

Contract Drawings For

# MANATEE COUNTY PUBLIC WORKS DEPARTMENT FM 33A and FM 36A REPLACEMENT

MARCH 2021

MANATEE COUNTY PROJECT NO.  
6097880

HDR Project No.  
10171461

PREPARED BY:  
HDR ENGINEERING, INC.  
4830 W KENEDY BLVD, SUITE 400  
TAMPA, FL 33609  
CA #4213

PROJECT DESIGNER:  
RYAN MESSER, P.E. FL 79332

Board of County Commissioners

District 1	Priscilla Whisenant Trace
District 2	Reggie Bellamy
District 3	Stephen R. Jonsson
District 4	Misty Servia
District 5	Vanessa Baugh
Vice Chair At-Large	Carol Whitmore
Chair At-Large	Betsy Benac
Utilities Department Director:	Mike Gore

INDEX OF DRAWINGS

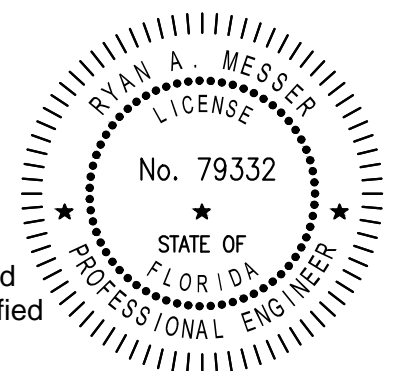
GENERAL

- G-101 COVER SHEET
- G-102 GENERAL NOTES (1 OF 2)
- G-103 GENERAL NOTES (2 OF 2)
- G-104 LEGEND AND VVH INFORMATION
- G-105 DRAWING KEY SHEET

CIVIL

- C-101 FM 36A PLAN & PROFILE STA: 10+00.00 TO 14+40.00
- C-102 FM 36A PLAN & PROFILE STA: 14+40.00 TO 19+40.00
- C-103 FM 36A PLAN & PROFILE STA: 19+40.00 TO 24+60.00
- C-104 FM 36A PLAN & PROFILE STA: 24+60.00 TO 27+60.00
- C-105 FM 36A PLAN & PROFILE STA: 27+60.00 TO 31+20.00
- C-106 FM 36A PLAN & PROFILE STA: 31+20.00 TO 36+00.00
- C-107 FM 36A PLAN & PROFILE STA: 36+00.00 TO 38+20.00
- C-108 FM 33A PLAN & PROFILE STA: 50+00.00 TO 52+50.00
- C-109 FM 33A PLAN & PROFILE STA: 52+50.00 TO 57+40.00
- C-110 FM 33A PLAN & PROFILE STA: 57+40.00 TO 62+40.00
- C-111 FM 33A PLAN & PROFILE STA: 62+40.00 TO 64+85.00
- C-112 FM 36A PAVEMENT RESTORATION
- C-113 FM 36A PAVEMENT RESTORATION
- C-114 FM 36A PAVEMENT RESTORATION
- C-115 FM 36A PAVEMENT RESTORATION
- C-116 FM 33A PAVEMENT RESTORATION
- C-117 FM 33A PAVEMENT RESTORATION
- C-501 DETAILS I
- C-502 DETAILS II

This item has been digitally signed and sealed by  
Ryan A. Messer on March 17, 2021.  
Printed copies of this document are not considered  
signed and sealed and the signature must be verified  
on any electronic copies.



