02.21.2020 | | | | 8/18/20 | | MODIFIED PLANS FOR REBID | |
| CHECKED BY: | SL | 02.21.2020 | | | | | | | |
| DATE: | | | | | | | | | |
| FLORIDA REGISTRATION NO. | | | | | | | | | |

| | |
|-------------|------------|
| DESIGNER | SL |
| DRAWN BY | NH |
| DATE | 02.21.2020 |
| CHECKED BY: | SL |
| DATE | 02.21.2020 |

JEA Building Communitysm

SPRING PARK ROAD PUMP STATION REHABILITATION
HVAC
PLUMBING NOTES AND DETAILS

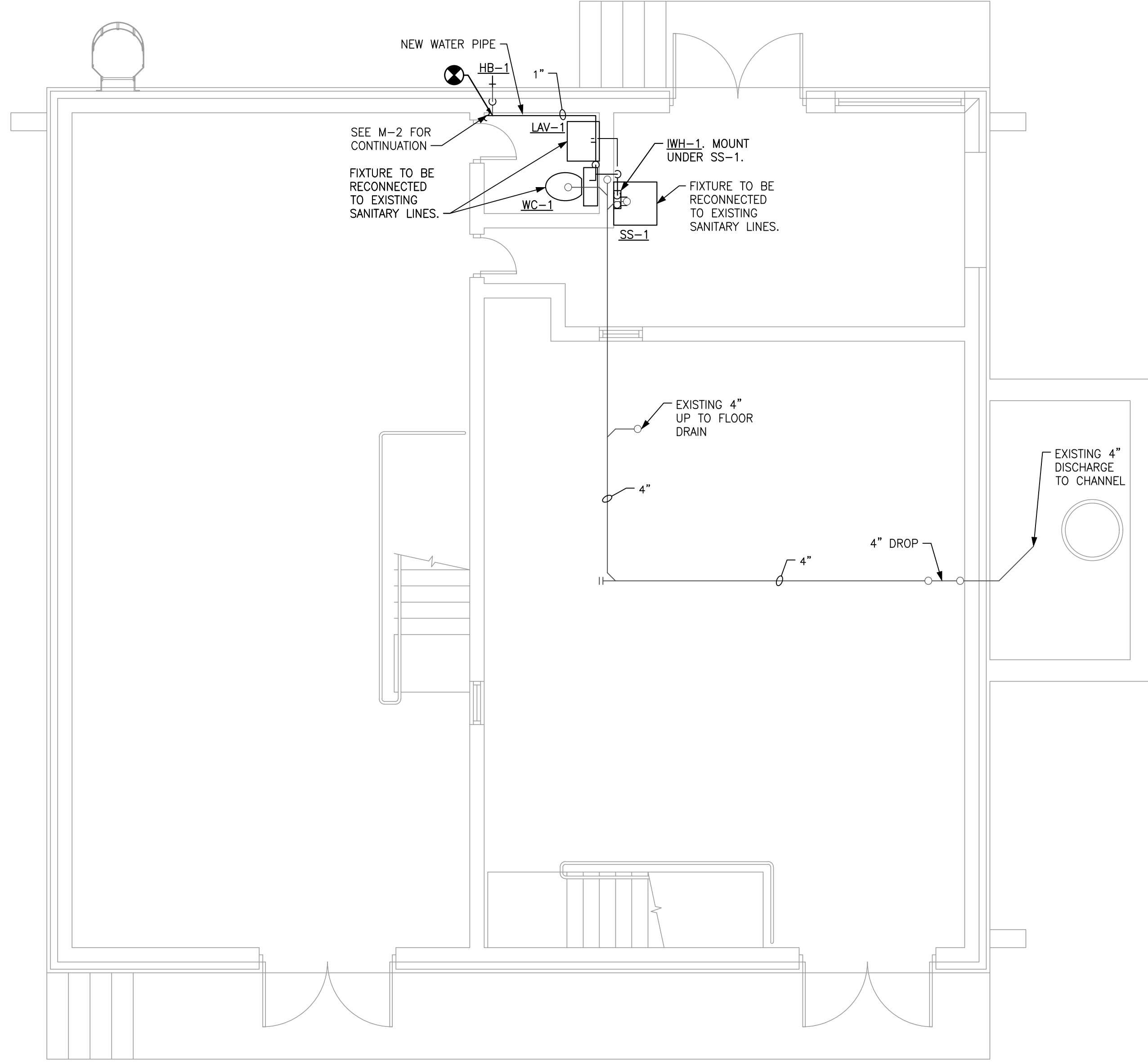
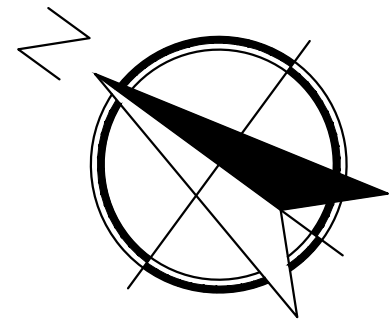
| | |
|-------------|-----------|
| NO. SHEETS | PROJ. NO. |
| 52 | |
| SHEET NO. | DATE: |
| DRAWING NO. | SCALE: |
| PL-1 | |



MOTOR ROOM FLOOR PLAN - PLUMBING DEMOLITION

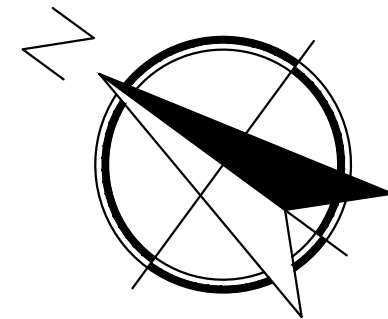
SCALE 1/4" = 1'-0"



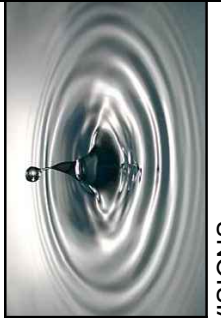
/// HATCHING INDICATES MECHANICAL ITEMS TO BE REMOVED.



MOTOR ROOM FLOOR PLAN - PLUMBING NEW

SCALE 1/4" = 1'-0"



| | | | | |
|---|--|-----------------|------------------------------------|--------------------------|
|  Building Community sm | SPRING PARK ROAD PUMP STATION REHABILITATION HVAC | | PLUMBING FLOOR PLAN - DEMO AND NEW | |
| | NO. SHEETS 52 | PROJ. NO. | | |
| SHEET NO. | | DATE: | | |
| DRAWING NO. PL-2 | | SCALE: | | |
|  HADAD ENGINEERING INC. 3905 HAWLEY ROAD, SUITE 200 JACKSONVILLE, FLORIDA 32218 TELEPHONE: 904-262-4121 FAX: 904-262-4122 E-MAIL: JEA@HADADENGINEERING.COM SUSANNE LEVINSKY, P.E. - LICENSE NO. 36123 | | DESIGN ENGINEER | | FLORIDA REGISTRATION NO. |
| J. Collins Engineering Associates, LLC 11516-3 San Jose Blvd. Jacksonville, Florida 32223 TELEPHONE: 904-262-4121 FAX: 904-262-4122 E-MAIL: JCA@JCOLLINSENGINEERING.COM | | CM 9952 | | MODIFIED PLANS FOR REBID |
|  | | NO. | | REVISIONS |
| | | BY | DATE | |
| | | | 8/18/20 | |

STRUCTURAL ABBREVIATIONS

| | | | | | |
|--|---|--|--|---|--|
| # Ø & ⊗ | NUMBER OR POUND ROUND OR DIAMETER SQUARE AND AT | GA GALV GC GT | GAGE GALVANIZED GENERAL CONTRACTOR GROUND FAULT INTERRUPTER GIRDER TRUSS | SCHED SECT SIM SOG SPA SPEC SQ STD STIFF STL STR STRUCT SYM | SCHEDULE SECTION SIMILAR SLAB ON GRADE SPACE SPECIFICATION SQUARE STANDARD STIFFENER STEEL STRAIGHT STRUCTURAL SYMMETRICAL |
| ALUM AR ARCH ASSY | ALUMINUM ANCHOR ROD ARCHITECTURE ASSEMBLY | HGT HORIZ HSA HT | HEIGHT HORIZONTAL HEADED STUD ANCHOR HEIGHT | T&B T/ T/U PANEL TE THK THRD TRANSV TS TYP | TOP & BOTTOM TOP OF TILT-UP PANEL THICKENED EDGE THICK THREADED TRANSVERSE THICKENED SLAB TYPICAL |
| B/ BETWN BOT BM BLDG BPL BRG | BOTTOM OF BETWEEN BOTTOM BEAM BUILDING BASE PLATE BEARING | IF INFO INT | INSIDE FACE INFORMATION INTERIOR | UON | UNLESS OTHERWISE NOTED |
| C TO C CANT CJ CL CLR CMU COL CONC CONN CONST CONT CONTR CTR CTRD | CENTER TO CENTER CANTILEVER CONSTRUCTION JOINT CENTER LINE CLEAR CONCRETE MASONRY UNIT COLUMN CONCRETE CONNECTION CONSTRUCTION CONTINUOUS CONSTRUCTION CENTER CENTERED | LB LG LLH LLV LSH LSV | POUND LONG LONG LEG HORIZONTAL LONG LEG VERTICAL LONG SIDE HORIZONTAL LONG SIDE VERTICAL | VER VERT | VERIFY VERTICAL |
| DBA DEFL DET DIAG DIA DIFF DIM DO DWG | DEFORMED BAR ANCHOR DEFLECTION DETAIL DIAGONAL DIAMETER DIFFERENT DIMENSION DITTO DRAWING | MANUF MAT'L MAX MECH MIN MISC | MANUFACTURER MATERIAL MAXIMUM MECHANICAL MINIMUM MISCELLANEOUS | W/ W/O WP WS WWF | WITH WITHOUT WORK POINT WATERSTOP WELDED WIRE FABRIC |
| EA EF EJ EL ELEC ELEV ENGR EOR EQ EQUIP EXIST EXP EXT EW | EACH EACH FACE EXPANSION JOINT ELEVATION ELECTRICAL ELEVATOR ENGINEER ENGINEER OF RECORD EQUIVA EQUIPMENT EXISTING EXPANSION EXTERIOR EACH WAY | NIC NO NS NTS | NOT IN CONTRACT NUMBER NEAR SIDE NOT TO SCALE | | |
| OC OD OF O/O OPNG OPP | ON CENTER OUTSIDE DIAMETER OUTSIDE FACE OUT TO CUT OPENING OPPOSITE | PERP PL PNL PREFAB PSF PSI PVC | PERPENDICULAR PLATE PANEL PREFABRICATED POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POLYVINYL CHLORIDE | | |
| QTY | QUANTITY | | | | |
| R OR RAD RD REF REINF REQ REQ'D RET REV | RADIUS ROUND REFERENCE REINFORCE(MENT) REQUIRE REQUIRED RETAINING REVISION | | | | |
| FB FD FDN FF FIN FLR FS FTG | FLAT BAR FLOOR DRAIN FOUNDATION FINISH FLOOR FINISH FLOOR FAR SIDE FOOTING | | | | |

DESIGN CRITERIA

DESIGN PER 2017 FLORIDA BUILDING CODE, UNLESS OTHERWISE NOTED.

| | |
|--|----------|
| LIVE LOADS: ELEVATED CONCRETE SLAB | 100 PSF |
| WIND LOADS: ULTIMATE WIND SPEED: (ASCE 7-10)..... | 140 MPH |
| NOMINAL WIND SPEED: | 109 MPH |
| MEAN ROOF HEIGHT: | 18 FT |
| RISK CATEGORY..... | III |
| WIND EXPOSURE..... | C |
| ENCLOSURE CLASSIFICATION..... | ENCLOSED |
| INTERNAL PRESSURE COEFFICIENT..... | ± 0.18 |
| DIRECTIONALITY FACTOR (Kd)..... | 0.85 |
| SHAPE FACTORS | PER CODE |

| | |
|--|---------------|
| CONCRETE (DESIGN PER CURRENT EDITION ACI 318) ALL CONCRETE | F'c= 4000 PSI |
| ALL REINFORCING STEEL ASTM A615 GRADE 60. REINFORCING STEEL SHOWN ON THESE DRAWINGS TO BE WELDED SHALL BE ASTM A706. | |
| SOIL BEARING (ASSUMED MAXIMUM)..... | 2000 PSF |

GENERAL NOTES

FOUNDATIONS

EXCAVATE TO BOTTOM OF FOUNDATION AND COMPACT SOIL TO MINIMUM 95% DRY DENSITY PER ASTM D-1557.

SOIL TESTING:
MAKE ONE OPTIMUM MOISTURE-MAXIMUM DENSITY CURVE TEST FOR EACH CLASS OF MATERIAL. MAKE IN-PLACE DENSITY TESTS AS FILL AND BACKFILL WORK PROGRESSES. MAKE ONE DENSITY TEST FOR EVERY 5000 SQUARE FEET OF COMPACTED EXISTING SOILS, SUBGRADE AND IN EACH LIFT OF COMPACTED FILL.

IF FOOTING ELEVATIONS SHOWN OCCUR IN A DISTURBED, UNSTABLE, OR UNSUITABLE SOIL, THE ENGINEER SHALL BE NOTIFIED.

CONCRETE

UNLESS OTHERWISE NOTED (UON) ON THE DRAWINGS, MINIMUM COVER FOR REINFORCING SHALL BE AS FOLLOWS:
FOOTINGS 3"
SLABS (EXPOSED TO EARTH, LIQUID OR WEATHER) 2"
SLABS (NOT EXPOSED TO EARTH, LIQUID OR WEATHER) ¾"

ALL REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING THE PLACING OF THE CONCRETE.

ALL HOOKS IN REINFORCING BARS SHALL BE AN ACI STANDARD HOOK, UNLESS OTHERWISE NOTED.

PROVIDE ¾" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALL, ETC.

FASTENERS

EXPANSION BOLTS SHALL BE HILTI KWIK BOLT 3, SIMPSON STRONG-TIE STRONG-BOLT2 OR APPROVED EQUAL, UON. EMBEDMENT DEPTH INTO CONCRETE OR SOLID GROUTED MASONRY SHALL BE AT LEAST 7 TIMES THE BOLT DIAMETER. CLEAN HOLE AND INSTALL PER MANUFACTURER'S PRINTED INSTRUCTIONS.

SCREW ANCHORS SHALL BE HILTI KWIK HUS-EZ, SIMPSON STRONG-TIE TITEN HD OR APPROVED EQUAL, UON. EMBEDMENT IN CONCRETE OR SOLID GROUTED MASONRY SHALL BE AT LEAST 9 TIMES THE BOLT DIAMETER. CLEAN HOLE AND INSTALL PER MANUFACTURER'S PRINTED INSTRUCTIONS.

POWER ACTUATED FASTENERS (PAF) SHALL BE 0.157" DIAMETER HILTI X-U, SIMPSON STRONG-TIE POPA OR EQUAL, UON. EMBED MIN 1-1/4" INTO CONCRETE AND CMU. DO NOT PLACE WITHIN 1" OF CMU MORTAR JOINT. PAF SHALL COMPLETELY PENETRATE STRUCTURAL STEEL.

ADHESIVE ANCHORING (EPOXY)
• ADHESIVE ANCHORING FOR CONCRETE SHALL BE HILTI HIT-HY 200 CARTRIDGE SYSTEM, SIMPSON STRONG-TIE AT-XP OR APPROVED EQUAL, UON. EMBEDMENT DEPTH SHALL BE AT LEAST 12 TIMES THE INSERT DIAMETER, UON. HOLE DIAMETER SHALL BE NO GREATER THAN RECOMMENDED BY MANUFACTURER. THE HOLE SHALL BE CLEANED PER MANUFACTURER'S RECOMMENDATIONS BY BRUSHING OUT WITH WIRE BOTTLE BRUSH AND BLOWN OUT WITH AIR USING A COMPRESSOR WITH A FUNCTIONAL OIL TRAP (EXCEPT WHERE PERMITTED WHEN USING A HILTI SAFE SET HIT Z ANCHOR ROD OR HILTI HOLLOW DRILL BIT W/ VACUUM).

• GENERAL – ANCHORS SHALL MEET THE REQUIREMENTS OF ACI 355.4. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND PERFORMED BY AN INSTALLER TRAINED BY THE MANUFACTURER. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY WHICH SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER IN ACCORDANCE WITH ACI318 APPENDIX D AND CONTINUOUSLY INSPECTED PER ACI318.

• CAPACITIES – UON, DESIGN BOND STRENGTH OF ANCHORS HAVE BEEN BASED ON CRACKED CONCRETE, ACI 355.4 TEMPERATURE CATEGORY B, AND INSTALLATIONS INTO DRY HOLES DRILLED WITH A ROTARY IMPACT DRILL OR ROCK DRILL INTO CONCRETE THAT HAS CURED AT LEAST 21 DAYS AND HAS A CONCRETE TEMPERATURE OF AT LEAST 50 DEGREES F AT TIME OF ANCHOR INSTALLATION.

SUPPLEMENTARY NOTES
PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

MCVEIGH & MANGUM ENGINEERING, INC OR ANY OF ITS EMPLOYEES SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES OR SEQUENCES FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

VERIFY ALL DIMENSIONS WITH OTHER TRADES AND WITH PRE-FABRICATED, PRECAST CONCRETE BUILDING.

SEE MECHANICAL, ELECTRICAL, CIVIL, AND PLUMBING DRAWINGS FOR EMBEDS, OPENINGS, SLEEVES, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS.

ALL STRUCTURAL OPENINGS AROUND OR AFFECTED BY MECHANICAL, ELECTRICAL, CIVIL AND PLUMBING EQUIPMENT SHALL BE VERIFIED WITH EQUIPMENT PURCHASED BEFORE PROCEEDING WITH STRUCTURAL WORK AFFECTED.

CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE AND SITES THAT ARE AFFECTED BY NEW WORK BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.

SHOP DRAWINGS AND SUBMITTALS

SHOP DRAWING SUBMITTALS ARE ONLY REVIEWED FOR GENERAL CONFORMANCE WITH THE INFORMATION SHOWN ON THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR MUST REVIEW AND APPROVE THE SHOP DRAWINGS PRIOR TO THEIR SUBMITTAL TO THE ARCHITECT. SUBMITTALS WHICH DO NOT CONTAIN THE CONTRACTOR'S SHOP DRAWING STAMP SHALL BE RETURNED WITHOUT REVIEW. ANY REQUESTED CHANGES TO THE CONTRACT DOCUMENTS SHALL BE COMMUNICATED IN WRITING PRIOR TO SUBMITTING THE SHOP DRAWINGS AND CLOUDED ON THE SHOP DRAWINGS.

SHOP DRAWINGS MUST BE SUBMITTED FOR ENGINEER'S REVIEW OF THE FOLLOWING ITEMS:
(S/S = SIGNED & SEALED SHOP DRAWING WITH CALC'S, SD = SHOP DRAWING FOR REVIEW ONLY)

- CONCRETE REINFORCING LAYOUT S/S ☐ SD ☒
- CONCRETE MIX DESIGNS S/S ☐ SD ☐
- SHORING AND FORMWORK DRAWINGS S/S ☒ SD ☐

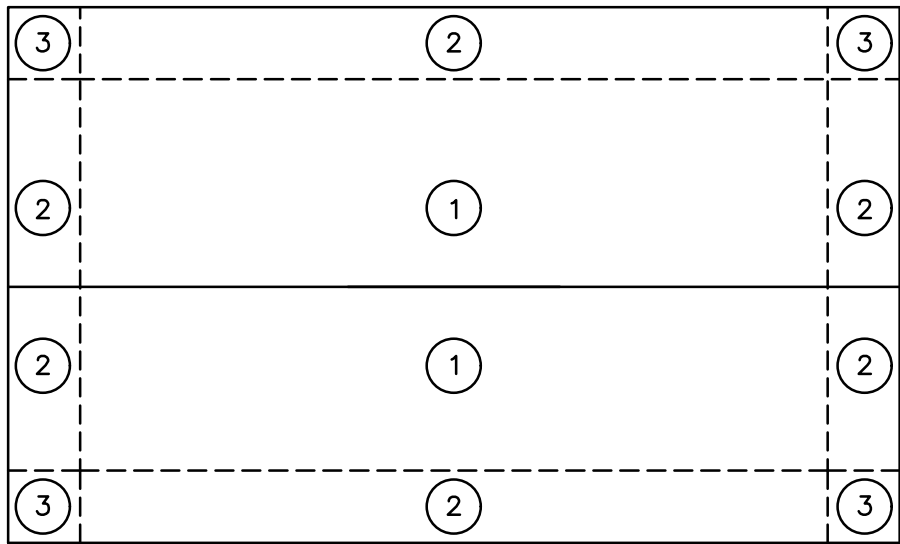
SPECIFICATIONS

CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301. "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (LATEST EDITION). EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

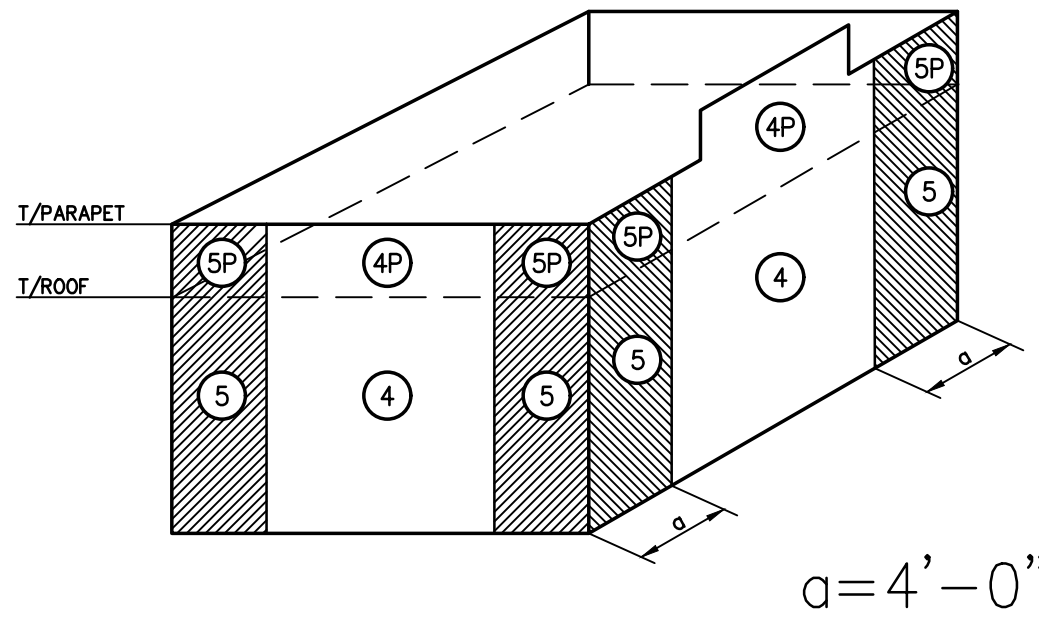
A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED TO CONFIRM BEARING PRESSURE STATED PRIOR TO CONSTRUCTION. THE ENGINEER SHALL DEVELOP & ENSURE IMPLEMENTATION OF A SITE PREPARATION PROGRAM AS HE DEEMS NECESSARY TO ACHIEVE THE STATED BEARING PRESSURE.

FOOTING AND SLAB SUBGRADE PREPARATION SHALL BE IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

| COMPONENT & CLADDING DESIGN WIND PRESSURES (PSF) | | | |
|---|-------------|------------|------------|
| ROOF | | | |
| ZONE | 10 SF | 50 SF | 100 SF |
| ALL ZONES | +19 | +16 | +16 |
| 1 | -45 | -42 | -41 |
| 2 | -75 | -57 | -49 |
| 3 | -113 | -68 | -49 |
| WALLS | | | |
| ZONE | 10 SF | 100 SF | 500 SF |
| 4 | +41 -44 | +35 -38 | +31 -34 |
| 4P | +105 -73 | +72 -61 | +67 -53 |
| 5 | +41 -55 | +35 -43 | +31 -34 |
| 5P | +143 -84 | +72 -65 | +67 -53 |
| NOTES: 1) TABLE PRESSURES ARE FOR THE SQUARE FOOT (SF) TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINEARLY INTERPOLATE BETWEEN VALUES SHOWN ABOVE. 2) POSITIVE PRESSURES ACT TOWARD THE BUILDING. NEGATIVE PRESSURES ACT AWAY FROM THE BUILDING. 3) SEE DIAGRAMS FOR LOCATION OF ZONES. 4) PRESSURES SHOWN ARE ULTIMATE WIND PRESSURES. MULTIPLY BY 0.6 FOR NOMINAL WIND PRESSURES. | | | |
| a=4'-0" | | | |



ROOF PLAN (GENERIC BUILDING SHOWN)



WALLS (GENERIC BUILDING SHOWN)



WIND PRESSURE DIAGRAMS

J. Collins Engineering Associates, LLC
11916-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9952
904-262-4121
904-262-4121

REVIEWS

| | | |
|-----|----|------|
| NO. | BY | DATE |
| 6 | | |
| 5 | | |
| 4 | | |
| 3 | | |
| 2 | | |
| 1 | | |

DESIGN ENGINEER
TIMOTHY R. MOORE, P.E.
FLORIDA REGISTRATION NO. 80678

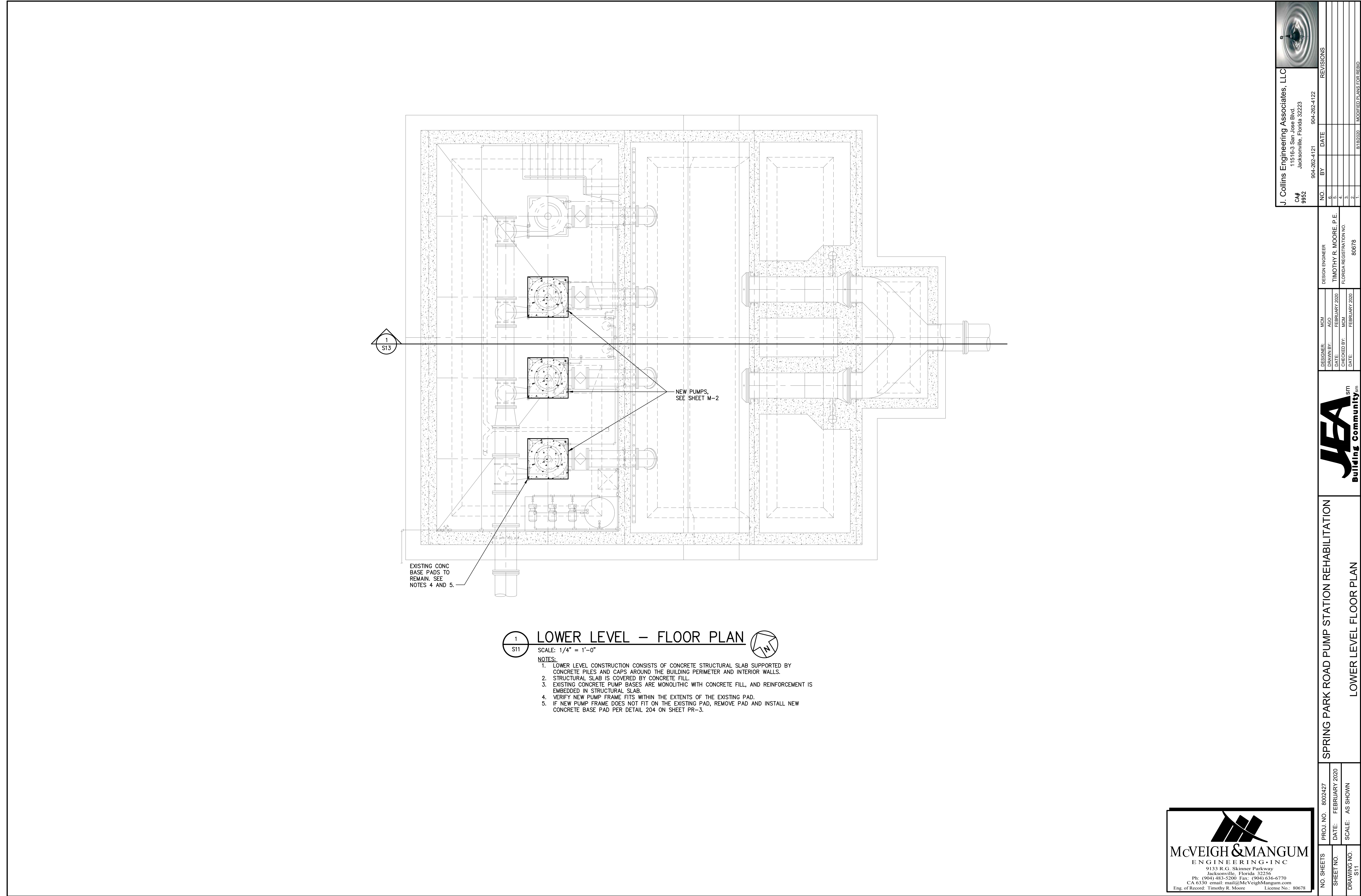


SPRING PARK ROAD PUMP STATION REHABILITATION

| | |
|----------------------|------------------------|
| NO. SHEETS 802427 | PROJ. NO. 802427 |
| SHEET NO. S01 | DATE: FEBRUARY 2020 |
| DRAWING NO. S01 | SCALE: AS SHOWN |

GENERAL NOTES

McVEIGH & MANGUM
ENGINEERING, INC
9133 R.G. Skinner Parkway
Jacksonville, Florida 32256
Ph: (904) 483-5200 Fax: (904) 636-6770
CA 6330 email: mail@McVeighMangum.com
Eng. of Record: Timothy R. Moore License No.: 80678



1
S11

LOWER LEVEL - FLOOR PLAN

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

NOTES:

1. LOWER LEVEL CONSTRUCTION CONSISTS OF CONCRETE STRUCTURAL SLAB SUPPORTED BY CONCRETE PILES AND CAPS AROUND THE BUILDING PERIMETER AND INTERIOR WALLS.
2. STRUCTURAL SLAB IS COVERED BY CONCRETE FILL.
3. EXISTING CONCRETE PUMP BASES ARE MONOLITHIC WITH CONCRETE FILL, AND REINFORCEMENT IS EMBEDDED IN STRUCTURAL SLAB.
4. VERIFY NEW PUMP FRAME FITS WITHIN THE EXTENTS OF THE EXISTING PAD.
5. IF NEW PUMP FRAME DOES NOT FIT ON THE EXISTING PAD, REMOVE PAD AND INSTALL NEW CONCRETE BASE PAD PER DETAIL 204 ON SHEET PR-3.

McVEIGH & MANGUM
ENGINEERING • INC
9133 R.G. Skinner Parkway
Jacksonville, Florida 32256
Ph: (904) 483-5200 Fax: (904) 636-6770
CA 6330 email: mail@McVeighMangum.com
Eng. of Record: Timothy R. Moore License No.: 80678

| | |
|-----------------|---------------------|
| NO. SHEETS | PROJ. NO. 8002427 |
| SHEET NO. | DATE: FEBRUARY 2020 |
| DRAWING NO. S11 | SCALE: AS SHOWN |

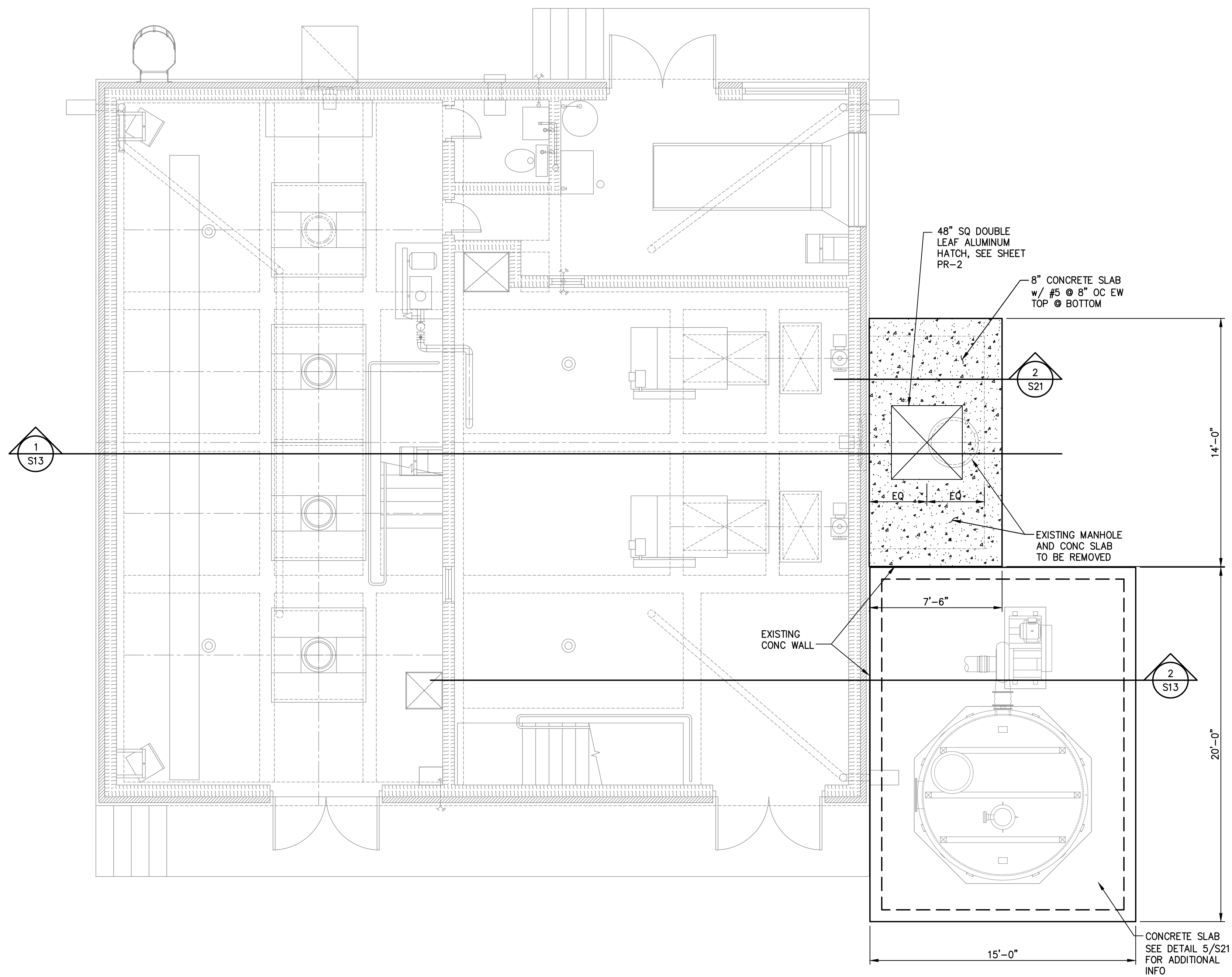
SPRING PARK ROAD PUMP STATION REHABILITATION

LOWER LEVEL FLOOR PLAN



| | | |
|------------|---------------|--------------------------|
| DESIGNER | NCM | DESIGN ENGINEER |
| DRAWN BY | AGO | TIMOTHY R. MOORE, P.E. |
| DATE | FEBRUARY 2020 | FLORIDA REGISTRATION NO. |
| CHECKED BY | FOR | 80678 |
| DATE | FEBRUARY 2020 | |

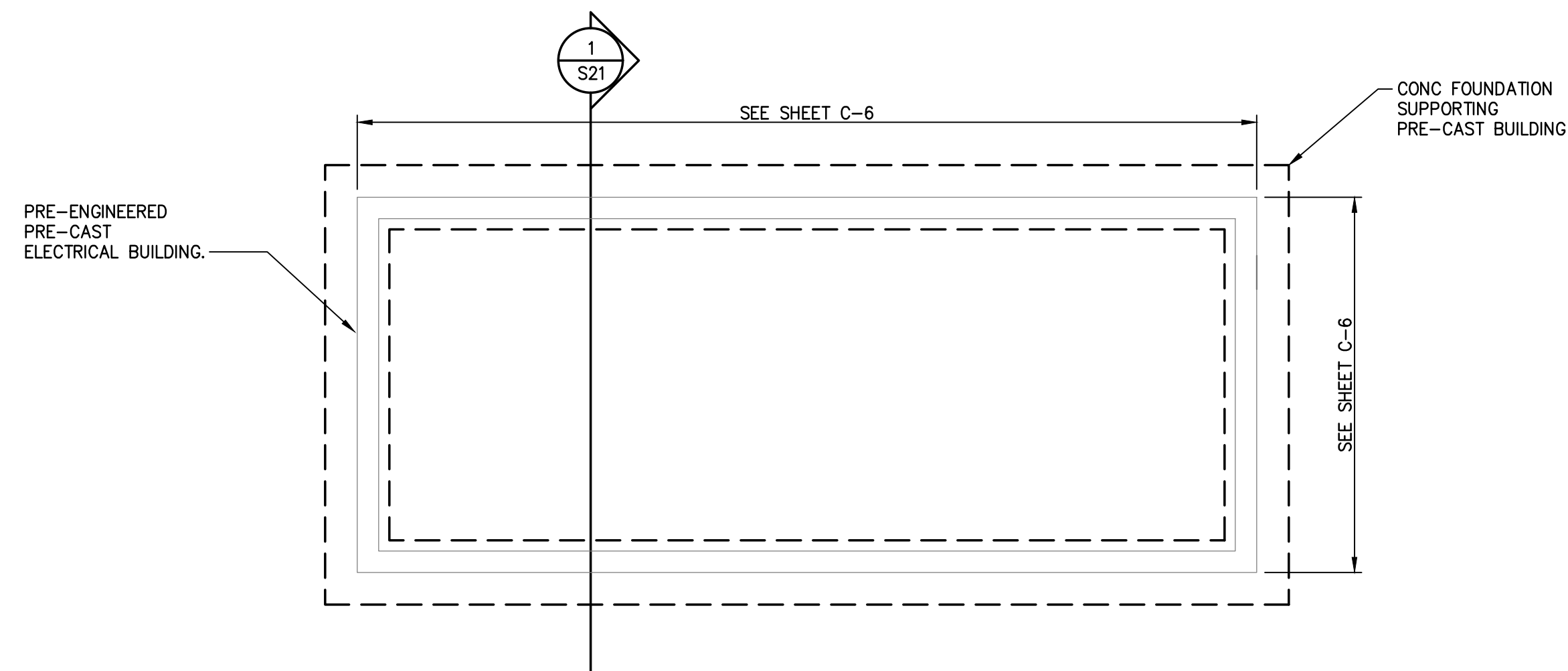
| | | | |
|--|----|-----------|--------------------------|
| J. Collins Engineering Associates, LLC | | REVISIONS | |
| 11516-3 San Jose Blvd. | | | |
| Jacksonville, Florida 32223 | | | |
| CJ# 9952 | | | |
| 904-262-4121 | | | |
| 904-262-4122 | | | |
| NO. | BY | DATE | REVISIONS |
| 6. | | | |
| 4. | | | |
| 3. | | | |
| 2. | | | |
| 1. | | 8/18/2020 | MODIFIED PLANS FOR REBID |



1
S12 **UPPER LEVEL – FLOOR PLAN**

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

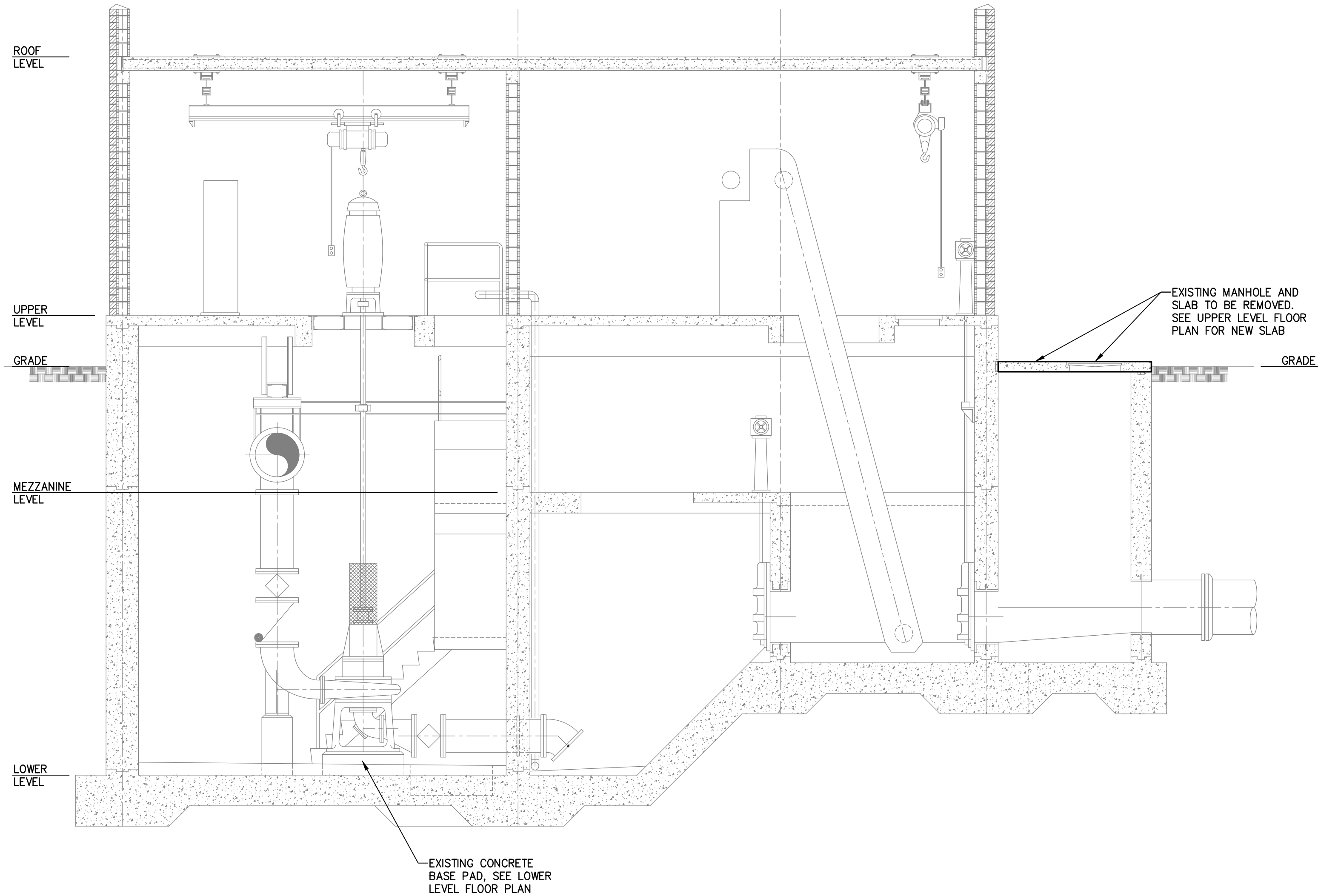
NOTES:
 1. BUILDING UPPER LEVEL ELEVATION IS APPROXIMATELY AT THE EXTERIOR GRADE ELEVATION.
 2. EXISTING CONCRETE SLAB TO BE REPLACED IS LOCATED AT GRADE ON THE EXTERIOR OF THE BUILDING.
 3. EXISTING SLAB IS TO BE REMOVED AND REPLACED WITH NEW CONCRETE SLAB AND ACCESS HATCH.
 4. VERIFY SLAB DIMENSIONS IN FIELD.



