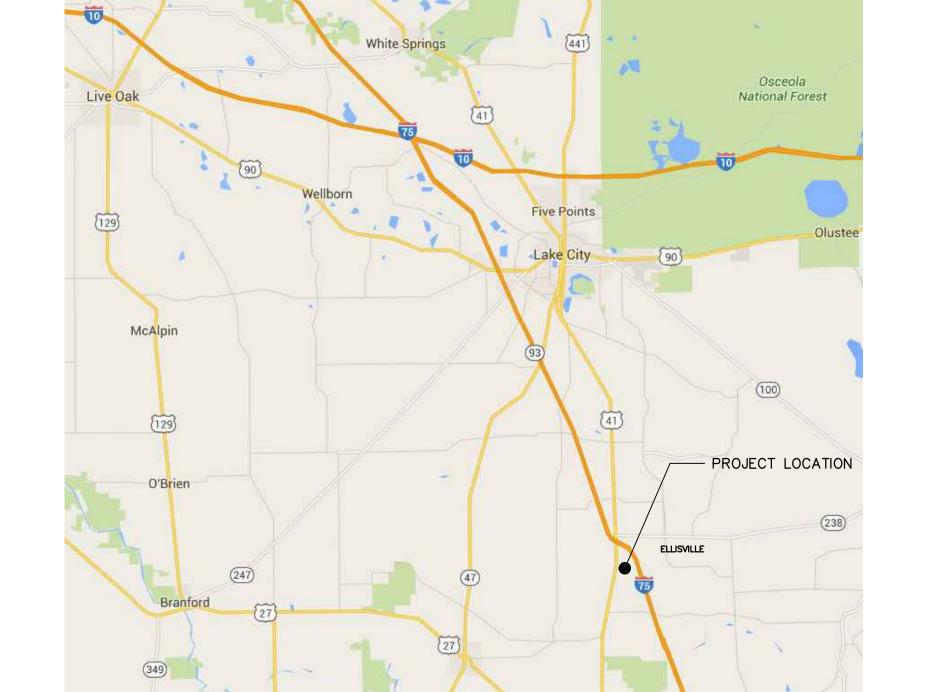
ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION Sheet Title

2021-11 **CONFORMED SET**

DATE ISSUED / DATE REVISED **NOVEMBER 2021**



LOCATION MAP LOCATION

COLUMBIA COUNTY, FLORIDA



SEAN K. CHAPARRO, P.E.

FLORIDA P.E. # 75865

KEY CONTACTS

OWNER: COLUMBIA COUNTY UTILITIES P.O. BOX 1529 LAKE CITY, FLORIDA 32056

CHAD WILLIAMS, P.E.

DRAWING INDEX

GENERAL

 $G - \emptyset 2$

MECHANICAL

 $E - \emptyset 3$

INSTRUMENTATION

CIVIL

COVER SHEET

SITE PLAN

CIVIL DETAILS I

CIVIL DETAILS II

GENERAL NOTES

PROCESS FLOW DIAGRAM

EROSION CONTROL DETAILS

STRUCTURAL DETAILS

MECHANICAL DETAILS

PANELBOARD SCHEDULES

ELECTRICAL DETAILS

ABBREVIATIONS, LEGEND, AND SYMBOLS

STRUCTURAL NOTES, LEGEND, AND ABBREVIATIONS

WASTEWATER TREATMENT PLANT - SECTIONS

ELECTRICAL NOTES, LEGEND, AND ABBREVIATIONS

AREA CLASSIFICATION PLAN AND SECTION

INSTRUMENTATION SYMBOLS AND LEGEND

|WASTEWATER TREATMENT PLANT - P&ID

NETWORK DIAGRAM AND INSTRUMENT DETAILS

| WASTEWATER TREATMENT PLANT - ONE-LINE DIAGRAM

WASTEWATER TREATMENT PLANT — INTERCONNECT DIAGRAMS

WASTEWATER TREATMENT PLANT - ELECTRICAL SITE PLAN - ENLARGED

| WASTEWATER TREATMENT PLANT - ELECTRICAL SITE PLAN

WASTEWATER TREATMENT PLANT — PLAN AND SECTIONS

and sealed by Sean K. Chaparro, PE, Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

This item has been digitally signed

ARCADIS U.S. INC. 3109 W. MARTIN LUTHER KING JR. BLVD., TAMPA, FLORIDA 33607 TELEPHONE: 813.903.3100 **ENGINEER OF RECORD:** SEAN K. CHAPARRO, P.E.

DATE

2. CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA (SSOCOF) BY CALLING 811 OR 1-800-432-4770 AT LEAST 48 HOURS PRIOR TO EXCAVATION. ALL PROPOSED

CONSTRUCTION SHALL BE WHITE-LINE PAINTED PRIOR TO CONTACTING SSOCOF.

- 3. FIELD VERIFY EXISTING CONDITIONS.
- 4. DETERMINING THE ACTUAL LOCATION OF ANY EXISTING UTILITY IS THE CONTRACTORS RESPONSIBILITY. BEFORE COMMENCING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA. (PROVIDE 72 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION). THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER AND ENGINEER ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COSTS INCURRED BECAUSE OF THE CONTRACTOR'S OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. SCHEDULE AND EXECUTE ALL WORK INVOLVING EXISTING UTILITIES TO MINIMIZE INTERRUPTION OF SERVICES. WHENEVER SUCH INTERRUPTION IS NECESSARY FOR COMPLETION OF THE WORK, NOTIFY THE ENGINEER AND THE OWNER AT LEAST 72 HOURS IN ADVANCE. ALL WORK TO REPAIR/RESTORE UTILITY SERVICE SHALL BE PERFORMED AS REQUIRED BY THE APPROPRIATE UTILITY. IF IT IS NECESSARY TO SHORE, BRACE, OR SWING A UTILITY, CONTACT THE UTILITY COMPANY OR DEPARTMENT AFFECTED AND OBTAIN THEIR PERMISSION REGARDING THE METHOD TO USE FOR SUCH WORK. ALL COSTS RELATED TO SERVICE, MAINTENANCE, INTERRUPTION, REPAIR, RELOCATION AND RESTORATION ARE TO BE INCLUDED IN THE CONTRACTOR'S BID. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION SHALL BE PAID.
- FIELD CONDITIONS MAY NECESSITATE SLIGHT ALIGNMENT AND/OR GRADE DEVIATIONS FROM THOSE WHICH ARE INDICATED ON THE PLANS. ANY DEVIATIONS OR ADJUSTMENTS SHALL FIRST BE APPROVED BY THE ENGINEER BEFORE BEING PERFORMED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING, INCLUDING HORIZONTAL AND VERTICAL CONTROL FOR ALIGNMENT OF WORK. ALL SURVEY WORK TO ESTABLISH THE HORIZONTAL AND VERTICAL CONTROL SHALL BE UNDER THE GUIDANCE AND DIRECT SUPERVISION OF A FLORIDA REGISTERED PROFESSIONAL SURVEYOR AND MAPPER. PER FLORIDA ADMINISTRATIVE CODE, CHAPTER 61G17-6, "MINIMUM TECHNICAL STANDARDS."
- THE CONTRACTOR SHALL PRESERVE ALL CONTROL STAKES, BENCH MARKS, REFERENCE POINTS AND PROPERTY CORNERS. THE OWNER WILL GRANT NO CLAIM FOR DAMAGES OR LOSS OF TIME BY THE CONTRACTOR DUE TO LOSS OR DISTURBANCE OF SURVEY CONTROL POINTS. CONTROL STAKES, BENCH MARKS, REFERENCE POINTS AND PROPERTY CORNERS DISTURBED BY THE CONTRACTOR'S WORK SHALL BE REPLACED BY A FLORIDA REGISTERED PROFESSIONAL SURVEYOR AND MAPPER WHO WILL BE SELECTED BY AND PAID BY THE CONTRACTOR. THE OWNER WILL NOT MAKE FINAL PAYMENT TO THE CONTRACTOR UNTIL ALL DISTURBED OR DESTROYED PROPERTY CORNERS AND PERMANENT BENCH MARKS HAVE BEEN REPLACED BY THE FLORIDA REGISTERED SURVEYOR AND MAPPER. THE SURVEYOR SHALL CERTIFY THAT SUCH MARKERS HAVE BEEN REPLACED IN ACCORDANCE WITH THE STATE OF FLORIDA ADMINISTRATIVE CODE, CHAPTER 61G17-6, "MINIMUM TECHNICAL STANDARDS".
- ALL TREES. SHRUBS. ETC.. ALONG THE LINES OF CONSTRUCTION SHALL BE PROTECTED UNLESS SHOWN TO BE REMOVED. ANY DISTURBANCE TO THESE ITEMS SHALL REQUIRE APPROVAL OF THE ENGINEER.
- RESTORE ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK TO A CONDITION EQUAL TO OR BETTER THAN EXISTED BEFORE COMMENCING CONSTRUCTION WORK, UNLESS SPECIFICALLY EXEMPTED BY THE DRAWINGS. THE CONTRACTOR SHALL RECONSTRUCT ALL FACILITIES TO PRE-CONSTRUCTION GRADES AND DIMENSIONS. THE ACQUISITION OF SUCH ADDITIONAL INFORMATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT HIS EXPENSE. WATER, FERTILIZE AND SUPPLY ALL ITEMS AND CARE NECESSARY TO MAINTAIN THE HEALTH OF ALL NEW VEGETATION AND VEGETATION REPLACED AT NO EXPENSE TO THE OWNER, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC MAINTENANCE IN ACCORDANCE WITH THE SPECIFICATIONS. U.S. DEPARTMENT OF TRANSPORTATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) SPECIFICATIONS AND OTHER GOVERNING AGENCY'S SPECIFICATIONS. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT SPECIFICATION OR REQUIREMENT SHALL GOVERN. PROVIDE ALL NECESSARY BARRICADES, WARNING SIGNS, DELINEATORS, FLAGMEN, PILOT CARS, ETC.. REQUIRED FOR TRAFFIC CONTROL AND/OR MAINTENANCE.
- 11. PROVIDE ANY TEMPORARY CONTROLS AND/OR STRUCTURES REQUIRED TO MAINTAIN SUITABLE AND SAFE WORKING CONDITIONS AT ALL TIMES. SUCH ITEMS SHALL BE REMOVED ONCE THAT PORTION OF WORK HAS BEEN COMPLETED.
- 12. UPON COMPLETION OF THE PROJECT, PROVIDE AN AS-BUILT SURVEY OF ALL IMPROVEMENTS IN AUTOCAD 2018 FORMAT. THE AS-BUILT SURVEY MUST BE PREPARED BY A FLORIDA REGISTERED SURVEYOR AND MAPPER IN ACCORDANCE WITH THE STATE OF FLORIDA ADMINISTRATIVE CODE, CHAPTER 61G17-6, "MINIMUM TECHNICAL STANDARDS". AS A MINIMUM, AS-BUILT DRAWINGS FOR PLANT AND PIPELINE CONSTRUCTION SHALL SHOW CONSTRUCTED HORIZONTAL AND VERTICAL LOCATIONS OF ALL BENDS, FITTINGS, VALVES AND STRUCTURES, AND ELEVATIONS AT ALL LOCATIONS WHERE PROPOSED DESIGN ELEVATIONS ARE SHOWN ON THE DRAWINGS. THE AS-BUILT SURVEY SHALL BE TIED INTO THE STATE PLANE COORDINATE SYSTEM.
- 13. SPECIAL EMPHASIS ON EXCAVATION SAFETY AND TRENCH CONSTRUCTION:
 - A. OSHA'S EXCAVATION SAFETY STANDARDS 29, CFR PART 1926.650-652 SUBPART P, AS WELL AS FLORIDA'S TRENCH SAFETY ACT (FLORIDA STATUTE 90-96) ARE CONSIDERED AS COMPLIMENTARY TO THESE CONTRACT DOCUMENTS. IF THERE IS ANY DUPLICATION, REDUNDANCY OR CONFLICT BETWEEN THE STIPULATIONS OF THESE CONTRACT DOCUMENTS AND THOSE STANDARDS, THE MOST STRINGENT REQUIREMENT SHALL
 - B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EXCAVATIONS DO NOT ENDANGER WORKMEN, EXISTING STRUCTURES, UTILITIES, OR OTHER FACILITIES. IF SUCH CONDITIONS OCCUR WHICH MAY ENDANGER WORKMEN, EXISTING STRUCTURES, UTILITIES, OR OTHER FACILITIES, IMMEDIATELY INSTALL AND MAINTAIN ADEQUATE SHEETING AND BRACING PER OSHA SPECIFICATIONS. CEASE ALL WORK UNTIL THE SHEETING AND BRACING HAS BEEN PROPERLY AND COMPLETELY INSTALLED. INSTALL THE SHEETING AND BRACING IN A MANNER THAT WILL ALLOW REMOVAL WITHOUT INJURING OR ENDANGERING WORKMEN, THE WORK, ADJACENT STRUCTURES, AND THE LIKE. PROMPTLY AND COMPLETELY FILL ALL VOIDS CAUSED BY THE WITHDRAWAL OF SHEETING WITH SAND AND COMPACT TO A DEGREE EQUAL TO THE SURROUNDING SOIL. REMOVE THE SHEETING AS THE WORK PROGRESSES OR, AT THE DISCRETION OF THE ENGINEER, CUT THE SHEETING OFF BELOW FINISHED GRADE AND LEAVE IN PLACE.

- 14. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AT ALL TIMES.
- 15. ALL AFFECTED GRASSED AREAS SHALL BE RESTORED WITH THE APPLICATION OF ARGENTINE BAHIA SOD, HYDROMULCH SEEDING OR APPROVED EQUAL. ALL SLOPED AREAS TO BE SODDED. ANY SOD LAID ON A INCLINE SHALL BE PROPERLY PINNED. ALL SOD SHALL BE WATERED BY CONTRACTOR AS NEEDED UNTIL ESTABLISHED TO THE SATISFACTION OF THE ENGINEER. ALL DEAD AREAS SHALL BE REPLANTED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
- 16. SECURITY OF CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 17. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS INDICATED ON THE CONTRACT DRAWINGS.
- 18. CONTRACTOR SHALL MAINTAIN 36" MINIMUM COVER OVER PROPOSED FORCE MAIN.
- 19. UNDER NO CIRCUMSTANCES SHALL PIPE BE LAID IN A WET TRENCH OR STRUCTURES BE CONSTRUCTED IN A WET EXCAVATION. DEWATERING SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.
- 20. IF NECESSARY, USE TEMPORARY SHEETING OR TRENCH BOXES TO MINIMIZE THE SIZE OF THE EXCAVATIONS AND TO PROTECT ADJACENT EXISTING ROADWAYS, UTILITIES AND OTHER FACILITIES.
- 21. BACKFILL ALL TRENCHES AT THE END OF EACH DAYS WORK. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT. THE ENDS OF ALL PIPE SHALL BE PLUGGED AT THE CLOSE OF EACH DAYS
- 22. PERFORM SURFACE RESTORATION IMMEDIATELY FOLLOWING SUCCESSFUL PRESSURE TESTING, INCLUDING ROADWAY, DRIVEWAY, LANDSCAPING, GRASSING OR OTHER. RESHAPE DITCHES TO EXISTING CONTOURS. SOD SHALL BE INSTALLED IN ALL AREAS DAMAGED BY CONSTRUCTION.

EROSION CONTROL NOTES

- 1. NO UNAUTHORIZED DISTURBANCE OF ANY WETLANDS WILL BE PERMITTED. TEMPORARILY INSTALL SILT FENCES, BARRIERS OR SYNTHETIC BALES IMMEDIATELY ADJACENT TO AND UPLAND FROM ALL EXISTING WETLANDS PRIOR TO CONSTRUCTION ACTIVITIES WHICH MIGHT IMPACT THE WETLANDS. REMOVE ALL WETLAND PROTECTION MEASURES AFTER THE PROJECT HAS BEEN ACCEPTED BY THE OWNER.
- 2. ALL CONSTRUCTION ACTIVITIES SHALL INCORPORATE BEST MANAGEMENT PRACTICES TO CONTROL EROSION, SEDIMENTATION, AND THE POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. CONSTRUCTION PRACTICES INCLUDE:
- A. CONSTRUCT TEMPORARY SEDIMENTATION BASINS OR EARTHEN BERMS AT DOWN-GRADIENT ENDS OF NEWLY GRADED AREAS TO PROVIDE FOR SEDIMENT AND TURBIDITY REMOVAL.
- B. TURBIDITY BARRIERS, SYNTHETIC BALES AND OTHER EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE POTENTIAL FOR EROSION IS ELIMINATED.
- 3. DO NOT EMPLOY SILT FENCES IN A MANNER TO CAUSE THEM TO ACT AS A DAM ACROSS PERMANENTLY FLOWING WATERCOURSES. USE SILT FENCES AT UPLAND LOCATIONS, AND TURBIDITY BARRIERS IN PERMANENT WATER BODIES, REGARDLESS OF WATER DEPTH.

SEQUENCE OF CONSTRUCTION

- INSTALL AND MAINTAIN EROSION CONTROL STRUCTURES THROUGHOUT THE PROJECT DURATION. ALL EROSION CONTROL MEASURES MUST BE APPROVED BY THE ENGINEER BEFORE
- 2. EXCAVATE RAPID INFILTRATION BASINS (RIBS), INSTALL DISTRIBUTION PIPING, CONSTRUCT BERMS, ADD TOPSOIL AND SOD TO BERMS AND WATER TO ESTABLISH GROWTH. CONTRACTOR SHALL BE RESPONSIBLE FOR SOIL BALANCE INCLUDING REMOVAL OF SPOILS AND THE SUPPLY OF OFF-SITE FILL, AS REQUIRED TO COMPLETE THE WORK.
- 3. INSTALL WASTEWATER TREATMENT PLANT, YARD PIPING, AND COMPLETE CIVIL SITE WORK. FILL WITH WATER AND HYDRAULICALLY TEST WASTEWATER TREATMENT PLANT PRIOR TO THE INTRODUCTION OF WASTEWATER.
- 4. TRANSFER MULTIPLE LOADS OF RAS/WAS FROM EXISTING WASTEWATER TREATMENT PLANT TO NEW PLANT UNTIL MIXED LIQUOR CONCENTRATION IS 2500 TO 3000 MG/L. FEED PLANT MOLASSES AT CONTROLLED RATES FOR APPROXIMATELY 30 DAYS OR UNTIL MIXED LIQUOR CONCENTRATIONS IS STABILIZED TO THE SATISFACTION OF THE ENGINEER.
- 5. WITH TRAIN NO. 2 OPERATIONAL, SHUT DOWN TRAIN NO. 1 AND COMPLETE CHLORINE CONTACT CHAMBER INTERCONNECTION.
- 6. GRADE SITE TO GENTLY SLOPE TOWARD DRAINAGE DITCH.
- 7. UPON ESTABLISHMENT OF VEGETATION TO THE SATISFACTION OF THE ENGINEER, REMOVE ALL EROSION CONTROL MEASURES.

This item has been digitally signed and sealed by Sean K. Chaparro, PE, on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

· · LICENSÉ . sional Engineer's Name No. 75865 SEAN K. CHAPARRO, P.E. essional Engineer's No. STATE OF MORIDA. Date Signed Project Mgr. 1 11/19/2021 CONFORMED SET AGG SKC USE TO VERIFY FIGURE REPRODUCTION SCALE Checked by THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OF ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. SEAN K. CHAPARRO P.E. NO. 75865





COLUMBIA COUNTY, FLORIDA ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

GENERAL NOTES

ARCADIS Project No. 30028119.0000 NOVEMBER 2021 **ARCADIS**

TEL. 813.903.3125

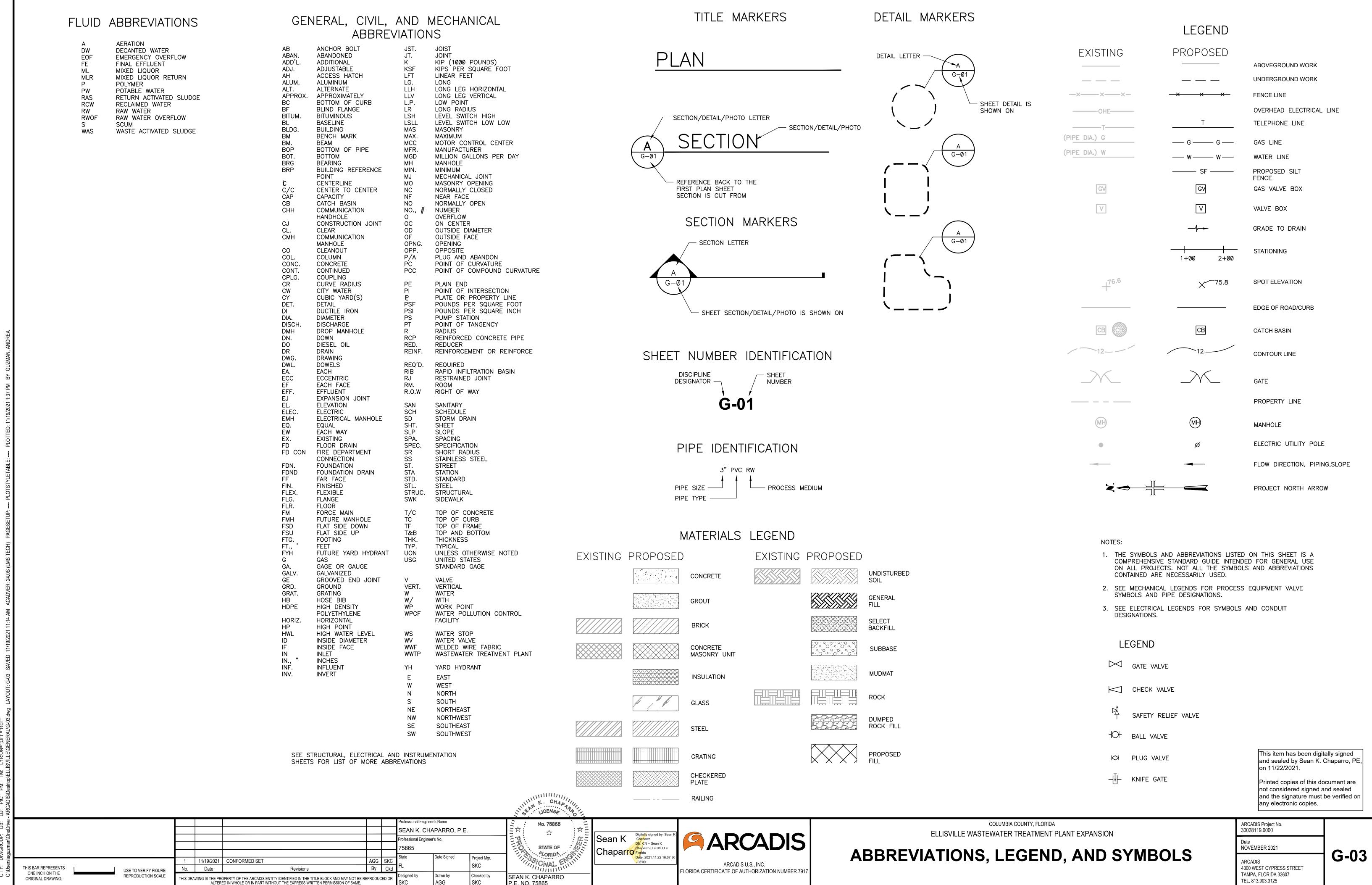
G-02 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607