**GENERAL**

- ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION, THE PROJECT MANAGER.
- SITE VISITS ARE MANDATORY FOR ALL BIDDERS.
- ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
- LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS AND SERVE AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR WILL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING THE CONTRACTOR'S WORK PRIOR TO CONSTRUCTION. CONTRACTOR WILL PROBE AREAS SUSPECT OF HAVING EXISTING UTILITIES AND WILL UNCOVER ALL UTILITIES VIA "POT HOLE" METHOD TO ENSURE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES. CONTRACTOR WILL OBTAIN OWNER'S PERMISSION TO PERFORM "POT HOLING" PRIOR TO THE COMMENCEMENT OF WORK IN THESE AREAS. THE OWNER WILL LOCATE, TO THE BEST OF THEIR KNOWLEDGE, WHEN REQUESTED AS STATED IN ITEM 5 BELOW, WITHIN 2'± OF EITHER SIDE OF THE CENTERLINE OF THE UTILITY. THE CONTRACTOR WILL KEEP A RECORD OF THIS LOCATION FOR FUTURE WORK IN THE SAME AREA FOR HIMSELF OR HIS SUBCONTRACTORS. THE CONTRACTOR WILL NOTIFY THE OWNER'S PROJECT MANAGER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND CONDITIONS ARE DISCOVERED.
- THE CONTRACTOR WILL PROVIDE A MINIMUM OF 48 HOURS AND A MAXIMUM OF FIVE (5) DAYS NOTICE (EXCLUDING SATURDAY, SUNDAY, AND LEGAL HOLIDAYS) TO THE SUNSHINE STATE ONE CALL SYSTEMS AT 1-800-432-4770 OR (811) AND ALL AFFECTED UTILITY COMPANIES IN ORDER TO REQUEST MARKING OF THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR WILL NOTIFY THE PARTICIPATING UTILITY COMPANIES BY CALLING THE UTILITY NOTIFICATION CENTER (1-800-432-4770) OR (811). NOT ALL UTILITY COMPANIES ARE MEMBERS OF SUNSHINE STATE ONE CALL. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL AFFECTED UTILITIES WHICH ARE NOT MEMBERS OF SUNSHINE STATE ONE CALL. ANY AND ALL DAMAGE TO EXISTING UTILITIES WILL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE ANY AND ALL UTILITIES ON THIS PROJECT (SEE NOTES 4 AND 5 ABOVE). FIELD CONDITIONS MAY NECESSITATE SLIGHT ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, EXISTING UTILITIES & STORM FACILITIES. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION. ANY AND ALL DAMAGE TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S ACTIVITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

**SAFETY**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
- CONTRACTOR TO CONFORM TO ALL OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC, AS REQUIRED IN ALL EXCAVATION AREAS THAT CONFORM TO ALL OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
- CONTRACTOR, CONTRACTOR EMPLOYEES, AND SUBCONTRACTOR(S) TO FOLLOW LATEST FEDERAL, STATE, AND OSHA MANDATED COVID-19 INFECTION PREVENTION MEASURES.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKPLACE.

**ENVIRONMENTAL**

- THE CONTRACTOR WILL SUBMIT AN ADEQUATE EROSION CONTROL PLAN TO THE ENGINEER OF RECORD AND RECEIVE AN APPROVED PLAN FROM THE OWNER PRIOR TO THE PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION. DISCHARGE OF STORM WATER CONTRIBUTING TO A VIOLATION OF WATER QUALITY STANDARDS IN THE WATERS OF THE STATE WILL NOT BE ALLOWED.
- STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
- STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC, WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
- SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.
- ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
- SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
- ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
- IN THE EVENT THAT THE EROSION PREVENTION AND CONTROL DEVICES SHOWN IN THE EROSION CONTROL PLAN, PROVIDED BY THE CONTRACTOR, PROVE NOT TO BE EFFECTIVE, ALTERNATE METHODS FOR MAINTAINING STATE WATER QUALITY STANDARDS FOR DISCHARGE FROM THE CONSTRUCTION SITE WILL BE REQUIRED. ALL ALTERNATE EROSION PREVENTION AND CONTROL DEVICES MUST BE APPROVED BY THE OWNER'S ENGINEER PRIOR TO PLACEMENT
- THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATION OR PERMIT CONDITIONS.