1
S13 **ELECTRICAL BUILDING – FOUNDATION PLAN**

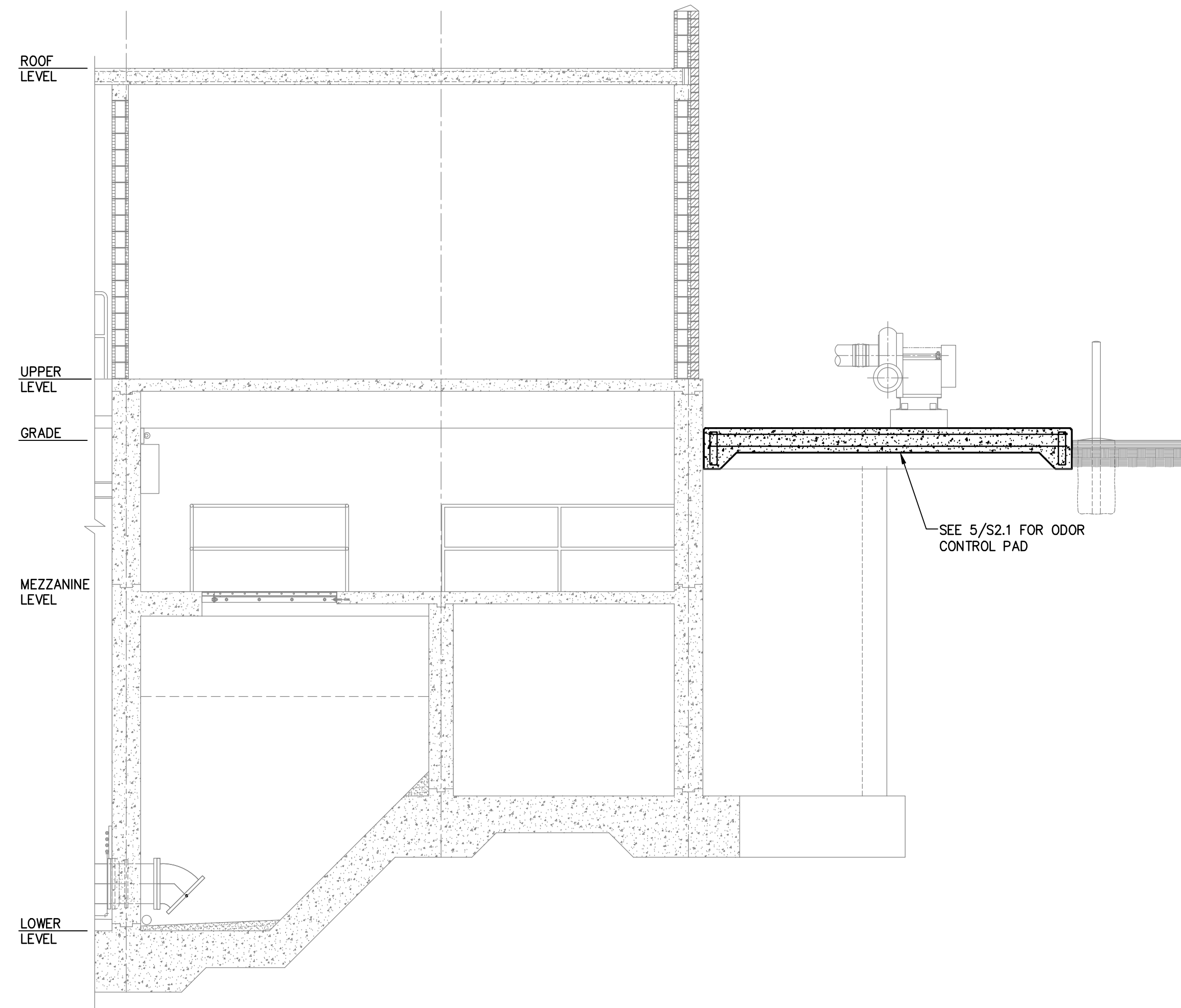
SCALE: 1/4" = 1'-0"

NOTES:
 1. ELECTRICAL BUILDING IS PRE-ENGINEERED, PRECAST CONCRETE ENCLOSURE DESIGNED BY OTHERS.
 2. SEE SHEET C-4 FOR LOCATION AND SHEET C-6 FOR DIMENSIONS AND ELEVATIONS.



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

- NOTES:
1. BUILDING SECTION SHOWN FOR REFERENCE.
2. SEE FLOOR PLANS FOR STRUCTURAL WORK.



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"

- NOTES:
1. BUILDING SECTION SHOWN FOR REFERENCE.
2. SEE FLOOR PLANS FOR STRUCTURAL WORK.

McVEIGH & MANGUM
ENGINEERING • INC
9133 R.G. Skinner Parkway
Jacksonville, Florida 32256
Ph: (904) 483-5200 Fax: (904) 636-6770
CA 6330 email: mail@McVeighMangum.com
Eng. of Record: Timothy R. Moore License No.: 80678



J. Collins Engineering Associates, LLC
12412 San Jose Blvd., Suite 204
Jacksonville, Florida 32223
CA# 9952 904-262-4121

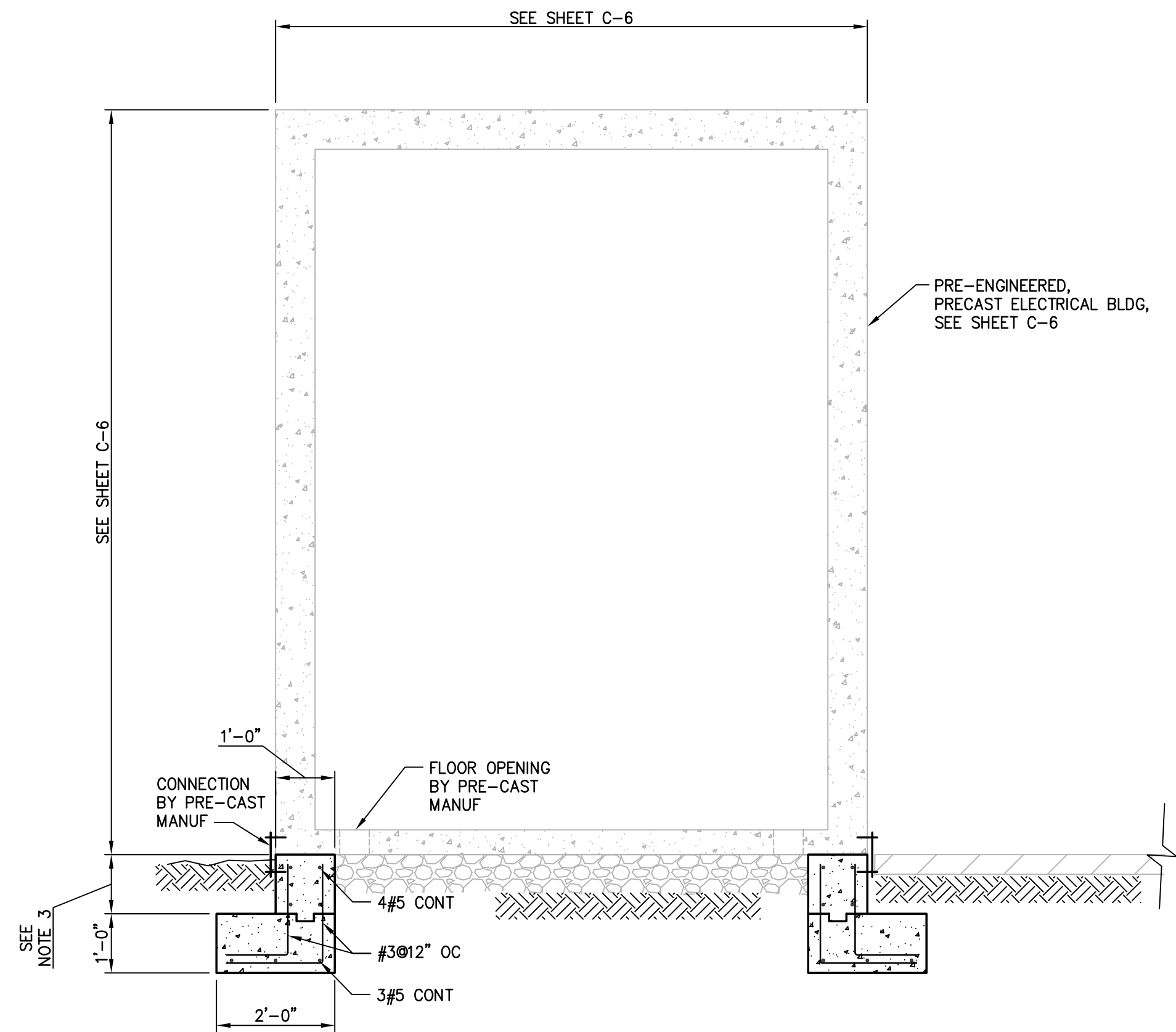
| NO. | BY | DATE | REVISIONS |
|-----|-----|------------|--|
| 1. | SDA | 11/27/2018 | MODIFIED PLANS FOR REED DATA CENTER 125 REVISION |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |

| | | | |
|------------|-----|---------------|--------------------------------|
| DESIGNER | NCM | AGM | DESIGN ENGINEER |
| DRAWN BY | AGM | FEBRUARY 2020 | TIMOTHY R. MOORE, PE |
| CHECKED BY | AGM | FEBRUARY 2020 | FLORIDA REGISTRATION NO. 80678 |
| DATE | | | |



SPRING PARK ROAD PUMP STATION REHABILITATION
PUMP STATION MODIFICATIONS
BUILDING SECTIONS

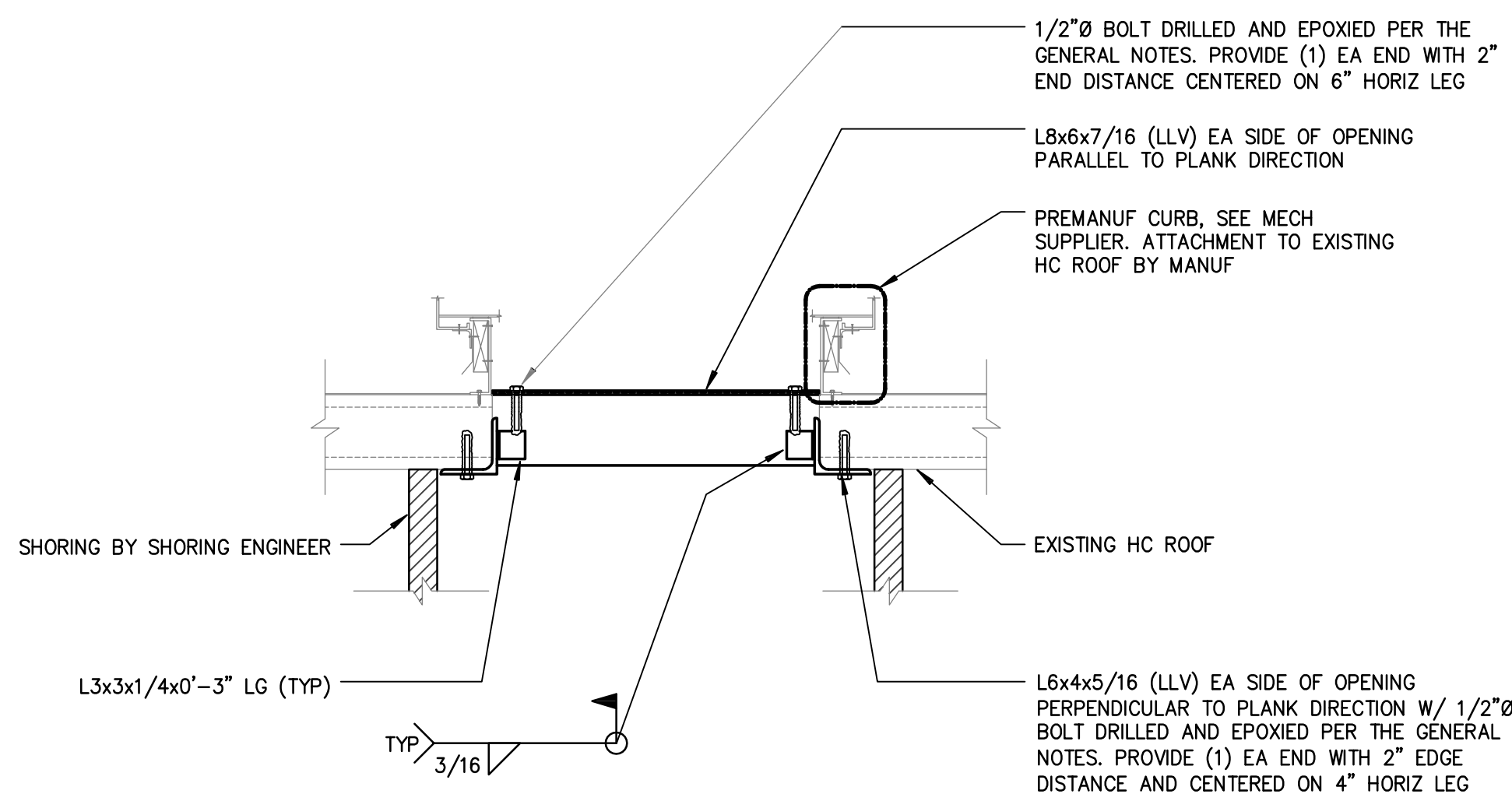
| | | |
|-------------|---------------------|-----------------|
| NO. SHEETS | DATE: FEBRUARY 2020 | SCALE: AS SHOWN |
| SHEET NO. | | |
| DRAWING NO. | | |



1 ELECTRICAL BLDG FDN SECTION
S21 SCALE: NTS

NOTES:

1. ELECTRICAL BUILDING IS PRE-ENGINEERED, PRECAST CONCRETE ENCLOSURE DESIGNED BY OTHERS.
2. SEE SHEET C-6 FOR DIMENSIONS AND ELEVATIONS.
3. 1'-0" MIN AND 1'-6" MAX. TO BE DETERMINED BY PRE-CAST MANUFACTURER TO ACCOMMODATE CONNECTION TO BUILDING, BY PRE-CAST MANUFACTURER.



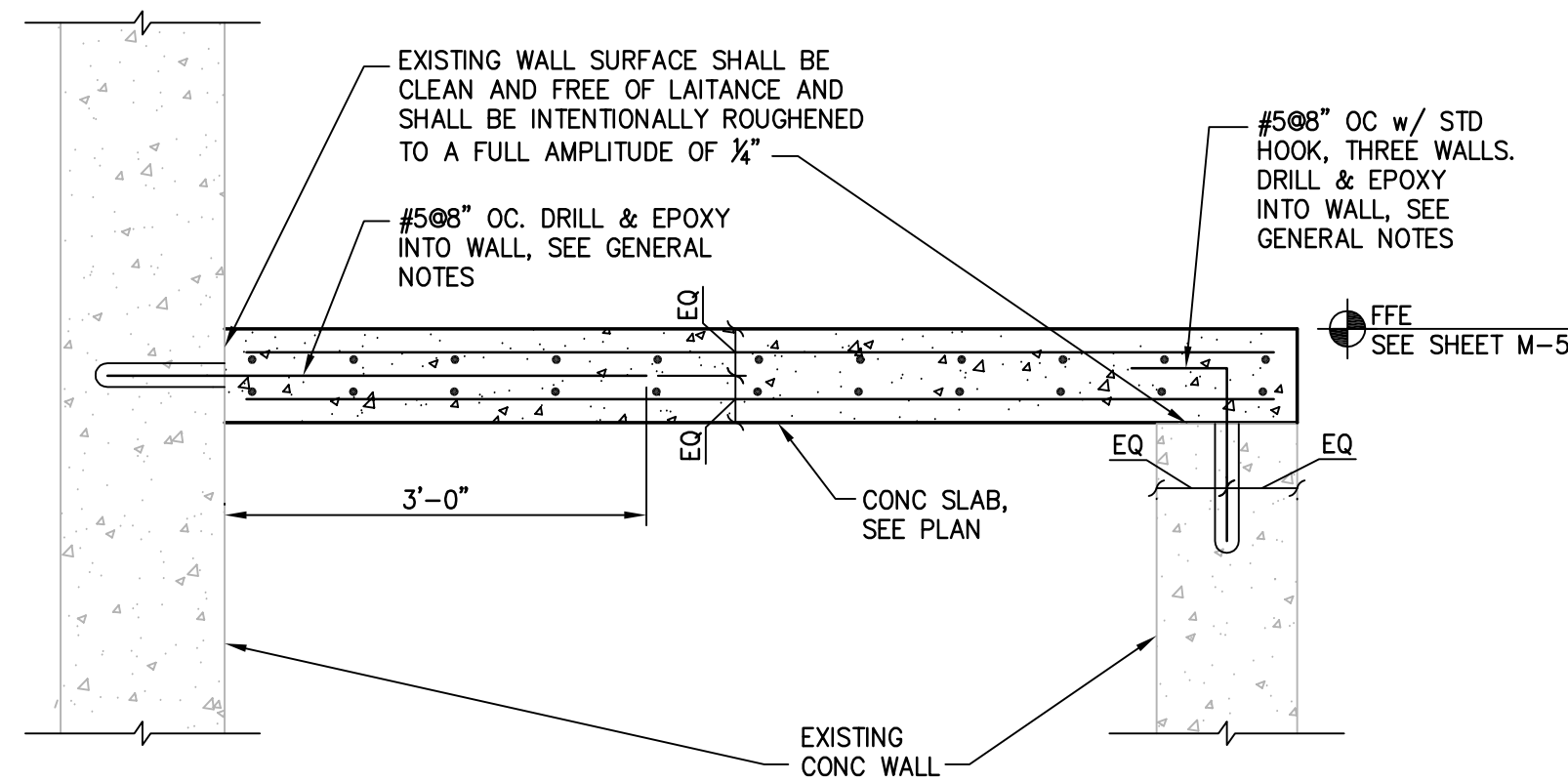
NOTES:

- 1) SEE ARCH/MECH FOR NEW OPENING LOCATION
- 2) MAX OPENING SIZE = 24"x24", VERIFY WITH ARCH/MECH
- 3) L6x4x5/16 TO BE SNUG TIGHT TO HC PLANK
- 4) GROUT FILL EXISTING HC PLANK 1'-0" MIN IN EA DIRECTION IF NOT GROUTED AT ANCHOR LOCATION
- 5) CONTRACTOR OPTION TO PROVIDE BENT PL IN LIEU OF ANGLE

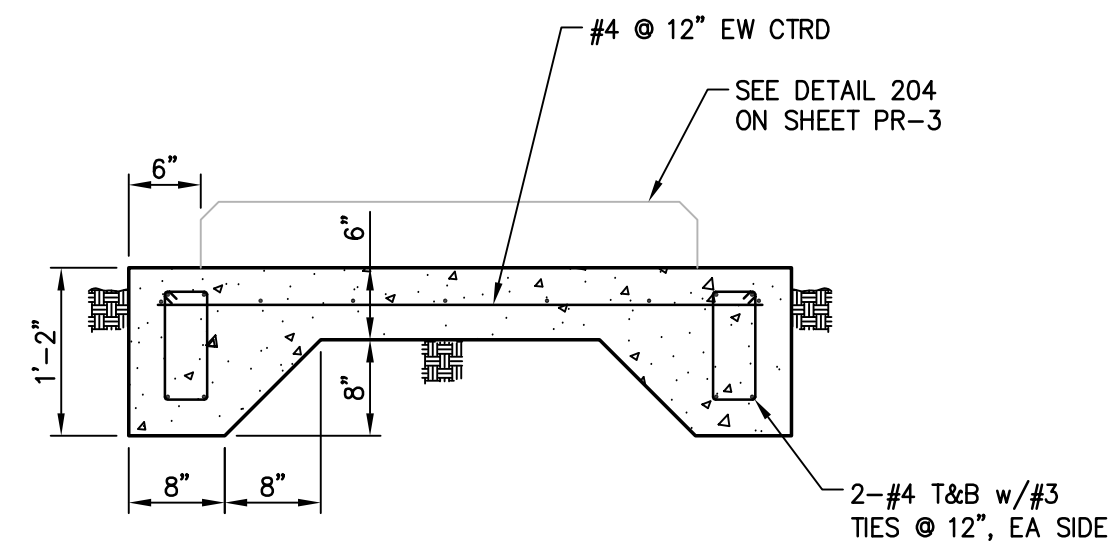
CONSTRUCTION SEQUENCE:

- 1) SHORE EXISTING HC PLANKS PER SHORING ENGINEER PLAN
- 2) CUT NEW OPENING NO LARGER THAN SPECIFIED ON DRAWINGS
- 3) INSTALL ANGLE ON PARALLEL EDGE
- 4) INSTALL CLIP ANGLE
- 5) INSTALL ANGLE ON PERPENDICULAR EDGE
- 6) REMOVE SHORING

6 OPENING IN EXIST ROOF
S21 SCALE: NTS



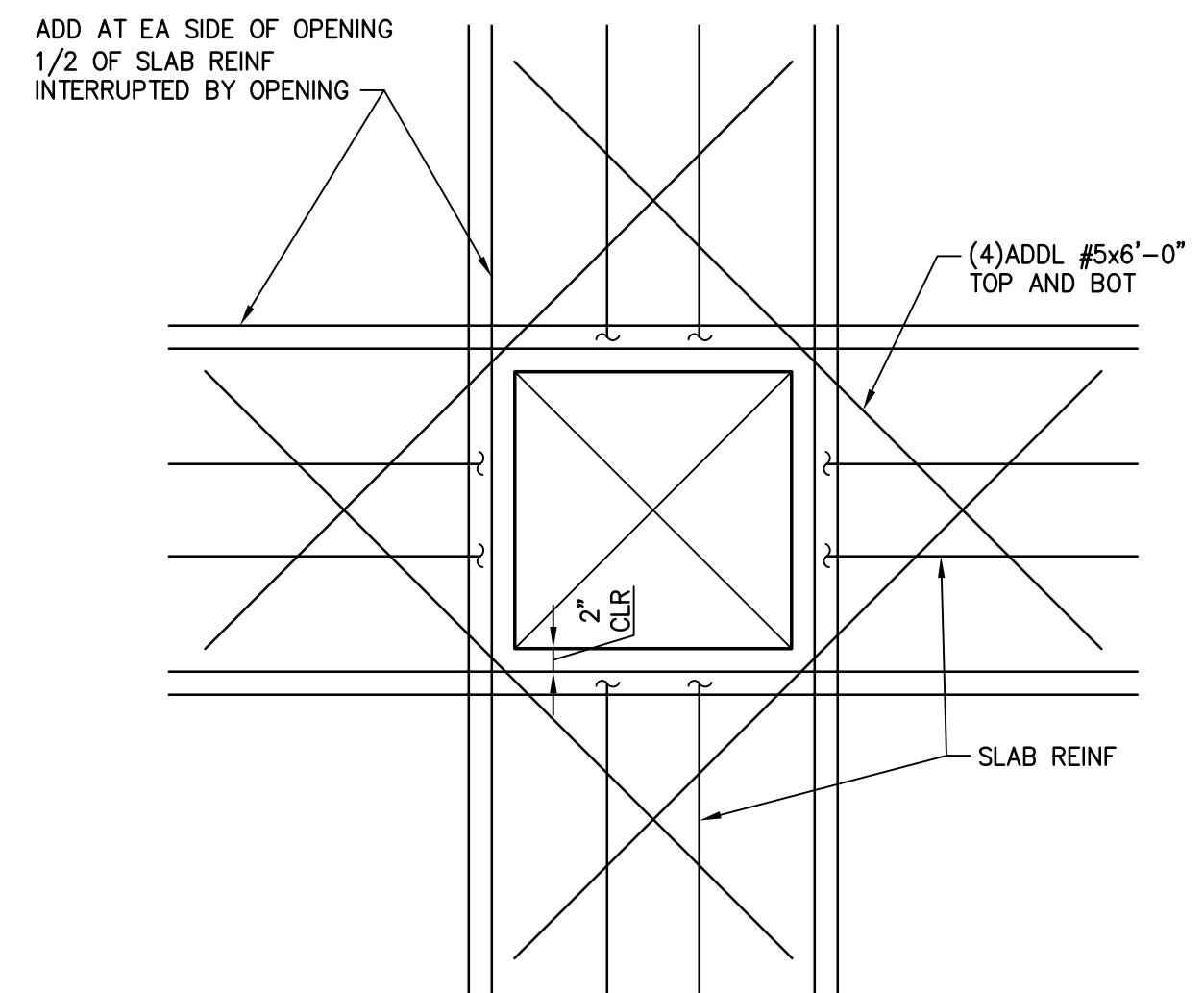
2 CONCRETE SLAB SECTION
S21 SCALE: NTS



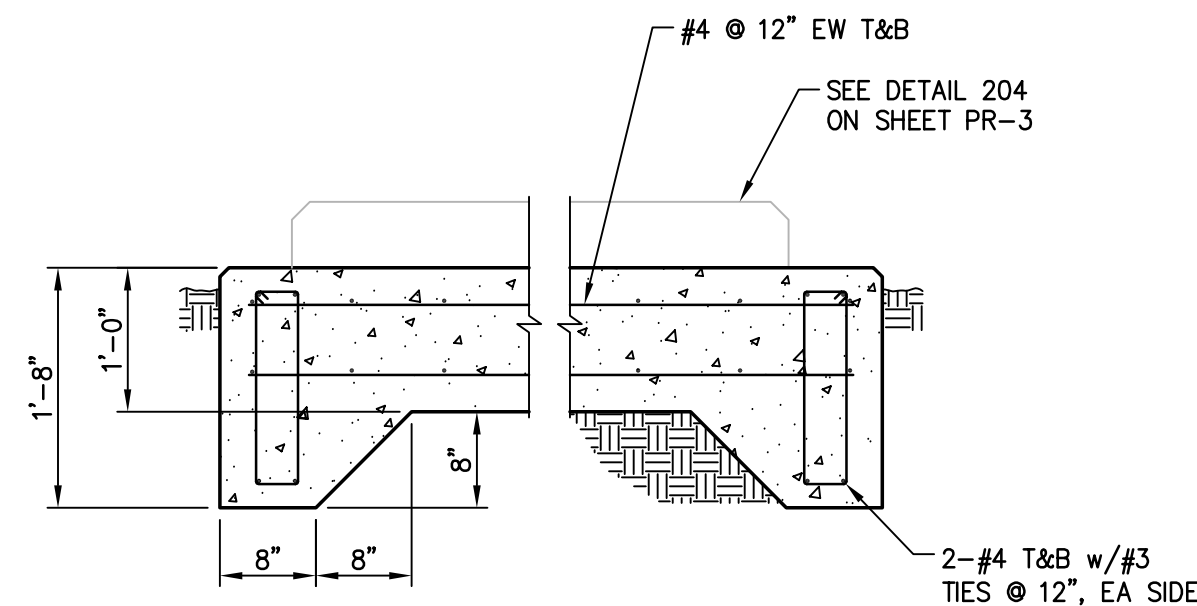
4 TYPICAL EQUIPMENT PAD
S21 SCALE: NTS

NOTES:

1. EQUIPMENT PAD SHOWN FOR EXTERIOR APPLICATIONS.
2. FOR INTERIOR EQUIPMENT, PROVIDE PAD SHOWN IN DETAIL 204 ON SHEET PR-3 ATTACHED TO EXISTING STRUCTURAL SLAB.
3. VERIFY SIZE OF PAD W/EQUIPMENT DIMENSIONS.
4. SEE CIVIL AND MECHANICAL DRAWINGS FOR PAD LOCATIONS.



3 REINF AT CONCRETE OPENING
S21 SCALE: NTS



5 ODOR CONTROL PAD
S21 SCALE: NTS

NOTES:

1. EQUIPMENT PAD SHOWN FOR EXTERIOR APPLICATIONS.
2. FOR INTERIOR EQUIPMENT, PROVIDE PAD SHOWN IN DETAIL 204 ON SHEET PR-3 ATTACHED TO EXISTING STRUCTURAL SLAB.
3. SIZE OF PAD PER PLANS.
4. SEE CIVIL AND MECHANICAL DRAWINGS FOR PAD LOCATIONS.

ELECTRICAL LEGEND

| | | | |
|--|--|--|---|
| | FEEDER CONDUIT "P101" (SEE CONDUIT AND CABLE SCHEDULE) | | CIRCUIT BREAKER (FRAME SIZE/TRIP RATING – "MCP" MOTOR CIRCUIT PROTECTOR) MAGNETIC TYPE COMBINATION MOTOR STARTER, NEMA |
| | CONDUIT RUNS CONCEALED | | SIZE AS INDICATED ("FV" FULL VOLTAGE, "RV" SOLID STATE REDUCED VOLTAGE, "NR" NON-REVERSING, "R" REVERSING, "2S" TWO SPEED, "1W" SINGLE WINDING "2W" TWO WINDING, "LC" LIGHTING CONTACTOR) |
| | CONDUIT RUNS EXPOSED | | VARIABLE FREQUENCY DRIVE |
| | CONDUIT RUNS IN DUCT BANKS OR BELOW GRADE | | MOTOR (NUMERAL INDICATES HORSEPOWER – "H" SPACE HEATER, "T" WINDING THERMOSTAT, "M" MOISTURE DETECTOR) |
| | CONDUIT TURNING UP | | POTENTIAL TRANSFORMER; CURRENT TRANSFORMER |
| | CONDUIT TURNING DOWN | | PILOT LIGHT ("A" AMBER, "B" BLUE, "C" CLEAR, "G" GREEN, "R" RED, "W" WHITE) |
| | CHANGE IN CONDUIT ELEVATIONS USING CONDUIT OUTLET BODIES. | | ALARM SIGNAL OR ANNUNCIATOR POINT |
| | CONDUIT TERMINATED WITH WATERTIGHT CABLE CONNECTOR | | ASSOCIATED DEVICE "REMOTE" FROM MOTOR CONTROL CENTER OR CONTROL PANEL |
| | BRANCH CIRCUIT HOMERUN (ARROWS INDICATE PANEL CIRCUITS, SHORT STROKES INDICATE PHASE OR SWITCHED CONDUCTORS, LONG STROKE DENOTES NEUTRAL, CURVED STROKE DENOTES GROUND. (NO STROKES INDICATES 3/4" CONDUIT WITH 3#12 PHASE/NEUTRAL/GROUND CONDUCTORS). | | HAND/OFF/AUTOMATIC SELECTOR SWITCH CONTROL STATION |
| | HANDHOLE, OR PULLBOX AS INDICATED ("E" ELECTRICAL, "C" COMMUNICATION)) | | SAFE OFF MOMENTARY PUSHBUTTON CONTROL STATION WITH LOCKING DEVICE |
| | TYPICAL WIRING DEVICE NOTATIONS ("W" WEATHERPROOF OR "X" EXPLOSION PROOF DEVICE CONNECTED TO CIRCUIT "5". ENCLOSING SQUARE DENOTES FLOORBOX) | | AMMETER AND AMMETER SWITCH |
| | RECEPTACLE | | HOURS OF OPERATION; ELAPSED TIME METER |
| | SPECIAL PURPOSE OUTLET | | VOLTMETER AND VOLTMETER SWITCH |
| | JUNCTION BOX, PULL BOX | | CONTROL RELAY, INTERPOSING CONTROL RELAY |
| | SINGLE POLE SWITCH CONTROLS FIXTURES MARKED "b" ("2" 2 POLE, "3" 3 WAY, "T" TIME SWITCH, "M" MANUAL MOTOR STARTER) | | GROUND FAULT PROTECTION SYSTEM |
| | THERMOSTAT (LINE VOLTAGE TYPE WITH ON-OFF-AUTO SWITCH UNLESS NOTED). | | POWER MONITOR |
| | SAFETY DISCONNECT SWITCH (AMPERAGE RATING/POLES/FUSE RATING – "NF" NON-FUSED, "DT" DOUBLE-THROW) | | TIME DELAY RELAY |
| | TELEPHONE OUTLET | | SPRING WOUND TIMER SWITCH |
| | TELEPHONE BACKBOARD | | PRESSURE CONTROLLER |
| | LOW VOLTAGE PANELBOARD | | OVERLOAD DEVICE; SURGE CONTROL PANEL |
| | HIGH VOLTAGE PANELBOARD | | LEVEL SWITCH |
| | TYPICAL LIGHTING FIXTURE NOTATIONS (TYPE "E" CONNECTED TO CIRCUIT "2" AND SWITCH "b". SHADING DENOTES EMERGENCY UNIT. BRACKET DENOTES WALL MOUNTING) | | POSITION SWITCH |
| | FLUORESCENT FIXTURE | | PRESSURE SWITCH |
| | H.I.D. FIXTURE | | SOLENOID VALVE |
| | INCANDESCENT FIXTURE | | ALARM HORN |
| | REFERENCE TO NOTE "#" | | SURGE PROTECTION DEVICE |
| | | | TIME CLOCK (CYCLE TIME/TYPE/MIN. SETTING – "AC" ADJUSTABLE CYCLE, "M" MOMENTARY, "P" PULSE, "RC" REPEAT CYCLE) |
| | | | MOTOR OPERATED VALVE |

| LIGHTING FIXTURE SCHEDULE | | | | | | |
|---------------------------|-------------------------------|--|-------|-------|-------|--------------------------|
| TYPE | MANUFACTURER & CATALOG NUMBER | | LAMPS | VOLTS | WATTS | REMARKS |
| A | HOLOPHANE | EMS L48 6000LM LMAFL MD 120 GZ10 40K 80CRI | LED | 120 | 45 | |
| B | HOLOPHANE | BALED 8L 4K 120 C G | LED | 120 | 61 | |
| C | LITHONIA | TWH LED 20C 1000 40K T3M 120 DDBXD | LED | 120 | 72 | |
| D | HOLOPHANE | HPLD 42 530 4K 12 US G L5H 45C | LED | 120 | 74 | HAZARDOUS LOCATIONS |
| W | LITHONIA | TWH LED 20C 1000 40K T3M 120 PER DDBXD WITH DLL127F 1.5 JU | LED | 120 | 72 | PHOTOCELL |
| X | LITHONIA | QM LED R | LED | 120 | 5 | EXIT/EMERGENCY |
| Y | LITHONIA | LHZ618 S 1 R H0806 | LED | 120 | 5 | HAZARDOUS/EMERGENCY/EXIT |
| Z | LITHONIA | WLTU LED | LED | 120 | 5 | EMERGENCY |

LIGHTING FIXTURE NOTES:

1. ALTERNATE LIGHT FIXTURE SUBMITTALS SHALL INCLUDE PHOTOMETRIC CALCULATIONS FOR EACH AREA FOR WHICH THE ALTERNATE LIGHT FIXTURE IS PROPOSED, ELECTRONIC COPIES OF THE ASSOCIATED IES FILES, AND A WRITTEN COMPARISON OF THE CONSTRUCTION, OPTICS, AND ELECTRICAL FEATURES OF THE ALTERNATE LIGHT FIXTURE WITH THE BASIS OF DESIGN LIGHT FIXTURE LISTED ABOVE.

