

CONSTRUCTION PLANS

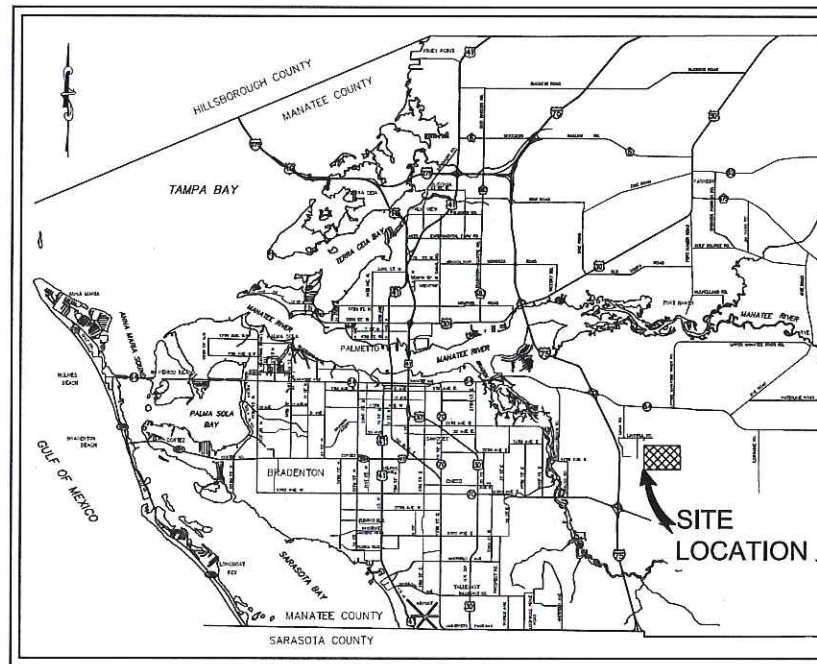
FOR

SEWRF RECLAIMED PUMP BACK STATION & SEWRF ARC FLASH MITIGATION

MANATEE COUNTY, FLORIDA

MARCH 2020

MANATEE COUNTY PROJECT #6088380/6097680



PROJECT VICINITY MAP
N.T.S.

BID SET

PREPARED BY
Kimley»Horn

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No.	REVISIONS	DATE	BY

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DATE: MARCH 2020
KHA PROJECT NO. 148430015
SHEET NUMBER G-1



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Table with columns: DISCIPLINE, Sheet Number, Sheet Title. Rows include GENERAL (COVER SHEET, DRAWING INDEX AND GENERAL NOTES, PROCESS FLOW DIAGRAM, EXISTING SITE PLAN, PROPOSED SITE PLAN, EROSION CONTROL AND CONSTRUCTION PHASING PLAN PHASE 1, 2 AND 3, EROSION CONTROL AND SEDIMENTATION DETAILS), DEMOLITION (OVERALL DEMOLITION PLAN, EAST LAKE PUMP STATION DEMOLITION PLAN, EAST LAKE REHABILITATION PLAN, EAST LAKE REHABILITATION CURVE TABLES, EAST LAKE REHABILITATION SECTIONS, EAST LAKE REHABILITATION SECTIONS, EAST LAKE REHABILITATION SECTIONS, EAST LAKE REHABILITATION SECTIONS, PUMP STATION GRADING PLAN, PUMP STATION GRADING SECTIONS, PUMP STATION GRADING SECTIONS, PLAN & PROFILE - SOUTH LAKE 2 INTAKE PIPING, PLAN & PROFILE - EAST LAKE INTAKE PIPING, PLAN & PROFILE - EAST LAKE INTAKE PIPING, PLAN & PROFILE - EAST LAKE INTAKE PIPING, PLAN & PROFILE - EAST LAKE INTAKE PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, PLAN & PROFILE - DISTRIBUTION PIPING, EAST LAKE ENERGY DISSIPATION STRUCTURE, OVERFLOW STRUCTURES, EAST LAKE EARTHEN BOAT RAMP, EAST LAKE CULVERT, CIVIL DETAILS, CIVIL DETAILS), CIVIL (CENTRAL PUMP STATION PLAN, CENTRAL PUMP STATION SECTIONS, CENTRAL PUMP STATION SECTIONS, CENTRAL PUMP STATION ISOMETRIC VIEW, LEACHATE PIPING IMPROVEMENTS, MECHANICAL DETAILS, STRUCTURAL GENERAL NOTES, CENTRAL PUMP STATION PLAN, CENTRAL PUMP STATION SECTIONS, DISCHARGE PIPING FOUNDATION, INTAKE SCREEN SLAB, LEACHATE METERING ASSEMBLY PAD, STRUCTURAL DETAILS, STRUCTURAL DETAILS, ELECTRICAL LEGEND AND ABBREVIATIONS, ELECTRICAL SITE PLAN, CENTRAL PUMP STATION ELECTRICAL LAYOUT, CENTRAL PUMP STATION ELECTRICAL EQUIPMENT RACK LAYOUTS, CENTRAL PUMP STATION ELECTRICAL EQUIPMENT RACK LAYOUTS, CENTRAL PUMP STATION ELECTRICAL ONE-LINE DIAGRAM, ELECTRICAL DETAILS AND PANEL SCHEDULE, ELECTRICAL MODIFICATIONS SITE PLAN, ELECTRICAL DETAILS, CONDUIT AND CABLE SCHEDULE, ELECTRICAL BUILDING NO.1 FLOOR PLAN, MCC-9 ELEVATION AND DETAILS, MCC-10 ELEVATION AND DETAILS, MCC-9 AND MCC-10 ONE-LINE DIAGRAMS, BIOSOLIDS BUILDING ELECTRICAL PLAN, DEWATERING BUILDING TEMPORARY POWER PLAN, WIRING DIAGRAMS, INSTRUMENTATION LEGEND AND ABBREVIATIONS, MOTOR CONTROL CABINET EXTERIOR ELEVATION, MOTOR CONTROL CABINET DEADFRONT ELEVATION, MOTOR CONTROL CABINET DEADFRONT ELEVATION, MOTOR CONTROL CABINET BILL OF MATERIALS, TYPICAL VFD WIRING SCHEMATIC, PUMP CONTROL CABINET ELEVATIONS AND DETAIL, PUMP CONTROL CABINET BILL OF MATERIALS, PUMP CONTROL CABINET POWER WIRING SCHEMATICS, PUMP CONTROL CABINET PLC TO WIRING SCHEMATICS, INSTRUMENTATION DETAILS, WET WELL JUNCTION BOX RACK DETAILS, JUNCTION BOX DETAILS), MECHANICAL (CENTRAL PUMP STATION PLAN, CENTRAL PUMP STATION SECTIONS, CENTRAL PUMP STATION ISOMETRIC VIEW, LEACHATE PIPING IMPROVEMENTS, MECHANICAL DETAILS), STRUCTURAL (STRUCTURAL GENERAL NOTES, CENTRAL PUMP STATION PLAN, CENTRAL PUMP STATION SECTIONS, DISCHARGE PIPING FOUNDATION, INTAKE SCREEN SLAB, LEACHATE METERING ASSEMBLY PAD, STRUCTURAL DETAILS, STRUCTURAL DETAILS), ELECTRICAL (ELECTRICAL LEGEND AND ABBREVIATIONS, ELECTRICAL SITE PLAN, CENTRAL PUMP STATION ELECTRICAL LAYOUT, CENTRAL PUMP STATION ELECTRICAL EQUIPMENT RACK LAYOUTS, CENTRAL PUMP STATION ELECTRICAL EQUIPMENT RACK LAYOUTS, CENTRAL PUMP STATION ELECTRICAL ONE-LINE DIAGRAM, ELECTRICAL DETAILS AND PANEL SCHEDULE, ELECTRICAL MODIFICATIONS SITE PLAN, ELECTRICAL DETAILS, CONDUIT AND CABLE SCHEDULE, ELECTRICAL BUILDING NO.1 FLOOR PLAN, MCC-9 ELEVATION AND DETAILS, MCC-10 ELEVATION AND DETAILS, MCC-9 AND MCC-10 ONE-LINE DIAGRAMS, BIOSOLIDS BUILDING ELECTRICAL PLAN, DEWATERING BUILDING TEMPORARY POWER PLAN, WIRING DIAGRAMS), INSTRUMENTATION (INSTRUMENTATION LEGEND AND ABBREVIATIONS, MOTOR CONTROL CABINET EXTERIOR ELEVATION, MOTOR CONTROL CABINET DEADFRONT ELEVATION, MOTOR CONTROL CABINET DEADFRONT ELEVATION, MOTOR CONTROL CABINET BILL OF MATERIALS, TYPICAL VFD WIRING SCHEMATIC, PUMP CONTROL CABINET ELEVATIONS AND DETAIL, PUMP CONTROL CABINET BILL OF MATERIALS, PUMP CONTROL CABINET POWER WIRING SCHEMATICS, PUMP CONTROL CABINET PLC TO WIRING SCHEMATICS, INSTRUMENTATION DETAILS, WET WELL JUNCTION BOX RACK DETAILS, JUNCTION BOX DETAILS).

SURVEY LEGEND: IRON PIPE, IRON RAIL W/ CAP, PK NAIL W/ DISC, CONCRETE MONUMENT, RIGHT-OF WAY, PARCEL IDENTIFICATION, PLAT BOOK, CONDOMINIUM BOOK, OFFICIAL RECORD BOOK, PAGE, SITE CONTROL POINT, PORTION OF, SITE BENCHMARK, SIGN, UTILITY POLE, GUY WIRE, WATER METER, SANITARY MANHOLE, STORM MANHOLE, MAILBOX, LIGHT POLE, FIRE HYDRANT, BACKFLOW PREVENTER, BOLLARD, FLAG POLE, IRRIGATION BOX, OAK, PALM, TREE, JANUARY SUE TEST HOLE, MAY SUE TEST HOLE.

SITE LEGEND: CONCRETE SIDEWALK/FLOWABLE FILL, ASPHALT, FENCE, TO BE DEMOLISHED, SILT FENCE, MILL & SURFACE, GRAVEL, WETLAND BUFFER, ACCESS DRIVE, EX. FORCE MAIN, EX. WATER, EX. STORM, EX. UGC, EX. RECLAIMED WATER MAIN, EX. SANITARY SEWER, EX. SURFACE POND WATER, EX. REJECT, EX. CLAIRIFIER EFFLUENT, EX. COMPRESSED AIR, EX. PLANT DRAIN FORCE MAIN.

ABBREVIATIONS: ARV, CLS/CLS2, D.I., DIA, DIP, EFF, ELEC, EX, FRP, FT, INV, MEG, MH, MJ, PE, PPS, PVC, PW, SCH, SPW, SS, SVH, TYP, UGC, VERT, W, MEG.

PLAN CALLOUT LEGEND: KEY NOTE, KEY TAG, PICTURE TAG, DETAIL NAME, SHEET WHERE DETAIL IS SHOWN.

GENERAL NOTES: THESE PLANS ARE SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE EXISTING CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION NECESSARY TO DETERMINE THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED.

LOCATION, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) AFFECTING HIS WORK.

THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING.

THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, STORM DRAINS, SEWERS, UTILITIES, AND OTHER FACILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR ANY DAMAGES DUE TO HIS CONSTRUCTION.

WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURERS' MAXIMUM RECOMMENDED DEFLECTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING DRAINAGE SYSTEM WITHIN THE LIMITS OF THE PROJECT AREA FOR THE DURATION OF THE PROJECT.

THE CONTRACTOR SHALL PROVIDE CERTIFIED RECORD DRAWINGS AS OUTLINED IN THE SPECIFICATIONS. RED-LINE DRAWINGS SHALL BE CURRENT WITH EACH PAY APPLICATION SUBMITTED AND WILL BE CHECKED AS PART OF THE PAY APPLICATION REVIEW PROCESS. PAYMENT WILL NOT BE MADE TO CONTRACTOR WITHOUT APPROVED RED-LINE DRAWINGS. THE MOST CURRENT SET OF RED-LINE DRAWINGS SHALL ALSO BE BROUGHT TO EACH MONTHLY PROGRESS MEETING.

FIELD CONDITIONS MAY NECESSITATE ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED PIPELINES TO AVOID CONFLICTS. NO ADDITIONAL PAYMENT SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND THE OWNER'S ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY DISPOSE OF ALL WASTEWATER, SLUDGE, AND GRIFF WITHIN ALL PIPES TO BE DEMOLISHED, REMOVED, OR CONNECTED TO.

ALL PROPOSED WORK SHALL BE COORDINATED WITH WASTEWATER TREATMENT PLANT PERSONNEL AND MANATEE COUNTY UTILITIES DEPARTMENT AT LEAST TWO WEEKS IN ADVANCE OF PROPOSED CONSTRUCTION.

THE CONTRACTOR SHALL FURNISH SHOP DRAWINGS PER SPECIFICATION SECTION 01340 TO THE ENGINEER FOR REVIEW OF ALL PIPE CONNECTIONS, TRANSITIONS, AND SPECIAL APPURTENANCES PRIOR TO FABRICATION OR DELIVERY TO THE JOB SITE.

CONNECTIONS TO EXISTING FACILITIES SHALL BE ACCOMPLISHED IN A NEAT WORKMANSHIP LIKE MANNER, WHEN FIELD CONDITIONS INDICATE ANY VARIANCE FROM DETAILED METHODS. THE CONTRACTOR SHALL PROVIDE COMPREHENSIVE AND DETAILED DRAWINGS FOR OWNER REVIEW AND APPROVAL PRIOR TO MAKING THE CONNECTIONS.

UNLESS OTHERWISE INDICATED OR APPROVED, ALL BELOW GROUND DUCTILE IRON PIPE SHALL HAVE PUSH-ON OR MECHANICAL JOINTS, AND ALL ABOVE GROUND DUCTILE IRON PIPE SHALL HAVE FLANGED JOINTS. ALL PIPE IN CONTACT WITH RECLAIMED WATER SHALL HAVE A CEMENT LINING PER AWWA C104. ALL BURIED PIPE SHALL HAVE AN EXTERNAL COAL TAR ENAMEL. ALL EXPOSED PIPE SHALL HAVE AN EXTERIOR APPLIED EPOXY PRIMER. ALL JOINTS SHALL BE RESTRAINED PER JOINT RESTRAINT TABLE UNLESS OTHERWISE SPECIFIED ON THE PLANS. CONTRACTOR TO FULLY RESTRAIN EXISTING PIPE AT TIE-IN LOCATIONS OF NEW PIPE IN ACCORDANCE WITH JOINT RESTRAINT TABLE.

ALL PIPELINES SHALL HAVE A MINIMUM COVER OF 36" BELOW EXISTING GRADE UNLESS OTHERWISE NOTED OR DIRECTED.

SANITARY SEWERS AND FORCE MAINS CROSSING OVER OR UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER OR FORCE MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10' BETWEEN ANY TWO JOINTS. AS AN ALTERNATIVE, THE SEWER OR FORCE MAIN MAY BE PLACED IN A WATERTIGHT CASING PIPE.

WATER SHALL NOT BE PERMITTED IN BUILDING EXCAVATIONS OR TRENCHES DURING CONSTRUCTION. DEWATERING IS REQUIRED TO A MINIMUM OF 18" BELOW BOTTOM OF EXCAVATION.

THE CONTRACTOR SHALL NOT ALLOW ANY DISCHARGE OF WASTEWATER TO LANDS AND/OR ADJACENT WATER BODIES OR STORM DRAINS. ANY LEAKAGE MUST BE CONTAINED AND REMOVED BY THE CONTRACTOR TO THE PLANT DRAIN PUMP STATION AT THE WASTEWATER TREATMENT PLANT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY SPILLS TO FDP.

ALL BELOW-GRADE FITTINGS 4-INCHES AND GREATER IN DIAMETER SHALL BE MECHANICAL JOINT DUCTILE IRON AND COATED ON THE INSIDE WITH CEMENT LINING PER AWWA C104, AND SHALL HAVE A COAL TAR ENAMEL COATING ON THE OUTSIDE.

ALL EXPOSED FITTINGS 4-INCHES AND GREATER IN DIAMETER SHALL BE FLANGED JOINT DUCTILE IRON AND COATED ON THE INSIDE WITH A CEMENT LINING PER AWWA C104, AND SHALL HAVE A FACTORY APPLIED EXTERIOR EPOXY PRIMER.

ALL EXPOSED PIPING AND FITTINGS SHALL BE PAINTED WITH DESIGNATED COLORS ASSOCIATED WITH THEIR USAGE AS PROVIDED IN THE SPECIFICATIONS.

ALL NEW PIPELINES SHALL BE FLUSHED, PRESSURE TESTED, AND APPROVED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PRESSURE TESTING.

CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ALL EROSION, SEDIMENT, AND TURBIDITY CONTROL MEASURES PRIOR TO CONSTRUCTION OF ANY COMPONENTS ASSOCIATED WITH THE PROJECT. SEDIMENT CONTROL INCLUDES SILT DAMS, TRAPS, EROSION PROTECTION, AND ANY OTHER APPURTENANCES NEEDED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS.

CONTRACTOR SHALL PROVIDE PROTECTIVE MATTING, FUEL CONTAINMENT AND ALL OTHER MATERIALS, EQUIPMENT AND LABOR TO PROTECT THE STAGING AREA DURING CONSTRUCTION.

CONTRACTOR SHALL, PRIOR TO BEGINNING CONSTRUCTION, SUBMIT A "FUELING SPILL PREVENTION PLAN" THAT SHALL CLEARLY INDICATE HOW FUEL SPILLS WILL BE PREVENTED WHEN FUELING BOTH WITHIN AND OUTSIDE

GENERAL NOTES: OF THE STAGING AREA.

THE CONTRACTOR SHALL COORDINATE THE STAGING AREA WITH THE OWNER. THERE MAY BE MULTIPLE PROJECTS UNDER CONSTRUCTION AT THE FACILITY AND IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A SECURE AREA FOR THE STORAGE AND STAGING OF EQUIPMENT, INCLUDING BUT NOT LIMITED TO FENCING, GATES, AND ANY ADDITIONAL ITEMS THAT MAY BE NECESSARY TO SECURE THE AREA.

SURVEY NOTES: THE FOLLOWING VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREIN:

1.1. COORDINATES- N: 1138264.41 E: 513497.33 ELEV. (NGVD) 48.93'

THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2011 ADJUSTMENT).

THIS IS NOT A BOUNDARY OR MEAN HIGH WATER SURVEY. TITLE WORK WAS NOT PROVIDED.

THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.

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UTILITY NOTES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE FOLLOWING JURISDICTIONAL BODIES AND UTILITY COMPANIES:

MANATEE COUNTY PUBLIC WORKS
ANTHONY BENITEZ, P.E.
1022 26TH AVENUE EAST
BRADENTON, FL 34208-3916
(941) 708-7450 EXT. 7333

SOUTHEAST REGIONAL WASTEWATER TREATMENT PLANT
VICTOR BOUCHER, CHIEF OPERATOR
LELIA ROAD
BRADENTON, FL 34210
(941) 792-8811 EXT. 8028

ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS, UNLESS OTHERWISE SPECIFIED.

ALL VALVE BOX COVERS SHALL BE PAINTED TO INDICATE THEIR TYPE OF SERVICE.

ALL TEST POINT TAPPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CAPPED AND REMAIN IN PLACE.

MAY 2017 SUE TEST HOLE DATA

NUMBER	UTILITY	SIZE/MATERIAL	GROUND ELEVATION	TOP OF PIPE
VW-101	FM	30" DIP	36.55	31.69
VW-102	FM	12" PVC	36.17	31.76
VW-103	FM	36" DIP	35.99	31.69
VW-104	FM	36" DIP	39.34	32.90
VW-105	FM	12" PVC	40.48	33.27
VW-106	RCW	30" DIP	40.50	37.32
VW-107		2" PVC	40.78	37.77
VW-108	FM	36" DIP	38.82	32.64
VW-109	FM	12" PVC	37.95	31.70
VW-110	RCW	30" DIP	37.86	35.06
VW-111	UNKNOWN	DIP	37.45	31.00
VW-112	RCW	36" DIP	34.61	31.61
VW-113	UNKNOWN	DIP	34.54	27.08
VW-114	FM	24" DIP	35.48	32.78
VW-115	FM	12" PVC	35.50	32.67

JANUARY 2017 SUE TEST HOLE DATA

NUMBER	UTILITY	SIZE/MATERIAL	GROUND ELEVATION	TOP OF PIPE
VW-101	UNKNOWN	DIP	35.33	32.82
VW-102	CLE	36" DIP	35.99	29.39
VW-103	2CL2S	2" PVC	36	33.95
VW-104	REJ	12" PVC	37.06	32.94
VW-105	SPW	16" DIP	36.92	33.12
VW-106	UNKNOWN	12" DIP	36.34	33.18
VW-107	RCW	DIP	34.96	29.96
VW-108	BE	2" PVC	35.40	33.55
VW-109	UNKNOWN	12" PVC	35.82	31.34
VW-110	UNKNOWN	8" PE	35.60	32.93
VW-111	BE	2" PVC	35.87	34.27
VW-112	UNKNOWN	DIP	35.05	29.75

NOTE: SURFACE UTILITY ENGINEERING DATA PROVIDED BY HYATT SURVEY SERVICES, DATED JANUARY 18, 2017 AND MAY 15, 2017.

EARTHWORK NOTES: ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS EXCESS DIRT EXCAVATED IN CONSTRUCTING THE PROPOSED IMPROVEMENTS TO THE PROPOSED GRADES SHALL BE RETAINED BY THE CONTRACTOR.

THE CONTRACTOR SHALL INSTALL BARRICADES OF OTHER SYSTEMS APPROVED BY THE OWNER'S REPRESENTATIVE TO PROTECT TREES THAT ARE TO REMAIN. IF TREES NEED TO BE REMOVED, THE CONTRACTOR SHALL PREPARE AND SUBMIT THE REQUIRED TREE REMOVAL PERMITS. THAT ASSOCIATED PERMITTING FEES SHALL BE BORNE BY THE CONTRACTOR AND INCLUDED WITHIN THE SCOPE OF WORK. THE COST TO REMOVE AND REPLACE (IF REQUIRED) THE TREES SHALL BE BORNE BY THE CONTRACTOR.

DAMAGES TO TREE ROOTS GREATER THAN 1-INCH IN DIAMETER THAT ARE AFFECTED BY THE CONTRACTOR'S ACTIVITIES WITHIN THE DRIP-LINE OF THE TREE SHALL BE SAVED WITH A CLEAN CUT.

THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTHS. WHEN A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING, SHORING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING AND BRACING IS ANTICIPATED TO BE REQUIRED IN ACCORDANCE WITH THE TRENCH SAFETY ACT.

RESTORATION AND MISCELLANEOUS NOTES: ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL PROVIDE AN ASPHALT PATCH FOR TRENCH AREAS CONSTRUCTED IN EXISTING ROADWAYS. ADJUST ALL CASTINGS TO MATCH NEW PAVEMENT SURFACE.

THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVING, STABILIZED EARTH, CURBS, SIDEWALKS, FENCES, LANDSCAPING, AND OTHER IMPROVEMENTS WITH THE SAME OR BETTER TYPE AND QUANTITY OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.

ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER UNLESS SHOWN TO BE REMOVED ON CONSTRUCTION PLANS.

CONTRACTOR SHALL RESTORE ALL IRRIGATION SYSTEM COMPONENTS TO PRE-CONSTRUCTION CONDITIONS.

ALL DISTURBED GRASSED AREAS SHALL BE RESTORED WITH SOO IN LIKE KIND UNLESS OTHERWISE DIRECTED BY OWNER. CONTRACTOR SHALL ROLL ALL SODDED AREAS.

CONCRETE SIDEWALKS ACROSS DRIVEWAYS SHALL BE RESTORED WITH 6 INCHES OF 3,000 PSI CONCRETE WITH W2.5 X W2.5, 6X6 WIRE MESH. PLACE 1/2 INCH EXPANSION JOINT BETWEEN BACK OF CURB AND NEW CONCRETE. AREA BENEATH RESTORATION SHALL BE MECHANICALLY TAMPED PRIOR TO PLACING CONCRETE.

CONCRETE SIDEWALKS OUTSIDE OF DRIVEWAYS SHALL BE RESTORED WITH 4 INCHES OF 3,000 PSI CONCRETE PER FOOT DESIGN STANDARDS, SECTIONS 522 & 310.

RIP RAP SHALL BE INSTALLED PER FOOT STANDARD SPECIFICATION 530 AND SHALL BE PROCURED FROM A FDOT APPROVED YARD.

PIPE AND FITTING SYMBOLS: 90° ELBOW, 90° ELBOW ROTATED UP, 90° ELBOW ROTATED DOWN, TEE, REDUCER, ECCENTRIC REDUCER, GATE VALVE, PLUG VALVE, MAGNETIC FLOW METER, ARV, CHECK VALVE, FLANGED, MECHANICAL JOINT.

Table with columns: No., REVISIONS, DATE, BY.

Kimley-Horn logo and address: 100 2ND AVENUE SOUTH, SUITE 105N, ST. PETERSBURG, FL 33701, PHONE: 727-547-3999, WWW.KIMLEY-HORN.COM CA 00000696

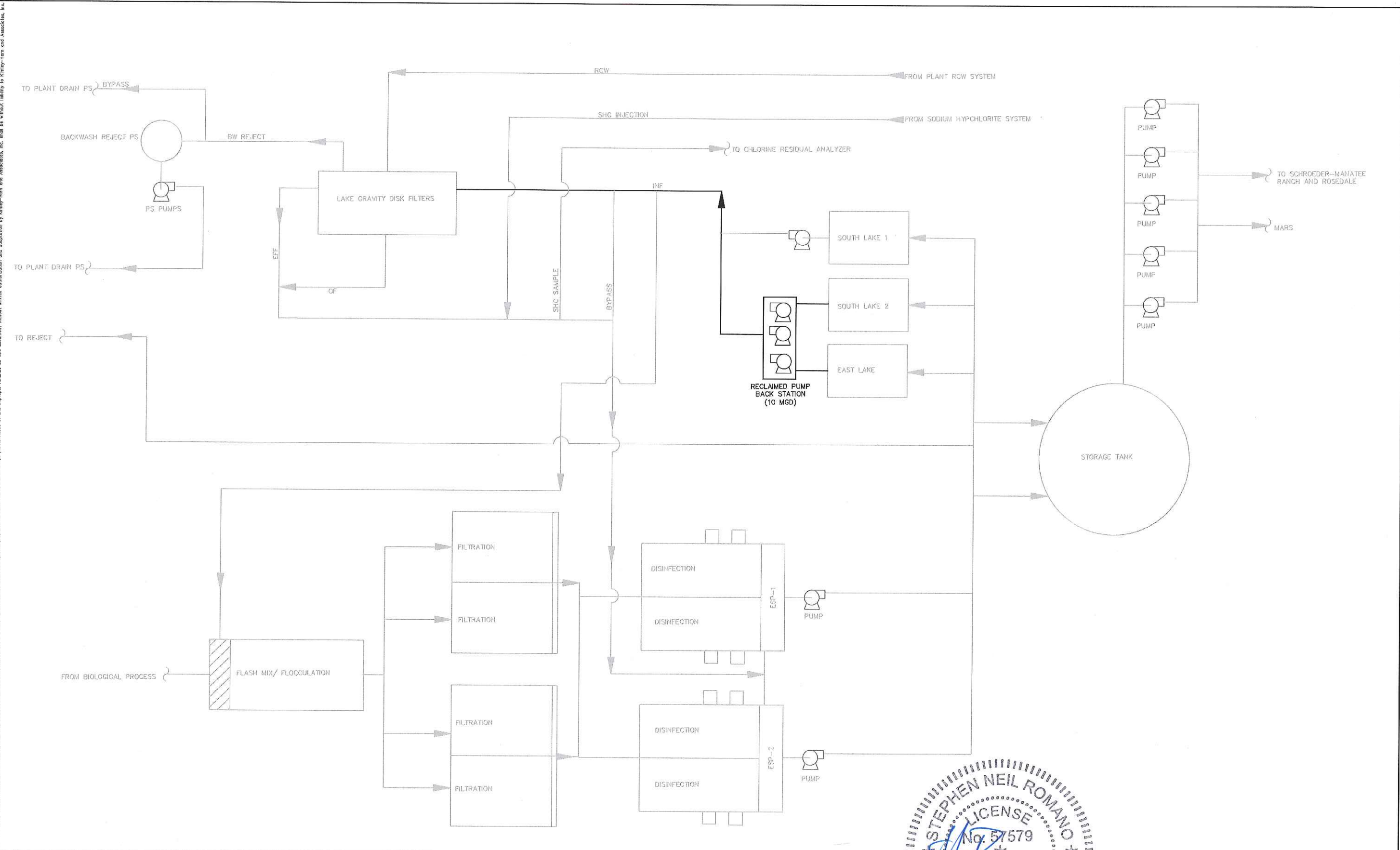
Table with columns: KHA PROJECT, DATE, SCALE, DESIGNED BY, DRAWN BY, CHECKED BY.

Manatee County logo and project title: SEWRF RECLAIMED PUMP BACK STATION

Professional Engineer seal for Stephen N. Romano, License No. 57578, State of Florida.

DRAWING INDEX AND GENERAL NOTES SHEET NUMBER G-2

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KHA PROJECT
 14B400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW
 MANATEE COUNTY



**SEWRF RECLAIMED
 PUMP BACK STATION**

FL DATE: 2/28/20

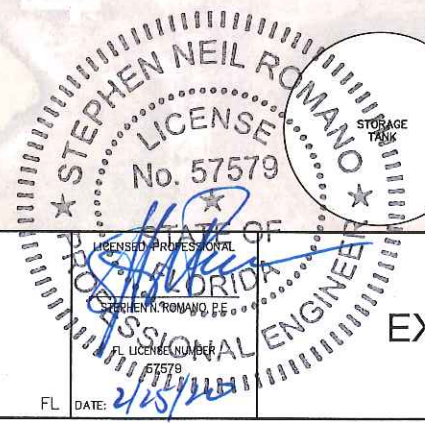
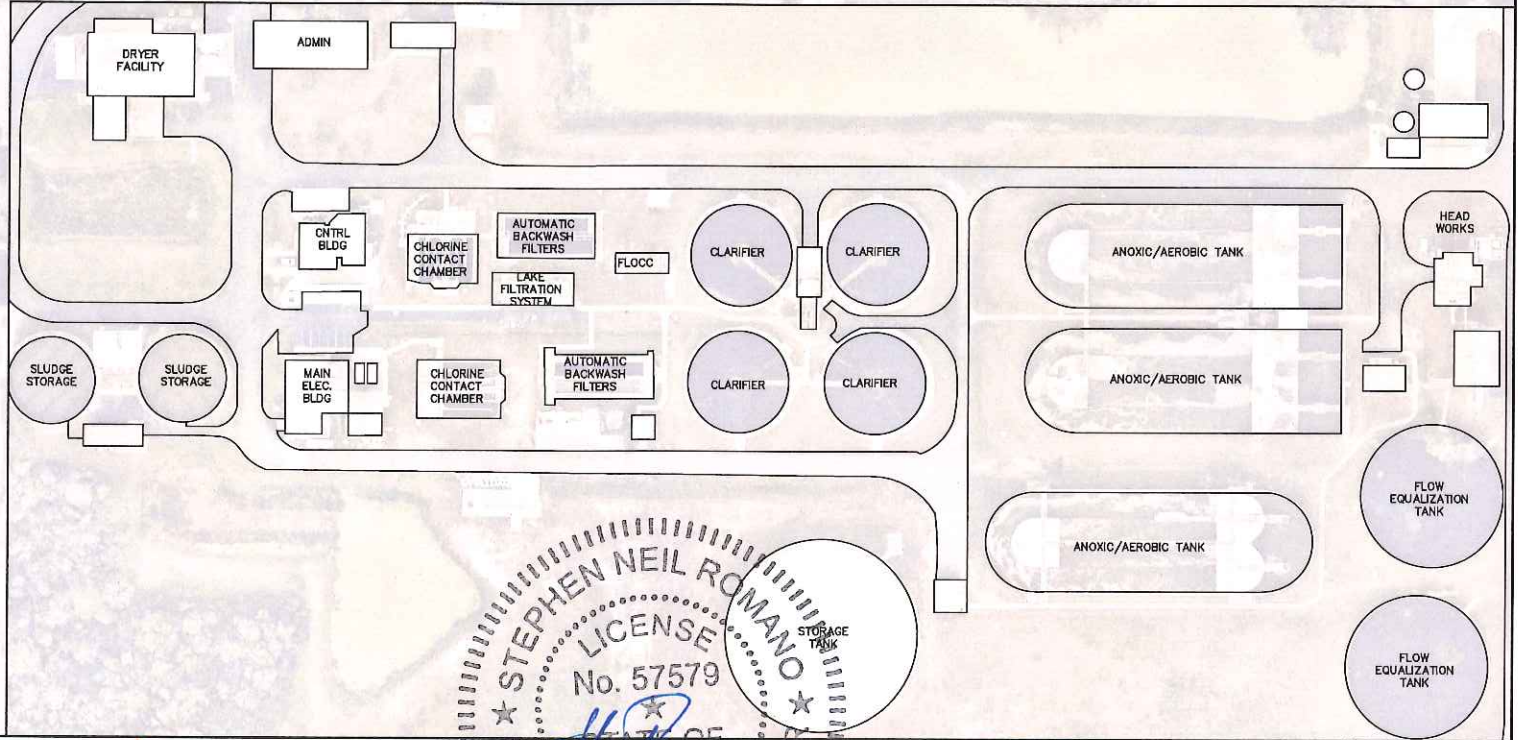
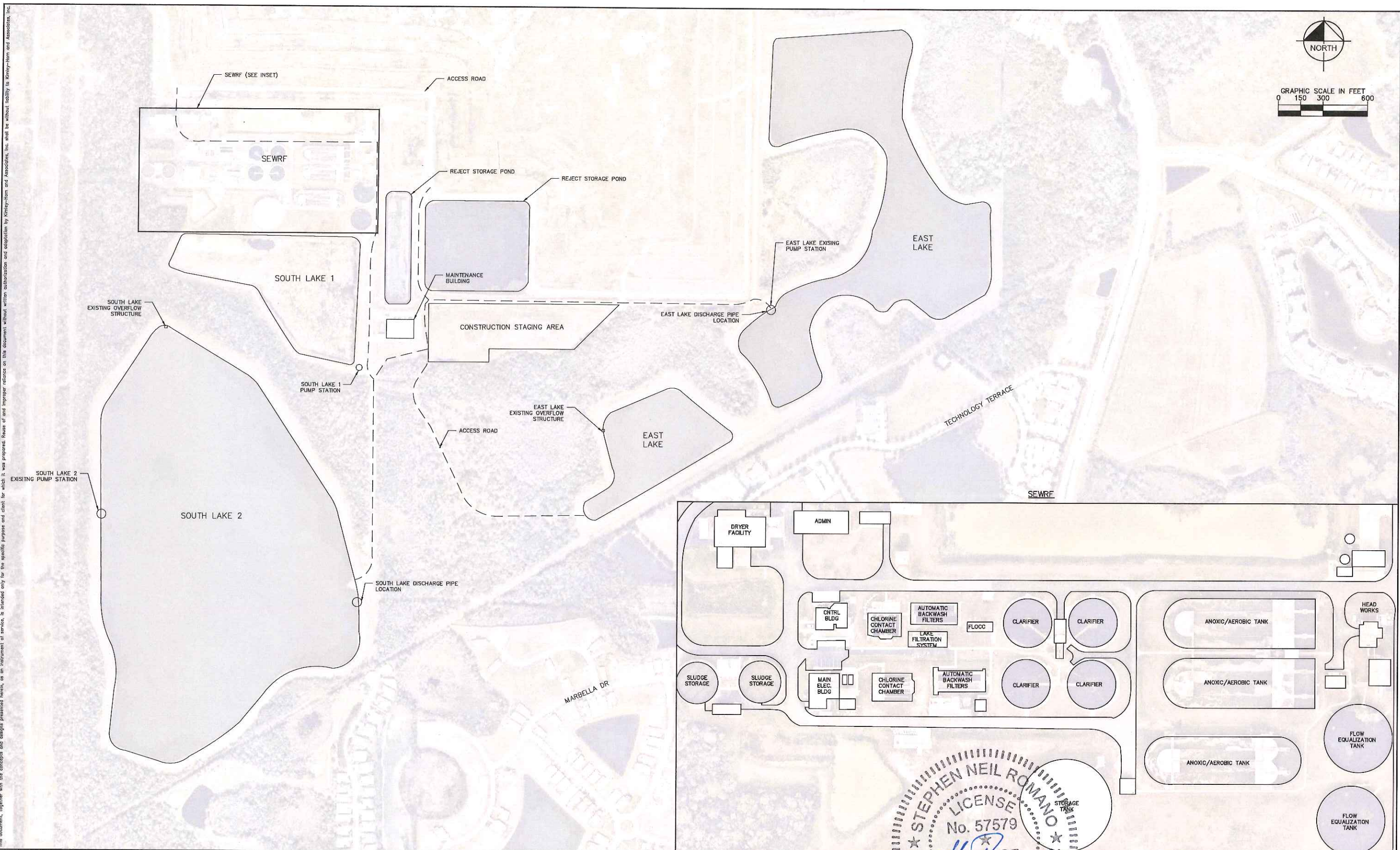
PROCESS FLOW DIAGRAM

SHEET NUMBER
G-3

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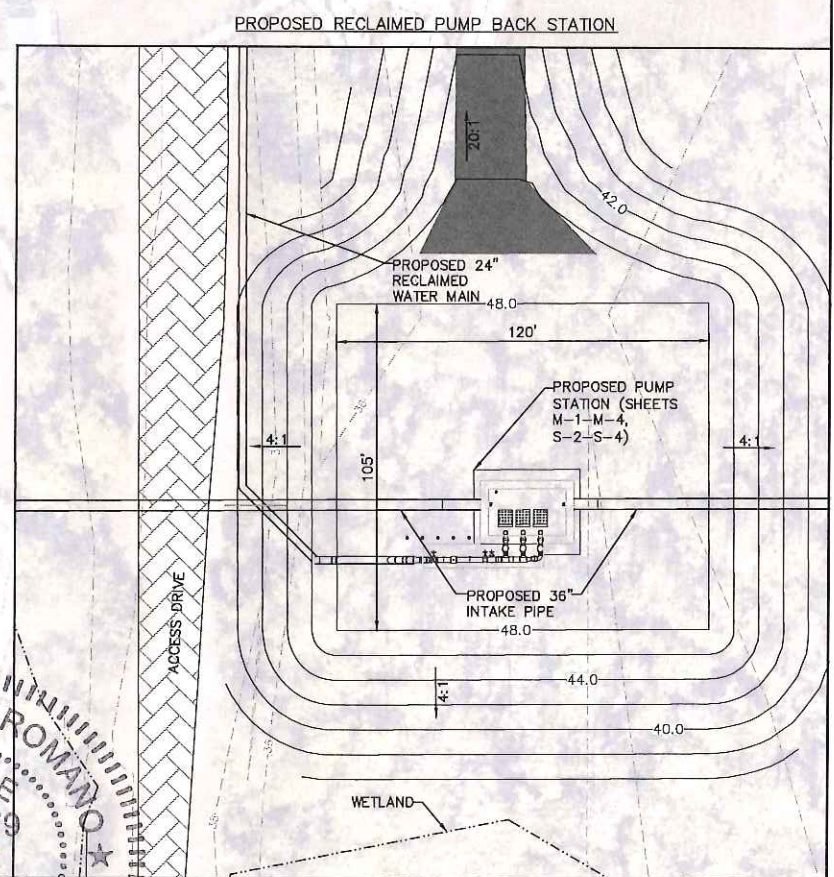
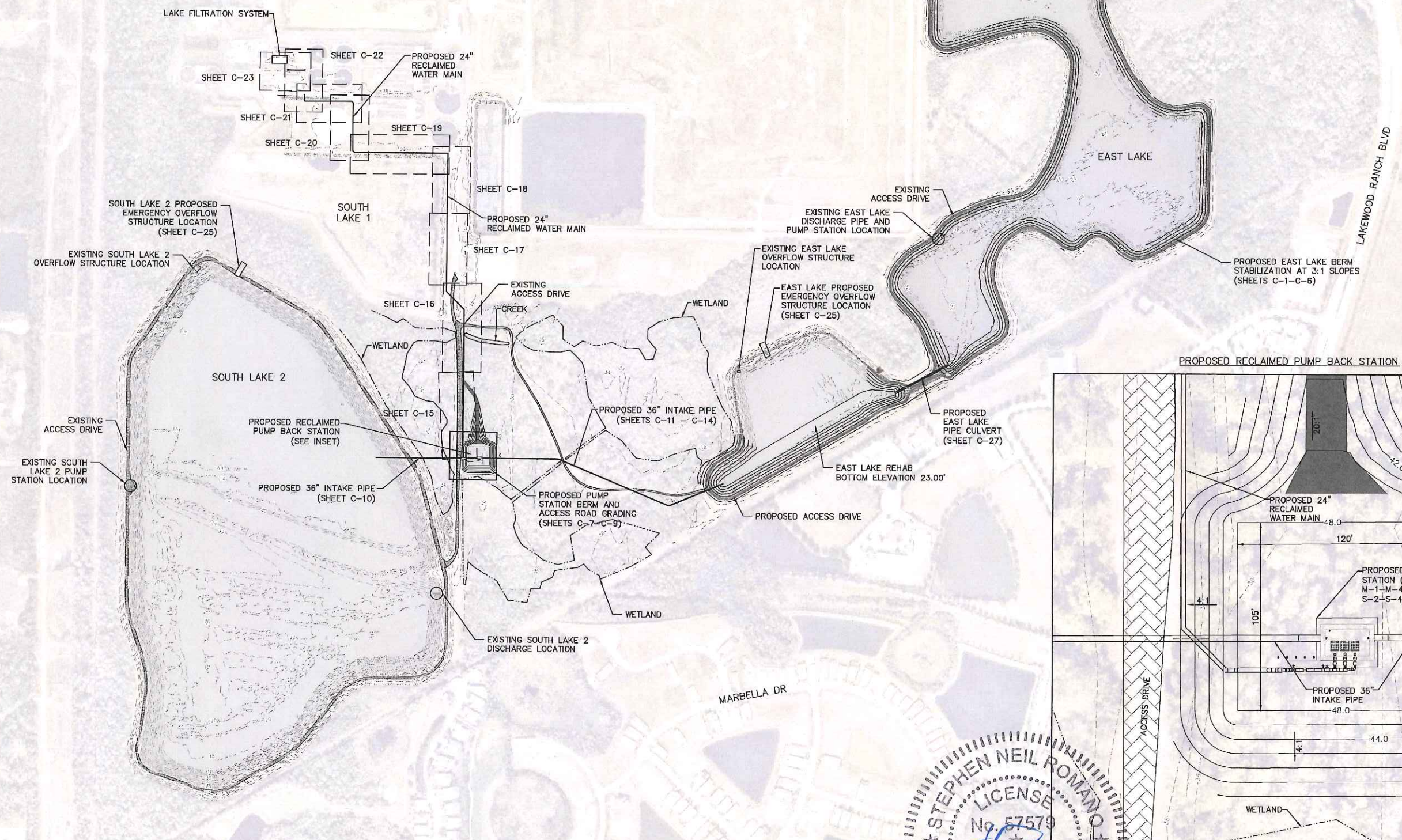
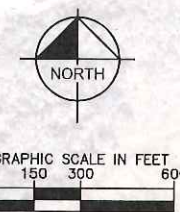
KHA PROJECT
148400015
 DATE
1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW
 MANATEE COUNTY