**RIGHT-OF-WAY (R/W)**

- ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
- CONTRACTOR TO NOTE LIMITS OF PROJECT AND/OR EASEMENTS SHOWN ON PLANS. LOCATIONS AND DIMENSIONS OF EXISTING R/W AND EASEMENTS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY AND STAKE LOCATION OF R/W AND EASEMENTS PRIOR TO ANY CONSTRUCTION ACTIVITIES TO ESTABLISH PROJECT LIMITS. STAKING MUST BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION ACTIVITIES TO CONFIRM THAT ALL WORK IS PERFORMED WITHIN THE SPECIFIED LIMITS. ALL WORK, INCLUDING MOBILIZATION OF EQUIPMENT WILL BE PERFORMED WITHIN LIMITS OF THE R/W AND EASEMENTS. CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGES AND WILL RESTORE AND REPLACE ANY DAMAGED OR DISTURBED AREAS OUTSIDE THE LIMITS AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- IF THE CONTRACTOR IS TO RESTRICT ANY TRAFFIC, PRIOR TO CONSTRUCTION THE CONTRACTOR MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND PREPARE A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS WHETHER SHOWN ON THE PLANS OR NOT. THE HEADWALL SHALL BE REPLACED IN ACCORDANCE WITH FDOT STANDARDS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COMPLETE STAKE-OUT OF THE PROJECT, I.E., LINE, BENCHMARKS, CENTERLINES, GRADE, SLOPE STAKE, STATIONING, UTILITY RELOCATION'S OR ANY OTHER STAKE-OUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID ITEM MOBILIZATION, DEMOBILIZATION, BONDS AND PERMITS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
- THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORKDAY AND FULLY RESTORED PER SECTION 02575.
- A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE CONTRACTOR FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

**UTILITIES**

- THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH AND VWH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINT SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
- ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION, ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAILBOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- ANY TEMPORARY SHUTDOWNS FOR MODIFICATIONS OF EXISTING UTILITY SYSTEMS THAT MUST REMAIN IN SERVICE DURING CONSTRUCTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE COORDINATED WITH AND APPROVED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IT IS NOTED THAT TEMPORARY SHUTDOWNS MAY BE RESTRICTED TO CERTAIN HOURS OF THE DAY OR NIGHT AND WILL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