| ELECTRICAL LOAD CALCULATIONS | | |
|---|--------|----------|
| WASTEWATER PUMP 1 | 100 HP | 124 AMPS |
| WASTEWATER PUMP 2 | 100 HP | 124 AMPS |
| WASTEWATER PUMP 3 | 100 HP | 124 AMPS |
| WASTEWATER PUMP 4 | 100 HP | 124 AMPS |
| FLUSHING WATER PUMP | 5 HP | 8 AMPS |
| SEAL WATER PUMP 1 | 5 HP | 8 AMPS |
| SEAL WATER PUMP 2 | 5 HP | 8 AMPS |
| SUMP PUMP 1 | .75 HP | 2 AMPS |
| SUMP PUMP 2 | .75 HP | 2 AMPS |
| FAN SF-1 | 1.5 HP | 3 AMPS |
| FAN SF-2 | .33 HP | 1 AMPS |
| FAN EF-1 | 2 HP | 4 AMPS |
| FAN EF-2 | .50 HP | 1 AMPS |
| ODOR CONTROL BLOWER | 7.5 HP | 11 AMPS |
| TOTAL MOTOR LOAD | | 544 AMPS |
| LIGHTING PANEL L1 | 30 KVA | 36 AMPS |
| LIGHTING PANEL L2 | 30 KVA | 36 AMPS |
| TOTAL CONNECTED LOAD | | 616 AMPS |
| TOTAL NON-COINCIDENTAL LOAD | | 134 AMPS |
| PEAK DEMAND AMPS | | 482 AMPS |
| 0.25 X LARGEST MOTOR | | 31 AMPS |
| MIN SERVICE AMPACITY | | 513 AMPS |
| MIN SERVICE ENTRANCE BREAKER | | 770 AMPS |
| NEW ELECTRICAL SERVICE: 1000 AMP, 480Y/277 VOLT, 3 PHASE | | |

| NON-COINCIDENTAL ELECTRICAL LOAD CALCULATIONS | | |
|---|--------|----------|
| WASTEWATER PUMP | 100 HP | 124 AMPS |
| SEAL WATER PUMP | 5 HP | 8 AMPS |
| SUMP PUMP | .75 HP | 2 AMPS |
| TOTAL NON-COINCIDENTAL MOTOR LOAD | | 134 AMPS |

| ELECTRICAL SERVICE BASIS OF DESIGN | |
|------------------------------------|---------------------------|
| JEA SERVICE TRANSFORMER | 500 KVA |
| JEA FAULT CURRENT LETTER | (Preliminary) 18,892 AMPS |



J. Collins Engineering Associates, LLC

11516-3 San Jose Blvd.
Jacksonville, Florida 32223

CA# 9952

DESIGNER: JEA

CHECKED BY: JEA

DATE: MAR 2020

DATE: MAR 2020

DESIGN ENGINEER: W. DAVID LASSETTER

FLORIDA REGISTRATION NO. 37971

NO. SHEETS: 80

SHEET NO.: 55

DRAWING NO.: E-1

PROJ. NO.: 8002427

DATE: MAR 2020

SCALE: AS SHOWN

REVISIONS

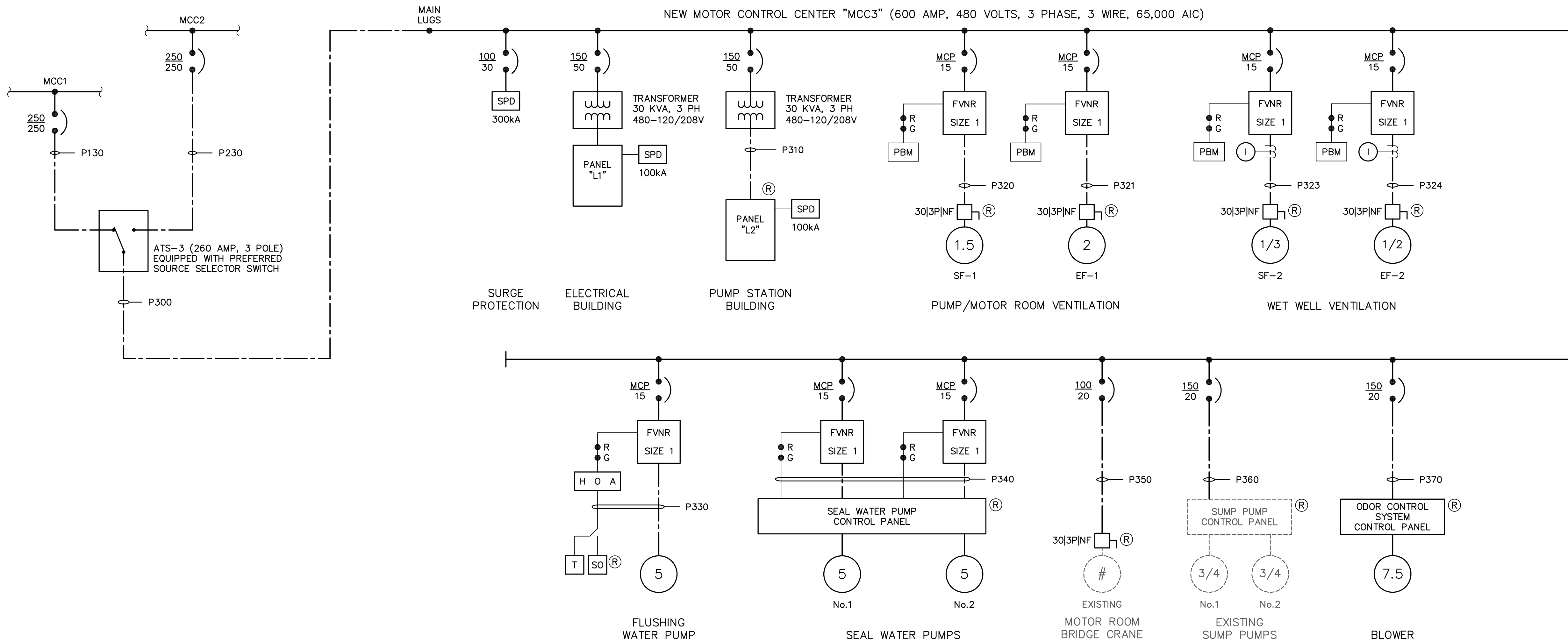
| NO. | BY | DATE | REVISIONS |
|-----|----|------|-----------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

8/18/2020

MODIFIED PLANS FOR REBID


SPRING PARK ROAD PUMP STATION REHABILITATION

ELECTRICAL LEGEND AND SCHEDULES



| LIGHTING PANEL "L1" | | | | | | | | | |
|---|-------------------|------|------|--|-----|-------------------|------|------|-----|
| 100 AMP MCB | | | | NEMA 1 MCC MOUNTED 120/208 VOLTS/ 3 PH/ 4 W | | | | | |
| CKT | LOAD DESCRIPTION | POLE | TRIP | KVA | CKT | LOAD DESCRIPTION | POLE | TRIP | KVA |
| 1 | LIGHTS – INTERIOR | 1 | 20 | 0.3 | 2 | A/C OUTDOOR UNIT | 2 | 35 | 3.5 |
| 3 | RCPTS – INTERIOR | 1 | 20 | 0.8 | 4 | A/C OUTDOOR UNIT | – | – | – |
| 5 | LIGHTS – EXTERIOR | 1 | 20 | 0.3 | 6 | AIR HANDLING UNIT | 2 | 15 | 1.3 |
| 7 | SCADA RADIO PANEL | 1 | 20 | 0.2 | 8 | AIR HANDLING UNIT | – | – | – |
| 9 | FLOAT CONTROLS | 1 | 20 | 0.2 | 10 | SPARE | 1 | 20 | – |
| 11 | PLC CONTROL PANEL | 1 | 20 | 1.0 | 12 | SPARE | 1 | 20 | – |
| 13 | NETWORK CABINET | 1 | 20 | 0.1 | 14 | SPARE | 1 | 20 | – |
| 15 | SECURITY PANEL | 1 | 20 | 0.1 | 16 | SPARE | 1 | 20 | – |
| 17 | SPARE | 1 | 20 | – | 18 | SPARE | 1 | 20 | – |
| 19 | SPARE | 1 | 20 | – | 20 | SPARE | 1 | 20 | – |
| 21 | SPARE | 1 | 20 | – | 22 | SPARE | 1 | 20 | – |
| 23 | SPARE | 1 | 20 | – | 24 | SPARE | 1 | 20 | – |
| 25 | SPACE | 1 | – | – | 26 | SPACE | 1 | – | – |
| 27 | SPACE | 1 | – | – | 28 | SPACE | 1 | – | – |
| 29 | SPACE | 1 | – | – | 30 | SPACE | 1 | – | – |
| BUS MOUNTED SURGE PROTECTION DEVICE MINIMUM 100kA | | | | | | | | | |

| LIGHTING PANEL "L2" | | | | | | | | | |
|---|-----------------------|------|------|-------------------------------------|-----|---------------------|------|------|-----|
| 100 AMP MCB | | | | NEMA 12 120/208 VOLTS/ 3 PH/ 4 W | | | | | |
| CKT | LOAD DESCRIPTION | POLE | TRIP | KVA | CKT | LOAD DESCRIPTION | POLE | TRIP | KVA |
| 1 | LIGHTS – MOTOR RM | 1 | 20 | 1.0 | 2 | ULTRASONIC WW LEVEL | 1 | 20 | 0.1 |
| 3 | RCPTS – MOTOR RM | 1 | 20 | 1.0 | 4 | FLOW METER | 1 | 20 | 0.1 |
| 5 | LIGHTS – PUMP RM | 1 | 20 | 0.7 | 6 | SUMP PUMP | 1 | 20 | 1.0 |
| 7 | RCPTS – PUMP RM | 1 | 20 | 0.6 | 8 | SPARE | 1 | 20 | – |
| 9 | LIGHTS – GEN RM | 1 | 20 | 0.3 | 10 | SPARE | 1 | 20 | – |
| 11 | RCPTS – GEN RM | 1 | 20 | 1.0 | 12 | SPARE | 1 | 20 | – |
| 13 | LIGHTS – WET WELL | 1 | 20 | 0.4 | 14 | SPARE | 1 | 20 | – |
| 15 | SPARE | 1 | 20 | – | 16 | SPARE | 1 | 20 | – |
| 17 | SPARE | 1 | 20 | – | 18 | SPARE | 1 | 20 | – |
| 19 | SPARE | 1 | 20 | – | 20 | SPARE | 1 | 20 | – |
| 21 | SPARE | 1 | 20 | – | 22 | SPARE | 1 | 20 | – |
| 23 | SPARE | 1 | 20 | – | 24 | SPARE | 1 | 20 | – |
| 25 | SPACE | 1 | – | – | 26 | SPACE | 1 | – | – |
| 27 | IRRIGATION CONTROLLER | 1 | 20 | 0.1 | 28 | SPACE | 1 | – | – |
| 29 | IWH-1 | 1 | 35 | 3.5 | 30 | SPACE | 1 | – | – |
| BUS MOUNTED SURGE PROTECTION DEVICE MINIMUM 100kA | | | | | | | | | |



Building Community

NO. SHEETS
80

SHEET NO.
57

DRAWING NO.
E-3

PROJ. NO.
8002427

DATE
MAR 2020

SCALE
AS SHOWN

SPRING PARK ROAD PUMP STATION REHABILITATION

SINGLE LINE DIAGRAM

DESIGNER:
JEA

DATE:
MAR 2020

CHECKED BY:
JEA

DATE:
MAR 2020

DESIGN ENGINEER
W. DAVID LASSETTER

FLORIDA REGISTRATION NO.
37971

NO.
1

BY
JEA

DATE
8/18/2020

REVISIONS

J. Collins Engineering Associates, LLC

11516-3 San Jose Blvd.

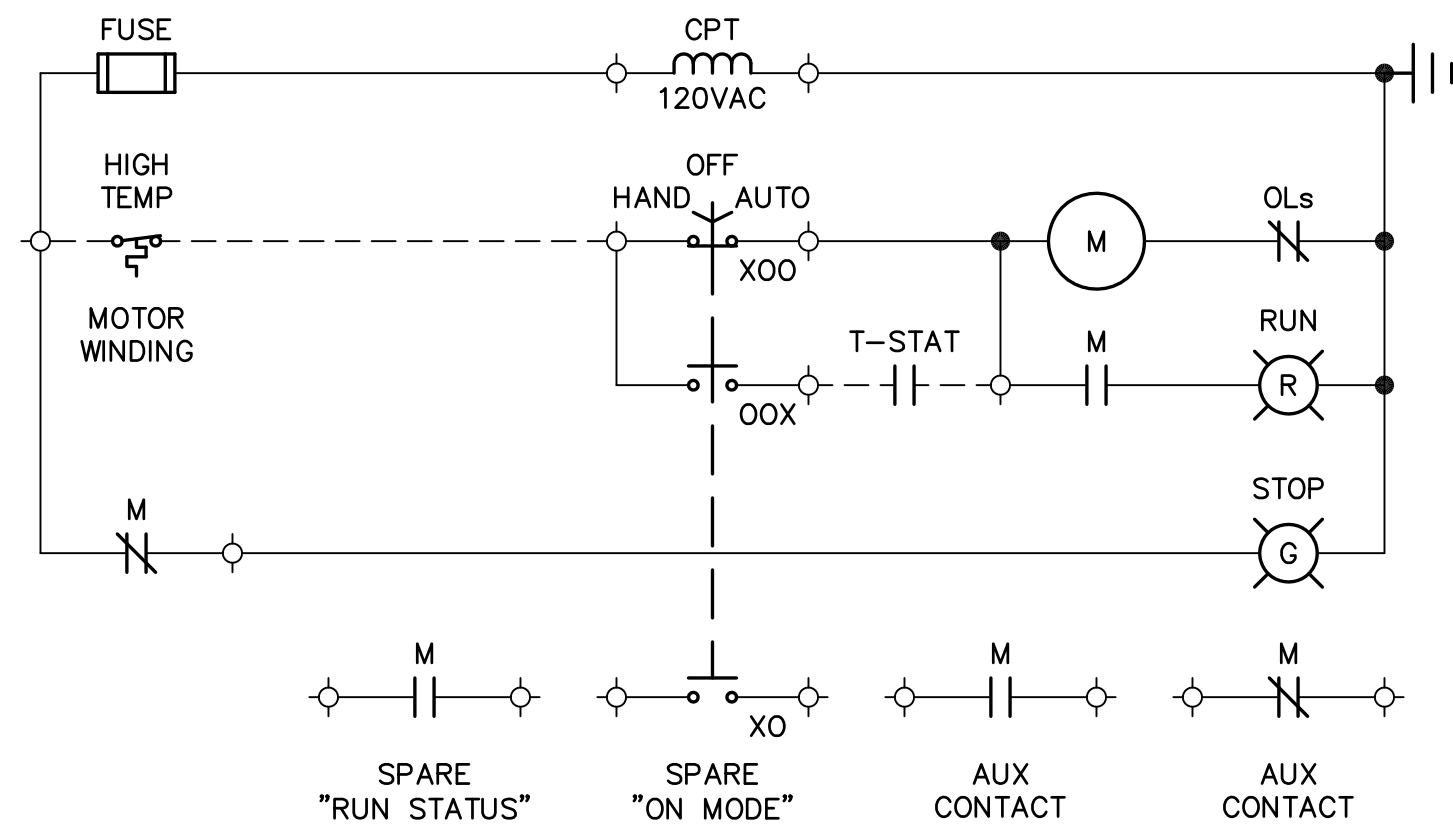
Jacksonville, Florida 32223

CA#
9552

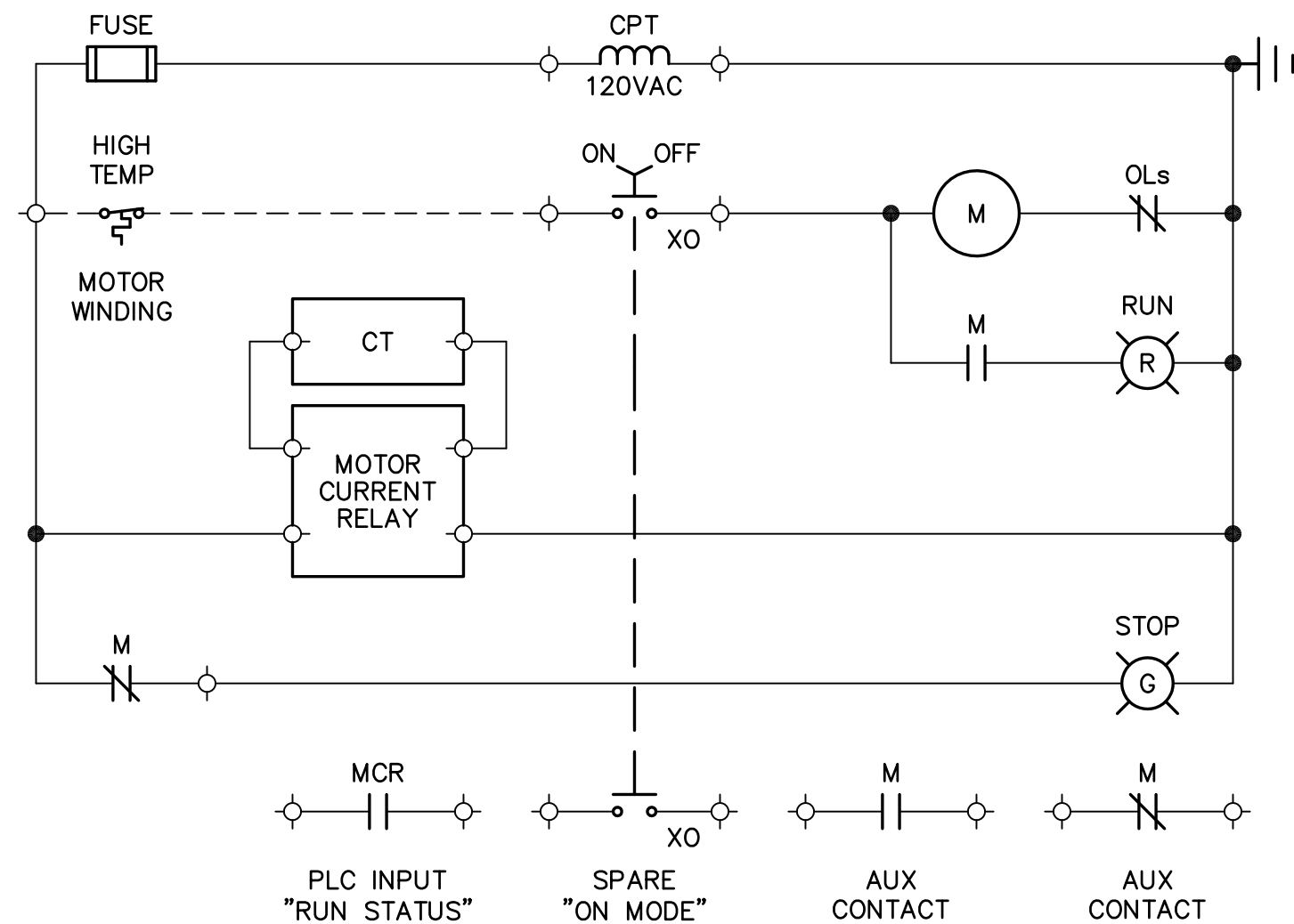
904-262-4121

904-262-4122

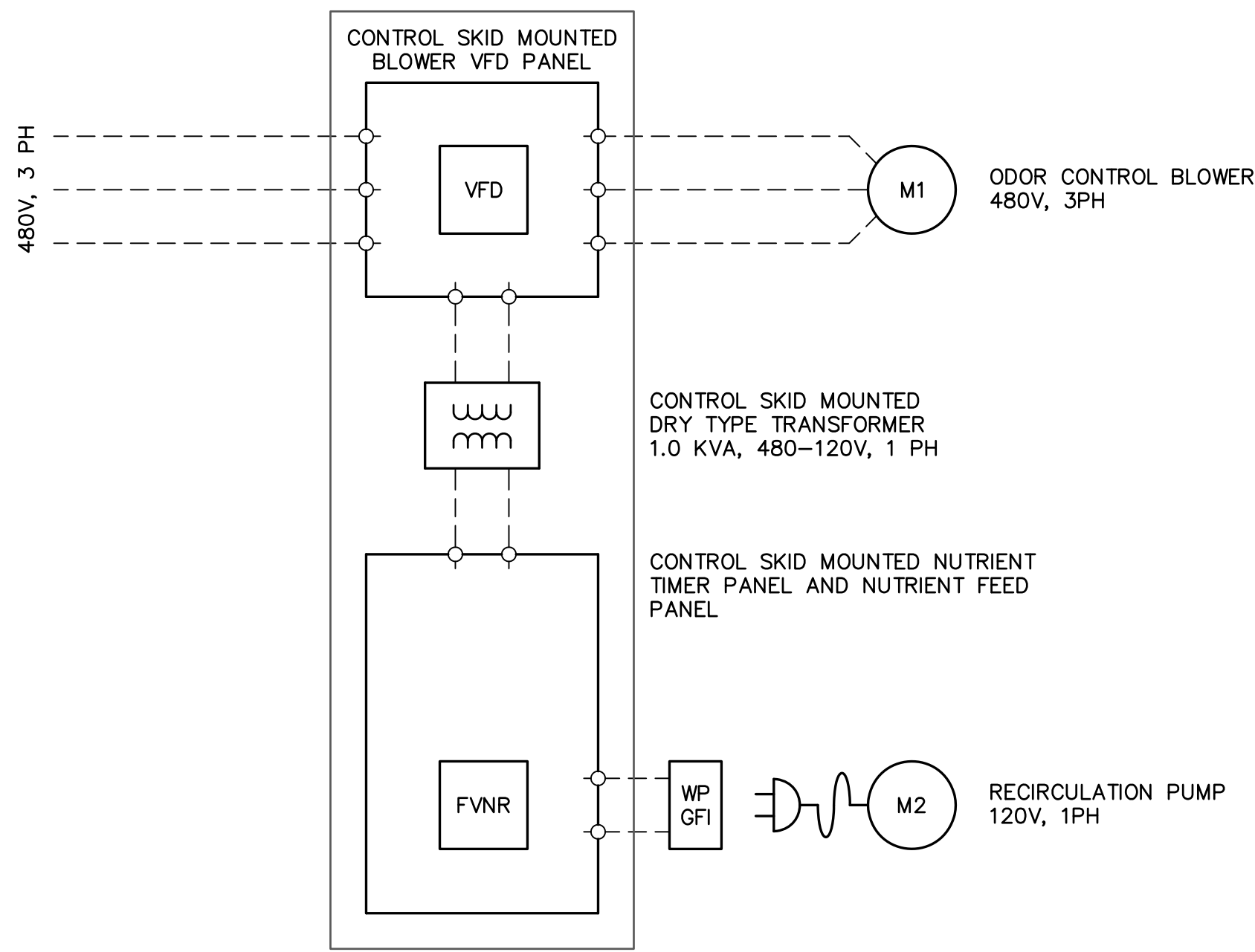
MODIFIED PLANS FOR REBID



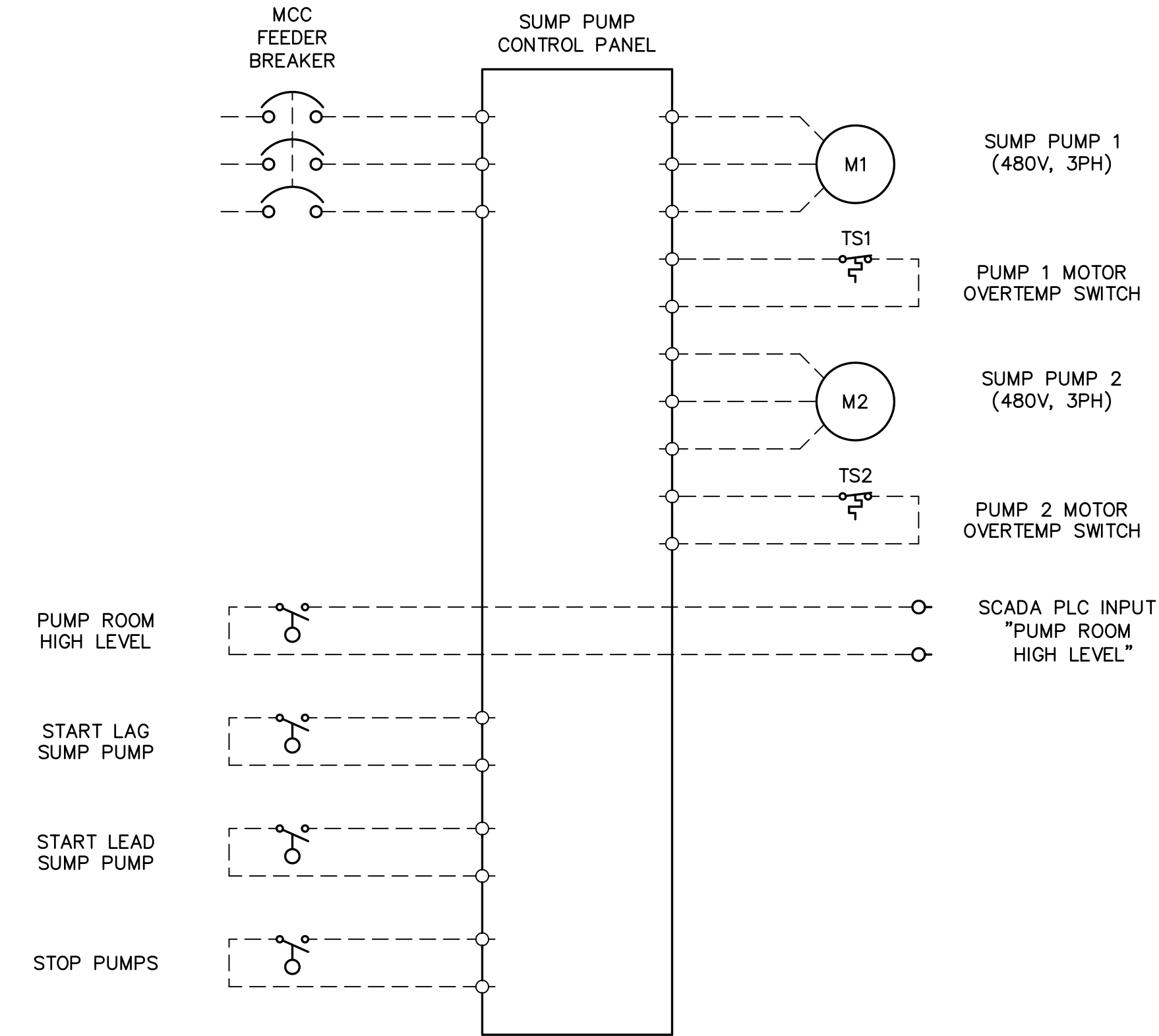
MOTOR ROOM SUPPLY/EXHAUST FAN CONTROL WIRING DIAGRAM



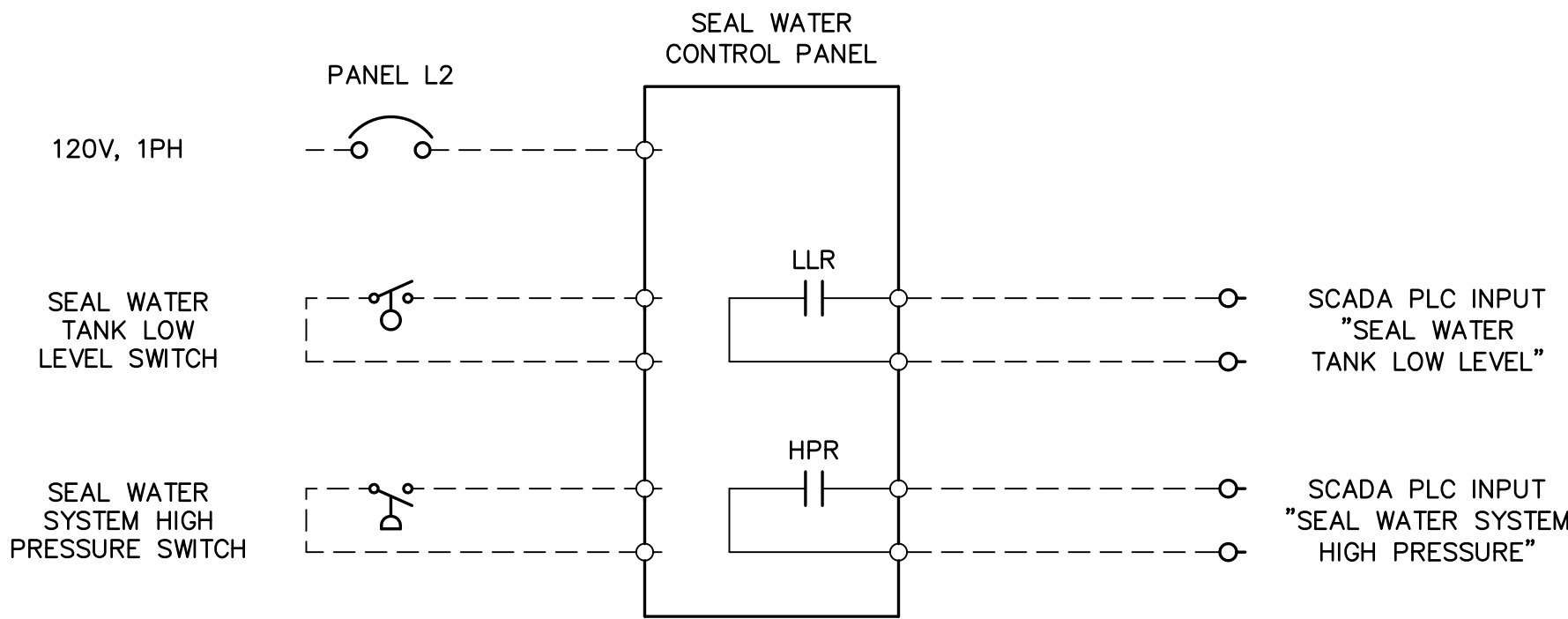
WET WELL SUPPLY/EXHAUST FAN CONTROL WIRING DIAGRAM



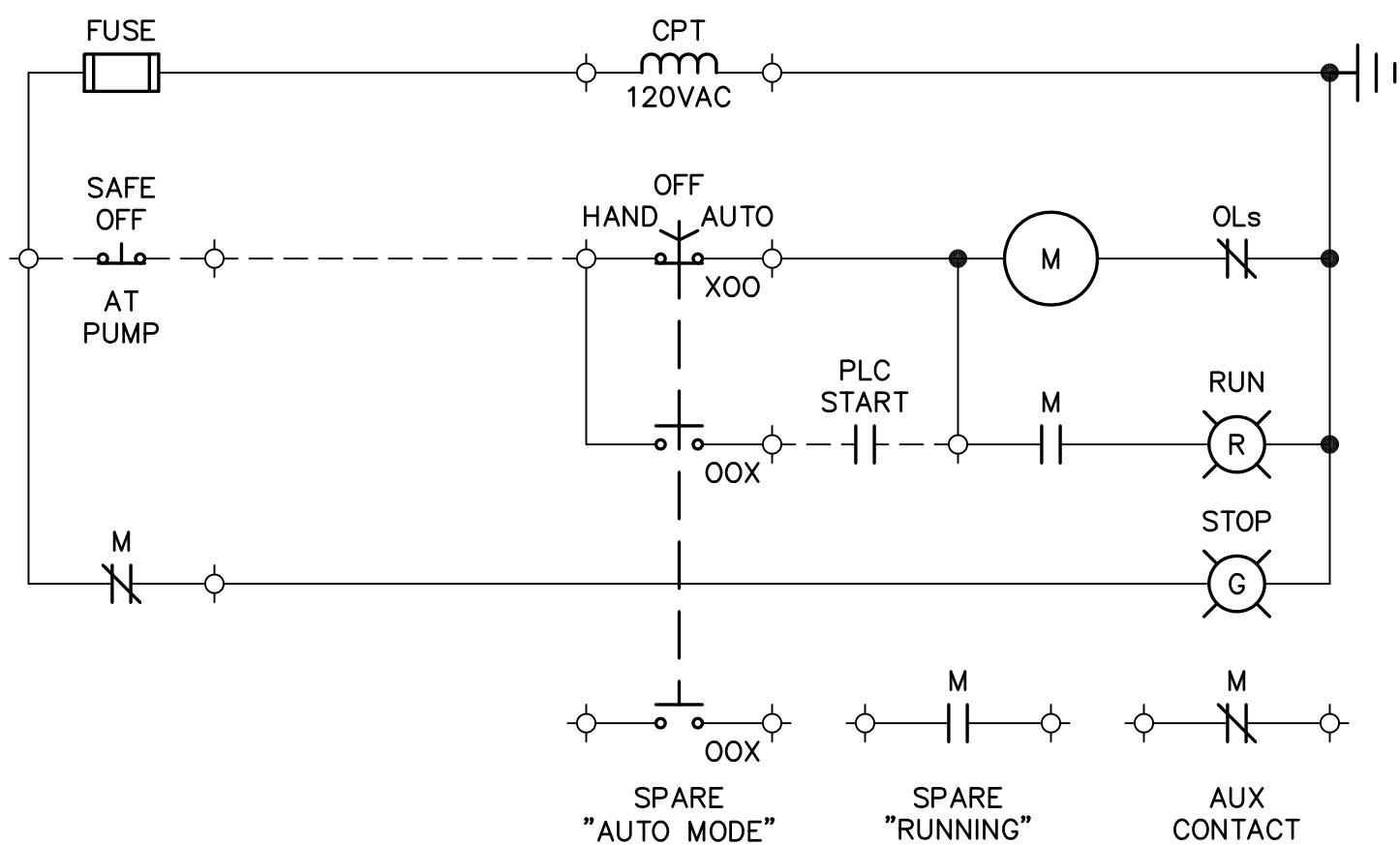
ODOR CONTROL SYSTEM CONTROL SKID WIRING DIAGRAM



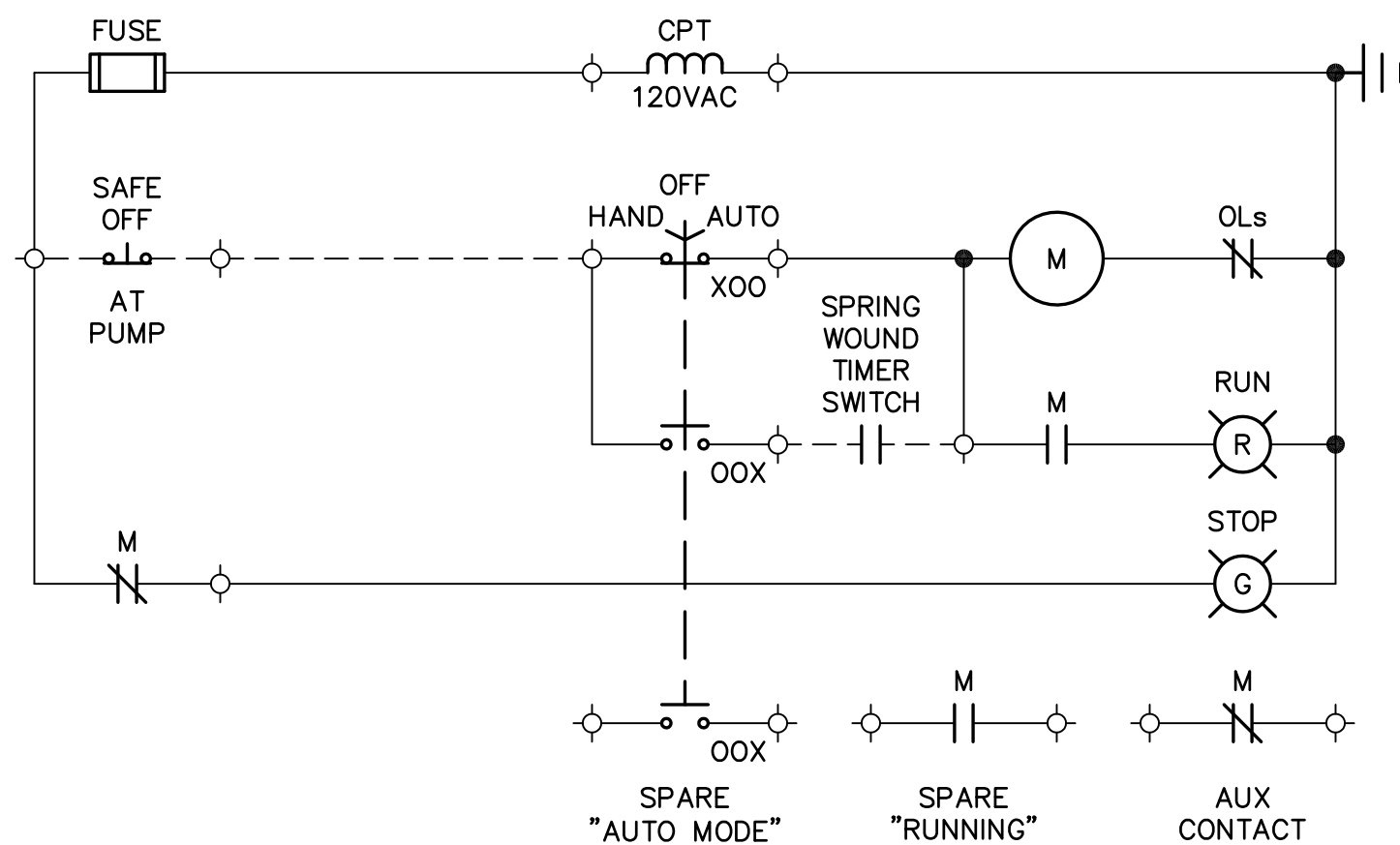
SUMP PUMP CONTROL PANEL WIRING DIAGRAM



SEAL WATER SYSTEM LOCAL CONTROL PANEL WIRING DIAGRAM



TYPICAL SEAL WATER PUMP CONTROL WIRING DIAGRAM



FLUSHING WATER PUMP CONTROL WIRING DIAGRAM



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9952

| NO. | BY | DATE | REVISIONS |
|------|----|------|-----------|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |
| 16. | | | |
| 17. | | | |
| 18. | | | |
| 19. | | | |
| 20. | | | |
| 21. | | | |
| 22. | | | |
| 23. | | | |
| 24. | | | |
| 25. | | | |
| 26. | | | |
| 27. | | | |
| 28. | | | |
| 29. | | | |
| 30. | | | |
| 31. | | | |
| 32. | | | |
| 33. | | | |
| 34. | | | |
| 35. | | | |
| 36. | | | |
| 37. | | | |
| 38. | | | |
| 39. | | | |
| 40. | | | |
| 41. | | | |
| 42. | | | |
| 43. | | | |
| 44. | | | |
| 45. | | | |
| 46. | | | |
| 47. | | | |
| 48. | | | |
| 49. | | | |
| 50. | | | |
| 51. | | | |
| 52. | | | |
| 53. | | | |
| 54. | | | |
| 55. | | | |
| 56. | | | |
| 57. | | | |
| 58. | | | |
| 59. | | | |
| 60. | | | |
| 61. | | | |
| 62. | | | |
| 63. | | | |
| 64. | | | |
| 65. | | | |
| 66. | | | |
| 67. | | | |
| 68. | | | |
| 69. | | | |
| 70. | | | |
| 71. | | | |
| 72. | | | |
| 73. | | | |
| 74. | | | |
| 75. | | | |
| 76. | | | |
| 77. | | | |
| 78. | | | |
| 79. | | | |
| 80. | | | |
| 81. | | | |
| 82. | | | |
| 83. | | | |
| 84. | | | |
| 85. | | | |
| 86. | | | |
| 87. | | | |
| 88. | | | |
| 89. | | | |
| 90. | | | |
| 91. | | | |
| 92. | | | |
| 93. | | | |
| 94. | | | |
| 95. | | | |
| 96. | | | |
| 97. | | | |
| 98. | | | |
| 99. | | | |
| 100. | | | |