Manatee County
SEWRF RECLAIMED PUMP BACK STATION

EXISTING SITE PLAN

SHEET NUMBER
G-4

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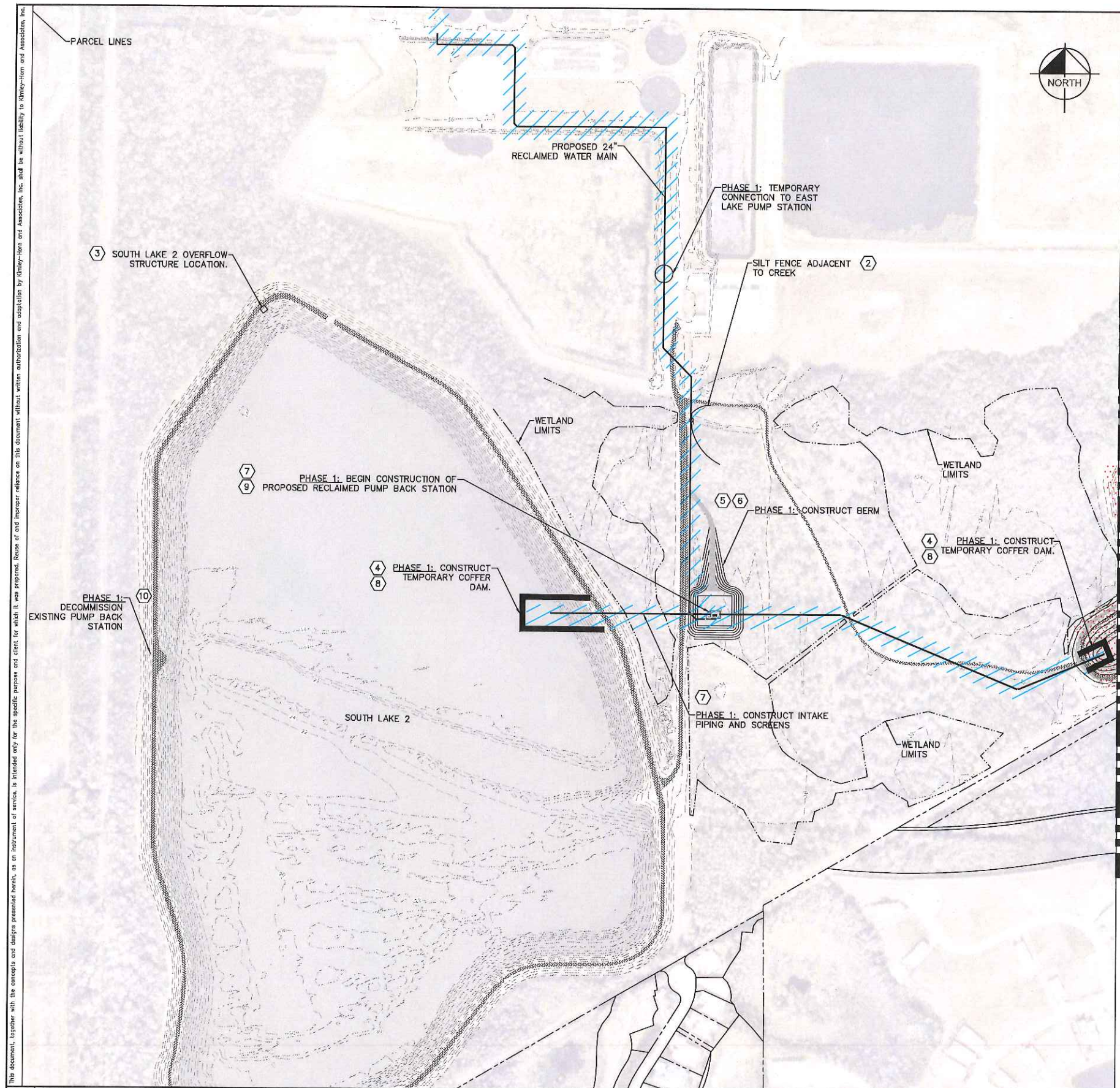
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**SEWRF RECLAIMED
 PUMP BACK STATION**

PROPOSED SITE PLAN
 SHEET NUMBER
G-5



PHASE 1

- ① INSTALL SWPPP INFORMATION SIGN NEAR PLANNED CONSTRUCTION ENTRANCE AND WITHIN EASY ACCESS TO THE GENERAL PUBLIC WITHOUT ENTERING THE CONSTRUCTION SITE.
- ② INSTALL SILT FENCE AS NECESSARY FOR PHASE 1 CONSTRUCTION ACTIVITIES.
- ③ INSTALL STOP LOGS IN SOUTH LAKE 2 OVERFLOW STRUCTURE TO BLOCK ANY DISCHARGE.
- ④ CONSTRUCT TEMPORARY COFFER DAM IN SOUTH LAKE 2 AND EAST LAKE TO CONSTRUCT INTAKE SCREENS AND ASSOCIATED PIPING.
- ⑤ CONSTRUCT BERM LEADING FROM THE ACCESS ROAD TO THE PROPOSED RECLAIMED PUMP BACK STATION.
- ⑥ PERMANENTLY STABILIZE WITH VEGETATIVE COVER, TO PREVENT EROSION AND SEDIMENT LOSS, IMMEDIATELY FOLLOWING THE COMPLETION OF BERMS AND FILL LOCATIONS AS AREAS ARE BROUGHT TO FINAL GRADE (SEE NOTE 2 BELOW).
- ⑦ CONSTRUCT INTAKE PIPING, DISCHARGE PIPING, RECLAIMED PUMP BACK STATION INCLUDING ALL ASSOCIATED PIPING AND APPURTENANCES. PERMANENTLY STABILIZE AS WORK PROGRESSES.
- ⑧ REMOVE TEMPORARY COFFER DAMS.
- ⑨ START UP AND TEST THE PROPOSED RECLAIMED PUMP BACK STATION AND PLACE INTO SERVICE (SLUICE GATE FOR SOUTH LAKE 2 TO REMAIN CLOSED.)
- ⑩ AFTER SUCCESSFUL START-UP OF THE RECLAIMED PUMP STATION AND APPROVAL BY MANATEE COUNTY, DECOMMISSION EXISTING SOUTH LAKE 2 RECLAIMED PUMP BACK STATION.

NOTE:
 1. DEWATERING EFFLUENT SHALL NOT BE PERMITTED TO LEAVE THE CONSTRUCTION SITE. CONTRACTOR TO DEWATER TO TEMPORARY SEDIMENT BASIN AS IDENTIFIED IN THE PHASING SCHEDULE. CONTRACTOR TO ENGAGE EMERGENCY PUMP TO RECLAIMED WATER RECLAMATION FACILITY, AS REQUIRED, TO MAINTAIN WATER LEVEL WITHIN SEDIMENT BASIN.
 2. CONTRACTOR SHALL STABILIZE AREAS WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED FOR ANY PORTION OF THE SITE. PERMANENT STABILIZATION AT SLOPPED AREAS SHALL CONSIST OF SOG OR SEED WITH SLOPE BLANKET STABILIZATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING FINAL STABILIZATION WITH A DENSITY OF AT LEAST 70% AS DEFINED IN THE FDEP GENERIC PERMIT

MATCHLINE - SEE SHEET G-7

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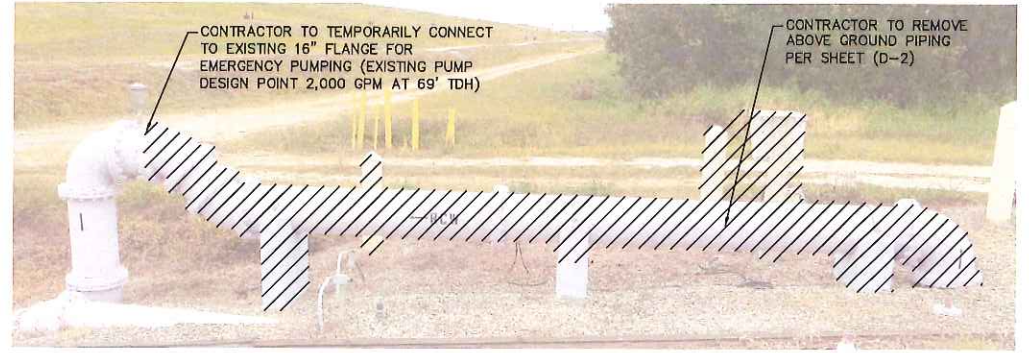
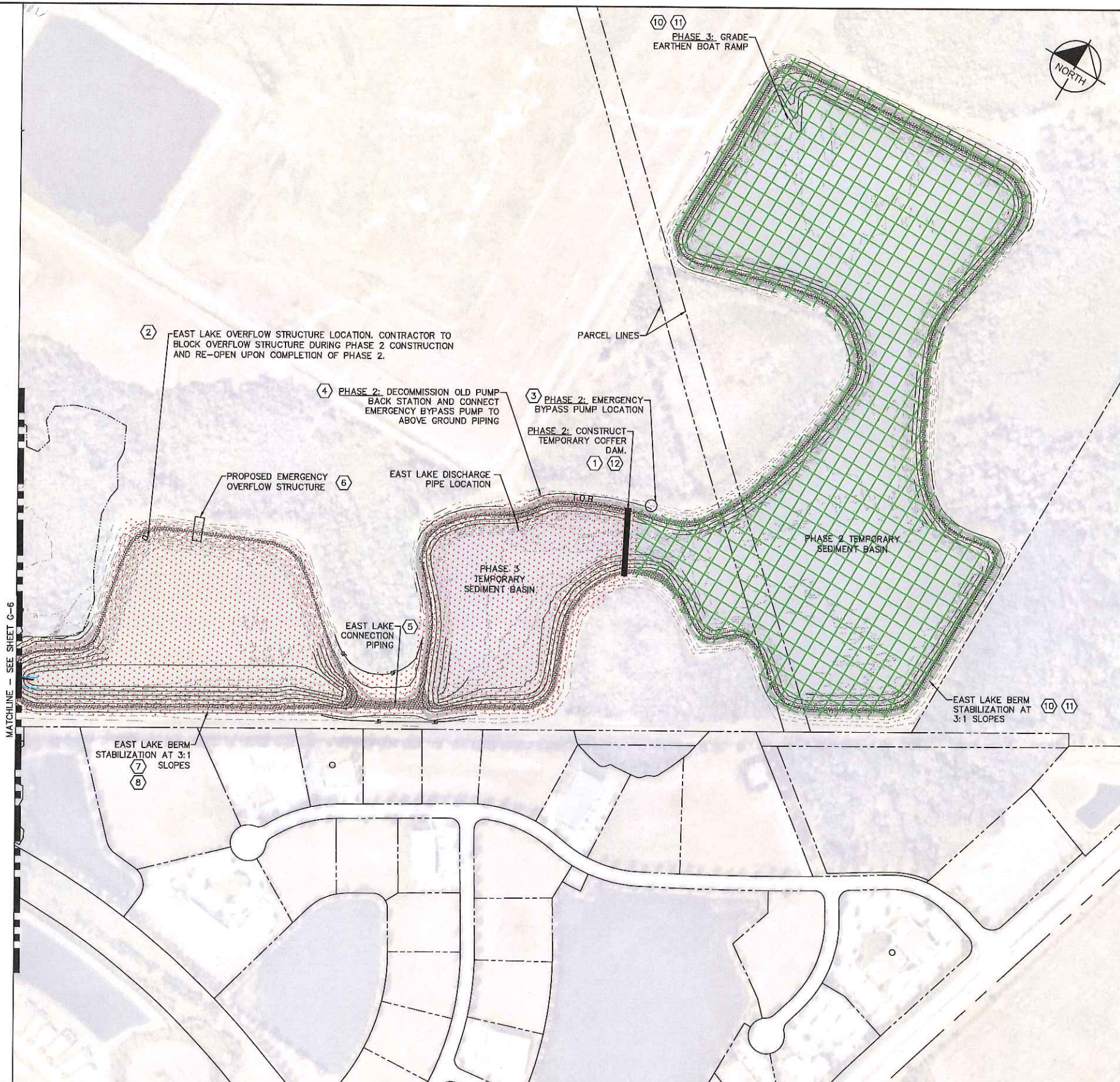
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DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

SEWRF RECLAIMED PUMP BACK STATION

EROSION CONTROL AND CONSTRUCTION PHASING PLAN PHASE 1

SHEET NUMBER
G-6

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EAST LAKE TEMPORARY EMERGENCY PUMPING CONNECTION

PHASE 2

- 1 CONSTRUCT TEMPORARY COFFER DAM IN EAST LAKE (DEWATER INTO PHASE 2 TEMPORARY SEDIMENT BASIN). CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT NO. 17-7261 DATED SEPTEMBER 2018.
- 2 INSTALL STOP LOGS IN EAST LAKE OVERFLOW STRUCTURE TO BLOCK ANY DISCHARGE.
- 3 CONSTRUCT TEMPORARY EMERGENCY PUMP STATION ON NORTH EAST SIDE OF TEMPORARY COFFER DAM. CONNECT PUMP STATION TO EXISTING ABOVE GROUND PIPING (SEE PHOTO THIS SHEET). TEMPORARY/EMERGENCY PUMP STATION SHALL BE ABLE TO OPERATE TO PREVENT WATER FROM OVERFLOWING DISCHARGE STRUCTURE.
- 4 DEMOLISH EAST LAKE RECLAIMED PUMP STATION AND EXISTING DISCHARGE STRUCTURE. REBUILD BERM TO MATCH PROPOSED GRADES.
- 5 CONSTRUCT EAST LAKE CONNECTION PIPING AND REGRADE THE BOTTOM OF EAST LAKE (SUITABLE SOILS TO BE PLACED IN PROPOSED EARTHEN BERM AREA).
- 6 CONSTRUCT EMERGENCY OVERFLOW STRUCTURE AND DISCHARGE STRUCTURE.
- 7 REGRADE BERMS IN THE SOUTHERN PORTION OF EAST LAKE, WEST OF THE TEMPORARY COFFER DAM (SUITABLE SOILS TO BE PLACE IN PROPOSED EARTHEN BERM AREA).
- 8 PERMANENTLY STABILIZE WITH VEGETATIVE COVER, TO PREVENT EROSION AND SEDIMENT LOSS, IMMEDIATELY FOLLOWING THE COMPLETION OF BERMS AND FILL LOCATIONS AS AREAS ARE BROUGHT TO FINAL GRADE (SEE NOTE 2 BELOW).

PHASE 3

- 9 DEWATER NORTHERN PORTION OF EAST LAKE INTO PHASE 3 TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT NO. 17-7261 DATED SEPTEMBER 2018. OPEN EAST LAKE SLIDE GATE AT NEW RECLAIMED PUMP BACK STATION.
- 10 REGRADE BERMS AND GRADE THE EARTHEN BOAT RAMP IN THE NORTHERN PORTION OF EAST LAKE, EAST OF THE TEMPORARY COFFER DAM (SUITABLE SOILS TO BE PLACE IN PROPOSED EARTHEN BERM AREA).
- 11 PERMANENTLY STABILIZE VEGETATIVE COVER, TO PREVENT EROSION AND SEDIMENT LOSS, IMMEDIATELY FOLLOWING THE COMPLETION OF BERMS AND FILL LOCATIONS AS AREAS ARE BROUGHT TO FINAL GRADE (SEE NOTE 2 BELOW).
- 12 REMOVE THE TEMPORARY COFFER DAM, SILT FENCE AND RE-OPEN EAST LAKE OVERFLOW STRUCTURE.

NOTE:
 1. DEWATERING EFFLUENT SHALL NOT BE PERMITTED TO LEAVE THE CONSTRUCTION SITE. CONTRACTOR TO DEWATER TO TEMPORARY SEDIMENT BASIN AS IDENTIFIED IN THE PHASING SCHEDULE. CONTRACTOR TO ENGAGE EMERGENCY PUMP TO RECLAIMED WATER RECLAMATION FACILITY, AS REQUIRED, TO MAINTAIN WATER LEVEL WITHIN SEDIMENT BASIN.
 2. CONTRACTOR SHALL STABILIZE AREAS WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED FOR ANY PORTION OF THE SITE. PERMANENT STABILIZATION AT SLOPPED AREAS SHALL CONSIST OF SOIL OR SEED WITH SLOPE BLANKET STABILIZATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING FINAL STABILIZATION WITH A DENSITY OF AT LEAST 70% AS DEFINED IN THE FDEP GENERIC PERMIT

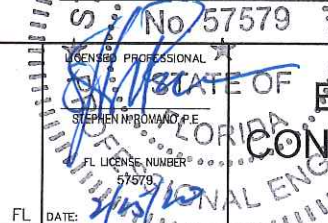
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SEWRF RECLAIMED
 PUMP BACK STATION



EROSION CONTROL AND
 CONSTRUCTION PHASING PLAN
 PHASE 2 AND 3

SHEET NUMBER
 G-7

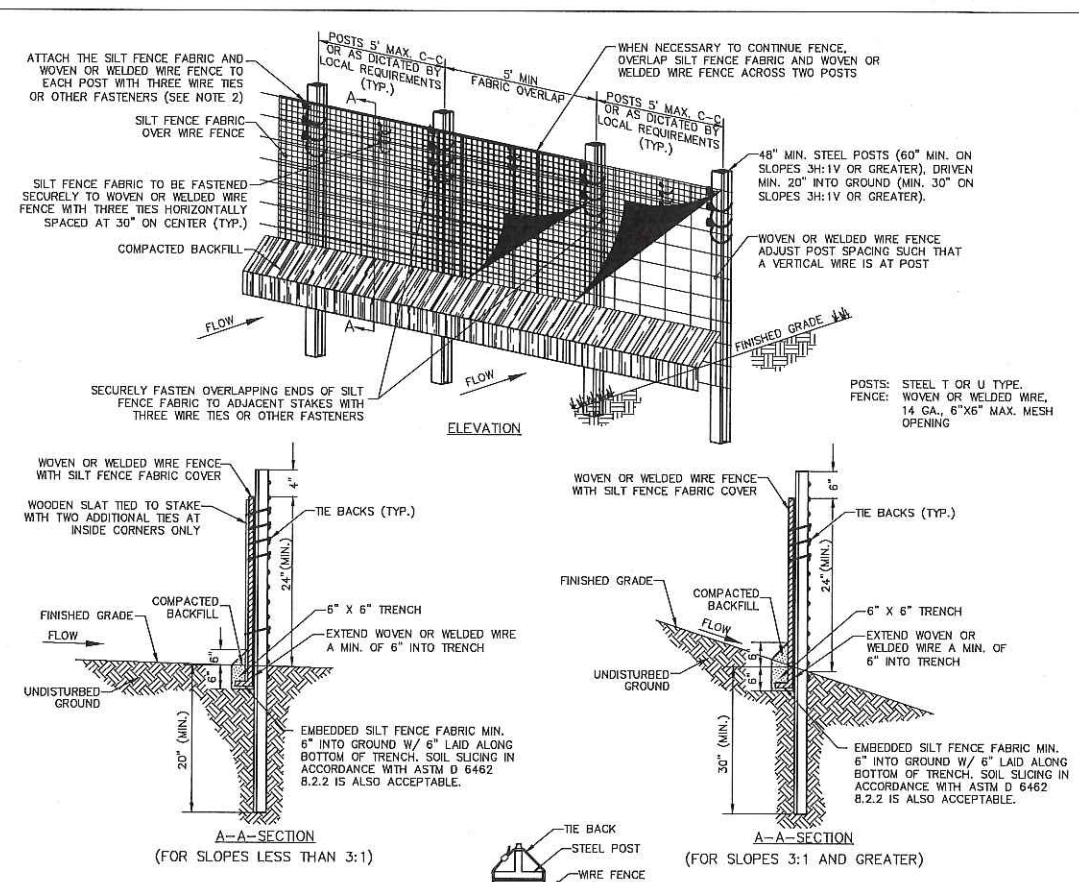
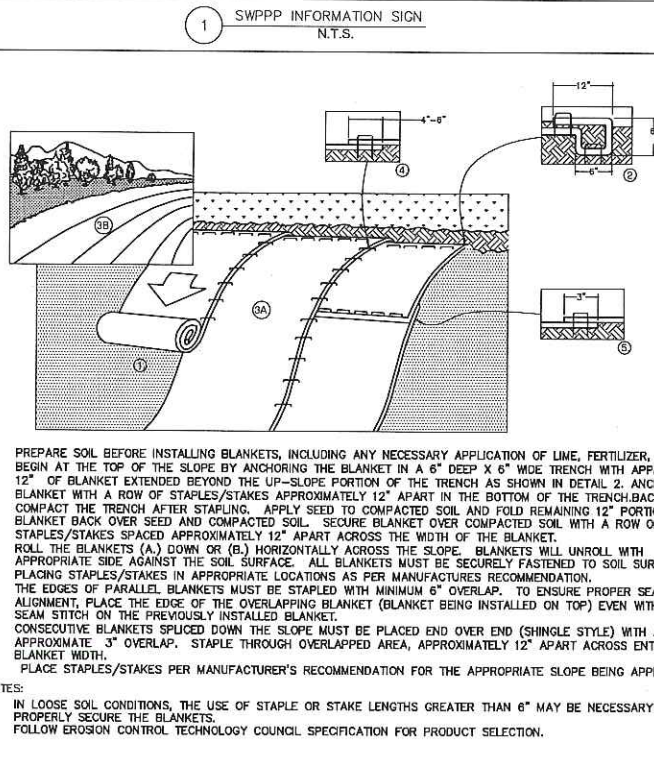
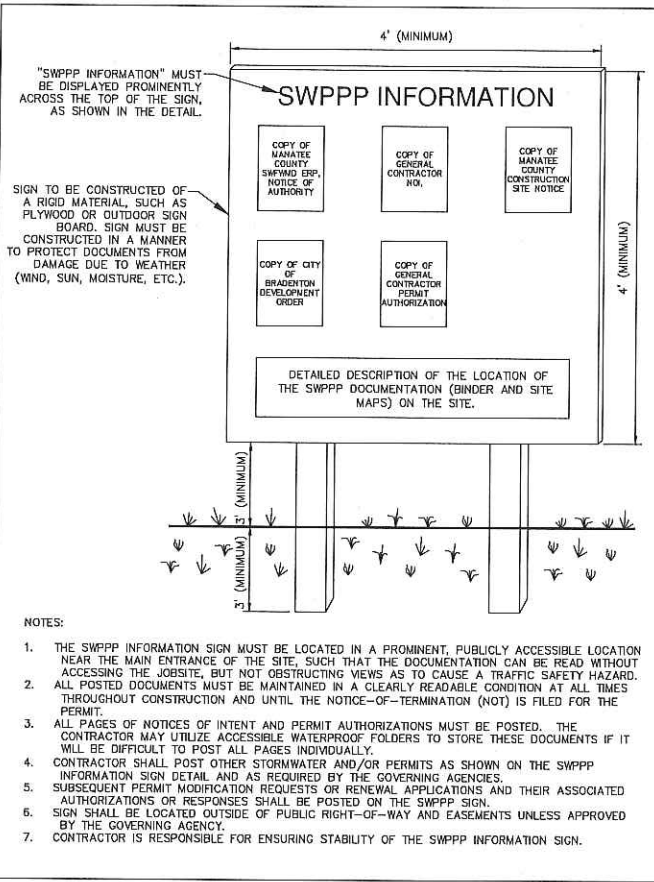
EROSION AND SEDIMENT CONTROL NOTES

- A. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FILING NOTICE OF INTENT TO USE THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
- B. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THIS STORM WATER POLLUTION PREVENTION PLAN. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- C. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- D. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- E. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH SWPPP IMPLEMENTATION SEQUENCE, OR AS REQUIRED BY THE APPLICABLE GENERIC PERMIT. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.
- F. ALL DENUDE/BARE AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE, MUST BE STABILIZED IMMEDIATELY UPON COMPLETION OF MOST RECENT GRADING ACTIVITY, WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING AND/OR BLANKETS. COMPLETION MUST BE ACHIEVED WITHIN 7 DAYS.
- G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE SEEDED, SOODED, AND/OR VEGETATED IMMEDIATELY, AND COMPLETED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- H. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION. TEMPORARY AND/OR PERMANENT STABILIZATION SHALL BE APPLIED PER REQUIREMENTS IN THESE EAS CONTROL NOTES.
- I. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE OFF-SITE.
- J. ALL MEASURES STATED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE GENERIC PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE PLANS.
- K. STORM WATER POLLUTANT CONTROL MEASURES INSTALLED DURING CONSTRUCTION, THAT WILL ALSO PROVIDE STORM WATER MANAGEMENT AFTER CONSTRUCTION, ARE INCLUDED IN THE CONTRACT DOCUMENTS.
- L. ALL PERMANENT CONTROLS AND SYSTEMS MUST BE INSTALLED AND FUNCTIONING AS DESIGNED AND FREE OF ACCUMULATED SEDIMENT AND DEBRIS DURING FINAL PROJECT INSPECTION AND APPROVAL.

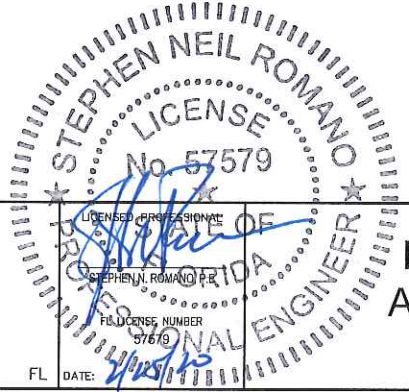
NOI TABLE	
PROJECT NAME	SEWRF RECLAIMED PUMP BACK STATION
PROJECT ADDRESS	3331 LENA ROAD
CITY	BRADENTON
STATE	FLORIDA
ZIP CODE	34211
COUNTY	MANATEE
LATITUDE	27° 28' 08.20" N
LONGITUDE	82° 27' 05.8" W
INDIAN COUNTY LANDS	NO
WATER MANAGEMENT DISTRICT	SWFVMD
LARGE OR SMALL CONSTRUCTION	LARGE
LOD ACREAGE	290 ACRES
SWPPP LOCATION	ADDRESS IN PART IV
DEWATERING	YES
WITHIN 500' OF CONTAMINATED SITE	YES
REMIEDIATED	NO
POLLUTANTS PRESENT	YES
RECEIVING WATER	MANATEE RIVER

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE												
NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR ESTIMATED PROJECT SCHEDULE												
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS												
TEMPORARY CONTROL MEASURES												
SEDIMENT CONTROL BASIN(S)/TRAP(S)												
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADING												
STORM FACILITIES												
SITE CONSTRUCTION												
FINISH GRADING												
PERMANENT CONTROL STRUCTURES												
FOUNDATION / BUILDING CONSTRUCTION												
LANDSCAPING/SEED/FINAL STABILIZATION												

1) CONTRACTOR MUST COMPLETE TABLE WITH ESTIMATED DATES OR PROJECT ACTIVITIES PRIOR TO BMP CERTIFICATION.
2) TIME SCHEDULE MUST COINCIDE WITH THE SWPPP IMPLEMENTATION SEQUENCE.



- SPECIFICATIONS FOR SILT FENCE INSTALLATION**
- MATERIALS AND INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
 - INSTALL SILT FENCE AT A FAIRLY LEVEL GRADE ALONG THE CONTOUR WITH THE ENDS CURVED UPHILL TO PROVIDE SUFFICIENT UPSTREAM STORAGE VOLUME FOR THE ANTICIPATED RUNOFF.
 - ATTACH THE GEOTEXTILE OR FABRIC TO THE WOVEN OR WELDED WIRE FENCE WITH THREE WIRE TIES OR OTHER FASTENERS (HORIZONTALLY SPACED EVERY 30"). ALL SPACED WITHIN THE TOP 6" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. AT EACH POST, ATTACH THE GEOTEXTILE OR FABRIC AND THE WOVEN OR WELDED WIRE FENCE TO THE POST AS PREVIOUSLY STATED. IN ADDITION, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
 - WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 60" ACROSS TWO POSTS, AS SHOWN.
 - ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE PER DETAIL, "SILT FENCE INSTALLATION (SLICING METHOD)".
 - WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
 - COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST. COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
 - ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.
- MAINTENANCE NOTES**
- SILT FENCES SHALL BE INSPECTED ALONG ITS ENTIRETY AND MUST BE CLEANED WHEN SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE SILT FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ON-THIRD THE HEIGHT OF THE SILT FENCE.
 - ALL MATERIAL EXCAVATED FROM BEHIND SILT FENCE SHALL BE STOCKPILED ON AN UPLAND PORTION OF THE SITE IF SUITABLE FOR REUSE.
 - SPECIAL ATTENTION SHOULD BE PAID TO ENSURE THAT NO UNDERMINING OF SILT FENCE HAS OCCURRED AND THAT NO BYPASS IS OCCURRING AT JOINING SECTIONS.
 - IF EXCESS SEDIMENT IS ACCUMULATING IN ANY SECTION OF SILT FENCE, THE CONTRACTOR SHOULD IMPLEMENT ADDITIONAL UPSTREAM STABILIZATION MEASURES OR ADDITIONAL BMP'S (PENDING CEC APPROVAL) TO PREVENT EXCESSIVE BUILDUP ON SILT FENCE.
 - SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED.



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MANATEE COUNTY



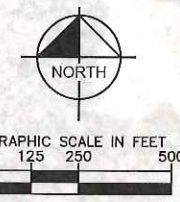
SEWRF RECLAIMED PUMP BACK STATION

EROSION CONTROL AND SEDIMENTATION DETAILS

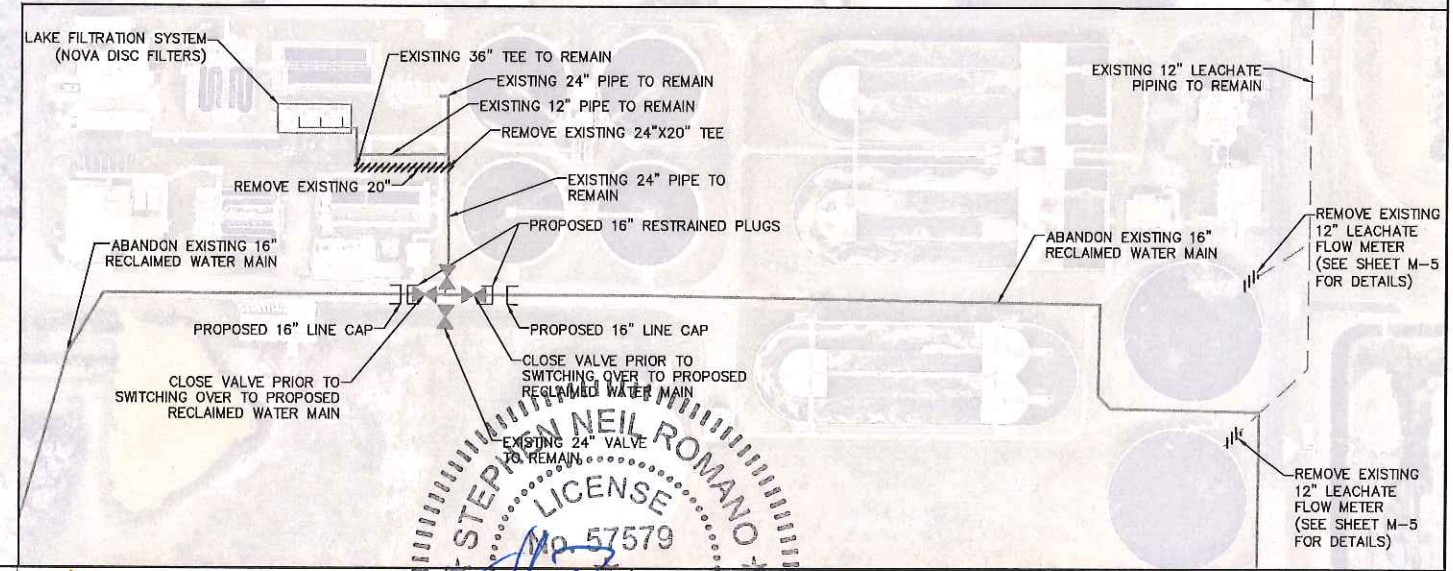
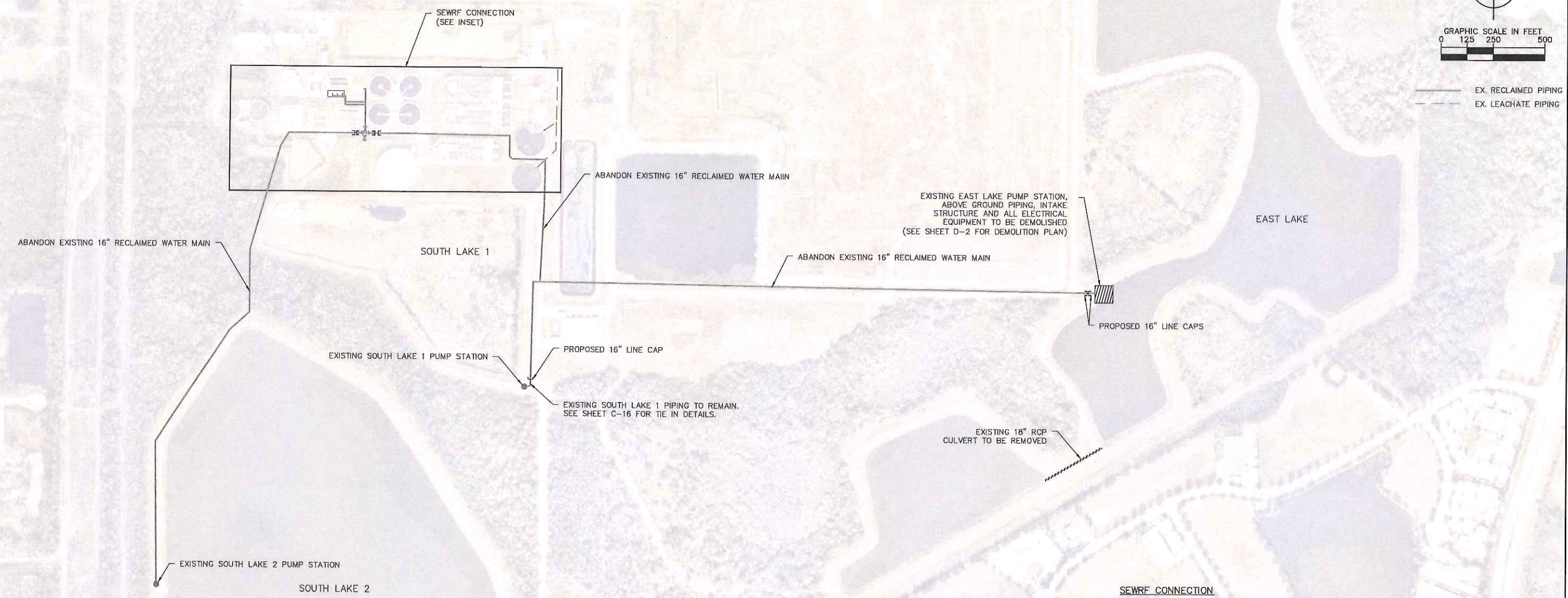
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— EX. RECLAIMED PIPING
 - - - EX. LEACHATE PIPING



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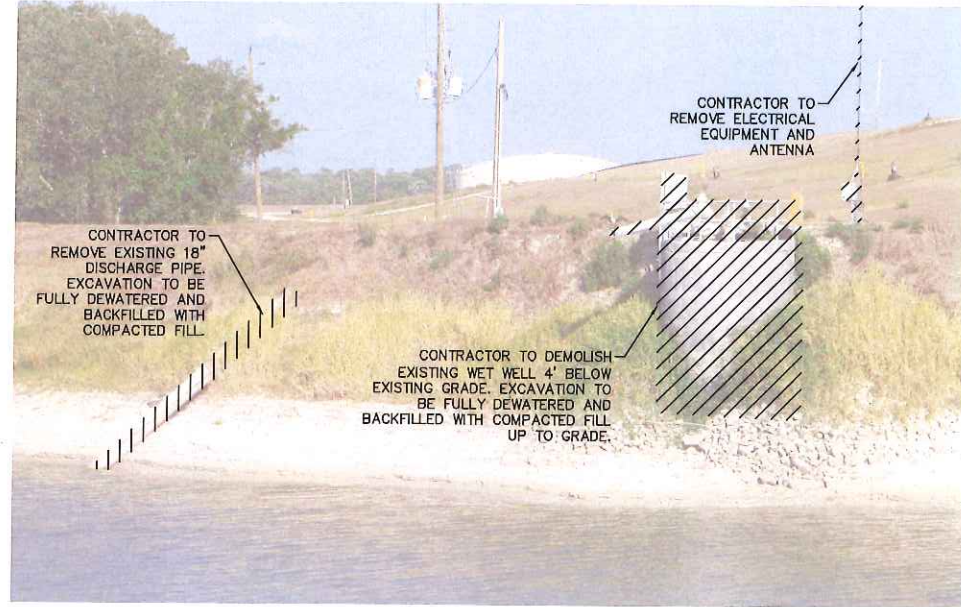
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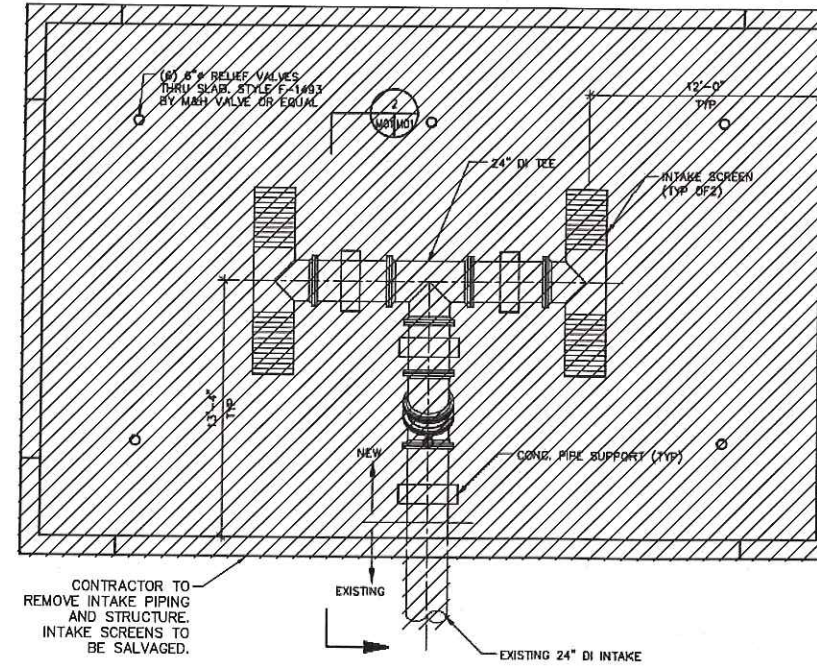
OVERALL DEMOLITION
 PLAN

SHEET NUMBER
D-1

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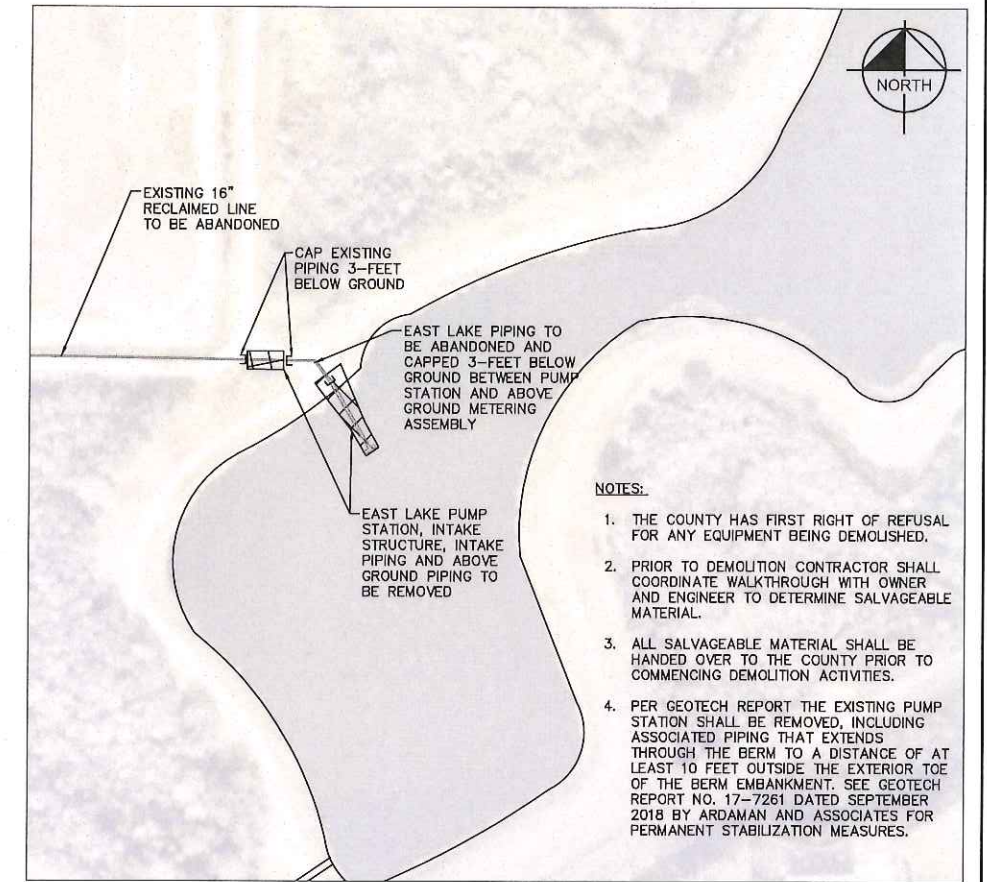


EX. EAST LAKE PUMP STATION



EX. EAST LAKE INTAKE STRUCTURE

NOTE:
* PROPOSED DEMOLITION AS PART OF THE CONSTRUCTION PLANS ARE BASED ON THE RECORD DRAWINGS.