THIS BAR REPRESENTS

ONE INCH ON THE

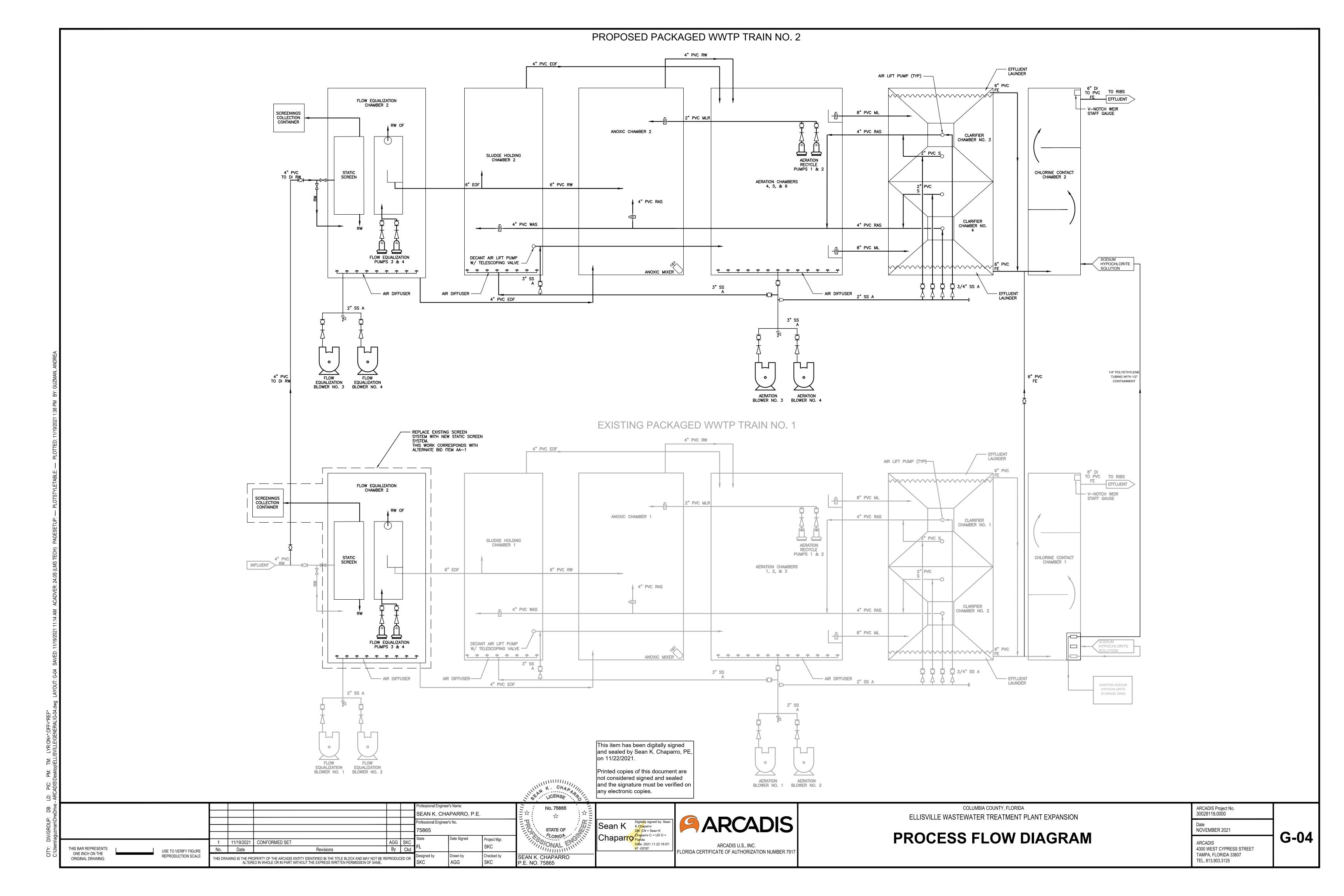
ORIGINAL DRAWING:

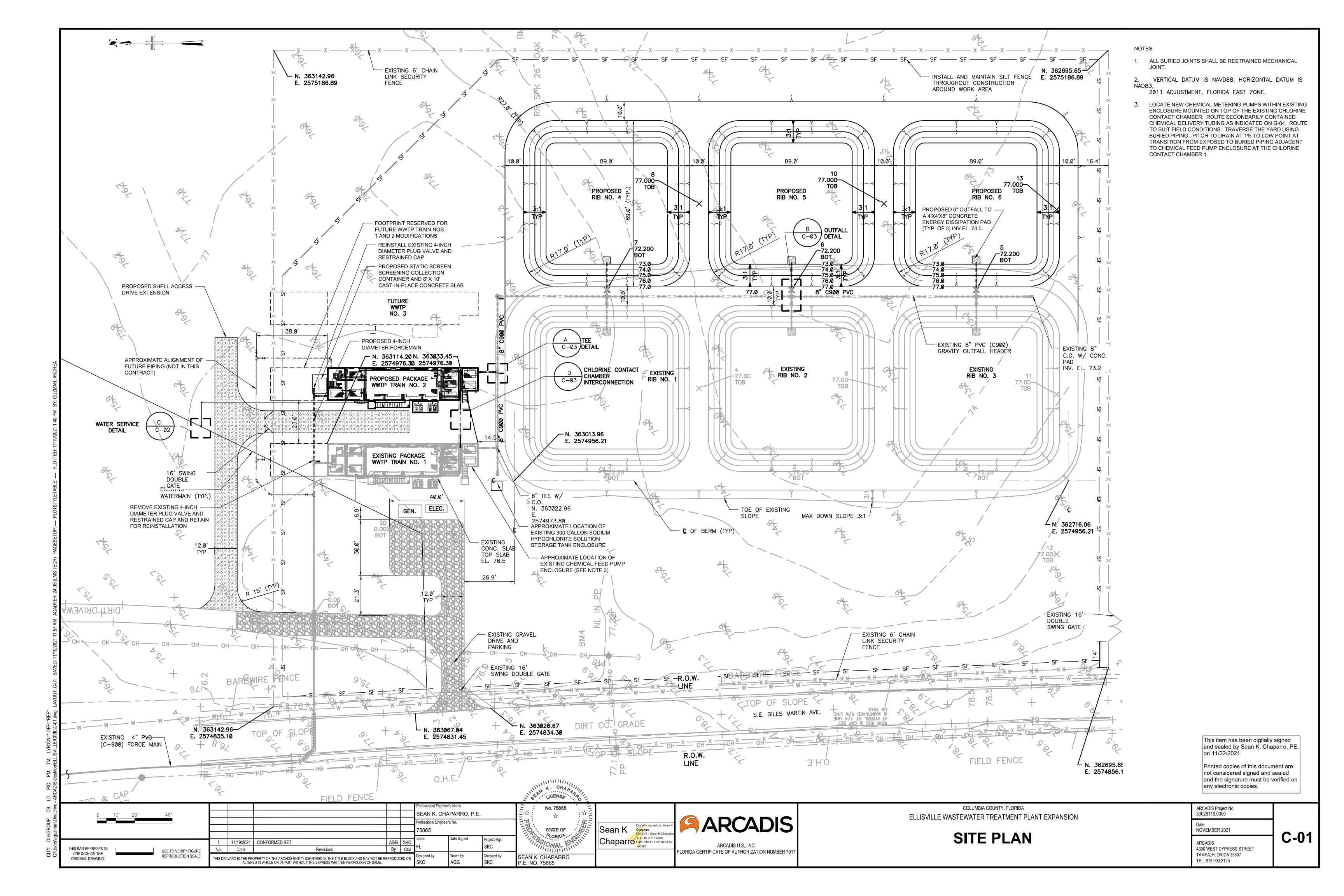
ARCADIS U.S., INC. FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER 79°

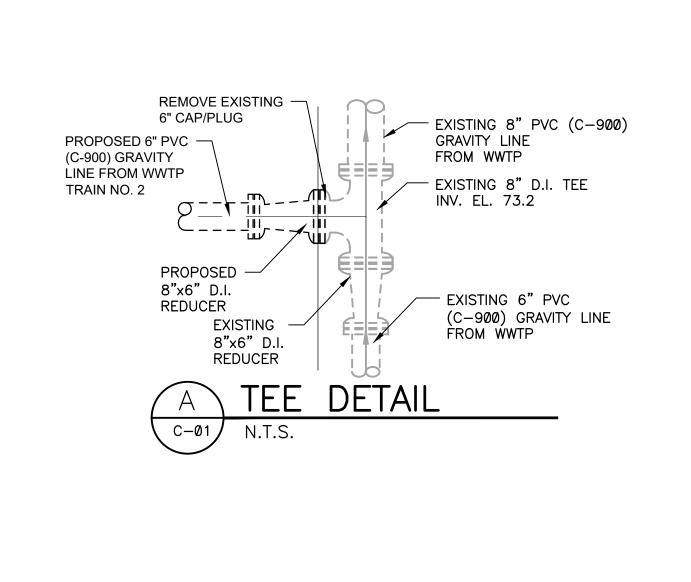


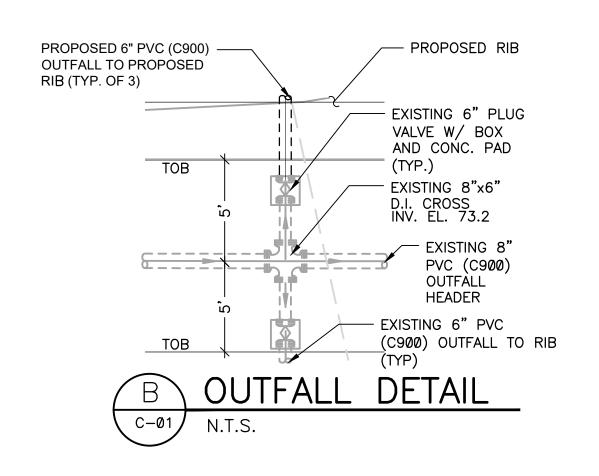
P.E. NO. 75865

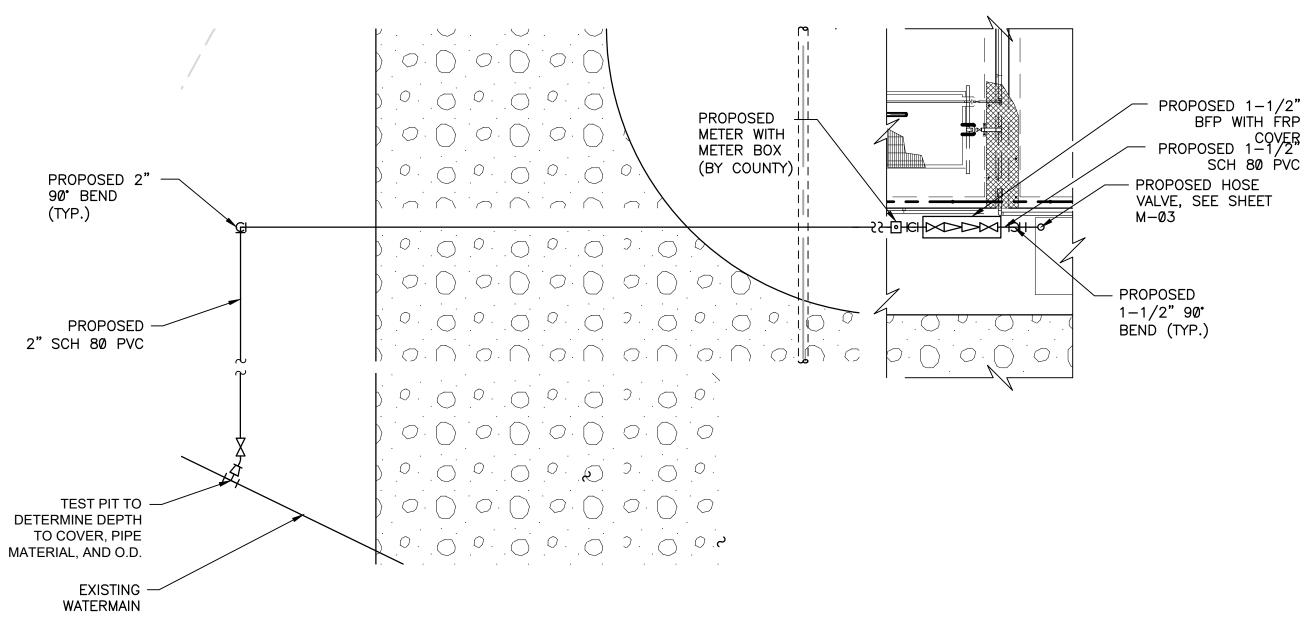
TEL. 813.903.3125



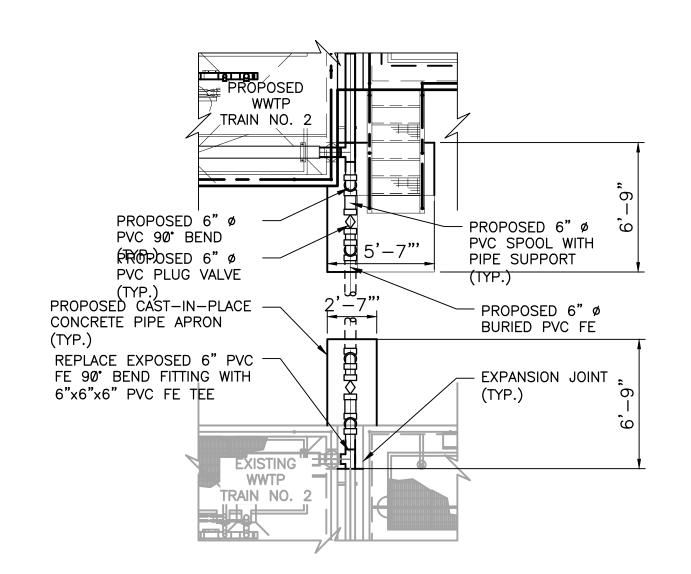








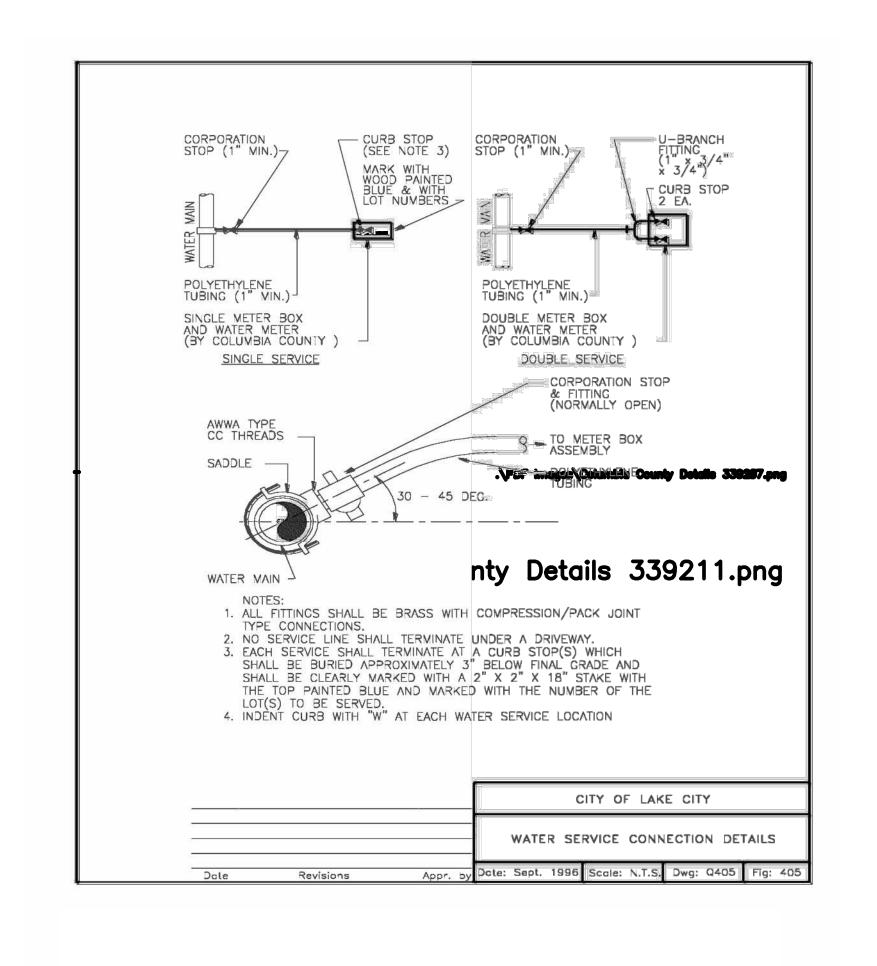


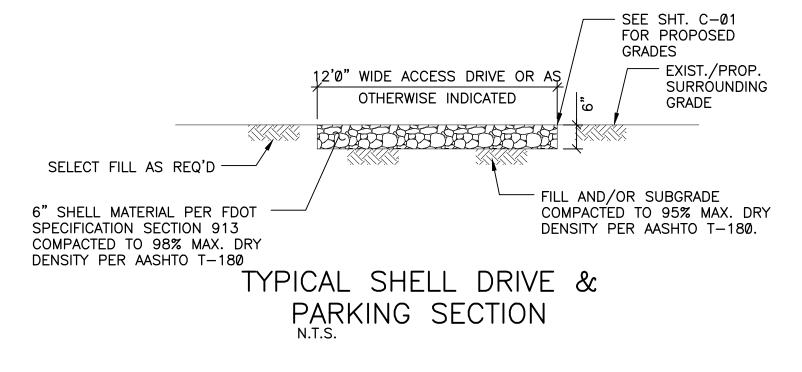




NOTES:

1. PROVIDE PIPE SUPPORTS AS REQUIRED. MOUNT SUPPORTS TO CONCRETE PIPE APRON.





NOTES:

- CLEAR AND GRUB LIMITS OF PROPOSED DRIVE/PARKING. REMOVE ALL ROOTS AND DELETERIOUS MATERIAL PRIOR TO SUBGRADE PREPARATION AND COMPACTION.
- 2. SELECT FILL WILL BE REQUIRED IN SOME AREAS UNDER SHELL DRIVE/PARKING TO RAISE SHELL SURFACE TO PROPOSED GRADES.