DESIGNER: WOL
DATE: JCEA
CHECKED BY: JCEA
DATE: MAR 2020

DESIGN ENGINEER: W. DAVID LASSETTER
FLORIDA REGISTRATION NO. 37971

NO. SHEET'S 80
SHEET NO. 88
DRAWING NO. E-4

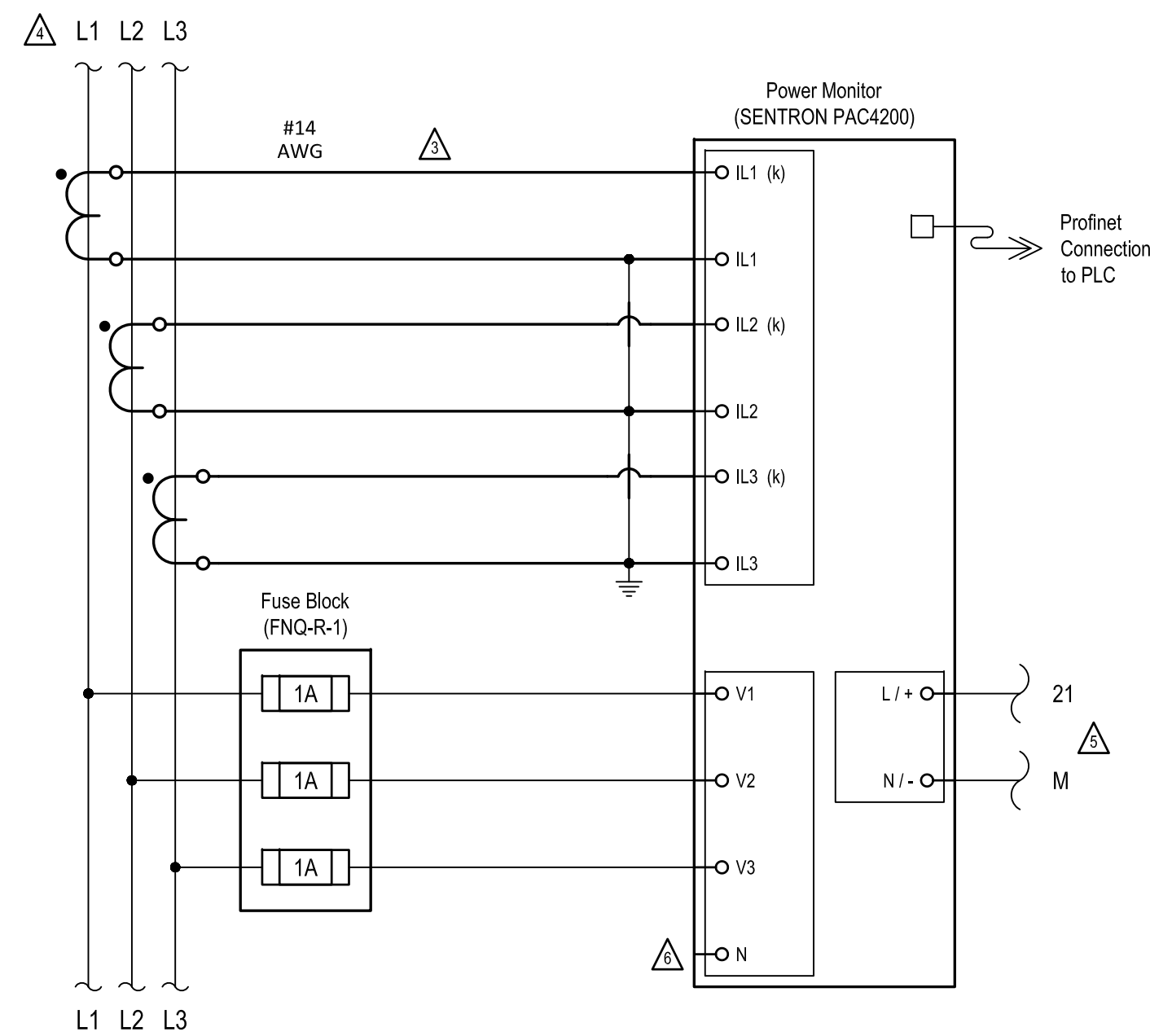
PROJ. NO. 8002427
DATE: MAR 2020
SCALE: AS SHOWN

SPRING PARK ROAD PUMP STATION REHABILITATION

CONTROL WIRING DIAGRAMS

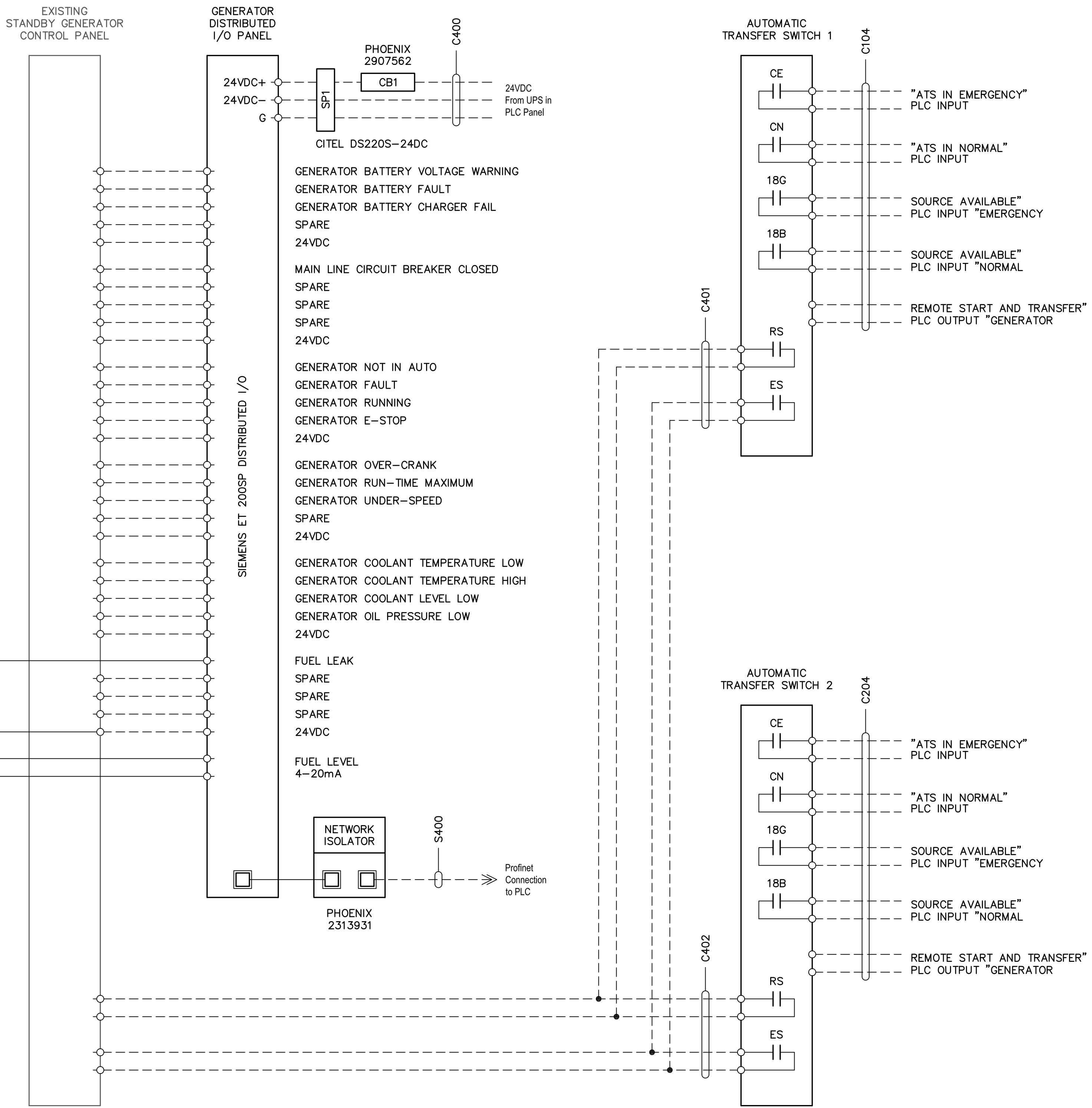
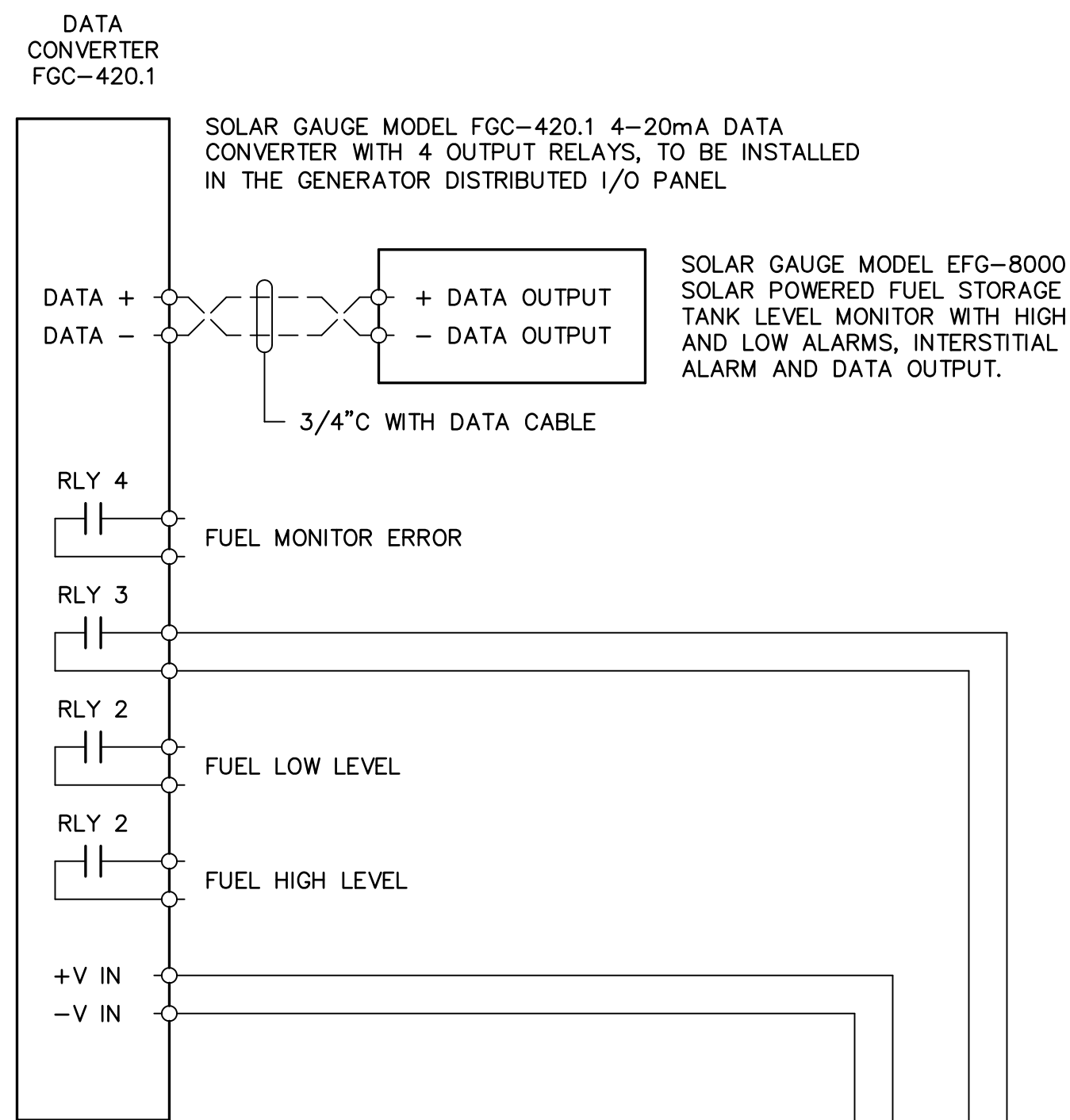
NOTES:

1. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A JEA PRE-APPROVED GENERATOR MANUFACTURER TO FURNISH AND INSTALL THE NEW JEA STANDARD GENERATOR DISTRIBUTED I/O PANEL MOUNTED ON THE EXISTING STANDBY GENERATOR.
2. THE GENERATOR MANUFACTURER SHALL MODIFY THE EXISTING GENERATOR CONTROL PANEL TO PROVIDE ALL REQUIRED I/O SIGNALS BETWEEN THE GENERATOR CONTROL PANEL AND THE GENERATOR DISTRIBUTED I/O PANEL.
3. THE GENERATOR MANUFACTURER SHALL FURNISH AND INSTALL THE NEW JEA STANDARD FUEL STORAGE TANK MONITORING SYSTEM INCLUDING SOLAR GAUGE FUEL STORAGE TANK LEVEL MONITOR, LEVEL SENSORS AND DATA CONVERTER.



| BILL of MATERIAL | | | |
|------------------|--------------|---------------------|---------------------------------------|
| QTY | MANUFACTURER | PART NUMBER | DESCRIPTION |
| 1 | SIEMENS | 7KM4 211-1BA00-3AA0 | PAC-4200 POWER MONITOR, 3-PHASE |
| 1 | SIEMENS | 7KM9 300-0AE01-0AA0 | PROFINET EXPANSION MODULE |
| 1 | SIEMENS | 6AG1 901-1BB20-2AA0 | PROFINET CONNECTOR, SIPLUS, 90" |
| 1 | WAGO | 811-430 | 3-POLE CLASS CC FUSE HOLDER |
| 3 | BUSSMANN | FNQ-R-1 | FUSE, CLASS CC REJECTION, 600V, 1A |
| 1 | SIEMENS | PDS-CTSC-083 | CURRENT XFMR, XXX:5 RATIO, SPLIT CORE |

MOTOR CONTROL CENTER POWER METER DIAGRAM



STANDBY GENERATOR AND FUEL STORAGE TANK REMOTE MONITORING CONTROL WIRING DIAGRAM

GENERAL NOTES:

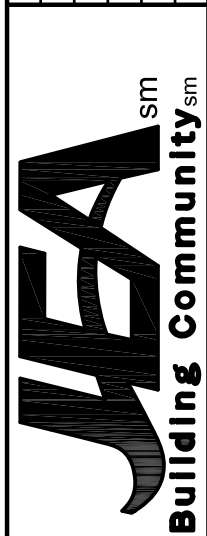
1. REFER TO "433 LIFT STATION SCADA CONTROLS SPECIFICATION" FOR FURTHER DETAILS THAT MUST BE ADHERED TO SUCH AS WIRE, CONTACTOR, AND CIRCUIT BREAKER SIZING.
2. ALL WIRING SHALL BE STRANDED, TIN-PLATED COPPER, APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.
3. WINDING RATIO OF CT CHANGES BASED ON SERVICE SIZE.
4. CT'S ARE TO BE INSTALLED ON THE LOAD SIDE OF THE MAIN BREAKERS (TYPICALLY IN MCC).
5. 24VDC POWER TO POWER MONITOR MUST BE SOURCED FROM UPS IN PLC CABINET.
6. CONNECT POWER MONITOR TO NEUTRAL CONDUCTOR IF PRESENT.



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9952

| NO. | | BY | DATE | REVISIONS | |
|-----|---|--------------------|-----------|-----------|--------------------------|
| 1 | 1 | W. DAVID LASSETTER | 8/18/2020 | 1 | MODIFIED PLANS FOR REBID |

| DESIGNER | | DESIGN ENGINEER | |
|------------------------|------------------------|--------------------------|--------------------------|
| W. DAVID LASSETTER | W. DAVID LASSETTER | W. DAVID LASSETTER | W. DAVID LASSETTER |
| DATE: MAR 2020 | DATE: MAR 2020 | FLORIDA REGISTRATION NO. | FLORIDA REGISTRATION NO. |
| CHECKED BY: J. COLLINS | CHECKED BY: J. COLLINS | DATE: MAR 2020 | DATE: MAR 2020 |



SPRING PARK ROAD PUMP STATION REHABILITATION

| | |
|-----------|----------|
| PROJ. NO. | 8002427 |
| DATE: | MAR 2020 |
| SCALE: | AS SHOWN |

| | |
|-------------|-----|
| NO. SHEETS | 80 |
| SHEET NO. | 59 |
| DRAWING NO. | E-5 |

CONTROL WIRING DIAGRAMS

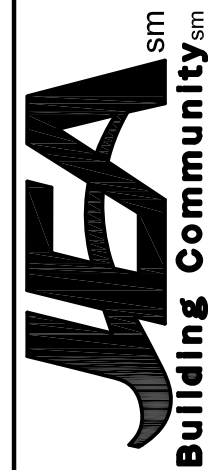
1. GROUNDING ELECTRODE SYSTEM: PROVIDE A GROUND RING PER NEC 250.52, ENCIRCLING THE ELECTRICAL BUILDING, CONSISTING OF CONTINUOUS #4/0 TINNED COPPER CONDUCTOR AT 30" BELOW FINISHED GRADE.
2. PROVIDE GROUND RODS (MINIMUM 5/8" DIAMETER, 20' LONG COPPER CLAD STEEL) BONDED TO EACH QUADRANT OF THE GROUND RING, DRIVEN AT A 45 DEGREE ANGLE AWAY FROM THE CENTER OF THE GROUND RING. GROUND ROD SECTIONS SHALL BE COUPLED AND DRIVEN TO ESTABLISH A MAXIMUM RESISTANCE TO GROUND OF 5 OHMS THROUGHOUT THE GROUNDING ELECTRODE SYSTEM.
3. BOND THE GROUND RING TO THE STEEL REINFORCEMENT IN THE BUILDING FOUNDATION WITH MINIMUM #1/0 TINNED COPPER CONDUCTOR. BOND THE GROUND RING TO THE BUILDING LIGHTNING PROTECTION SYSTEM DOWNLEAD CONDUCTORS.

4. GROUNDING ELECTRODE CONDUCTOR: PROVIDE MINIMUM #2 TINNED COPPER GROUNDING ELECTRODE CONDUCTOR FROM THE GROUND RING TO THE GROUND BUS OF THE SERVICE ENTRANCE MAIN BREAKER, ATCS, MCC, EACH VFD, PUMP STATION CONTROL PANEL, AND THE SCADA SYSTEM RADIO ANTENNA. INSTALL GROUNDING ELECTRODE CONDUCTORS IN 3/4" SCH 80 PVC CONDUIT SLEEVE FOR MECHANICAL PROTECTION.
5. UPON COMPLETION OF THE ELECTRICAL SERVICE, THE CONTRACTOR SHALL MEASURE AND RECORD THE GROUNDING ELECTRODE SYSTEM RESISTANCE TO REMOTE EARTH USING A CLAMP-ON GROUND RESISTANCE TESTER (AMEC 3711, OR APPROVED EQUAL). THE CONTRACTOR SHALL MEASURE AND RECORD THE GROUND RESISTANCE OF A SINGLE TEST GROUND ROD CONNECTED TO THE SERVICE NEUTRAL, STARTING AT A DRIVEN DEPTH OF 20', AND AT ADDITIONAL 10' INCREMENTS UNTIL A MAXIMUM VALUE OF 10 OHMS IS OBTAINED.

- J. Collins Engineering Associates, LLC**
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA#

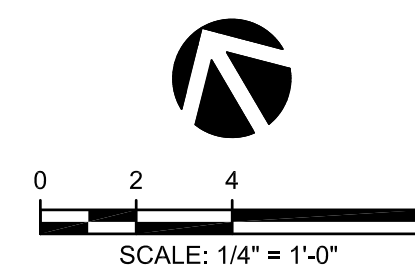
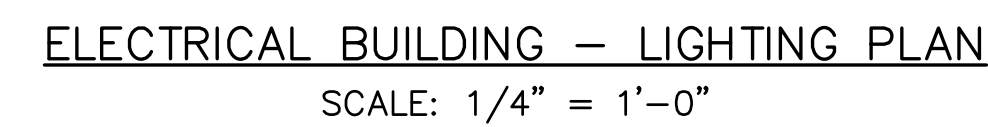
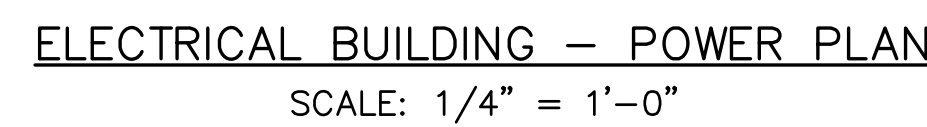
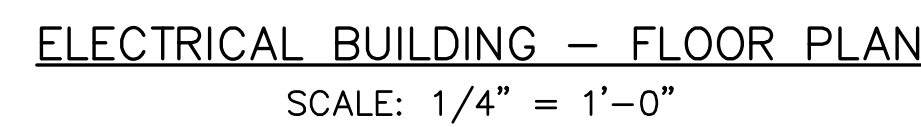
| NO. | BY | DATE | REVISIONS |
|-----|-----|-----------|---------------------------|
| 6. | | | |
| 5. | | | |
| 4. | | | |
| 3. | | | |
| 2. | | | |
| 1. | WNI | 8/18/2020 | MODIFIED PLANS FOR PERIOD |

| | | |
|-------------|----------|--|
| DESIGNER: | WDL | DESIGN ENGINEER W. DAVID LASSETTER FLORIDA REGISTRATION NO. 37971 |
| DRAWN BY: | JCEA | |
| DATE: | MAR 2020 | |
| CHECKED BY: | JCEA | |
| DATE: | MAR 2020 | |



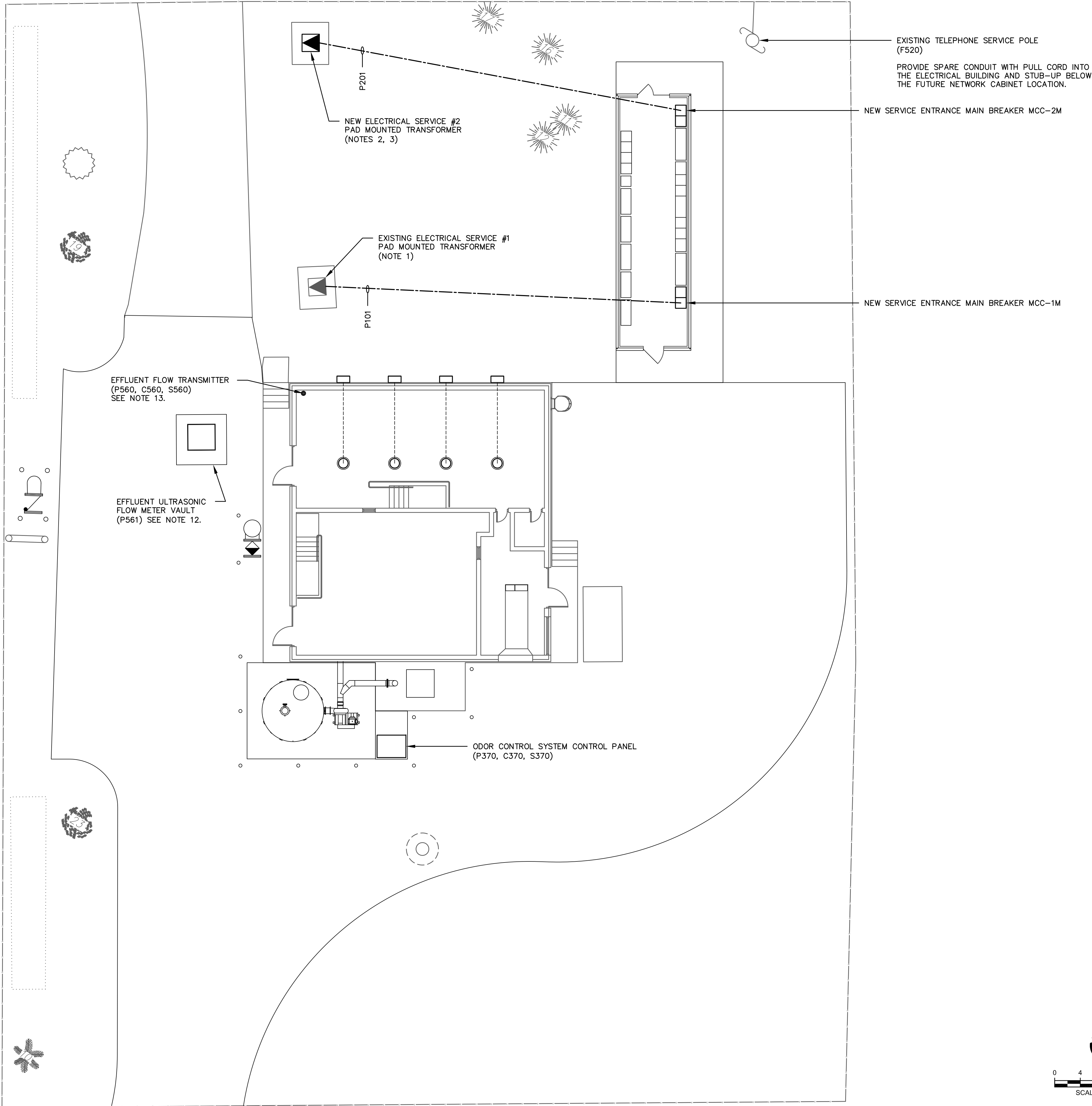
SPRING PARK ROAD PUMP STATION REHABILITATION ELECTRICAL BUILDING POWER AND LIGHTING PLANS

| | |
|--------------------|-------------------|
| NO. SHEETS 80 | PROJ. NO. 8002427 |
| SHEET NO. 60 | DATE: MAR 2020 |
| DRAWING NO. E-6 | SCALE: AS SHOWN |



NOTES:

- ELECTRICAL SERVICE #1: PROVIDE NEW ELECTRICAL SERVICE TO THE NEW ELECTRICAL BUILDING MCC-1M FROM THE EXISTING JEA PAD MOUNTED SERVICE TRANSFORMER. REPLACE THE EXISTING ELECTRICAL SERVICE METER WITH NEW JEA SMART SERVICE METER.
- ELECTRICAL SERVICE #2: PROVIDE NEW ELECTRICAL SERVICE TO THE NEW ELECTRICAL BUILDING MCC-2M FROM A NEW JEA PAD MOUNTED SERVICE TRANSFORMER.
- THE NEW ELECTRICAL SERVICE #2 PAD MOUNTED TRANSFORMER AND PRE-CAST TRANSFORMER PAD SHALL BE PROVIDED BY JEA. THE NEW UG PRIMARY TO THE TRANSFORMER SHALL BE PROVIDED BY JEA. THE CONTRACTOR SHALL INSTALL THE TRANSFORMER PAD, BOLLARDS, METERING, PRIMARY CONDUITS ETC. IN ACCORDANCE WITH JEA REQUIREMENTS.
- THE EXISTING ELECTRICAL FACILITIES SHALL REMAIN IN OPERATION UNTIL SUCH TIME AS ALL FACILITY LOADS HAVE BEEN TRANSFERRED TO THE NEW ELECTRICAL FACILITIES.
- PROVIDE SIGN AS FOLLOWS PERMANENTLY MOUNTED AT THE EXISTING JEA REVENUE METER: "GENERATOR-JEA ISOLATION POINT LOCATED AT 1200A MAIN BREAKER INSIDE THE ELECTRICAL BUILDING". SIGN SHALL BE AT LEAST 6" X 6" IN SIZE AND USE A MINIMUM OF 3/8" LETTERING. SIGN SHALL HAVE RED FACE WITH WHITE LETTERING.
- PROVIDE SIGN AS FOLLOWS PERMANENTLY MOUNTED AT THE 1200A MAIN BREAKER: "GENERATOR-JEA ISOLATION POINT". SIGN SHALL BE AT LEAST 6" X 6" IN SIZE AND USE A MINIMUM OF 3/8" LETTERING. SIGN SHALL HAVE RED FACE WITH WHITE LETTERING.
- THE PROJECTS GROUNDING SYSTEM SHALL CONSIST OF A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC SPECIFICATIONS, BONDED TO A MAIN GROUND BUS INTERCONNECTING ALL POWER DISTRIBUTION EQUIPMENT. GROUND ROD SECTIONS SHALL BE COUPLED AND DRIVEN TO ESTABLISH A MAXIMUM RESISTANCE TO GROUND OF 10 OHMS THROUGHOUT THE GROUNDING SYSTEM.
- PROVIDE A UL MASTER LABEL LIGHTNING PROTECTION SYSTEM FOR THE NEW ELECTRICAL BUILDING, INCLUDING GROUND RODS AT EACH LIGHTNING PROTECTION SYSTEM DOWN CONDUCTOR. INTERCONNECT EACH SYSTEM GROUND ROD WITH A CONTINUOUS #4/0 COPPER COUNTERPOISE LOOP. BOND THE SERVICE ENTRANCE EQUIPMENT, POWER DISTRIBUTION EQUIPMENT, GENERATOR, FUEL STORAGE TANK, AND FENCING TO THE LOOP COUNTERPOISE.
- THE CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BID TO EVALUATE EXISTING CONDITIONS. INSTALLATION OF THE NEW FACILITIES WILL REQUIRE FIELD COORDINATION WITH PLANT OPERATIONS TO PERMIT MAINTENANCE OF OPERATION DURING CONSTRUCTION. DURATION OF POWER OUTAGES SHALL BE MINIMUM REQUIRED FOR SAFE INSTALLATION AND SHALL BE SCHEDULED WITH AND APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID EXISTING UNDERGROUND UTILITIES INCLUDING PROCESS PIPING, WATER LINES, CHEMICAL FEED PIPING, ELECTRICAL CONDUITS, TELEPHONE, ETC. HAND EXCAVATION SHALL BE REQUIRED IN CONGESTED AREAS WHERE THE EXACT LOCATION OF ALL UTILITIES IS UNKNOWN AND SURFACE LOCATION IS NOT PRACTICAL. LOCATIONS SHOWN FOR THE EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. NOT ALL OF THE EXISTING UNDERGROUND UTILITIES ARE SHOWN. FIELD ADJUST LOCATIONS OF THE NEW FACILITIES TO ACCOMMODATE THE EXISTING SITE CONDITIONS AND UNDERGROUND UTILITIES.
- THE LISTING OF EQUIPMENT TO BE SALVAGED SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THE FOLLOWING: AUTOMATIC TRANSFER SWITCH, SCADA SYSTEM PLC PANEL, AND THE VARIABLE FREQUENCY DRIVES. OTHER ITEMS WILL BE MARKED IN THE FIELD WITH PAINT OR TAGS TO DENOTE EITHER SALVAGE OR DEMOLITION.
- FLOW METER VAULT: PROVIDE WP TYPE GFI RECEPTACLE AT THE MAXIMUM ELEVATION POSSIBLE INSIDE THE FLOW METER VAULT FOR SUMP PUMP.
- FLOW METER: NEW ULTRASONIC FLOW TRANSMITTER SHALL BE WALL MOUNTED INSIDE THE BUILDING. PROVIDE POWER AND SIGNAL LINE SURGE PROTECTION ADJACENT TO THE FLOW TRANSMITTER. PROVIDE GROUND ROD OUTSIDE THE BUILDING FOR CONNECTION TO THE SURGE PROTECTION. PROVIDE 2-1" PVC CONDUITS INTO THE VAULT FOR THE FLOW METER SENSOR CABLES.

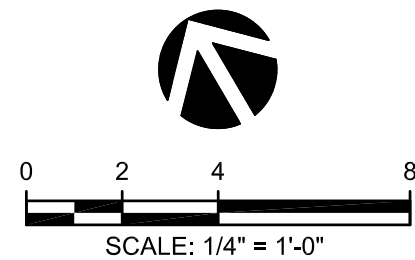
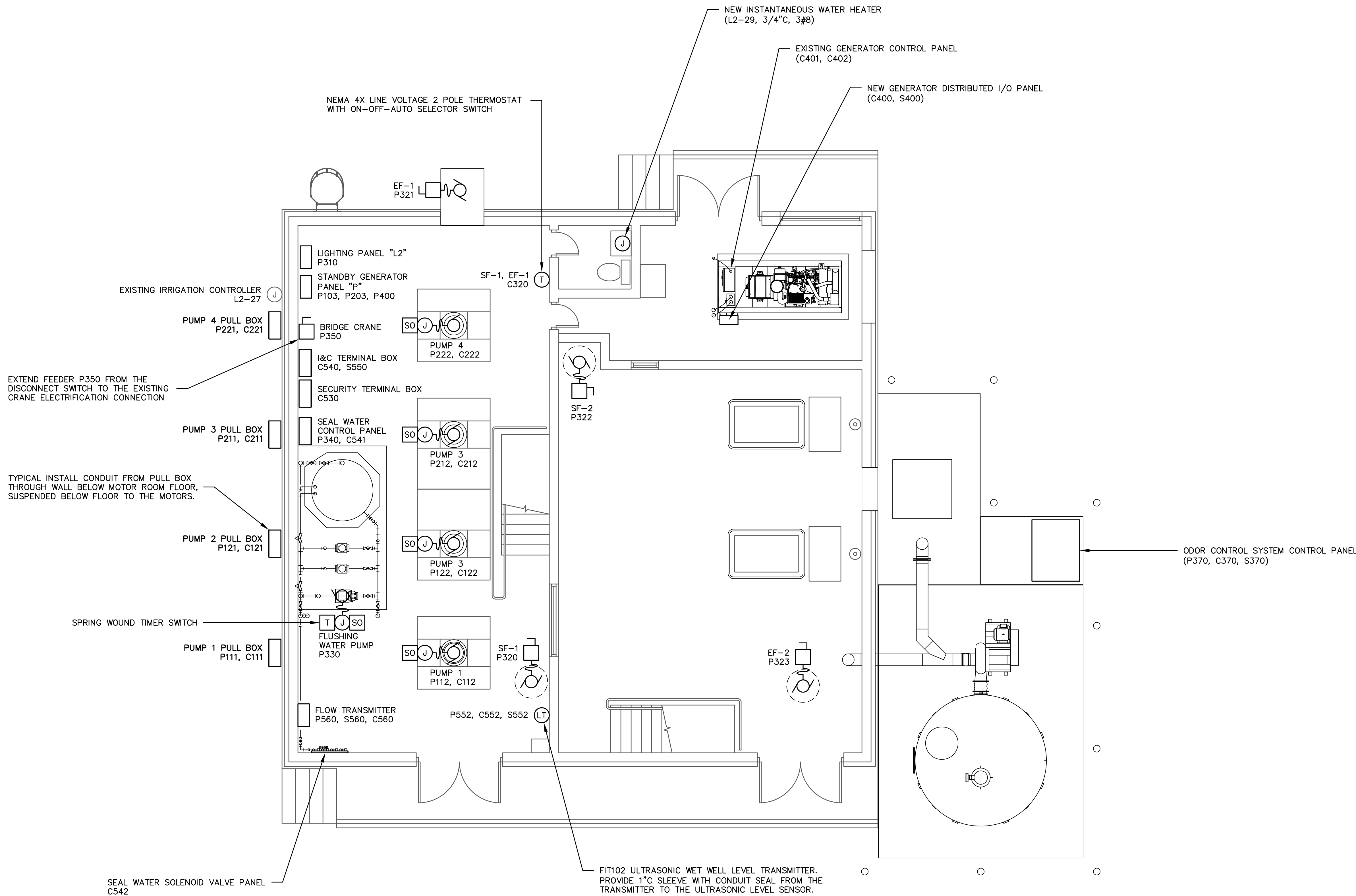



| | | | | | | | | |
|---|--|--|---|--|--|--------------------|--|--|
| J. Collins Engineering Associates, LLC CA# 9952 11516-3 San Jose Blvd. Jacksonville, Florida 32223 904-263-4121 | | | DESIGN ENGINEER W. DAVID LASSETTER FLORIDA REGISTRATION NO. 37971 | | | REVISIONS | | |
| NO. SHEETS 80 | | | PROJECT NO. 8002427 | | | NO. BY DATE | | |
| SHEET NO. MAR 2020 | | | DATE: MAR 2020 | | | 1. WDL 8/18/2020 | | |
| SCALE: AS SHOWN | | | CHECKED BY: JEA | | | 2. WDL 8/18/2020 | | |
| DRAWING NO. E-7 | | | DATE: MAR 2020 | | | 3. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 4. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 5. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 6. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 7. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 8. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 9. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 10. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 11. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 12. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 13. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 14. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 15. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 16. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 17. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 18. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 19. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 20. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 21. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 22. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 23. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 24. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 25. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 26. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 27. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 28. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 29. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 30. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 31. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 32. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 33. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 34. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 35. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 36. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 37. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 38. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 39. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 40. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 41. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 42. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 43. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 44. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 45. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 46. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 47. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 48. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 49. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 50. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 51. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 52. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 53. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 54. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 55. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 56. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 57. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 58. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 59. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 60. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 61. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 62. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 63. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 64. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 65. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 66. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 67. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 68. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 69. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 70. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 71. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 72. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 73. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 74. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 75. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 76. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 77. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 78. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 79. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 80. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 81. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 82. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 83. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 84. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 85. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 86. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 87. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 88. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 89. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 90. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 91. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 92. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 93. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 94. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 95. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 96. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 97. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 98. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 99. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 100. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 101. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 102. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 103. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 104. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 105. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 106. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 107. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 108. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 109. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 110. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 111. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 112. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 113. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 114. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 115. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 116. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 117. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 118. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 119. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 120. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 121. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 122. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 123. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 124. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 125. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 126. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 127. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 128. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 129. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 130. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 131. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 132. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 133. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 134. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 135. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 136. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 137. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 138. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 139. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 140. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 141. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 142. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 143. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 144. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 145. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 146. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 147. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 148. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 149. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 150. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 151. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 152. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 153. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 154. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 155. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 156. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 157. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 158. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 159. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 160. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 161. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 162. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 163. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 164. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 165. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 166. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 167. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 168. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 169. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 170. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 171. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 172. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 173. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 174. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 175. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 176. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 177. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 178. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 179. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 180. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 181. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 182. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 183. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 184. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 185. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 186. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 187. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 188. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 189. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 190. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 191. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 192. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 193. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 194. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 195. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 196. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 197. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 198. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 199. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 200. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 201. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 202. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 203. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 204. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 205. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 206. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 207. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 208. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 209. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 210. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 211. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 212. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 213. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 214. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 215. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 216. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 217. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 218. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 219. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 220. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 221. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 222. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 223. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 224. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 225. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 226. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 227. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 228. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 229. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 230. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 231. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 232. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 233. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 234. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 235. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 236. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 237. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 238. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 239. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 240. WDL 8/18/2020 | | |
| | | | DATE: MAR 2020 | | | 241. WDL 8/18/2020 | | |
| | | | | | | | | |

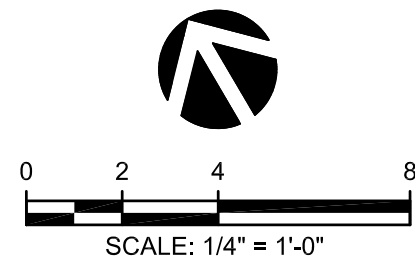
SPRING PARK ROAD PUMP STATION REHABILITATION