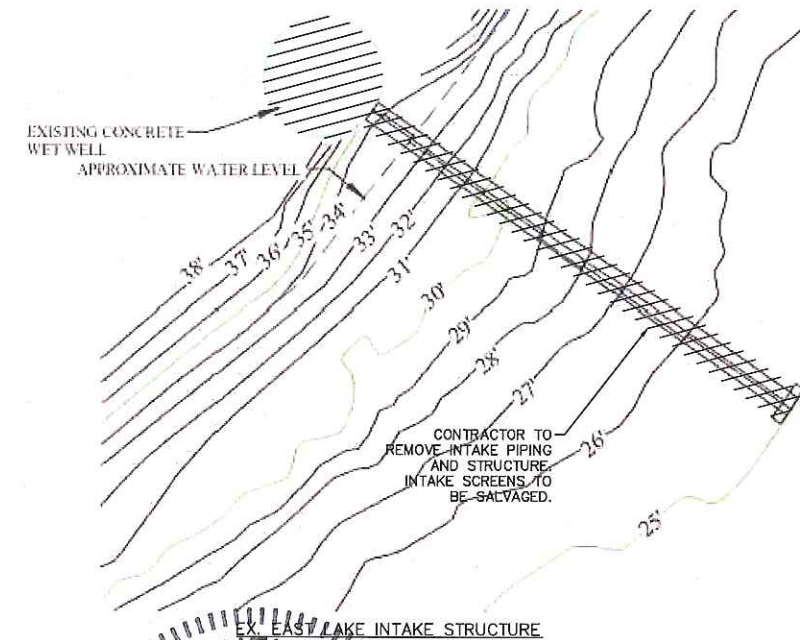
EXISTING PUMP STATION LOCATION MAP



EX. EAST LAKE ELECTRICAL EQUIPMENT



EX. EAST LAKE ABOVE GROUND PIPING



STEPHEN NEIL ROMANO
LICENSED PROFESSIONAL ENGINEER
No. 57579
STATE OF FLORIDA
FL LICENSE NUMBER 57579
DATE: 1/28/2020

EAST LAKE PUMP STATION DEMOLITION PLAN

No.	REVISIONS	DATE	BY

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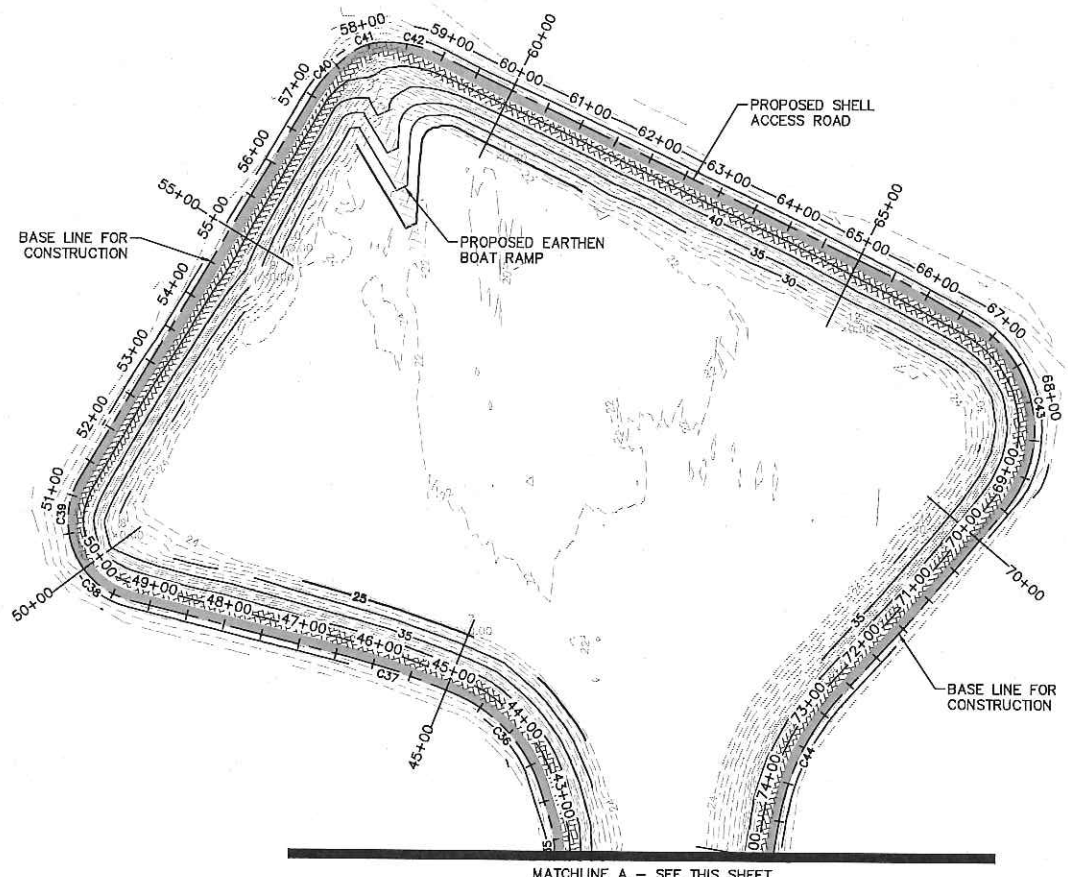
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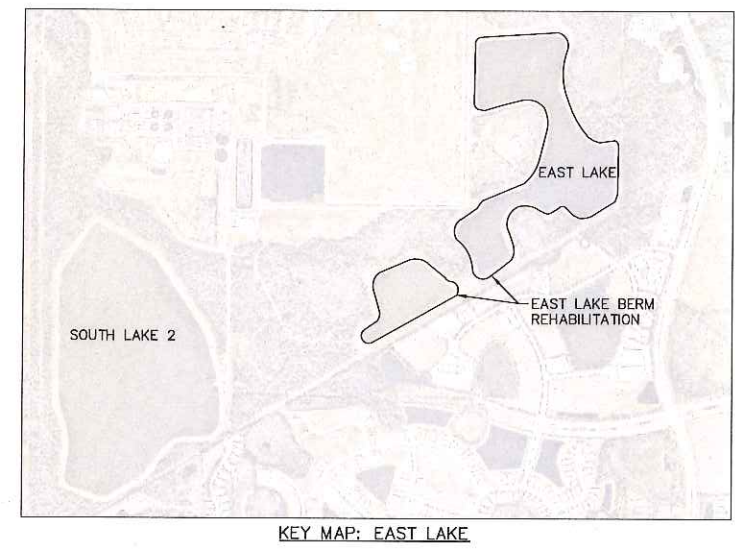
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D-2

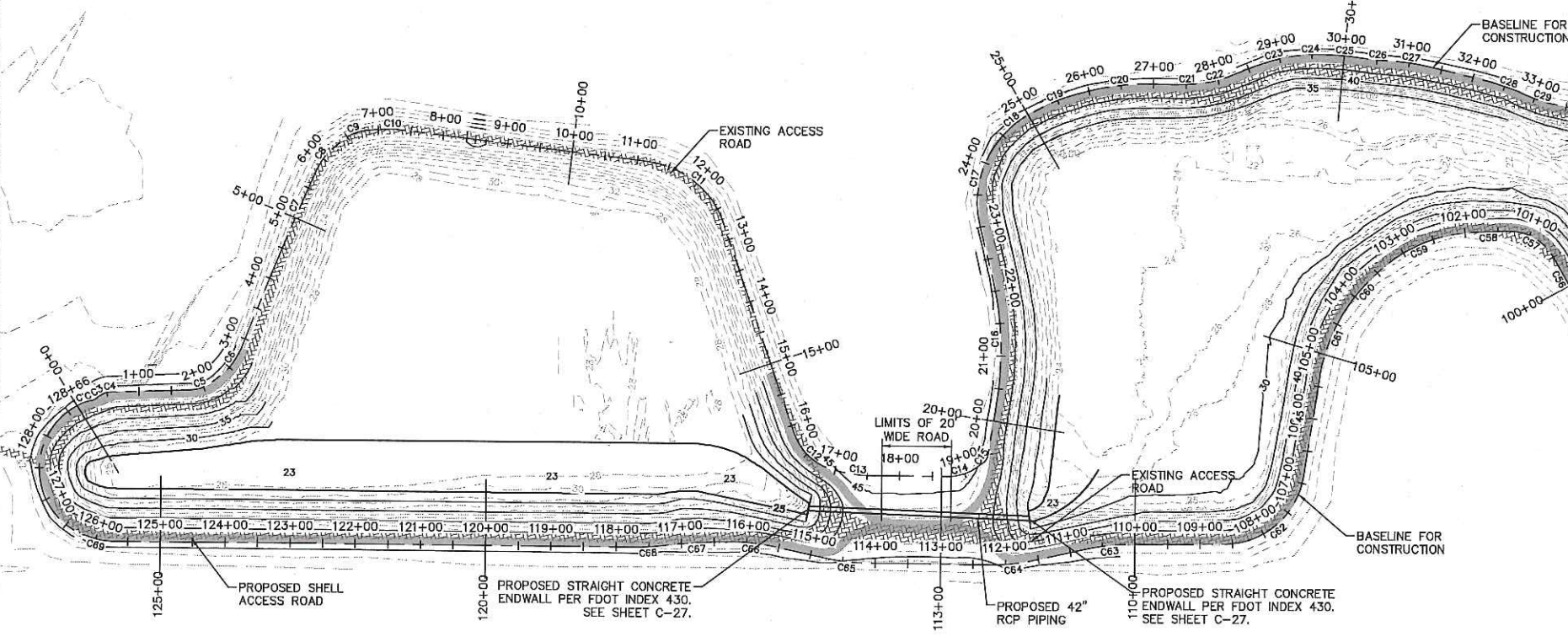
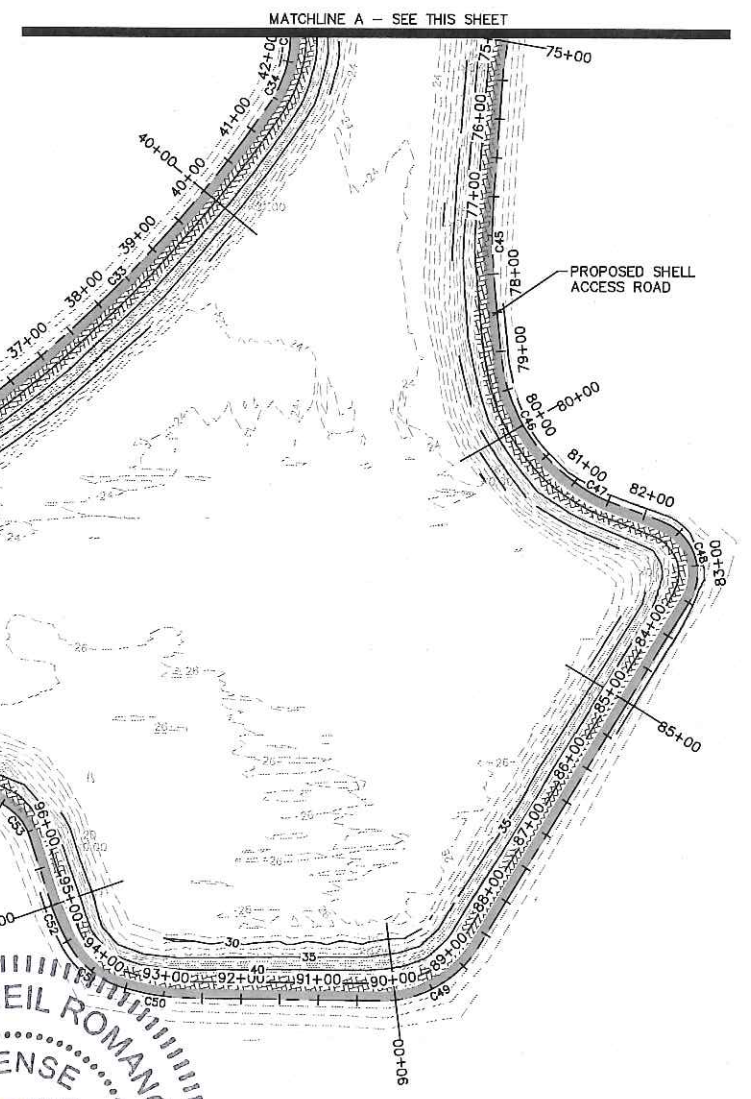
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EAST LAKE CROSS SECTIONS	
SHEET	STATION
C-3	0+00
C-3	5+00
C-3	10+00
C-3	15+00
C-3	20+00
C-3	25+00
C-4	30+00
C-4	35+00
C-4	40+00
C-4	45+00
C-4	50+00
C-4	55+00
C-5	60+00
C-5	65+00
C-5	70+00
C-5	75+00
C-5	80+00
C-5	85+00
C-6	90+00
C-6	95+00
C-6	100+00
C-6	105+00
C-6	110+00
C-6	113+00
C-6	120+00
C-6	125+00



LEGEND:
 PROPOSED SHELL ACCESS ROAD (SEE DETAIL 3 SHEET C-29 FOR DETAILS.)
 EXISTING ACCESS ROAD



STEPHEN NEIL ROMANO
 LICENSE No. 57579
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 DATE: 1/28/20

No.	REVISIONS	DATE	BY

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KHA PROJECT 148400015
 DATE 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW
 MANATEE COUNTY



SEWRF RECLAIMED PUMP BACK STATION

EAST LAKE REHABILITATION PLAN

SHEET NUMBER
C-1

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CURVE TABLE with columns: CURVE, RADIUS, LENGTH, START NORTHING EASTING, START STATION, END NORTHING EASTING, END STATION, PI NORTHING EASTING, PI STATION. Contains 35 rows of curve data (C1 to C35).

CURVE TABLE with columns: CURVE, RADIUS, LENGTH, START NORTHING EASTING, START STATION, END NORTHING EASTING, END STATION, PI NORTHING EASTING, PI STATION. Contains 35 rows of curve data (C36 to C69).

Revisions table with columns: No., REVISIONS, DATE, BY.



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KHA PROJECT 148400015 DATE 1/28/2020 SCALE AS SHOWN DESIGNED BY SNR DRAWN BY ASR CHECKED BY WEW

MANATEE COUNTY



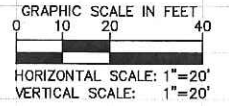
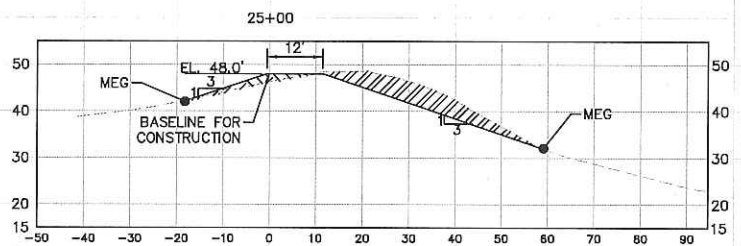
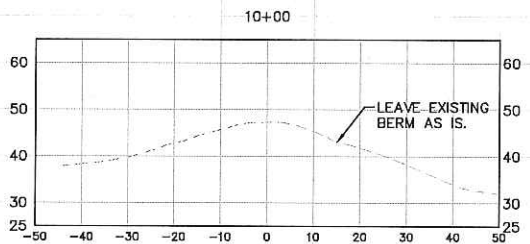
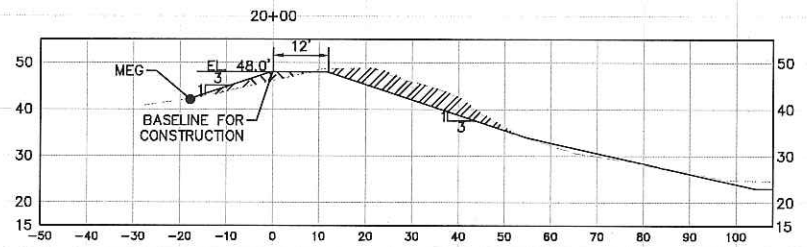
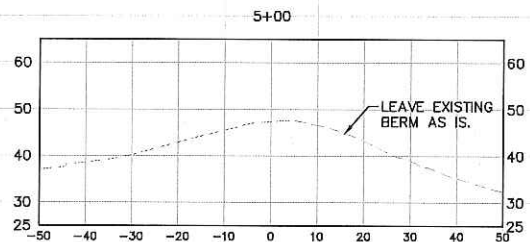
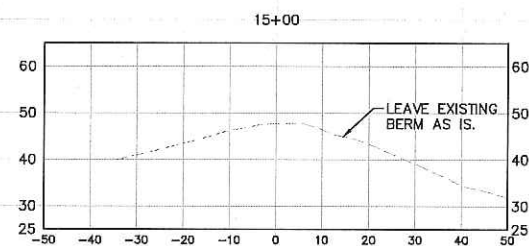
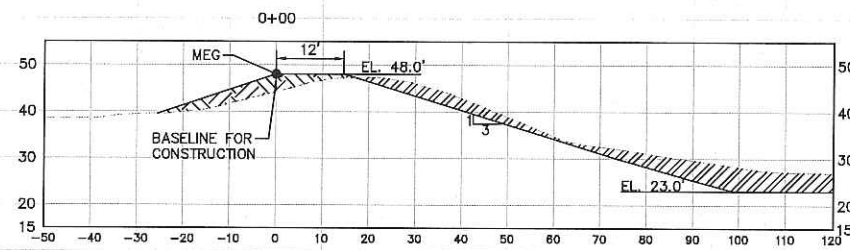
SEWRF RECLAIMED PUMP BACK STATION



EAST LAKE REHABILITATION CURVE TABLES

SHEET NUMBER C-2

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LEGEND:
 FILL AREA
 CUT AREA
 *REFER TO DETAIL 3 SHEET C-29 FOR 12' ACCESS DRIVE RESTORATION

No.	REVISIONS	DATE	BY

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MANATEE COUNTY



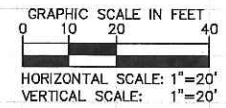
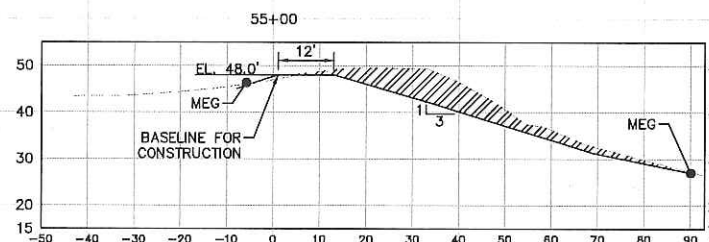
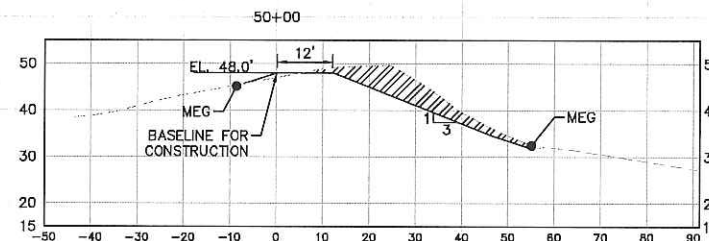
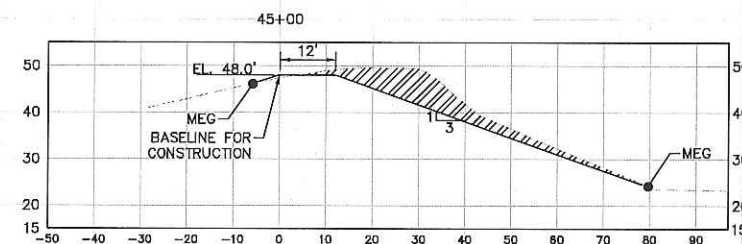
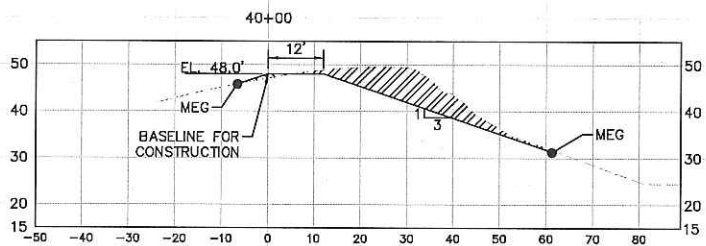
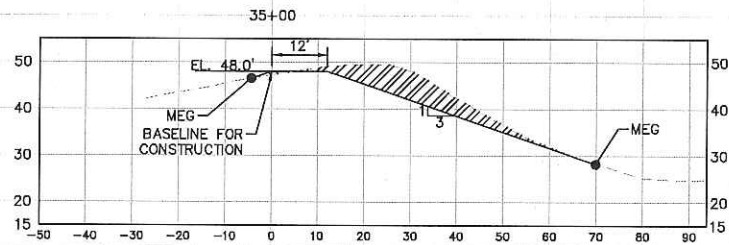
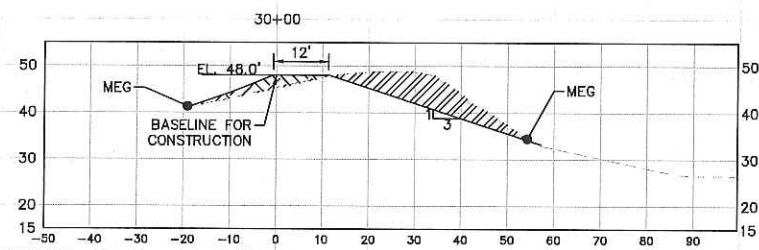
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 PUMP BACK STATION



EAST LAKE
 REHABILITATION
 SECTIONS

SHEET NUMBER
C-3

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LEGEND:
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 PUMP BACK STATION

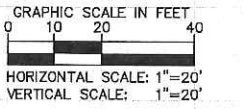
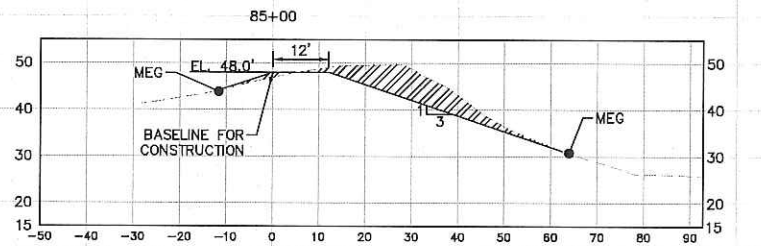
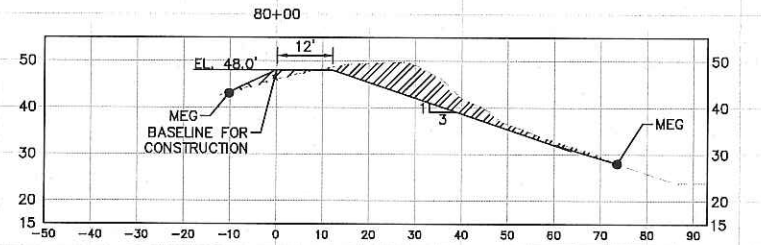
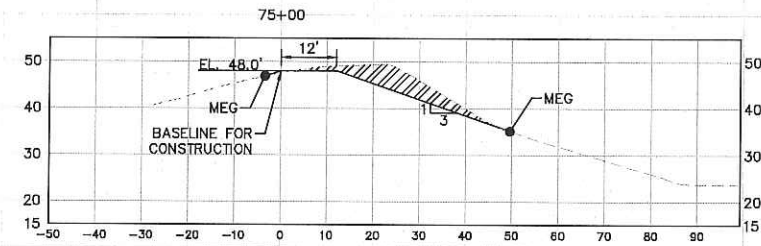
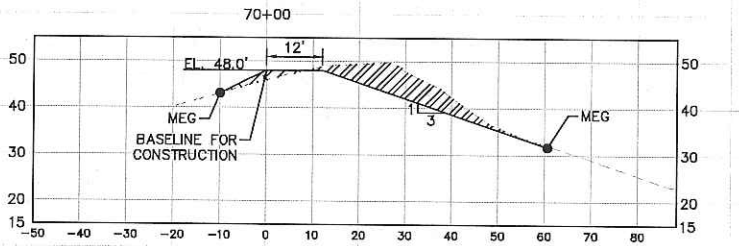
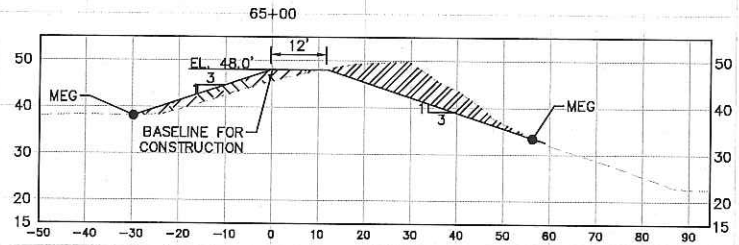
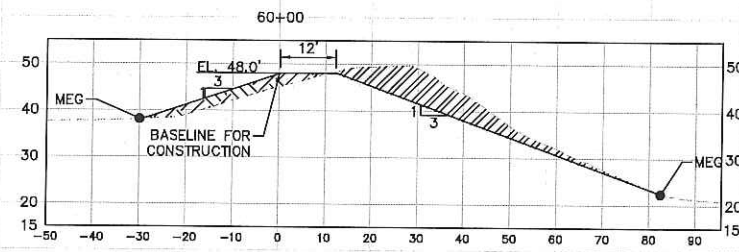


EAST LAKE
 REHABILITATION
 SECTIONS

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C-4

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LEGEND:
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 CUT AREA
 *REFER TO DETAIL 3 SHEET C-29 FOR 12' ACCESS DRIVE RESTORATION

No.	REVISIONS	DATE	BY

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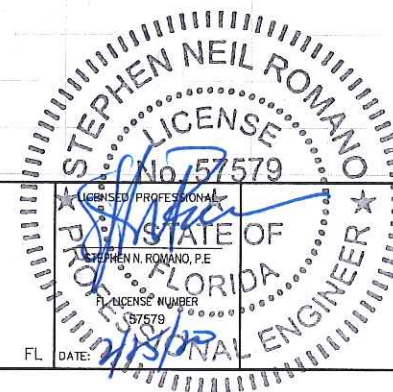
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MANATEE COUNTY



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 PUMP BACK STATION

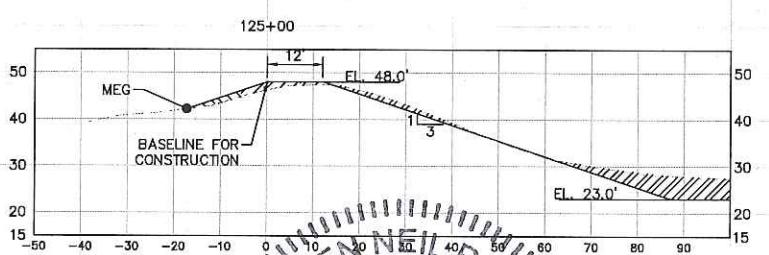
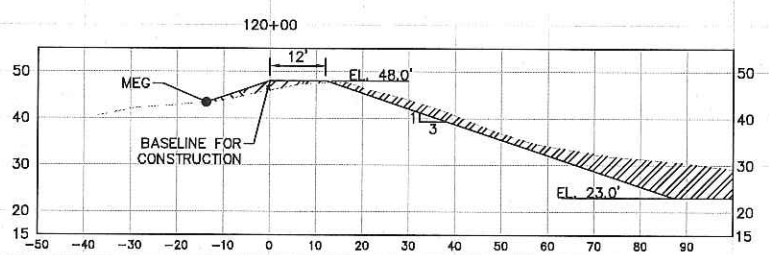
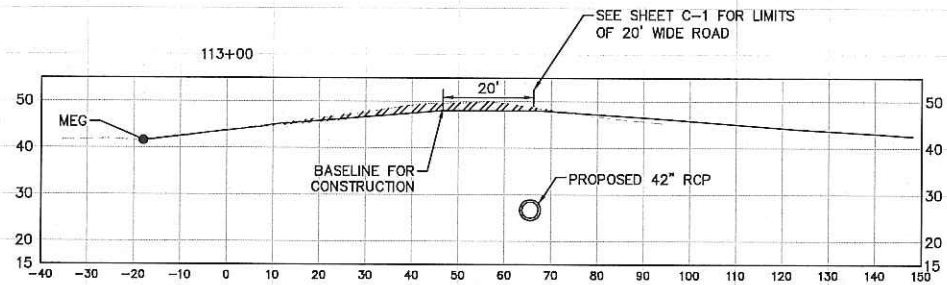
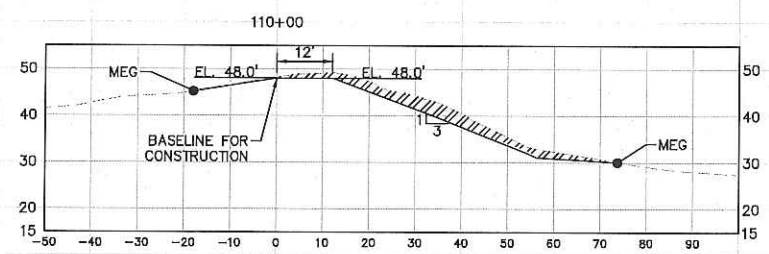
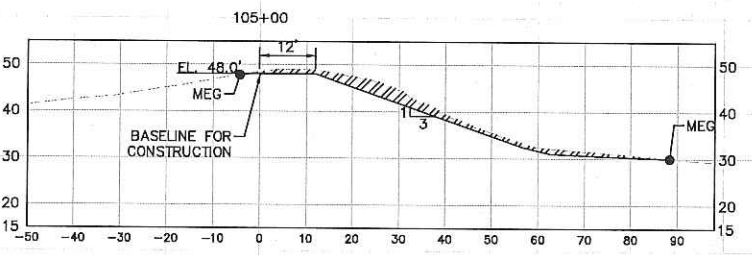
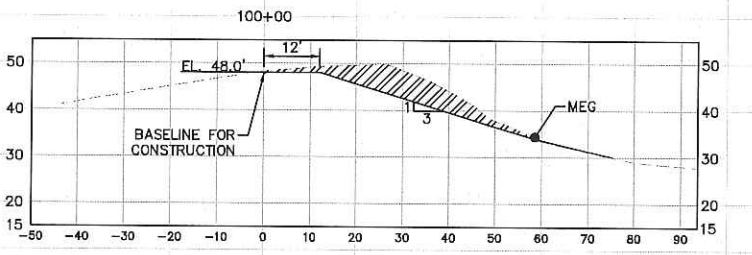
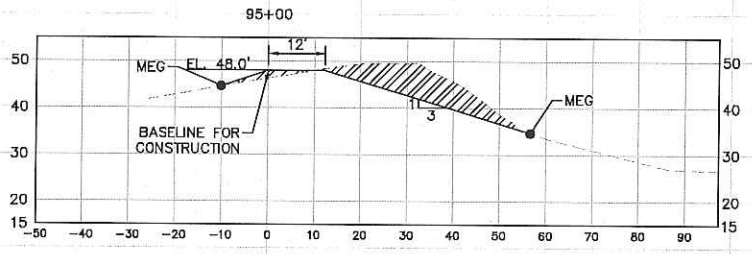
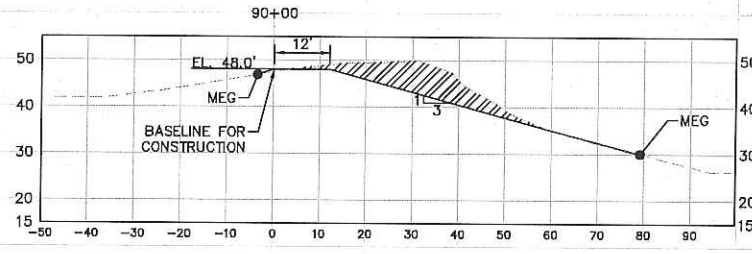


EAST LAKE
 REHABILITATION
 SECTIONS



SHEET NUMBER

C-5

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GRAPHIC SCALE IN FEET
 0 10 20 40
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=20'

LEGEND:
 FILL AREA 
 CUT AREA 

*REFER TO DETAIL 3 SHEET C-29 FOR 12' ACCESS DRIVE RESTORATION

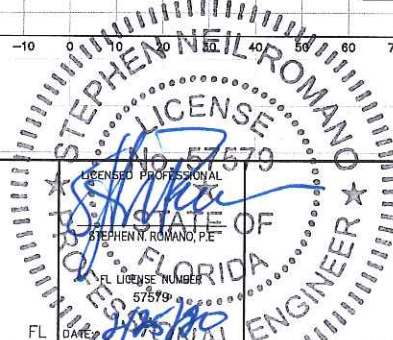
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KHA PROJECT
 148400015
 DATE
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 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW MANATEE COUNTY



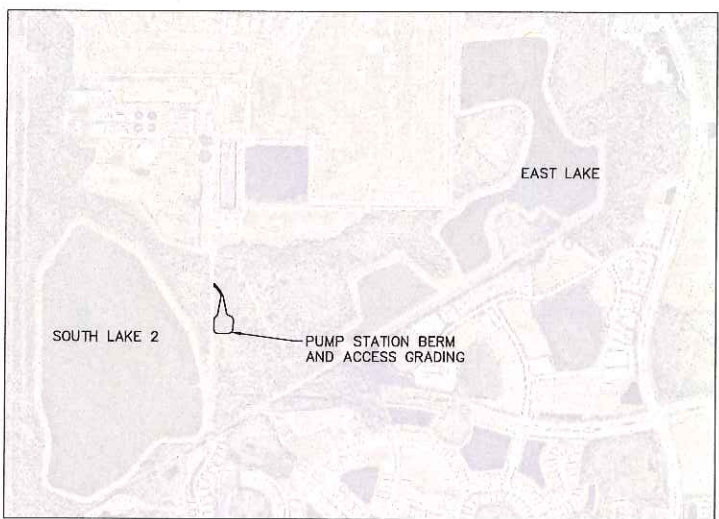
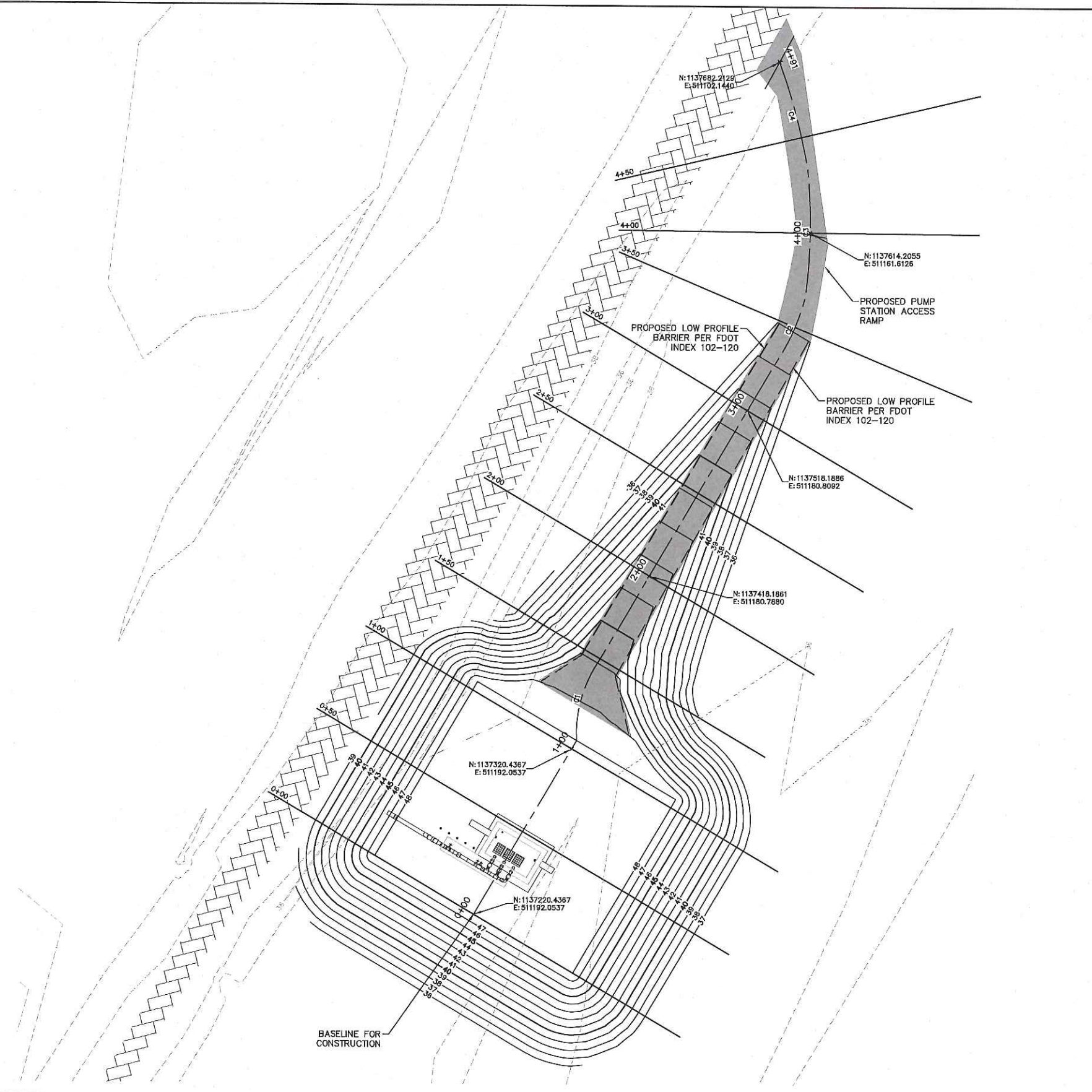
SEWRF RECLAIMED
 PUMP BACK STATION



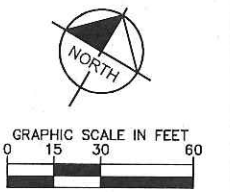
EAST LAKE
 REHABILITATION
 SECTIONS

SHEET NUMBER
 C-6

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KEY MAP: EAST LAKE



LEGEND:
 PROPOSED SHELL ACCESS ROAD (SEE DETAIL 3 SHEET C-29 FOR DETAILS.)
 EXISTING ACCESS ROAD

PUMP STATION ACCESS ROAD AND BERM CROSS SECTIONS	
SHEET	STATION
C-8	0+00
C-8	0+50
C-8	1+00
C-8	1+50
C-8	2+00
C-8	2+50
C-8	3+00
C-8	3+50
C-9	4+00
C-9	4+50

CURVE TABLE								
CURVE	RADIUS	LENGTH	START NORTHING EASTING	START STATION	END NORTHING EASTING	END STATION	PI NORTHING EASTING	PI STATION
C1	67.38'	42.37'	N: 1137325.4566 E: 511192.0537	1+05.02	N: 1137365.5725 E: 511180.7768	1+47.39	N: 1137343.6810 E: 511179.8928	1+26.93
C2	112.82'	39.84'	N: 1137545.7369 E: 511180.8151	3+27.55	N: 1137585.1134 E: 511176.3150	3+67.39	N: 1137565.8266 E: 511182.0779	3+47.68
C3	301.76'	66.02'	N: 1137585.1134 E: 511176.3150	3+67.39	N: 1137642.1842 E: 511143.3798	4+33.41	N: 1137615.4576 E: 511162.9816	4+00.53
C4	315.30'	57.55'	N: 1137642.1842 E: 511143.3798	4+33.41	N: 1137682.2129 E: 511102.1439	4+90.96	N: 1137664.0855 E: 511124.5935	4+62.27

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 DATE
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 SCALE AS SHOWN
 DESIGNED BY SNR
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 MANATEE COUNTY

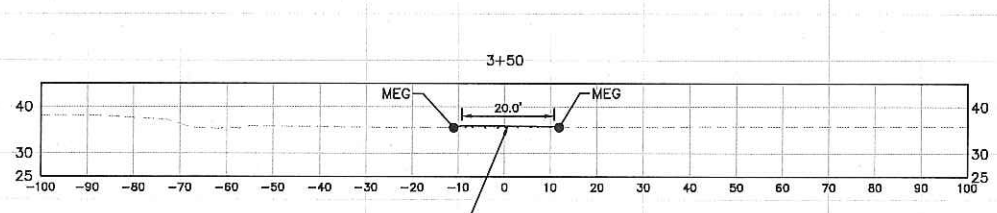
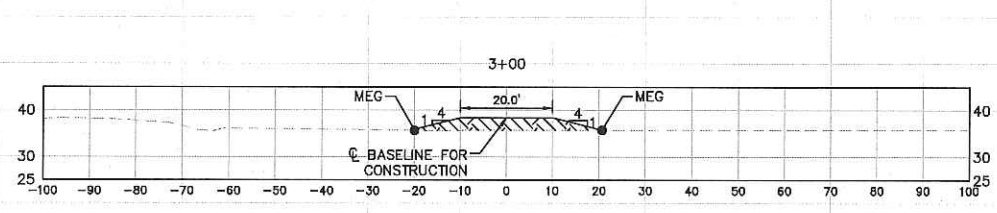
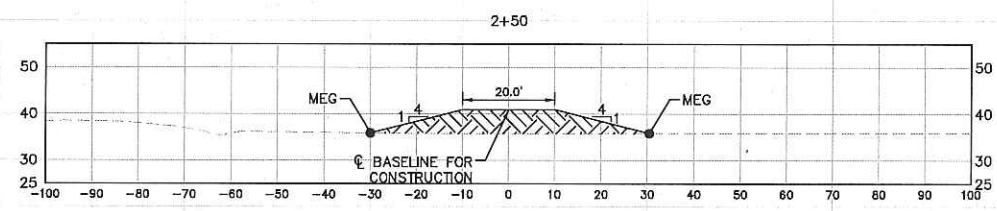
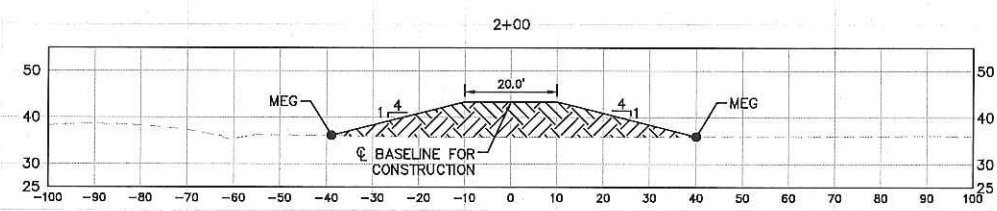
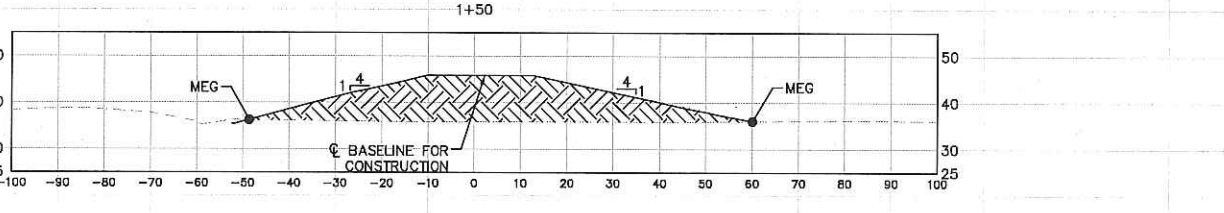
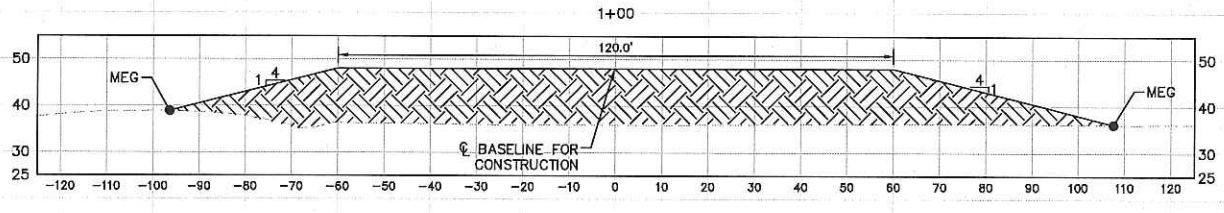
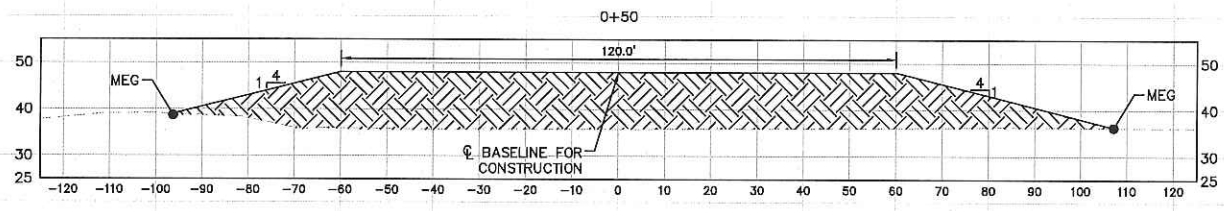
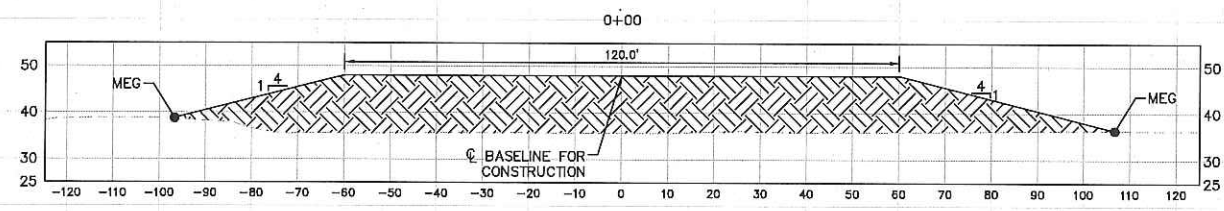
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 PUMP BACK STATION**