This item has been digitally signed and sealed by Sean K. Chaparro, PE, on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

CENSE ssional Engineer's Name No. 75865 SEAN K. CHAPARRO, P.E. essional Engineer's No. STATE OF . LORIDA. Date Signed 1 11/19/2021 CONFORMED SET AGG SKC THIS BAR REPRESENTS USE TO VERIFY FIGURE ONE INCH ON THE REPRODUCTION SCALE Checked by SEAN K. CHAPARRO THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. ORIGINAL DRAWING: P.E. NO. 75865



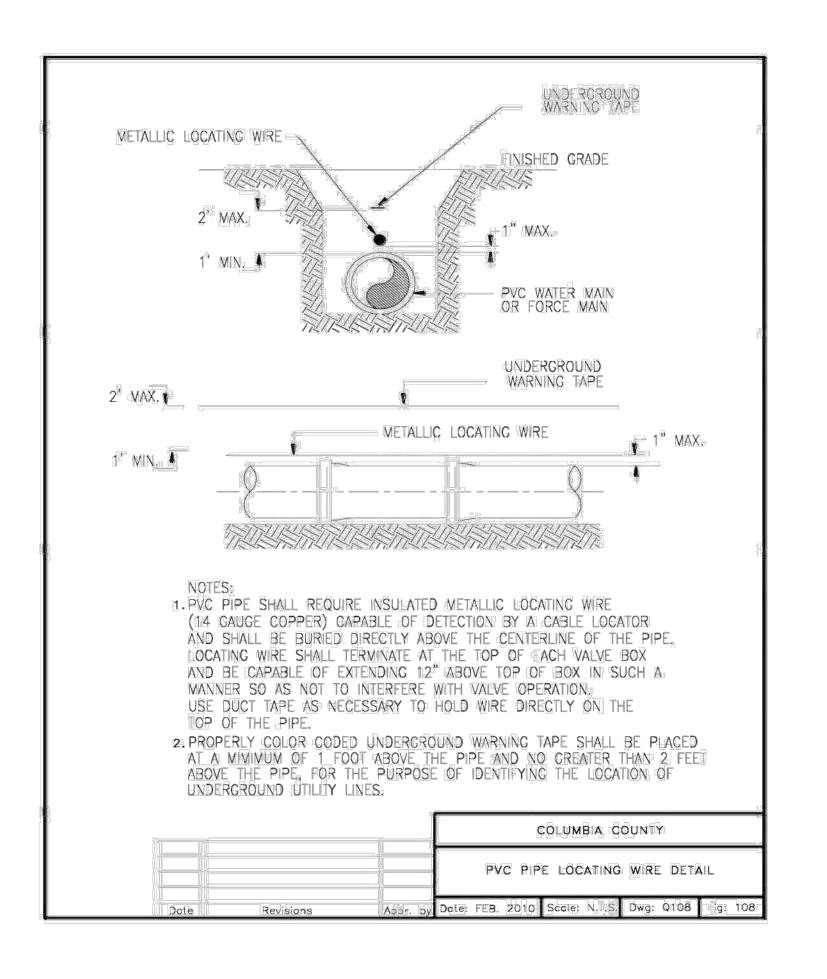


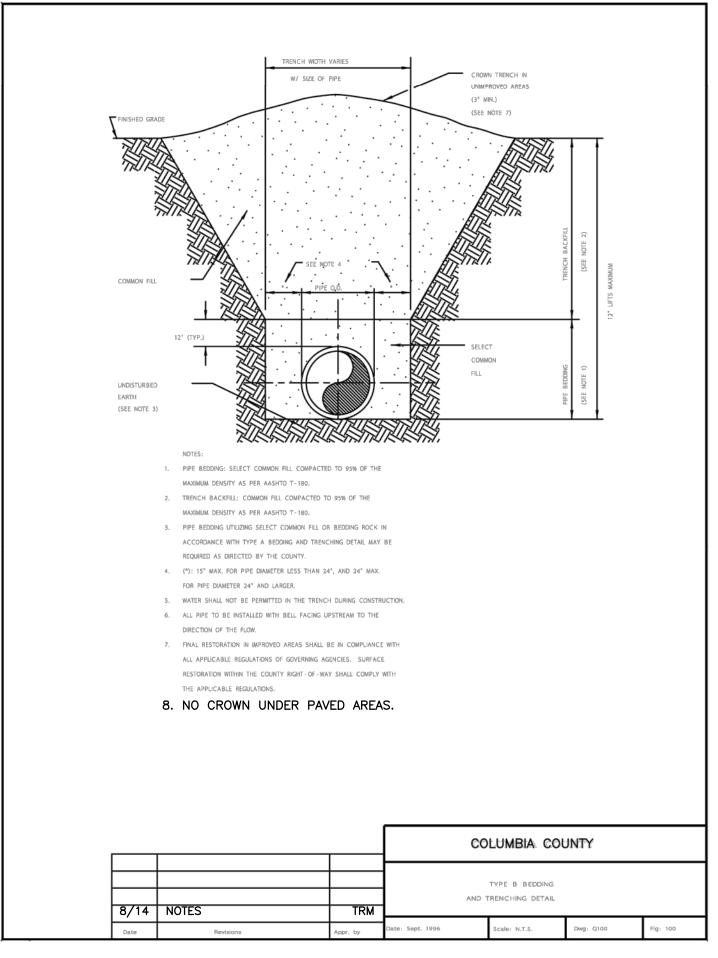
COLUMBIA COUNTY, FLORIDA
ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

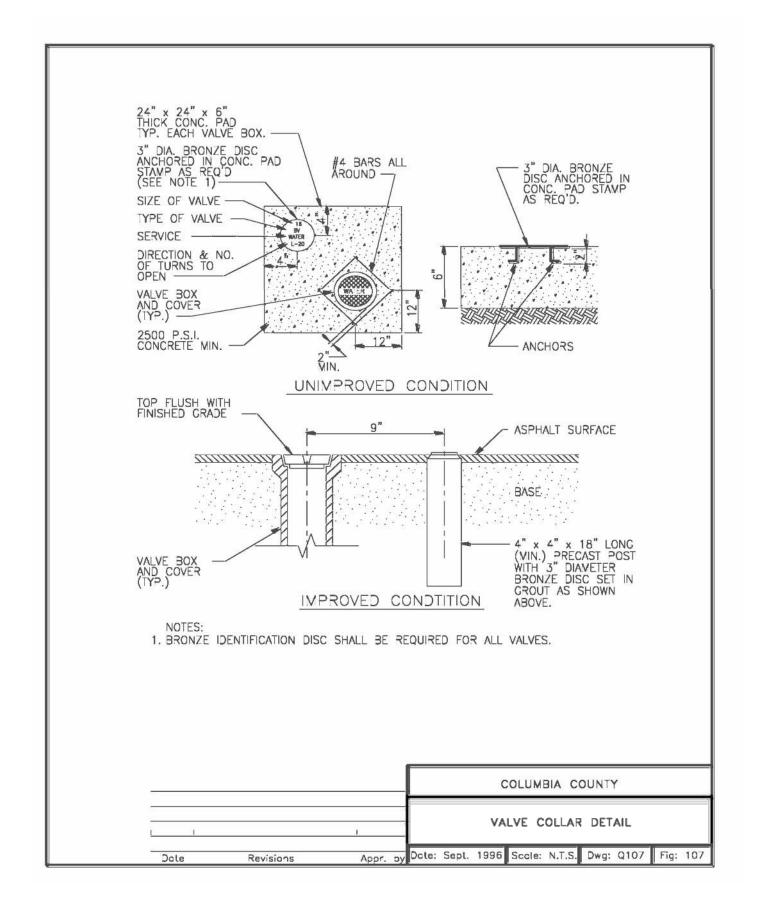
CIVIL DETAILS I

ARCADIS Project No. 30028119.0000	
Date NOVEMBER 2021	
ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607	C-02

TEL. 813.903.3125

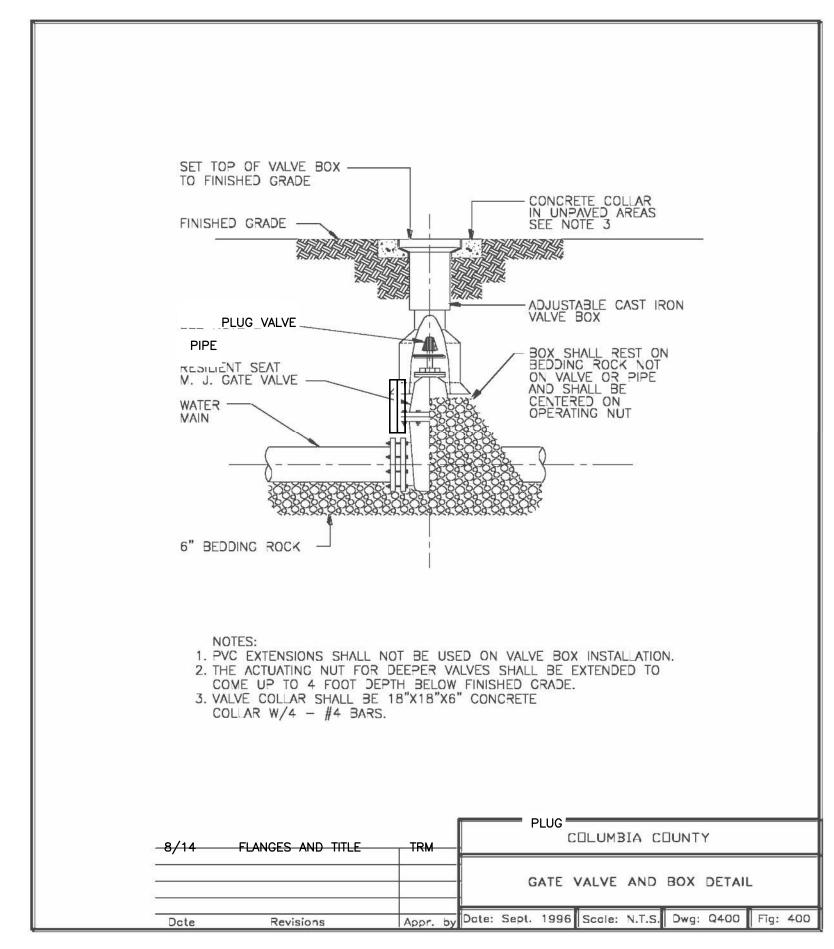


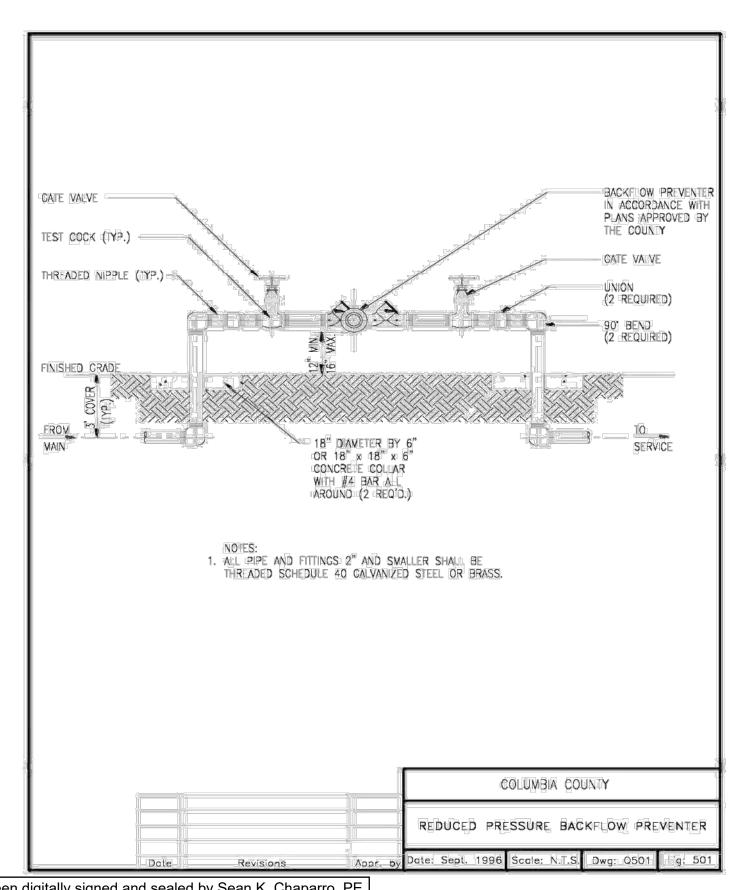


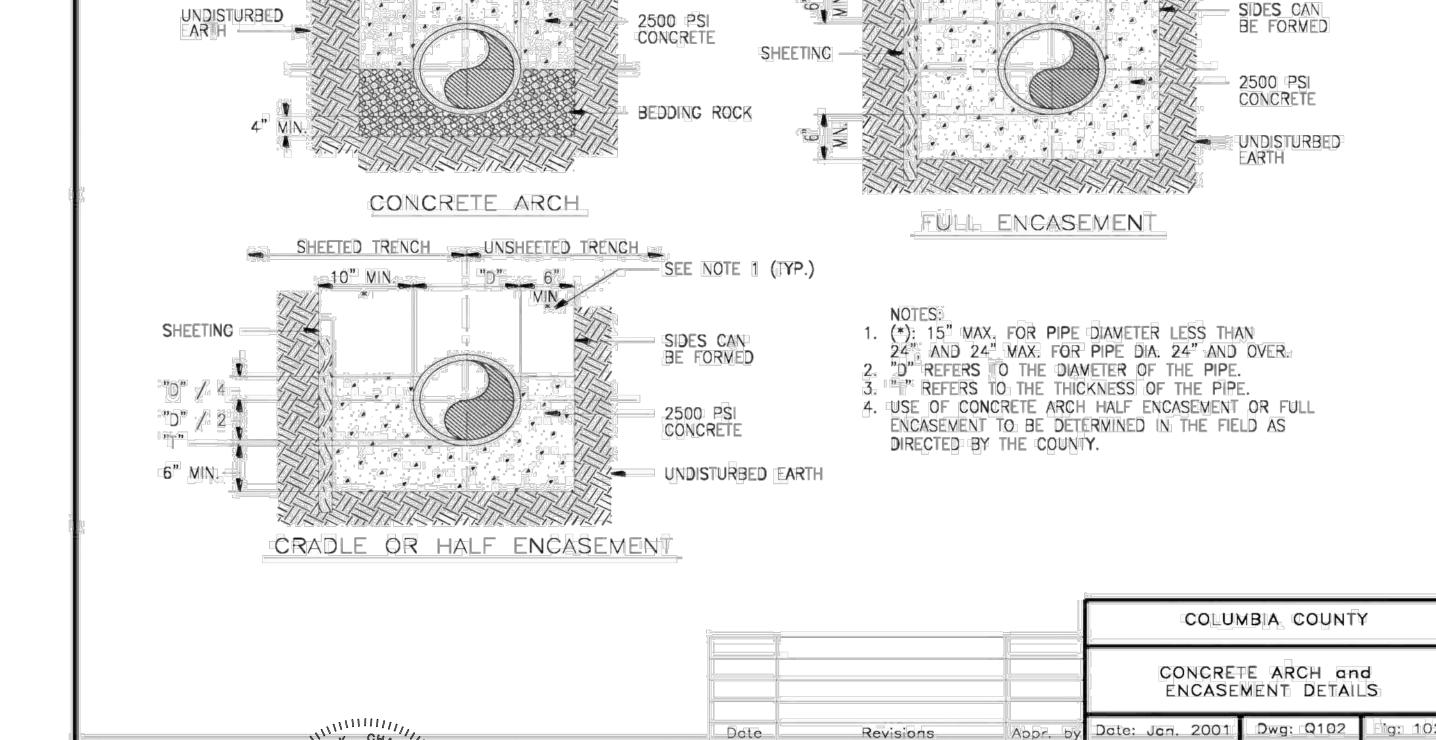


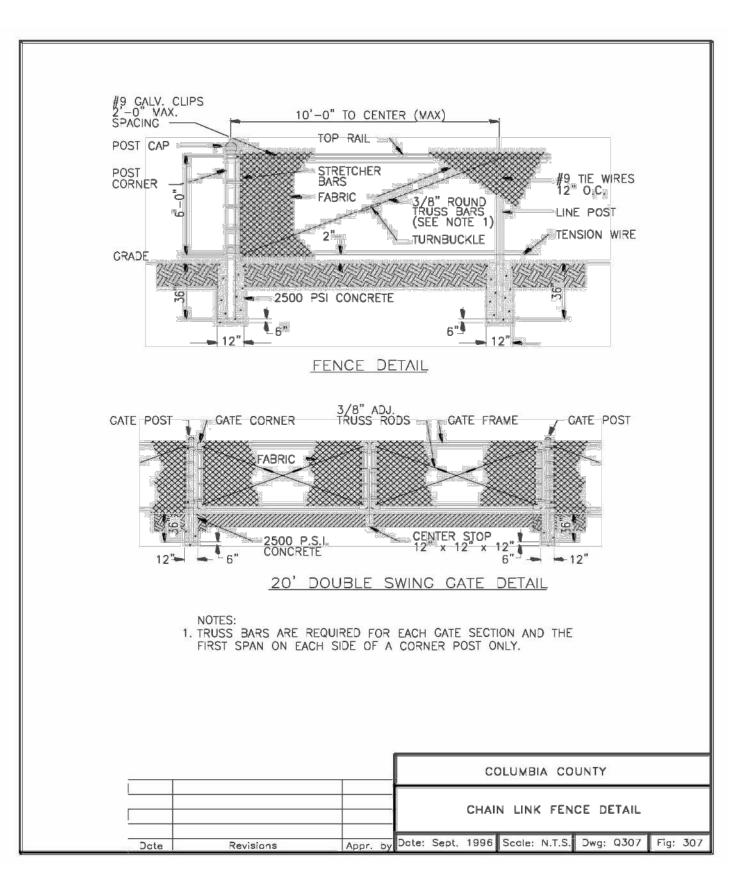
SEE NOTE 1 (TYP.)

SEE NOTE 1 (TYP.) SHEETED TRENCH UNSHEETED TRENCH









This item has been digitally signed and sealed by Sean K. Chaparro, PE, on 11/22/2021.

JOHN LICENSE Printed copies of this document are not considered signed and sealed ssional Engineer's Name SEAN K. CHAPARRO, P.E. Sean K

Chaparro

DN: CN = Sean K Chaparro

C = US O = Florida

Date: 2021.11.22 16:08:20

-05'00' STATE OF . LORIDA. 1 | 11/19/2021 | CONFORMED SET AGG SKC THIS BAR REPRESENTS USE TO VERIFY FIGURE ONE INCH ON THE REPRODUCTION SCALE Checked by SEAN K. CHAPARRO P.E. NO. 75865 THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. ORIGINAL DRAWING:

ARCADIS U.S., INC.
FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER 7917

COLUMBIA COUNTY, FLORIDA
ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

CIVIL DETAILS II

ARCADIS Project No. 30028119.0000

Date NOVEMBER 2021

ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607 TEL. 813.903.3125

ENVIRONMENTAL PROTECTION NOTES:

- 1. SILT BARRIERS, SYNTHETIC BALES, STAKED SILT FENCES OR FLOATING SILT SCREENS SHALL BE USED AS SILT BARRIERS. SEE NOTE NO. 7 ON THIS SECTION. THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL MONITOR AND MAINTAIN THESE SILT BARRIERS DAILY AND CHECK FOLLOWING EACH STORM EVENT. SHOULD THE SILT BARRIERS BECOME LOOSE OR DAMAGED DURING THE CONSTRUCTION PERIOD, CONTRACTOR SHALL RECONSTRUCT AND CORRECT THEM, OR REPLACE THEM WITH A DIFFERENT TYPE IF NECESSARY, AT NO COST TO THE OWNER.
- 2. ALL WATER COLLECTED AND PUMPED DURING TRENCH DEWATERING ACTIVITIES SHALL BE DISPOSED OF ON UPLAND AREAS INTO DOUBLE STAKED HAY BALES. DISCHARGE LOCATIONS SHALL BE A MINIMUM OF 75 FEET FROM THE NEAREST WETLAND TO ALLOW FOR A MAXIMUM OVERLAND FILTRATION OF SOIL PARTICLES. ALL PERMITTING ASSOCIATED WITH CONTRACTOR'S DEWATERING ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 3. EXCAVATION ACROSS ALL WETLANDS WITHIN ESTABLISHED LIMITS OF CONSTRUCTION SHALL BE ACCOMPLISHED BY STRIPPING THE TOP 10 INCHES OF ORGANIC SURFICIAL SOILS FROM THE FULL WIDTH OF THE AREA TO BE DISTURBED AND STOCKPILING THESE SOILS ON UPLAND AREAS. THE REMAINING EXCAVATIONS NECESSARY FOR PIPE INSTALLATION THAT SHALL BE USED FOR BACKFILL SHALL BE TEMPORARILY PLACED ADJACENT TO THE PIPE TRENCH. THE EXCAVATED MATERIAL THAT SHALL NOT BE USED FOR BACKFILL SHALL BE STOCKPILED SEPARATELY FROM SURFICIAL SOILS ON UPLAND AREAS OUTSIDE OFJURISDICTIONAL AREAS DESIGNATED ON THE DRAWINGS AT A MINIMUM DISTANCE OF 200 FEET FROM A WETLAND. BACKFILLING OPERATIONS SHALL PROCEED SUCH THAT SURFICIAL SOILS SHALL BE REPLACED LAST AND SHALL BE SPREAD ACROSS THE ENTIRE DISTURBED WETLAND AREA TO HELP PROMOTE NATIVE VEGETATIVE GROWTH. SURFICIAL SOILS SHALL NOT BE LEFT STOCKPILED IN EXCESS OF TWO WEEKS. ALL WETLAND CROSSINGS THAT ARE DISTURBED DURING CONSTRUCTION, SHALL HAVE AN ADEQUATE AMOUNT OF FILL REMOVED SO THAT THE WETLAND IS RESTORED TO THE ORIGINAL LINE, GRADE AND
- I. GRESETREATION RASHADICATEDIED THESE PROWINGS.VIOLATION OF ANY AND ALL ENVIRONMENTAL REGULATIONS AND PERMIT CONDITIONS, IN ACCORDANCE WITH THE GENERAL CONDITIONS AND GENERAL REQUIREMENTS SECTIONS OF THE CONTRACT DOCUMENTS.
- 5. BANKS SHALL BE PROTECTED FROM EROSION OR COLLAPSE DURING CONSTRUCTION. MATERIAL SHALL BE CAREFULLY PLACED FROM THE BANK AND NOT DUMPED FROM ABOVE IN AN UNCONTROLLED MANNER. EROSION CONTROL FABRIC SHALL BE USED FOR EROSION PROTECTION WHERE SOD SHALL NOT HOLD OR BECOME ESTABLISHED IN TIME TO PROTECT THE BANKS. UPON COMPLETION OF CONSTRUCTION, BANKS AND WATERWAYS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONFIGURATION AND PROTECTED FROM EROSION.
- 6. THESE ENVIRONMENTAL NOTES ARE APPLICABLE TO THE COMPLETE PROJECT HOWEVER, THE CONTRACTOR SHALL TAKE EXTRA PRECAUTIONS WHERE SPECIFIC REFERENCES ARE MADE WITHIN THE DRAWINGS.
- 7. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF THE DEPTH OF THE SILTATION CONTROL BARRIER SHALL BE IMMEDIATELY REMOVED AND PLACED IN UPLAND AREAS.