- FOR WORK BEING DONE ON EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FLOW OF ALL SEWAGE DURING CONSTRUCTION, WHICH MAY REQUIRE BY-PASS PUMPING AND/OR PUMPER TRUCKS, THE CONTRACTOR SHALL SUBMIT A DETAILED BY-PASS PUMPING PLAN PER SECTION 02720.
- CONTRACTOR IS TO KEEP ALL SANITARY SEWER MANHOLES ACCESSIBLE BY COUNTY STAFF DURING CONSTRUCTION. IF A MANHOLE REQUIRES MODIFICATION OR IS DAMAGED/IMPACTED AS PART OF THE CONTRACTOR'S WORK, THE COUNTY SHALL BE NOTIFIED IMMEDIATELY.
- PLASTIC RISER RINGS TO ADJUST MANHOLE LIDS WILL NOT BE ALLOWED.
- CONTRACTOR WILL NOTIFY THE OWNER 72 HOURS PRIOR TO START OF BY-PASS PUMPING.
- ARV(S) ARE SHOWN IN LOCATIONS BASED ON DESIGN PROFILE. ARV(S) ARE TO BE INSTALLED AT ALL HIGH POINTS CREATED DURING CONSTRUCTION. LOCATIONS TO BE APPROVED BY COUNTY PRIOR TO CONSTRUCTION OF ARV.
- IN THE EVENT OF A WATER OR SEWER MAIN BREAK, CALL 24 HOUR EMERGENCY NUMBER (941) 792-8811 EXT. 5216.
- ALL WATER SERVICES TO BE INSTALLED OR MODIFIED ON PRIVATE PROPERTY SHALL REQUIRE A PLUMBING PERMIT:
  - THE CONTRACTOR'S PLUMBER SHALL INSTALL A REDUCED PRESSURE (RP) TYPE BACKFLOW PREVENTION ASSEMBLIES (BPA'S) EQUIPPED WITH A PRESSURE RELIEF VALVE AT THE POTABLE WATER METER WHENEVER ANY OF THE FOLLOWING CONDITIONS EXIST AT A PROPERTY:
    - IN-GROUND IRRIGATION SYSTEM,
    - SECONDARY SOURCE OF WATER (I.E. RECLAIMED WATER OR WELL),
    - SWIMMING POOL,
    - FIRE SPRINKLER SYSTEM
    - FLOOD ZONE DESIGNATION (IF ONLY FLOOD ZONE, INSTALL A DOUBLE CHECK BPA),
    - PROPERTY THAT ABUTS OR INCLUDES A BODY OF WATER (INCLUDING RIVER, BAY, LAKE OR POND),
    - SOLAR WATER HEATING SYSTEM,
    - MULTISTORY OR MULTIFAMILY RESIDENTIAL FACILITY.
  - A LICENSED PLUMBER SHALL INSTALL THE BPA'S IN ACCORDANCE WITH THE CURRENT FLORIDA PLUMBING CODE AND MANATEE COUNTY CODE OF ORDINANCES AND SHALL SELECT A PRESSURE RELIEF VALVE WITH AN APPROPRIATE PRESSURE SEET POINT TO PROTECT THE CUSTOMER'S PLUMBING AND NOT ALLOW EXCESSIVE LEAKAGE DUE TO SYSTEM SUPPLY PRESSURE. A PRESSURE REDUCING VALVE MAY BE NECESSARY UPSTREAM OF THE PRESSURE RELIEF VALVE, WHERE NORMAL SUPPLY PRESSURE EXCEEDS 80 PSI, CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION CONTROL STAFF AS REQUIRED.
  - IF IN-GROUND IRRIGATION SYSTEM IS CONNECTED TO THE POTABLE WATER LINE, AN ADDITIONAL REDUCED PRESSURE (RP) BPA SHALL BE INSTALLED AT THE POINT OF CONNECTION.
  - VACUUM BREAKERS SHALL BE INSTALLED ON ALL EXTERNAL HOSE BIBBS.
  - CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION STAFF & PRIVATE PROPERTY OWNER AS REQUIRED. CROSS CONNECTION STAFF SHALL DETERMINE WHICH PROPERTIES REQUIRE A BPA AND TYPE OF BPA TO BE INSTALLED.