**PUMP STATION GRADING
 PLAN**

SHEET NUMBER
C-7

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GRAPHIC SCALE IN FEET
 0 10 20 40.1
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=20'

LEGEND:
 FILL AREA 
 CUT AREA 



No.	REVISIONS	DATE	BY

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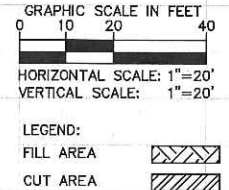
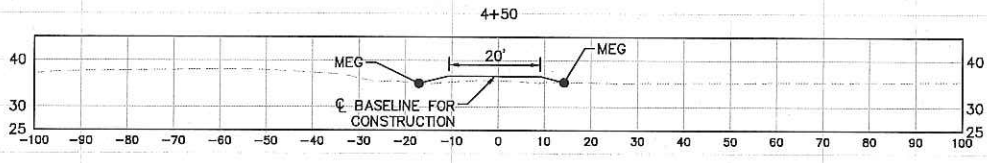
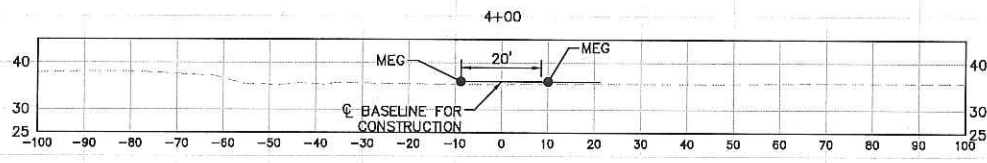
KHA PROJECT
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 DATE
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 SCALE AS SHOWN
 DESIGNED BY SNR
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**PUMP STATION
 GRADING
 SECTIONS**

SHEET NUMBER
C-8

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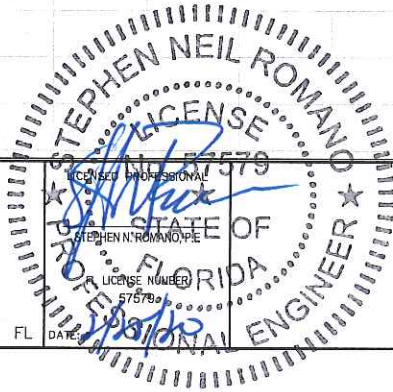
No.	REVISIONS	DATE	BY

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KHA PROJECT
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 MANATEE COUNTY



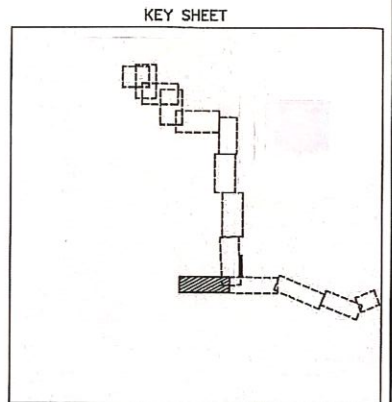
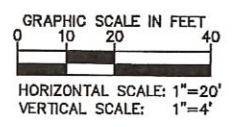
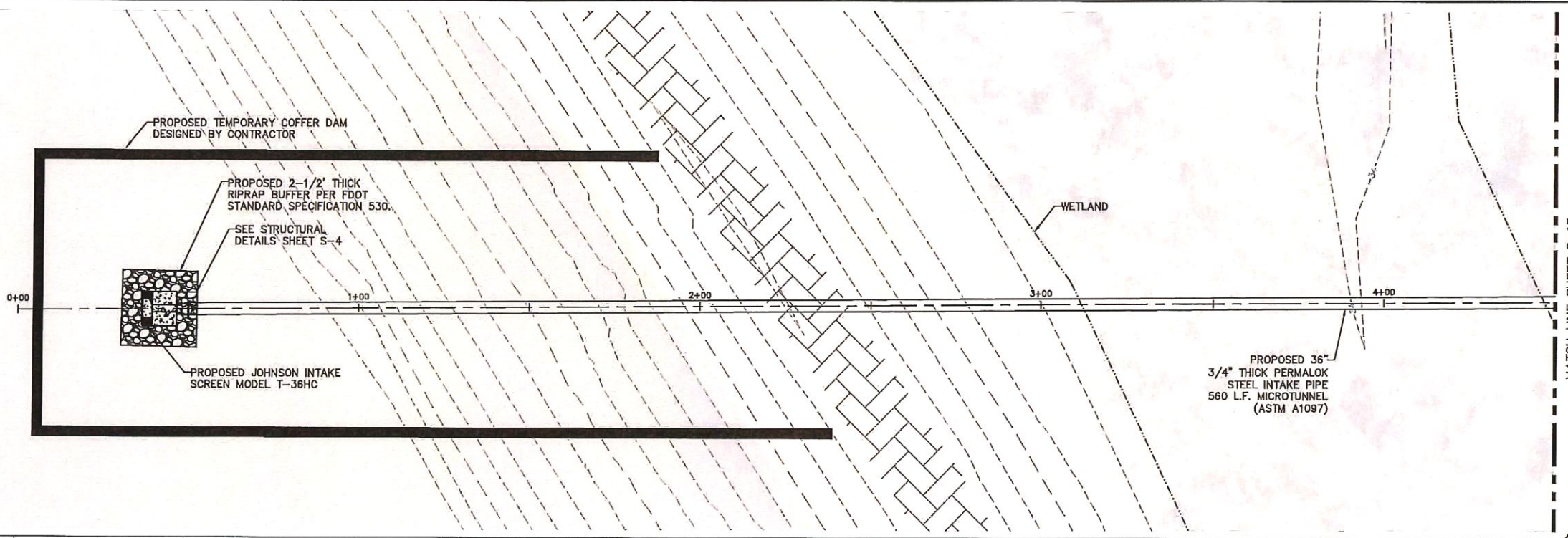
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 PUMP BACK STATION**



**PUMP STATION
 GRADING
 SECTIONS**

SHEET NUMBER
C-9

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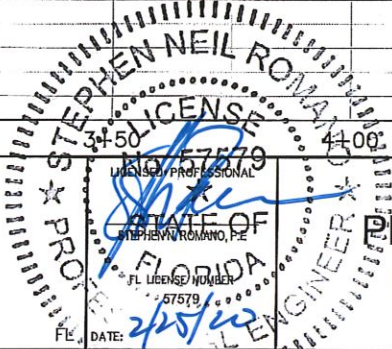
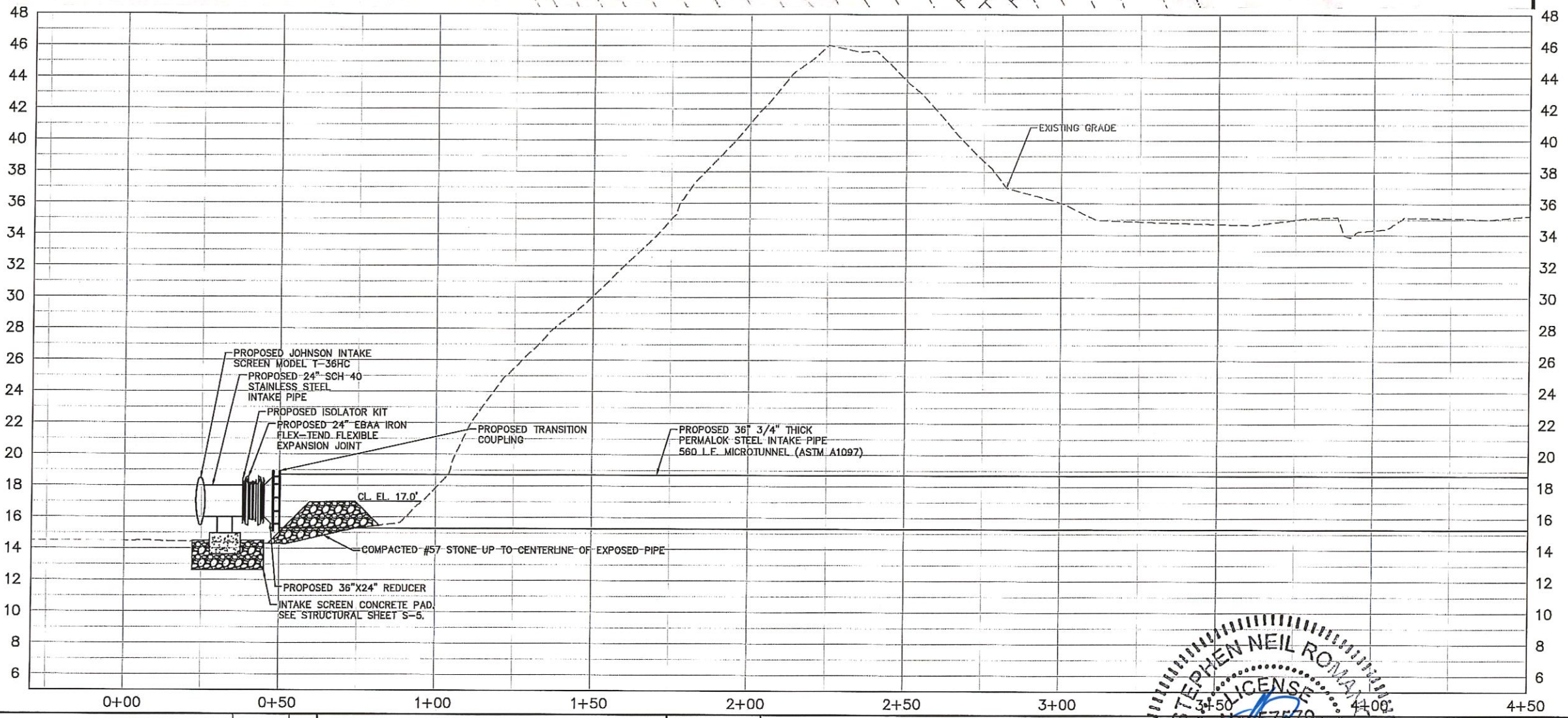


- LEGEND:
- 25' WETLAND BUFFER
 - PROPOSED ACCESS ROAD (SEE SHEET C-28 FOR DETAILS.)
 - EXISTING ACCESS ROAD

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No.	REVISIONS	DATE	BY

Kimley»Horn
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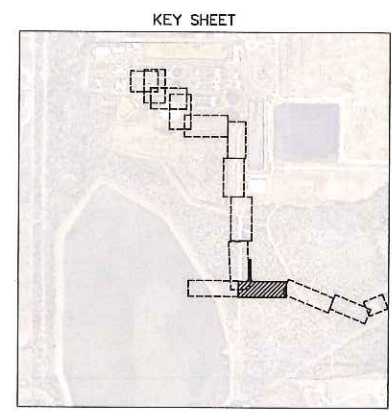
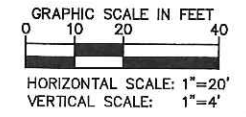
KHA PROJECT
 14B400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

Manatee County
 SEWRF RECLAIMED
 PUMP BACK STATION
 MANATEE COUNTY

**PLAN & PROFILE - SOUTH
 LAKE 2 INTAKE PIPING**

SHEET NUMBER
C-10

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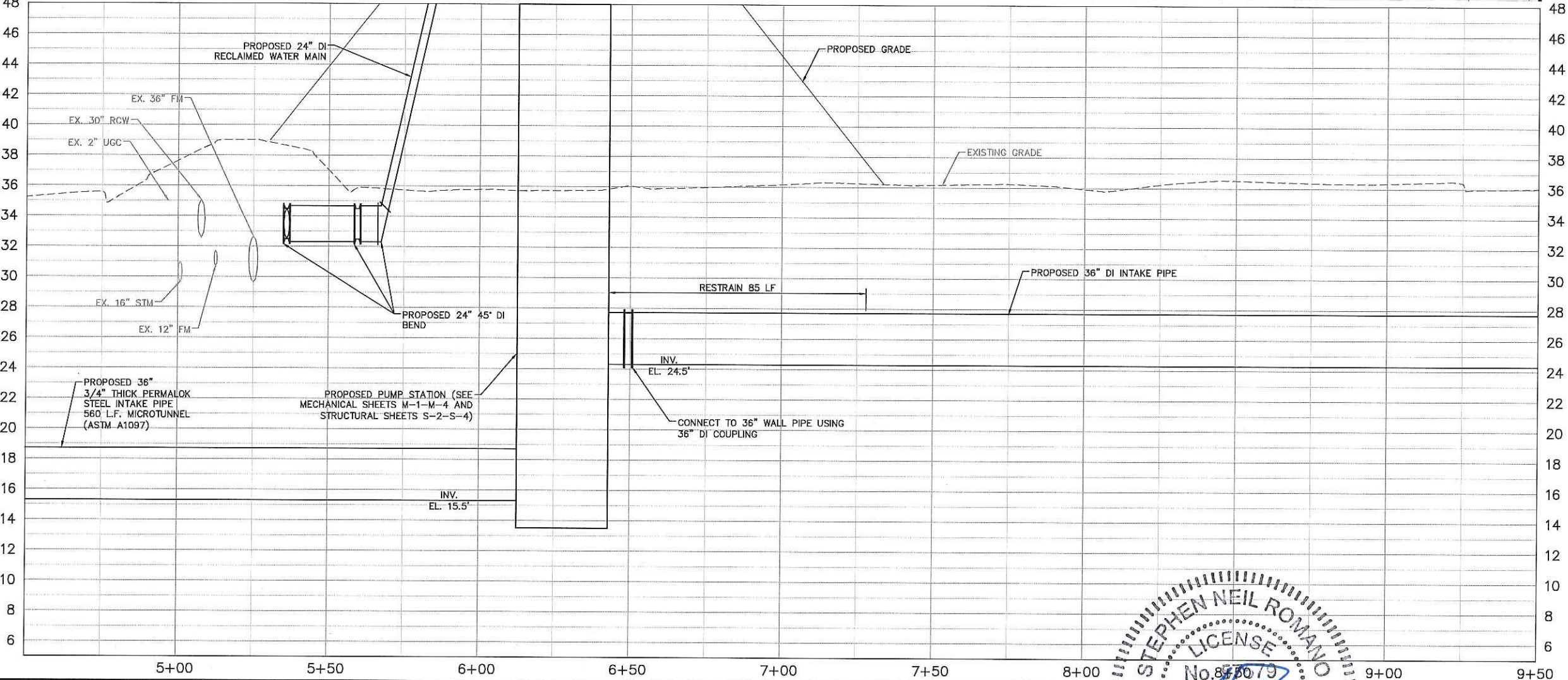
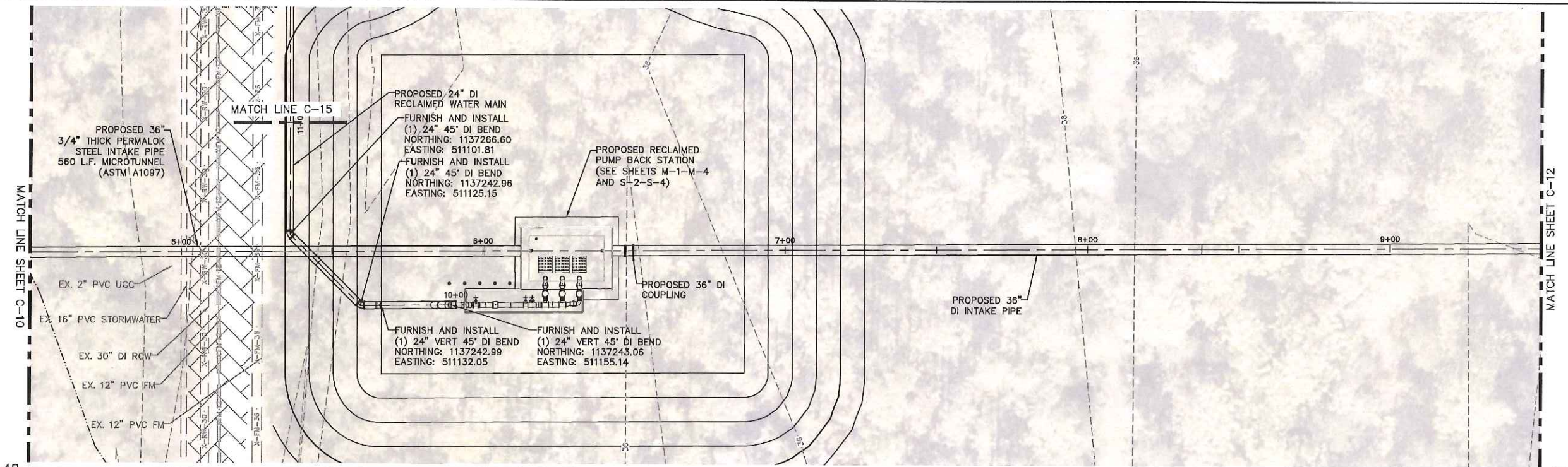
LEGEND:

- 25' WETLAND BUFFER +
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- EXISTING ACCESS ROAD

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No.	REVISIONS	DATE	BY

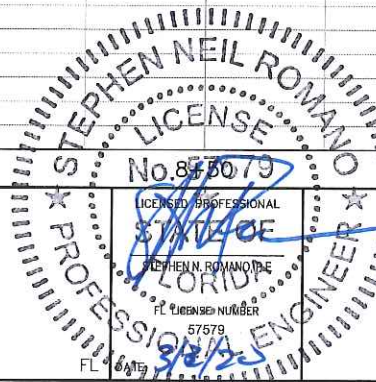
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KHA PROJECT 148400015
 DATE 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW
 MANATEE COUNTY



SEWRF RECLAIMED PUMP BACK STATION

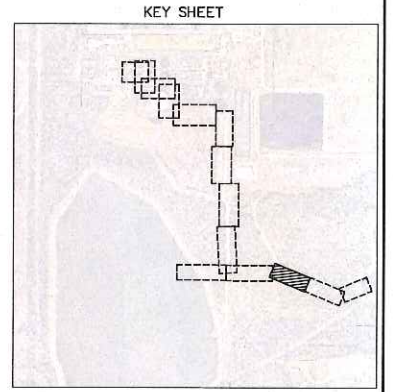
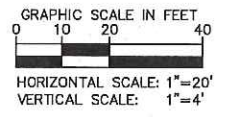
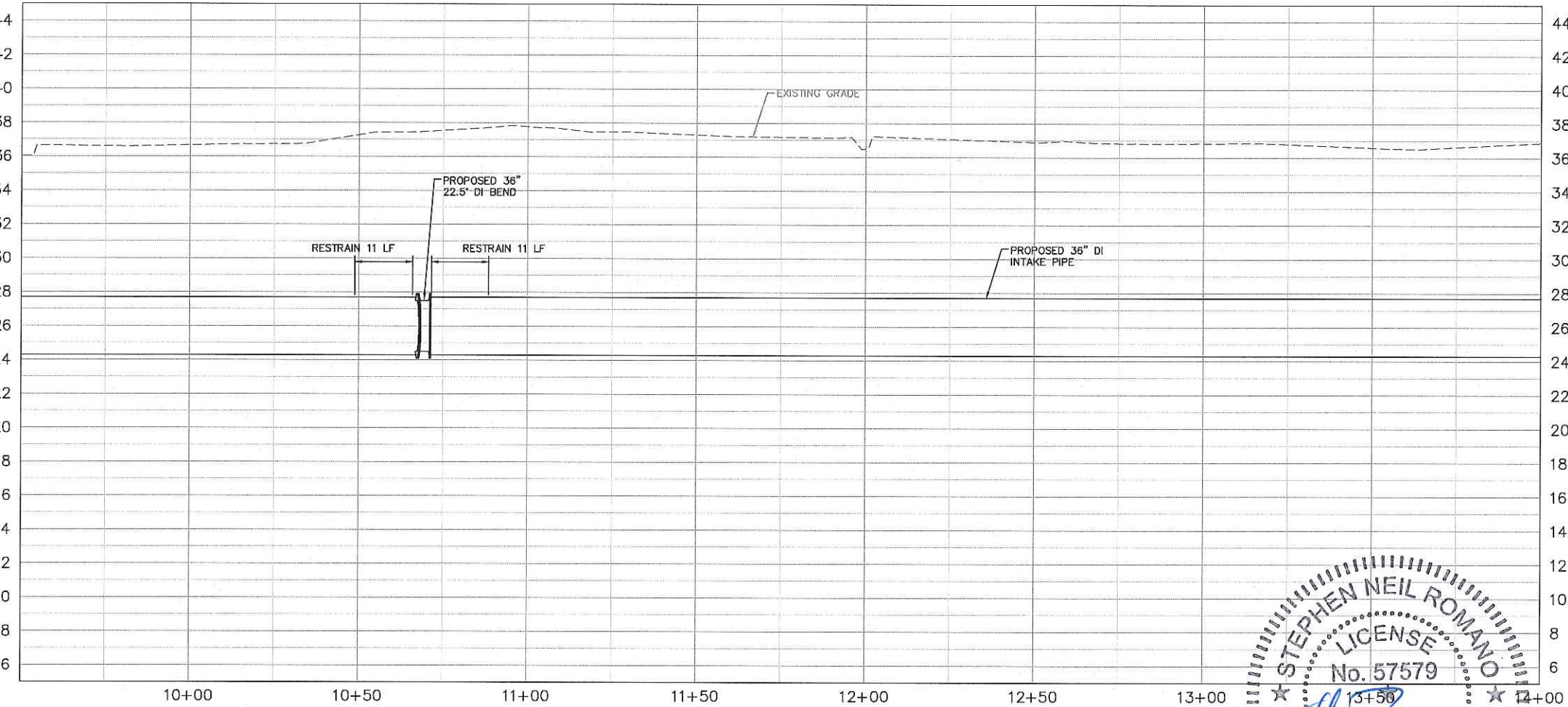
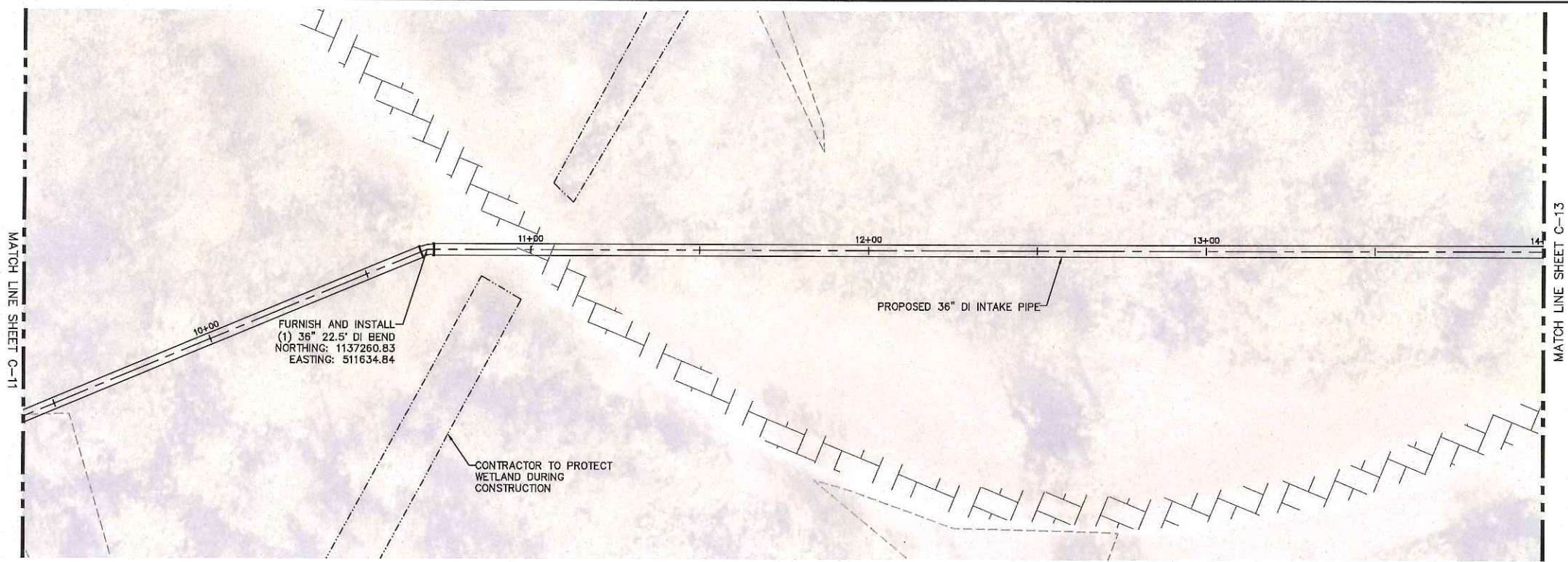


PLAN & PROFILE - SOUTH LAKE 2 INTAKE PIPING

SHEET NUMBER

C-11

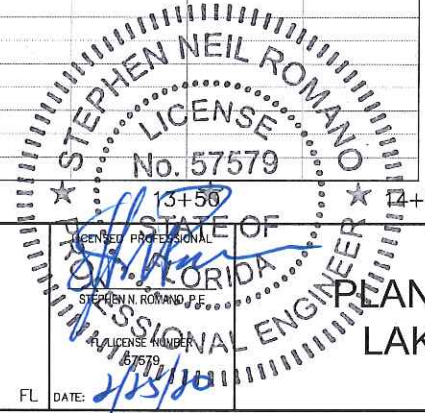
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LEGEND:
 PROPOSED ACCESS ROAD (SEE SHEET C-28 FOR DETAILS.) [Symbol]
 EXISTING ACCESS ROAD [Symbol]

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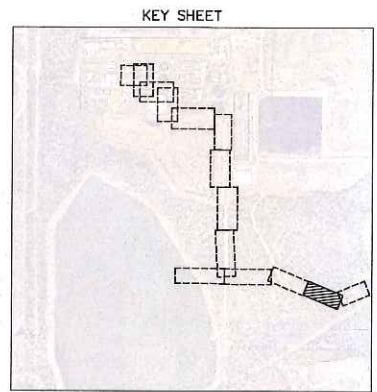
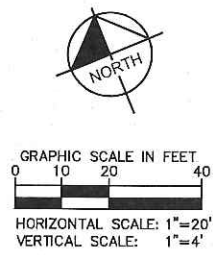
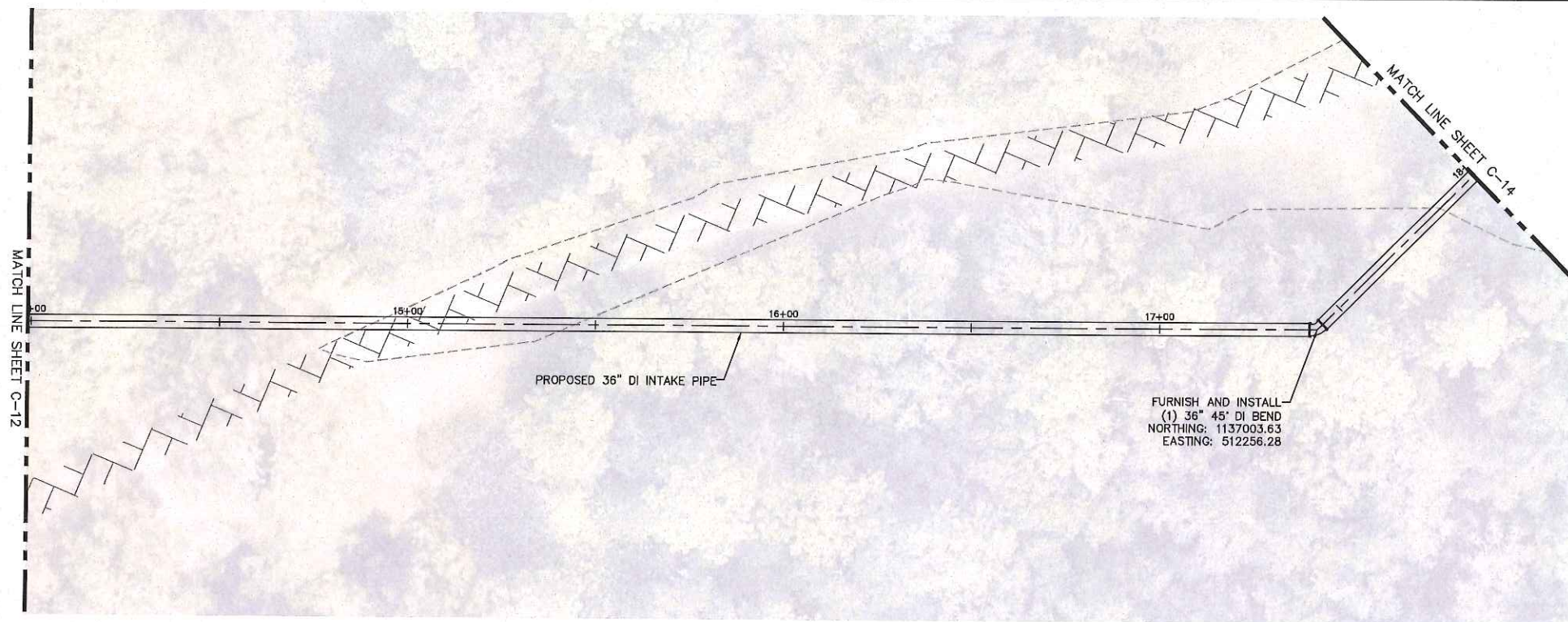
KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

Manatee County
**SEWRF RECLAIMED
 PUMP BACK STATION**
 MANATEE COUNTY

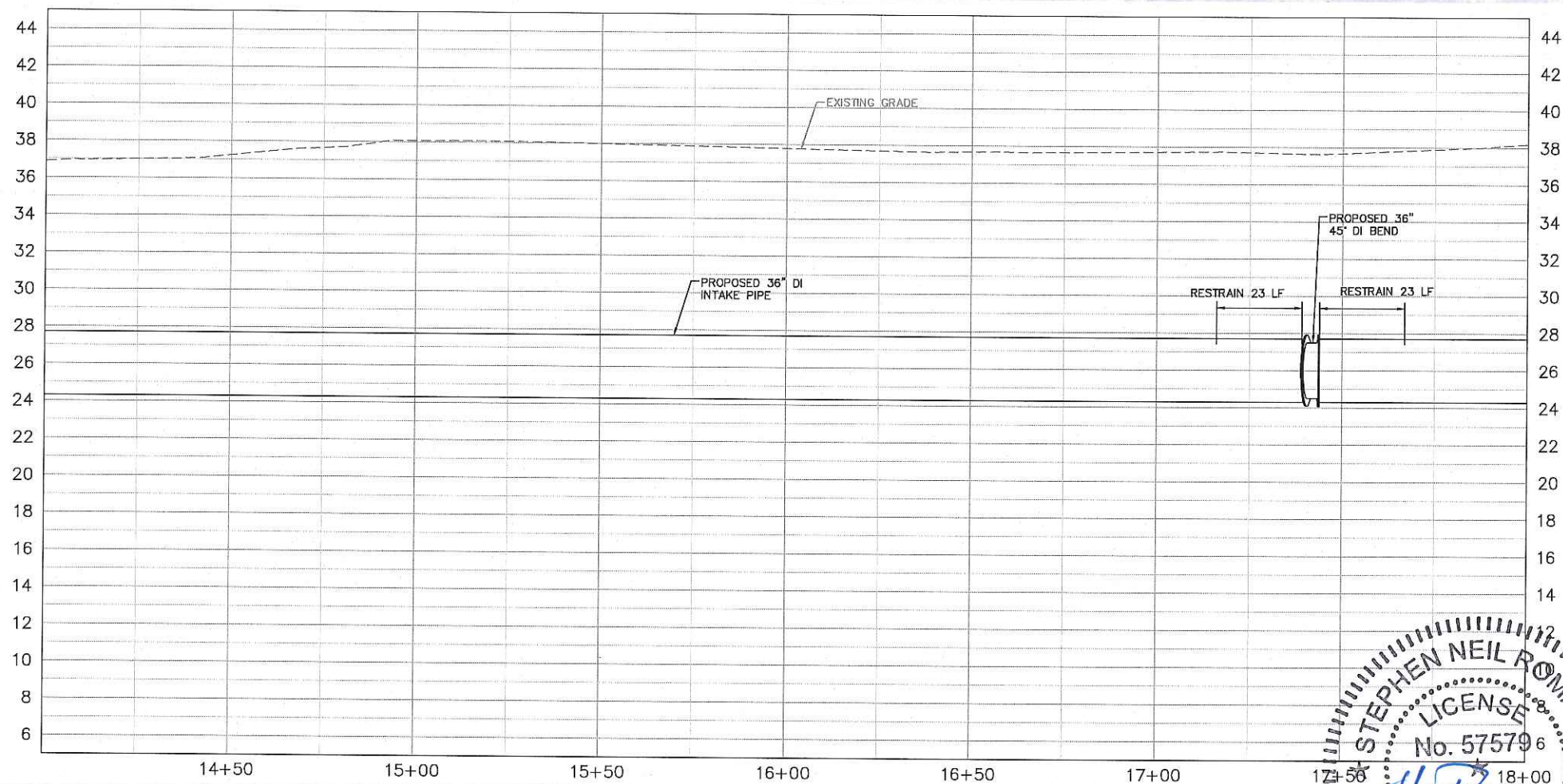
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**PLAN & PROFILE - EAST
 LAKE INTAKE PIPING**

SHEET NUMBER
C-12

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LEGEND:
 PROPOSED ACCESS ROAD (SEE SHEET C-28 FOR DETAILS.) [Symbol: Dashed line with cross-hatching]
 EXISTING ACCESS ROAD [Symbol: Solid line with cross-hatching]



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STEPHEN NEIL ROMANO
 LICENSE
 No. 575796
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 DATE: 2/15/20

No.	REVISIONS	DATE	BY

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KHA PROJECT
 148400015
 DATE
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 SCALE AS SHOWN
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 MANATEE COUNTY

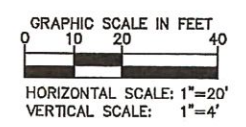
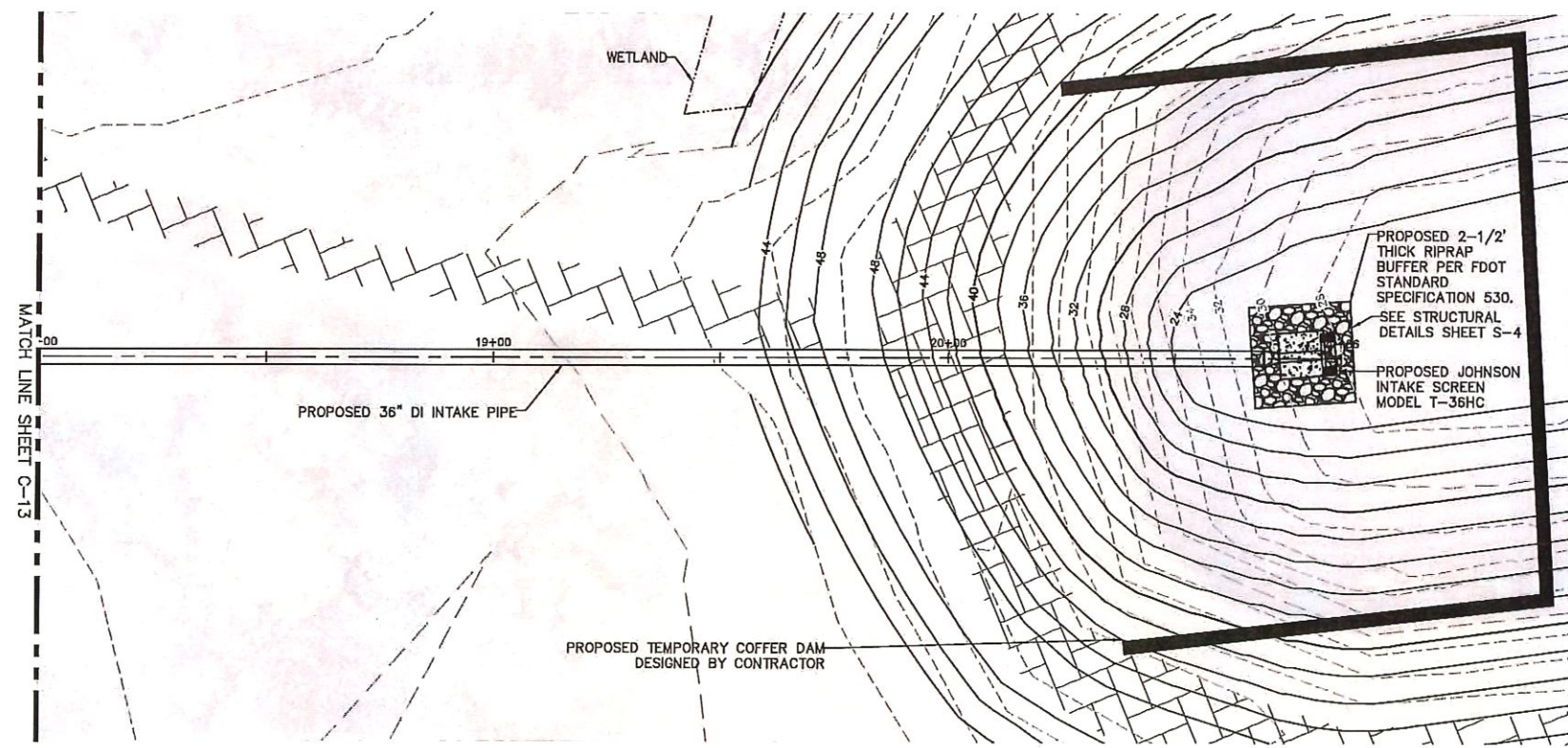


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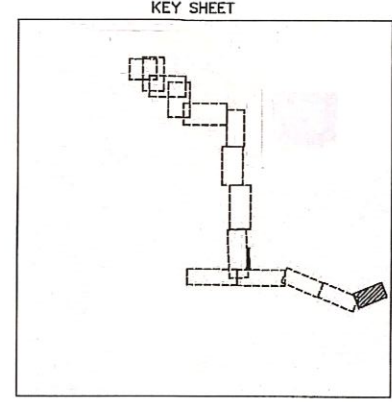
PLAN & PROFILE - EAST
 LAKE INTAKE PIPING