EROSION CONTROL NOTES

C. TURBIDITY BARRIERS -- INDEX NO. 103.

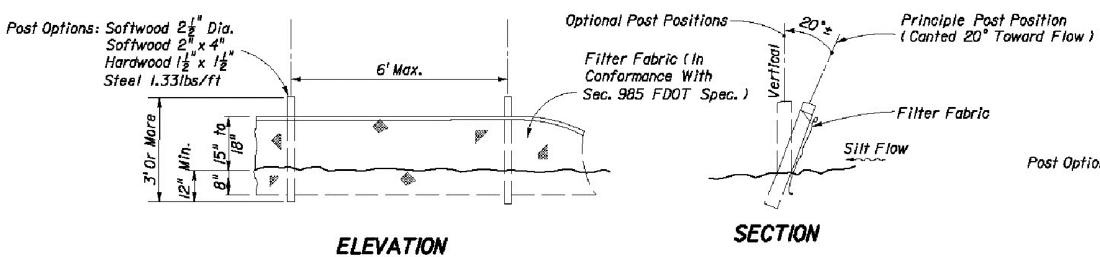
USE TO VERIFY FIGURE

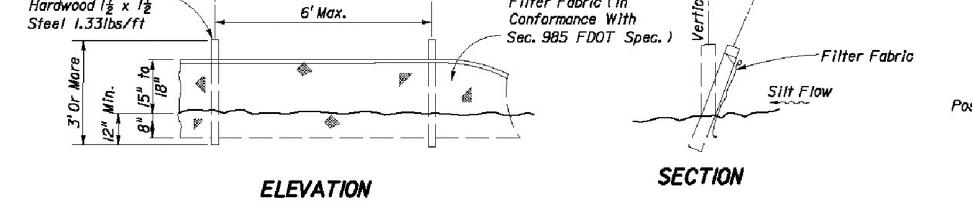
REPRODUCTION SCALE

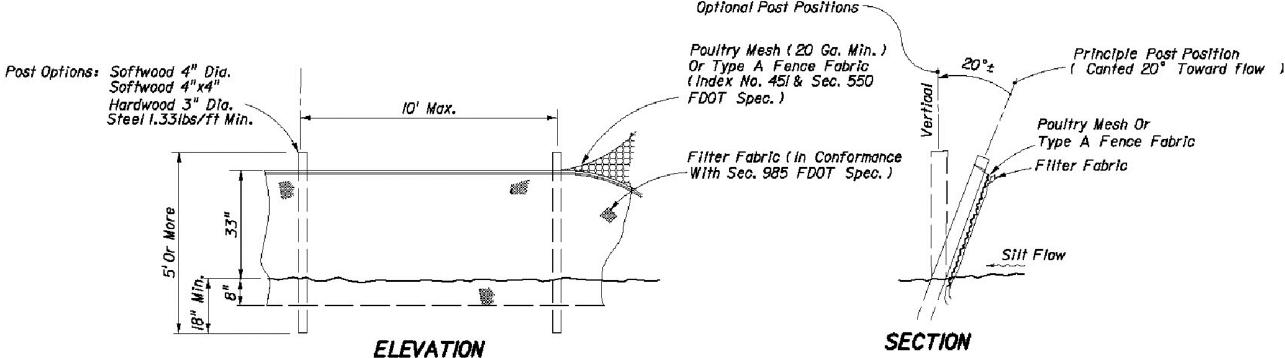
- 1. ALL CONSTRUCTION ACTIVITIES SHALL INCORPORATE BEST MANAGEMENT PRACTICES TO CONTROL EROSION, SEDIMENTATION, AND THE POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. CONSTRUCTION PRACTICES INCLUDE:
- A. CONSTRUCT TEMPORARY SEDIMENTATION BASINS OR EARTHEN BERMS AT DOWNGRADIENT ENDS OF NEWLY GRADED AREAS TO PROVIDE FOR SEDIMENT AND TURBIDITY REMOVAL. B. LIMIT SITE CLEARING TO THOSE AREAS REQUIRED FOR A PARTICULAR PHASE OF
- CONSTRUCTION. EXISTING TREES AND VEGETATION TO REMAIN WHEREVER POSSIBLE C. TURBIDITY BARRIERS. SYNTHETIC BALES AND OTHER EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE POTENTIAL FOR EROSION IS ELIMINATED.
- 2. SOLID SOD DITCH AND SWALE BANKS AS SOON AS POSSIBLE AFTER CONSTRUCTION IN ORDER TO STABILIZE THE SLOPES AND MINIMIZE EROSION. IN AREAS DELINEATED AS "WETLANDS," REVEGETATE IN ACCORDANCE WITH PERMIT CONDITIONS.
- 3. DO NOT EMPLOY SILT FENCES IN A MANNER TO CAUSE THEM TO ACT AS A DAM ACROSS PERMANENTLY FLOWING WATERCOURSES. USE SILT FENCES AT UPLAND LOCATIONS, AND TURBIDITY BARRIERS IN PERMANENT WATER BODIES, REGARDLESS OF WATER DEPTH.
- 4. TURBIDITY BARRIERS FOR WATER BODIES MAY BE EITHER FLOATING OR STAKED TYPE, OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS, AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. INSTALL POSTS IN STAKED TURBIDITY BARRIERS IN THE VERTICAL POSITION UNLESS OTHERWISE NOTED.
- 5. TURBIDITY IN ALL WATER BODIES TO BE CONTROLLED TO PREVENT VIOLATION OF WATER QUALITY PURSUANT TO RULE 62-302.510(5)(r), FLORIDA ADMINISTRATIVE CODE. TURBIDITY SHALL NOT EXCEED 29 NEPHELOMETRIC TURBIDITY UNITS ABOVE NATURAL BACKGROUND CONDITIONS.
- 6. FOR EROSION CONTROL DETAILS, REFER TO FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "ROADWAY AND TRAFFIC DESIGN STANDARDS":
- A. TRASH RETAINER AND SEDIMENT BASIN -- INDEX NO. 101 B. BAILED HAY OR STRAW BARRIERS AND SILT FENCES -- INDEX NO. 102 (ALSO SHOWN THIS SHEET).
- ADDITIONALLY, COMPLY WITH FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," SECTION 104 - PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLLUTION.

1 11/19/2021 CONFORMED SET

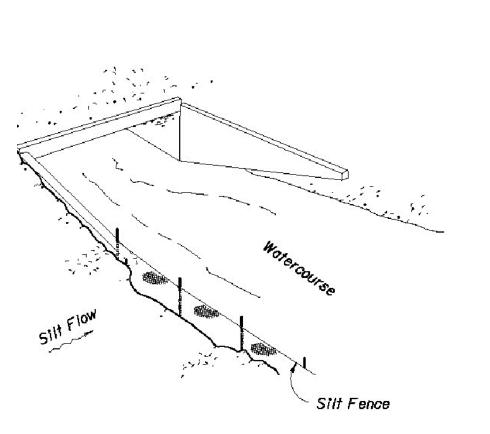
THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

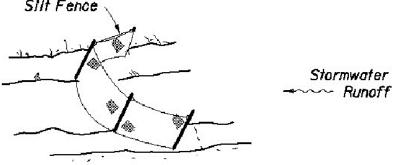




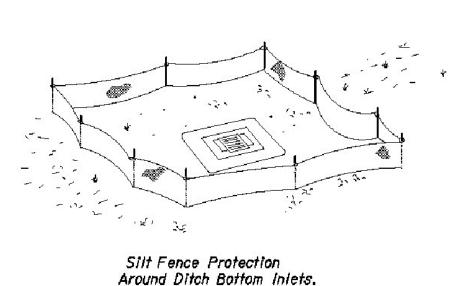


TYPE III SILT FENCE

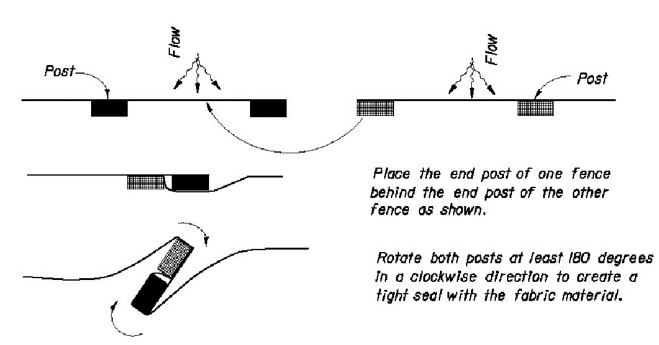




Silt Fence Protection in Ditches with Intermittent Flow



TYPE IX SILT FENCE



SILT FENCE APPLICATIONS

NOTES FOR SILT FENCES

- 1. TYPE III SILT FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH CHART I, SHEET I.
- 2. TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF
- 3. DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER
- 4. WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.
- 5. PERIMETER SILT FENCE SHALL BE TRENCHED 8-10 INCHES DEEP EXCEPT AROUND THE DRIPLINEOF LARGE TREES WHERE YOU SHOULD REFER TO THE TREE PROTECTION

PLAN VIEW

JOINING TWO SILT FENCES

Drive both posts into the ground and bury flap.

MAINTENANCE

SEAN K. CHAPARRO, P.E.

Date Signed

Checked by

essional Engineer's No.

AGG SKC

- A. INSPECT SILT BARRIERS IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST ONCE A DAY DURING
- PERIODS OF PROLONGED RAINFALL. MAKE NEEDED REPAIRS IMMEDIATELY. B. SHOULD THE FABRIC ON A SILT BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND IF THE BARRIER IS STILL NEEDED, REPLACE THE FABRIC
- IMMEDIATELY. C. REMOVE SEDIMENT DEPOSITS AFTER EACH STORM EVENT.
- D. ANY SEDIMENT DEPOSITS IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, AND PREPARED FOR SEEDING OR SODDING.

· LICENSÉ.

No. 75865

STATE OF

.FLORIDA.

SEAN K. CHAPARRO

P.E. NO. 75865

STORMWATER NOTES:

- 1. STORMWATER DESIGN SHALL COMPLY WITH PROPERTY OWNERS STORMWATER REQUIREMENTS.
- 2. UNDER THE PROVISIONS OF THE CLEAN WATER ACT, AS AMENDED, FEDERAL LAW PROHIBITS DISCHARGES OF POLLUTANTS IN STORMWATER FROM CONSTRUCTION ACTIVITIES WITHOUT A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT (NPDES). THE CONTRACTOR SHALL COMPLETE AND SUBMIT AN FDEP NOI FORM 62-621.300 (4) (b) TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES TO OBTAIN COVERAGE UNDER A CONSTRUCTION GENERAL PERMIT.

This item has been digitally signed and sealed by Sean K. Chaparro, PE on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

LORIDA CERTIFICATE OF AUTHORIZATION NUMBER 79°

Sean K Chaparro DN: CN = Sean K Chaparro C = US O = Chaparro Florida Date: 2021.11.22 16:08:29 ARCADIS U.S., INC.

COLUMBIA COUNTY, FLORIDA

ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

EROSION CONTROL DETAILS

ARCADIS Project No. 30028119.0000 NOVEMBER 2021 ARCADIS

TEL. 813.903.3125

4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607

THIS BAR REPRESENTS

ONE INCH ON THE

ORIGINAL DRAWING:

G-2 DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE 2020 FLORIDA BUILDING CODE (7TH EDITION) EXCEPT WHERE OTHER APPLICABLE CODES AND THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE.

G-3 LIVE LOADS:

FLOOR LIVE LOAD = 250 PSF STAIRS, WALKWAYS, ELEVATED PLATFORMS: 100 PSF (U.O.N.) PLATFORMS WITH EQUIPMENT: 150 PSF (U.O.N.)

G-4 WIND DESIGN: ULTIMATE DESIGN WIND SPEED = 130 MPH EXPOSURE CATEGORY = C

RISK CATEGORY = III

- G-5 ALL DIMENSIONS INDICATED (*) ARE TO BE VERIFIED EITHER BY FIELD MEASUREMENTS FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.
- G-6 EQUIPMENT ANCHOR BOLT SIZES, TYPES, AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.
- G-7 STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
- G-8 IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED BY THE ENGINEER.
- G-9 STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
- G-10 NO BACKFILL SHALL BE PLACED AGAINST ANY WALL UNLESS ALL SUPPORTING ELEMENTS OF THE STRUCTURE HAVE BEEN CONSTRUCTED AND HAVE REACHED THE SPECIFIED MINIMUM CONCRETE STRENGTH.
- G-11 NO COLD WEATHER CONSTRUCTION OR HOT WEATHER CONSTRUCTION, AS DEFINED IN SPECIFICATIONS, IS PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- G-12 OPENINGS AND PENETRATIONS: THE CONTRACTOR SHALL SUBMIT COMPOSITE DRAWINGS INDICATING ALL FLOOR OPENINGS AND PENETRATIONS THROUGH STRUCTURAL MEMBERS REQUIRED TO ACCOMMODATE ALL OTHER WORK. THE CONTRACTOR SHALL FOLLOW THE TYPICAL FRAMING DETAILS AT OPENINGS AND REINFORCEMENT DETAILS AT PENETRATIONS THROUGH STRUCTURAL MEMBERS. ACCORDINGLY, THE CONTRACTOR SHALL SUBMIT SHOP DETAILS TO THE ENGINEER FOR REVIEW.

FOUNDATIONS

- F-1 ALL FOUNDATION WORK SHALL BE PER GEOTECHNICAL ENGINEERING REPORT FOR ELLISVILLE WWTP - NEW WATER STORAGE STRUCTURES, ISSUED BY CAL-TECH TESTING, INC.
- F-2 FOUNDATION WORK SHALL FOLLOW THE PROCEDURES RECOMMENDED IN THE GEOTECHNICAL REPORT.
- F-3 THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION TO EXISTING UNDERGROUND UTILITIES. VERIFY UTILITIES LOCATION BEFORE PROCEEDING WITH FOUNDATION EXCAVATION.
- F-4 ALL CONSTRUCTION OPERATIONS DEALING WITH EARTHWORK, EXCAVATIONS AND EXCAVATION BOTTOMS SHALL BE INSPECTED BY AN EXPERIENCED GEOTECHNICAL ENGINEER AT THE CONTRACTOR'S EXPENSE.
- F-5 SLAB AND FOUNDATIONS PARAMETERS: A) MAXIMUM ALLOWABLE NET SOIL PRESSURE = 2000 PSF B) MODULUS OF SUBGRADE REACTIONS FOR SLABS-ON-GRADE = 150 PSI/IN
- F-6 COMPACTED #57 STONE AND COMPACTED EXCAVATION BOTTOM AS SHOWN ON THE DRAWINGS SHALL BE UNDER THE ENTIRE FOUNDATION

CONCRETE

- CONCRETE 28-DAY COMPRESSIVE STRENGTH: 4500 PSI
- C-2 REINFORCEMENT: ASTM A615, GRADE 60, OR ASTM A706, GRADE 60 WHERE REINFORCEMENT IS TO BE WELDED.
- C-3 CONCRETE COVER FOR REINFORCING:
- A) SURFACES CAST AGAINST EARTH B) SURFACE WITH EMBEDDED PVC WATERSTOP 3" C) ALL OTHER SURFACES
- C-4 CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE LOCATED AT NO MORE THAN 40' ON CENTER. CONSTRUCTION JOINT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER
- C-5 EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.
- C-6 AT ALL TYPICAL CURBS, EQUIPMENT PADS, AND PIPE SUPPORT PIERS, REINFORCING DOWELS SHOWN MAY BE REPLACED WITH MATCHING DOWELS SET IN EPOXY ADHESIVE IN DRILLED HOLES AS SPECIFIED. DOWELS LOCATED CLOSER THAN 3" FROM ANY EDGE OF CONCRETE SHALL NOT BE REPLACED WITH DRILLED DOWELS.
- C-7 WHERE DRILLED EPOXY ADHESIVE DOWELS ARE SHOWN TO BE PLACED INTO HARDENED CONCRETE, ADJUST THE DOWEL LOCATIONS AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE DOWEL LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER.
- C-8 WHERE HORIZONTAL CONSTRUCTION JOINTS, LOCATED ABOVE THE FOUNDATION SLAB, EXTEND BEYOND WHERE NEEDED, THEY SHALL BE TERMINATED AT A VERTICAL CONSTRUCTION JOINT AS APPROVED BY THE ENGINEER
- C-9 DOWELS, ANCHOR BOLTS, PIPES, AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING
- C-10 CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN OR PASS THROUGH COLUMNS OR BEAMS UNLESS INDICATED OTHERWISE OR AUTHORIZED BY
- C-11 ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER OR A 1/2" RADIUS
- C-12 LAP SPLICES SHALL BE IN ACCORDANCE WITH THE TABLE SHOWN ON THIS

ABBREVIATIONS

DWL

DOWEL

AB	ANCHOR BOLTS	Е	EAST	ID	INSIDE DIAMETER	R	RADIUS, RISER	
ADD'L	ADDITIONAL	EA	EACH	IF	INSIDE FACE	REINF	REINFORCEMENT	
AL	ALUMINUM	EF	EACH FACE	INV	INVERT	REQD	REQUIRED	
ALT	ALTERNATE	EJ	EXPANSION JOINT	JT	JOINT	RM	ROOM	
APPROX	APPROXIMATE	EL	ELEVATION	JI	JOINT	RO	ROUGH OPENING	
ARCH	ARCHITECTURAL	ELEC	ELECTRICAL	L	ANGLE (STRUCTURAL			
D 4 1	DAI ANIOE	EMB	EMBEDMENT		SHAPE)	S	SOUTH	
BAL	BALANCE	ENCL	ENCLOSURE	LL	LIVE LOAD	SECT	SECTION	
BL	BUILDING LINE	EQ	EQUAL	LLH	LONG LEG HORIZ	SH	SHEET	
BLDG	BUILDING	EQUIP	EQUIPMENT	LLV	LONG LEG VERT	SIM	SIMILAR	
BM	BEAM	ES	EACH SIDE	LOC	LOCATION	SL	SLAB	
BOT	воттом	EW	EACH WAY	LP	LOW POINT	SPEC	SPECIFICATION	
BRG	BEARING	EW T&B	EACH WAY TOP &	LW	LONG WAY	SQ	SQUARE	
С	CHANNEL STRUCTURAL		ВОТТОМ	L**	20110 11/11	SS	STAINLESS STEEL	
	SHAPE	EXIST	EXISTING	MAX	MAXIMUM	STD	STANDARD	
CANT'L	CANTILEVER	EXP	EXPANSION	MECH	MECHANICAL	STIR	STIRRUP	
CANTE	CONSTRUCTION JOINT	EXT	EXTERIOR	MFR	MANUFACTURE,	STL	STEEL	
CL	CLEAR		FLOOD DEAL		MANUFACTURER	STRUCT	STRUCTURAL	
COL	COLUMN	FB	FLOOR BEAM	MH	MANHOLE	SW	SHORT WAY	\vdash
COMP	COMPRESSIBLE	FDN	FOUNDATION	MID	MIDDLE			
CONC	CONCRETE	FF	FAR FACE	MIN	MINIMUM	T&B	TOP AND BOTTOM	
CONC	CONNECTION	FIN	FINISH			TOC	TOP OF CONCRETE	
CONST	CONSTRUCTION	FL	FLOOR	N	NORTH	THK	THICK	
	CONTINUOUS	FTG	FOOTING	NF	NEAR FACE	T/	TOP OF	
CONT		GA	GAUGE	#	NUMBER	T	TREAD	
CSTG	CASTING CENTER	GALV	GALVANIZE	# NTS	NOT TO SCALE	TYP	TYPICAL	
C/C	CENTER TO CENTER	GB	GRADE BEAM	OC	ON CENTER	UON	UNLESS OTHERWISE NOTED	
CTR	CENTER	GD	GRADE	OD	OUTSIDE DIAMETER	VERT	VERTICAL	
DET	DETAIL	GRTG	GRATING	OF	OUTSIDE DIAMETER OUTSIDE FACE	W/	WITH	\vdash
DIA	DIAMETER	GIVIG	ORATINO			WP	WORKING POINT	\vdash
DIAG	DIAGONAL	Н	HIGH	OPNG	OPENING	WS	WATERSTOP	
DIM	DIMENSION	П HT	HEIGHT	OPP	OPPOSITE	WWF	WELDED WIRE FABRIC	
DL	DEAD LOAD	HORZ		PC	DDECAST CONCDETE	** **1	HELDED WINE LADINO	
DN	DOWN		HORIZONTAL		PRECAST CONCRETE			
DP	DEEP	HP	HIGH POINT	PL	PLATE			\vdash
DWG	DRAWING	HS	HIGH STRENGTH	PSF	POUNDS PER SQUARE			\perp
DVVG	DIVAMINA	HSS	HOLLOW STRUCTURAL		FOOT			

POLYVINYL CHLORIDE

SECTION

		REINFORCI	NG LAP SPLI	CE & EMBEDI	MENT LENGTH			
_	MIN	LAP LENGTH	MIN EMBEDMENT LENGTH (IN)					
NR 	TOP E	BARS	STRAIGHT BARS WITH					
ZE	CLA	SS	CLA:	SS	TOP	OTHER	STD	
	Α	В	Α	В	BARS	BARS	HOOK	
		SLABS	& WALLS W	ITH 2" + CO	VER			
3	16	21	12	16	16	12	6	
4	16	21	12	16	16	12	7	

#5	20	25	15	19	20	15	9
#6	24	30	18	23	24	18	10
#7	33	43	25	33	33	25	12
#8	38	49	29	37	38	29	14
#9	49	63	37	48	49	37	15
#10	60	78	46	60	60	46	17
#11	75	97	57	74	75	57	19
		SLABS	& WALLS W	/ITH < 2" CO	VER		
#3	16	21	12	16	16	12	8
#4	16	21	12	16	16	12	10
#5	20	25	15	19	20	15	12

23

37

47

58

70

24

38

47

58

71

15

17

19

22

25

29

36

44

54

18

29

36

44

54

#11	85	110	65	84 85		65	27			
BEAMS & COLUMNS WITH 3.75" CLEAR SPACING **										
#3	16	21	12	16	16	12	6			
#4	16	21	12	16	16	12	7			
# 5	20	25	15	19	20	15	9			
# 6	24	30	18	23	24	18	10			
# 7	33	43	25	33	33	25	12			
#8	39	51	30	39	39	30	14			
# 9	50	64	38	49	50	38	15			
#10	60	78	46	60	60	46	17			
#11	72	94	55	72	72	55	19			

** FOR BAR CLEAR SPACING LESS THAN 3.75", ADD 46% FOR BAR CLEAR SPACING LESS THAN 2.25", ADD 104%

49

62

76

24

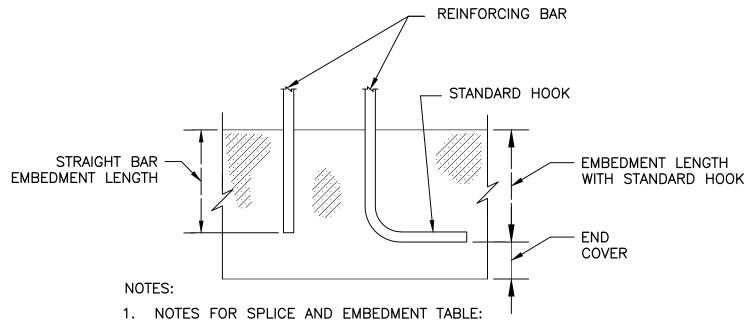
38

47

58

71

#8

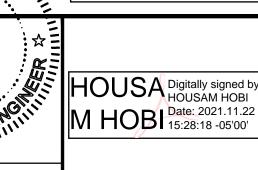


- A. THE MINIMUM LENGTH OF LAPS FOR SPLICES SHALL BE AS GIVEN IN THE TABLE FOR CLASS "B" LAPS UNLESS SHOWN OTHERWISE ON THE DRAWINGS. PROVIDE CLASS "A" LAPS ONLY WHERE NOTED ON THE DRAWINGS.
- B. THE SPLICE AND EMBEDMENT LENGTHS FOR WALLS AND SLABS ARE BASED ON A 5" MINIMUM ON CENTER BAR SPACING. SEE THE DRAWINGS FOR SPLICE AND EMBEDMENT WHERE BARS ARE SPACED CLOSER THAN 5".
- C. HOOK EMBEDMENTS APPLY ONLY WHERE THE SIDE COVER (NORMAL TO THE HOOK PLANE) IS AT LEAST 2.5". THE COVERS REFERENCED ON THE TABLE ARE
- FROM THE HOOK EXTENSION TO THE FACE OF THE CONCRETE. D. THE TABLE DOES NOT APPLY TO LIGHTWEIGHT CONCRETE OR EPOXY COATED REINFORCING BARS. SEE ACI 318 FOR APPROPRIATE ADDITIONAL MULTIPLIERS FOR THOSE CASES.
- 2. WHERE SPLICES ARE REQUIRED BETWEEN BARS OF DIFFERENT SIZES, THE LAP LENGTH SHALL BE NO LESS THAN THE EMBEDMENT LENGTH OF THE LARGER BAR OR THE LAP LENGTH OF THE SMALLER BAR, WHICHEVER IS GREATER.
- 3. VERTICAL REINFORCEMENT FOR CONCRETE SHALL BE SPLICED WITH DOWEL BARS OF THE SAME SIZE AND SPACING FROM THE FOUNDATION USING A STANDARD SPLICE
- 4. DOWELS SHOWN EXTENDING FROM PREVIOUSLY PLACED CONCRETE SHALL EXTEND ONE SPLICE LENGTH BEYOND THE JOINT, UNLESS DIMENSIONED OTHERWISE. WHERE A DIMENSION IS PROVIDED, THE BAR SPLICING TO THE DOWEL SHALL END ONE SPLICE LENGTH FROM THE END OF THE DOWEL.