ELECTRICAL SITE PLAN





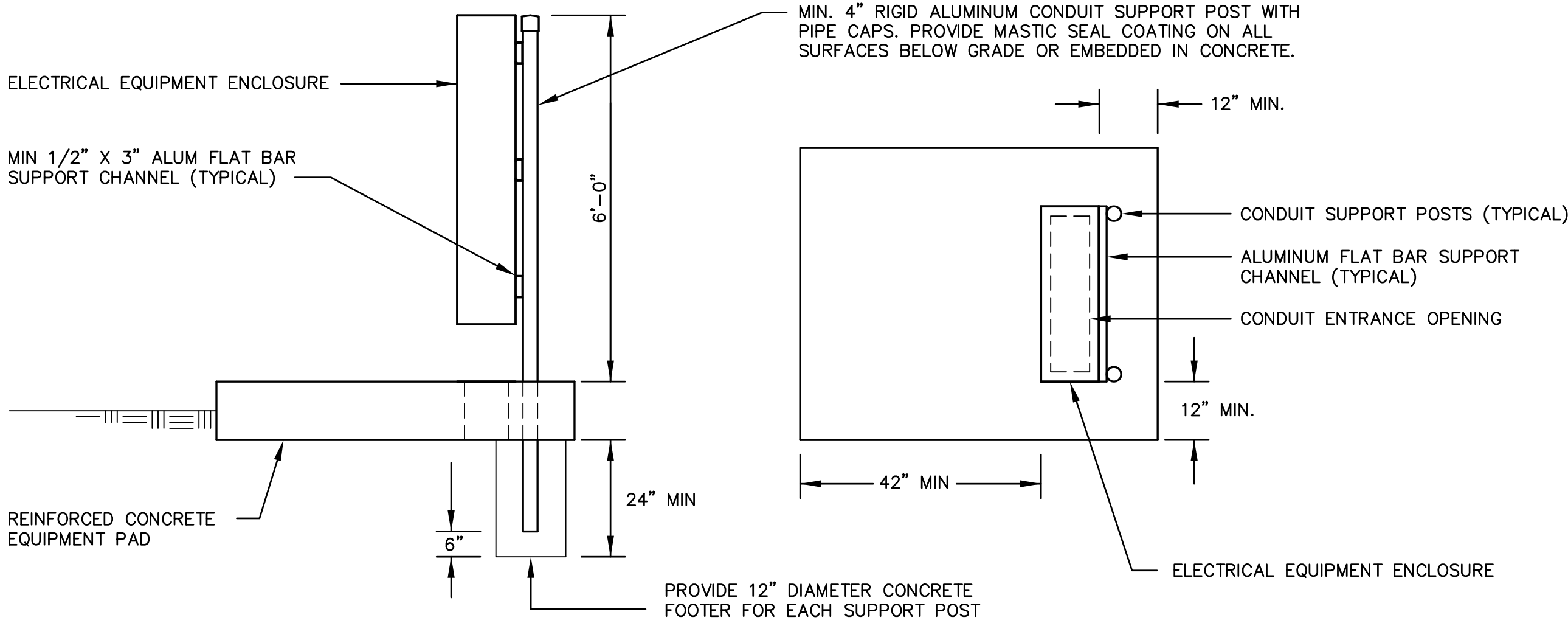


| | | | | | |
|--|--|---|--|---------------------------------------|--|
|  | | SPRING PARK ROAD PUMP STATION REHABILITATION | | PROJ. NO. 8002427 | |
| PUMP BUILDING UPPER LEVEL | | DESIGNER: JEA | | DATE: MAR 2020 | |
| POWER PLAN | | CHECKED BY: JEA | | SCALE: AS SHOWN | |
| | | DESIGN ENGINEER: W. DAVID LASSETTER | | FLORIDA REGISTRATION NO. 37971 | |
| | | NO. BY DATE | | REVISIONS | |
| | | 1. J. COLLINS | | 1. J. COLLINS | |
| | | 2. J. COLLINS | | 2. J. COLLINS | |
| | | 3. J. COLLINS | | 3. J. COLLINS | |
| | | 4. J. COLLINS | | 4. J. COLLINS | |
| | | 5. J. COLLINS | | 5. J. COLLINS | |
| | | 6. J. COLLINS | | 6. J. COLLINS | |
| | | 7. J. COLLINS | | 7. J. COLLINS | |
| | | 8. J. COLLINS | | 8. J. COLLINS | |
| | | 9. J. COLLINS | | 9. J. COLLINS | |
| | | 10. J. COLLINS | | 10. J. COLLINS | |
| | | 11. J. COLLINS | | 11. J. COLLINS | |
| | | 12. J. COLLINS | | 12. J. COLLINS | |
| | | 13. J. COLLINS | | 13. J. COLLINS | |
| | | 14. J. COLLINS | | 14. J. COLLINS | |
| | | 15. J. COLLINS | | 15. J. COLLINS | |
| | | 16. J. COLLINS | | 16. J. COLLINS | |
| | | 17. J. COLLINS | | 17. J. COLLINS | |
| | | 18. J. COLLINS | | 18. J. COLLINS | |
| | | 19. J. COLLINS | | 19. J. COLLINS | |
| | | 20. J. COLLINS | | 20. J. COLLINS | |
| | | 21. J. COLLINS | | 21. J. COLLINS | |
| | | 22. J. COLLINS | | 22. J. COLLINS | |
| | | 23. J. COLLINS | | 23. J. COLLINS | |
| | | 24. J. COLLINS | | 24. J. COLLINS | |
| | | 25. J. COLLINS | | 25. J. COLLINS | |
| | | 26. J. COLLINS | | 26. J. COLLINS | |
| | | 27. J. COLLINS | | 27. J. COLLINS | |
| | | 28. J. COLLINS | | 28. J. COLLINS | |
| | | 29. J. COLLINS | | 29. J. COLLINS | |
| | | 30. J. COLLINS | | 30. J. COLLINS | |
| | | 31. J. COLLINS | | 31. J. COLLINS | |
| | | 32. J. COLLINS | | 32. J. COLLINS | |
| | | 33. J. COLLINS | | 33. J. COLLINS | |
| | | 34. J. COLLINS | | 34. J. COLLINS | |
| | | 35. J. COLLINS | | 35. J. COLLINS | |
| | | 36. J. COLLINS | | 36. J. COLLINS | |
| | | 37. J. COLLINS | | 37. J. COLLINS | |
| | | 38. J. COLLINS | | 38. J. COLLINS | |
| | | 39. J. COLLINS | | 39. J. COLLINS | |
| | | 40. J. COLLINS | | 40. J. COLLINS | |
| | | 41. J. COLLINS | | 41. J. COLLINS | |
| | | 42. J. COLLINS | | 42. J. COLLINS | |
| | | 43. J. COLLINS | | 43. J. COLLINS | |
| | | 44. J. COLLINS | | 44. J. COLLINS | |
| | | 45. J. COLLINS | | 45. J. COLLINS | |
| | | 46. J. COLLINS | | 46. J. COLLINS | |
| | | 47. J. COLLINS | | 47. J. COLLINS | |
| | | 48. J. COLLINS | | 48. J. COLLINS | |
| | | 49. J. COLLINS | | 49. J. COLLINS | |
| | | 50. J. COLLINS | | 50. J. COLLINS | |
| | | 51. J. COLLINS | | 51. J. COLLINS | |
| | | 52. J. COLLINS | | 52. J. COLLINS | |
| | | 53. J. COLLINS | | 53. J. COLLINS | |
| | | 54. J. COLLINS | | 54. J. COLLINS | |
| | | 55. J. COLLINS | | 55. J. COLLINS | |
| | | 56. J. COLLINS | | 56. J. COLLINS | |
| | | 57. J. COLLINS | | 57. J. COLLINS | |
| | | 58. J. COLLINS | | 58. J. COLLINS | |
| | | 59. J. COLLINS | | 59. J. COLLINS | |
| | | 60. J. COLLINS | | 60. J. COLLINS | |
| | | 61. J. COLLINS | | 61. J. COLLINS | |
| | | 62. J. COLLINS | | 62. J. COLLINS | |
| | | 63. J. COLLINS | | 63. J. COLLINS | |
| | | 64. J. COLLINS | | 64. J. COLLINS | |
| | | 65. J. COLLINS | | 65. J. COLLINS | |
| | | 66. J. COLLINS | | 66. J. COLLINS | |
| | | 67. J. COLLINS | | 67. J. COLLINS | |
| | | 68. J. COLLINS | | 68. J. COLLINS | |
| | | 69. J. COLLINS | | 69. J. COLLINS | |
| | | 70. J. COLLINS | | 70. J. COLLINS | |
| | | 71. J. COLLINS | | 71. J. COLLINS | |
| | | 72. J. COLLINS | | 72. J. COLLINS | |
| | | 73. J. COLLINS | | 73. J. COLLINS | |
| | | 74. J. COLLINS | | 74. J. COLLINS | |
| | | 75. J. COLLINS | | 75. J. COLLINS | |
| | | 76. J. COLLINS | | 76. J. COLLINS | |
| | | 77. J. COLLINS | | 77. J. COLLINS | |
| | | 78. J. COLLINS | | 78. J. COLLINS | |
| | | 79. J. COLLINS | | 79. J. COLLINS | |
| | | 80. J. COLLINS | | 80. J. COLLINS | |
| | | 81. J. COLLINS | | 81. J. COLLINS | |
| | | 82. J. COLLINS | | 82. J. COLLINS | |
| | | 83. J. COLLINS | | 83. J. COLLINS | |
| | | 84. J. COLLINS | | 84. J. COLLINS | |
| | | 85. J. COLLINS | | 85. J. COLLINS | |
| | | 86. J. COLLINS | | 86. J. COLLINS | |
| | | 87. J. COLLINS | | 87. J. COLLINS | |
| | | 88. J. COLLINS | | 88. J. COLLINS | |
| | | 89. J. COLLINS | | 89. J. COLLINS | |
| | | 90. J. COLLINS | | 90. J. COLLINS | |
| | | 91. J. COLLINS | | 91. J. COLLINS | |
| | | 92. J. COLLINS | | 92. J. COLLINS | |
| | | 93. J. COLLINS | | 93. J. COLLINS | |
| | | 94. J. COLLINS | | 94. J. COLLINS | |
| | | 95. J. COLLINS | | 95. J. COLLINS | |
| | | 96. J. COLLINS | | 96. J. COLLINS | |
| | | 97. J. COLLINS | | 97. J. COLLINS | |
| | | 98. J. COLLINS | | 98. J. COLLINS | |
| | | 99. J. COLLINS | | 99. J. COLLINS | |
| | | 100. J. COLLINS | | 100. J. COLLINS | |
| | | 101. J. COLLINS | | 101. J. COLLINS | |
| | | 102. J. COLLINS | | 102. J. COLLINS | |
| | | 103. J. COLLINS | | 103. J. COLLINS | |
| | | 104. J. COLLINS | | 104. J. COLLINS | |
| | | 105. J. COLLINS | | 105. J. COLLINS | |
| | | 106. J. COLLINS | | 106. J. COLLINS | |
| | | 107. J. COLLINS | | 107. J. COLLINS | |
| | | 108. J. COLLINS | | 108. J. COLLINS | |
| | | 109. J. COLLINS | | 109. J. COLLINS | |
| | | 110. J. COLLINS | | 110. J. COLLINS | |
| | | 111. J. COLLINS | | 111. J. COLLINS | |
| | | 112. J. COLLINS | | 112. J. COLLINS | |
| | | 113. J. COLLINS | | 113. J. COLLINS | |
| | | 114. J. COLLINS | | 114. J. COLLINS | |
| | | 115. J. COLLINS | | 115. J. COLLINS | |
| | | 116. J. COLLINS | | 116. J. COLLINS | |
| | | 117. J. COLLINS | | 117. J. COLLINS | |
| | | 118. J. COLLINS | | 118. J. COLLINS | |
| | | 119. J. COLLINS | | 119. J. COLLINS | |
| | | 120. J. COLLINS | | 120. J. COLLINS | |
| | | 121. J. COLLINS | | 121. J. COLLINS | |
| | | 122. J. COLLINS | | 122. J. COLLINS | |
| | | 123. J. COLLINS | | 123. J. COLLINS | |
| | | 124. J. COLLINS | | 124. J. COLLINS | |
| | | 125. J. COLLINS | | 125. J. COLLINS | |
| | | 126. J. COLLINS | | 126. J. COLLINS | |
| | | 127. J. COLLINS | | 127. J. COLLINS | |
| | | 128. J. COLLINS | | 128. J. COLLINS | |
| | | 129. J. COLLINS | | 129. J. COLLINS | |
| | | 130. J. COLLINS | | 130. J. COLLINS | |
| | | 131. J. COLLINS | | 131. J. COLLINS | |
| | | 132. J. COLLINS | | 132. J. COLLINS | |
| | | 133. J. COLLINS | | 133. J. COLLINS | |
| | | 134. J. COLLINS | | 134. J. COLLINS | |
| | | 135. J. COLLINS | | 135. J. COLLINS | |
| | | 136. J. COLLINS | | 136. J. COLLINS | |
| | | 137. J. COLLINS | | 137. J. COLLINS | |
| | | 138. J. COLLINS | | 138. J. COLLINS | |
| | | 139. J. COLLINS | | 139. J. COLLINS | |
| | | 140. J. COLLINS | | 140. J. COLLINS | |
| | | 141. J. COLLINS | | 141. J. COLLINS | |
| | | 142. J. COLLINS | | 142. J. COLLINS | |
| | | 143. J. COLLINS | | 143. J. COLLINS | |
| | | 144. J. COLLINS | | 144. J. COLLINS | |
| | | 145. J. COLLINS | | 145. J. COLLINS | |
| | | 146. J. COLLINS | | 146. J. COLLINS | |
| | | 147. J. COLLINS | | 147. J. COLLINS | |
| | | 148. J. COLLINS | | 148. J. COLLINS | |
| | | 149. J. COLLINS | | 149. J. COLLINS | |
| | | 150. J. COLLINS | | 150. J. COLLINS | |
| | | 151. J. COLLINS | | 151. J. COLLINS | |
| | | 152. J. COLLINS | | 152. J. COLLINS | |
| | | 153. J. COLLINS | | 153. J. COLLINS | |
| | | 154. J. COLLINS | | 154. J. COLLINS | |
| | | 155. J. COLLINS | | 155. J. COLLINS | |
| | | 156. J. COLLINS | | 156. J. COLLINS | |
| | | 157. J. COLLINS | | 157. J. COLLINS | |
| | | 158. J. COLLINS | | 158. J. COLLINS | |
| | | 159. J. COLLINS | | 159. J. COLLINS | |
| | | 160. J. COLLINS | | 160. J. COLLINS | |
| | | 161. J. COLLINS | | 161. J. COLLINS | |
| | | 162. J. COLLINS | | 162. J. COLLINS | |
| | | 163. J. COLLINS | | 163. J. COLLINS | |
| | | 164. J. COLLINS | | 164. J. COLLINS | |
| | | 165. J. COLLINS | | 165. J. COLLINS | |
| | | 166. J. COLLINS | | 166. J. COLLINS | |
| | | 167. J. COLLINS | | 167. J. COLLINS | |
| | | 168. J. COLLINS | | 168. J. COLLINS | |
| | | 169. J. COLLINS | | 169. J. COLLINS | |
| | | 170. J. COLLINS | | 170. J. COLLINS | |
| | | 171. J. COLLINS | | 171. J. COLLINS | |
| | | 172. J. COLLINS | | 172. J. COLLINS | |
| | | 173. J. COLLINS | | 173. J. COLLINS | |
| | | 174. J. COLLINS | | 174. J. COLLINS | |
| | | 175. J. COLLINS | | 175. J. COLLINS | |
| | | 176. J. COLLINS | | 176. J. COLLINS | |
| | | 177. J. COLLINS | | 177. J. COLLINS | |
| | | 178. J. COLLINS | | 178. J. COLLINS | |
| | | 179. J. COLLINS | | 179. J. COLLINS | |
| | | 180. J. COLLINS | | 180. J. COLLINS | |
| | | 181. J. COLLINS | | 181. J. COLLINS | |
| | | 182. J. COLLINS | | 182. J. COLLINS | |
| | | 183. J. COLLINS | | 183. J. COLLINS | |
| | | 184. J. COLLINS | | 184. J. COLLINS | |
| | | 185. J. COLLINS | | 185. J. COLLINS | |
| | | 186. J. COLLINS | | 186. J. COLLINS | |
| | | 187. J. COLLINS | | 187. J. COLLINS | |
| | | 188. J. COLLINS | | 188. J. COLLINS | |
| | | 189. J. COLLINS | | 189. J. COLLINS | |
| | | 190. J. COLLINS | | 190. J. COLLINS | |
| | | 191. J. COLLINS | | 191. J. COLLINS | |
| | | 192. J. COLLINS | | 192. J. COLLINS | |
| | | 193. J. COLLINS | | 193. J. COLLINS | |
| | | 194. J. COLLINS | | 194. J. COLLINS | |
| | | 195. J. COLLINS | | 195. J. COLLINS | |
| | | 196. J. COLLINS | | 196. J. COLLINS | |
| | | 197. J. COLLINS | | 197. J. COLLINS | |
| | | 198. J. COLLINS | | 198. J. COLLINS | |
| | | 199. J. COLLINS | | 199. J. COLLINS | |
| | | 200. J. COLLINS | | 200. J. COLLINS | |
| | | 201. J. COLLINS | | 201. J. COLLINS | |
| | | 202. J. COLLINS | | 202. J. COLLINS | |
| | | 203. J. COLLINS | | 203. J. COLLINS | |
| | | 204. J. COLLINS | | 204. J. COLLINS | |
| | | 205. J. COLLINS | | 205. J. COLLINS | |
| | | 206. J. COLLINS | | 206. J. COLLINS | |
| | | 207. J. COLLINS | | 207. J. COLLINS | |
| | | 208. J. COLLINS | | 208. J. COLLINS | |
| | | 209. J. COLLINS | | 209. J. COLLINS | |
| | | 210. J. COLLINS | | 210. J. COLLINS | |
| | | 211. J. COLLINS | | 211. J. COLLINS | |
| | | 212. J. COLLINS | | 212. J. COLLINS | |
| | | 213. J. COLLINS | | 213. J. COLLINS | |
| | | 214. J. COLLINS | | 214. J. COLLINS | |
| | | 215. J. COLLINS | | 215. J. COLLINS | |
| | | 216. J. COLLINS | | 216. J. COLLINS | |
| | | 217. J. COLLINS | | 217. J. COLLINS | |
| | | 218. J. COLLINS | | 218. J. COLLINS | |
| | | 219. J. COLLINS | | 219. J. COLLINS | |
| | | 220. J. COLLINS | | 220. J. COLLINS | |
| | | 221. J. COLLINS | | 221. J. COLLINS | |
| | | 222. J. COLLINS | | 222. J. COLLINS | |
| | | 223. J. COLLINS | | 223. J. COLLINS | |
| | | 224. J. COLLINS | | 224. J. COLLINS | |
| | | 225. J. COLLINS | | 225. J. COLLINS | |
| | | 226. J. COLLINS | | 226. J. COLLINS | |
| | | 227. J. COLLINS | | 227. J. COLLINS | |
| | | 228. J. COLLINS | | 228. J. COLLINS | |
| | | 229. J. COLLINS | | 229. J. COLLINS | |
| | | 230. J. COLLINS | | 230. J. COLLINS | |
| | | 231. J. COLLINS | | 231. J. COLLINS | |
| | | 232. J. COLLINS | | 232. J. COLLINS | |
| | | 233. J. COLLINS | | 233. J. COLLINS | |
| | | 234. J. COLLINS | | 234. J. COLLINS | |
| | | 235. J. COLLINS | | 235. J. COLLINS | |
| | | 236. J. COLLINS | | 236. J. COLLINS | |
| | | 237. J. COLLINS | | 237. J. COLLINS | |
| | | 238. J. COLLINS | | 238. J. COLLINS | |
| | | 239. J. COLLINS | | 239. J. COLLINS | |
| | | 240. J. COLLINS | | 240. J. COLLINS | |
| | | 241. J. COLLINS | | 241. J. COLLINS | |
| | | 242. J. COLLINS | | 242. J. COLLINS | |
| | | 243. J. COLLINS | | 243. J. COLLINS | |
| | | 244. J. COLLINS | | 244. J. COLLINS | |
| | | 245. J. COLLINS | | 245. J. COLLINS | |
| | | 246. J. COLLINS | | 246. J. COLLINS | |
| | | 247. J. COLLINS | | 247. J. COLLINS | |
| | | 248. J. COLLINS | | 248. J. COLLINS | |
| | | 249. J. COLLINS | | 249. J. COLLINS | |
| | | 250. J. COLLINS | | 250. J. COLLINS | |
| | | 251. J. COLLINS | | 251. J. COLLINS | |
| | | 252. J. COLLINS | | 252. J. COLLINS | |
| | | 253. J. COLLINS | | 253. J. COLLINS | |
| | | 254. J. COLLINS | | 254. J. COLLINS | |
| | | 255. J. COLLINS | | 255. J. COLLINS | |
| | | 256. J. COLLINS | | 256. J. COLLINS | |
| | | 257. J. COLLINS | | 257. J. COLLINS | |
| | | 258. J. COLLINS | | 258. J. COLLINS | |
| | | 259. J. COLLINS | | 259. J. COLLINS | |
| | | 260. J. COLLINS | | 260. J. COLLINS | |
| | | 261. J. COLLINS | | 261. J. COLLINS | |
| | | 262. J. COLLINS | | 262. J. COLLINS | |
| | | 263. J. COLLINS | | 263. J. COLLINS | |
| | | 264. J. COLLINS | | 264. J. COLLINS | |
| | | 265. J. COLLINS | | 265. J. COLLINS | |
| | | 266. J. COLLINS | | 266. J. COLLINS | |
| | | 267. J. COLLINS | | 267. J. COLLINS | |
| | | 268. J. COLLINS | | 268. J. COLLINS | |
| | | | | | |

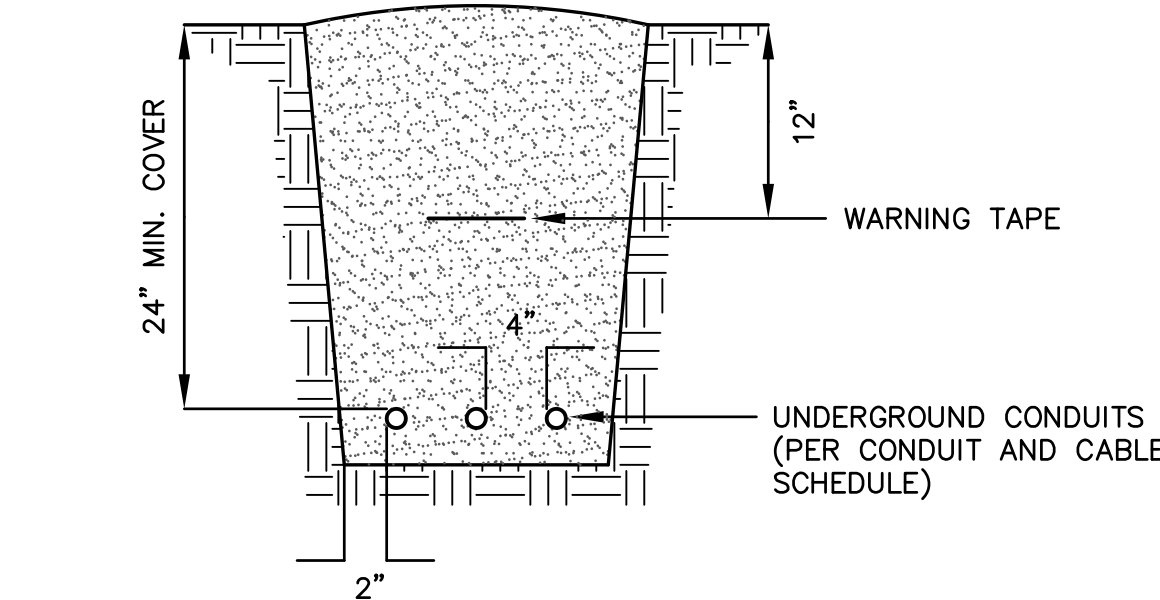


| | | | | | | | | | | | | | | | | | |
|------------------------------|--|-----------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NO. SHEETS 60 | | PROJ. NO. 800/2427 | | SPRING PARK ROAD PUMP STATION REHABILITATION | |  | | <div>DESIGN ENGINEER W. DAVID LASSETTER FLORIDA REGISTRATION NO. 37971</div> | | | | <div>NO. BY DATE NO. BY DATE NO. BY DATE NO. BY DATE NO. BY DATE NO. BY DATE</div> | | | | <div>J. Collins Engineering Associates, LLC 1151C-3 San Jose Blvd. Jacksonville, Florida 32223 CA# 9952 904-262-4121 904-262-4122</div>  | |
| SHEET NO. DRAWING NO. E-9 | | DATE: MAR 2020 SCALE: AS SHOWN | | PUMP BUILDING LOWER LEVEL POWER PLAN | | | | | | | | | | | | | |

| | | | | | | | |
|--|-------------|-----------|--|--|--|-----------------|-----------------------|
| <div></div> | NO. SHEETS | PROJ. NO. | SPRING PARK ROAD PUMP STATION REHABILITATION | | <div></div> | DESIGN ENGINEER | NO. BY DATE REVISIONS |
| | SHEET NO. | DATE: | W. DAVID LASSETTER | | | | |
| | DRAWING NO. | SCALE: | FLORIDA REGISTRATION NO. | | | | |
| 80 | 8002427 | MAR 2020 | AS SHOWN | | | 37971 | |
| 64 | | | | | | | |
| E-10 | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| </ | | | | | | | |



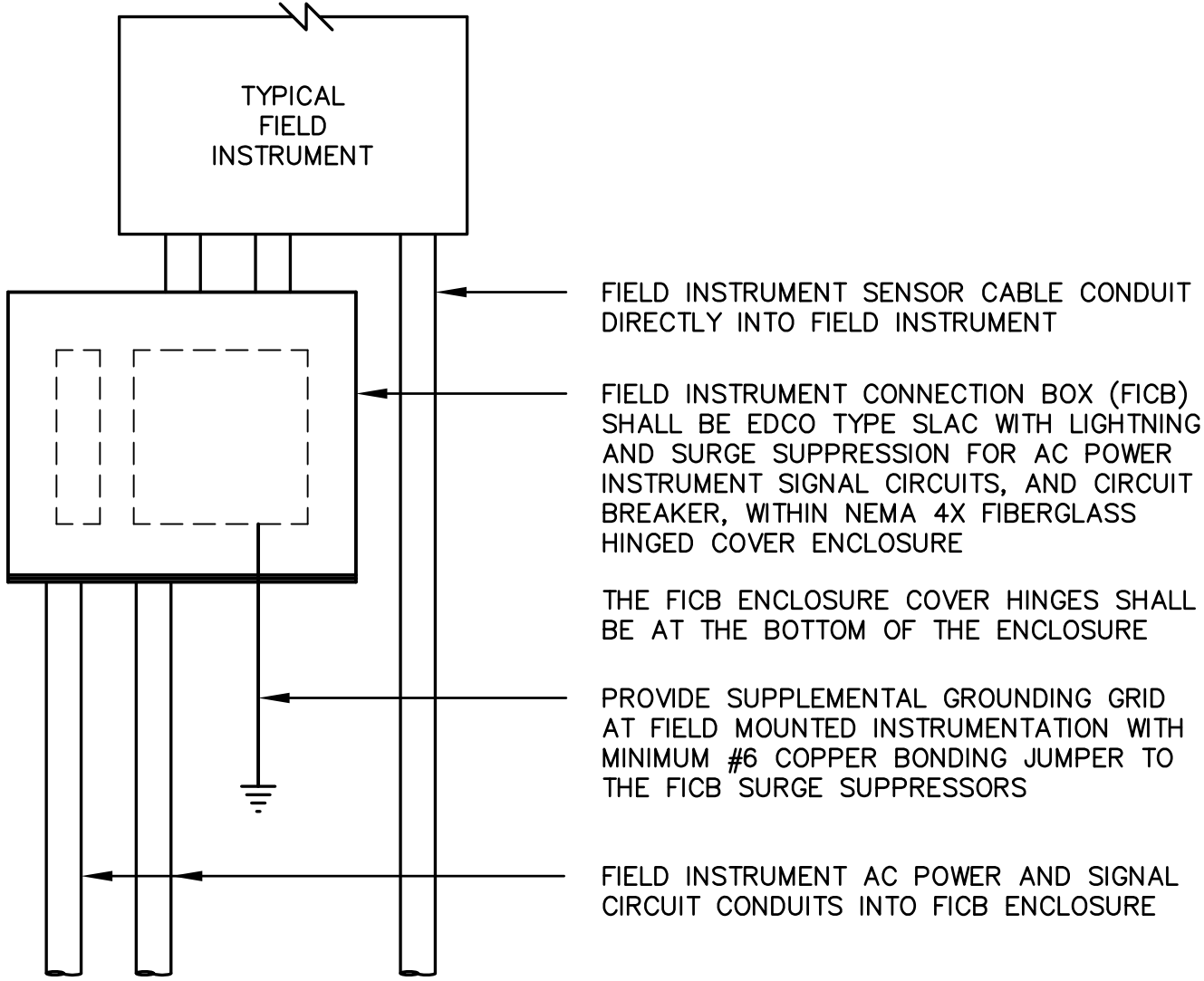
TYPICAL ELECTRICAL EQUIPMENT MOUNTING DETAIL
NOT TO SCALE



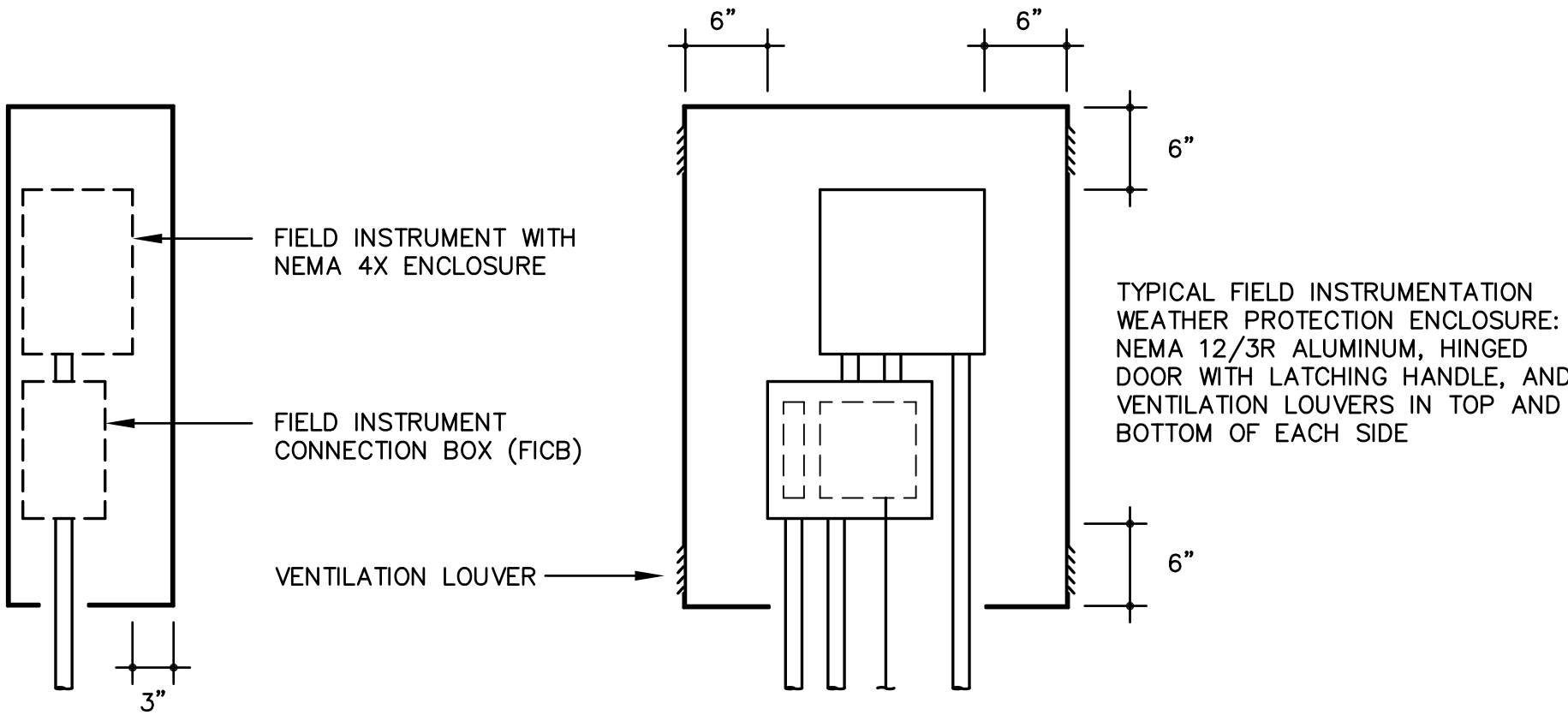
NOTE: UNDERGROUND CONDUITS CONNECTED TO THE WET WELL OR THE VFDs, AND ALL EXPOSED EXTERIOR CONDUITS, SHALL BE PVC COATED RIGID ALUMINUM. UNLESS OTHERWISE NOTED, ALL REMAINING DIRECT BURIED CONDUITS SHALL BE SCH 40 PVC.

TYPICAL DIRECT BURIED CONDUIT DETAIL
NOT TO SCALE

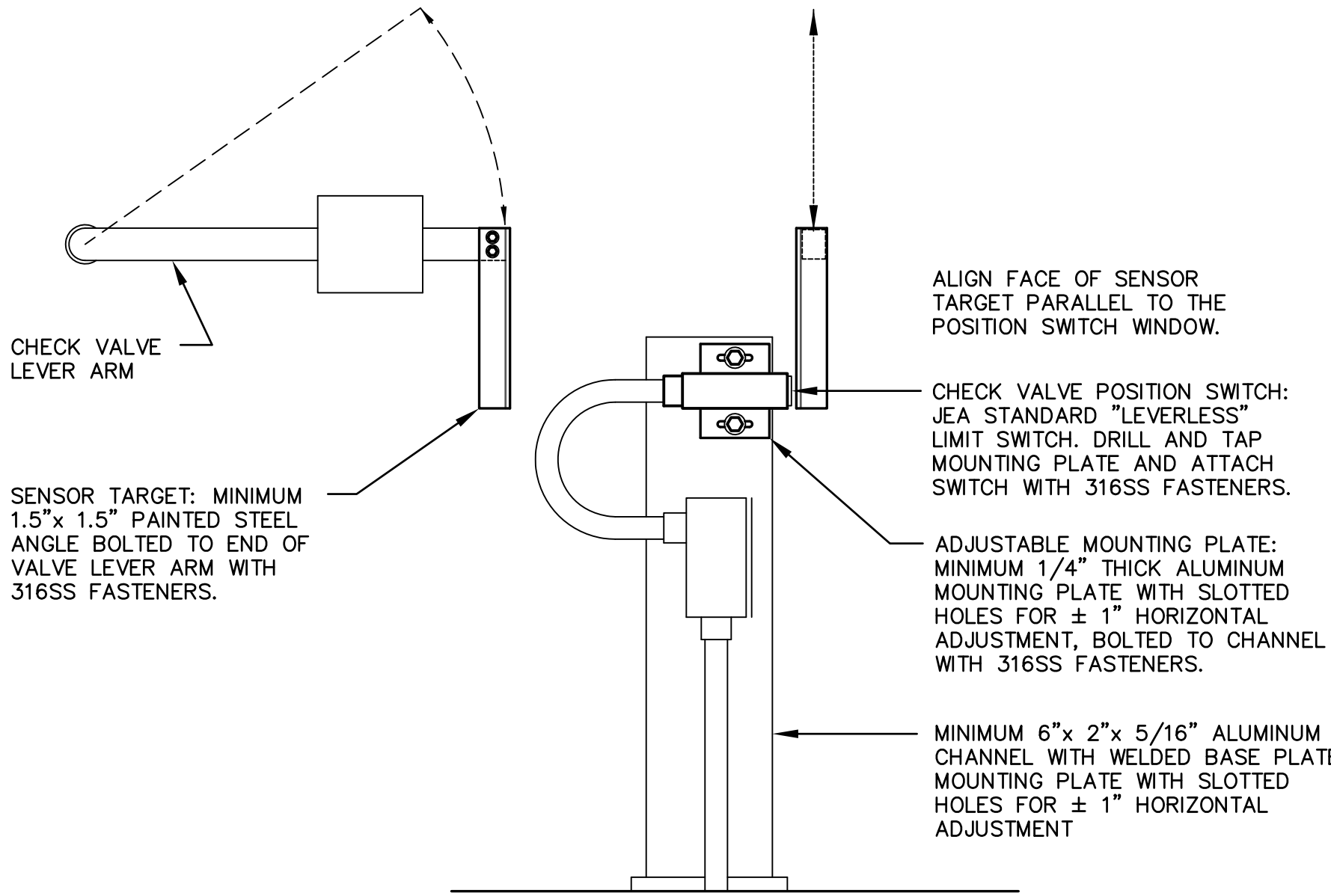
NOTE: FOR MAGNETIC FLOW TRANSMITTERS WITH PROFIBUS DP OUTPUT, PROVIDE FIBER OPTIC CABLE CONNECTION TO THE MASTER PLC CONTROL PANEL INCLUDING FIBER CONVERTER OPTICAL LINK MODULE (SIEMENS OLM/G11) AND FIBER PATCH PANEL (CORNING SPH) MOUNTED WITHIN THE FIELD INSTRUMENTATION WEATHER PROTECTION ENCLOSURE.