**RESTORATION**

- ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
- ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDED UNLESS OTHERWISE INDICATED, THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.
- ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.
- ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SPECIFICATION SECTION 02513.
- CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITION OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, THE FDOT. DESIGN STANDARDS AND THE MANATEE COUNTY TRANSPORTATION DEPARTMENT SIDEWALK STANDARDS AS SHOWN ON SHEET C-502. CONCRETE WITH A 3,000PSI AT 28 DAYS SHALL BE USED.
- WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION, PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.
- RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, FENCES, MAILBOXES, METERS AND METER BOXES, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

**CONSTRUCTION**

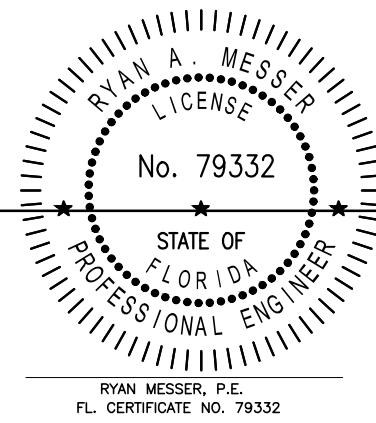
- THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT BAFFLES POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.
- NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS, ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY, AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST. DEBRIS AND OTHER MATERIAL WILL BE DISPOSED OF OFF-SITE AND IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. ROADS SHALL BE SWEEP DAILY AS PART OF DAILY CLEAN UP.
- CONTRACTOR WILL NOT LEAVE OPEN PITS OR TRENCHES EXPOSED AT END OF EACH CONSTRUCTION DAY. ANY PIT OR TRENCH MUST BE COVERED OR FILLED.
- THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
- INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
- PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
- SHOULD EXISTING FENCING BE REMOVED, CONTRACTOR IS TO INSTALL TEMPORARY FENCING UNTIL NEW PERMANENT FENCING CAN BE PLACED.
- THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY; DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
- ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES. MODIFICATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.
- ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
- ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER.
- TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), PLUGS AND OTHER APPURTENANCES WILL BE INSTALLED WITH RESTRAINED JOINTS UNLESS OTHERWISE NOTED.
- ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON, CONTRACTOR WILL EXPOSE AND RESTRAIN EXISTING PIPE FACILITIES AND THEIR APPURTENANCES AT THOSE LOCATIONS WHERE MODIFICATIONS, CONNECTIONS, TAPS, ETC. ARE MADE TO EXISTING FACILITIES. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS.