This item has been digitally signed and sealed by H.A. Hobi, PE, on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ssional Engineer's Name H. A. HOBI, P.E. essional Engineer's No. 1 11/19/2021 CONFORMED SET AGG SKC THIS BAR REPRESENTS USE TO VERIFY FIGURE ONE INCH ON THE REPRODUCTION SCALE Checked by THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OF ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. ORIGINAL DRAWING:



H.A. HOB,

· CENSE.

STATE OF

. CORIDA.



ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

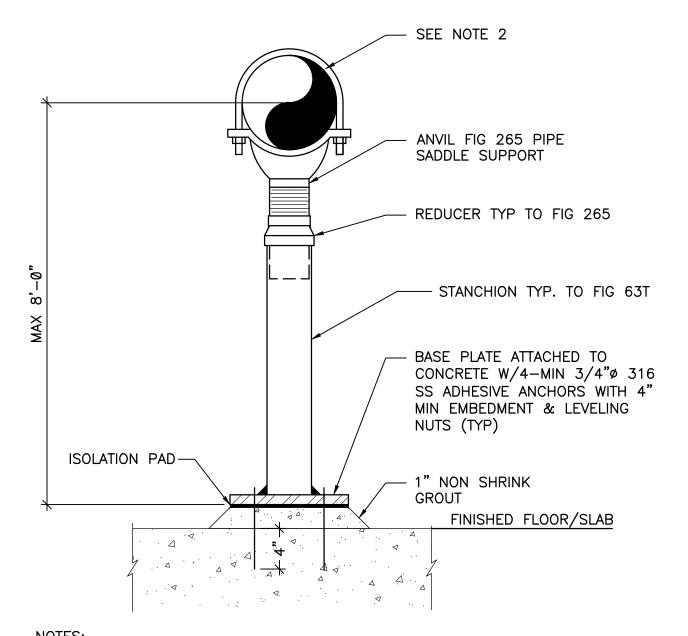
STRCTURAL NOTES, LEGEND, AND **ABBREVIATIONS**

COLUMBIA COUNTY, FLORIDA

ARCADIS Project No. 30028119 0000 NOVEMBER 2021 ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607

TEL. 813.903.3125

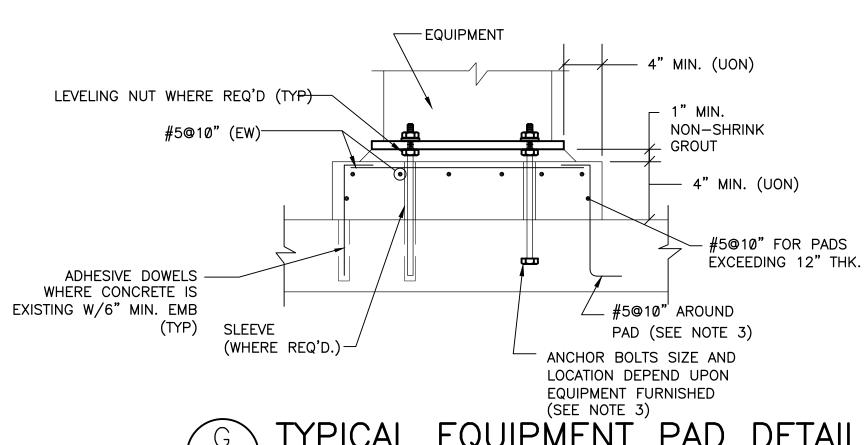
S-01



NOTES:
1. MAXIMUM RECOMMENDED LOAD: 1,500 LBS.

- 2. WELDED PIPE SUPPORT BRACKETS FOR SYSTEMS WEIGHING GREATER THAN 1,500 LBS: THE CONTRACTOR SHALL PROVIDE SHOP DRAWING AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
- 3. PROVIDE 3"X1/4" NEOPRENE PAD BONDED TO PIPE.
- 4. PIPE SUPPORT TO BE SS316.
- 5. MAX SUPPORT SPACING 8'-0".

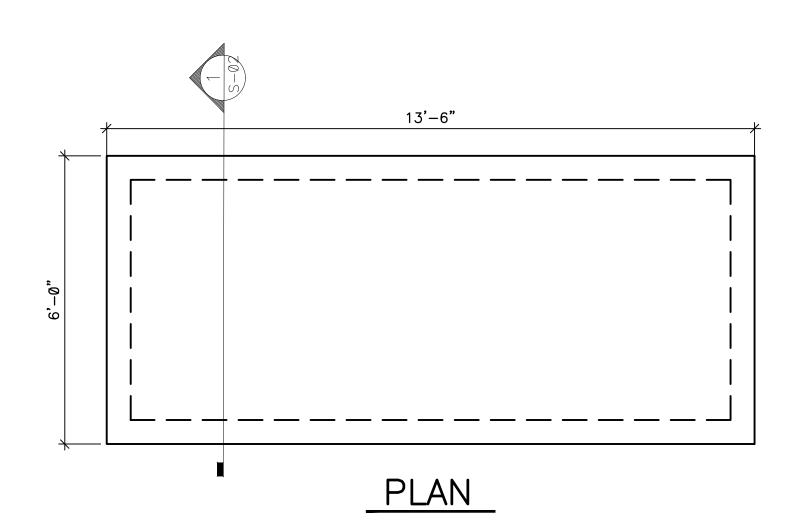


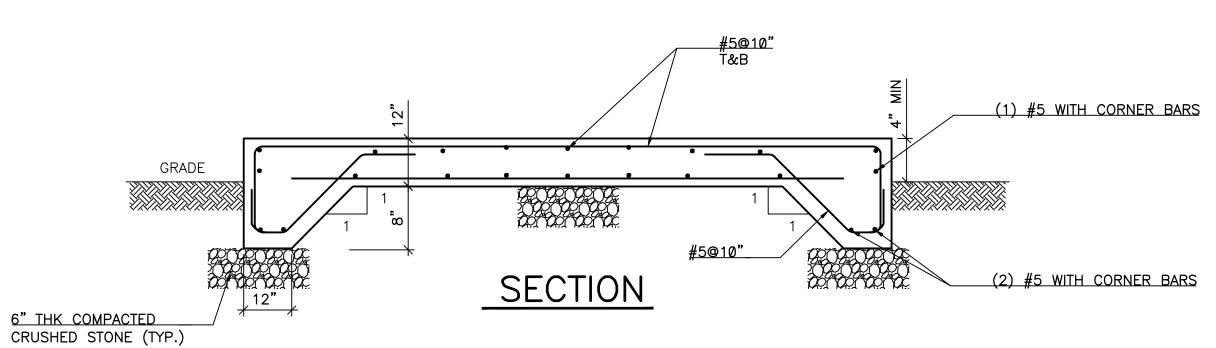


TYPICAL EQUIPMENT PAD DETAIL SCALE: NO SCALE

1. PROVIDE TYP. 4" MINIMUM CONCRETE SUPPORT PAD FOR ALL

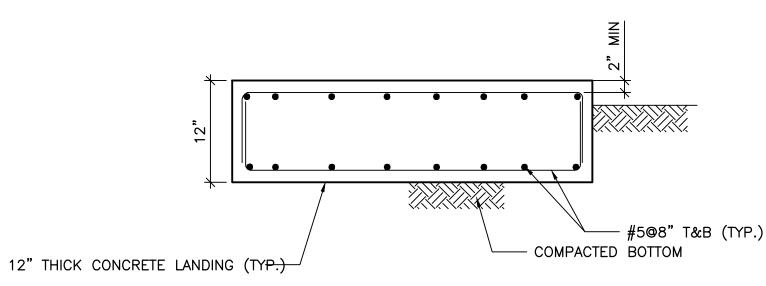
- EQUIPMENT UNLESS OTHERWISE NOTED. 2. COORDINATE LOCATION AND SIZE OF PADS WITH OTHER DRAWINGS
- AND MANUFACTURER'S CERTIFIED DRAWINGS. 3. FOR EXISTING SLABS, DRILL HOLE DIAMETER AND DEPTH IN
- EXISTING SLAB PER MANUFACTURER'S REQUIREMENTS FOR ADHESIVE ANCHORAGE SYSTEM USED.





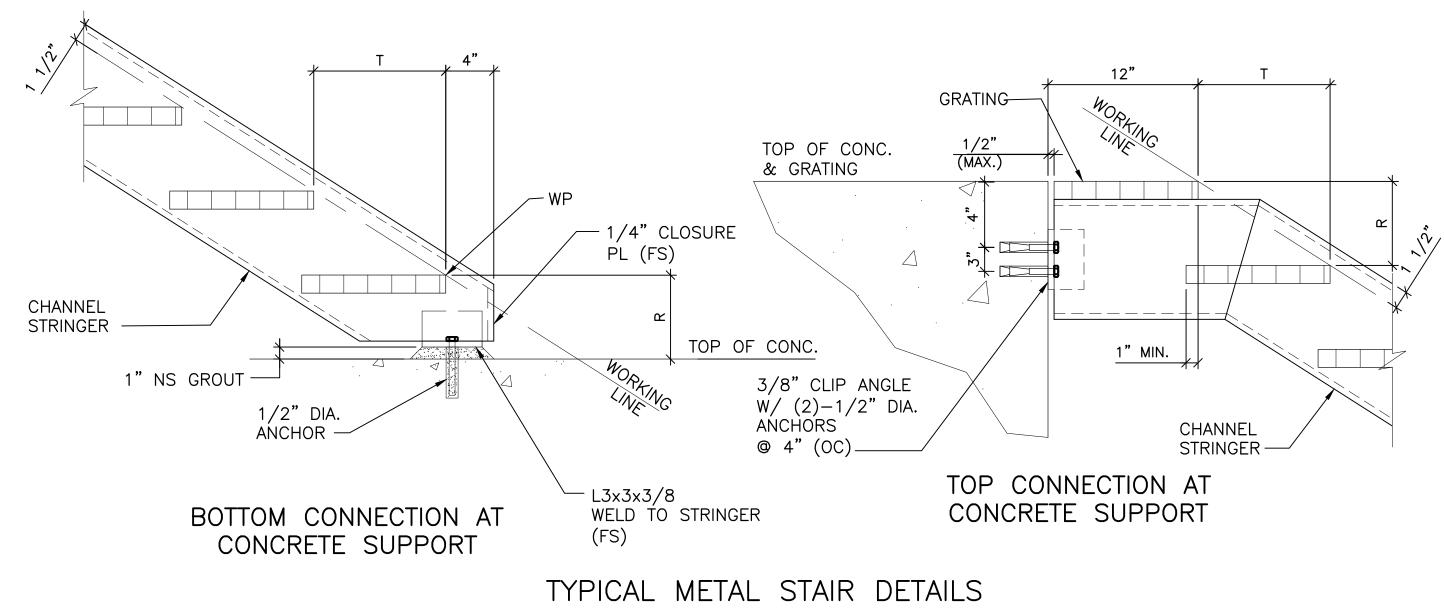
TYPICAL BLOWER PAD DETAIL S-02 SCALE: NO SCALE

- 1. REFER MECHANICAL DRAWINGS FOR LENGTH AND
 - WIDTH OF CONCRETE PAD
- PREPARE SUBBASE PER GEOTECNICAL REPORT ANCHORAGE FOR EQUIPMENT IS MANUFACTURER AND/OR CONTRACTORS RESPONSIBILITY. PROVIDE SHOP DRAWINGS AND CALCULATIONS FOR ANCHORAGE DESIGN SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.



TYPICAL CONCRETE STAIR LANDING

- SCALE: NO SCALE 1. REFER TO MECHANICAL DRAWINGS FOR LENGTH
- AND WIDTH OF CONCRETE STAIR LANDING.
- PREPARE SUBBASE PER GEOTECNICAL REPORT



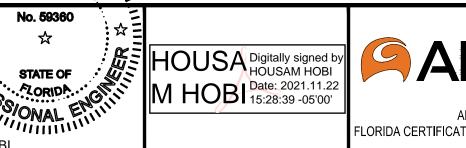
1. STAIR TREADS, GRATING AND STRUCTURAL SHAPES SHALL BE ALUMINUM.

2. RAILING NOT SHOWN FOR CLARITY.

This item has been digitally signed and sealed by H.A. Hobi, PE, on

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

H. A. HOBI, P.E. essional Engineer's No. 1 11/19/2021 CONFORMED SET AGG SKC THIS BAR REPRESENTS USE TO VERIFY FIGURE ONE INCH ON THE REPRODUCTION SCALE Checked by THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. ORIGINAL DRAWING:



'A.A. HOB'

··· /ICENSE

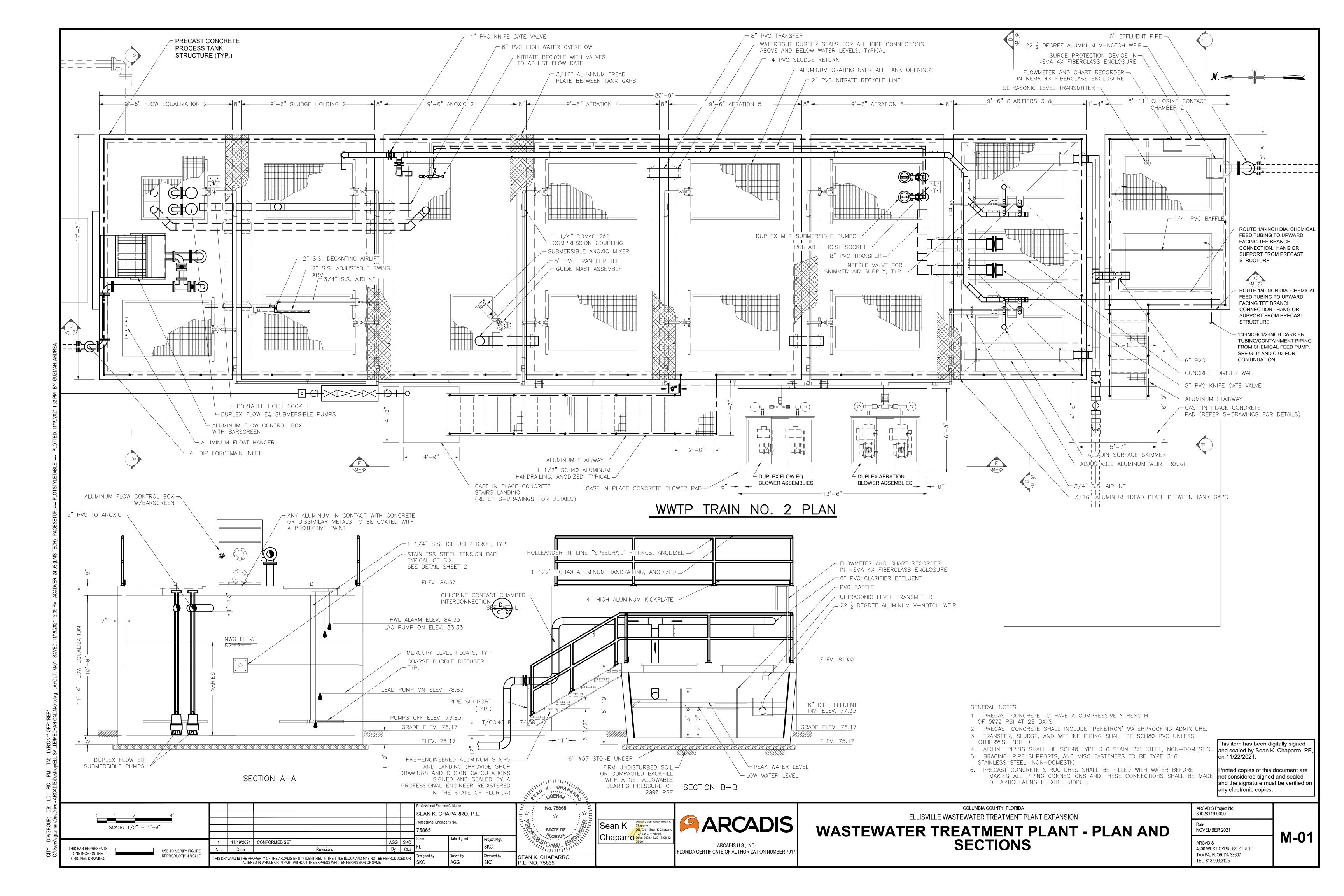
COLUMBIA COUNTY, FLORIDA ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

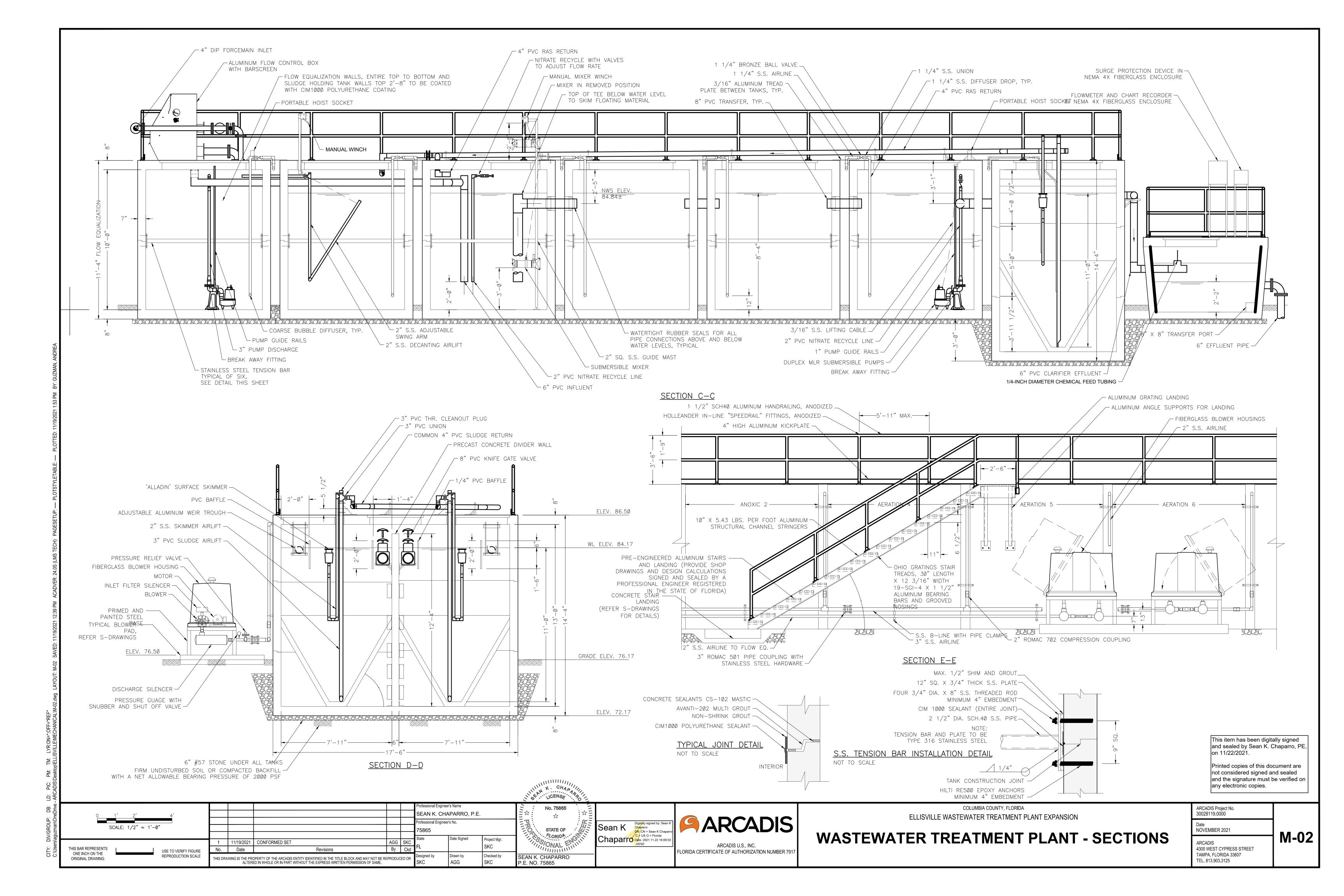
STRUCTURAL DETAILS

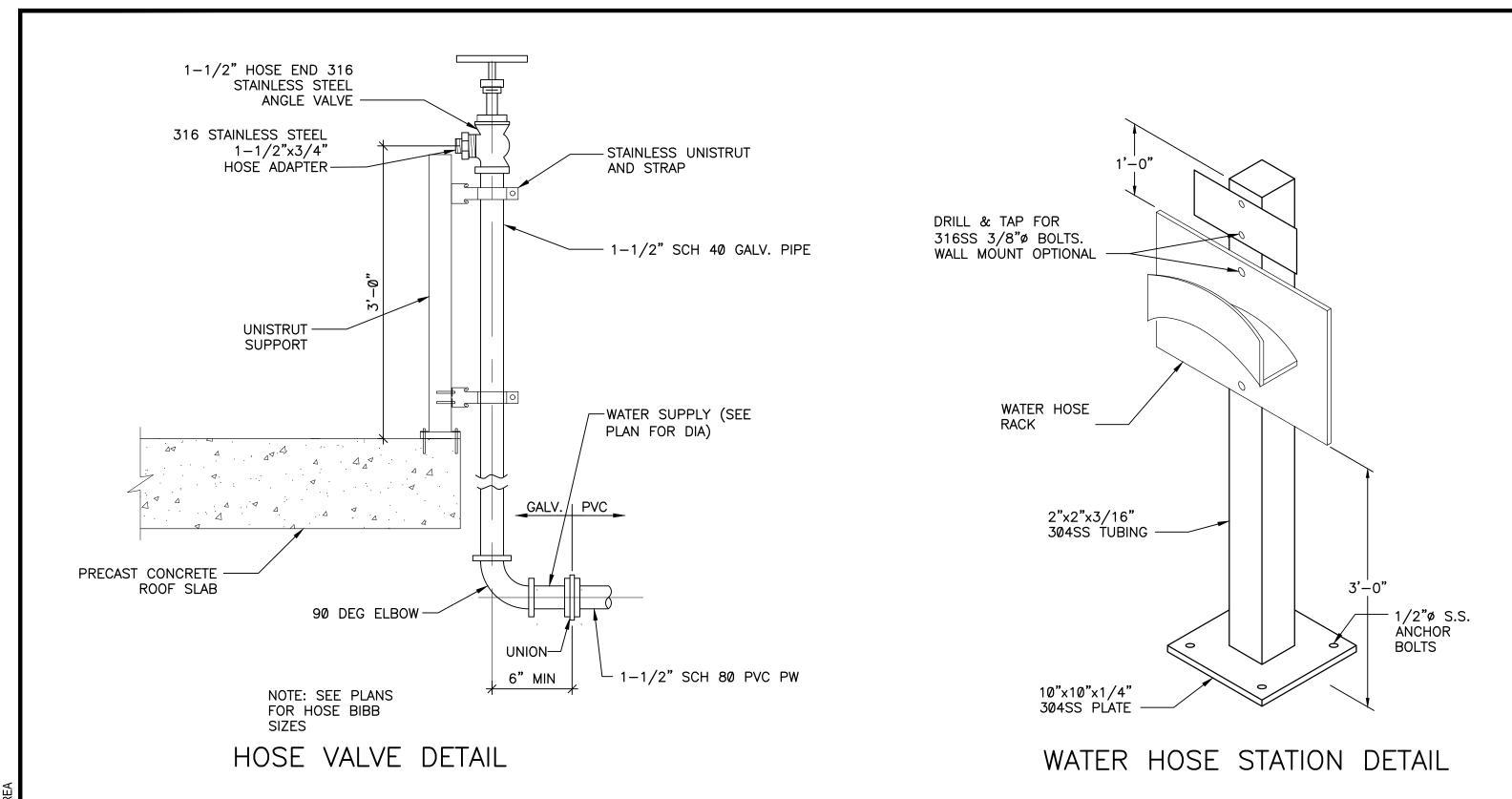
ARCADIS Project No. 30028119.0000 **NOVEMBER 2021 S-02** ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607

TEL. 813.903.3125

ARCADIS U.S., INC. FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER 791







GENERAL NOTES:

- 1. HOSE RACK SHALL BE OF ALL WELDED CONSTRUCTION. MATERIAL SHALL BE MINIMUM OF 3/16 INCH THICK STEEL.
- UTILITY STATIONS FASTENERS AND MOUNTING HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.
- USE ONLY GALVANIZED AND PVC PIPING AND STAINLESS STEEL VALVES FOR PLANT WATER SERVICE. NO BRASS OR BRONZE.