TYPICAL FIELD INSTRUMENT CONNECTION BOX (FICB)
NOT TO SCALE

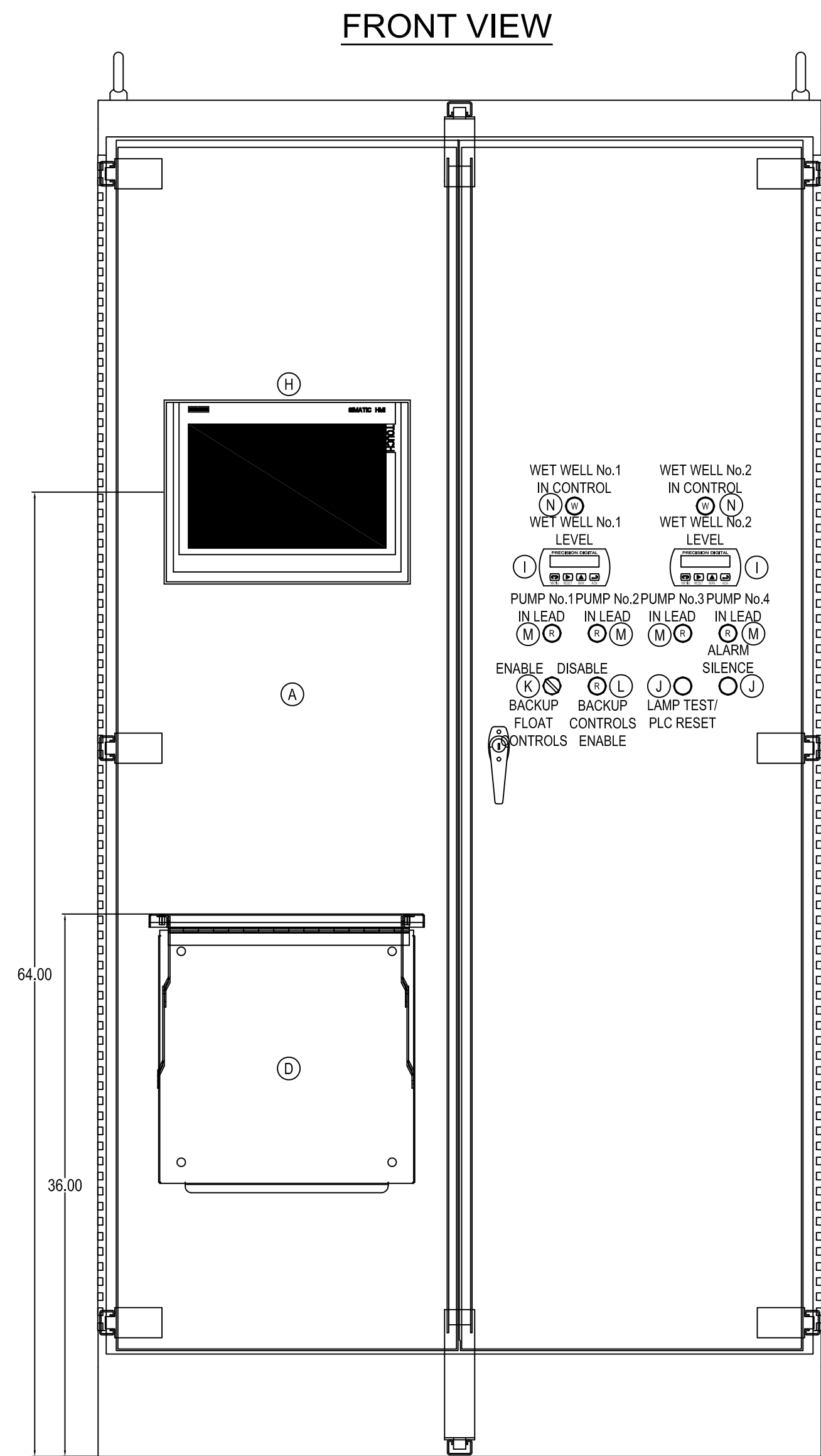


TYPICAL OUTDOOR FIELD INSTRUMENT MOUNTING DETAIL
NOT TO SCALE



CHECK VALVE POSITION SWITCH INSTALLATION DETAIL
NOT TO SCALE

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|



CUSTOM ENCLOSURE:
90"H x 48"W x 20"D, NEMA 12 RATED, FABRICATED FROM 12ga. CARBON STEEL WITH ANSI-61 GRAY POLYESTER POWDER COAT FINISH INSIDE AND OUT. OUTER DOOR IS FITTED WITH A PADLOCKABLE 3-POINT LATCH. BATTERY SHELF WITH 1/2" THICK RUBBER PAD IS SIDE-MOUNTED INSIDE ENCLOSURE.

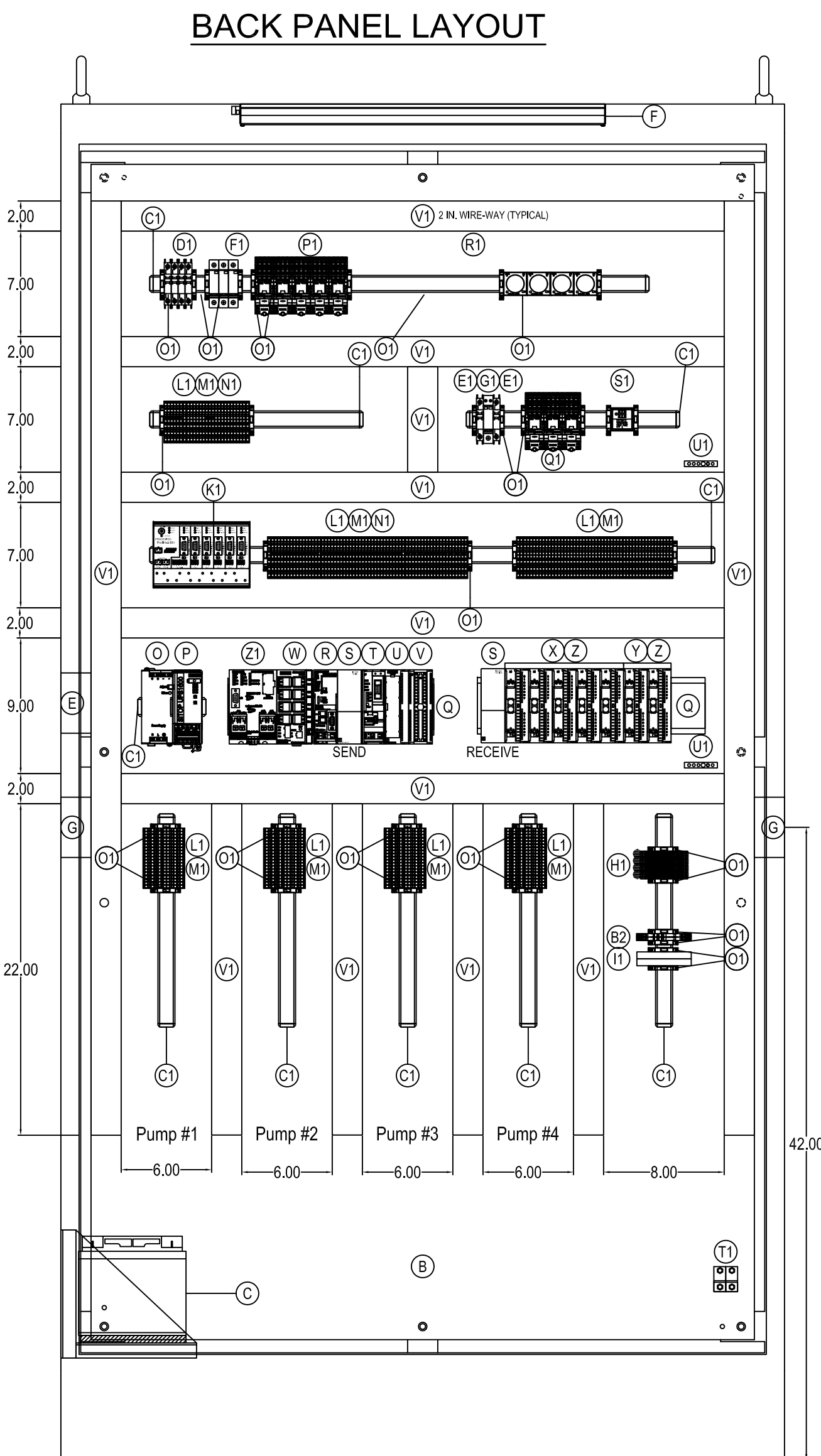
ENCLOSURE HAS OPEN BOTTOM FOR INSTALLATION ON TOP OF CONCRETE CURB WIREWAY.

REFER TO ENCLOSURE SPECIFICATIONS FOR FURTHER DETAILS.

BACK PANEL:
78"H x 44"W, FABRICATED FROM 12ga. CARBON STEEL WITH WHITE POLYESTER POWDER COAT FINISH.

CONTROL WIRE UL508A COLOR:

| | | |
|---------------------|---|---------|
| RED | - | 120 VAC |
| WHITE | - | NEUTRAL |
| BLUE | - | +24 VDC |
| WHITE / BLUE STRIPE | - | 0 VDC |




BILL of MATERIAL

| QTY | MANUFACTURER | PART NUMBER | DESCRIPTION |
|--------|-------------------|---------------------|--|
| A 1 | OEM | CUSTOM ENCLOSURE | SEE THIS SHEET FOR DETAILS |
| B 1 | OEM | CUSTOM BACK PANEL | SEE THIS SHEET FOR DETAILS |
| C 2 | POWER SONIC | PS-12180 F2 | BATTERY, LEAD-ACID, 12VDC, 18Ah |
| D 1 | SCHAEFER | SP-SHELF18 | FOLDING LAPTOP SHELF, 18" |
| E 1 | -- | -- | PANEL LIGHT SWITCH, 120VAC, 20A |
| F 1 | -- | -- | 24" LED LIGHT PANEL |
| G 2 | -- | -- | GFCI DUPLEX RECEPTACLE, 15A, 120VAC |
| H 1 | SIEMENS | 6AV2 124-0QC02-0AX1 | OPERATOR PANEL TP 1500 TOUCH SCREEN |
| I 1 | SIEMENS | 6AV2 181-8XP00-0AX0 | SIMATIC HMI MEMORY CARD, 2GB |
| J 2 | PRECISION DIGITAL | PD785-6R0-00 | 4-DIGIT PANEL METER, LED, NO OPTIONS |
| K 1 | SQUARE D | 9001 KR1B | MOMENTARY PUSHBUTTON, 30mm, FLUSH |
| L 1 | SQUARE D | 9001 KS11B | 2 POSITION MAINTAINED SWITCH, 30mm |
| M 4 | SQUARE D | 9001 KP38LRR31 | PILOT LIGHT, RED, LED, 30mm, 120VAC |
| N 2 | SQUARE D | 9001 KP35LRR31 | PILOT LIGHT, RED, LED, 30mm, 24VDC |
| O 1 | SQUARE D | 9001 KP35LWC31 | PILOT LIGHT, WHITE, LED, 30mm, 24VDC |
| P 1 | SIEMENS | 6AG1 134-3AB00-7AY2 | SITOP DC UPS, 10A WITH CHARGER |
| Q 1 | PULS | CS10.241 | 24VDC POWER SUPPLY, 10A |
| R 2 | SIEMENS | 6ES7 390-1AE80-0AA0 | 480mm MOUNTING RAIL FOR PLC EQUIP. |
| S 1 | SIEMENS | 6ES7 315-2EH14-0AB0 | CPU 315-2 PN/DP, 384KB |
| T 1 | SIEMENS | 6ES7 953-8LL31-0AA0 | MMC MEMORY CARD, 2MB |
| U 1 | SIEMENS | 6ES7 365-0BA01-0AA0 | IM 365 RACK INTERFACE MODULE |
| V 1 | SIEMENS | 6NH7 800-3CA00 | SINAUT ST7, TIM 3V-IE ADVANCED MODULE |
| W 1 | TFS, INC. | -- | SINAUT TO RADIO NULL CABLE |
| X 1 | SIEMENS | 6ES7 370-0AA01-0AA0 | DM 370 DUMMY MODULE |
| Y 1 | SIEMENS | 6ES7 331-7NF10-0AB0 | 8 ANALOG INPUT MODULE, ISOLATED |
| Z 1 | SIEMENS | 6ES7 392-1BM01-0AA0 | 40-PIN SPRING CONNECTOR |
| AA 1 | SIEMENS | 6GK5 108-0BA00-2AA3 | ETHERNET SWITCH, 8-PORT, UNMANAGED |
| AB 5 | SIEMENS | 6ES7 321-7BH01-0AB0 | 16 DIGITAL INPUT MODULE |
| AC 2 | SIEMENS | 6ES7 322-1BH01-0AA0 | 16 DIGITAL OUTPUT MODULE |
| AD 7 | SIEMENS | 6ES7 392-1BJ00-0AA0 | 20-PIN SPRING CONNECTOR |
| AE 2 | BRAD HARRISON | PA9D01-42 | PROFIBUS CONNECTOR, 90°, PG PORT |
| AF 4 | BRAD HARRISON | MA9D00-42 | PROFIBUS CONNECTOR, 180° |
| AG 2 | WAGO | 210-112 | 2M DIN RAIL, GALVANIZED, SLOTTED |
| AH 1 | WEIDMULLER | 9926 25 1015 | CB10, CB11, CB12, CB13, UL489, 1 POLE, 15A |
| AI 2 | WEIDMULLER | 9926 25 1910 | CB20 and CB21, UL489, 1 POLE, 10A |
| AJ 3 | CITEL | DS41S-120 | 120VAC SURGE SUPPRESSOR, BASE |
| AK 1 | CITEL | DS220S-24DC | 24VDC SURGE SUPPRESSOR |
| AL 4 | CITEL | DLAW-24D3 | ANALOG SURGE SUPPRESSOR, 24VDC |
| AM 2 | WAGO | 2857-401 | ISOLATION AMPLIFIER, JUMPFLEX |
| AN 1 | CITEL | DLA-12D3 | PROFIBUS SURGE PROTECTOR |
| AO 1 | PROCENTEC | 17020R | PROFIBUS HUB |
| AP 218 | WAGO | 2002-1401 | TERMINAL, 2002, SPRING, GRAY |
| AQ 23 | WAGO | 2002-1492 | TERMINAL END / PART. PLATE, ORANGE |
| AR 57 | WAGO | 2002-400 | ADJACENT JUMPER, 2-WAY CONTINUOUS |
| AS 34 | WAGO | 249-116 | TERMINAL END STOP, GRAY |
| AT 5 | FINDER | 58P481205060 | RELAY, STATUS, SPRING, 4NO-NC, 120VAC |
| AU 3 | FINDER | 58P490245050 | RELAY, STATUS, SPRING, 4NO-NC, 24VDC |
| AV 4 | AUTONICS | AT8N-24-240 | ON-DELAY TIMER, 120VAC |
| AW 1 | NCC | KMM-9999M-96M | MULTI-FUNCTION TIMER, 24VDC |
| AX 2 | SQUARE D | PK5GTA | EQUIPMENT GROUND BAR, 5-POINT |
| AY 2 | PANDUIT | LAMA2-14-QY | GROUND LUG, DUAL-RATED, #2-14AWG |
| AZ 7 | PANDUIT | 2"W x 2"H x 72"L | WIREWAY, HINGE COVER, WIDE FINGER |
| BA 1 | SIEMENS | 6XV1 830-0EH10 | PROFIBUS CABLE, FAST CONNECT TYPE |
| BB 1 | SIEMENS | 6AG1901-1BB10-7AA0 | PROFINET CONNECTOR, SIPLUS |
| BC 7 | SIEMENS | 6XV1840-2AH10 | PROFINET CABLE, FAST CONNECT |
| BD 1 | SIEMENS | 6ES7 972-0AB01-0XA0 | PROFIBUS DIAGNOSTIC REPEATER |
| BE 1 | WAGO | 2857-900 | CONFIGURATION UNIT, JUMPFLEX |
| BF 2 | WAGO | 857-423 | SIGNAL SPLITTER |

GENERAL NOTES:

- REFER TO "433 LIFT STATION SCADA CONTROLS SPECIFICATION" FOR FURTHER DETAILS THAT MUST BE ADHERED TO SUCH AS WIRE, CONTACTOR, AND CIRCUIT BREAKER SIZING.
- THIS DRAWING IS AN EXAMPLE OF HOW OVERALL CABINET IS TO BE DESIGNED. THE DRAWING WILL NEED TO BE REVISED BASED ON THE PUMP MANUFACTURER, SIZE AND NUMBER OF PUMPS. THINGS THAT WILL CHANGE ARE ENCLOSURE SIZE, CIRCUIT BREAKER SIZE, WIRE SIZE, VFD SIZE, AND OTHER ITEMS. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
- REFER TO NOTES AND DETAILS ON ALL DRAWING SHEETS FOR MORE MANUFACTURING DETAILS.
- ALL FIELD WIRING SHALL BE #12 AWG STRANDED, TIN-PLATED COPPER. APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.
- ALL PLC I/O WIRING INTERNAL TO THE CONTROL PANEL SHALL BE TIN-PLATED #18 AWG.
- ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.
- ALL MOUNTING SCREWS SHALL BE STAINLESS STEEL, DRILLED AND TAPPED (NO SELF-TAPPING SCREWS ARE ALLOWED).
- TECHNICAL FIELD SERVICES, INC., JACKSONVILLE, FLORIDA (904) 278-5250
- ENSURE GOOD ELECTRICAL CONTACT BETWEEN BACK PANEL AND ALL MECHANICAL GROUND CONNECTIONS.

Sheet 1



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9952

NO. SHEETS: 80
SHEET NO.: 66
DRAWING NO.: E-12

PROJ. NO.: 8002427
DATE: MAR 2020
SCALE: AS SHOWN

DESIGNER: WJS
CHECKED BY: JEA
DATE: MAR 2020

DESIGN ENGINEER: W. DAVID LASSETTER
FLORIDA REGISTRATION NO.: 37971

REVISIONS

| NO. | BY | DATE | REVISIONS |
|-----|----|------|-----------|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |
| 16. | | | |
| 17. | | | |
| 18. | | | |
| 19. | | | |
| 20. | | | |
| 21. | | | |
| 22. | | | |
| 23. | | | |
| 24. | | | |
| 25. | | | |
| 26. | | | |
| 27. | | | |
| 28. | | | |
| 29. | | | |
| 30. | | | |
| 31. | | | |
| 32. | | | |
| 33. | | | |
| 34. | | | |
| 35. | | | |
| 36. | | | |
| 37. | | | |
| 38. | | | |
| 39. | | | |
| 40. | | | |
| 41. | | | |
| 42. | | | |
| 43. | | | |
| 44. | | | |
| 45. | | | |
| 46. | | | |
| 47. | | | |
| 48. | | | |
| 49. | | | |
| 50. | | | |
| 51. | | | |
| 52. | | | |
| 53. | | | |
| 54. | | | |
| 55. | | | |
| 56. | | | |
| 57. | | | |
| 58. | | | |
| 59. | | | |
| 60. | | | |
| 61. | | | |
| 62. | | | |
| 63. | | | |
| 64. | | | |
| 65. | | | |
| 66. | | | |
| 67. | | | |
| 68. | | | |
| 69. | | | |
| 70. | | | |
| 71. | | | |
| 72. | | | |
| 73. | | | |
| 74. | | | |
| 75. | | | |
| 76. | | | |
| 77. | | | |
| 78. | | | |
| 79. | | | |
| 80. | | | |

904-262-4121 904-262-4122

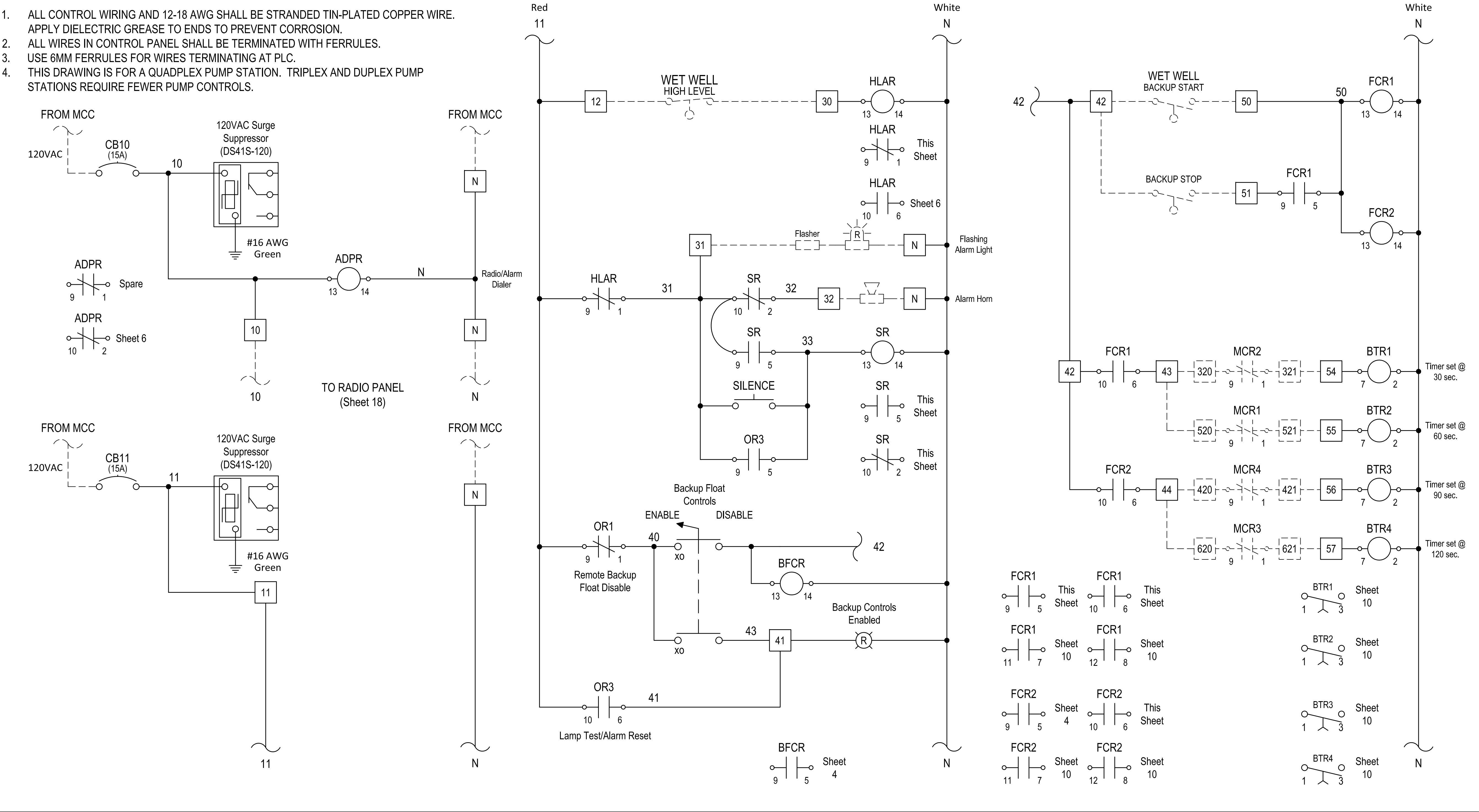
8/18/2020

MODIFIED PLANS FOR REBID


SPRING PARK ROAD PUMP STATION REHABILITATION
JEA STANDARD REFERENCE DRAWING
PLC ENCLOSURE LAYOUT

GENERAL NOTES:

- 1. ALL CONTROL WIRING AND 12-18 AWG SHALL BE STRANDED TIN-PLATED COPPER WIRE. APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.
- 2. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.
- 3. USE 6MM FERRULES FOR WIRES TERMINATING AT PLC.
- 4. THIS DRAWING IS FOR A QUADPLEX PUMP STATION. TRIPLEX AND DUPLEX PUMP STATIONS REQUIRE FEWER PUMP CONTROLS.



Sheet 2



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9952
904-262-4121 904-262-4122

| NO. | BY | DATE | REVISIONS |
|-----|----|------|-----------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |
| 29 | | | |
| 30 | | | |
| 31 | | | |
| 32 | | | |
| 33 | | | |
| 34 | | | |
| 35 | | | |
| 36 | | | |
| 37 | | | |
| 38 | | | |
| 39 | | | |
| 40 | | | |
| 41 | | | |
| 42 | | | |
| 43 | | | |
| 44 | | | |
| 45 | | | |
| 46 | | | |
| 47 | | | |
| 48 | | | |
| 49 | | | |
| 50 | | | |
| 51 | | | |
| 52 | | | |
| 53 | | | |
| 54 | | | |
| 55 | | | |
| 56 | | | |
| 57 | | | |
| 58 | | | |
| 59 | | | |
| 60 | | | |
| 61 | | | |
| 62 | | | |
| 63 | | | |
| 64 | | | |
| 65 | | | |
| 66 | | | |
| 67 | | | |
| 68 | | | |
| 69 | | | |
| 70 | | | |
| 71 | | | |
| 72 | | | |
| 73 | | | |
| 74 | | | |
| 75 | | | |
| 76 | | | |
| 77 | | | |
| 78 | | | |
| 79 | | | |
| 80 | | | |

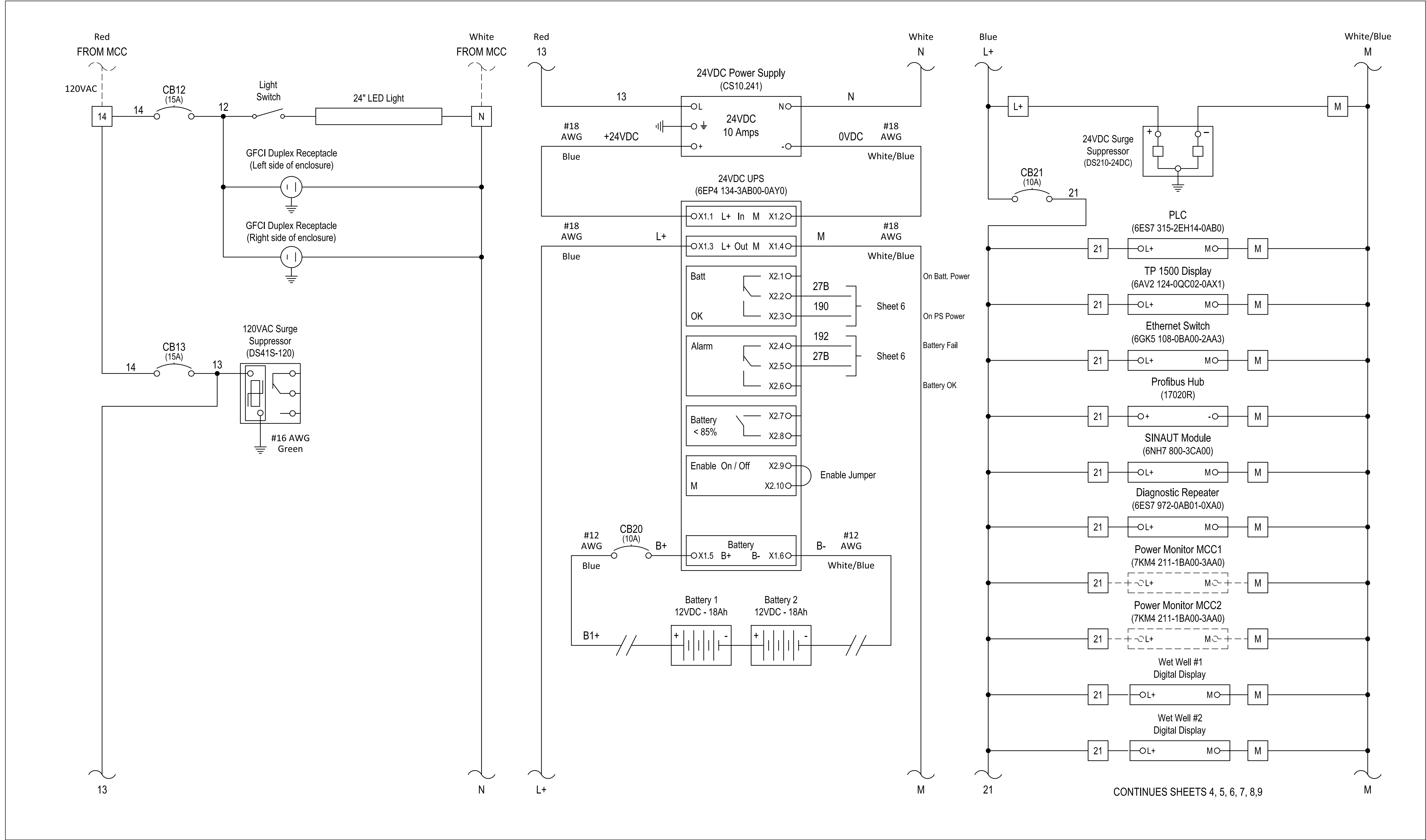
DESIGNER: JEA
CHECKED BY: JEA
DATE: MAR 2020
DATE: MAR 2020

DESIGN ENGINEER: W. DAVID LASSETTER
FLORIDA REGISTRATION NO. 37971


NO. SHEETS: 80
SHEET NO. 67
DRAWING NO. E-13

PROJ. NO. 8002427
DATE: MAR 2020
SCALE: AS SHOWN

SPRING PARK ROAD PUMP STATION REHABILITATION
JEA STANDARD REFERENCE DRAWING
PLC 120 VAC VOLTAGE



Sheet 3



J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9952

| NO. | BY | DATE | REVISIONS |
|------|----|------|-----------|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |
| 16. | | | |
| 17. | | | |
| 18. | | | |
| 19. | | | |
| 20. | | | |
| 21. | | | |
| 22. | | | |
| 23. | | | |
| 24. | | | |
| 25. | | | |
| 26. | | | |
| 27. | | | |
| 28. | | | |
| 29. | | | |
| 30. | | | |
| 31. | | | |
| 32. | | | |
| 33. | | | |
| 34. | | | |
| 35. | | | |
| 36. | | | |
| 37. | | | |
| 38. | | | |
| 39. | | | |
| 40. | | | |
| 41. | | | |
| 42. | | | |
| 43. | | | |
| 44. | | | |
| 45. | | | |
| 46. | | | |
| 47. | | | |
| 48. | | | |
| 49. | | | |
| 50. | | | |
| 51. | | | |
| 52. | | | |
| 53. | | | |
| 54. | | | |
| 55. | | | |
| 56. | | | |
| 57. | | | |
| 58. | | | |
| 59. | | | |
| 60. | | | |
| 61. | | | |
| 62. | | | |
| 63. | | | |
| 64. | | | |
| 65. | | | |
| 66. | | | |
| 67. | | | |
| 68. | | | |
| 69. | | | |
| 70. | | | |
| 71. | | | |
| 72. | | | |
| 73. | | | |
| 74. | | | |
| 75. | | | |
| 76. | | | |
| 77. | | | |
| 78. | | | |
| 79. | | | |
| 80. | | | |
| 81. | | | |
| 82. | | | |
| 83. | | | |
| 84. | | | |
| 85. | | | |
| 86. | | | |
| 87. | | | |
| 88. | | | |
| 89. | | | |
| 90. | | | |
| 91. | | | |
| 92. | | | |
| 93. | | | |
| 94. | | | |
| 95. | | | |
| 96. | | | |
| 97. | | | |
| 98. | | | |
| 99. | | | |
| 100. | | | |

DESIGNER: W. DAVID LASSETTER
DATE: MAR 2020
FLORIDA REGISTRATION NO. 37971

NO. SHEETS: 80
SHEET NO.: 68
DRAWING NO.: E-14

PROJ. NO.: 8002427
DATE: MAR 2020
SCALE: AS SHOWN

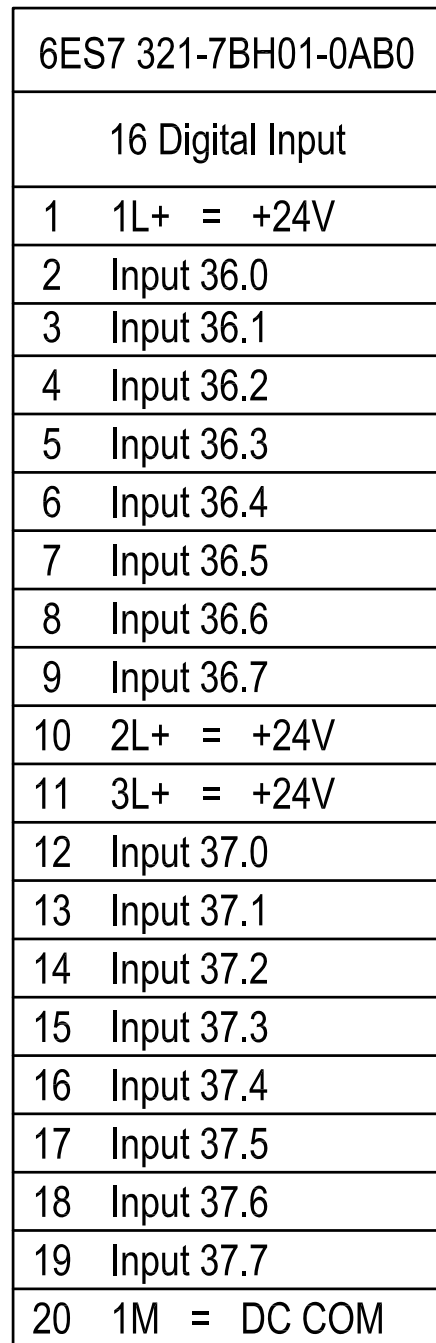
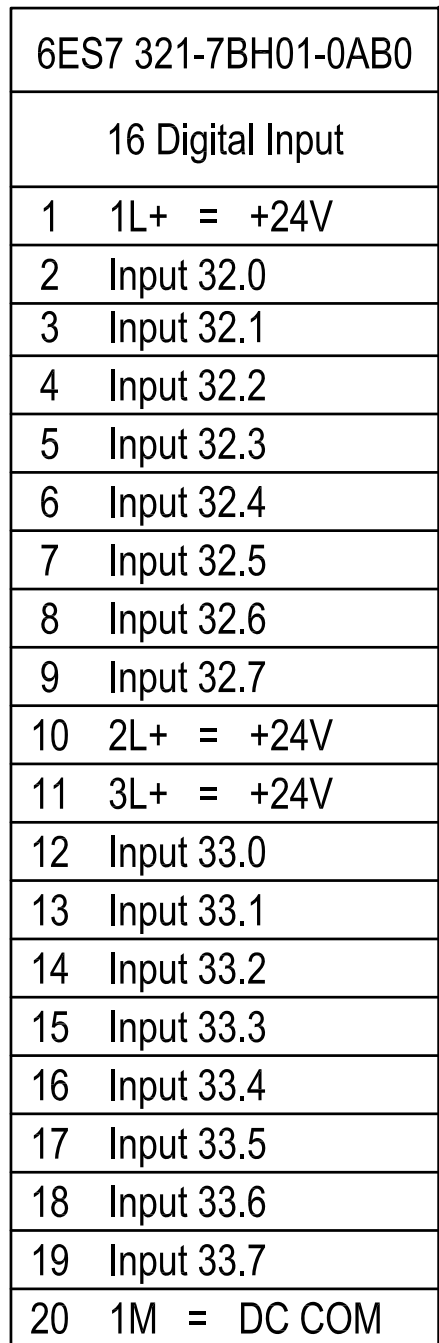
SPRING PARK ROAD PUMP STATION REHABILITATION
JEA STANDARD REFERENCE DRAWING
PLC 24 VDC VOLTAGE



| NO. | BY | DATE | REVISIONS |
|-----|----|------|-----------|
| 6. | | | |
| 5. | | | |
| 4. | | | |
| 3. | | | |
| 2. | | | |

JEASsm

| | |
|------------------|-------------------|
| NO. SHEETS 80 | PROJ. NO. 8002427 |
| SHEET NO. | DATE: MAR 2020 |
| DRAWING NO. | SCALE: AS SHOWN |

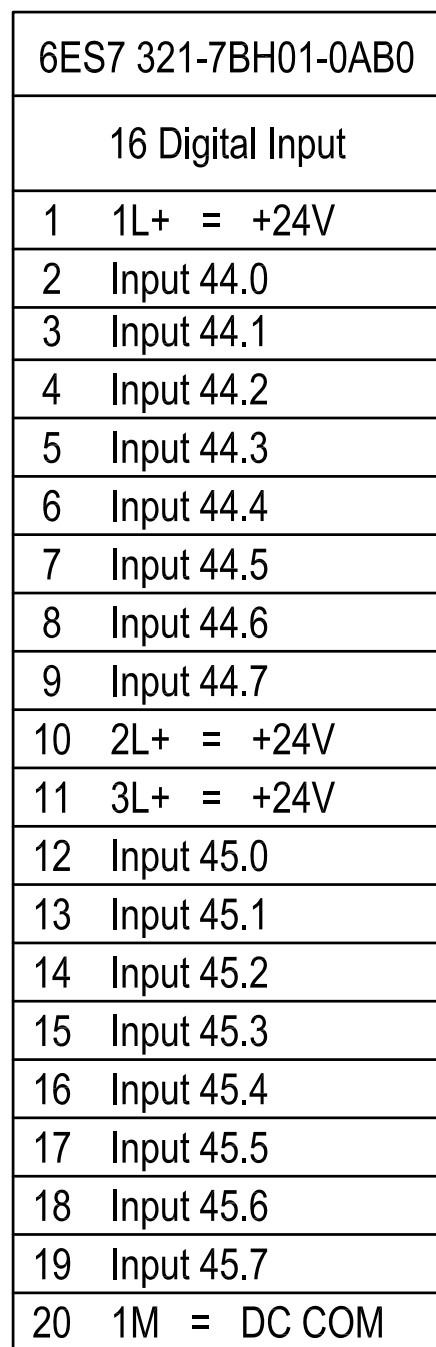
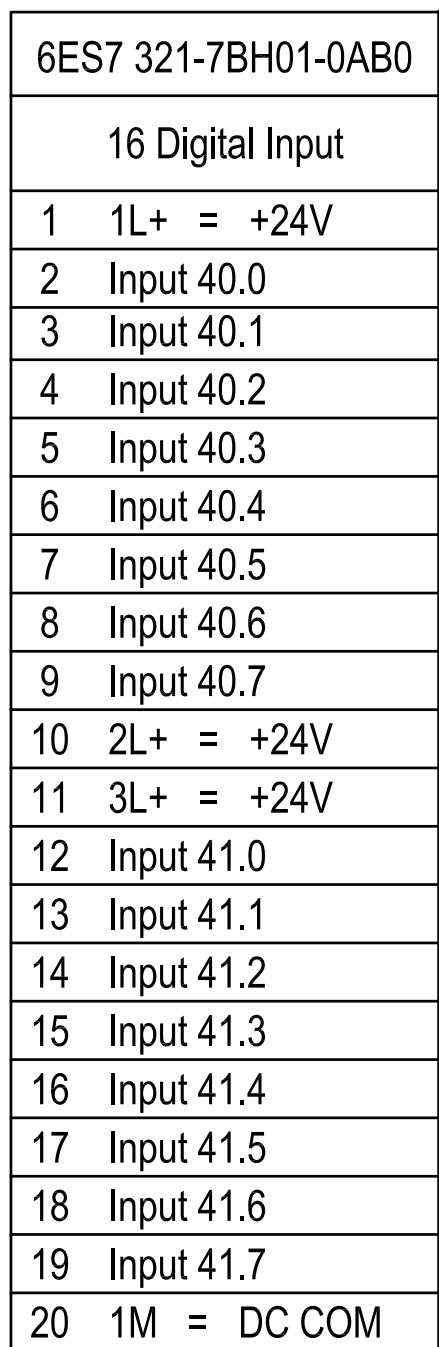