HDR Engineering, Inc.  
4830 W Kennedy Blvd., Suite 400  
Tampa, FL 33609  
Certificate of Authorization No. 4213

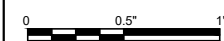
ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER RYAN MESSER, P.E.	
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER 10171461	



**FM 33A AND FM 36A REPLACEMENT**

**GENERAL NOTES (1 OF 2)**



FILENAME | G-102.DWG  
SCALE | NONE

SHEET

G-102

**CONSTRUCTION (CONTINUED)**

65. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE RECOMMENDED DEFLECTION. SHOP DRAWINGS WILL BE FURNISHED TO THE ENGINEER FOR APPROVAL OF ALL PIPE CONNECTIONS, TRANSITIONS, AND SPECIAL FITTINGS PRIOR TO FABRICATION AND DELIVERY TO JOB SITE.
66. MINIMUM VERTICAL AND HORIZONTAL CLEARANCES WILL BE MAINTAINED BETWEEN POTABLE WATER, RECLAIMED WATER, SANITARY MAINS AND STORM SEWERS AS DETAILED IN THESE PLANS AND DESCRIBED IN THE TECHNICAL SPECIFICATIONS FOR THIS PROJECT, OR PER CURRENT EDITION OF FAC 62-55.314.
67. UNLESS OTHERWISE NOTED ON THE DRAWINGS A MINIMUM OF 48" HORIZONTAL COVER WILL BE MAINTAINED ABOVE ALL BURIED PIPES. A MINIMUM OF 12" VERTICAL CLEARANCE WILL BE MAINTAINED BETWEEN BURIED GAS LINES AND ALL OTHER UTILITIES.
68. DUE TO GAS LINE PRESSURE, NO WORK OR STAGING OF WORK SHALL BE DONE WITHIN 10 FEET OF THE GAS MAIN WITHOUT THE NOTIFICATION OF TECO FIELD REPRESENTATIVE. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
69. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.
70. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
71. IF UNSATISFACTORY MATERIAL FOR ADEQUATE BEARING IS ENCOUNTERED AT THE NORMAL SUBGRADE, THE UNSATISFACTORY MATERIAL WILL BE REMOVED, DISPOSED OF OFFSITE AND REPLACED WITH SUITABLE BACKFILL MATERIAL AS SPECIFIED.
72. ALL TRENCH BACKFILL UNDER PAVEMENT BEGINNING ONE (1) FOOT ABOVE THE TOP OF PIPE AND UP TO THE STABILIZED SUBGRADE, WILL BE COMPACTED AS INDICATED IN THE CONTRACT SPECIFICATIONS AND NOTED IN THE PLAN DETAILS. IN THE EVENT THAT DEWATERING IS REQUIRED, THE MATERIALS AND EQUIPMENT REQUIRED FOR DEWATERING WILL REMAIN IN PLACE AND FULLY OPERATIONAL UNTIL ALL DENSITY TESTS HAVE PASSED AND BEEN APPROVED BY THE OWNER. DEWATERING MATERIALS AND EQUIPMENT WILL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
73. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
74. ALL PENETRATIONS OF EXISTING STRUCTURES SHALL BE BY MECHANICAL ROTARY CORE DRILLING METHOD. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
75. GROUT AND FILL EXISTING PIPELINES AS NOTED IN THE DRAWINGS USING A CEMENT SLURRY CONTAINING FLY ASH THAT CAN ACHIEVE A MAXIMUM FILL DISTANCE OF 2,000 LF. SLURRY COMPOSITION TO BE SUBMITTED AS A SHOP DRAWING TO COUNTY FOR REVIEW AND APPROVAL PRIOR TO PURCHASE. FOR CAPS, USE OFFSET PORTS THAT ARE TO BE INSTALLED ADJACENT TO THE CROWN OF THE PIPE SO AS TO MINIMIZE AIR GAP POTENTIAL.
76. ALL NEW PIPELINES SHALL BE CLEANED, PIGGED (4" AND LARGER), FLUSHED, PRESSURE TESTED, AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIGGING, FLUSHING, AND PRESSURE TESTING. CONTRACTOR WILL PROVIDE TEMPORARY THRUST RESTRAINT, BRACING, TESTING PLUGS, AND OTHER DEVICES NECESSARY TO SUCCESSFULLY COMPLETE PRESSURE TESTING OF PIPING SYSTEMS.
77. ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.
78. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
79. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 1.14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED AND SEALED BY A SURVEYOR. CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 1.15 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 1.15 WILL BE PROVIDED UPON REQUEST.
80. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS OF THE WORK AS CONSTRUCTED. AS-BUILT DRAWINGS SHALL INCLUDE THE LOCATION OF ABANDONED FORCE MAIN AND THE CUT AND PLUG POINTS. AS-BUILT DRAWINGS SHALL BE ANNOTATED EACH DAY AS THE WORK PROCEEDS AND SHALL BE AVAILABLE TO THE COUNTY PROJECT MANAGER AND/OR FIELD INSPECTOR FOR REVIEW ON AN ONGOING BASIS. AS-BUILT DRAWINGS SHALL PROVIDE THE HORIZONTAL AND VERTICAL INSTALLED LOCATION OF ALL NEW PIPELINE, FITTINGS, VALVES AND FORCE MAIN APPURTENANCES REFERENCED TO FIXED SURFACE FEATURES THAT ARE SHOWN ON THE CONSTRUCTION DRAWINGS AND/OR RIGHT-OF-WAY LINES, PROPERTY CORNERS OR OTHER SURVEYED POINTS. THE CONTRACTOR SHALL BE ABLE TO PRESENT THE RECORD DRAWINGS TO THE COUNTY PROJECT MANAGER AND/OR INSPECTOR ON DEMAND AS THE WORK PROGRESSES.