SHEET NUMBER
C-13

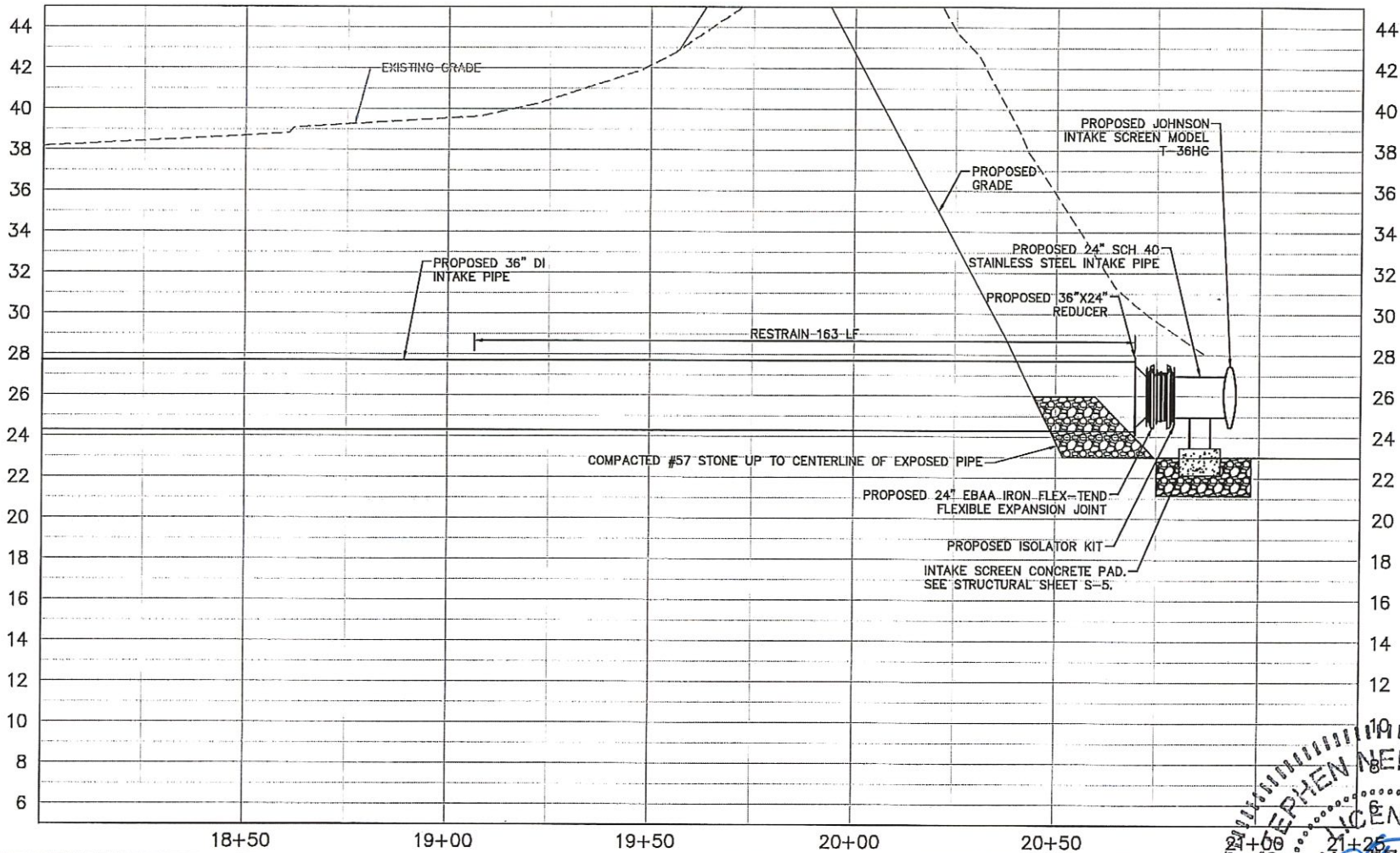
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- NOTE:**
- SUBMERGED DI PIPE AND FITTINGS SHALL BE RESTRAINED WITH INTEGRAL JOINT RESTRAINTS. EXTERNAL THRUST RESTRAINTS SHALL NOT BE ALLOWED.
 - CONTRACTOR SHALL INSTALL GRAVEL UP TO THE CENTERLINE OF SUBMERGED INTAKE PIPE



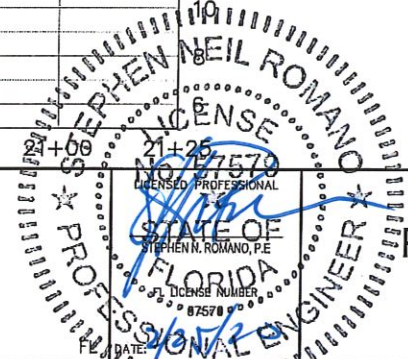
- LEGEND:**
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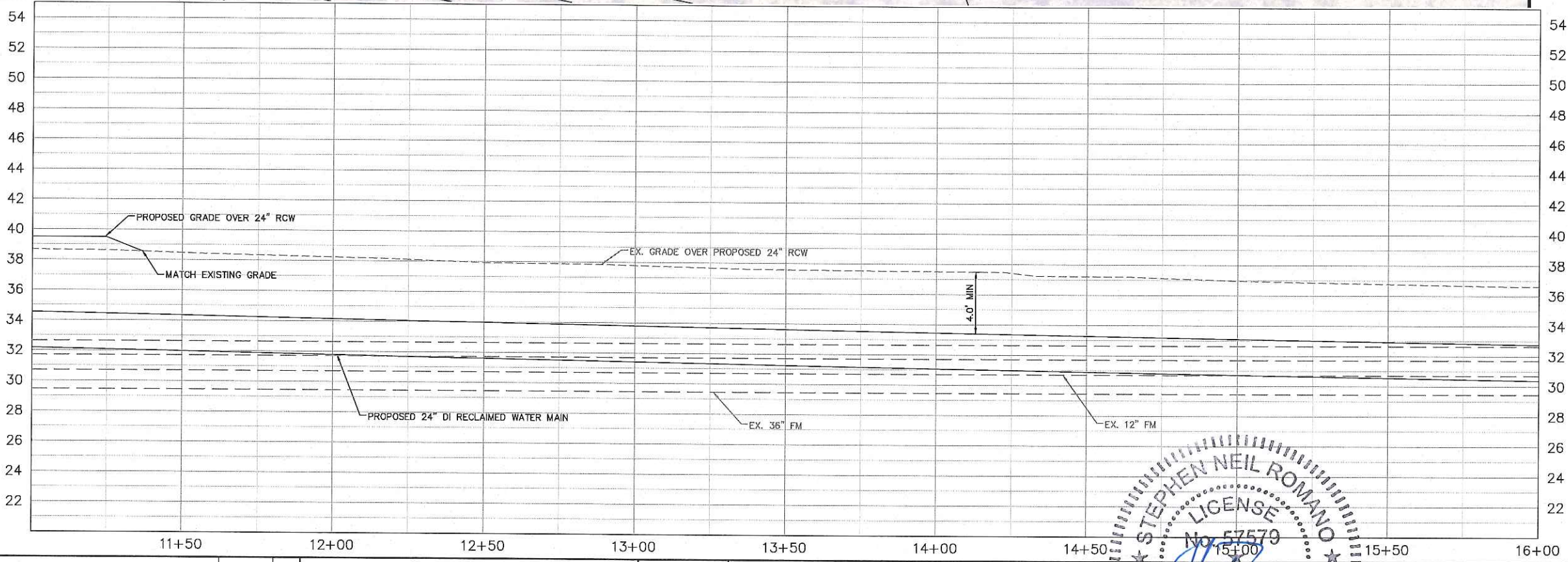
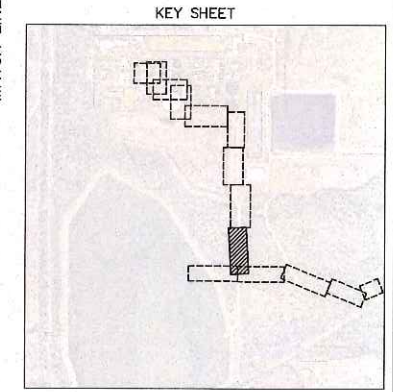
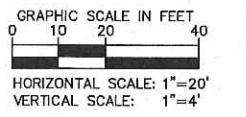
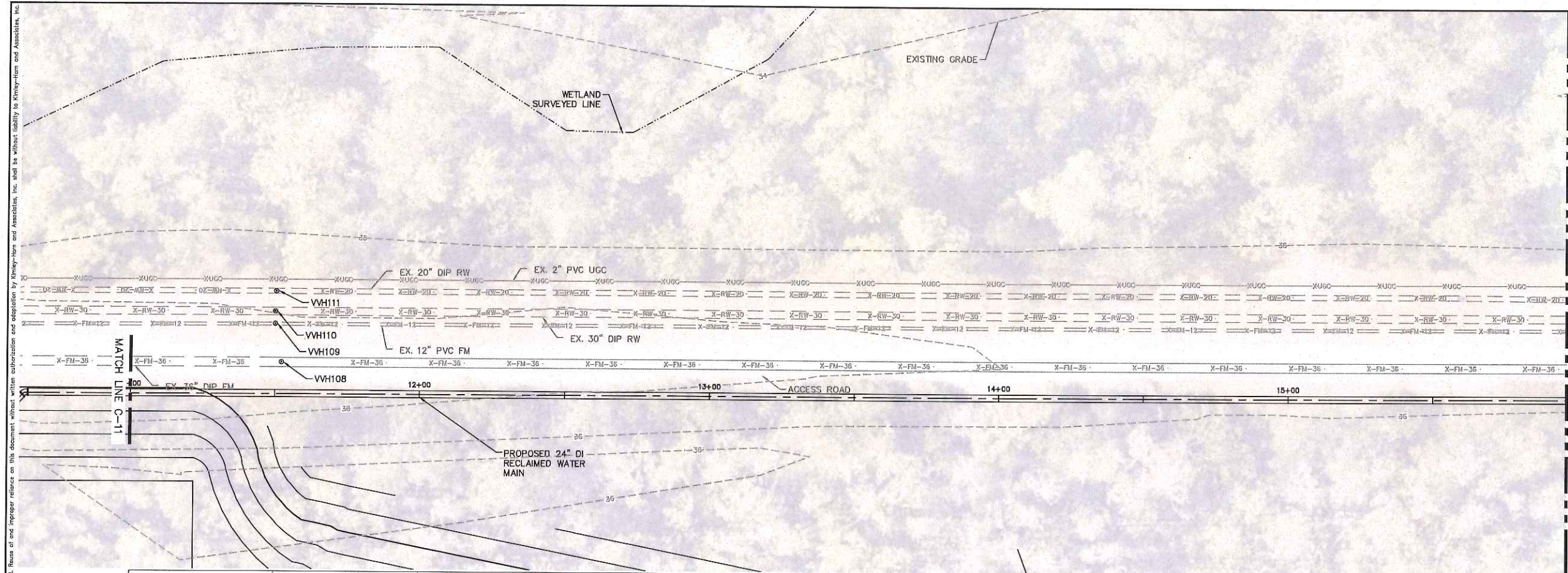
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KHA PROJECT
 148400015
 DATE
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 MANATEE COUNTY



PLAN & PROFILE - EAST LAKE INTAKE PIPING

SHEET NUMBER
C-14



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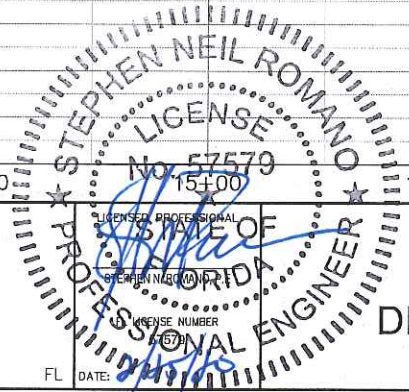
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DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
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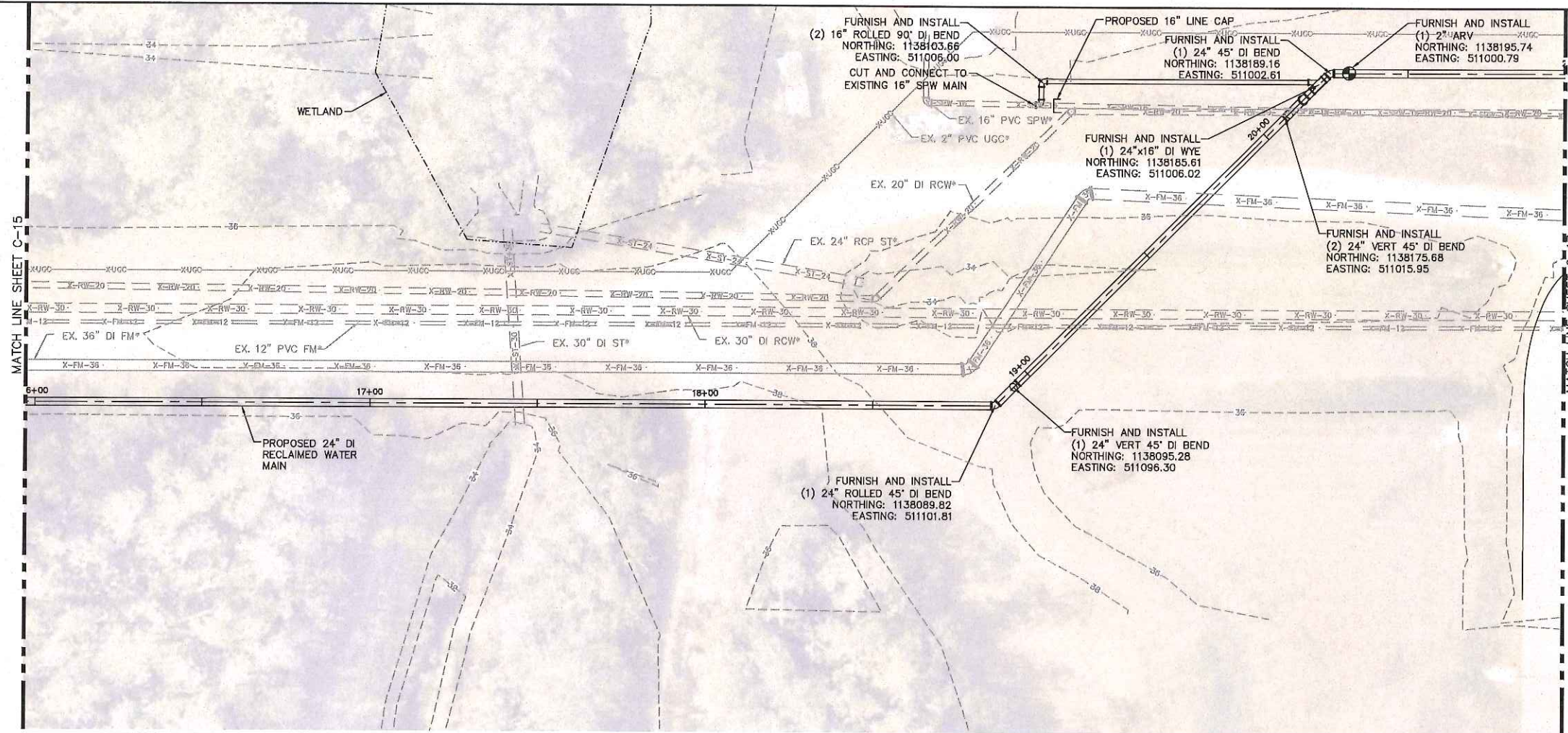
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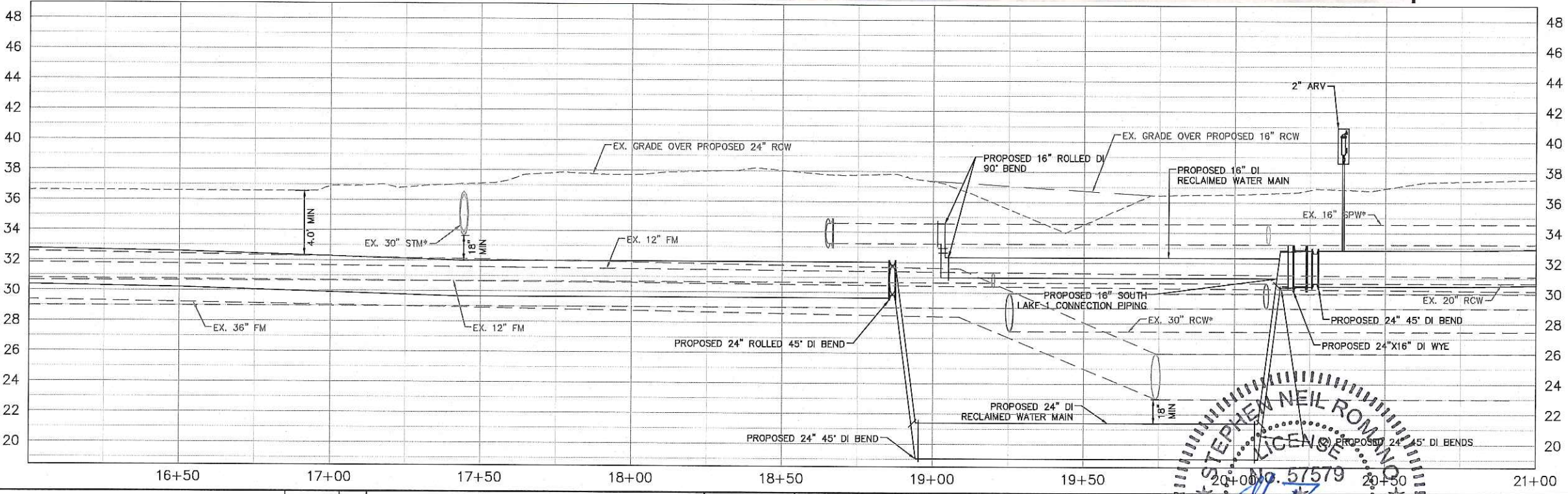
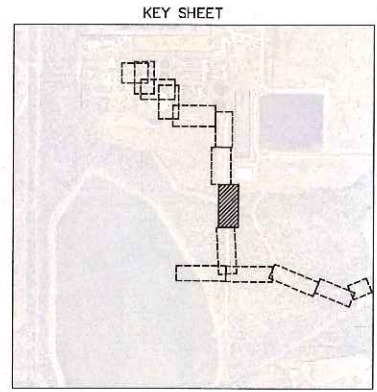
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 DISTRIBUTION PIPING**

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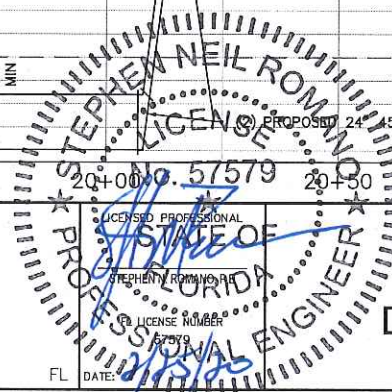
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 VERTICAL SCALE: 1"=4'



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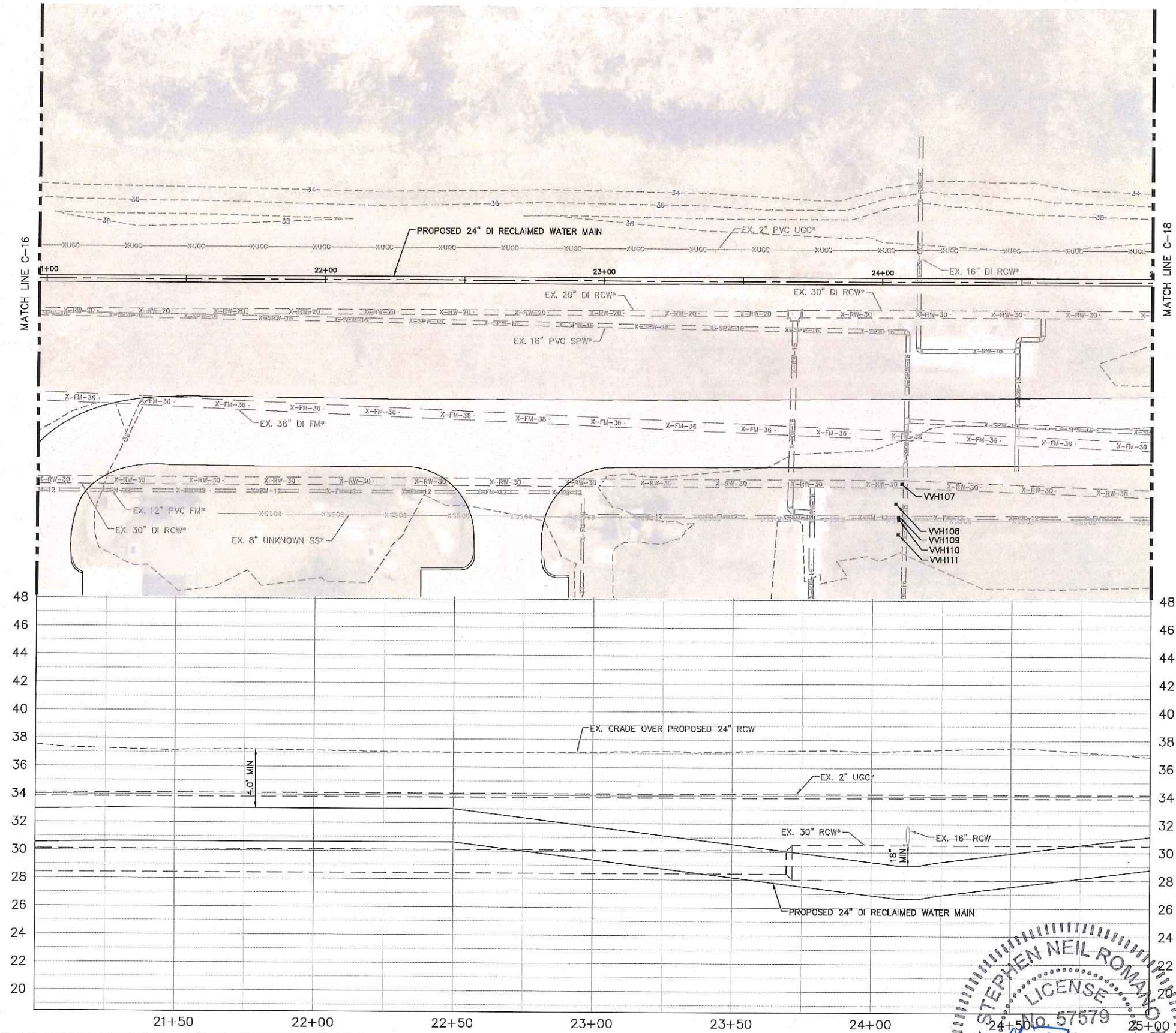
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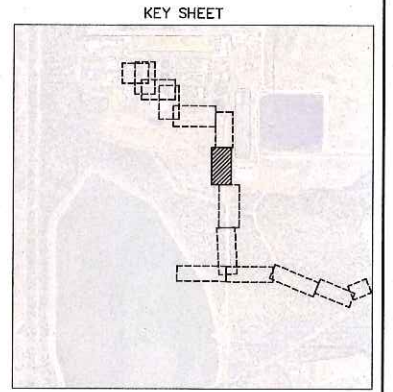
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KHA PROJECT
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 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
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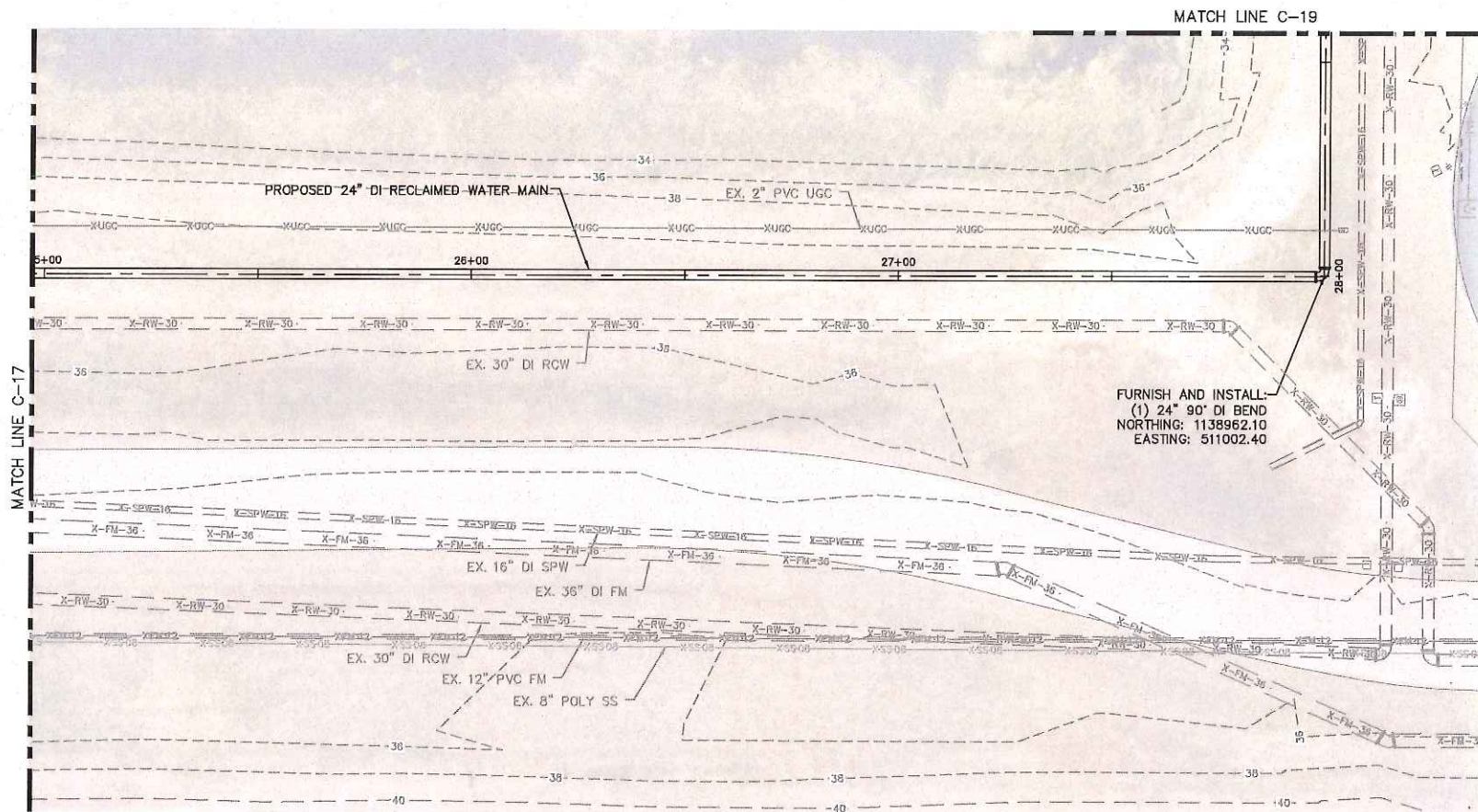
Manatee County
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 MANATEE COUNTY

STEPHEN NEIL ROMANO
 LICENSE No. 57579
 LICENSED PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 FL LICENSE NUMBER 57579
 DATE: 1/28/20

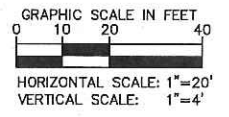
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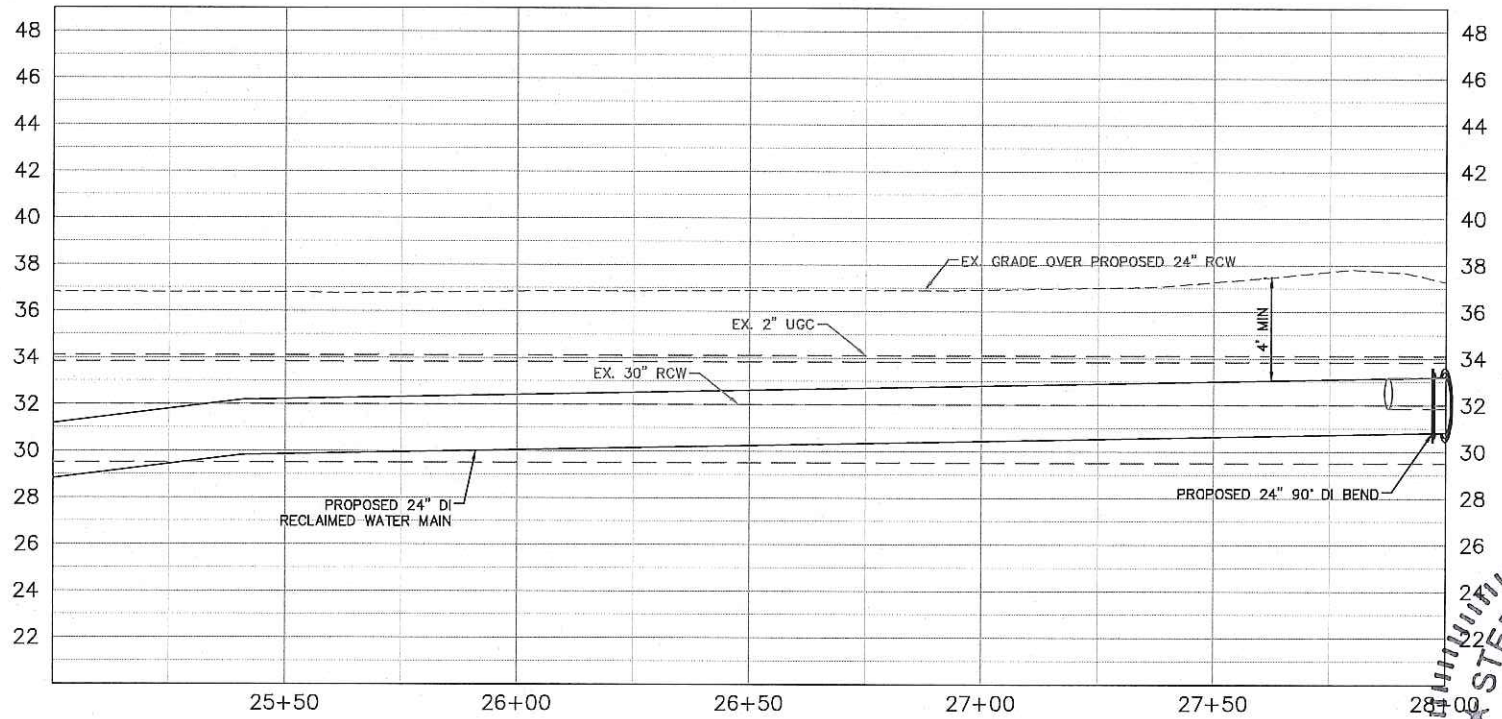
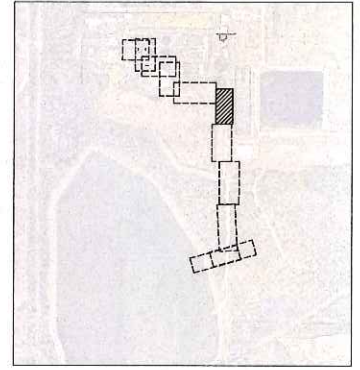
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FURNISH AND INSTALL:
 (1) 24" 90° DI BEND
 NORTHING: 1138962.10
 EASTING: 511002.40

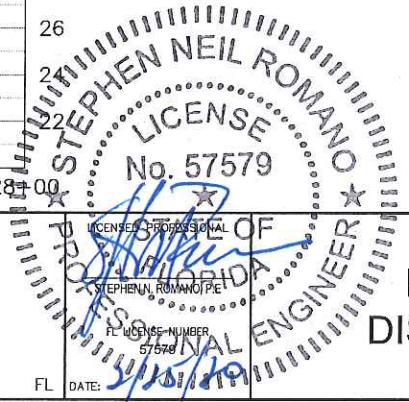


KEY SHEET



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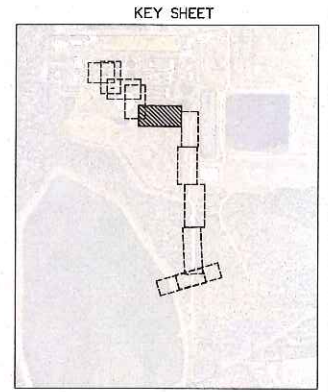
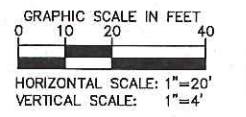
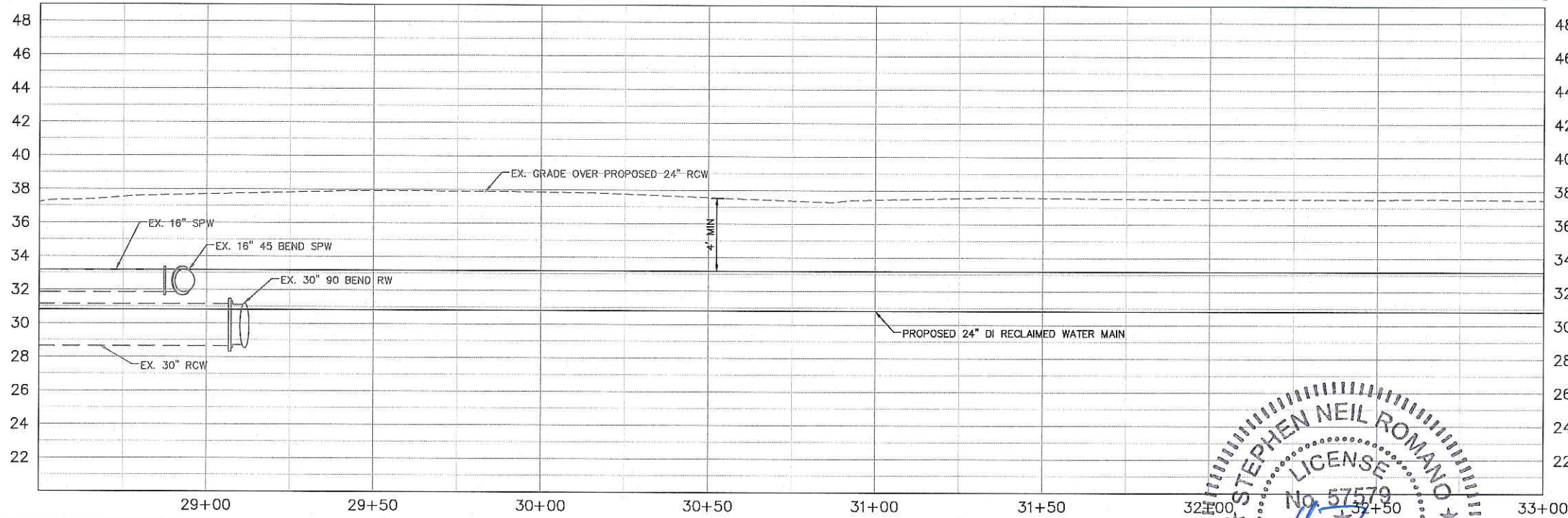
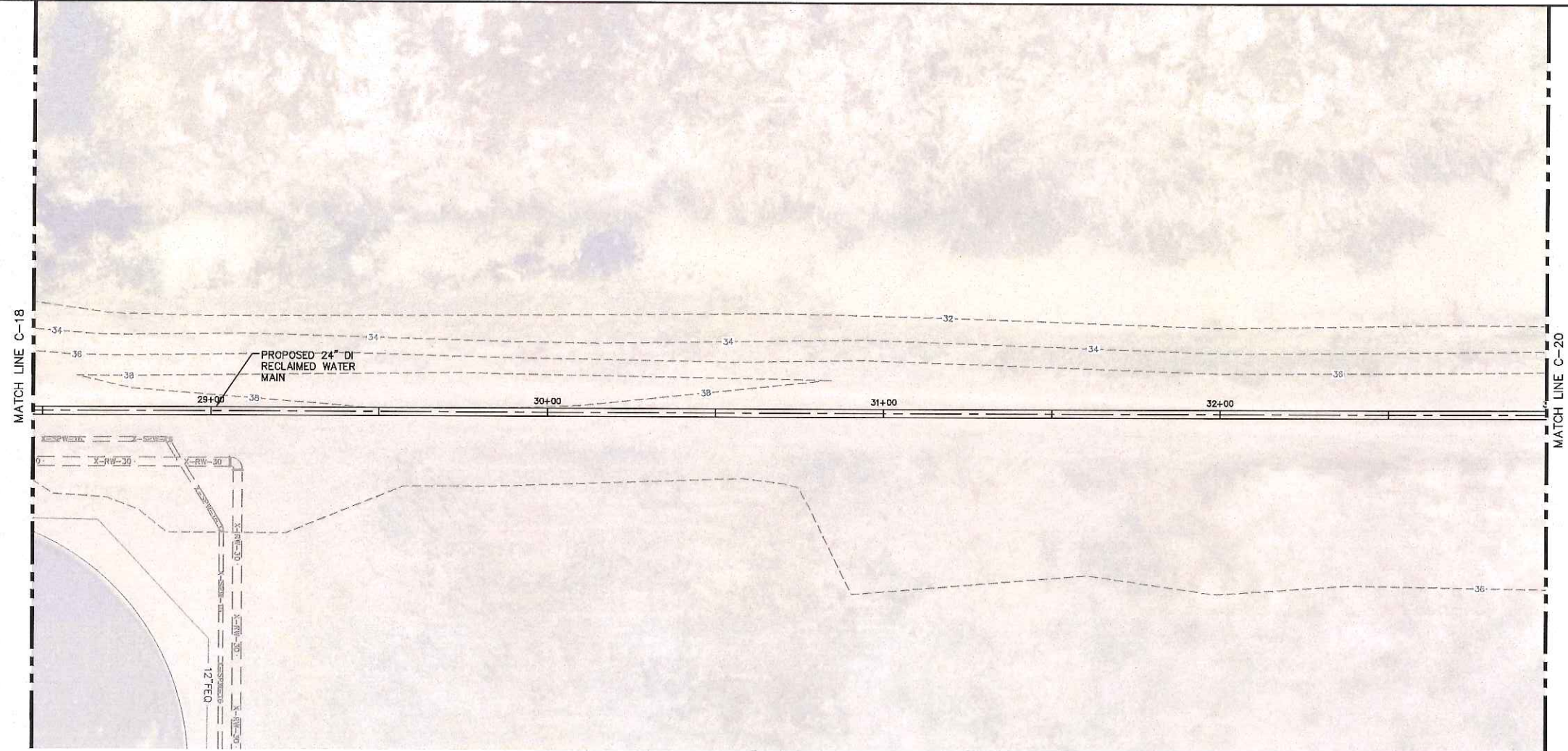
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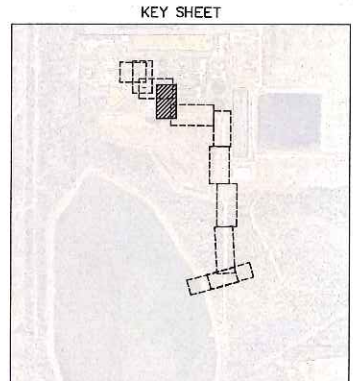
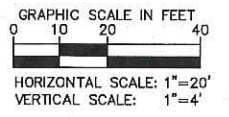
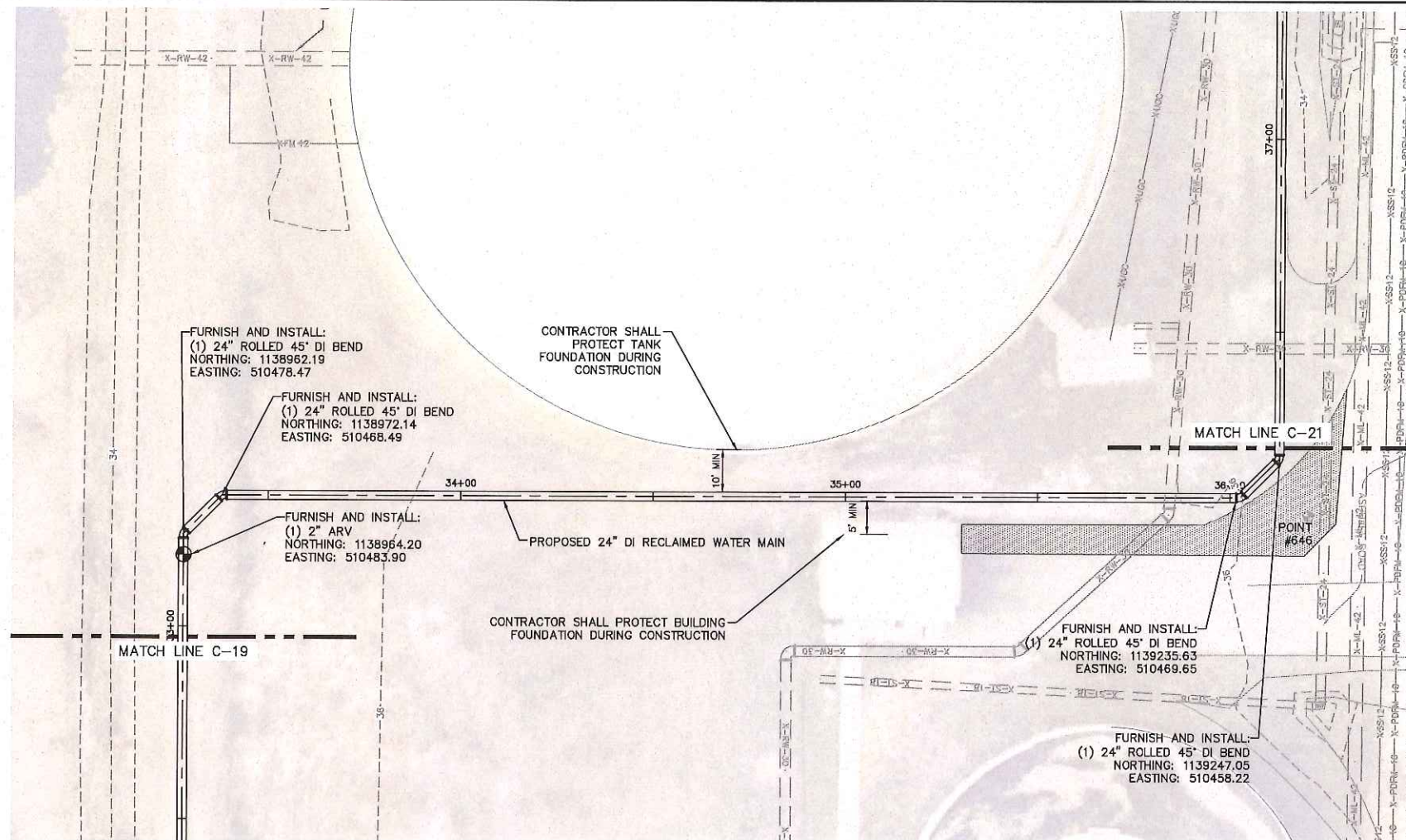
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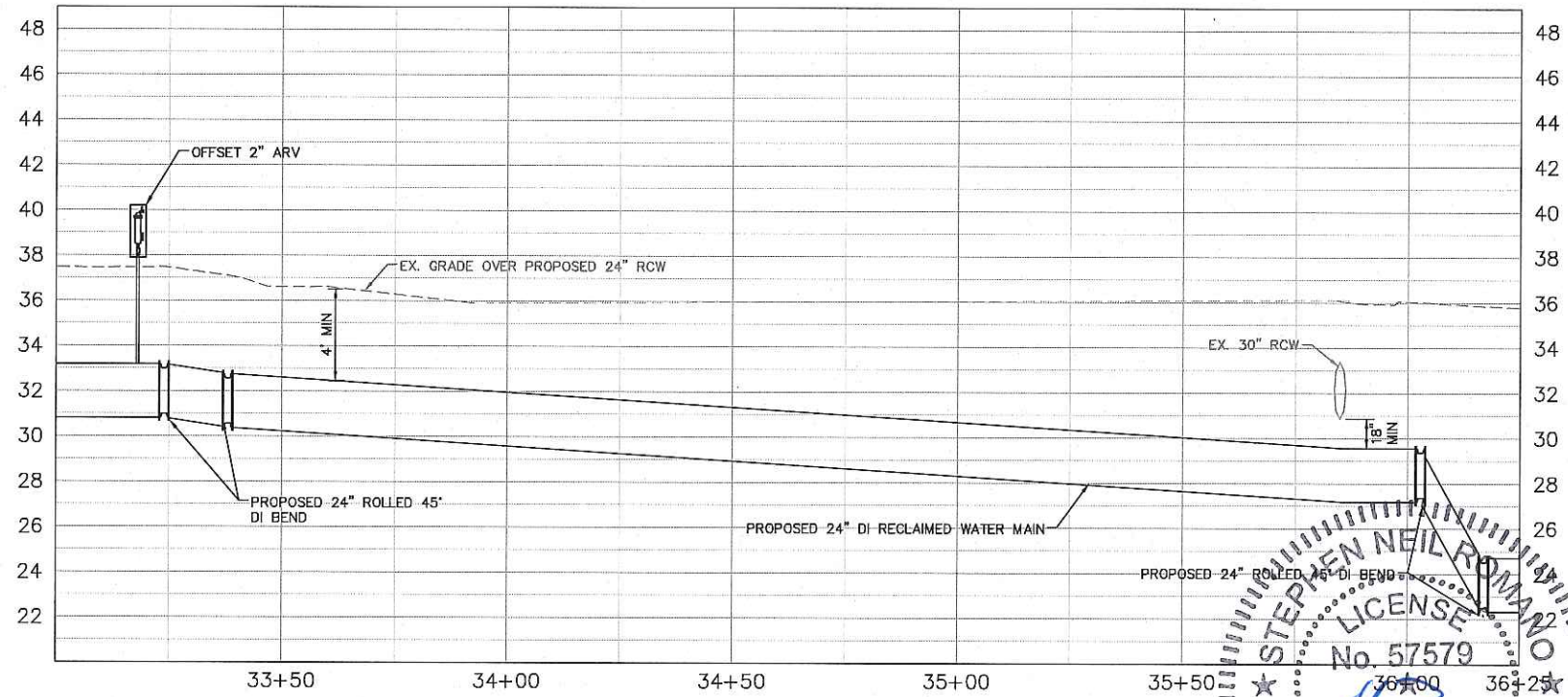
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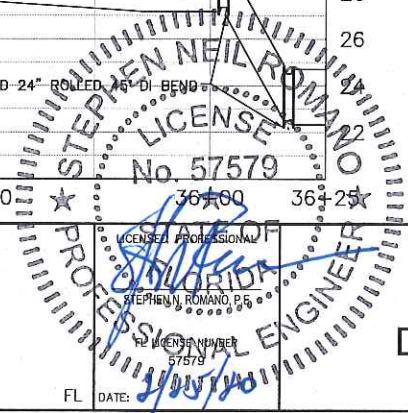