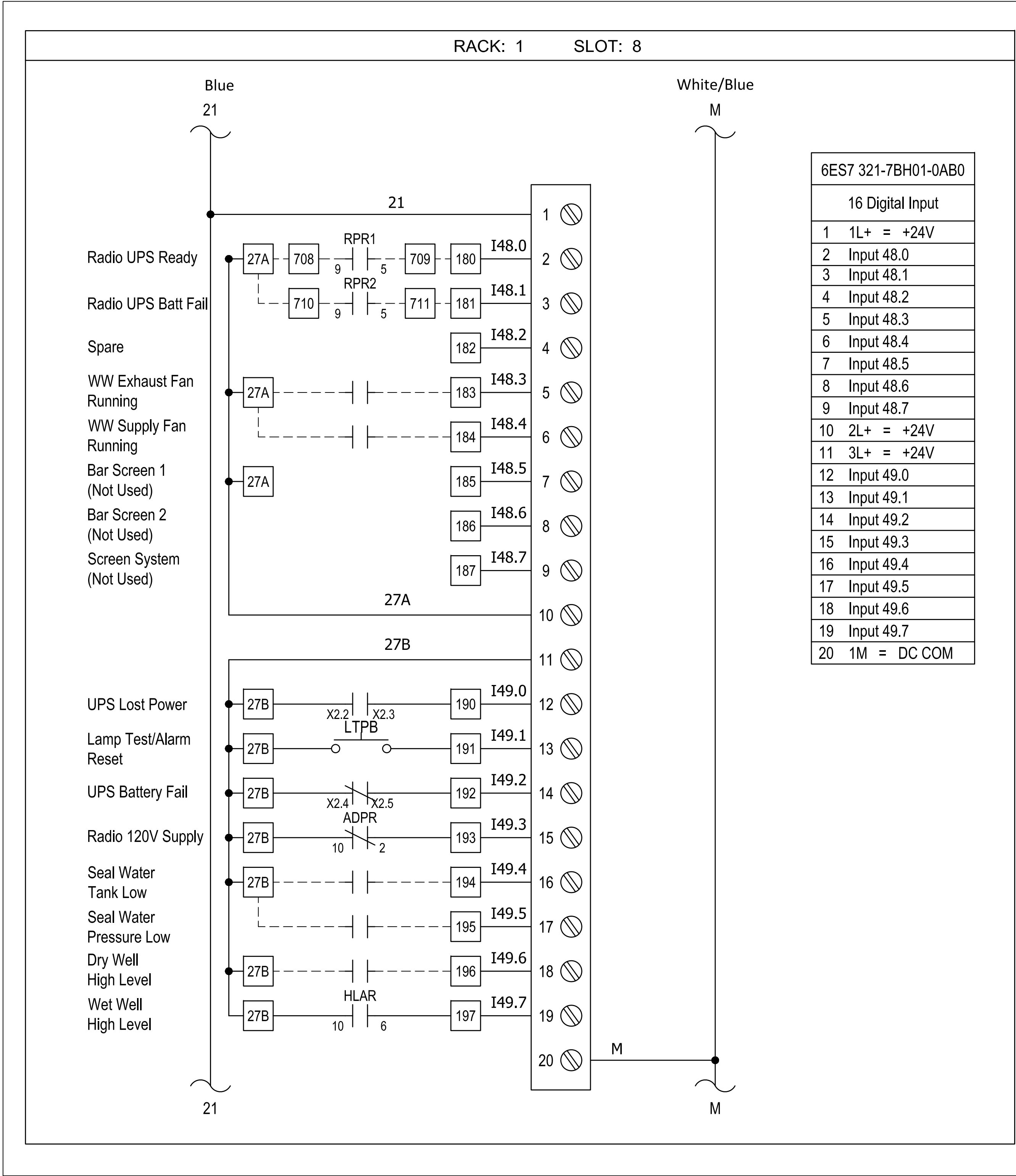


| NO. | BY | DATE | REVISIONS |
|-----|----|------|-----------|
| 6. | | | |
| 5. | | | |
| 4. | | | |
| 3. | | | |
| 2. | | | |

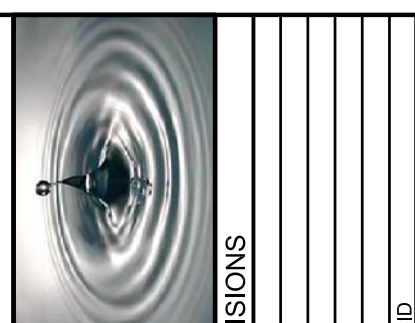
JEASsm

| | |
|------------------|-------------------|
| NO. SHEETS 80 | PROJ. NO. 8002427 |
| SHEET NO. | DATE: MAR 2020 |
| DRAWING NO. | SCALE: AS SHOWN |





Sheet 6

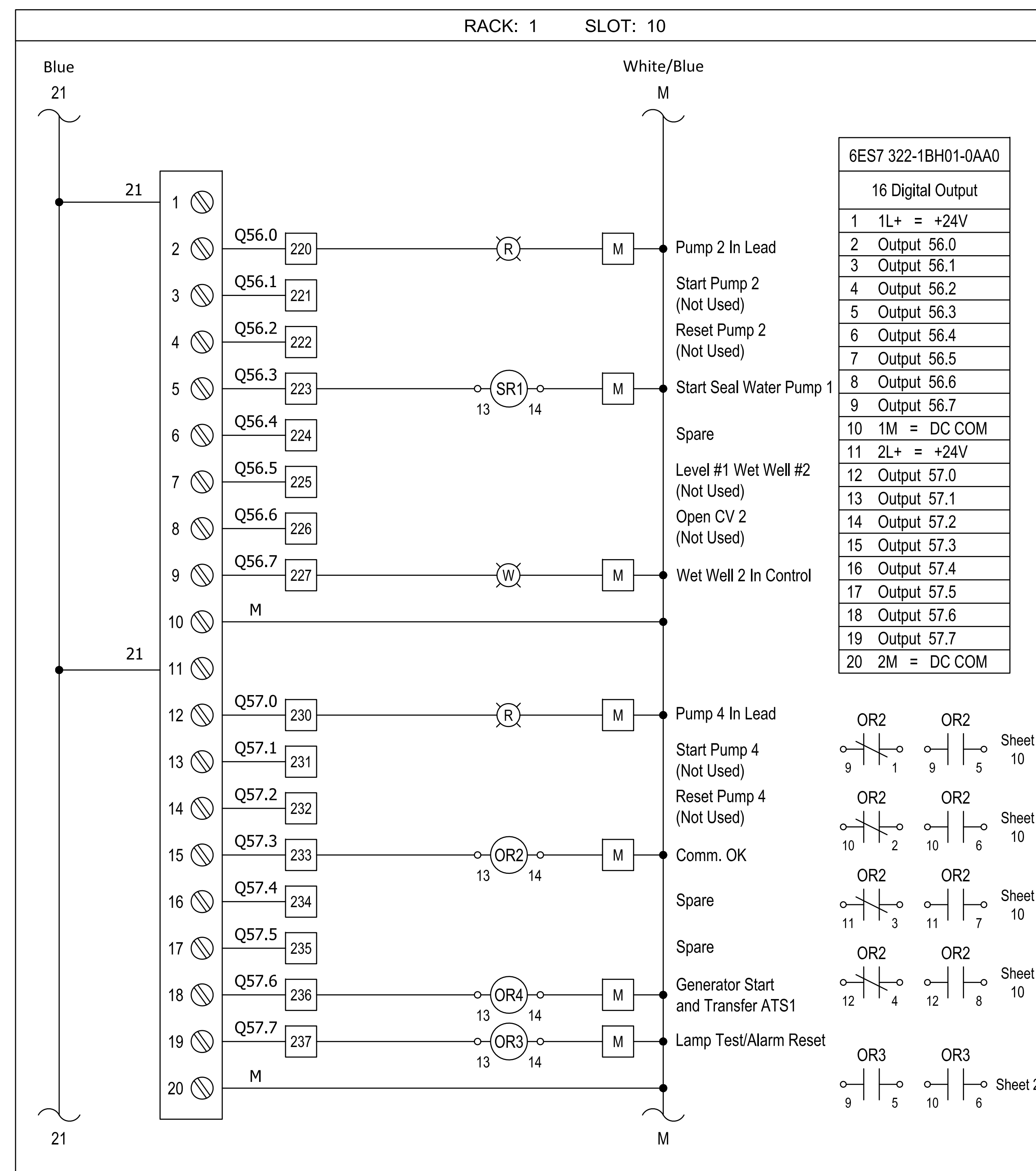
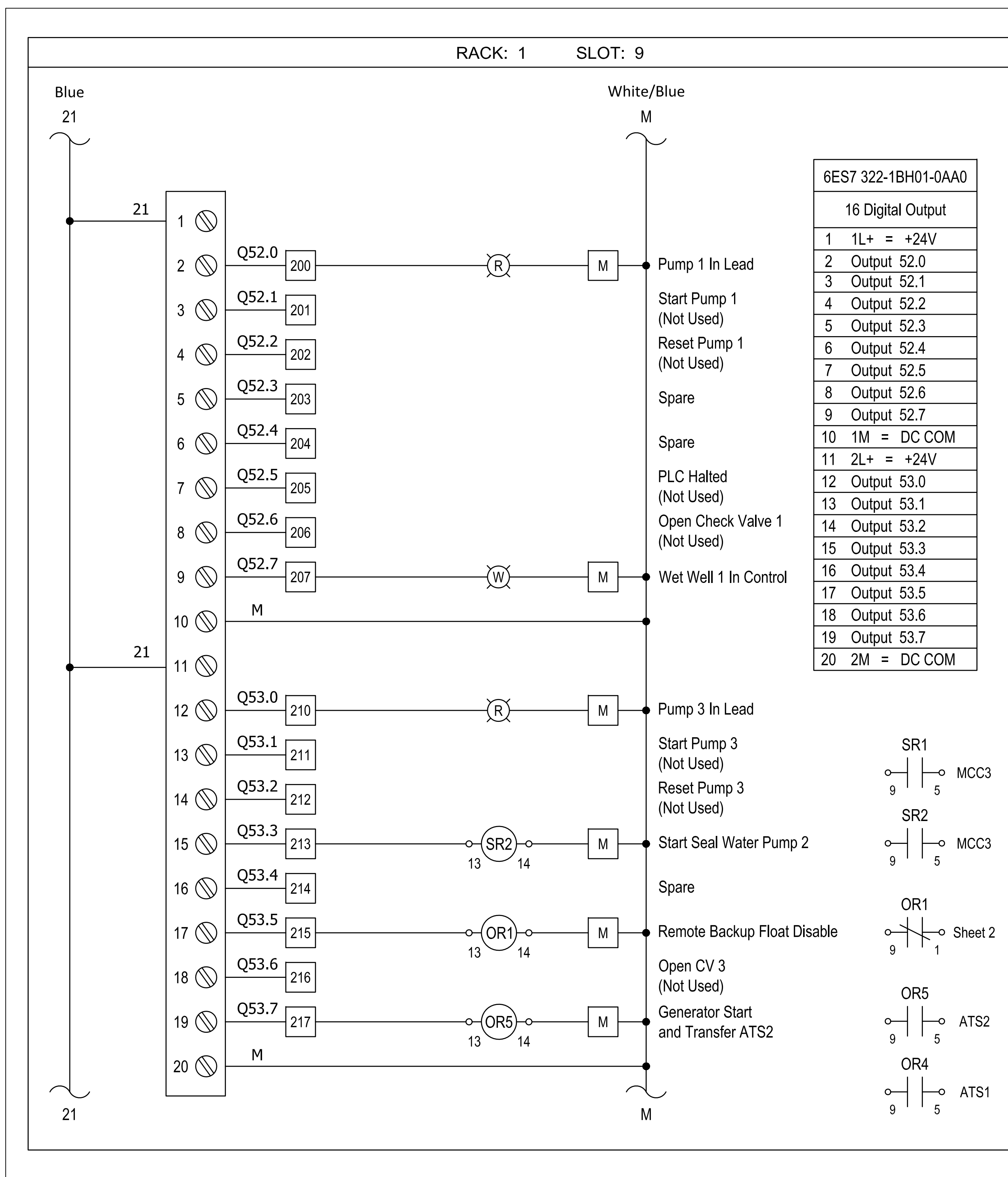


| | | | | |
|--|-----------------|--------------------|--------------------------|-------|
| | DESIGN ENGINEER | W. DAVID LASSETTER | FLORIDA REGISTRATION NO. | 37971 |
|--|-----------------|--------------------|--------------------------|-------|



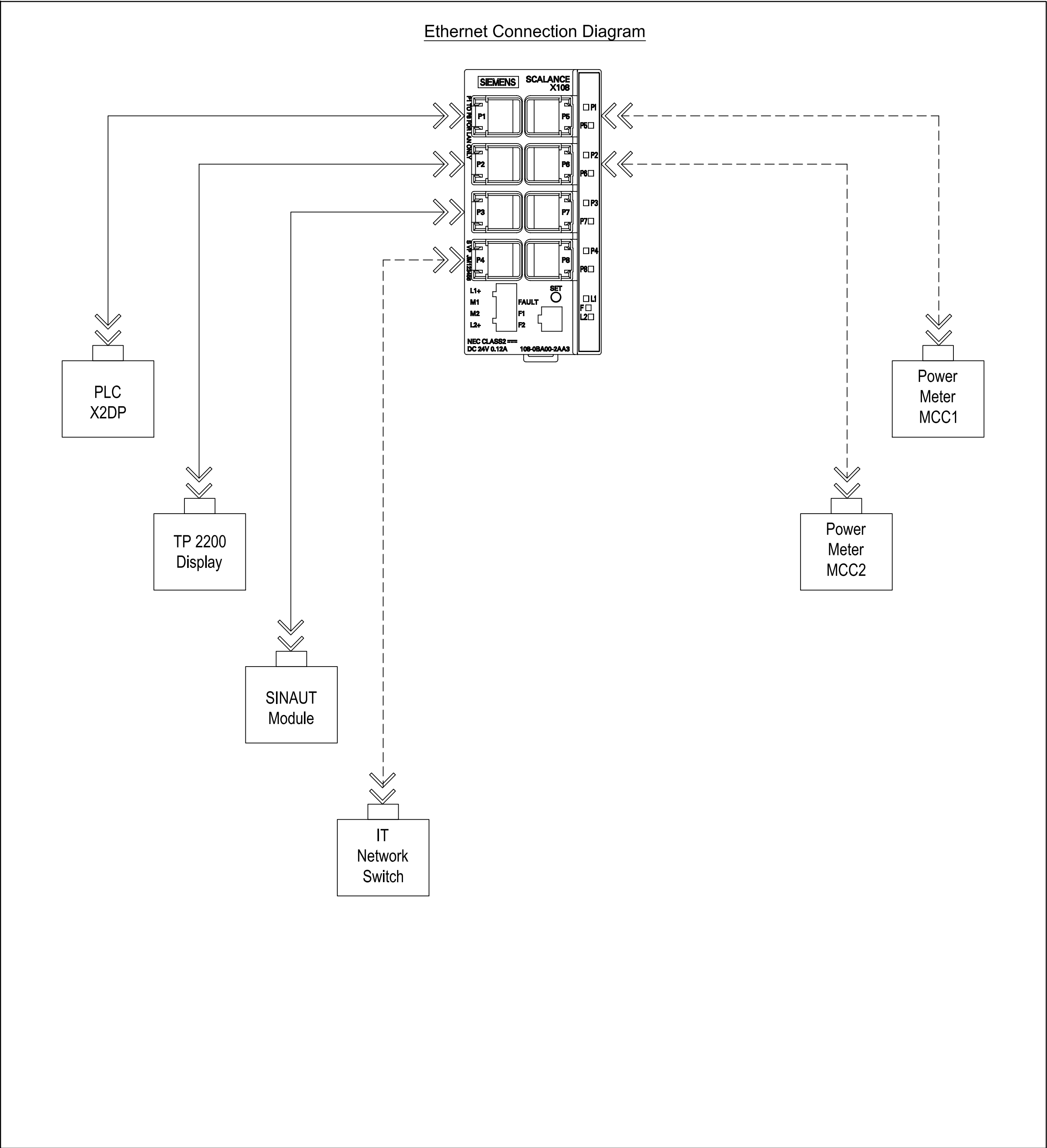
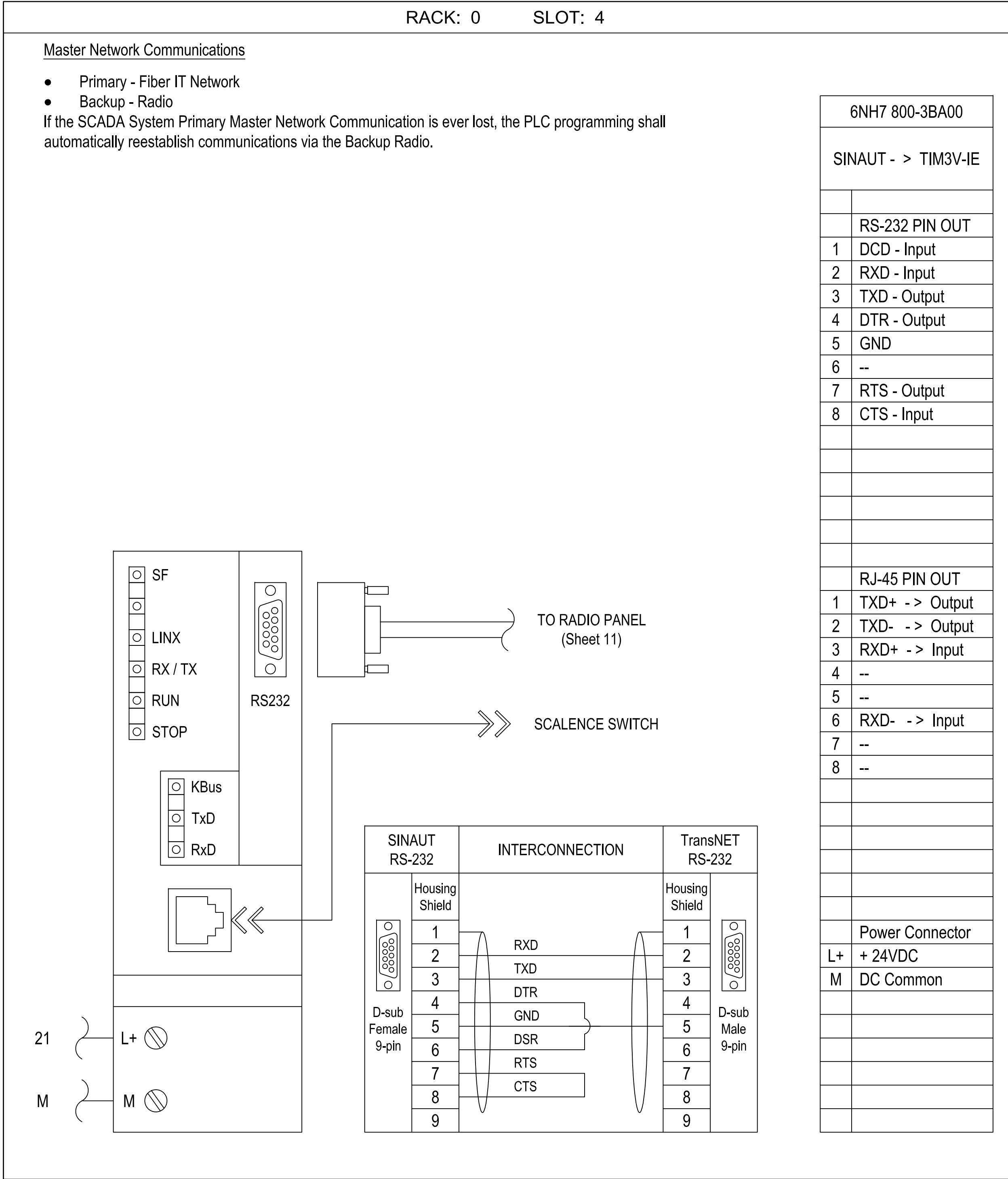
JEAsm
Building Communitysm

| | |
|---------------------|-------------------|
| NO. SHEETS 80 | PROJ. NO. 8002427 |
| SHEET NO. 72 | DATE: MAR 2020 |
| DRAWING NO. E-18 | SCALE: AS SHOWN |

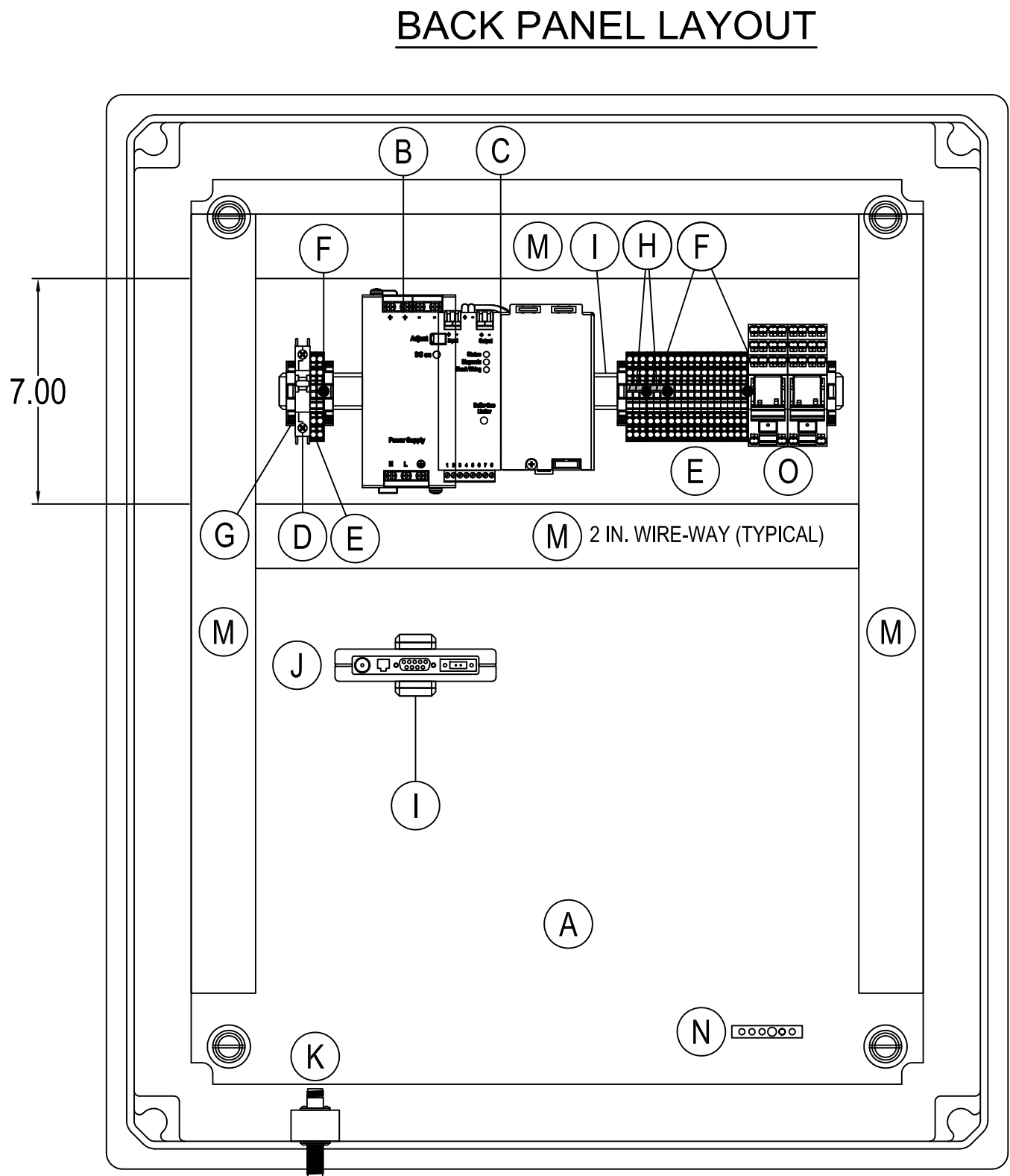


Sheet 7

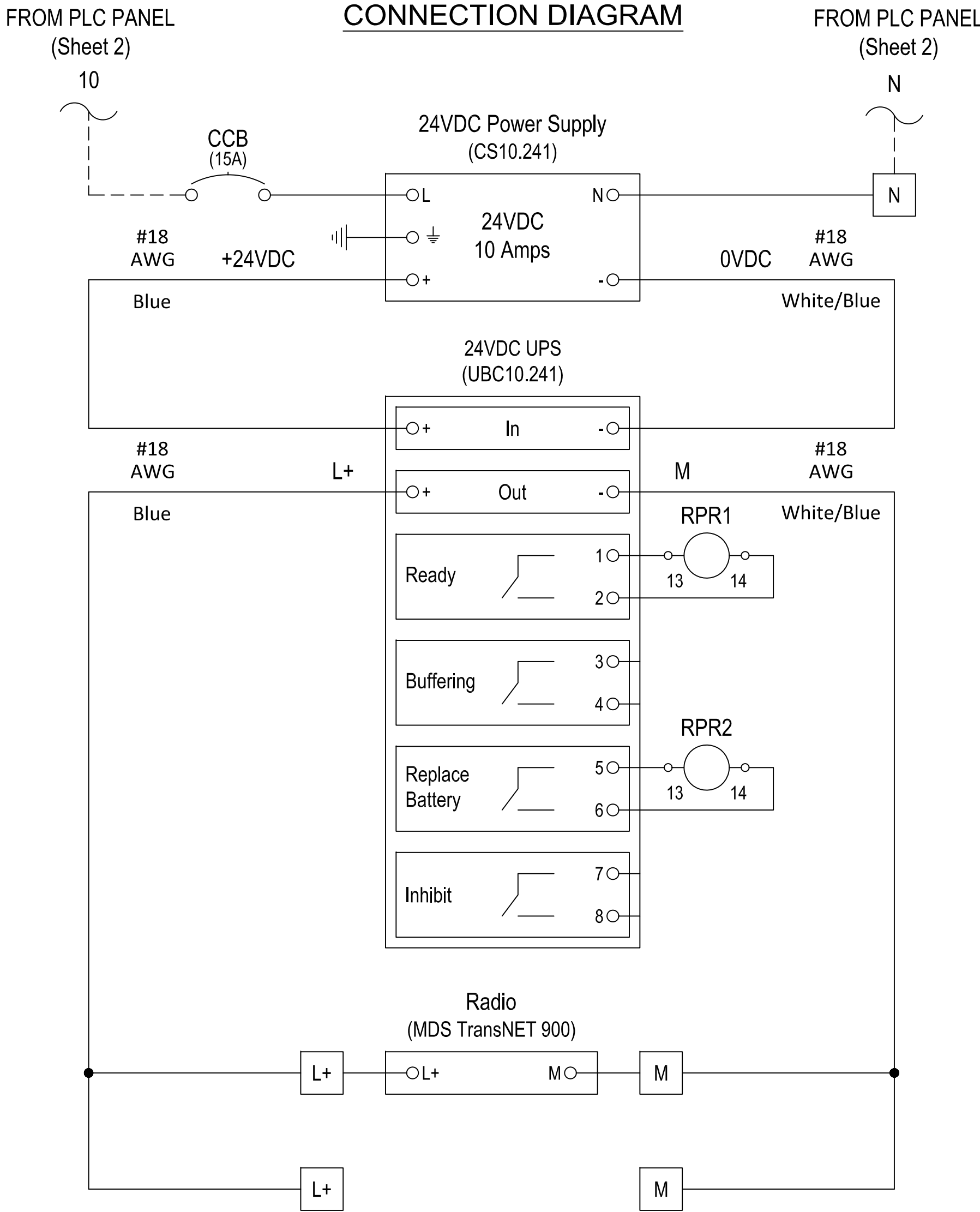




| BILL of MATERIAL | | | | |
|------------------|-----|--------------|------------------|--------------------------------------|
| | QTY | MANUFACTURER | PART NUMBER | DESCRIPTION |
| A | 1 | MDS | 82-3924A01 | FIBERGLASS ENCLOSURE |
| B | 1 | PULS | CS10.241 | 24VDC POWER SUPPLY, 10A |
| C | 1 | PULS | UBC10.241 | DC UPS, UL508, 10A, W/ BATTERY |
| D | 1 | WEIDMULLER | 9926 25 1015 | CCB, UL489, 1 POLE, 15A |
| E | 20 | WAGO | 2002-1401 | TERMINAL, 2002, SPRING, GRAY |
| F | 4 | WAGO | 2002-1492 | TERMINAL END / PART. PLATE, ORANGE |
| G | 4 | WAGO | 249-116 | TERMINAL END STOP, GRAY |
| H | 4 | WAGO | 2002-400 | ADJACENT JUMPER, 2-WAY CONTINUOUS |
| I | 1 | WAGO | 210-112 | 2M DIN RAIL, GALVANIZED, SLOTTED |
| J | 1 | MDS | TRANSNET 900 | RADIO, SPREAD-SPECTRUM, UNLICENSED |
| | 1 | MDS | 03-4124A01 | DIN RAIL MOUNT KIT |
| K | 1 | MDS | 97-1678A15 | SURGE SUPPRESSOR, ANTENNA |
| L | | | | |
| M | 1 | PANDUIT | 2"W x 2"H x 72"L | WIREWAY, HINGE COVER, WIDE FINGER |
| N | 1 | SQUARE D | PK5GTA | EQUIPMENT GROUND BAR, 5-POINT |
| O | 2 | FINDER | 58P490245050 | RELAY, STATUS, SPRING, 4NO-NC, 24VDC |

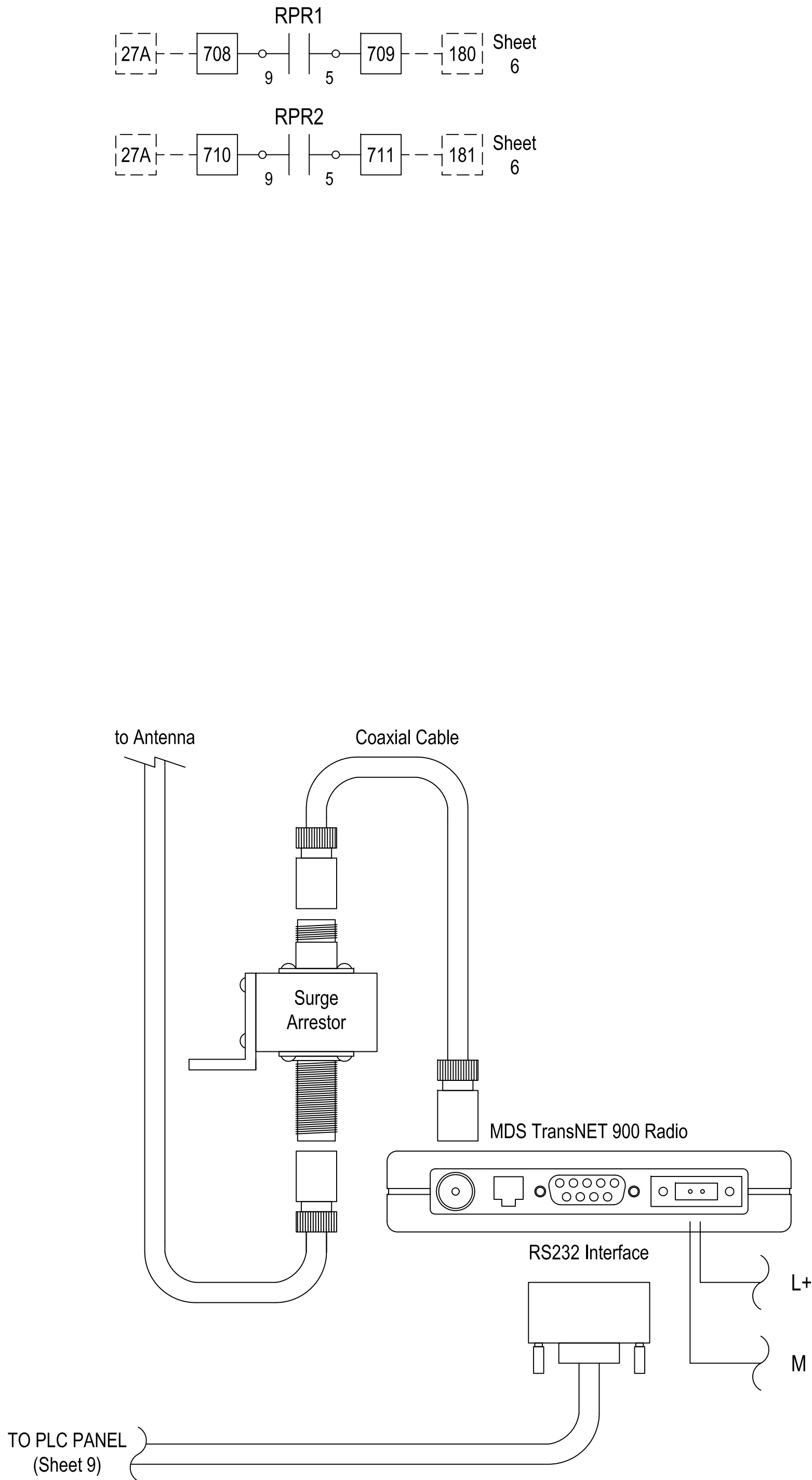


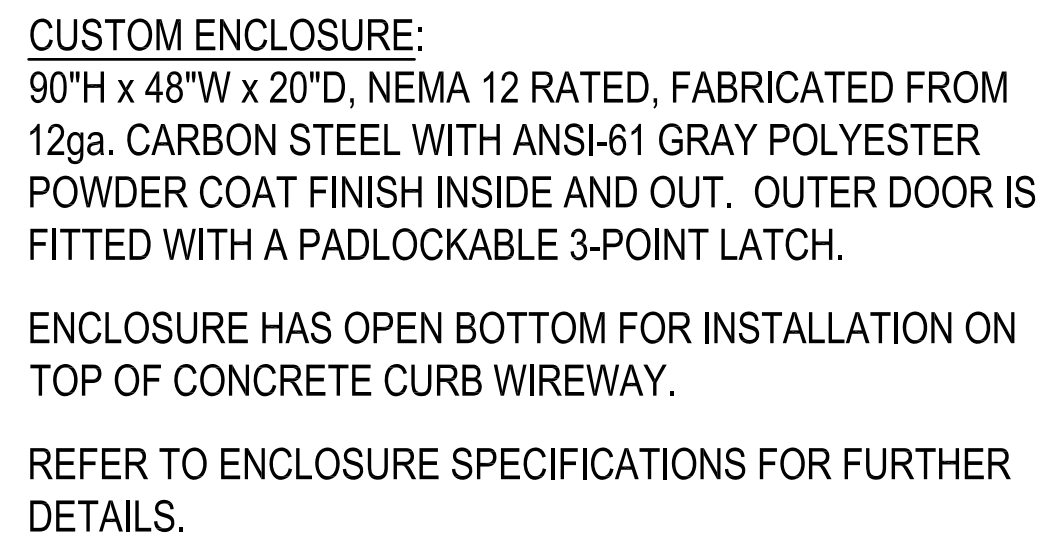
ENCLOSURE:
22"H x 18"W x 10"D, NEMA 4X RATED, FABRICATED FROM
FIBERGLASS.



GENERAL NOTES:

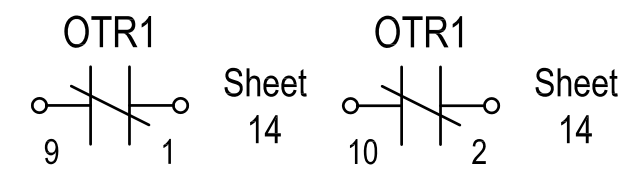
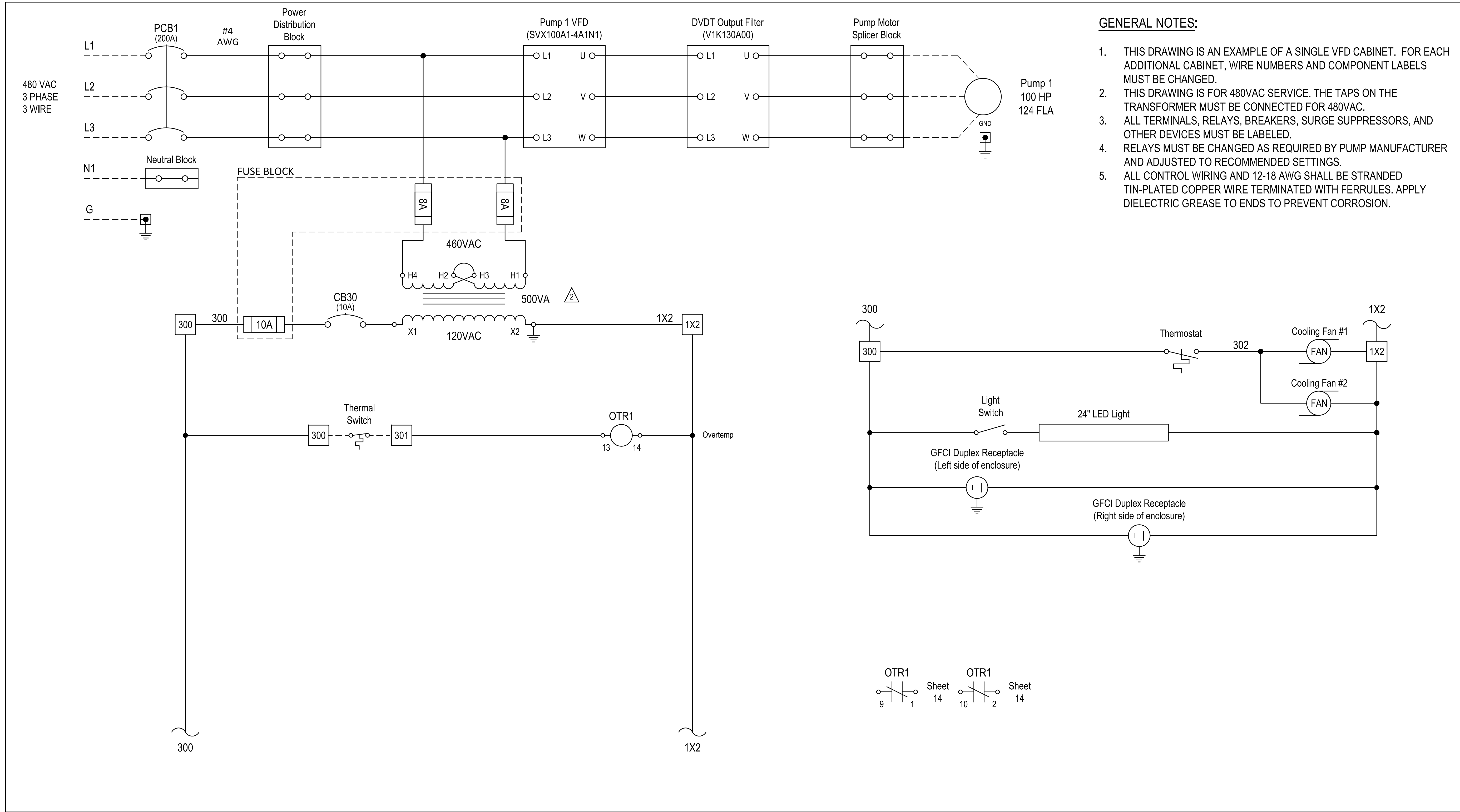
- REFER TO "433 LIFT STATION SCADA CONTROLS SPECIFICATION" FOR FURTHER DETAILS THAT MUST BE ADHERED TO SUCH AS WIRE, CONTACTOR, AND CIRCUIT BREAKER SIZING.
- ALL WIRING SHALL BE STRANDED, TIN-PLATED COPPER. APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.
- ALL TERMINAL WIRES IN PANEL SHALL BE TERMINATED WITH FERRULES.