**EXISTING UTILITY LOCATIONS**

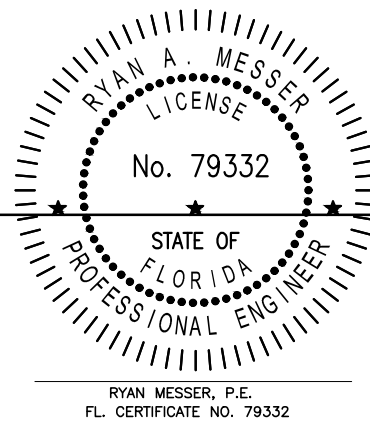
81. EXISTING UTILITIES WERE IDENTIFIED WITH SURVEY USING GROUND PENETRATING RADAR, AND SELECT UTILITIES WERE VEH-ED VIA TEST HOLES AS SHOWN ON THE DRAWINGS.
82. BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT.
83. THE COMBINED SCALE FACTOR FROM THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD) TO NORTH AMERICAN DATUM OF 1988 (NAVD) IS 1.000438695.

**MAINTENANCE OF TRAFFIC**

84. THE CONTRACTOR IS RESPONSIBLE FOR ANY MAINTENANCE OF TRAFFIC RESULTING FROM A TRAFFIC CONTROL PLAN (TCP) IMPLEMENTED. THE TCP SHALL BE PREPARED BY AN INDIVIDUAL CERTIFIED TO PREPARE A TCP IN THE STATE OF FLORIDA THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS LATEST EDITION (SERIES 600). ANY DEVIATIONS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SUBMITTED TO COUNTY FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.
85. THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHT-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN (TCP). THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS SECTION 102, SECTION 990, SECTION 994, AND FEDERAL HIGHWAY ADMINISTRATION'S THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). A TCP SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
86. CONTRACTOR TO PROVIDE ALL WARNING SIGNALS, SIGNS, LIGHTS AND FLAG PERSONS AS REQUIRED BY THE MUTCD AND FDOT STANDARDS/INDICES.
87. CONTRACTOR TO INCLUDE COST FOR OBTAINING ALL PERMITS, LICENSES AND INSURANCE REQUIRED FOR THIS PROJECT IN HIS BID.
88. THE CONTRACTOR SHALL USE, BUT ARE NOT LIMITED TO, FDOT INDICES 415, 600, 615, 616, AND 621. THE RECOMMENDED FDOT DESIGN STANDARD INDICES ARE CONCEPTUAL.
89. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TEMPORARY DRAINAGE. THERE WILL BE NO DIRECT PAY FOR THIS WORK, COSTS SHALL BE INCLUDED IN THE COST OF PIPE.
90. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED OR LOCATED TO MINIMIZE NOISE.
91. THE CONTRACTOR WILL NOTIFY ALL EMERGENCY AND RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY 24 HOURS IN ADVANCE OF ANY PROPOSED LANE CLOSURES OR DETOURS.
92. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION AT ALL TIMES.
93. USE FDOT INDEX NO. 619 FOR TRAFFIC CONTROL MEASURES WHEN CONSTRUCTION EQUIPMENT IS DRIVEN ON OPEN TRAVEL LANES. THE REGULATORY SPEED IN WORK ZONES SHOULD BE AS CLOSE TO NORMAL CONDITIONS AS POSSIBLE, UNLESS NOTED ON THE TRAFFIC CONTROL PLANS.
94. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SUPPORT OF ADJACENT UTILITY POLES AND/OR COORDINATION OF SUCH WITH UTILITY COMPANIES.
95. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIEMS.
96. ANY MOT ITEM NOT SPECIFICALLY LISTED UNDER A PARTICULAR PAY ITEM SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
97. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
98. ALL DETOURS, IF APPROVED BY THE COUNTY, SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MUTCD (LATES EDITION) AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION (600 SERIES). ANY DETOUR RECOMMENDED BY THE CONTRACTOR MUST BE SUBMITTED TO THE COUNTY FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.

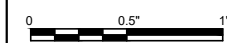
**UTILITY CONTACT TABLE**

MANATEE COUNTY PUBLIC WORKS	ANTHONY BENITEZ	(941) 708-7450 EXT. 7333
MANATEE COUITY TRAFFIC	MUKUNDA GOPALAKRISHNA	(941) 749-3500 EXT. 7813
MANATEE COUNTY HEALTH		(941) 748-0747 EXT. 1355
CITY OF BRADENTON PUBLIC WORKS	JIM MCLELLAN	(941) 708-6300
DEPARTMENT OF ENVIRONMENTAL PROTECTION	ED WATSON	(813) 470-5875
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT	STEVE LOPES	(941) 377-3722
FLORIDA POWER AND LIGHT (SERVICE)	NYLES PETERSON	(941) 723-4425
FLORIDA POWER AND LIGHT (DISTRIBUTION)	GREG COKER	(941) 723-4430
TECO GAS	DAN SHANAHAN	(941) 342-4006
PEACE RIVER ELECTRIC COOPERATIVE	JAMIE FONES	(863) 767-4654
FRONTIER/VERIZON	DENISE HUTTON	(941) 906-6722
CHARTER/BRIGHTHOUSE	TOM WRIGHT	(941) 748-3816 EXT. 21348
ATMS	VISHAL KAKAAD	(941) 749-3500 EXT. 7812
SUNSHINE STATE ONE CALL OF FLORIDA		1 (800) 432-4770



**FM 33A AND FM 36A  
REPLACEMENT**

**GENERAL NOTES  
(2 OF 2)**



FILENAME | G-103.DWG  
SCALE | NONE

SHEET  
**G-103**



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER		RYAN MESSER, P.E.
SENIOR ENGINEER	----	
PROCESS DESIGNER	J. THORPE	
PROJECT NUMBER		10171461