HOSE VALVE & RACK SUPPORT DETAIL M-03

> This item has been digitally signed and sealed by Sean K. Chaparro, PE, on 11/22/2021. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

LIGHT LICENSE ofessional Engineer's Name No. 75865 SEAN K. CHAPARRO, P.E. Professional Engineer's No. STATE OF AGG SKC F 1 11/19/2021 CONFORMED SET THIS BAR REPRESENTS ONE INCH ON THE USE TO VERIFY FIGURE REPRODUCTION SCALE Checked by SKC SEAN K. CHAPARRO P.E. NO. 75865 THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME. ORIGINAL DRAWING:

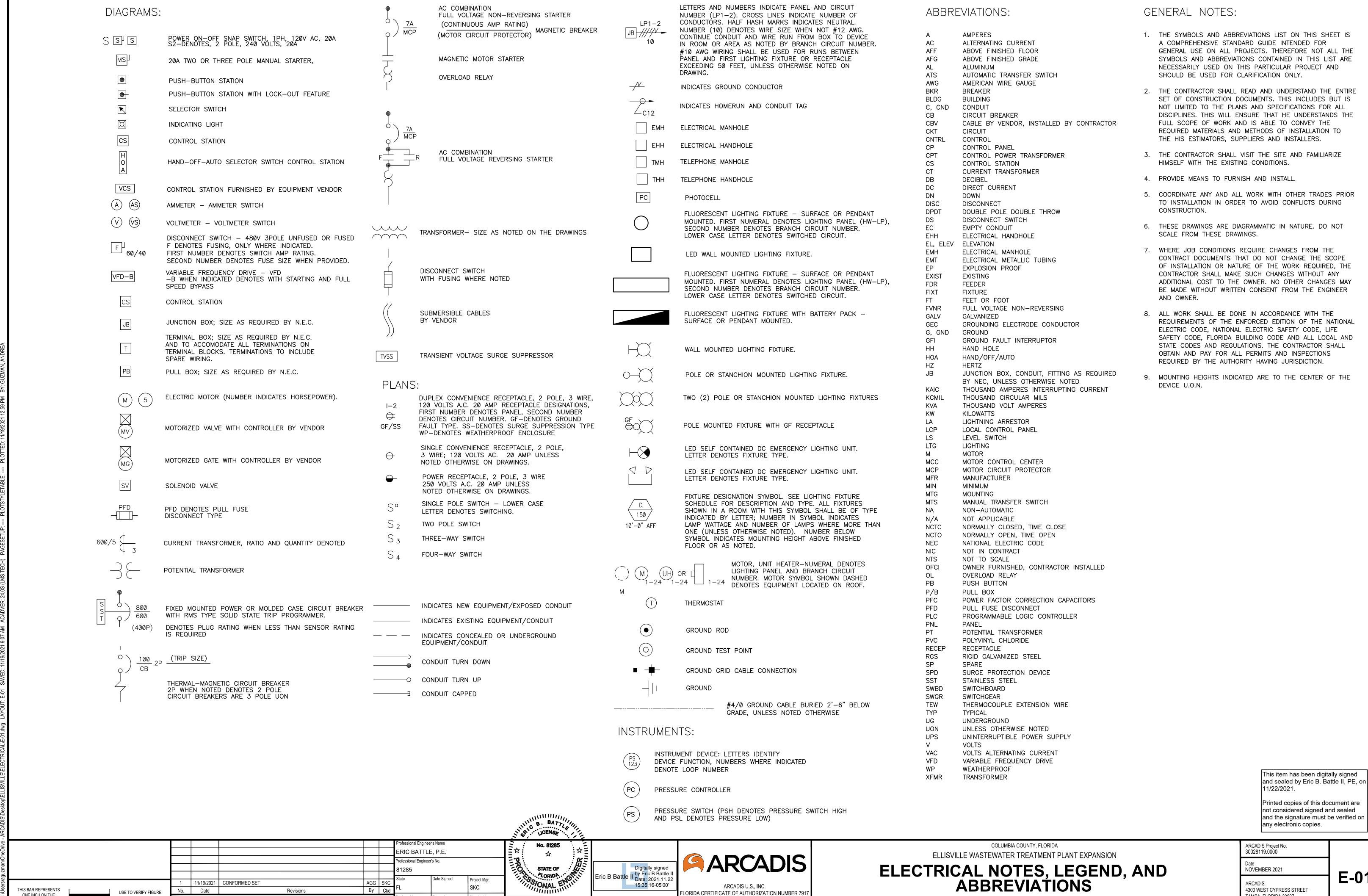




COLUMBIA COUNTY, FLORIDA ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

ИЕСНА	NICAL	DETAILS

ARCADIS Project No. 30028119.0000	
Date NOVEMBER 2021	R.A
ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607 TEL. 813.903.3125	IVI



Checked by

ERIC BATTLE

P.E. NO. 81285

ONE INCH ON THE

ORIGINAL DRAWING:

REPRODUCTION SCALE

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

E-01

TAMPA, FLORIDA 33607

TEL. 813.903.3125

CONTROL PANEL AM-LCP2 LOAD CALC										
EQUIPMENT	(D) DUTY OR (S) STANDBY	HP/KVA	CONNECTED LOAD (A)	RUNNING LOAD (A)						
ANOXIC MIXER 2	D	2.3 HP/2.83 KVA	3.40	3.40						
CONTROL POWER XFMR	D	0.5 KVA	1.04	1.04						
SUBTOTAL			4.44	4.44						
25% OF LARGEST MOTOR				Ø.28						
LOAD PER NEC 430.24				4.72						

CONTROL PANEL RP-LCP2 LOAD CALC										
EQUIPMENT	(D) DUTY OR (S) STANDBY	HP/KVA	CONNECTED LOAD (A)	RUNNING LOAD (A)						
RECYCLE PUMP NO. 3	D	0.75 HP/1.5 KVA	1.80	1.80						
RECYCLE PUMP NO. 4	D	0.75 HP/1.5 KVA	1.80	1.80						
CONTROL POWER XFMR	D	0.5 KVA	1.04	1.04						
SUBTOTAL			4.64	4.64						
25% OF LARGEST MOTOR				0.40						
LOAD PER NEC 430.24				5.04						

CONTROL PANEL MAB-LCP2 LOAD CALC										
EQUIPMENT	(D) DUTY OR (S) STANDBY	HP/KVA	CONNECTED LOAD (A)	RUNNING LOAD (A)						
MAIN AIR BLOWER NO. 3	D	7.5 HP/9.15 KVA	11.00	11.00						
MAIN AIR BLOWER NO. 4	S	7.5 HP/9.15 KVA	11.00	0.00						
120V XFMR	D	Ø.5 KVA	1.04	1.04						
SUBTOTAL			23.04	12.04						
25% OF LARGEST MOTOR				2.75						
LOAD PER NEC 430.24				14.79						

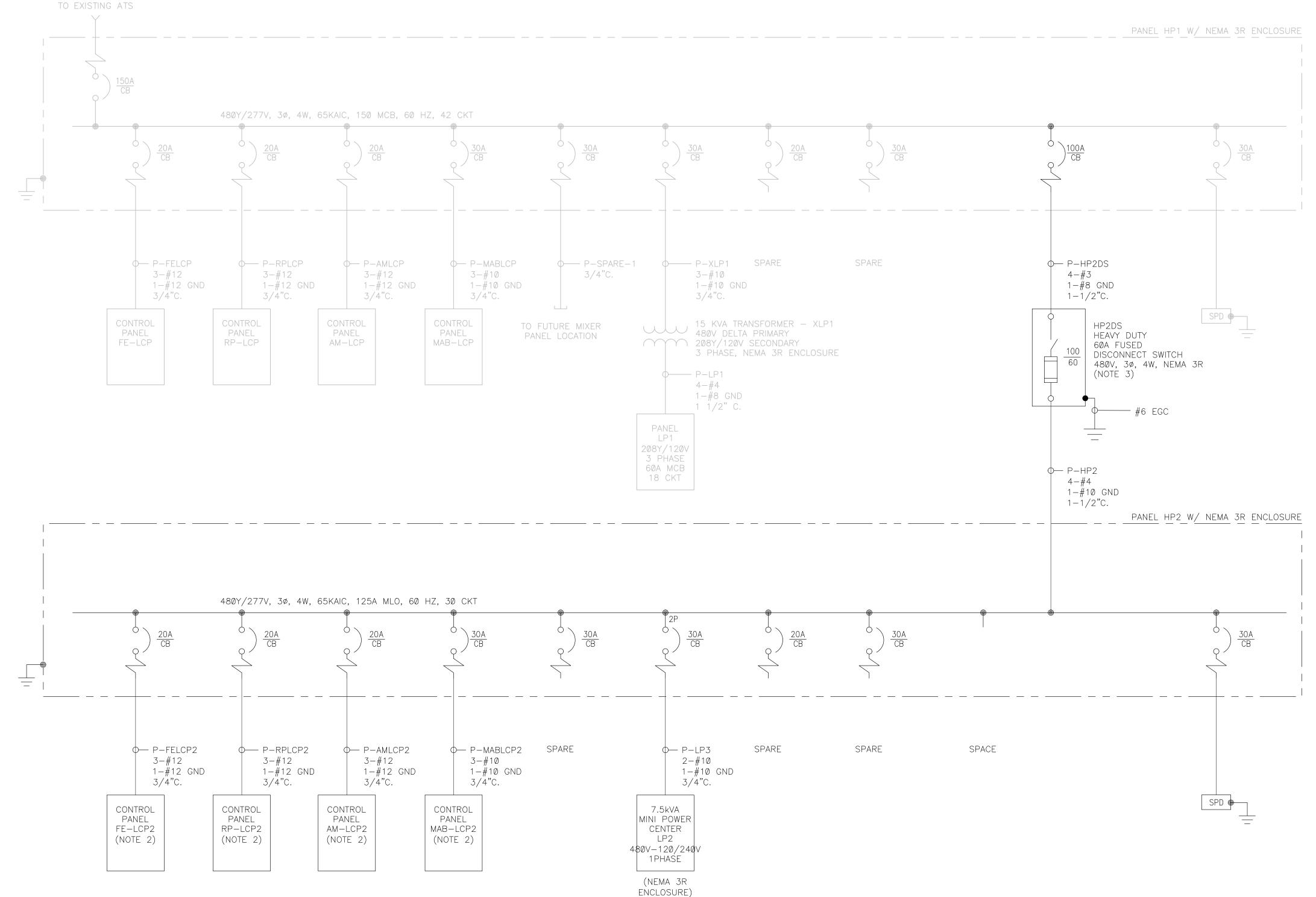
PANEL HP2 LOAD CALC										
EQUIPMENT	CONNECTED LOAD (KVA)	CONNECTED LOAD (A)	DESIGN LOAD (KVA)	RUNNING LOAD (A)						
CONTROL PANEL FE-LCP2	10.30	14.04	10.30	14.04						
CONTROL PANEL AM-LCP2	3.33	4.44	3.33	4.44						
CONTROL PANEL RP-LCP2	3.50	4.64	3.50	4.64						
CONTROL PANEL MAB-LCP2	18.80	23.04	9.65	12.04						
MINI POWER CENTER (LP3)	7.50	15.63	7.50	15.63						
SUBTOTAL	43.43	61.79	34.28	41.23						
25% SPARE CAPACITY			8.57	10.31						
TOTAL			42.85	51.56						

NOTES:

1. CIRCUIT BREAKERS SHOWN ARE 3-POLE UON.

2. LOCAL CONTROL PANEL(S) PROVIDED BY THE PACKAGED WASTEWATER TREATMENT VENDOR. CONNECTIONS FROM EACH CONTROL PANEL TO THE CONTROL STATIONS AND EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR. REFER TO SHEET E-04 FOR MORE INFORMATION ON QUANTITY AND SIZES. COORDINATE ALL FINAL CONNECTIONS PRIOR TO ROUGH-IN.

3. PROVIDE 600V, DUAL ELEMENT, TIME DELAY, 200 KAIC, CLASS RK5 TYPE FUSES (SIZE AS SHOWN).



Printed copies of this document are not considered signed and sealed

This item has been digitally signed and sealed by Eric B. Battle II, PE, on 11/22/2021.

and the signature must be verified on

any electronic copies.

WASTEWATER TREATMENT PLANT TRAIN NO. 2 - ONE-LINE DIAGRAM

THIS BAR REPRESENTS
ONE INCH ON THE ORIGINAL DRAWING:

USE TO VERIFY FIGURE REPRODUCTION SCALE

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

Professional Engineer's Name

ERIC BATTLE, P.E.

Professional Engineer's Name

ERIC BATTLE, P.E.

State
Date Signed
Project Mgr.
SKC

FL

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

Professional Engineer's Name

ERIC BATTLE, P.E.

State
Date Signed
Project Mgr.
SKC

FL

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

PROFESSIONAL DRAWING:

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

PROFESSIONAL DRAWING:

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

PROFESSIONAL DRAWING:

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR BEING BY VIN EBB

PROFESSIONAL DRAWING:

THIS DRAWING:

No. 81285

STATE OF

STATE OF

ERIC BATTLE
P.E. NO. 81285



WASTEWATER TREATMENT PLANT EXPANSION

WASTEWATER TREATMENT PLANT -

ONE-LINE DIAGRAM

COLUMBIA COUNTY, FLORIDA

ARCADIS Project No. 30028119.0000 Date NOVEMBER 2021

ARCADIS
4300 WEST CYPRESS STREET
TAMPA, FLORIDA 33607
TEL. 813.903.3125

E-02

(*) CONTRACTOR SHALL INSTALL NEW 480V, 3P, CIRCUIT BREAKER SIZED AS SHOWN. CIRCUIT BREAKER MANUFACTURER, SERIES, AND KAIC RATING SHALL MATCH

EXISTING POWER DISTRIBUTION PANEL AT WASTEWATER TREATMENT PLANT TRAIN NO. 1 REFER TO SHEET $E-\emptyset6$ FOR LOCATION

CKT NO.	TRIP	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	k A	VA PER PHAS	SE C	POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP	CKT NO.
1	20	RECEPTACLE	0.2	1.7	1	0.4		10000	1	1.7	0.2	LIGHTING	20	2
3	20	FE/FIQR	0.1	0.8	1		0.3		1	1.7	0.2	RECEPTACLE (FEED PUMPS-TRAIN NO. 1)	20	4
5	20	GENERATOR BATTERY CHARGER	0.5	4.2	1		42	0.5	1		- E	SPARE	20	6
7	20	GENERATOR BLOCK HEATER	1	8.3	1	1.0			1			SPARE	20	8
9	20	AUTODIALER	0.5	4.2	1		0.5		1			SPARE	20	10
11		<space></space>			1		<u> </u>	0.0	1		9	SPARE	20	12
13	20	SPARE			1	0.0			1		ev.	SPARE	20	14
15	20	SPARE			1		0.0		1			SPARE	20	16
17	20	SPARE			1			0.0	1			SPARE	20	1 8
	PANE	∟LP1	TC	OTAL KVA		1.4	0.8	0.5		VOLTS:	208Y/120	SERVICE CHARACTERISTICS		A MLO
	OCATION BUILDING	l: Exterior WWTP Service 6: N/A	GRAN	D CONNECT	TED TO	OTAL KVA	2	2.7		PHASE: WIRE:	4		60	_ A MCB
	NOTES	S: EXISTING								10k	MIN AIC S	SYMM, FULLY RATED ASSEMBLY		

EXISTING POWER DISTRIBUTION PANEL AT EXISTING WASTEWATER TREATMENT PLANT TRAIN NO. 1 REFER TO SHEET $E-\emptyset6$ FOR LOCATION

CKT NO.	TRIP	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	А	KVA PER PHASE B	С	POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP	CKT N
1	20	CONTROL PANEL	3.27	12.4	3	4.2			3	3.8	0.89	CONTROL PANEL	20	2
		(FE-LCP)	3.52				4.7				1.14	(RP-LCP)		
			3.52					4.7			1.14			
7	20	CONTROL PANEL	0.61	2.8	3	3.7			3	11.6	3.05	CONTROL PANEL	30	8
		(AM-LCP)	0.86				4.2				3.30	(MAB-LCP)		
	E		0.86					4.2			3.30			
13	30	SPACE FOR FUTURE MXR PANEL	3.05	11.6	3	8.1	200.0000		3	18.0	15	XLP1	30	14
			3.30				8.3					(LP-1 PANEL XFMR)		
	20	50.05	3.30		_	0.0		8.3	_					20
19	20	SPARE			3	0.0	0.0		3			SPARE	30	20
							0.0	0.0						
25	100	HP2 PANEL	33	39.7	3	11.0		0.0	3	\$		SPARE	30	26
	- Lot	(WWTP TRAIN NO. 2)					11.0		-					
		,						11.0						
31		SPACE			3	0.0			3			SPACE		32
							0.0							
								0.0						
37		SPACE			3	0.0			3			SPACE		38
							0.0							
								0.0				SERVICE CHARACTERISTICS		
	PANEL HP1 LOCATION: Exterior WWTP Service		тс	TAL KVA		26.9	28.1	28.1		VOLTS:	480Y/277	SERVICE CHARACTERISTICS		A ML
L									1.00	PHASE:		_	150	A MC
		: WWTP TRAIN NO. 1	GRANI	D CONNECT	ED TO	TAL KVA	83	.1		WIRE:		-		
	NOTES: EXISTING	is a second							65k	MIN AIC S	SYMM, FULLY RATED ASSEMBLY			

NEW MINI POWER CENTER AT NEW WASTEWATER TREATMENT PLANT TRAIN NO. 2 REFER TO SHEET E-06 FOR LOCATION

CKT NO.	TRIP	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PE	R PHASE	POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP	CKT NO.	
CKI NO.	T A	DESCRIPTION OF EGAD	LOAD KVA	AIVII 3	ЬО	Α	В	0	Aivii 3	LOAD KVA	DESCRIPTION OF EGAD	IF W	CKI IVO.	
1	20	RECEPTACLE	0.2	1.7	1	0.2		1			SPARE	20	2	
3	20	FE/FIQR	0.1	0.8	1		0.3	1	1.7	0.2	LIGHTING	20	4	
5	20	SPARE			1	0.0		1			SPARE	20	6	
7	20	SPARE			1		0.0	1			SPARE	20	8	
9		SPACE			1	0.0		1			SPACE		10	
11	Ji	SPACE			1		0.0	1			SPACE		12	
13		SPACE			1	0.0		1			SPACE		14	
15		SPACE			1		0.0	1			SPACE		16	
17	13	SPACE			1	0.0		1			SPACE		18	
			TOTAL KVA 0.2			0.2	0.3	SERVICE CHARACTERISTICS						
	PANE	LP2	10	TAL KVA	,	0.2	0.5	VOLTS: 240/120				30	A MLO	
	LOCATION Exterior WWTP Service BUILDING WWTP TRAIN NO. 2		GRANI	D CONNECT	TED TO	TAL KVA	0.5			1	-	1	_ A MCB	
								ļ	WIRE:		-			
	NOTES: NEW MINI POWER CENTER									10k MIN AIC SYMM, FULLY RATED ASSEMBLY				