GENERAL NOTES:

1. REFER TO "433 LIFT STATION SCADA CONTROLS SPECIFICATION" FOR FURTHER DETAILS THAT MUST BE ADHERED TO SUCH AS WIRE, CONTACTOR, AND CIRCUIT BREAKER SIZING.
2. THIS DRAWING IS AN EXAMPLE OF HOW OVERALL CABINET IS TO BE DESIGNED. THE DRAWING WILL NEED TO BE REVISED BASED ON THE PUMP MANUFACTURER AND SIZE. THINGS THAT WILL CHANGE ARE CIRCUIT BREAKER SIZE, WIRE SIZE, VFD SIZE, AND OTHER ITEMS. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
3. THIS DRAWING IS AN EXAMPLE OF A SINGLE VFD CABINET. FOR EACH ADDITIONAL CABINET, WIRE NUMBERS AND COMPONENT LABELS MUST BE CHANGED.
5. ALL WIRING SHALL BE STRANDED, TIN-PLATED COPPER. APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.
6. ALL TERMINAL WIRES IN PANEL SHALL BE TERMINATED WITH FERRULES.
7. REFER TO NOTES AND DETAILS ON ALL DRAWING SHEETS FOR MORE MANUFACTURING DETAILS.
8. ALL MOUNTING SCREWS SHALL BE STAINLESS STEEL, DRILLED AND TAPPED (NO SELF-TAPPING SCREWS ARE ALLOWED).
9. VFDs SHALL BE RATED FOR CORROSIVE ENVIRONMENTS AND DRIVE CONTROL BOARDS SHALL BE CONFORMAL COATED TO PROTECT AGAINST CORROSION.
10. A MINIMUM 5% LINE REACTOR IS REQUIRED. IF LINE REACTOR IS EXTERNAL TO VFD, A HARMONIC FILTER CABINET SIZED ACCORDING TO MANUFACTURER SPECIFICATIONS MUST BE PROVIDED.
11. VIBRATION SENSOR IS NOT REQUIRED FOR SUBMERSIBLE PUMPS. THIS DEVICE IS TO BE FIELD INSTALLED.
12. SEAL LEAK/OVERTEMP RELAYS MUST BE CHANGED AS REQUIRED BY PUMP MANUFACTURER. DEVICE CAN BE MOUNTED ON PANEL OR DOOR.
13. ENSURE GOOD ELECTRICAL CONTACT BETWEEN BACK PANEL AND ALL MECHANICAL GROUND CONNECTIONS.

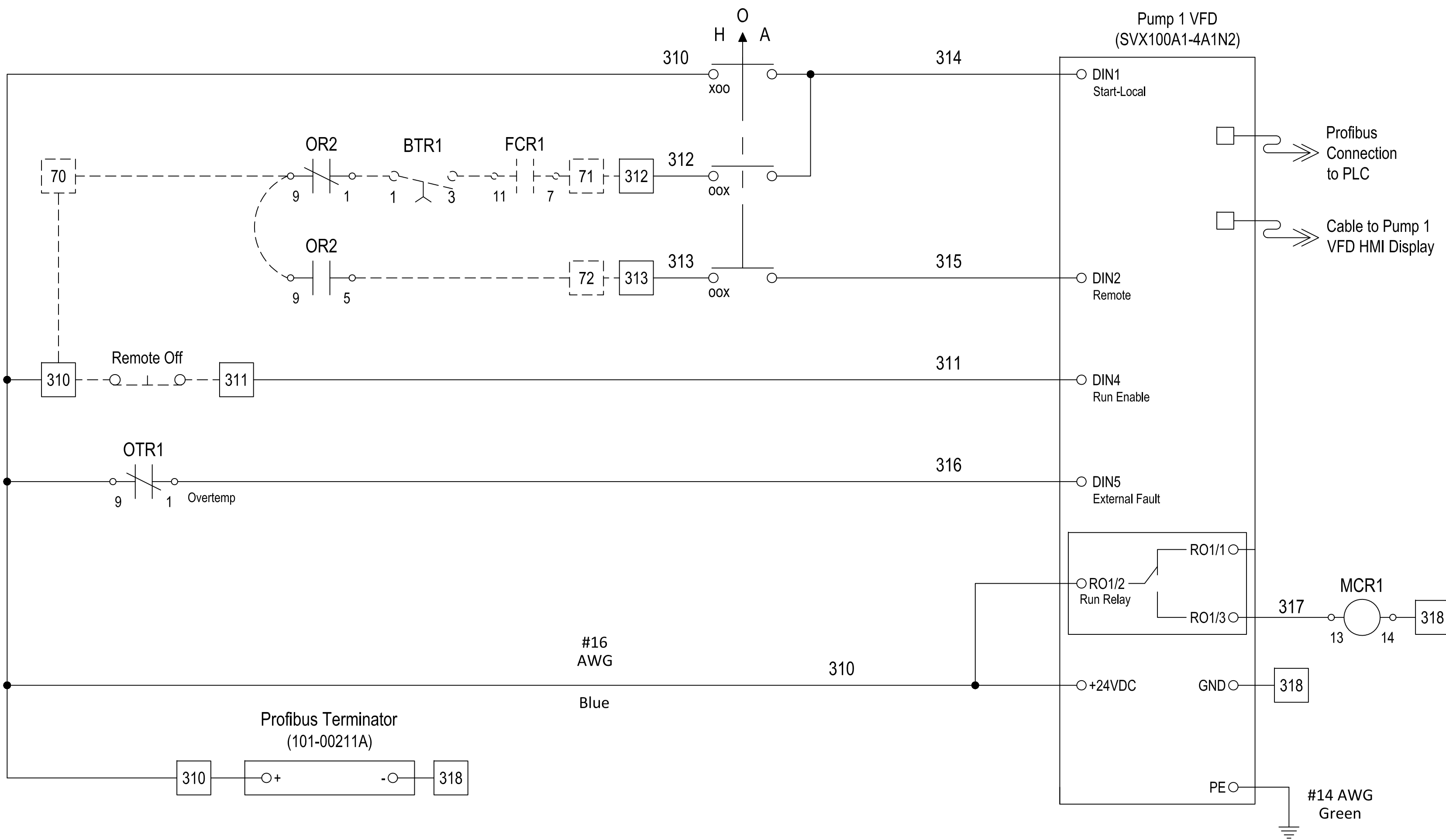


Sheet 13

| | | | | | |
|--|--------------------|---|-----|------------------|------|
|  | | J. Collins Engineering Associates, LLC 11516-3 San Jose Blvd. Jacksonville, Florida 32223 CA# 9952 904-262-4121 904-262-4122 | | REVISIONS | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | W. DAVID LASSETTER | 8/18/2020 | 2 | | |
| 2 | | | 3 | | |
| 3 | | | 4 | | |
| 4 | | | 5 | | |
| 5 | | | 6 | | |
| 6 | | | 7 | | |
| 7 | | | 8 | | |
| 8 | | | 9 | | |
| 9 | | | 10 | | |
| 10 | | | 11 | | |
| 11 | | | 12 | | |
| 12 | | | 13 | | |
| 13 | | | 14 | | |
| 14 | | | 15 | | |
| 15 | | | 16 | | |
| 16 | | | 17 | | |
| 17 | | | 18 | | |
| 18 | | | 19 | | |
| 19 | | | 20 | | |
| 20 | | | 21 | | |
| 21 | | | 22 | | |
| 22 | | | 23 | | |
| 23 | | | 24 | | |
| 24 | | | 25 | | |
| 25 | | | 26 | | |
| 26 | | | 27 | | |
| 27 | | | 28 | | |
| 28 | | | 29 | | |
| 29 | | | 30 | | |
| 30 | | | 31 | | |
| 31 | | | 32 | | |
| 32 | | | 33 | | |
| 33 | | | 34 | | |
| 34 | | | 35 | | |
| 35 | | | 36 | | |
| 36 | | | 37 | | |
| 37 | | | 38 | | |
| 38 | | | 39 | | |
| 39 | | | 40 | | |
| 40 | | | 41 | | |
| 41 | | | 42 | | |
| 42 | | | 43 | | |
| 43 | | | 44 | | |
| 44 | | | 45 | | |
| 45 | | | 46 | | |
| 46 | | | 47 | | |
| 47 | | | 48 | | |
| 48 | | | 49 | | |
| 49 | | | 50 | | |
| 50 | | | 51 | | |
| 51 | | | 52 | | |
| 52 | | | 53 | | |
| 53 | | | 54 | | |
| 54 | | | 55 | | |
| 55 | | | 56 | | |
| 56 | | | 57 | | |
| 57 | | | 58 | | |
| 58 | | | 59 | | |
| 59 | | | 60 | | |
| 60 | | | 61 | | |
| 61 | | | 62 | | |
| 62 | | | 63 | | |
| 63 | | | 64 | | |
| 64 | | | 65 | | |
| 65 | | | 66 | | |
| 66 | | | 67 | | |
| 67 | | | 68 | | |
| 68 | | | 69 | | |
| 69 | | | 70 | | |
| 70 | | | 71 | | |
| 71 | | | 72 | | |
| 72 | | | 73 | | |
| 73 | | | 74 | | |
| 74 | | | 75 | | |
| 75 | | | 76 | | |
| 76 | | | 77 | | |
| 77 | | | 78 | | |
| 78 | | | 79 | | |
| 79 | | | 80 | | |
| 80 | | | 81 | | |
| 81 | | | 82 | | |
| 82 | | | 83 | | |
| 83 | | | 84 | | |
| 84 | | | 85 | | |
| 85 | | | 86 | | |
| 86 | | | 87 | | |
| 87 | | | 88 | | |
| 88 | | | 89 | | |
| 89 | | | 90 | | |
| 90 | | | 91 | | |
| 91 | | | 92 | | |
| 92 | | | 93 | | |
| 93 | | | 94 | | |
| 94 | | | 95 | | |
| 95 | | | 96 | | |
| 96 | | | 97 | | |
| 97 | | | 98 | | |
| 98 | | | 99 | | |
| 99 | | | 100 | | |
| 100 | | | 101 | | |
| 101 | | | 102 | | |
| 102 | | | 103 | | |
| 103 | | | 104 | | |
| 104 | | | 105 | | |
| 105 | | | 106 | | |
| 106 | | | 107 | | |
| 107 | | | 108 | | |
| 108 | | | 109 | | |
| 109 | | | 110 | | |
| 110 | | | 111 | | |
| 111 | | | 112 | | |
| 112 | | | 113 | | |
| 113 | | | 114 | | |
| 114 | | | 115 | | |
| 115 | | | 116 | | |
| 116 | | | 117 | | |
| 117 | | | 118 | | |
| 118 | | | 119 | | |
| 119 | | | 120 | | |
| 120 | | | 121 | | |
| 121 | | | 122 | | |
| 122 | | | 123 | | |
| 123 | | | 124 | | |
| 124 | | | 125 | | |
| 125 | | | 126 | | |
| 126 | | | 127 | | |
| 127 | | | 128 | | |
| 128 | | | 129 | | |
| 129 | | | 130 | | |
| 130 | | | 131 | | |
| 131 | | | 132 | | |
| 132 | | | 133 | | |
| 133 | | | 134 | | |
| 134 | | | 135 | | |
| 135 | | | 136 | | |
| 136 | | | 137 | | |
| 137 | | | 138 | | |
| 138 | | | 139 | | |
| 139 | | | 140 | | |
| 140 | | | 141 | | |
| 141 | | | 142 | | |
| 142 | | | 143 | | |
| 143 | | | 144 | | |
| 144 | | | 145 | | |
| 145 | | | 146 | | |
| 146 | | | 147 | | |
| 147 | | | 148 | | |
| 148 | | | 149 | | |
| 149 | | | 150 | | |
| 150 | | | 151 | | |
| 151 | | | 152 | | |
| 152 | | | 153 | | |
| 153 | | | 154 | | |
| 154 | | | 155 | | |
| 155 | | | 156 | | |
| 156 | | | 157 | | |
| 157 | | | 158 | | |
| 158 | | | 159 | | |
| 159 | | | 160 | | |
| 160 | | | 161 | | |
| 161 | | | 162 | | |
| 162 | | | 163 | | |
| 163 | | | 164 | | |
| 164 | | | 165 | | |
| 165 | | | 166 | | |
| 166 | | | 167 | | |
| 167 | | | 168 | | |
| 168 | | | 169 | | |
| 169 | | | 170 | | |
| 170 | | | 171 | | |
| 171 | | | 172 | | |
| 172 | | | 173 | | |
| 173 | | | 174 | | |
| 174 | | | 175 | | |
| 175 | | | 176 | | |
| 176 | | | 177 | | |
| 177 | | | 178 | | |
| 178 | | | 179 | | |
| 179 | | | 180 | | |
| 180 | | | 181 | | |
| 181 | | | 182 | | |
| 182 | | | 183 | | |
| 183 | | | 184 | | |
| 184 | | | 185 | | |
| 185 | | | 186 | | |
| 186 | | | 187 | | |
| 187 | | | 188 | | |
| 188 | | | 189 | | |
| 189 | | | 190 | | |
| 190 | | | 191 | | |
| 191 | | | 192 | | |
| 192 | | | 193 | | |
| 193 | | | 194 | | |
| 194 | | | 195 | | |
| 195 | | | 196 | | |
| 196 | | | 197 | | |
| 197 | | | 198 | | |
| 198 | | | 199 | | |
| 199 | | | 200 | | |
| 200 | | | 201 | | |
| 201 | | | 202 | | |
| 202 | | | 203 | | |
| 203 | | | 204 | | |
| 204 | | | 205 | | |
| 205 | | | 206 | | |
| 206 | | | 207 | | |
| 207 | | | 208 | | |
| 208 | | | 209 | | |
| 209 | | | 210 | | |
| 210 | | | 211 | | |
| 211 | | | 212 | | |
| 212 | | | 213 | | |
| 213 | | | 214 | | |
| 214 | | | 215 | | |
| 215 | | | 216 | | |
| 216 | | | 217 | | |
| 217 | | | 218 | | |
| 218 | | | 219 | | |
| 219 | | | 220 | | |
| 220 | | | 221 | | |
| 221 | | | 222 | | |
| 222 | | | 223 | | |
| 223 | | | 224 | | |
| 224 | | | 225 | | |
| 225 | | | 226 | | |
| 226 | | | 227 | | |
| 227 | | | 228 | | |
| 228 | | | 229 | | |
| 229 | | | 230 | | |
| 230 | | | 231 | | |
| 231 | | | 232 | | |
| 232 | | | 233 | | |
| 233 | | | 234 | | |
| 234 | | | 235 | | |
| 235 | | | 236 | | |
| 236 | | | 237 | | |
| 237 | | | 238 | | |
| 238 | | | 239 | | |
| 239 | | | 240 | | |
| 240 | | | 241 | | |
| 241 | | | 242 | | |
| 242 | | | 243 | | |
| 243 | | | 244 | | |
| 244 | | | 245 | | |
| 245 | | | 246 | | |
| 246 | | | 247 | | |
| 247 | | | 248 | | |
| 248 | | | 249 | | |
| 249 | | | 250 | | |
| 250 | | | 251 | | |
| 251 | | | 252 | | |
| 252 | | | 253 | | |
| 253 | | | 254 | | |
| 254 | | | 255 | | |
| 255 | | | 256 | | |
| 256 | | | 257 | | |
| 257 | | | 258 | | |
| 258 | | | 259 | | |
| 259 | | | 260 | | |
| 260 | | | 261 | | |
| 261 | | | 262 | | |
| 262 | | | 263 | | |
| 263 | | | 264 | | |
| 264 | | | 265 | | |
| 265 | | | 266 | | |
| 266 | | | 267 | | |
| 267 | | | 268 | | |
| 268 | | | 269 | | |
| 269 | | | 270 | | |
| 270 | | | 271 | | |
| 271 | | | 272 | | |
| 272 | | | 273 | | |
| 273 | | | 274 | | |
| 274 | | | 275 | | |
| 275 | | | 276 | | |
| 276 | | | 277 | | |
| 277 | | | 278 | | |
| 278 | | | 279 | | |
| 279 | | | 280 | | |
| 280 | | | 281 | | |
| 281 | | | 282 | | |
| 282 | | | 283 | | |
| 283 | | | 284 | | |
| 284 | | | 285 | | |
| 285 | | | 286 | | |
| 286 | | | 287 | | |
| 287 | | | 288 | | |
| 288 | | | 289 | | |
| 289 | | | 290 | | |
| 290 | | | 291 | | |
| 291 | | | 292 | | |
| 292 | | | 293 | | |
| 293 | | | 294 | | |
| 294 | | | 295 | | |
| 295 | | | 296 | | |
| 296 | | | 297 | | |
| 297 | | | 298 | | |
| 298 | | | 299 | | |
| 299 | | | 300 | | |
| 300 | | | 301 | | |
| 301 | | | 302 | | |
| 302 | | | 303 | | |
| 303 | | | 304 | | |
| 304 | | | 305 | | |
| 305 | | | 306 | | |
| 306 | | | 307 | | |
| 307 | | | 308 | | |
| 308 | | | 309 | | |
| 309 | | | 310 | | |
| 310 | | | 311 | | |
| 311 | | | 312 | | |
| 312 | | | 313 | | |
| 313 | | | 314 | | |
| 314 | | | 315 | | |
| 315 | | | 316 | | |
| 316 | | | 317 | | |
| 317 | | | 318 | | |
| 318 | | | 3 | | |

GENERAL NOTES:

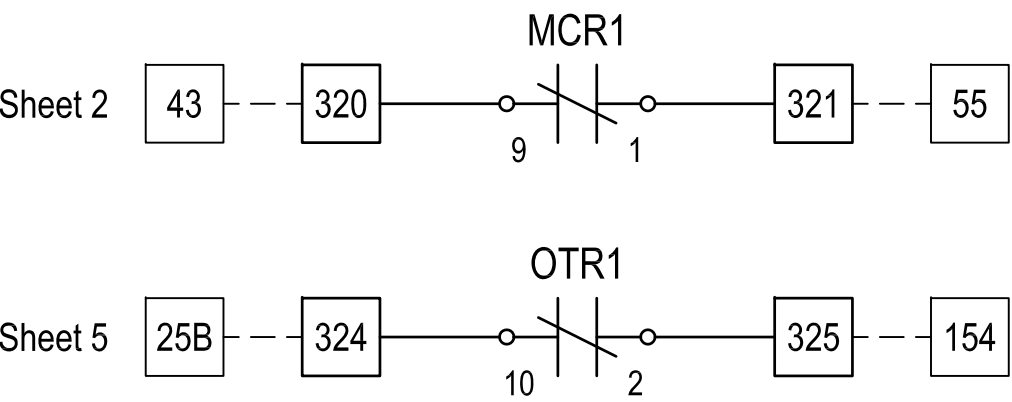
1. THIS DRAWING IS AN EXAMPLE OF A SINGLE VFD CABINET. FOR EACH ADDITIONAL CABINET, WIRE NUMBERS AND COMPONENT LABELS MUST BE CHANGED.
2. ALL TERMINALS, RELAYS, BREAKERS, SURGE SUPPRESSORS, AND OTHER DEVICES MUST BE LABELED.
3. RELAYS MUST BE CHANGED AS REQUIRED BY PUMP MANUFACTURER AND ADJUSTED TO RECOMMENDED SETTINGS.
4. ALL CONTROL WIRING AND 12-18 AWG SHALL BE STRANDED TIN-PLATED COPPER WIRE TERMINATED WITH FERRULES. APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.



VFD Functional

- OFF - Drive is disabled.
- MANUAL - The drive will be forced to Local control and will be given a start signal to ramp it up to maximum speed.
- AUTO - If the VFD selector switch is put into Auto and Communication OK relay is good then the drive will be controlled over Profibus using PPO4. If the PLC communication is ever lost to the VFD, the communication OK relay will drop out and control the VFD from the Float Control Relay. The communication OK relay is controlled by the PLC and is to be energized as long as the VFD communication is OK.

Field Relay Connections



| CONDUIT AND CABLE SCHEDULE | | | | | | | | | |
|----------------------------|------|-------|------|------|------|--------------------------|--------------------------|----------------------|------------|
| CONDUIT | | CABLE | | | | FROM | TO | FOR | NOTES |
| NO. | SIZE | COND. | AWG | TYPE | VOLT | | | | |
| P101 | 3-4" | 3 EA | 500 | XHHW | 600 | SERVICE 1 TRANSFORMER | SERVICE 1 MAIN BREAKER | POWER | |
| P101 | ---- | 1 EA | 4/0 | XHHW | 600 | SERVICE 1 TRANSFORMER | SERVICE 1 MAIN BREAKER | NEUTRAL | |
| P102 | 3-4" | 3 EA | 500 | XHHW | 600 | SERVICE 1 MAIN BREAKER | AUTO TRANSFER SWITCH 1 | POWER | |
| P102 | ---- | 2 EA | 4/0 | XHHW | 600 | SERVICE 1 MAIN BREAKER | AUTO TRANSFER SWITCH 1 | GROUND, NEUTRAL | |
| P103 | 4.00 | 3 | 500 | XHHW | 600 | GENERATOR PANEL P | AUTO TRANSFER SWITCH 1 | POWER | |
| P103 | ---- | 2 | 4/0 | XHHW | 600 | GENERATOR PANEL P | AUTO TRANSFER SWITCH 1 | GROUND, NEUTRAL | |
| P104 | 3-4" | 3 EA | 500 | XHHW | 600 | AUTO TRANSFER SWITCH 1 | MOTOR CONTROL CENTER 1 | POWER | |
| P104 | ---- | 1 EA | 4/0 | XHHW | 600 | AUTO TRANSFER SWITCH 1 | MOTOR CONTROL CENTER 1 | GROUND | |
| C104 | 0.75 | 11 | 14 | XHHW | 600 | AUTO TRANSFER SWITCH 1 | PUMP STATION CONTROL PNL | CONTROL, STATUS, ALM | |
| C105 | 0.75 | 3 | 14 | XHHW | 600 | MOTOR CONTROL CENTER 1 | PUMP STATION CONTROL PNL | 24VDC POWER | |
| S105 | 0.75 | ---- | ---- | ---- | ---- | MOTOR CONTROL CENTER 1 | PUMP STATION CONTROL PNL | PROFINET CABLE | SHIELDED |
| P110 | 2.50 | 3 | 250 | XHHW | 600 | MOTOR CONTROL CENTER 1 | PUMP NO.1 VFD | POWER | |
| P110 | ---- | 1 | 2 | XHHW | 600 | MOTOR CONTROL CENTER 1 | PUMP NO.1 VFD | GROUND | |
| C110 | 0.75 | XX | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | PUMP NO.1 VFD | DIGITAL I/O | |
| S110 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | PUMP NO.1 VFD | PROFIBUS CABLE | |
| P111 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.1 VFD | PUMP NO.1 PULL BOX | POWER, GROUND | VFD CABLES |
| C111 | 1.00 | 12 | 14 | XHHW | 600 | PUMP NO.1 VFD | PUMP NO.1 PULL BOX | SO, TS, SH, SO, ZS | |
| P112 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.1 PULL BOX | PUMP NO.1 MOTOR | POWER, GROUND | VFD CABLES |
| C112 | 0.75 | 7 | 14 | XHHW | 600 | PUMP NO.1 PULL BOX | PUMP NO.1 MOTOR | SO, TS, SH | |
| C113 | 0.75 | 6 | 14 | XHHW | 600 | PUMP NO.1 PULL BOX | PUMP NO.1 | SO, ZS | |
| P120 | 2.50 | 3 | 250 | XHHW | 600 | MOTOR CONTROL CENTER 1 | PUMP NO.2 VFD | POWER | |
| P120 | ---- | 1 | 2 | XHHW | 600 | MOTOR CONTROL CENTER 1 | PUMP NO.2 VFD | GROUND | |
| C120 | 0.75 | XX | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | PUMP NO.2 VFD | DIGITAL I/O | |
| S120 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | PUMP NO.2 VFD | PROFIBUS CABLE | |
| P121 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.2 VFD | PUMP NO.2 PULL BOX | POWER, GROUND | VFD CABLES |
| C121 | 1.00 | 12 | 14 | XHHW | 600 | PUMP NO.2 VFD | PUMP NO.2 PULL BOX | SO, TS, SH, SO, ZS | |
| P122 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.2 PULL BOX | PUMP NO.2 MOTOR | POWER, GROUND | VFD CABLES |
| C122 | 0.75 | 7 | 14 | XHHW | 600 | PUMP NO.2 PULL BOX | PUMP NO.2 MOTOR | SO, TS, SH | |
| C123 | 0.75 | 6 | 14 | XHHW | 600 | PUMP NO.2 PULL BOX | PUMP NO.2 | SO, ZS | |
| P130 | 2.50 | 3 | 250 | XHHW | 600 | MOTOR CONTROL CENTER 1 | AUTO TRANSFER SWITCH 3 | POWER | |
| P130 | ---- | 1 | 2 | XHHW | 600 | MOTOR CONTROL CENTER 1 | AUTO TRANSFER SWITCH 3 | GROUND | |
| P201 | 3-4" | 3 EA | 500 | XHHW | 600 | SERVICE 2 TRANSFORMER | SERVICE 2 MAIN BREAKER | POWER | |
| P201 | ---- | 1 EA | 4/0 | XHHW | 600 | SERVICE 2 TRANSFORMER | SERVICE 2 MAIN BREAKER | NEUTRAL | |
| P202 | 3-4" | 3 EA | 500 | XHHW | 600 | SERVICE 2 MAIN BREAKER | AUTO TRANSFER SWITCH 2 | POWER | |
| P202 | ---- | 2 EA | 4/0 | XHHW | 600 | SERVICE 2 MAIN BREAKER | AUTO TRANSFER SWITCH 2 | GROUND, NEUTRAL | |
| P203 | 4.00 | 3 | 500 | XHHW | 600 | GENERATOR PANEL P | AUTO TRANSFER SWITCH 2 | POWER | |
| P203 | ---- | 2 | 4/0 | XHHW | 600 | GENERATOR PANEL P | AUTO TRANSFER SWITCH 2 | GROUND, NEUTRAL | |
| P204 | 3-4" | 3 EA | 500 | XHHW | 600 | AUTO TRANSFER SWITCH 2 | MOTOR CONTROL CENTER 2 | POWER | |
| P204 | ---- | 1 EA | 4/0 | XHHW | 600 | AUTO TRANSFER SWITCH 2 | MOTOR CONTROL CENTER 2 | GROUND | |
| C204 | 0.74 | 11 | 14 | XHHW | 600 | AUTO TRANSFER SWITCH 2 | PUMP STATION CONTROL PNL | CONTROL, STATUS, ALM | |
| C205 | 0.75 | 3 | 14 | XHHW | 600 | MOTOR CONTROL CENTER 2 | PUMP STATION CONTROL PNL | 24VDC POWER | |
| S205 | 0.75 | ---- | ---- | ---- | ---- | MOTOR CONTROL CENTER 2 | PUMP STATION CONTROL PNL | PROFINET CABLE | SHIELDED |
| P210 | 2.50 | 3 | 250 | XHHW | 600 | MOTOR CONTROL CENTER 2 | PUMP NO.3 VFD | POWER | |
| P210 | ---- | 1 | 2 | XHHW | 600 | MOTOR CONTROL CENTER 2 | PUMP NO.3 VFD | GROUND | |
| C210 | 0.75 | XX | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | PUMP NO.3 VFD | DIGITAL I/O | |
| S210 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | PUMP NO.3 VFD | PROFIBUS CABLE | |
| P211 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.3 VFD | PUMP NO.3 PULL BOX | POWER, GROUND | VFD CABLES |
| C211 | 1.00 | 12 | 14 | XHHW | 600 | PUMP NO.3 VFD | PUMP NO.3 PULL BOX | SO, TS, SH, SO, ZS | |
| P212 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.3 PULL BOX | PUMP NO.3 MOTOR | POWER, GROUND | VFD CABLES |
| C212 | 0.75 | 7 | 14 | XHHW | 600 | PUMP NO.3 PULL BOX | PUMP NO.3 MOTOR | SO, TS, SH | |
| C213 | 0.75 | 6 | 14 | XHHW | 600 | PUMP NO.3 PULL BOX | PUMP NO.3 | SO, ZS | |
| P220 | 2.50 | 3 | 250 | XHHW | 600 | MOTOR CONTROL CENTER 2 | PUMP NO.4 VFD | POWER | |
| P220 | ---- | 1 | 2 | XHHW | 600 | MOTOR CONTROL CENTER 2 | PUMP NO.4 VFD | GROUND | |
| C220 | 0.75 | XX | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | PUMP NO.4 VFD | DIGITAL I/O | |
| S220 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | PUMP NO.4 VFD | PROFIBUS CABLE | |
| P221 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.4 VFD | PUMP NO.4 PULL BOX | POWER, GROUND | VFD CABLES |
| C221 | 1.00 | 12 | 14 | XHHW | 600 | PUMP NO.4 VFD | PUMP NO.4 PULL BOX | SO, TS, SH, SO, ZS | |
| P222 | 2.50 | 4C | 2/0 | XLP | 1000 | PUMP NO.4 PULL BOX | PUMP NO.4 MOTOR | POWER, GROUND | VFD CABLES |
| C222 | 0.75 | 7 | 14 | XHHW | 600 | PUMP NO.4 PULL BOX | PUMP NO.4 MOTOR | SO, TS, SH | |
| C223 | 0.75 | 6 | 14 | XHHW | 600 | PUMP NO.4 PULL BOX | PUMP NO.4 | SO, ZS | |
| P230 | 2.50 | 3 | 250 | XHHW | 600 | MOTOR CONTROL CENTER 2 | AUTO TRANSFER SWITCH 3 | POWER | |
| P230 | ---- | 1 | 2 | XHHW | 600 | MOTOR CONTROL CENTER 2 | AUTO TRANSFER SWITCH 3 | GROUND | |

| CONDUIT AND CABLE SCHEDULE | | | | | | | | | |
|----------------------------|------|-------|------|------|------|--------------------------|--------------------------|--------------------|-------------|
| CONDUIT | | CABLE | | | | FROM | TO | FOR | NOTES |
| NO. | SIZE | COND. | AWG | TYPE | VOLT | | | | |
| P300 | 2.50 | 3 | 250 | XHHW | 600 | AUTO TRANSFER SWITCH 3 | MOTOR CONTROL CENTER 3 | POWER | |
| P300 | ---- | 1 | 2 | XHHW | 600 | AUTO TRANSFER SWITCH 3 | MOTOR CONTROL CENTER 3 | GROUND | |
| C300 | 0.75 | ---- | ---- | ---- | ---- | AUTO TRANSFER SWITCH 3 | PUMP STATION CONTROL PNL | SPARE | |
| P310 | 2.00 | 5 | 2 | XHHW | 600 | MCC3 TRANSFORMER L2 | LIGHTING PANEL L2 | POWER, NEUTRAL GND | |
| P320 | 0.75 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SF-1 | POWER, GROUND | |
| C320 | 0.75 | 5 | 14 | XHHW | 600 | MOTOR CONTROL CENTER 3 | T-STAT | CONTROL | |
| P321 | 0.75 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | EF-1 | POWER, GROUND | |
| P322 | 0.75 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SF-2 | POWER, GROUND | |
| P323 | 0.75 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | EF-2 | POWER, GROUND | |
| P330 | 1.00 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | FLUSHING WATER PUMP | POWER, GROUND | |
| P330 | ---- | 4 | 4 | XHHW | 600 | MOTOR CONTROL CENTER 3 | FLUSHING WATER PUMP | SO, TIME SWITCH | |
| P340 | 1.00 | 3 | 12 | XHHW | 600 | MCC3 LIGHTING PANEL L1 | SEAL WATER CONTROL PNL | CONTROL POWER | |
| P340 | ---- | 3 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SEAL WATER CONTROL PNL | SEAL WATER PUMP 1 | |
| P340 | ---- | 3 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SEAL WATER CONTROL PNL | SEAL WATER PUMP 2 | |
| P340 | ---- | 4 | 14 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SEAL WATER CONTROL PNL | SO, SO | |
| P340 | ---- | 1 | 10 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SEAL WATER CONTROL PNL | GROUND | |
| P350 | 0.75 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | MOTOR ROOM HOIST | POWER, GROUND | |
| P360 | 0.75 | 4 | 12 | XHHW | 600 | MOTOR CONTROL CENTER 3 | SUMP PUMP CONTROL PANEL | POWER, GROUND | |
| P370 | 1.00 | 4 | 8 | XHHW | 600 | MOTOR CONTROL CENTER 3 | ODOR CONTROL PANEL | POWER, GROUND | |
| C370 | 0.75 | 9 | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | ODOR CONTROL PANEL | DIGITAL I/O | |
| S370 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | ODOR CONTROL PANEL | SPARE | |
| P380 | 0.75 | 3 | 8 | XHHW | 600 | MCC3 LIGHTING PANEL L1 | CU-1 | POWER, GROUND | L1-2 |
| C380 | 0.75 | ---- | ---- | ---- | ---- | CU-1 | AHU-1 | T-STAT CABLE | |
| P381 | 0.75 | 3 | 12 | XHHW | 600 | MCC3 LIGHTING PANEL L1 | AHU-1 | POWER, GROUND | L1-6 |
| C381 | 0.75 | ---- | ---- | ---- | ---- | AHU-1 | T-STAT | T-STAT CABLE | |
| P400 | 4.00 | 3 | 500 | XHHW | 600 | STANDBY GENERATOR | GENERATOR PANEL P | POWER | |
| P400 | ---- | 1 | 4/0 | XHHW | 600 | STANDBY GENERATOR | GENERATOR PANEL P | GROUND | |
| C400 | 0.75 | 3 | 14 | XHHW | 600 | STANDBY GENERATOR | PUMP STATION CONTROL PNL | 24VDC POWER | |
| S400 | 0.75 | ---- | ---- | ---- | ---- | STANDBY GENERATOR | PUMP STATION CONTROL PNL | PROFINET CABLE | SHIELDED |
| C401 | 0.75 | 5 | 12 | XHHW | 600 | STANDBY GENERATOR | AUTO TRANSFER SWITCH 1 | GEN START/STOP | |
| C402 | 0.75 | 5 | 12 | XHHW | 600 | STANDBY GENERATOR | AUTO TRANSFER SWITCH 2 | GEN START/STOP | |
| P500 | 0.75 | 7 | 12 | THWN | 600 | MCC3 LIGHTING PANEL L1 | PUMP STATION CONTROL PNL | POWER, GROUND | L1-7, 9, 11 |
| C500 | 0.75 | 5 | 14 | THWN | 600 | PUMP STATION CONTROL PNL | ALARM HORN & LIGHT | POWER, GROUND | |
| S500 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | FUTURE NETWORK CABINET | ETHERNET CABLE | |
| P510 | 0.75 | 3 | 12 | XHHW | 600 | PUMP STATION CONTROL PNL | SCADA RADIO PANEL | POWER, GROUND | |
| C510 | 0.75 | 5 | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | SCADA RADIO PANEL | SPARE | |
| S510 | 0.75 | ---- | ---- | ---- | ---- | PUMP STATION CONTROL PNL | SCADA RADIO PANEL | PLC COMM CABLE | |
| P520 | 0.75 | ---- | ---- | ---- | ---- | MCC3 LIGHTING PANEL L1 | FUTURE NETWORK CABINET | POWER, GROUND | L1-13 |
| F520 | 4.00 | ---- | ---- | ---- | ---- | EXISTING TELEPHONE POLE | FUTURE NETWORK CABINET | FO CABLE | |
| P530 | 0.75 | ---- | ---- | ---- | ---- | MCC3 LIGHTING PANEL L1 | FUTURE SECURITY PANEL | POWER, GROUND | L1-15 |
| S530 | 0.75 | ---- | ---- | ---- | ---- | FUTURE NETWORK CABINET | FUTURE SECURITY PANEL | ETHERNET CABLE | |
| C530 | 2.00 | ---- | ---- | ---- | ---- | PUMP BLDG TERMINAL BOX | FUTURE SECURITY PANEL | SECURITY SENSORS | |
| C540 | 2.00 | 36 | 14 | XHHW | 600 | PUMP STATION CONTROL PNL | I&C TERMINAL BOX | DIGITAL I/O | |
| C541 | 0.75 | 5 | 14 | XHHW | 600 | I&C TERMINAL BOX | SEAL WATER CONTROL PNL | DIGITAL I/O, SVs | |
| C542 | 0.75 | 9 | 14 | XHHW | 600 | I&C TERMINAL BOX | PUMP SEAL WATER SVs | DIGITAL I/O, SVs | |
| C543 | 0.75 | 3 | 14 | XHHW | 600 | I&C TERMINAL BOX | DRY WELL HL FLOAT SWITCH | DIGITAL I/O | |
| C544 | 0.75 | 7 | 14 | XHHW | 600 | I&C TERMINAL BOX | WET WELL FLOAT SWITCHES | DIGITAL I/O | |
| S550 | 2.00 | 8TSP | 18 | XHHW | 600 | PUMP STATION CONTROL PNL | I&C TERMINAL BOX | ANALOG I/O | |
| S551 | 0.75 | 1TSP | 18 | XLP | 600 | I&C TERMINAL BOX | PT200 FORCE MAIN PRESS | ANALOG SIGNAL | |
| P552 | 0.75 | 3 | 12 | THWN | 600 | LIGHTING PANEL L2 | LIT101 LEVEL TRANSMITTER | POWER, GROUND | L2-2 |
| S552 | 0.75 | 1TSP | 18 | XLP | 600 | I&C TERMINAL BOX | LIT101 LEVEL TRANSMITTER | ANALOG SIGNAL | |
| C552 | 1.00 | ---- | ---- | ---- | ---- | LIT101 LEVEL TRANSMITTER | LE101 LEVEL SENSOR | SENSOR CABLE | |
| S553 | 0.75 | 1TSP | 18 | XLP | 600 | I&C TERMINAL BOX | LT102 LEVEL TRANSDUCER | ANALOG SIGNAL | |
| P560 | 0.75 | 3 | 12 | XHHW | 600 | LIGHTING PANEL L2 | FIT200 FLOW TRANSMITTER | POWER, GROUND | L2-4 |
| S560 | 1.00 | 2TSP | 18 | XLP | 600 | PUMP STATION CONTROL PNL | FIT200 FLOW TRANSMITTER | ANALOG INPUT | |
| C560 | 2-1" | ---- | ---- | ---- | ---- | FIT200 FLOW TRANSMITTER | FLOW METER VAULT | SENSOR CABLES | |
| P561 | 0.75 | 3 | 12 | XHHW | 600 | LIGHTING PANEL L2 | FLOW METER VAULT RECPT | POWER, GROUND | L2-6 |

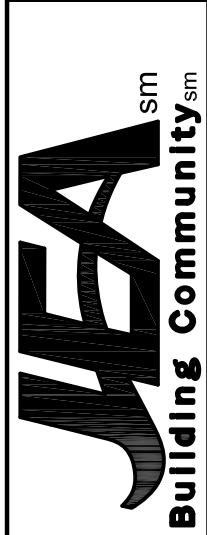


J. Collins Engineering Associates, LLC
11516-3 San Jose Blvd.
Jacksonville, Florida 32223
CA# 9552

| NO. | | BY | | DATE | | REVISIONS | |
|-----|----|----|----|------|----|-----------|----|
| 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |

DESIGNER: WFL
CHECKED BY: JEA
DATE: MAR 2020
FLORIDA REGISTRATION NO. 37971

DESIGN ENGINEER
W. DAVID LASSETTER
FLORIDA REGISTRATION NO. 37971



SPRING PARK ROAD PUMP STATION REHABILITATION

PROJ. NO. 8002427
DATE: MAR 2020
SCALE: AS SHOWN

NO. SHEETS 80
SHEET NO. 80
DRAWING NO. E-26

CONDUIT AND CABLE SCHEDULE