LEGEND:
 ROADWAY RESTORATION
 (SEE SHEET C-28 FOR DETAILS)



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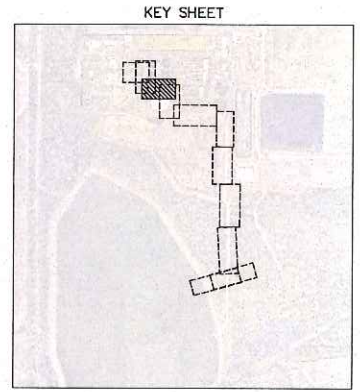
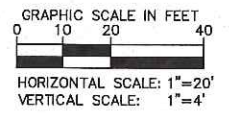
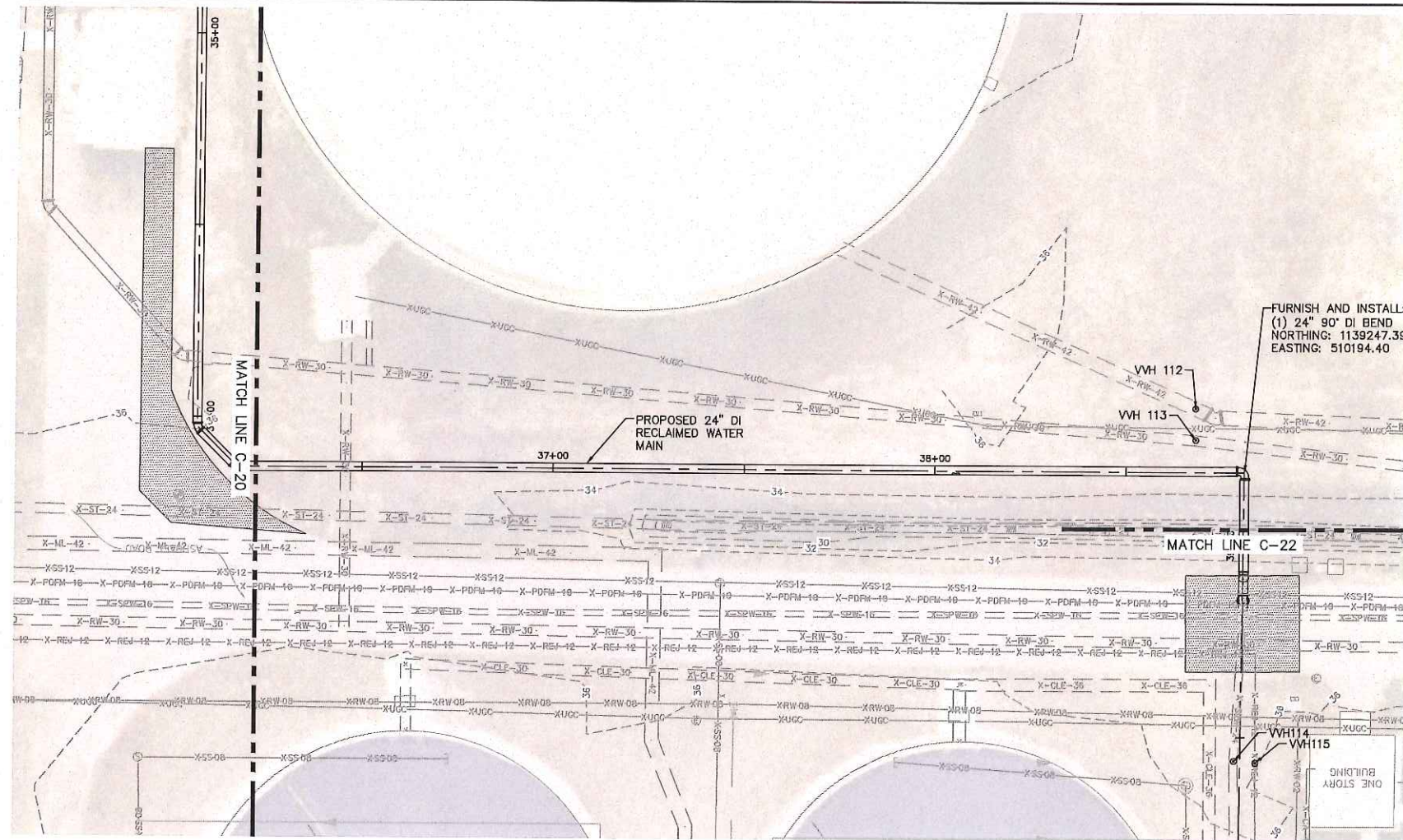
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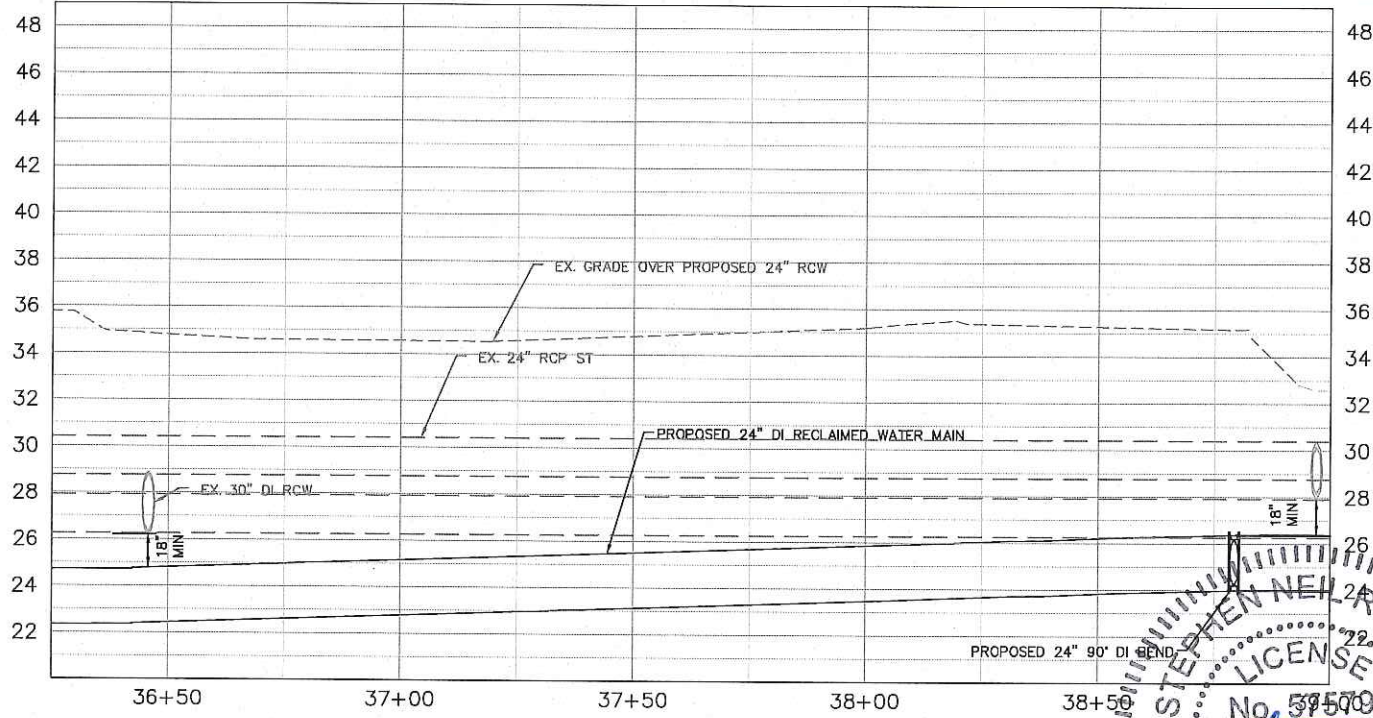
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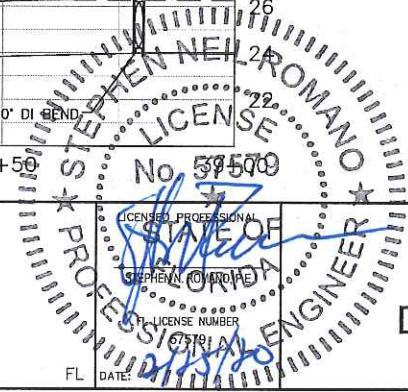
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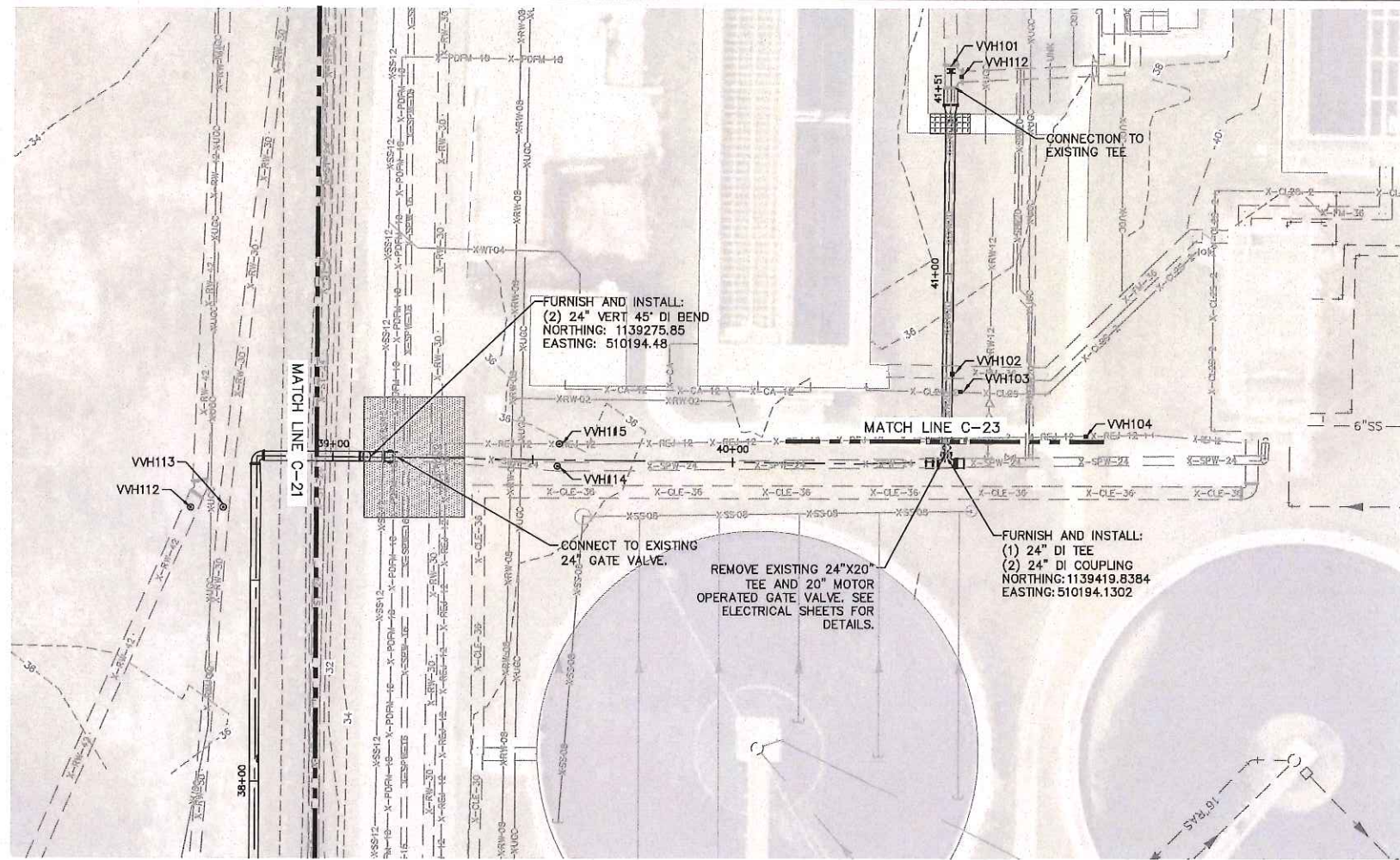
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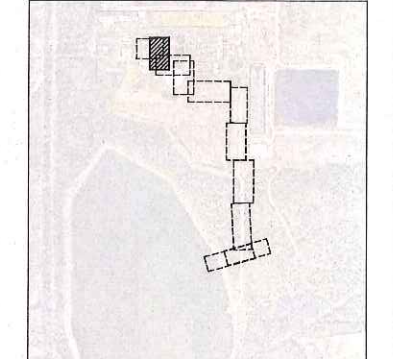
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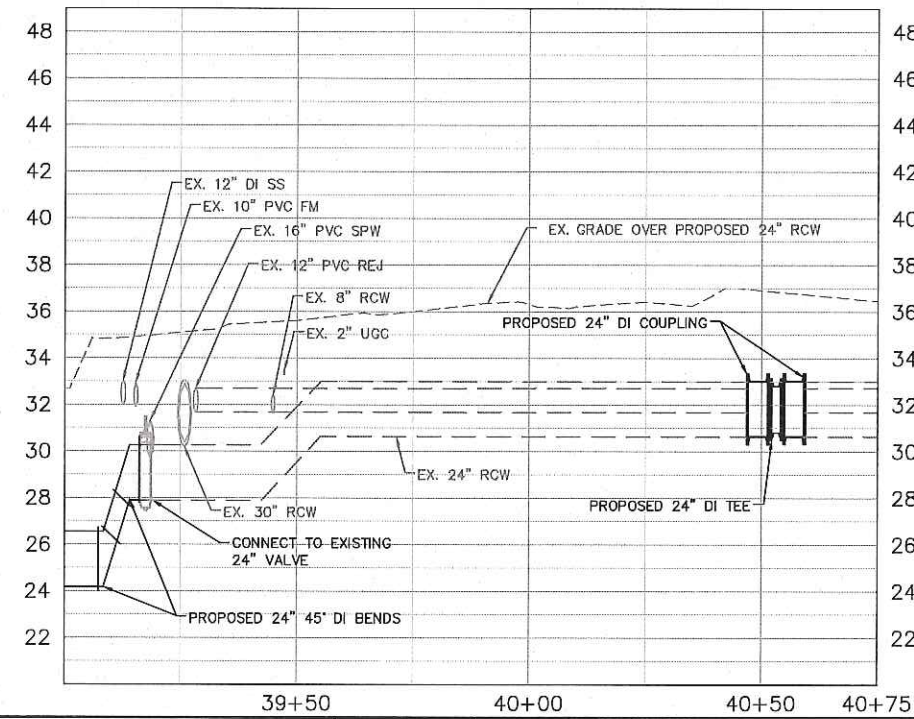


GRAPHIC SCALE IN FEET
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 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=4'

KEY SHEET



LEGEND:
 ROADWAY RESTORATION.
 (SEE SHEET C-28 FOR DETAILS)
 SIDEWALK RESTORATION.
 (SEE SHEET C-29 FOR DETAILS)



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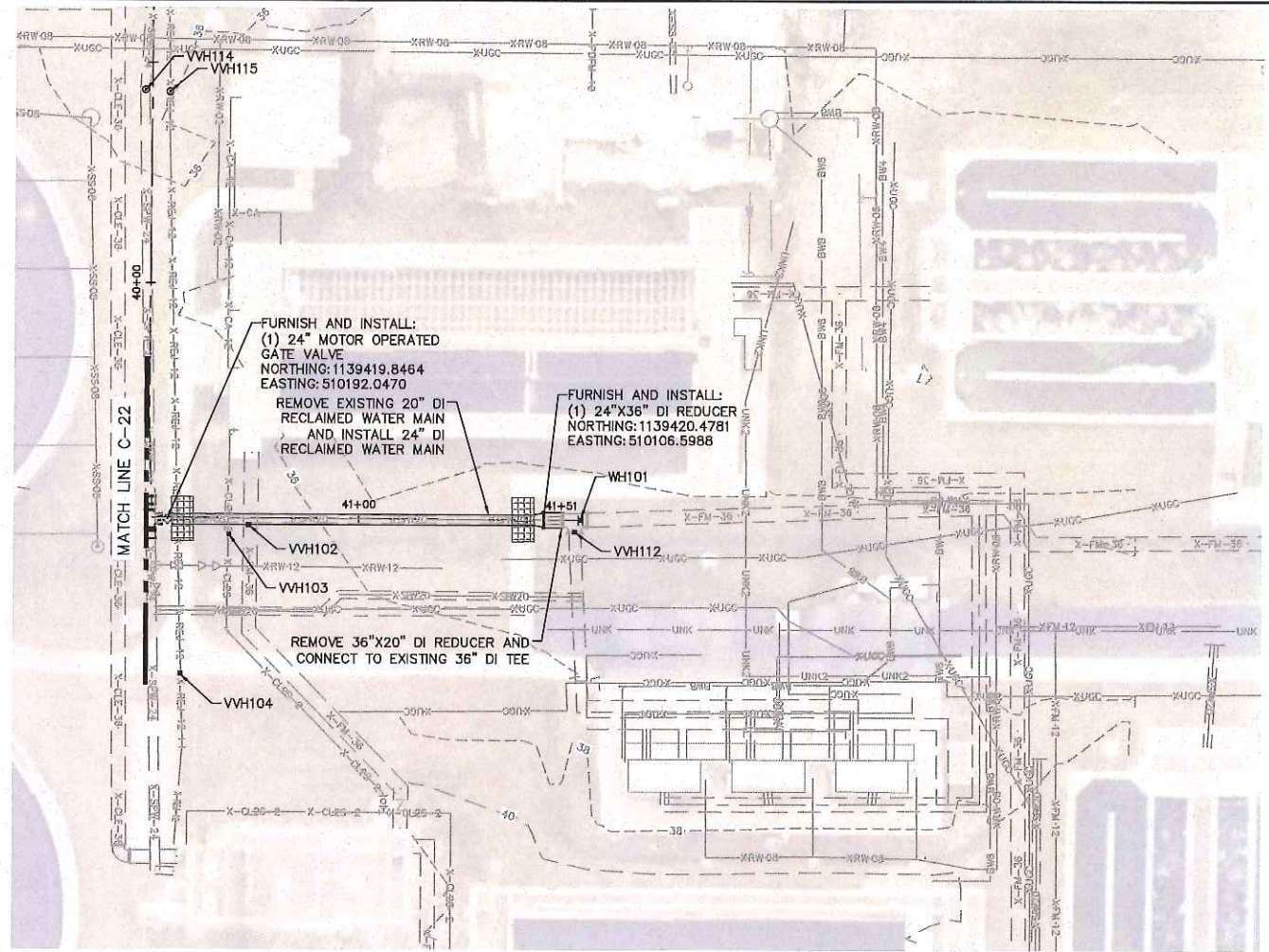
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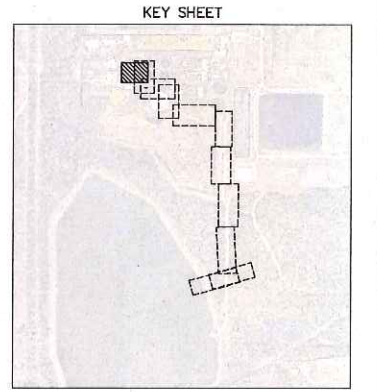
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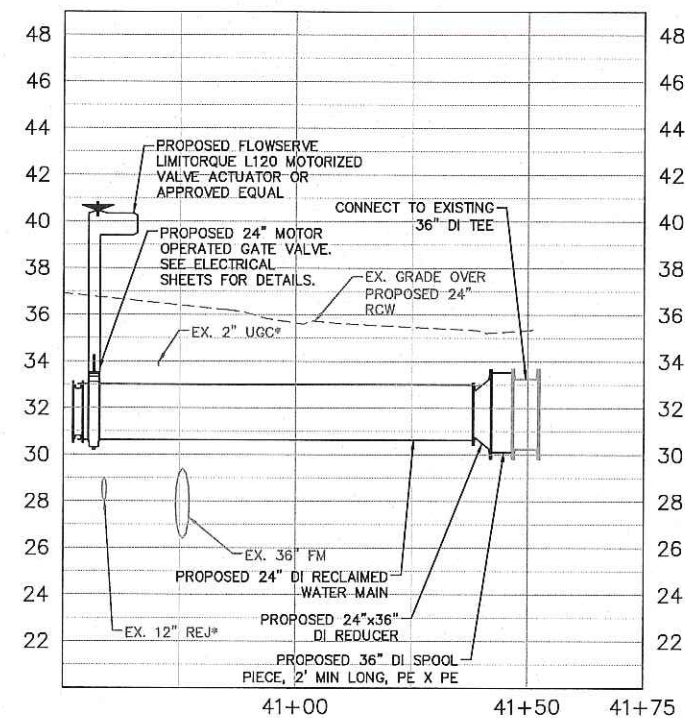
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 VERTICAL SCALE: 1"=4'



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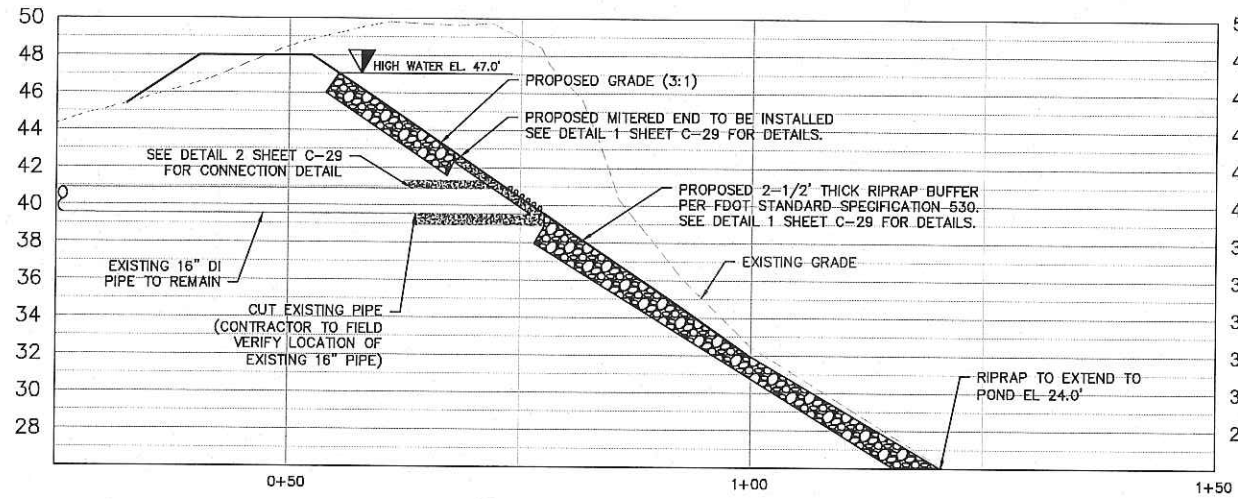
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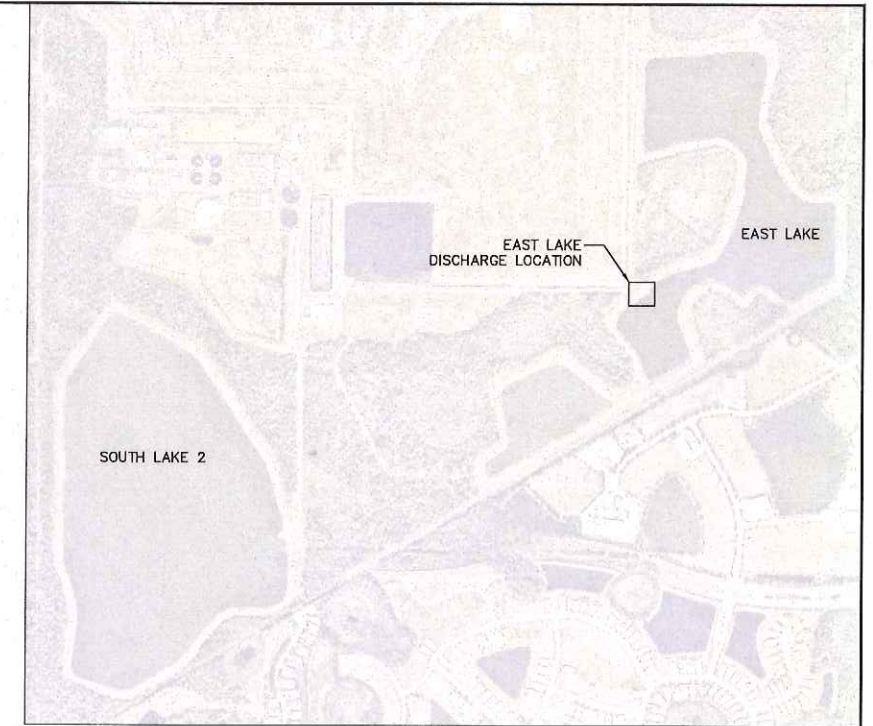
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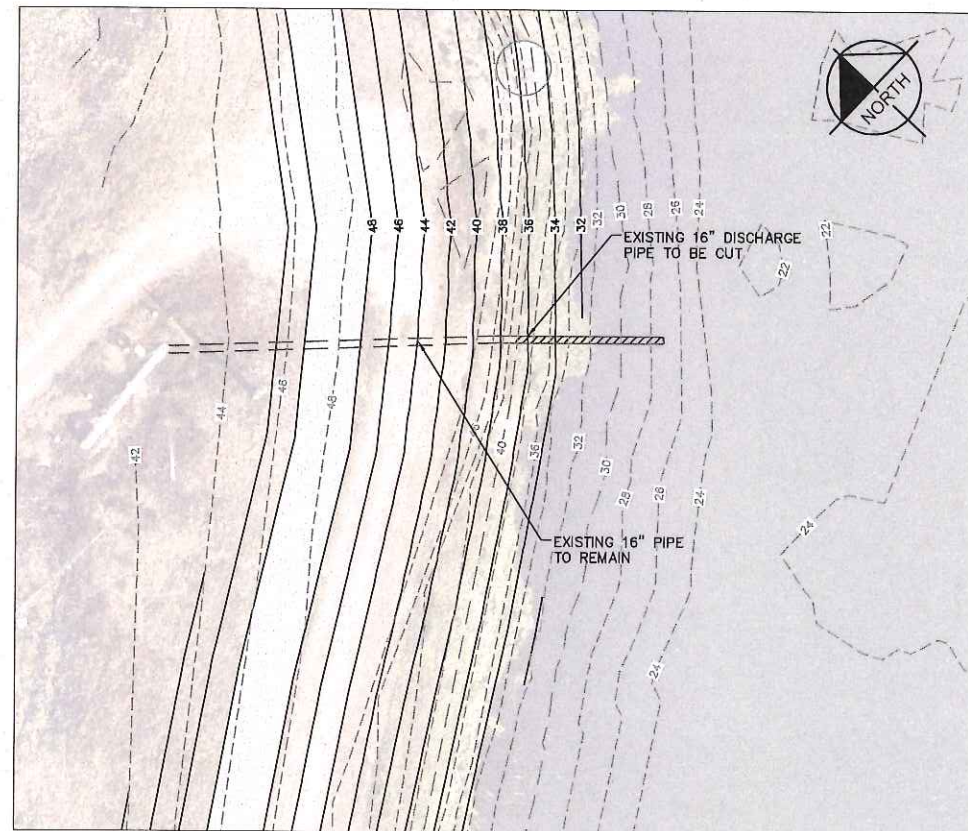
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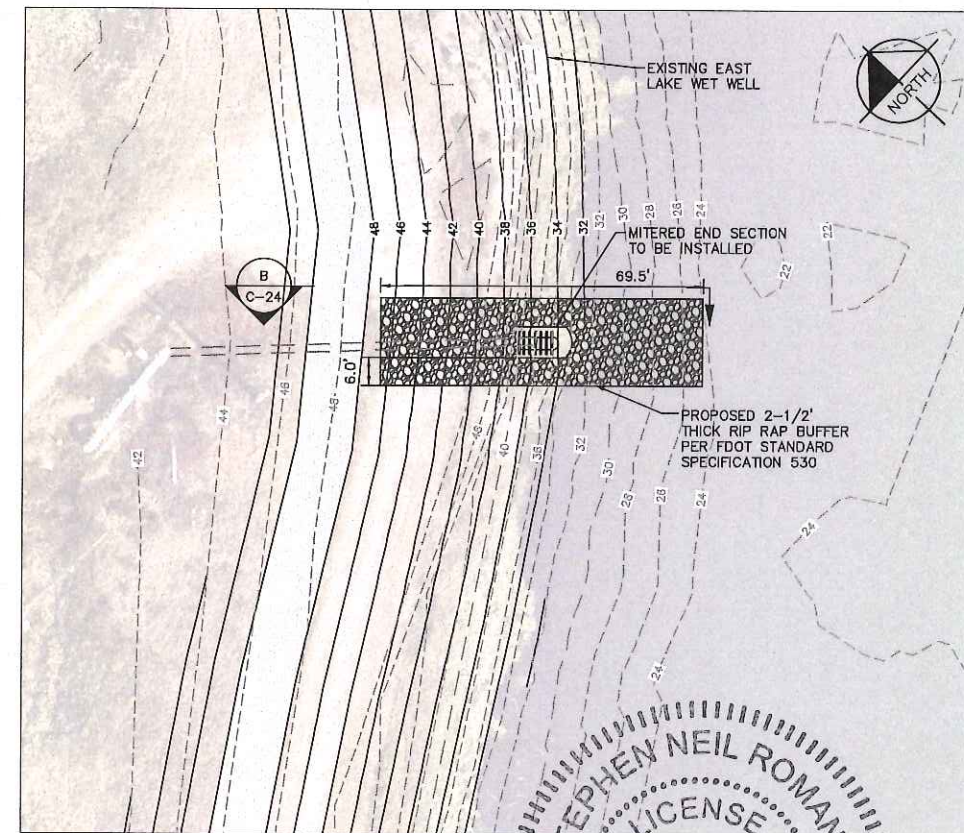
B
PROPOSED EAST LAKE DISCHARGE
 SCALE: 1" = 10'



DISCHARGE LOCATION MAP OVERVIEW



EAST LAKE DISCHARGE DEMOLITION PLAN



PROPOSED EAST LAKE DISCHARGE PLAN



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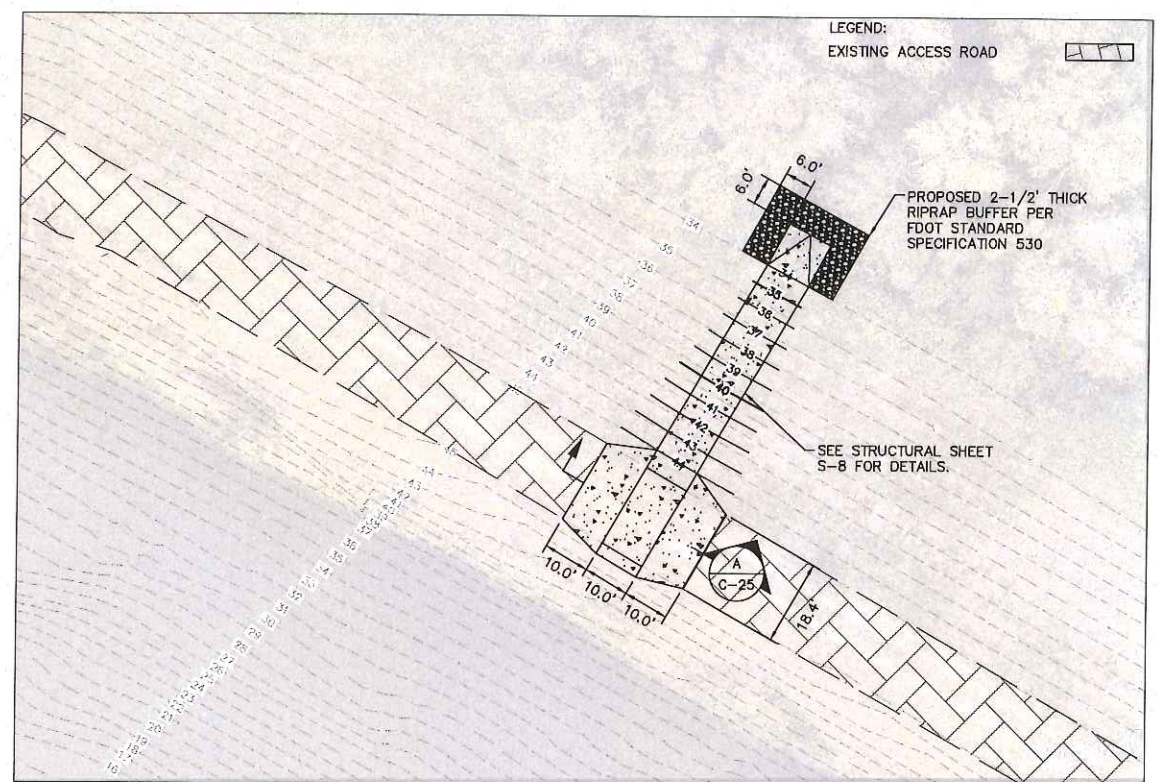
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**EAST LAKE ENERGY DISSIPATION
 STRUCTURE**

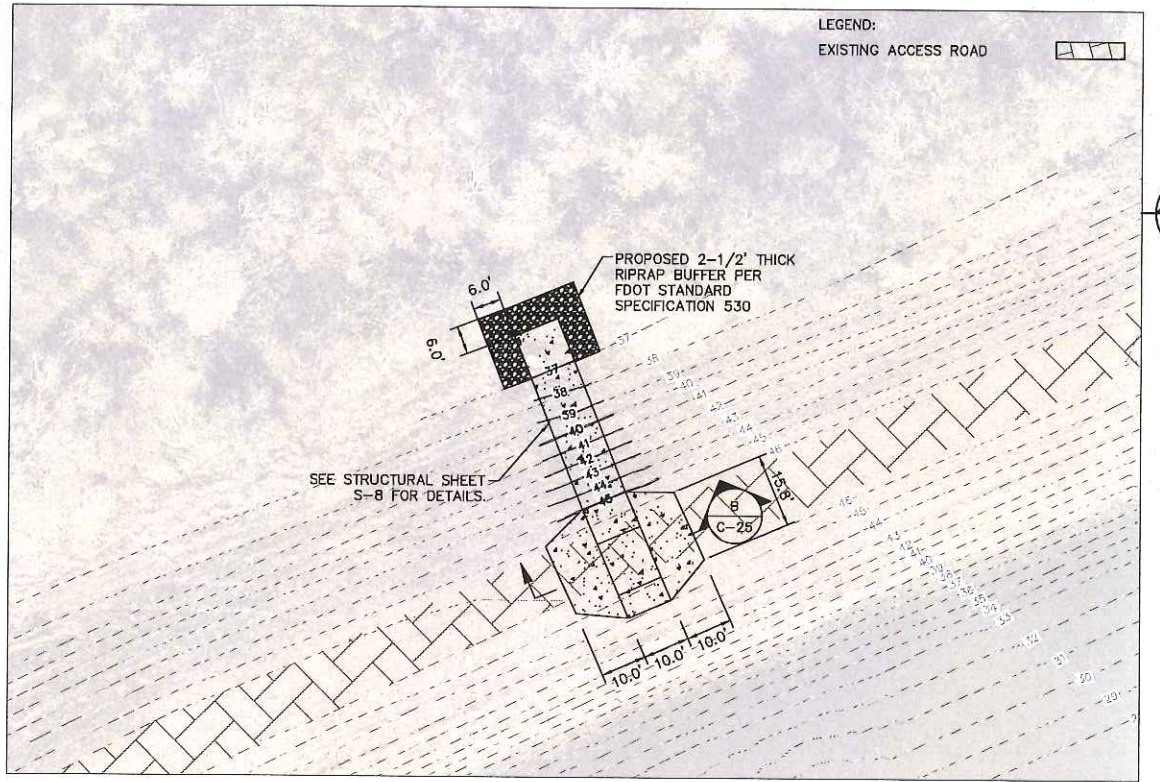
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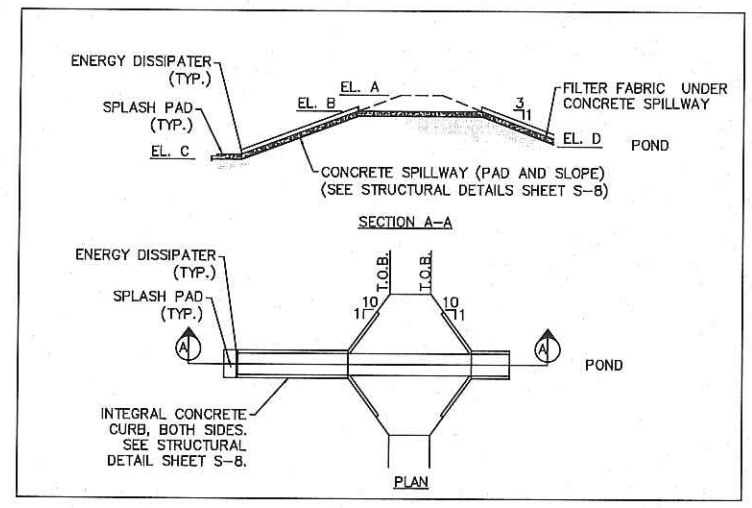
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SOUTH LAKE WEIR LOCATION

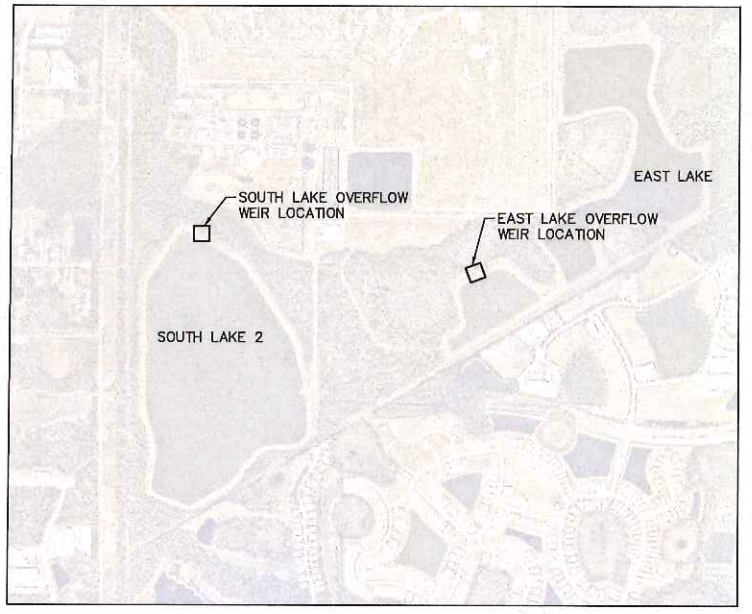


EAST LAKE WEIR LOCATION

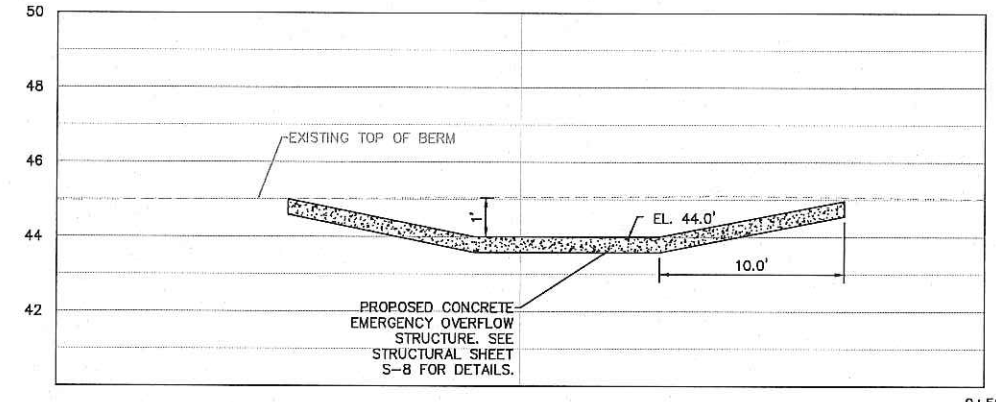


OVERFLOW DETAIL FOR SOUTH LAKE AND EAST LAKE

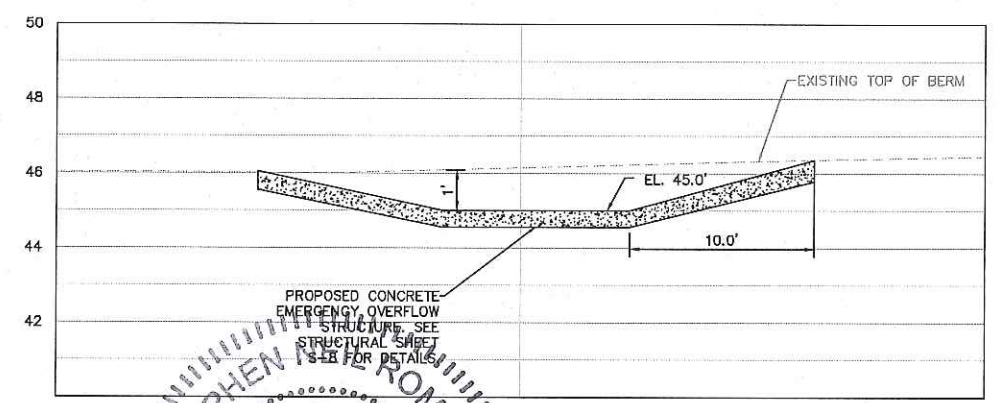
ELEVATION TABLE		
DESCRIPTION	SOUTH LAKE	EAST LAKE
TOP OF BANK ELEVATION (A)	45.0'	46.0'
TOP OF WEIR ELEVATION (B)	44.0'	45.0'
SPLASH PAD ELEVATION (C)	34.0'	37.0'
POND SIDE ELEVATION (D)	42.0'	45.0'