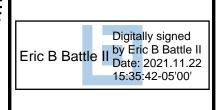
NEW POWER DISTRIBUTION PANEL AT NEW WASTEWATER TREATMENT PLANT TRAIN NO. 2 REFER TO SHEET E-06 FOR LOCATION

KT NO.	TRIP	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES		KVA PER PHAS	E	POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP	CKT NO
	FA	DESCRIPTION OF EARLY	LO/ID IV/I	7 WIT C	8	A	В	С	8	7 divil O	LOND KV/	DESCRIPTION OF EGAL	F &	City III
1	20	CONTROL PANEL	3.27	12.4	3	4.2			3	3.8	0.89	CONTROL PANEL	20	2
		(FE-LCP2)	3.52				4.7				1.14	(RP-LCP2)		
			3.52					4.7			1.14		,	5
7	20	CONTROL PANEL	0.61	2.8	3	3.7			3	11.6	3.05	CONTROL PANEL	30	8
		(AM-LCP2)	0.86				4.2				3.30	(MAB-LCP2)		
			0.86					4.2			3.30		(
13	30	SPARE			3	3.8			2	15.6	7.5	MINI POWER CENTER	30	14
							3.8	16				(LP3)		
								0.0	1			SPACE		18
19	20	SPARE			3	0.0			3			SPARE	30	20
							0.0	12						
								0.0						
25		SPACE			3	0.0			3			SPD	30	26
							0.0							
	-							0.0						c
			TC	OTAL KVA		11.6	12.6	8.8				SERVICE CHARACTERISTICS		
PANEL HP2 LOCATION: Exterior WWTP Service BUILDING: WWTP TRAIN NO. 2									VOLTS:	480Y/277	·	60	A MLO	
		GRAN	D CONNECT	TED TO	TAL KVA	3:	3.0		PHASE:	- 73	-	7	A MCB	
								_	WIRE:					
NOTES: NEW										65k	MIN AIC S	SYMM, FULLY RATED ASSEMBLY		

This item has been digitally signed and sealed by Eric B. Battle II, PE, on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

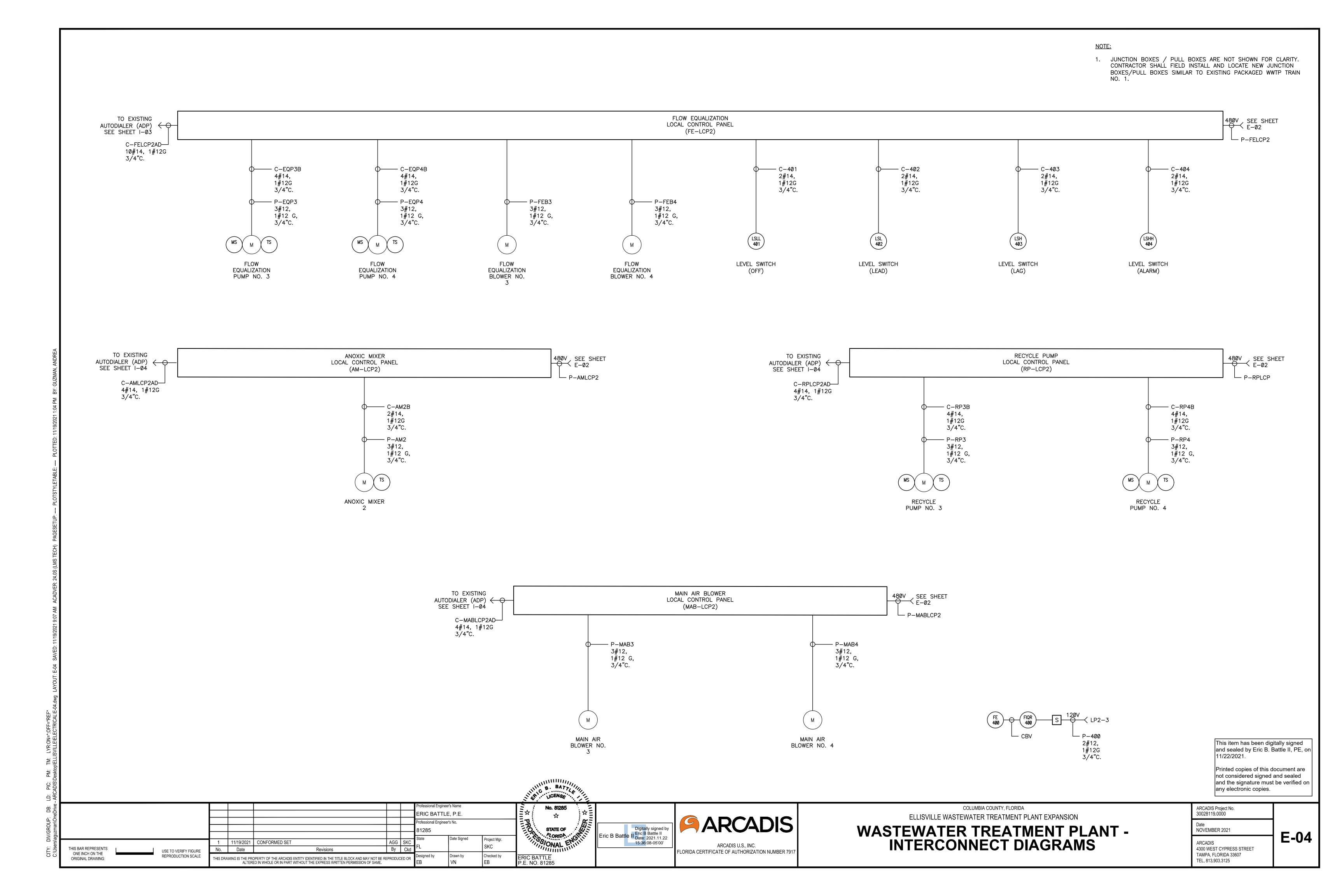
											CENS
	-						Professional Enginee			E ☆ No	o. 8128 ☆
	}						Professional Enginee	er's No.	_		ATE O
HIS BAR REPRESENTS USE TO VERIFY FIG	URE	1 No.	11/19/2021 Date	CONFORMED SET Revisions	AGG By	SKC Ckd	State FL	Date Signed	Project Mgr. SKC		ORID! NAL
ONE INCH ON THE CONTINUE REPRODUCTION SO	ALE	THIS DRA	THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR 💵				Designed by EB	Drawn by VN	Checked by EB	ERIC BATTLE P.E. NO. 8128	

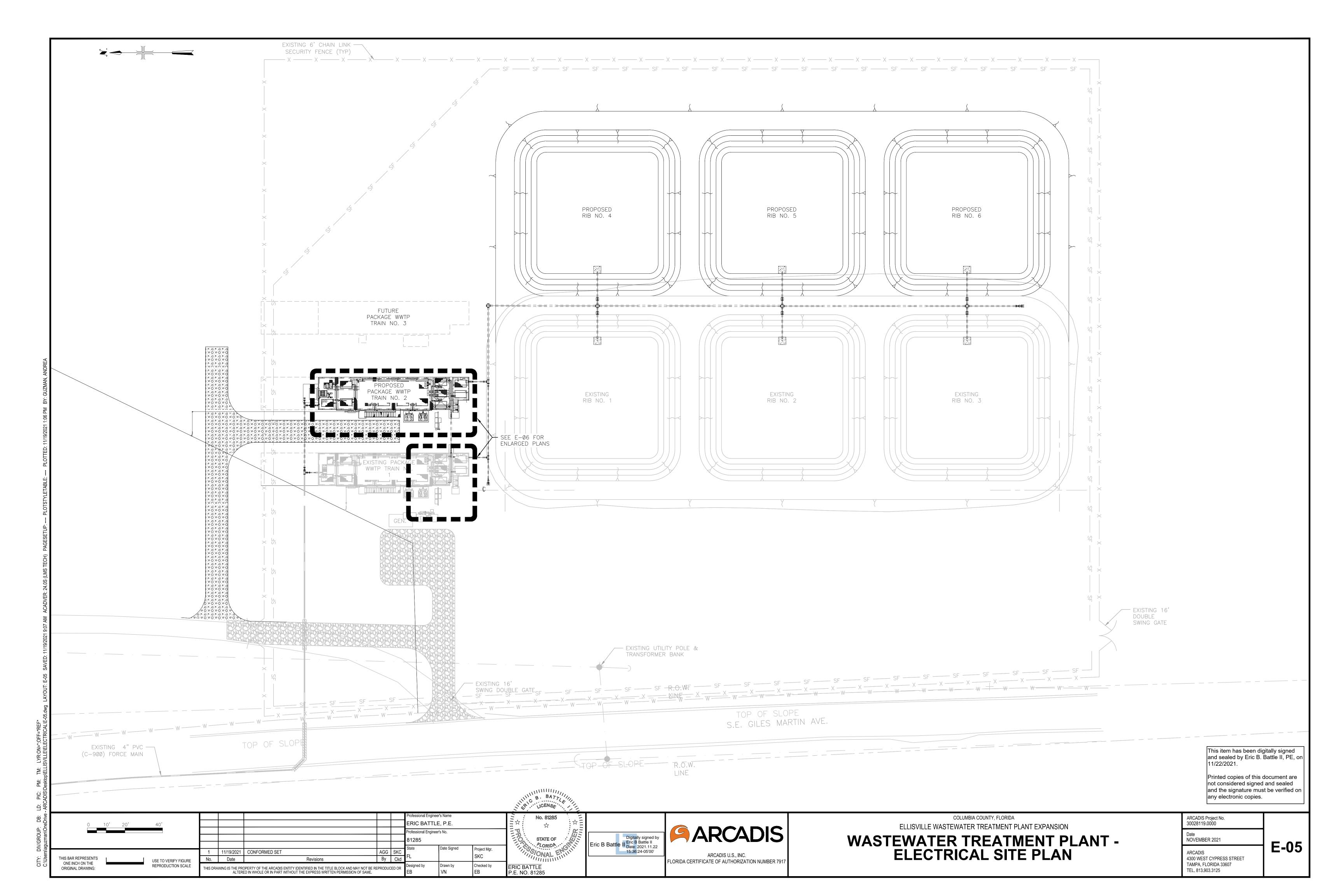


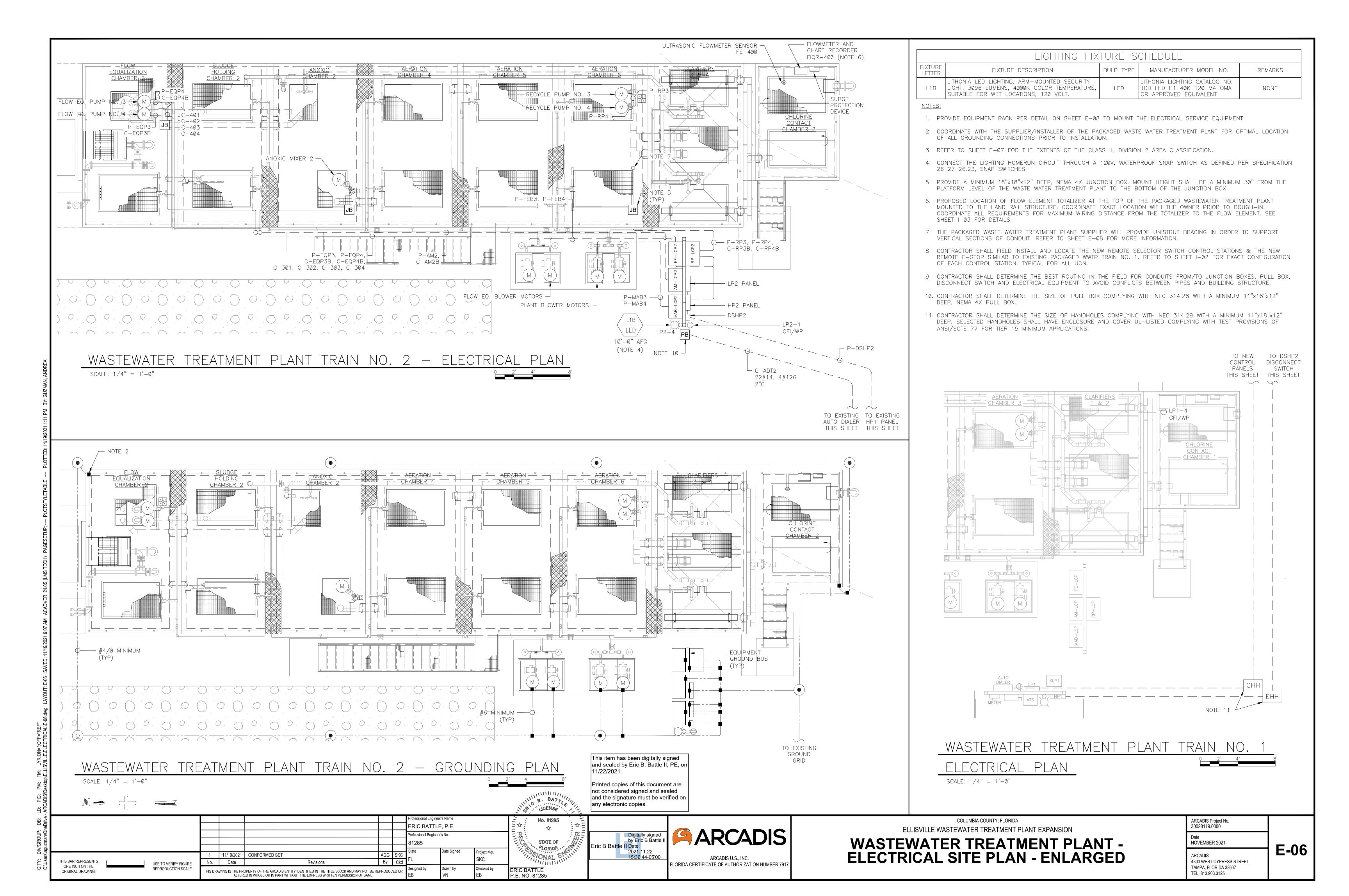


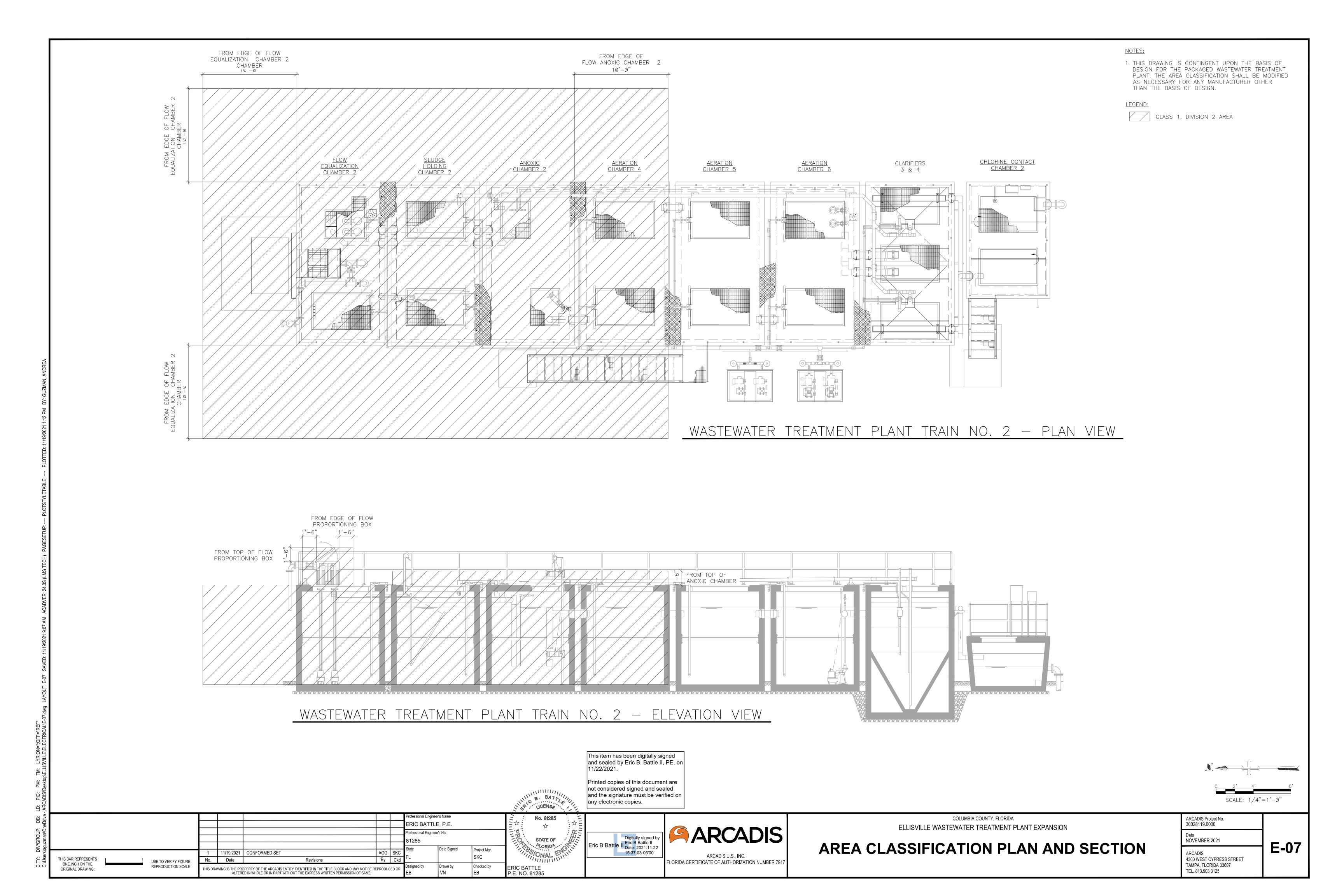
COLUMBIA COUNTY, FLORIDA ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

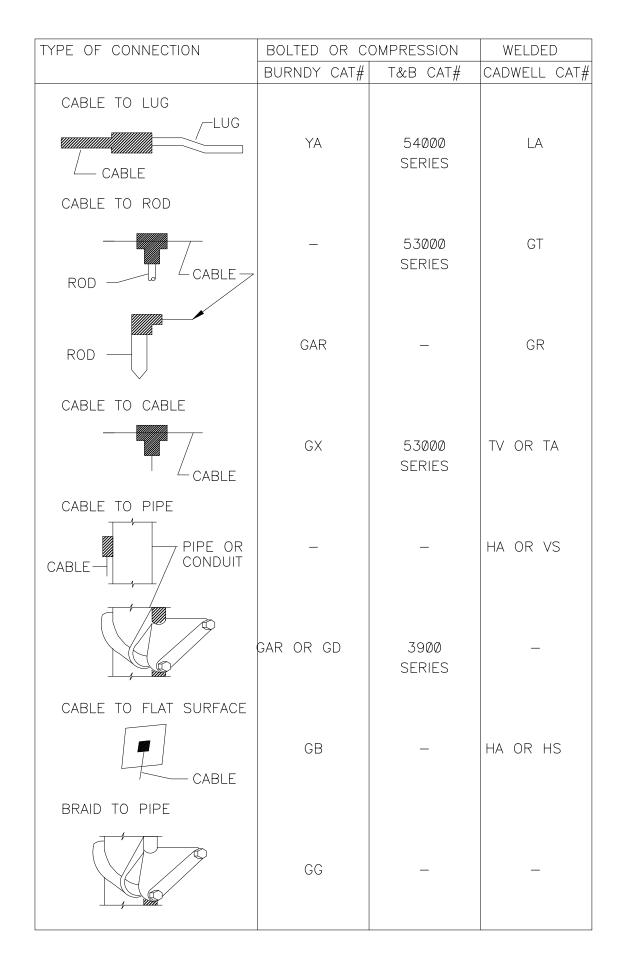
ARCADIS Project No. 30028119.0000	
Date NOVEMBER 2021	_
ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607 TEL. 813.903.3125	