OVERFLOW STRUCTURE LOCATION MAP



SOUTH LAKE - SECTION A



EAST LAKE - SECTION B

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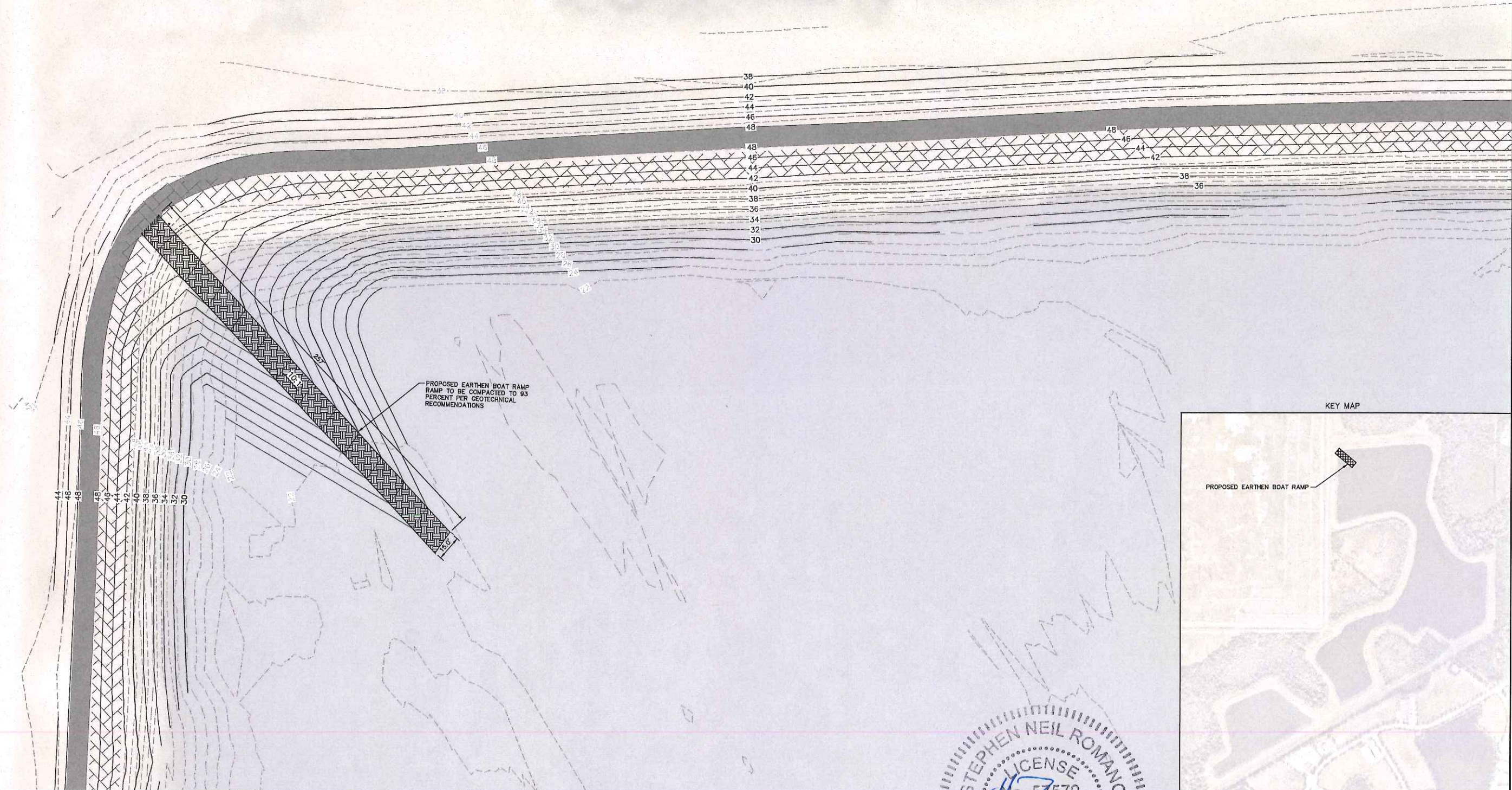
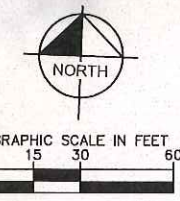
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OVERFLOW
STRUCTURES

SHEET NUMBER
C-25

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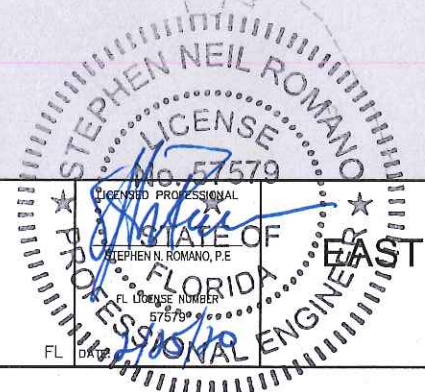


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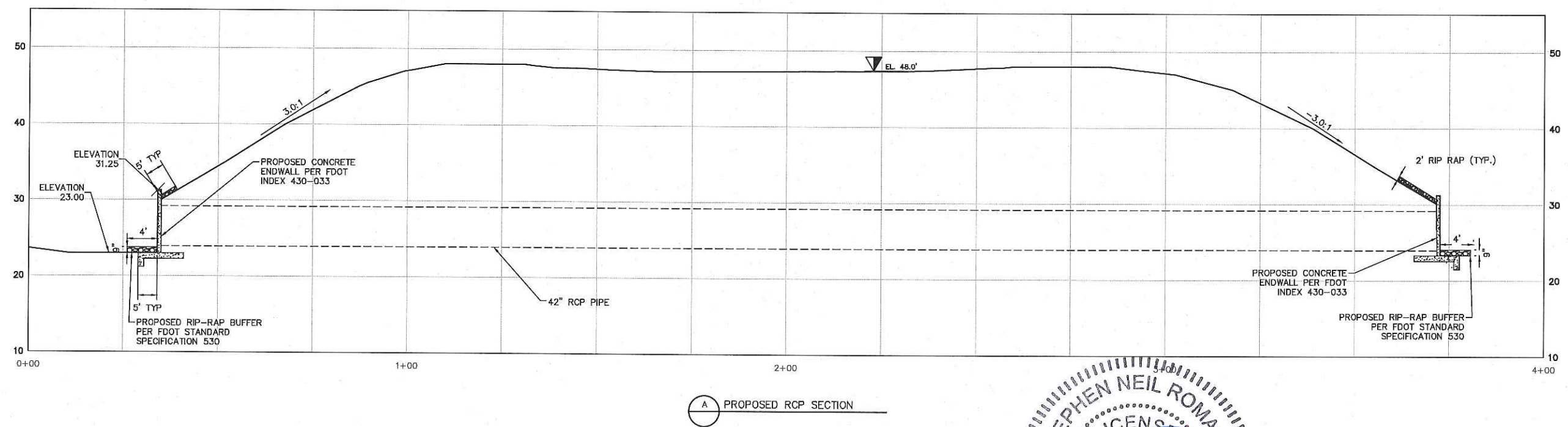
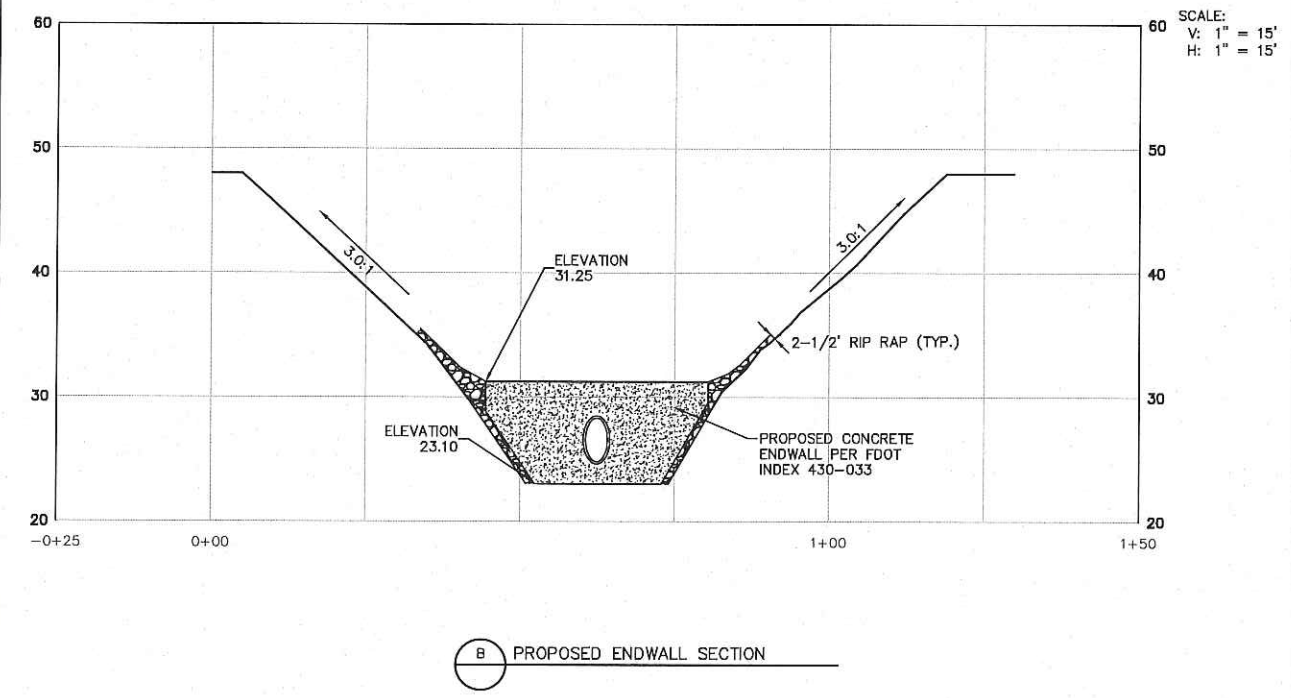
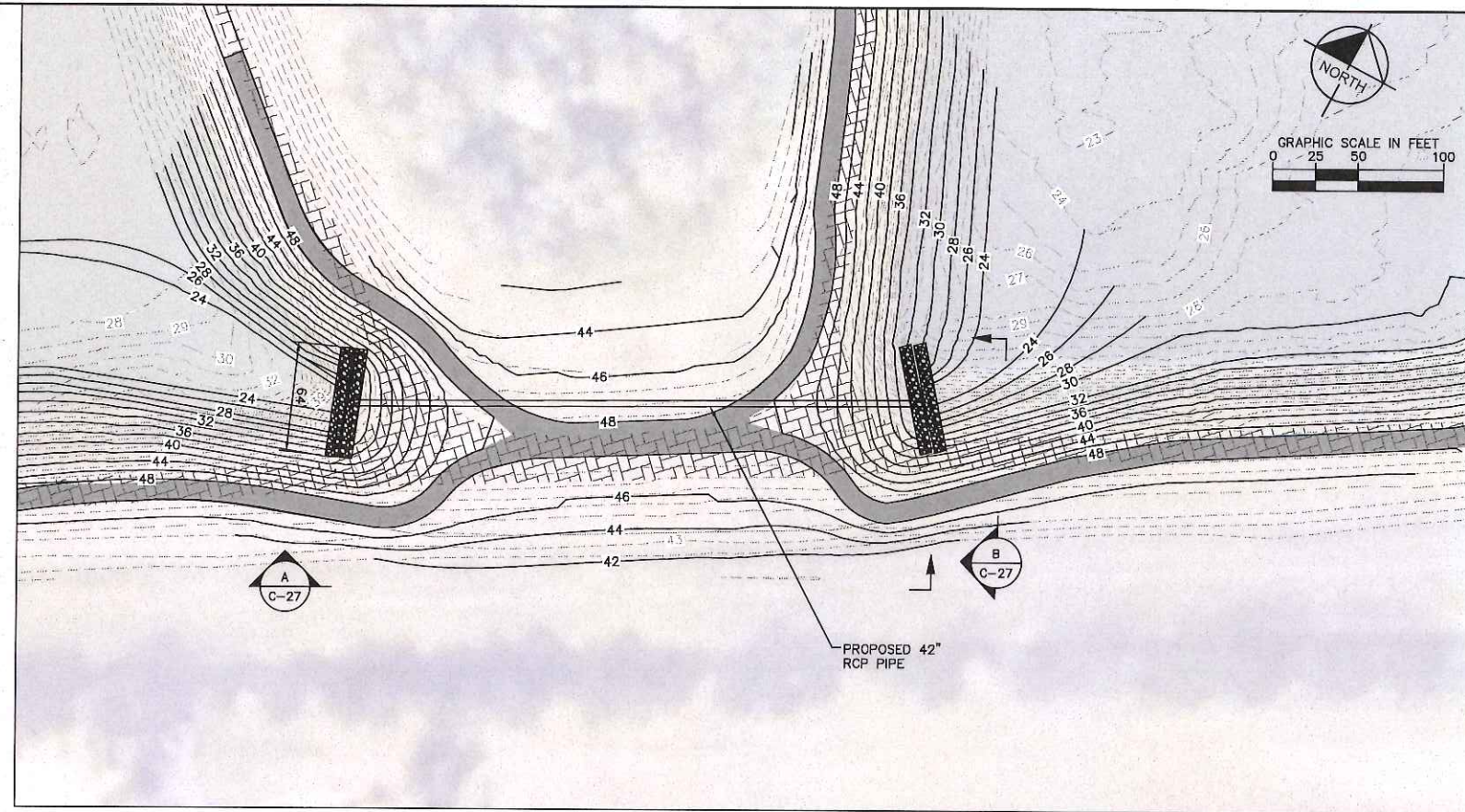
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EAST LAKE EARTHEN BOAT RAMP

SHEET NUMBER C-26

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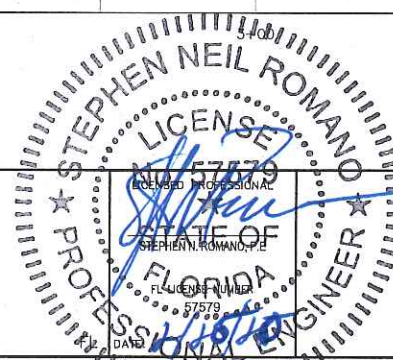
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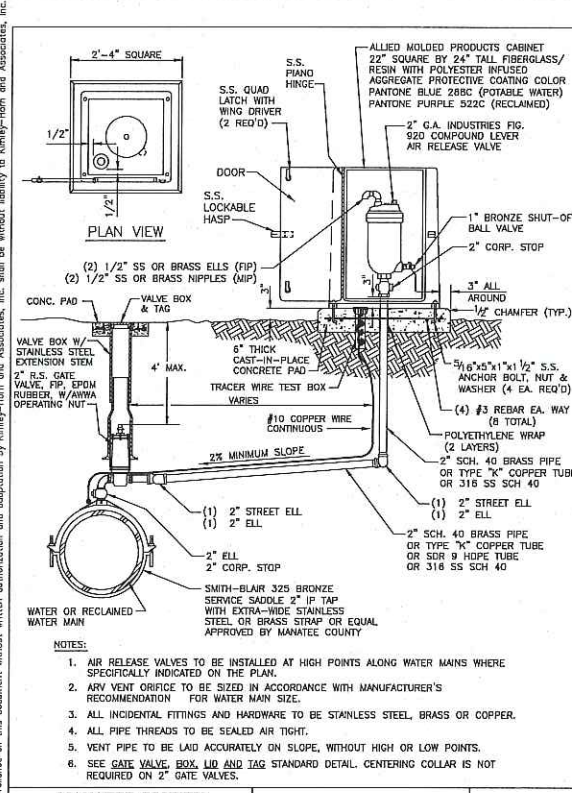
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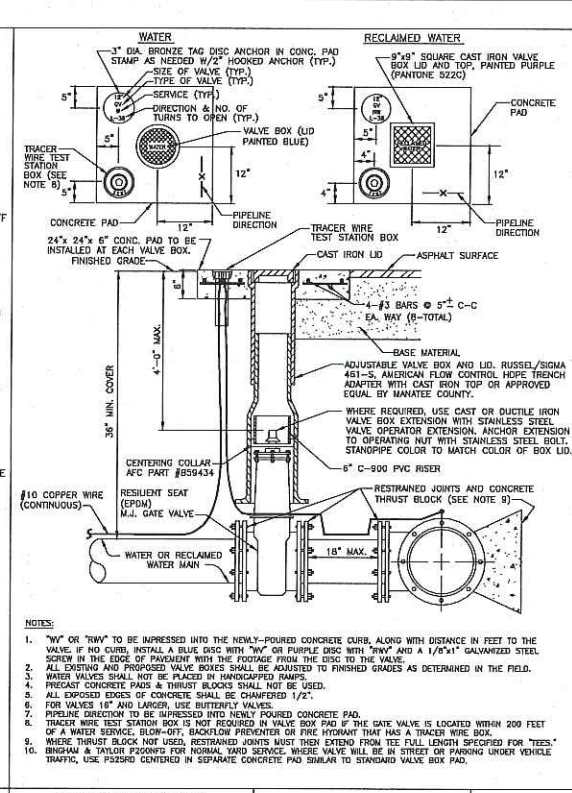
SHEET NUMBER

EAST LAKE CULVERT

C-27



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	AIR RELEASE ASSEMBLY FOR 16-INCH AND LARGER MAINS	UW-10
REV. BY CLB/NE	DATE MAY 10, 2011	PAGE 128



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	GATE VALVE, BOX, LID AND TAG	UW-2
REV. BY CLB/NE	DATE MAY 10, 2011	PAGE 120

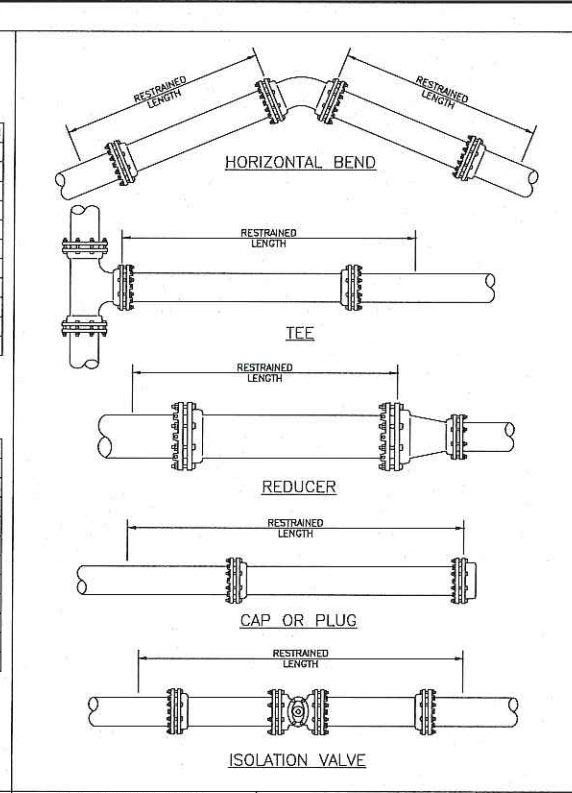
REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS	TEES					REDUCERS					PLUGS & VALVES
		SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH			
36	142	59	28	36	142	59	28	36	142	59	28	453
30	124	51	25	30	124	51	25	30	124	51	25	391
24	106	44	21	24	106	44	21	24	106	44	21	327
20	92	38	18	20	92	38	18	20	92	38	18	260
16	77	32	15	16	77	32	15	16	77	32	15	231
12	61	25	12	12	61	25	12	12	61	25	12	181
10	52	22	10	10	52	22	10	10	52	22	10	153
8	44	18	9	8	44	18	9	8	44	18	9	126
6	34	14	7	6	34	14	7	6	34	14	7	98
4	24	10	5	4	24	10	5	4	24	10	5	69

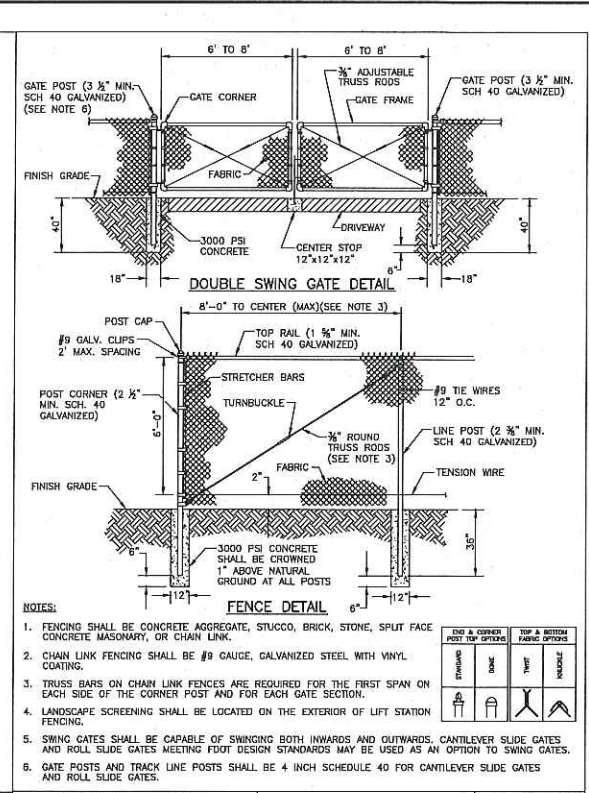
REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (NON-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS	TEES					REDUCERS					PLUGS & VALVES
		SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH			
36	100	42	20	36	100	42	20	36	100	42	20	188
30	88	37	18	30	88	37	18	30	88	37	18	162
24	75	31	15	24	75	31	15	24	75	31	15	135
20	65	27	13	20	65	27	13	20	65	27	13	116
16	54	22	11	16	54	22	11	16	54	22	11	96
12	43	18	9	12	43	18	9	12	43	18	9	75
10	37	15	7	10	37	15	7	10	37	15	7	63
8	30	13	6	8	30	13	6	8	30	13	6	53
6	24	10	5	6	24	10	5	6	24	10	5	41
4	17	7	3	4	17	7	3	4	17	7	3	29

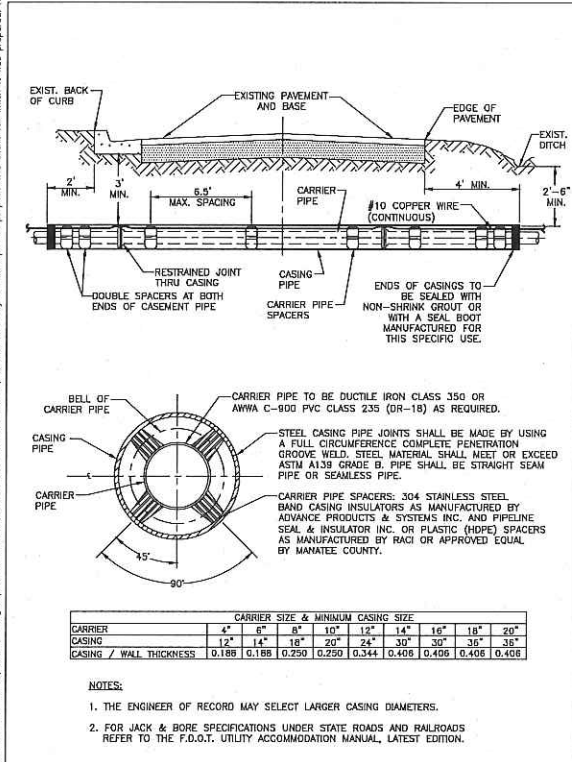
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	RESTRAINED LENGTHS FOR DIP	UG-9
REV. BY CLB/BR	DATE MAY 10, 2011	PAGE 109



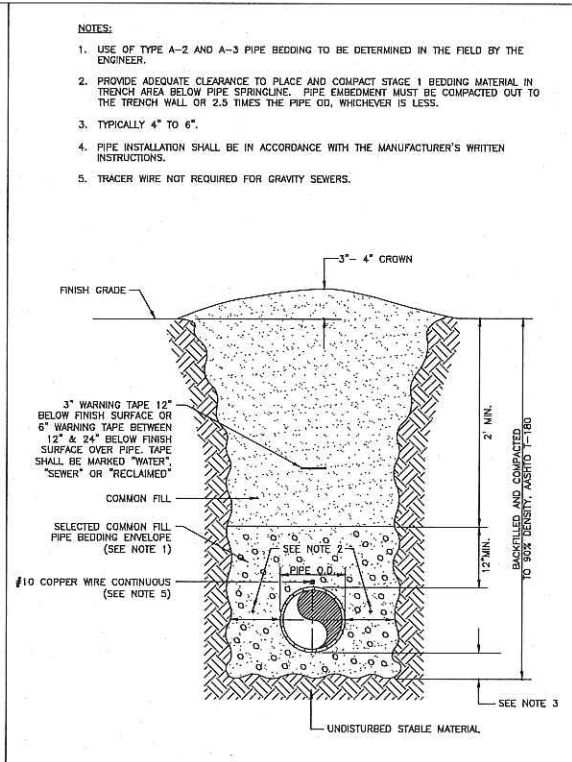
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	RESTRAINED LENGTHS FOR PIPE	UG-10
REV. BY CLB/BR	DATE MAY 10, 2011	PAGE 110



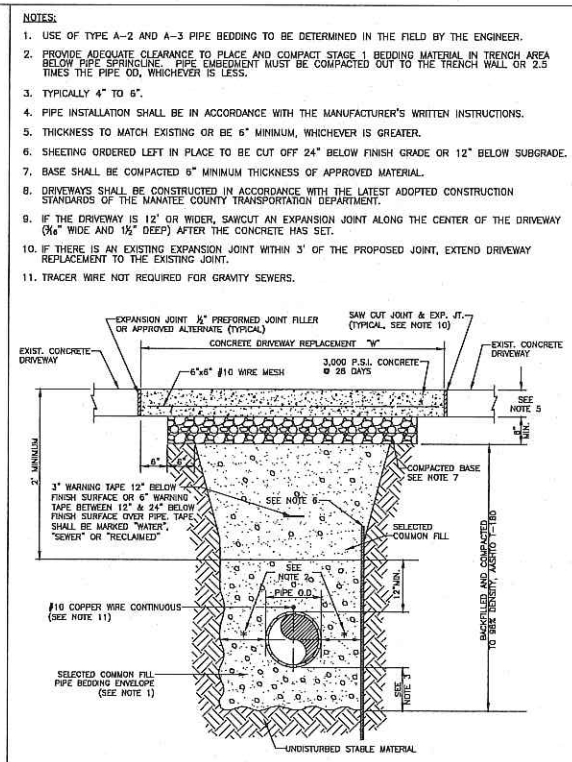
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SECURITY FENCING	UG-18
REV. BY CLB/BR	DATE MAY 10, 2011	PAGE 118



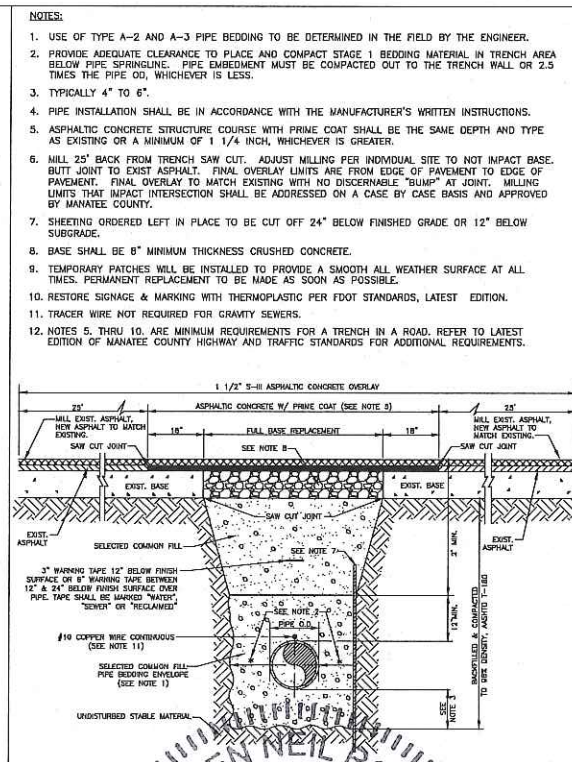
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	JACK & BORE CROSSING	UG-3
REV. BY CLB/BR	DATE MAY 10, 2011	PAGE 103



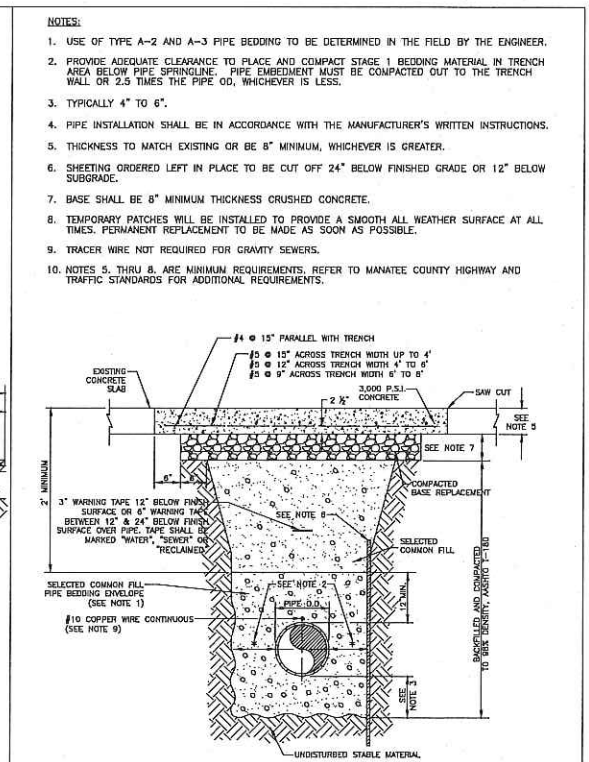
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY WRT/KE	DATE MAY 10, 2011	PAGE 111



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING	UG-14
REV. BY WRT/KE	DATE MAY 10, 2011	PAGE 114



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12
REV. BY WRT/KE	DATE MAY 10, 2011	PAGE 112



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH CONCRETE PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-13
REV. BY CLB/BR	DATE MAY 10, 2011	PAGE 113

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STEPHEN ROMANO, P.E.
No. 157579
LICENSED PROFESSIONAL ENGINEER
STATE OF FLORIDA
67679

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SHEET NUMBER
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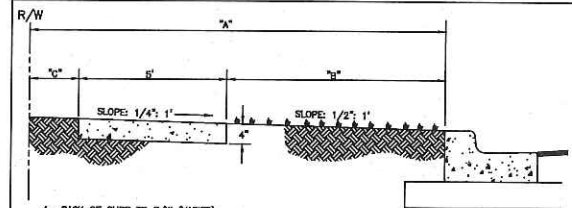
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GENERAL NOTES

- SIDEWALK SHALL BE CONSTRUCTED A MINIMUM OF 4" THICK, USING 3000 psi CONCRETE. WHERE SIDEWALK BISECTS A DRIVEWAY, THE MINIMUM SHALL BE 6" OF CLASS I CONCRETE REINFORCED WITH 6"x6" #10 WIRE MESH.
* SEE SHEETS 101.2 & 101.3.
- ALL SIDEWALKS SHALL BE CONSTRUCTED TO THE SPECIFICATIONS OF THE MANATEE COUNTY LAND DEVELOPMENT CODE, SECTION 722. A MINIMUM (5) FOOT WIDE SIDEWALK SHALL BE INSTALLED ALONG THE NORTH AND WEST SIDES OF ALL NEW LOCAL STREETS WHICH ARE CONSTRUCTED IN CONJUNCTION WITH A NEW RESIDENTIAL DEVELOPMENT. A SIDEWALK A MINIMUM OF (5) FEET IN WIDTH SHALL BE INSTALLED ON BOTH SIDES OF ALL THROUGHFARES. REFER TO F.D.O.T. ROADWAY AND TRAFFIC STANDARDS, LATEST REVISION FOR CURB CUT RAMP SPECIFICATIONS.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/4" UNDER A TEN FOOT STRAIGHTEDGE, NOR MORE THAN 1/8" ON A FIVE-FOOT TRAVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINTS: EXPANSION JOINTS BETWEEN THE SIDEWALKS AND THE CURB OR DRIVEWAY OR AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2" MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213. FOR LONG JOINTS, AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120'.
- CONTRACTION JOINTS:
OPEN TYPE JOINTS
OPEN TYPE CONSTRUCTION JOINTS SHALL BE FORMED BY STAKING A METAL BULKHEAD IN PLACE AND DEPOSITING THE CONCRETE ON BOTH SIDES. AFTER THE CONCRETE HAS SET SUFFICIENTLY TO PRESERVE THE WIDTH AND THE SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED. AFTER THE SIDEWALK HAS BEEN FINISHED OVER THE JOINT, THE SLOT SHALL BE FINISHED WITH A TOOL HAVING A 1/2" RADIUS.
SAWED JOINTS
A SLOT APPROXIMATELY 3/16" WIDE AND NOT LESS THAN 1" DEEP AT 10' CENTERS SHALL BE CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.
- SIDEWALKS ALONG OTHER STREETS SHALL BE CONSTRUCTED AND DEDICATED AS REQUIRED BY THE APPROVING AUTHORITY WHEN NECESSARY TO CONTINUE AN EXISTING OR PROPOSED SIDEWALK.
- HANDICAP RAMPS SHALL MEET FLORIDA ACCESSIBILITIES STANDARDS, AND SECTIONS 301.0, 301.1 AND 301.2.
- ALL SIDEWALKS ON R/W WITHIN 10' OF AN EXISTING OR PROPOSED TREE THAT WILL EXCEED 6" IN DIAMETER AT MATURITY SHALL BE 5" THICK AND CONTAIN 2-#3 REBAR CENTERED VERTICALLY AND SPACED 3' ON CENTER. PALMS ARE NOT CONSIDERED TREES.

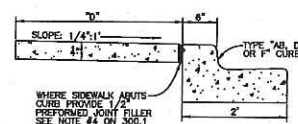
*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2008 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALKS GENERAL NOTES	301.0
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



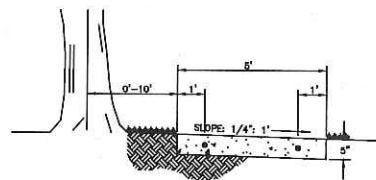
A= BACK OF CURB TO R/W (VARIES)
B= UNPAVED AREA (VARIES). REFER TO F.D.O.T. GREEN BOOK, TABLE 3-12, LATEST REVISION.
C= VARIES, SEE 401 SERIES

TYPICAL SIDEWALK LOCATION



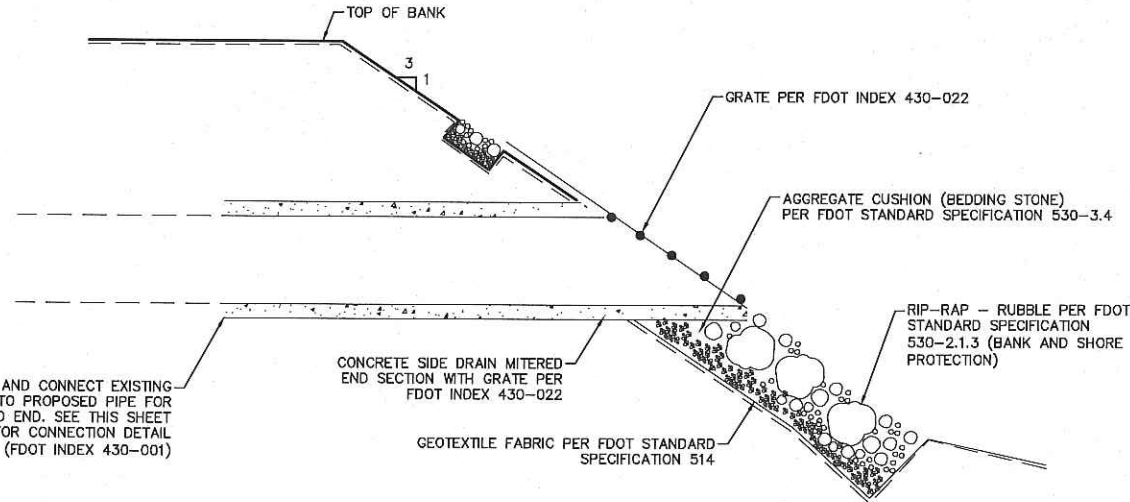
D= SIDEWALK WIDTH SHALL BE 6" STANDARD, WHERE WALK ABUTS TYPE 'AB, D OR F' CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5'-6".
* SEE SHEET 300.1 "GENERAL NOTES" FOR FURTHER INFORMATION

ALTERNATE SIDEWALK LOCATION

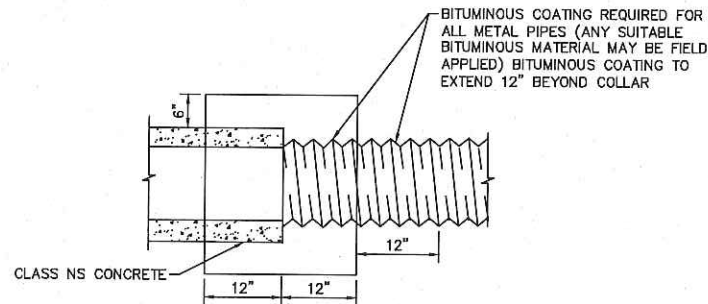


SIDEWALK LOCATION CLOSE TO TREES

MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALK REQUIREMENTS	301.1
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		

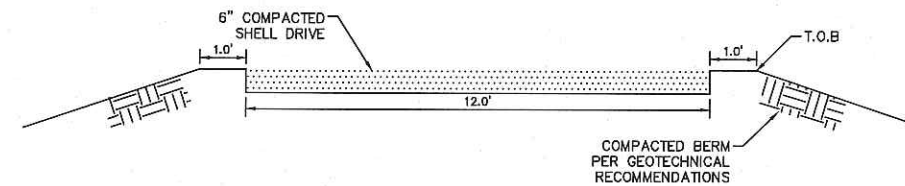


1 ENERGY DISSIPATION STRUCTURE DETAIL N.T.S.

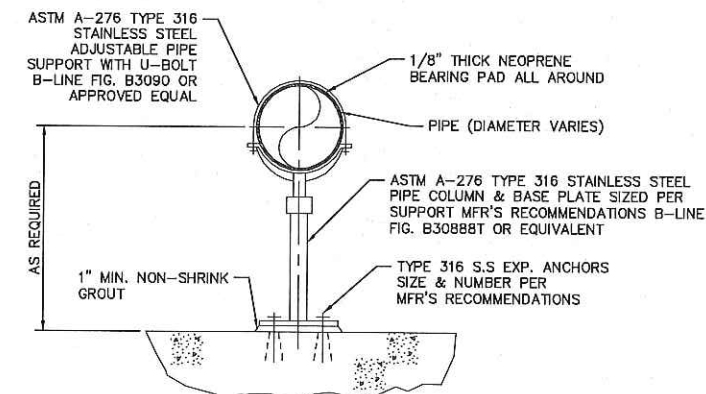


NOTE: COST OF CONCRETE AND BITUMINOUS COATING TO BE INCLUDED IN CONTRACT UNIT PRICE FOR EITHER NEW PIPE OR MITERED END SECTION. ALTERNATE CONNECTION MUST BE APPROVED BY THE STATE DRAINAGE ENGINEER. A CONCRETE JACKET SHALL NOT BE USED TO JOIN:
A. METAL PIPE OF DISSIMILAR MATERIAL

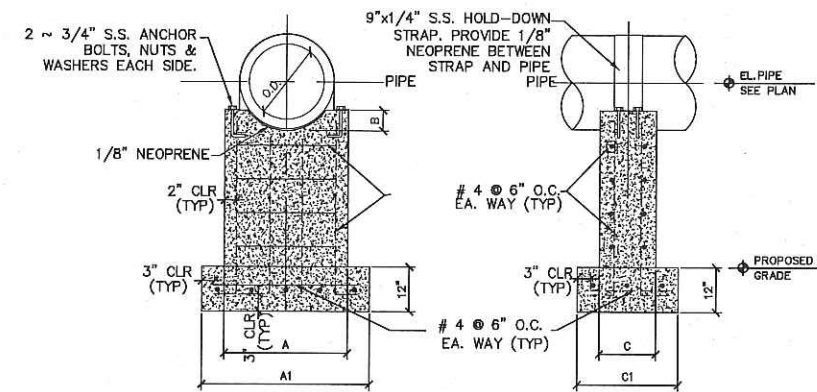
2 FDOT INDEX 430-001 - CONCRETE JACKET FOR CONNECTING DISSIMILAR PIPES DETAIL



3 PROPOSED ACCESS DRIVE - COMPACTED SHELL DRIVE N.T.S.



4 STAINLESS STEEL PIPE SUPPORT DETAIL N.T.S.



PIPE SIZE	A	B	C	CI
4"	1'-4"	2'-0"	2'	1'-4"
6"	1'-6"	2'-2"	2'	1'-4"
8"	1'-8"	2'-4"	3'	1'-8"
12"	2'-0"	2'-8"	4'	1'-8"
16"	2'-4"	3'-0"	4'	1'-8"
18"	2'-8"	3'-2"	6'	1'-8"
20"	3'-0"	3'-8"	8'	2'-0"
24"	3'-4"	4'-0"	8'	1'-8"
30"	3'-8"	4'-6"	9'	2'-0"



5 CONCRETE PIPE SUPPORT DETAIL N.T.S.



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CIVIL DETAILS

SHEET NUMBER

C-29

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NOTES:

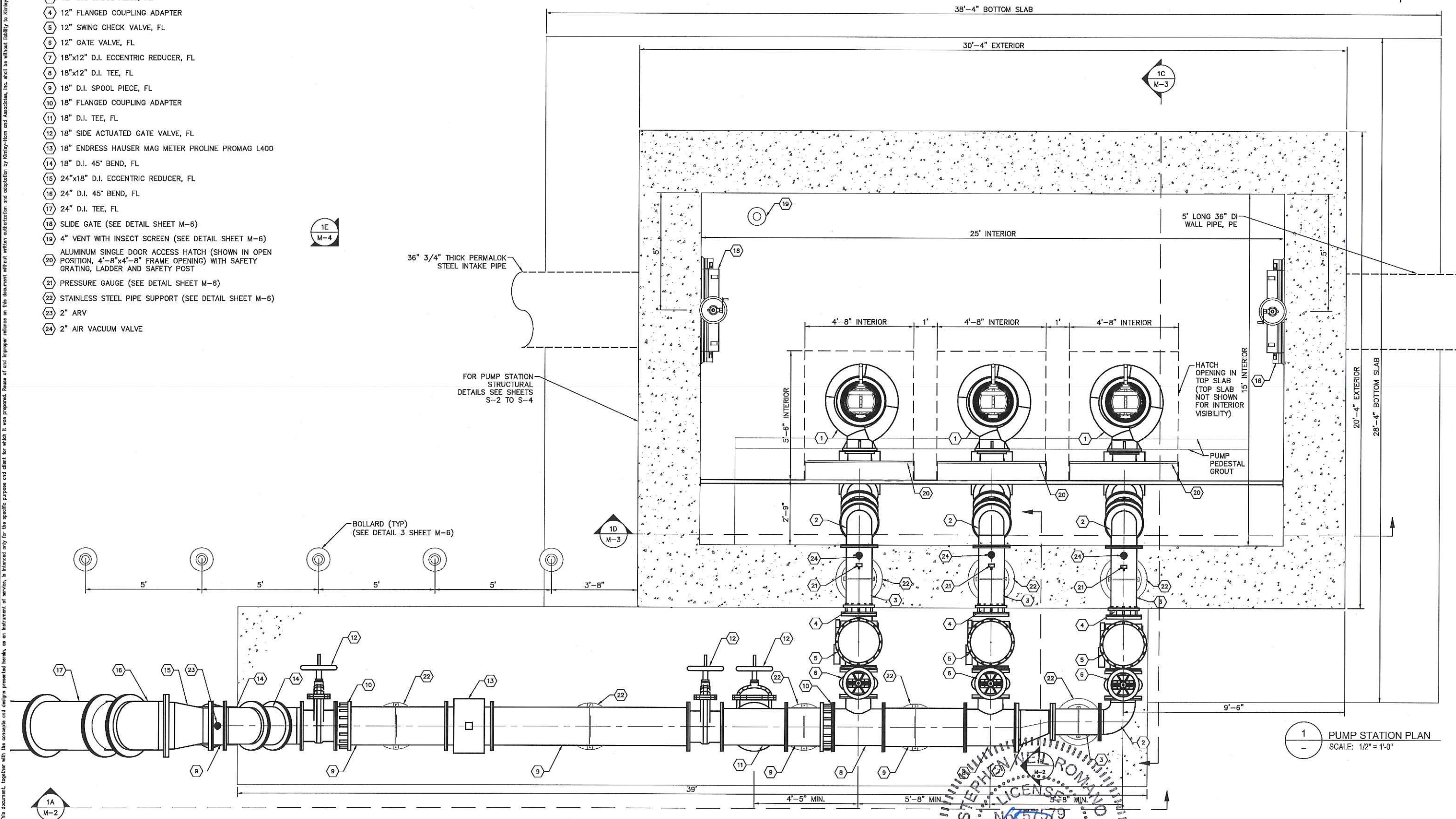
- 1 SUBMERSIBLE PUMP, MODEL HYDRAMATIC-S12L, 11.50 IN IMP, 3470 GPM @ 71 FT, 100 HP, 60 HZ
- 2 12" D.I. 90° BEND, FL
- 3 12" D.I. SPOOL PIECE, FL
- 4 12" FLANGED COUPLING ADAPTER
- 5 12" SWING CHECK VALVE, FL
- 6 12" GATE VALVE, FL
- 7 18"x12" D.I. ECCENTRIC REDUCER, FL
- 8 18"x12" D.I. TEE, FL
- 9 18" D.I. SPOOL PIECE, FL
- 10 18" FLANGED COUPLING ADAPTER
- 11 18" D.I. TEE, FL
- 12 18" SIDE ACTUATED GATE VALVE, FL
- 13 18" ENDRESS HAUSER MAG METER PROLINE PROMAG L400
- 14 18" D.I. 45° BEND, FL
- 15 24"x18" D.I. ECCENTRIC REDUCER, FL
- 16 24" D.I. 45° BEND, FL
- 17 24" D.I. TEE, FL
- 18 SLIDE GATE (SEE DETAIL SHEET M-6)
- 19 4" VENT WITH INSECT SCREEN (SEE DETAIL SHEET M-6)
- 20 ALUMINUM SINGLE DOOR ACCESS HATCH (SHOWN IN OPEN POSITION, 4'-8"x4'-8" FRAME OPENING) WITH SAFETY GRATING, LADDER AND SAFETY POST
- 21 PRESSURE GAUGE (SEE DETAIL SHEET M-6)
- 22 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
- 23 2" ARV
- 24 2" AIR VACUUM VALVE



36" 3/4" THICK PERMALOK STEEL INTAKE PIPE

FOR PUMP STATION STRUCTURAL DETAILS SEE SHEETS S-2 TO S-4

BOLLARD (TYP) (SEE DETAIL 3 SHEET M-6)



1 PUMP STATION PLAN
SCALE: 1/2" = 1'-0"

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DESIGNED BY	SNR
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Manatee County
**SEWRF RECLAIMED
 PUMP BACK STATION**
 MANATEE COUNTY

STEPHEN N. ROMANO, P.E.
 LICENSE NO. 57579
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 LICENSE NUMBER 57579
 DATE: 3/25

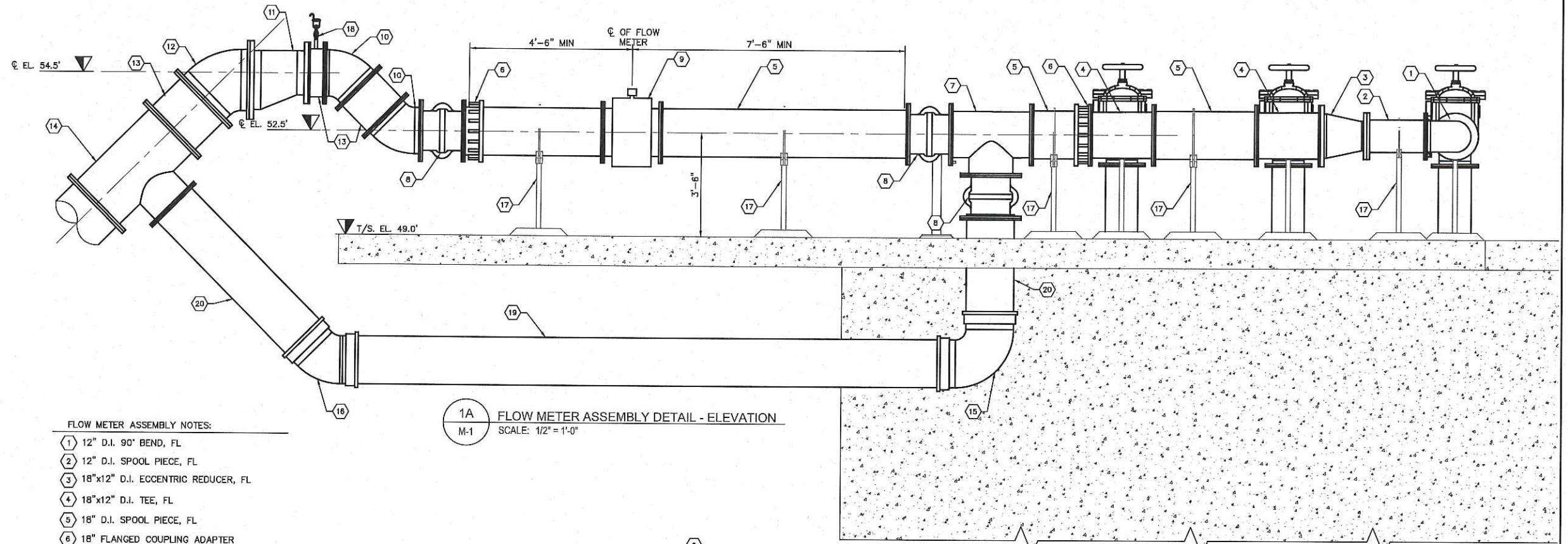
**CENTRAL PUMP STATION
PLAN**

SHEET NUMBER

M-1

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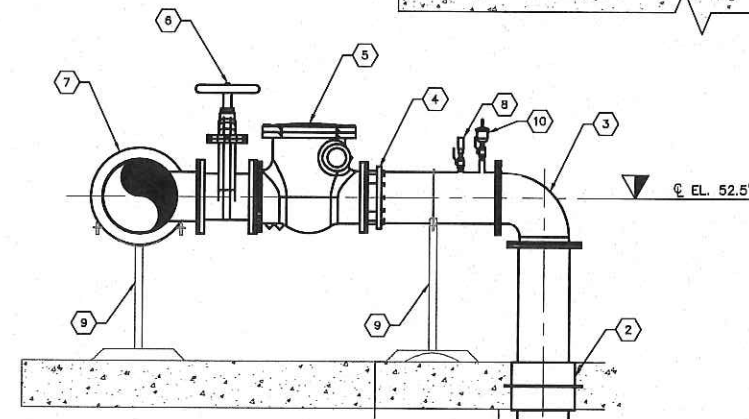
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1A FLOW METER ASSEMBLY DETAIL - ELEVATION
M-1 SCALE: 1/2" = 1'-0"

FLOW METER ASSEMBLY NOTES:

- 1 12" D.I. 90° BEND, FL
- 2 12" D.I. SPOOL PIECE, FL
- 3 18"x12" D.I. ECCENTRIC REDUCER, FL
- 4 18"x12" D.I. TEE, FL
- 5 18" D.I. SPOOL PIECE, FL
- 6 18" FLANGED COUPLING ADAPTER
- 7 18" D.I. TEE, FL
- 8 18" SIDE ACTUATED GATE VALVE, FL
- 9 18" ENDRESS HAUSER MAG METER PROLINE PROMAG L400
- 10 18" D.I. 45° BEND, FL
- 11 24"x18" D.I. ECCENTRIC REDUCER, FL
- 12 24" D.I. 45° BEND, FL
- 13 24" D.I. SPOOL PIECE, FL
- 14 24"x18" D.I. TEE, FL
- 15 18" D.I. 90° BEND, MJ
- 16 18" D.I. 45° BEND, MJ
- 17 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
- 18 2" ARV
- 19 18" D.I. SPOOL PIECE, PE
- 20 18" D.I. SPOOL PIECE, FL X PE

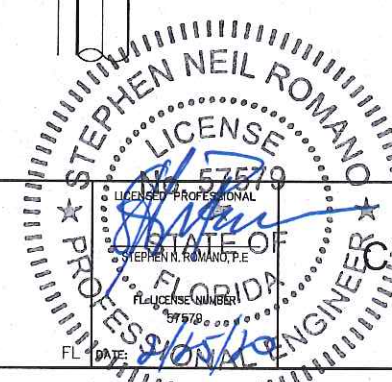


1B VALVE ASSEMBLY SECTION
M-1 SCALE: 1/2" = 1'-0"

VALVE ASSEMBLY NOTES:

- 1 12" D.I. SPOOL PIECE, FL
- 2 12" LINK SEAL W/ 316 SS HARDWARE
- 3 12" D.I. 90° BEND, FL
- 4 12" FLANGED COUPLING ADAPTER
- 5 12" SWING CHECK VALVE, FL
- 6 12" GATE VALVE, FL
- 7 18"x12" D.I. TEE, FL
- 8 PRESSURE GAUGE ASSEMBLY (SEE DETAIL SHEET M-6)
- 9 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
- 10 2" AIR VACUUM VALVE

NOTE: FOR PUMP STATION STRUCTURAL DETAILS, REFER TO SHEETS S-2 TO S-4



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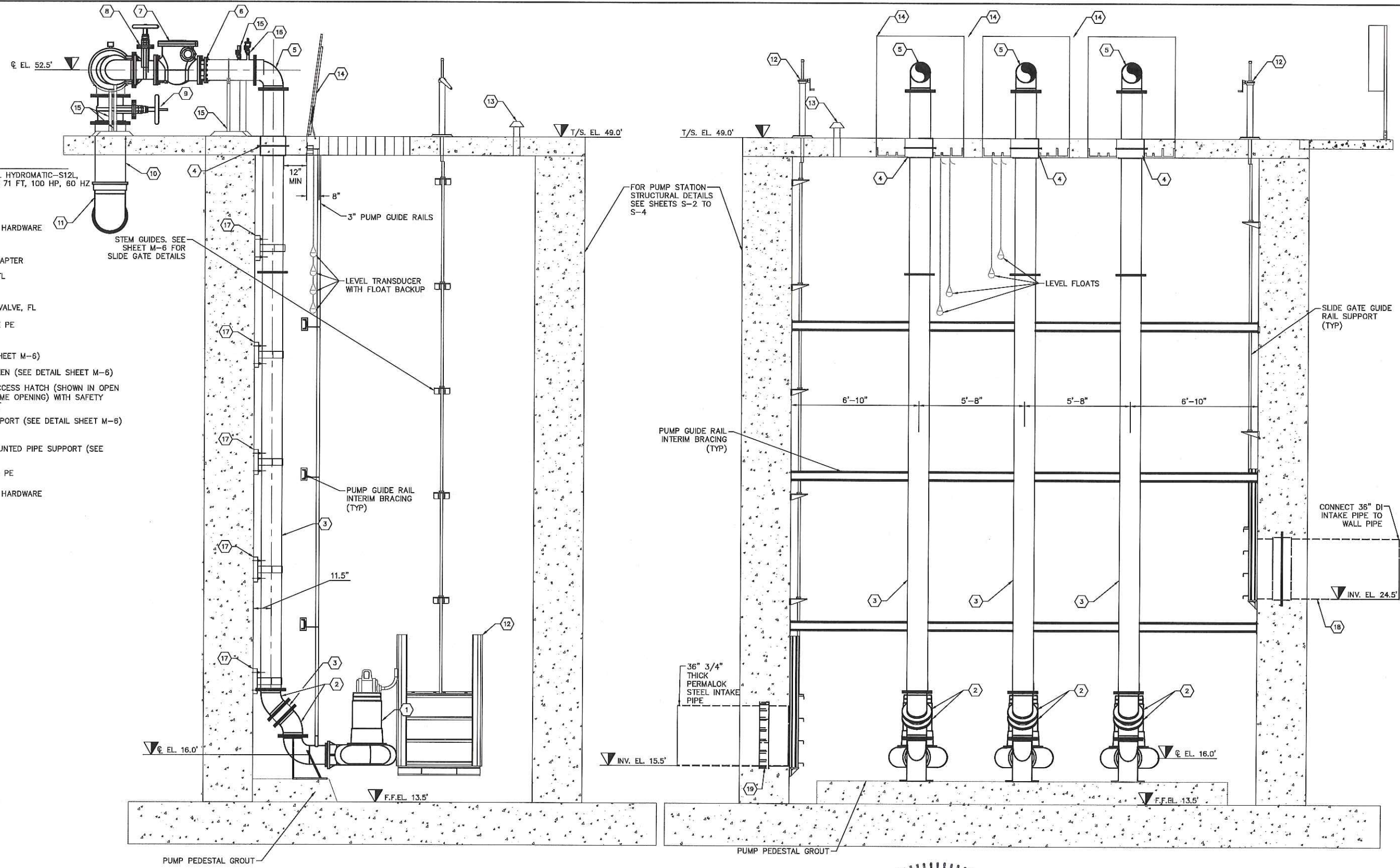


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PUMP BACK STATION

CENTRAL PUMP STATION
SECTIONS

SHEET NUMBER
M-2

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- NOTES:
- 1 SUBMERSIBLE PUMP, MODEL HYDROMATIC-S12L, 11.50 IN IMP, 3470 GPM @ 71 FT, 100 HP, 60 HZ
 - 2 12" D.I. 45° BEND, FL
 - 3 12" D.I. SPOOL PIECE, FL
 - 4 12" LINK SEAL W/ 316 SS HARDWARE
 - 5 12" D.I. 90° BEND, FL
 - 6 12" FLANGED COUPLING ADAPTER
 - 7 12" SWING CHECK VALVE, FL
 - 8 12" GATE VALVE, FL
 - 9 18" SIDE ACTUATED GATE VALVE, FL
 - 10 18" D.I. SPOOL PIECE, FL X PE
 - 11 18" D.I. 90° BEND, MJ
 - 12 SLIDE GATE (SEE DETAIL SHEET M-6)
 - 13 4" VENT WITH INSECT SCREEN (SEE DETAIL SHEET M-6)
 - 14 ALUMINUM SINGLE DOOR ACCESS HATCH (SHOWN IN OPEN POSITION, 4'-8"x4'-8" FRAME OPENING) WITH SAFETY GRATING AND SAFETY POST
 - 15 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
 - 16 2" AIR VACUUM VALVE
 - 17 STAINLESS STEEL WALL MOUNTED PIPE SUPPORT (SEE DETAIL SHEET M-6)
 - 18 5' LONG 36" DI WALL PIPE, PE
 - 19 36" LINK SEAL W/ 316 SS HARDWARE

1C TYPICAL PUMP DETAIL - SECTION
M-1 SCALE: 3/8" = 1'-0"

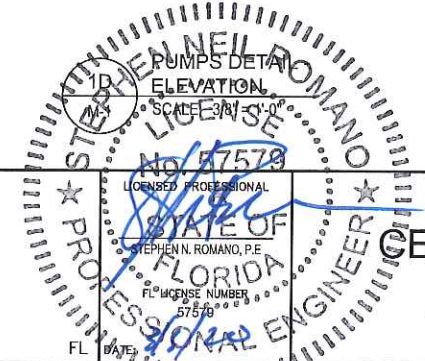
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KHA PROJECT
148400015
DATE
1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW
MANATEE COUNTY

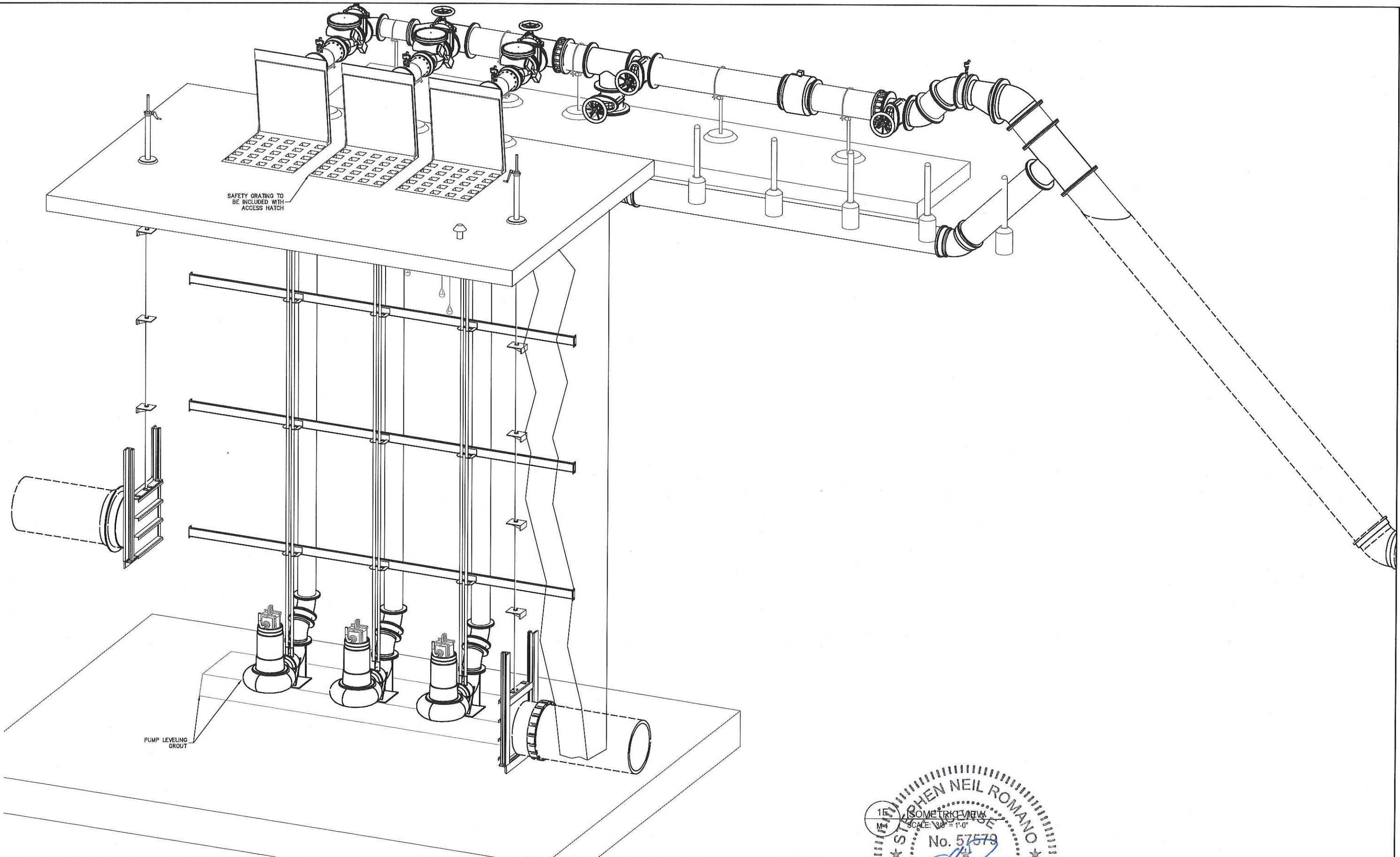
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CENTRAL PUMP STATION
SECTIONS

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 **Manatee County Florida**

**SEWRF RECLAIMED
PUMP BACK STATION**

MANATEE COUNTY

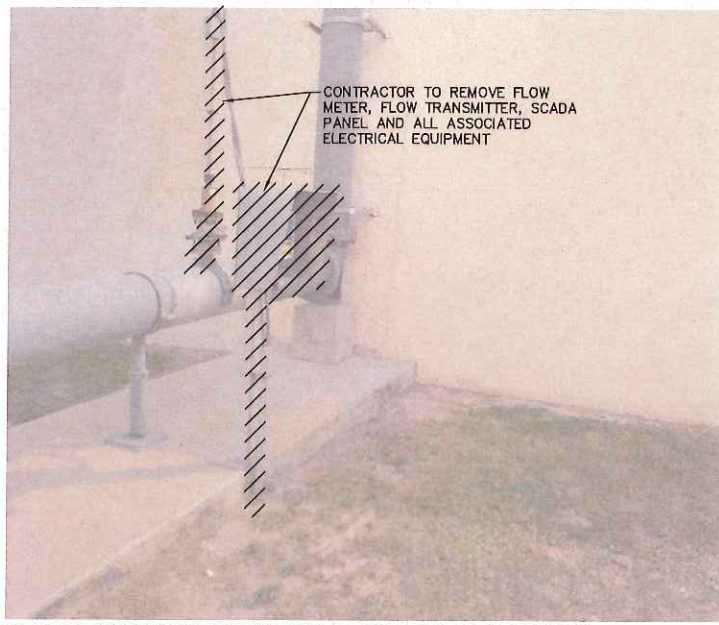
STEPHEN NEIL ROMANO
 ISOMETRIC VIEW
 SCALE: 3/8" = 1'-0"
 No. 57579
 LICENSED PROFESSIONAL ENGINEER
 FLORIDA
 LICENSE NUMBER 57579
 DATE: 3/8/2020

**CENTRAL PUMP STATION
ISOMETRIC VIEW**

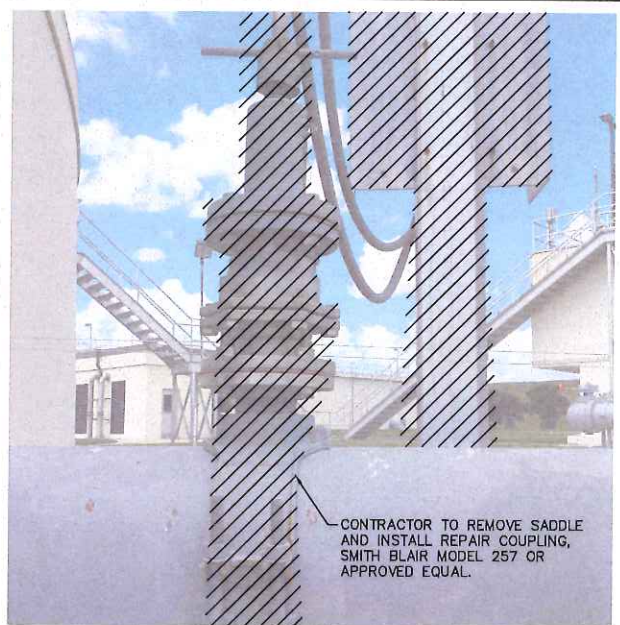
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M-4

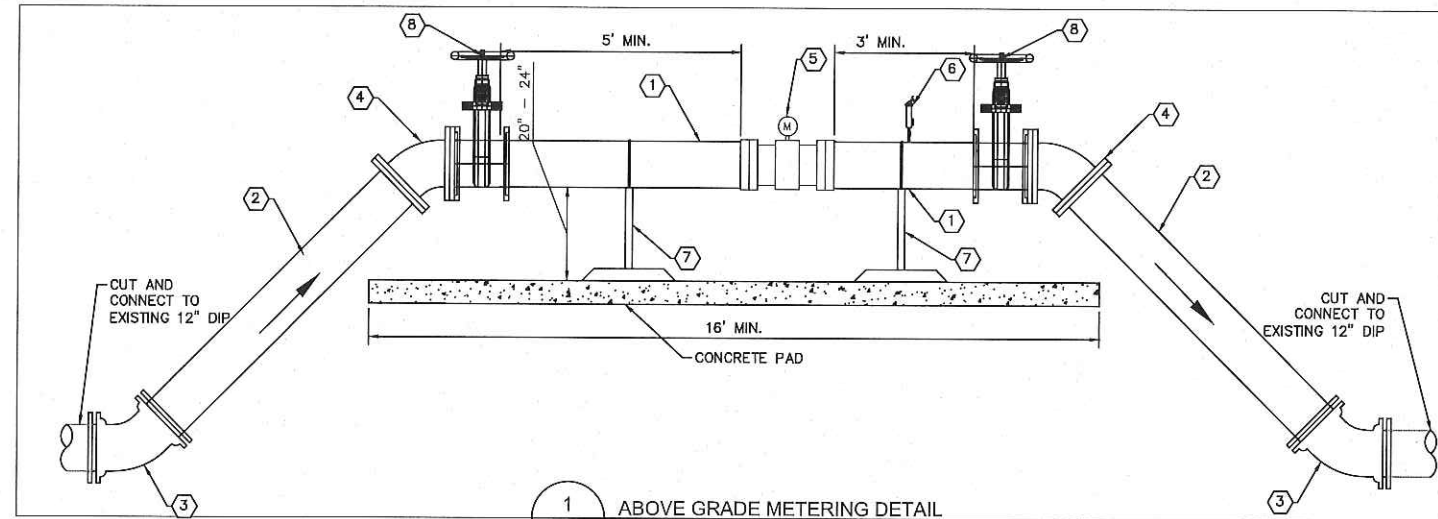
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EX. NORTH AND SOUTH EQUALIZATION TANK LEACHATE FLOW METER DEMOLITION



EX. LEACHATE FLOW METER DEMOLITION



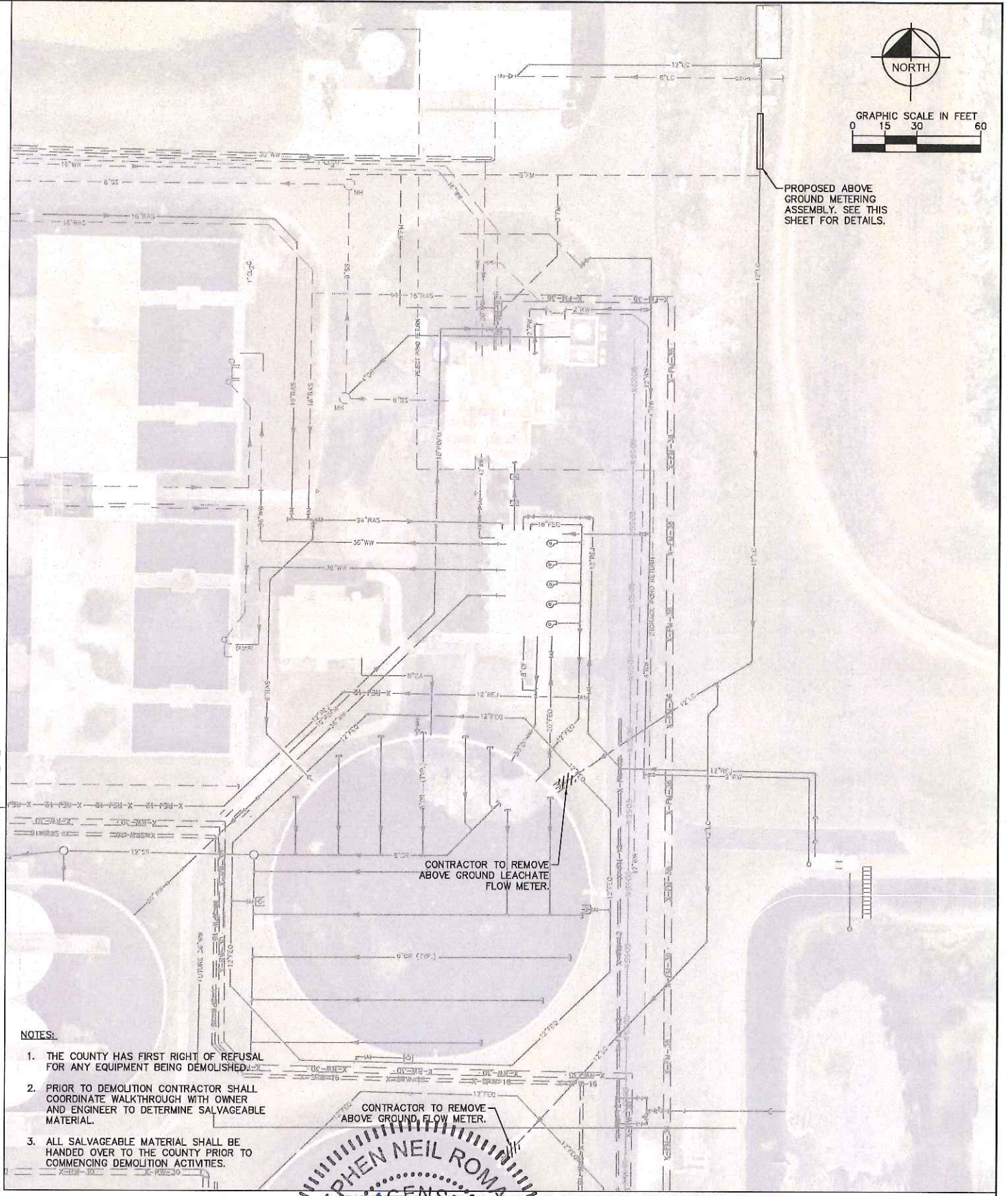
1 ABOVE GRADE METERING DETAIL
SCALE: 1/2" = 1'-0"

MAG METER PIPING NOTES:

- 1 12" D.I. SPOOL PIECE, FLG
- 2 12" D.I. SPOOL PIECE, FLG X PE
- 3 12" D.I. 45° BEND (COMPACT), MJ
- 4 12" D.I. 45° BEND (COMPACT), FLG
- 5 12" ENDRESS HAUSER MAG METER PROMAG W400
- 6 2" ARV
- 7 S.STL PIPE SUPPORT (SEE SHEET C-29 FOR DETAILS)
- 8 12" GATE VALVE, FLG

MAG METER DETAIL NOTES:

1. ABOVE GROUND PIPING SHALL BE D.I. BODY FLANGED FITTINGS.
2. ALL PIPING SHALL BE COLOR CODED IN ACCORDANCE W/ MANATEE COUNTY STANDARDS.
3. PIPE THROUGH SLAB AND ABOVE GROUND SHALL BE D.I. PIPE AND FITTINGS.
4. ALL METAL APPURTENANCES INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE STAINLESS STEEL (TYPE 316) UNLESS OTHERWISE NOTED. ALL STAINLESS STEEL BOLTS SHALL BE TREATED WITH NEVER-SIEZE PRIOR TO ASSEMBLY.
5. CONTRACTOR TO PROVIDE REQUIRED LENGTH OF PIPE DOWNSTREAM AND UPSTREAM OF THE PROPOSED METER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. ALL BELOW GROUND PIPING SHALL BE RESTRAINED ACCORDINGLY.
7. CONTRACTOR TO REMOVE/ABANDON EXISTING VAULTS AND FORCE MAIN AS NECESSARY TO PROPERLY INSTALL PROPOSED METER ASSEMBLY. ALL VOIDED AREAS SHALL BE REFILLED WITH FLOWABLE FILL.
8. ALL BELOW GROUND D.I. PIPE AND FITTINGS SHALL BE POLYETHYLENE WRAPPED.
9. INSTALL 6" OF COMPACTED 1" WASHED, CRUSHED SHELL OVER ONE LAYER OF WEED BARRIER OVER ALL EXPOSED GROUND SURFACES. ONE LAYER OF WEED BARRIER IS TO BE LAID AND EXTEND TO A LINE 6 FEET OUTSIDE OF THE CONCRETE PAD. THE WEED BARRIER SHALL BE MIRASCAPE MANUFACTURED BY MIFAFI OR APPROVED EQUAL. ALL FINISHED GRADE SURFACES SHALL SLOPE AWAY FROM THE CONCRETE SLABS AT A MINIMUM SLOPE OF 2%, EXTENDING TO A LINE 6 FEET OUTSIDE OF THE CONCRETE PAD LINE. ALL DISTURBED GROUND SHALL BE COMPACTED TO 95% MAX DENSITY, AASHTO T-180, BEFORE INSTALLING THE WEED BARRIER.



NOTES:

1. THE COUNTY HAS FIRST RIGHT OF REFUSAL FOR ANY EQUIPMENT BEING DEMOLISHED.
2. PRIOR TO DEMOLITION CONTRACTOR SHALL COORDINATE WALKTHROUGH WITH OWNER AND ENGINEER TO DETERMINE SALVAGEABLE MATERIAL.
3. ALL SALVAGEABLE MATERIAL SHALL BE HANDED OVER TO THE COUNTY PRIOR TO COMMENCING DEMOLITION ACTIVITIES.



CONTRACTOR TO REMOVE ABOVE GROUND FLOW METER.

LEACHATE PIPING IMPROVEMENTS TO HEADWORKS AND EQUALIZATION TANKS

LEACHATE PIPING IMPROVEMENTS

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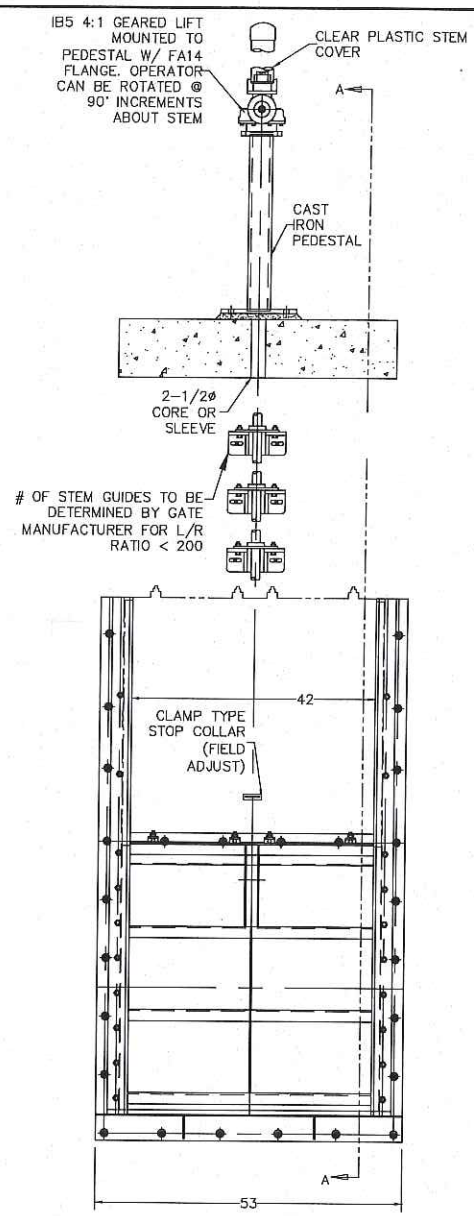
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MANATEE COUNTY

SHEET NUMBER

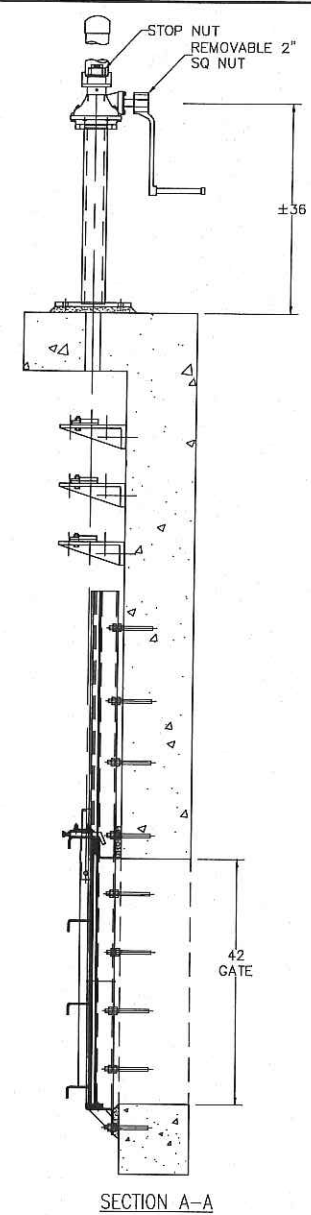
M-5

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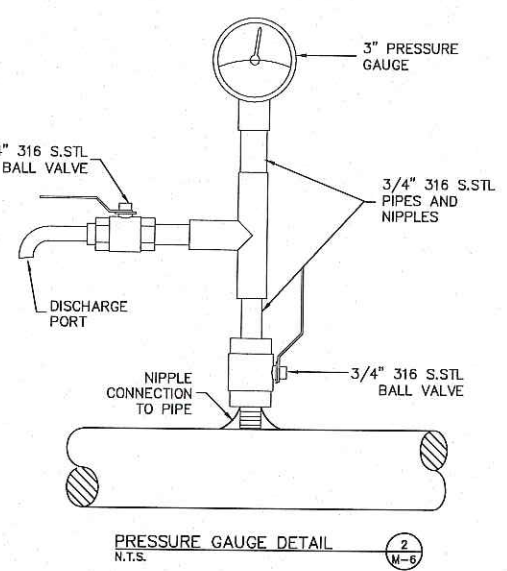


SLIDE GATE DETAIL (1) M-6
3/4" = 1' - 0"

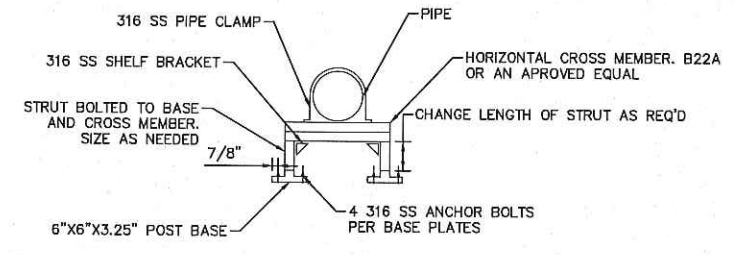
- NOTES:
1. ALL HARDWARE TO BE 316 SS
 2. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS BEFORE ORDERING MATERIALS
 3. ALL GATE INSTALLATIONS SHALL PASS LEAKAGE TEST PER AWWA C563
 4. ALL GATE AND FRAME DIMENSIONS TO BE DESIGNED BY GATE MANUFACTURER
 5. DIMENSIONS SHOWN ABOVE IN INCHES



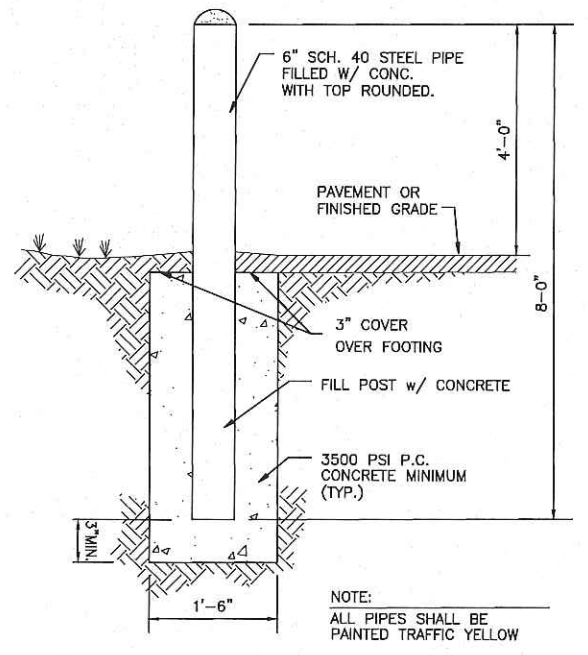
SECTION A-A



PRESSURE GAUGE DETAIL (2) M-6
N.T.S.

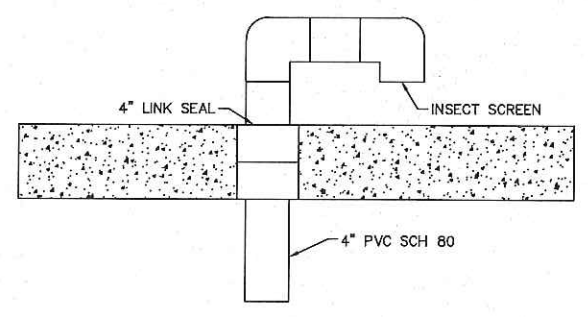


WALL MOUNTED PIPE SUPPORT (5) M-6
N.T.S.



BOLLARD DETAIL (3) M-6
N.T.S.

NOTE:
ALL PIPES SHALL BE PAINTED TRAFFIC YELLOW



4" VENT DETAIL (4) M-6
N.T.S.

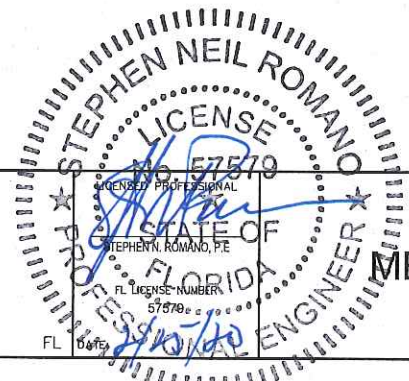
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MECHANICAL DETAILS

SHEET NUMBER
M-6