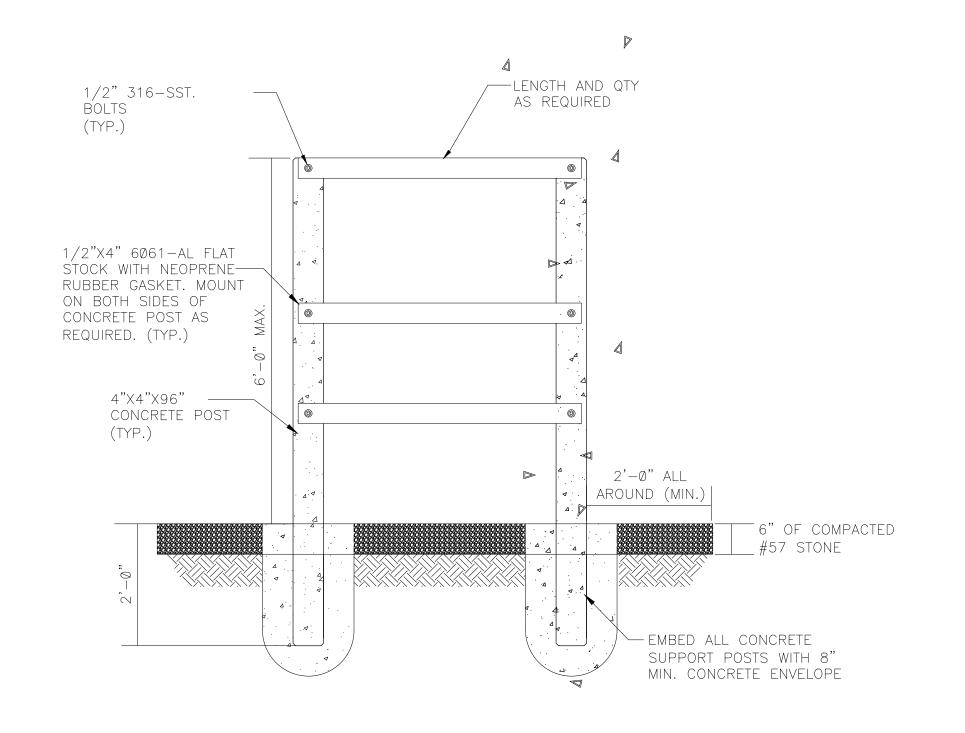




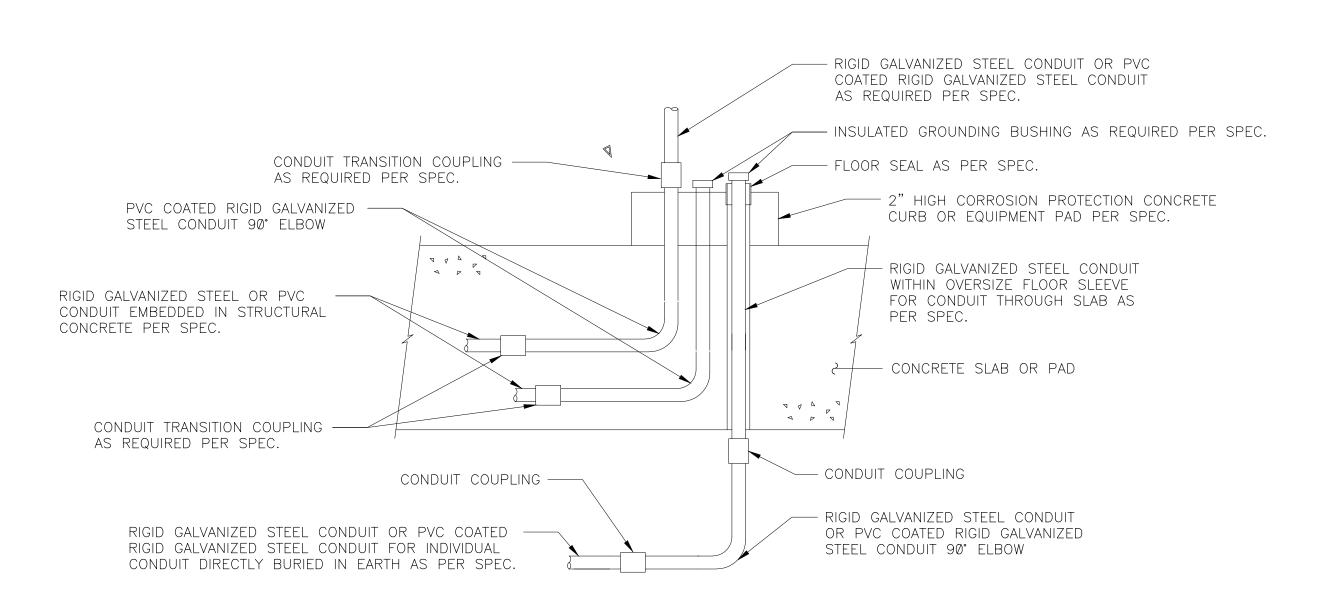




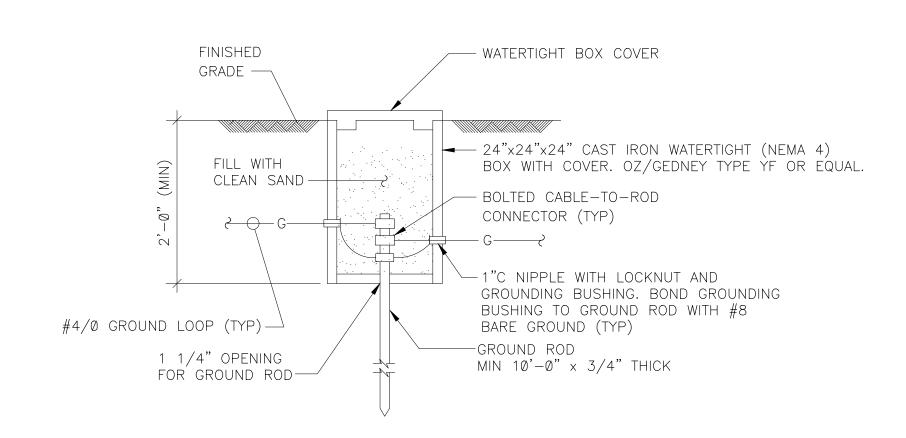




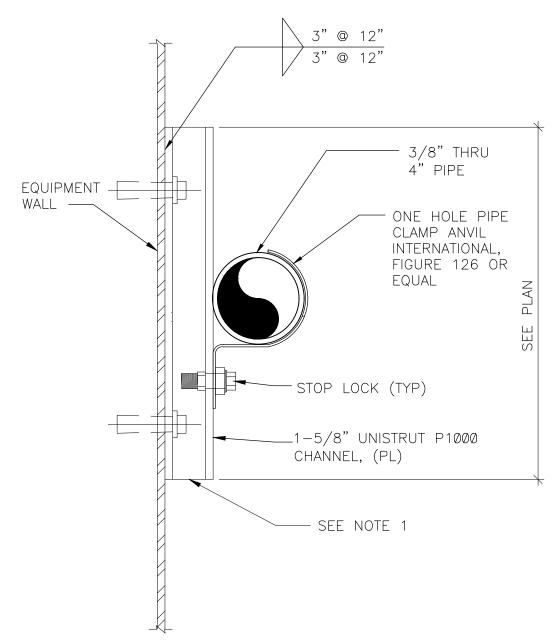




EMBEDDED CONDUIT DETAIL AND CORROSION PROTECTION DETAIL SCALE: NO SCALE







EQUIPMENT WALLS

/PIPE SUPPORT DETAIL SCALE: NO SCALE

> 1. UNISTRUT TO BE PROVIDED BY EQUIPMENT MANUFACTURER AND COATED SIMILAR TO EQUIPMENT FINISH.

This item has been digitally signed and sealed by Eric B. Battle II, PE, on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

E-08

								Professional Enginee ERIC BATTLE			////// ☆
								Professional Engineer	r's No.		PRO
BAR REPRESENTS	1 1	USE TO VERIFY FIGURE	1 No.	11/19/2021 Date	CONFORMED SET Revisions	AGG By	SKC Ckd	State FL	Date Signed	Project Mgr. SKC	
NE INCH ON THE IGINAL DRAWING:		REPRODUCTION SCALE	THIS DRA	WING IS THE PRO ALTER	OPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE F ED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.	BE REPRODUCED OR Designed by Drawn by				Checked by EB	ERIC P.E. N

S. C. MOENSE	
No. 81285 A STATE OF STATE OF ONAL NO. 81285	Eric B Battle
NONAL ENVIRONMENTAL	
ERIC BATTLE P.E. NO. 81285	

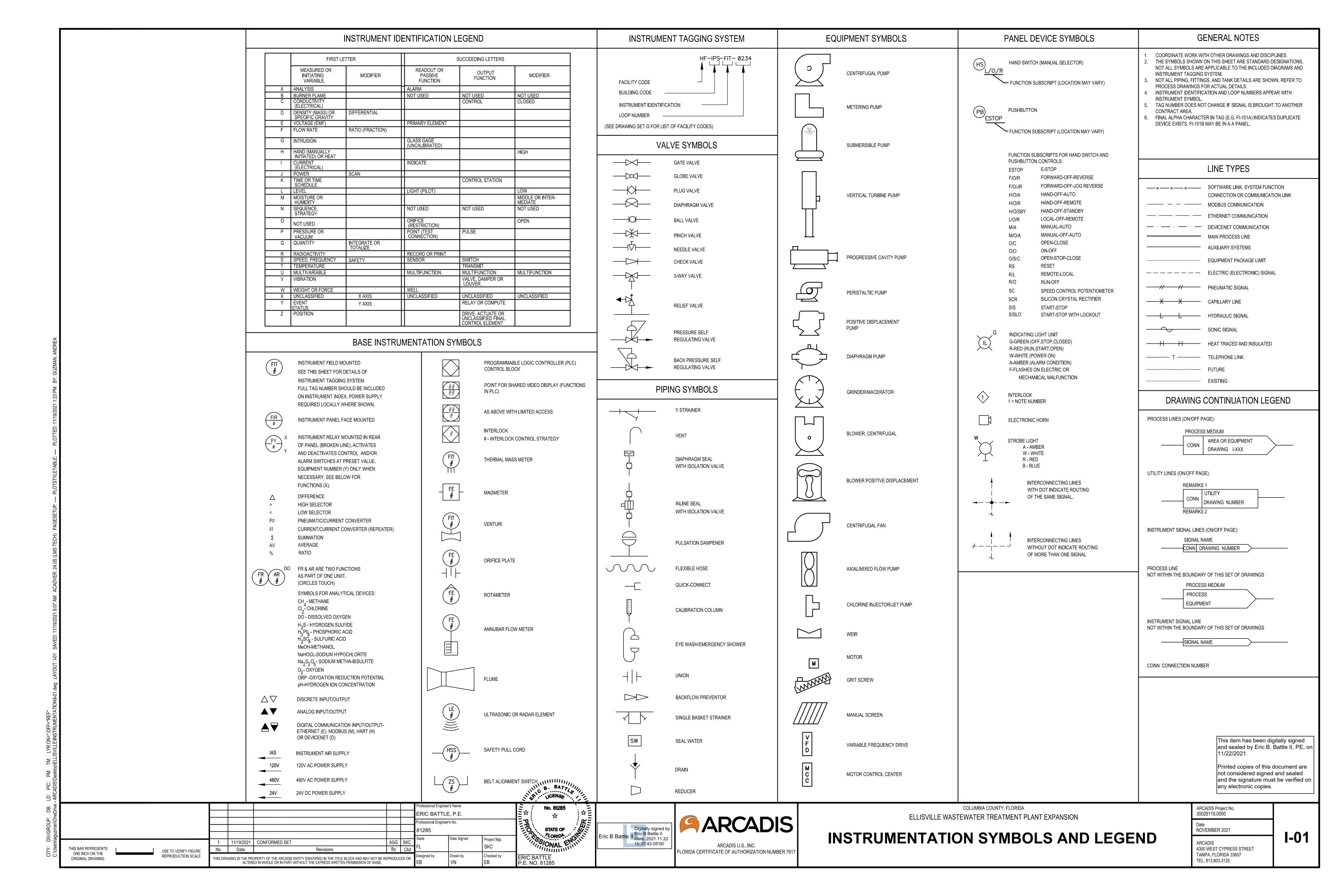
ed by II 1.22 00'	ARCADIS
	ARCADIS U.S., INC. FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER 7917

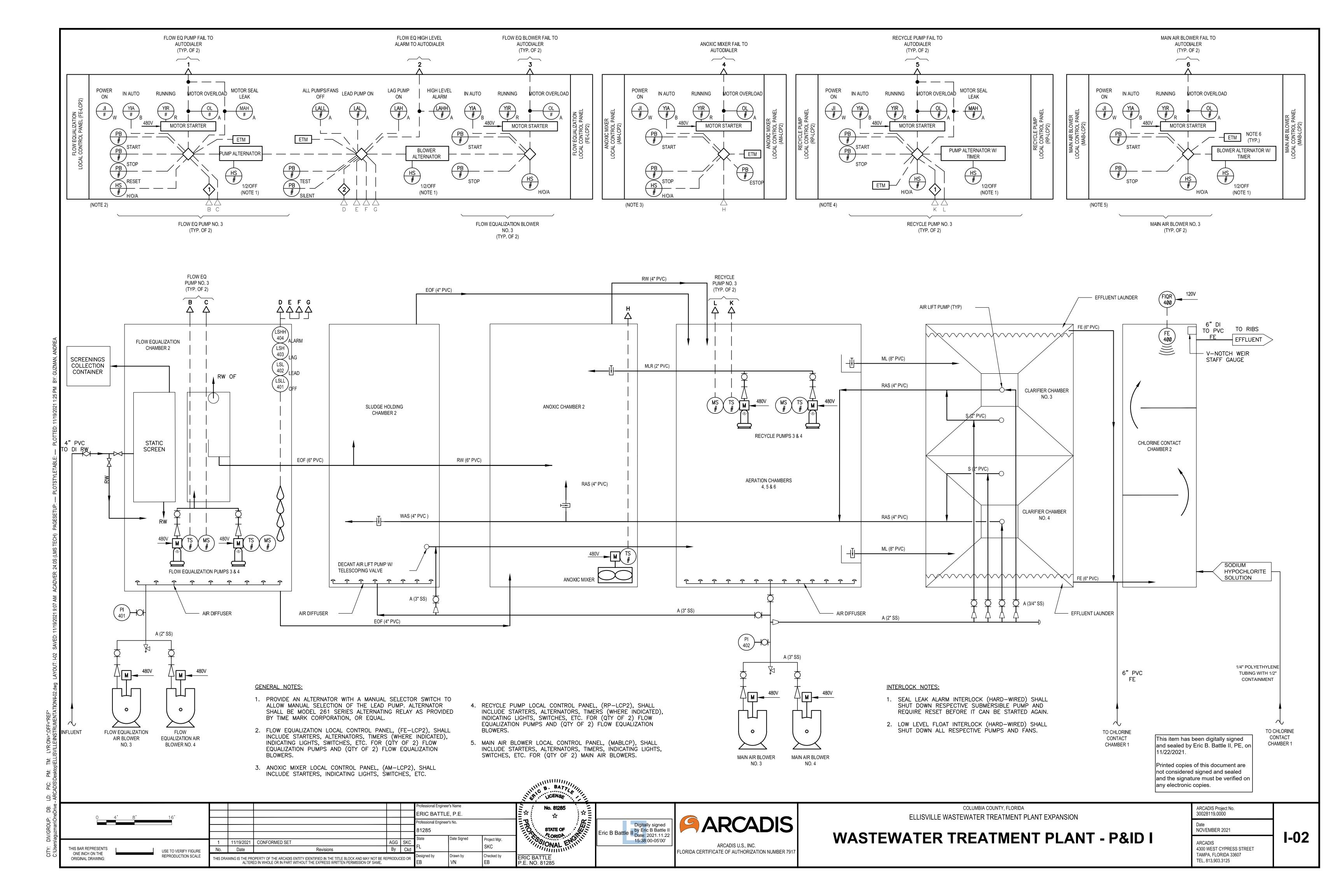
ELECTRICAL DETAILS

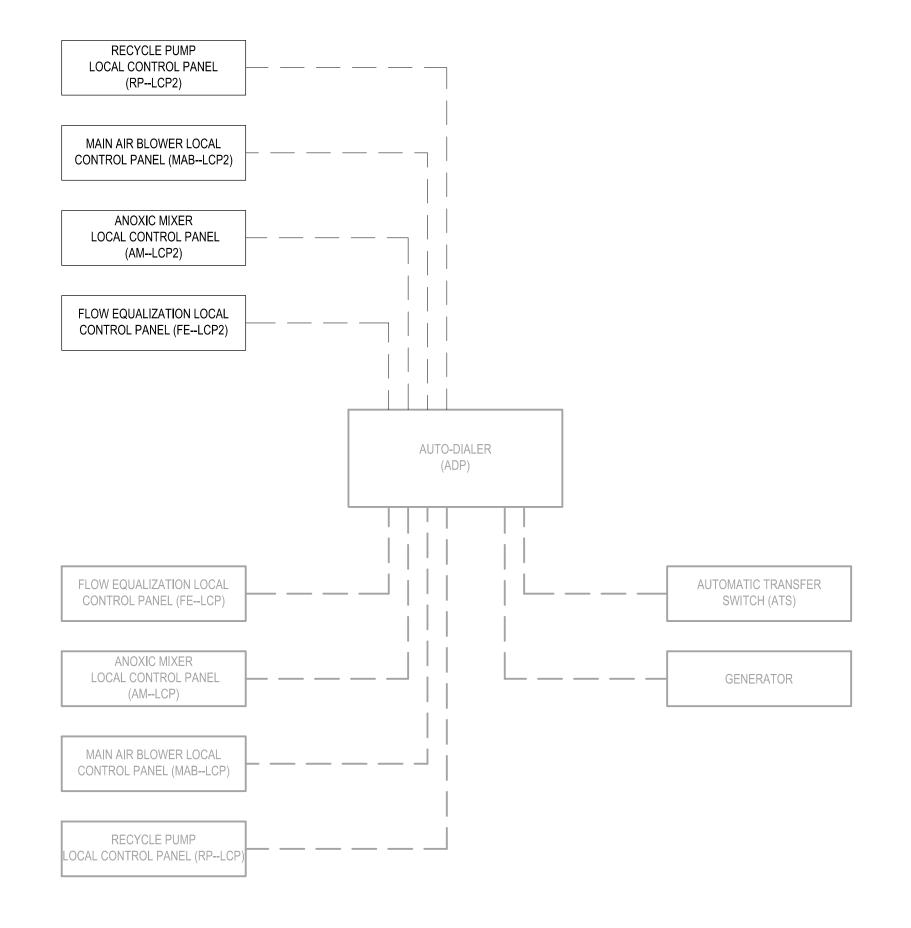
COLUMBIA COUNTY, FLORIDA ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

ARCADIS Project No. 30028119.0000
Date NOVEMBER 2021
ARCADIS 4300 WEST CYPRESS STREET

TAMPA, FLORIDA 33607 TEL. 813.903.3125





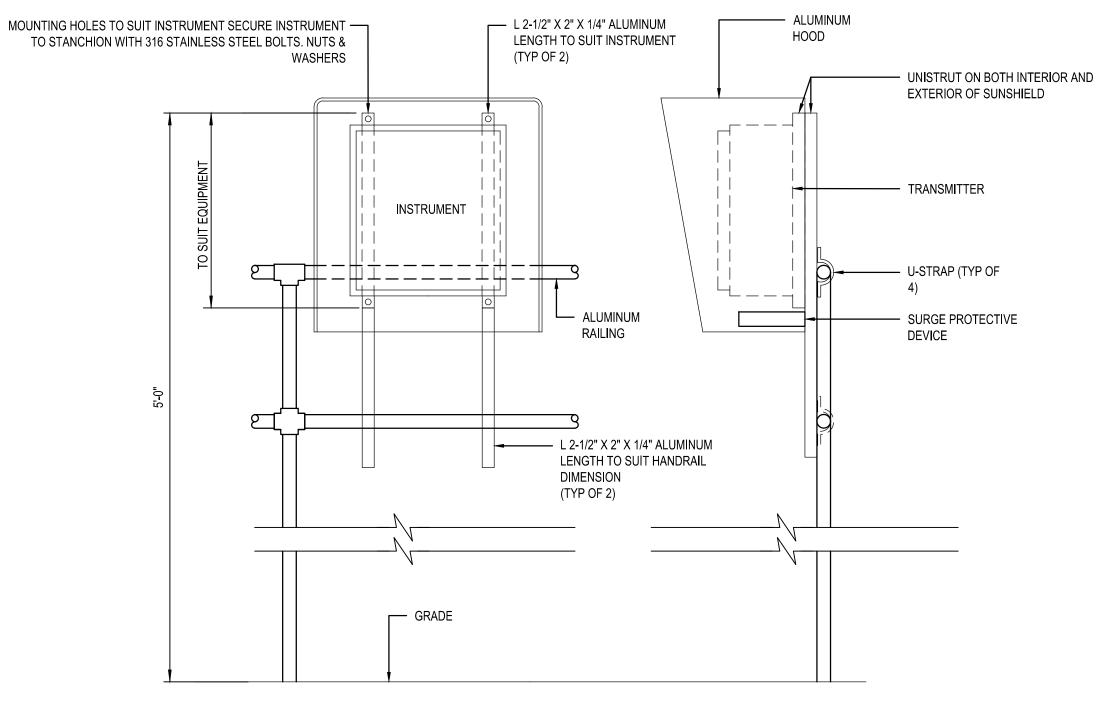


WWTP AUTO-DIALER NETWORK DIAGRAM

NOT TO SCALE

NOTES:

- 1. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT AND WIRING REQUIREMENTS.
- 2. REFER TO SPECIFICATION SECTION 40 60 05 FOR AUTO DIALER INPUT/OUTPUT LIST.
- 3. EXISTING PHONE LINE BY OWNER.



RAILING MOUNTING STAND FOR INSTRUMENTS

NOT TO SCALE (ALL RAILING MOUNTED PANELS/TRANSMITTERS)

NOTES:

I-02

1. SUN SHIELD SHALL BE AS PER DIV 40 SPECIFICATIONS.

2. ALL EXPOSED EDGES TO BE GROUND SMOOTH AND BURR FREE.

CHLORINE CONTACT
CHAMBER

CLARIFIER CHAMBER
WALL

OPEN CHANNEL FLOW METER MOUNTING DETAIL

NOT TO SCALE

2

I-02

NOTES:

1. ALL EXPOSED EDGES TO BE GROUND SMOOTH AND BURR FREE.

1" CONDUIT WITH MFG. ————

SENSOR CABLE

U-BOLT TRANSDUCER TO PIPE ---

BRACKET

BUTT WELD PIPECAP

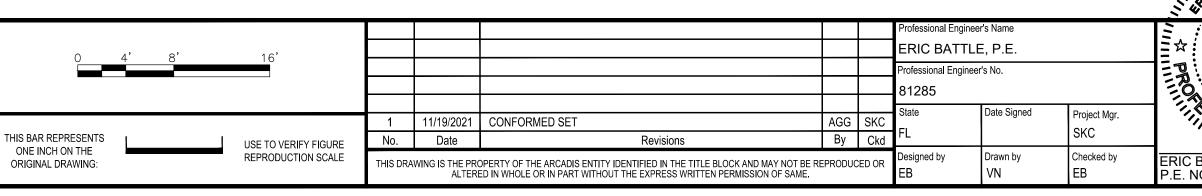
(POSITION OVER CENTER OF CHANNEL)

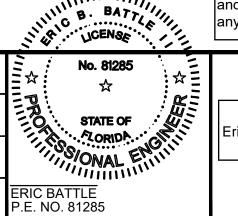
TRANSDUCER AND MOUNTING -

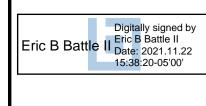
ECHO REFERENCE

This item has been digitally signed and sealed by Eric B. Battle II, PE, on 11/22/2021.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.









COLUMBIA COUNTY, FLORIDA
ELLISVILLE WASTEWATER TREATMENT PLANT EXPANSION

NETWORK	DIAGRAM	AND	INSTRUMENT	DETAILS

ARCADIS Project No. 30028119.0000	
Date NOVEMBER 2021	1.00
ARCADIS 4300 WEST CYPRESS STREET TAMPA, FLORIDA 33607 TEL. 813.903.3125	I-03

- 1" CONDUIT TO HANDRAIL MOUNTED

TRANSMITTER W/ SUNSHIELD

- 316 S.S. NEMA 4X TERMINAL BOX

(MOUNTED ON 1" NPT NIPPLE)

- 316 S.S. T-FITTING WITH TOP

PLATE ACCESS

- 2" 316 S.S. PIPE &

——— 6" X 6" MOUNTING PLATE

FITTINGS

CITY: DIV/GROUP: DB: LD: PIC: PM: TM: LYR:ON=*;OFF=*REF*