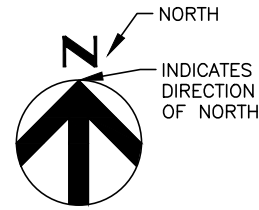
**LEGEND:**

- ARV = AIR RELEASE VALVE
- ASB = ASBESTOS
- AVE. = AVENUE
- BFP = BACKFLOW PREVENTER
- BGV = BELOW GRADE VAULT
- BLS = BELOW SURFACE
- BOS. = BOTTOM OF STRUCTURE
- (C) = CALCULATED
- C&G = CURB AND GUTTER
- C.L.F. = CHAIN LINK FENCE
- CIP = CAST IRON PIPE
- CIR. = CIRCLE
- CONC. = COMMISSIONER'S BOOK
- CONC. = CONCRETE
- CONN. = CONNECT
- CONST. = CONSTRUCT
- DI = DUCTILE IRON
- DIP = DUCTILE IRON PIPE
- DWY. = DRIVEWAY
- E. = EASTING
- EJ = EXPANSION JOINT
- EL. = ELEVATION
- EOP = EDGE OF PAVEMENT
- ERCP = ELLIPTICAL REINFORCED CONCRETE PIPE
- EXIST. = EXISTING
- (F) = FIELD
- FCM = FOUND CONCRETE MONUMENT
- FIN. = FINISHED
- FIP = FOUND IRON PIPE
- FIR = FOUND IRON ROD
- FLG'D = FLANGED
- FM = FORCE MAIN
- F.N&D. = FOUND NAIL AND DISK
- FPVC = FUSIBLE POLYVINYL CHLORIDE PIPE
- HDD = HORIZONTAL DIRECTIONAL DRILL
- HDPE = HIGH DENSITY POLYETHYLENE PIPE
- INV. = INVERT
- LB = LICENSED BUSINESS
- LF = LINEAR FEET
- LP = LIGHT POLE
- MBX = MAILBOX
- M.E.S. = MITERED END SECTION
- MH = MANHOLE
- MIN. = MINIMUM
- MJ = MECHANICAL JOINT
- MW = WATER METER
- N: = NORTHING
- MIN.T.S. = NOT TO SCALE
- O.R. = OFFICIAL RECORD BOOK
- (P) = PER PLAT
- P.B. = PLAT BOOK
- PG. = PAGE
- PP = POWER POLE
- PLS = PROFESSIONAL LAND SURVEYOR
- PROP. = PROPOSED
- PSM = PROFESSIONAL SURVEYOR AND MAPPER
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- REQ'D. = REQUIRED
- RJ = RESTRAINED JOINT
- R/W = RIGHT-OF-WAY
- SAN. = SANITARY
- SEC. = SECTION
- SMND = SET MAG NAIL AND DISK LB6992
- SRVC = SERVICE BOX
- SST = 316 STAINLESS STEEL
- STA: = STATION
- STL = STEEL
- S/W = SIDEWALK
- TELE = TELEPHONE/COMMUNICATIONS
- TOP = TOP OF PIPE
- TRAV = TRAVERSE
- UNK. = UNKNOWN
- VCS = VALVE CAP SANITARY
- VVH = VERIFIED VERTICAL & HORIZONTAL UTILITIES
- WM = WATER MAIN
- WPB = WIRE PULL BOX

**SYMBOLS LEGEND:**

- IRON PIPE FOUND
- IRON ROD FOUND
- CONCRETE MONUMENT
- ⊠ FOUND GRATE INLET
- ⊞ MITERED END SECTION
- ⊕ STORM MANHOLE
- ⊞ MAILBOX
- GAS MARKER
- BOLLARD
- CLEANOUT
- ✳ SIGN
- ✳ WOOD UTILITY POLE
- ✳ CONCRETE UTILITY POLE
- ↑ GUY WIRE
- ⊞ WATER METER
- ⊞ WATER VALVE
- ⊞ SANITARY MANHOLE
- ⊞ FIRE HYDRANT
- ⊞ BACKFLOW PREVENTER
- ⊞ COMMUNICATION MARKER
- ⊞ UTILITY RISER
- ⊞ UTILITY HANDHOLE
- ⊞ TRAFFIC SIGNAL POLE
- ⊞ ANTENNA
- VVH LOCATION
- ⊞ = PROP. PLUG VALVE
- ⊞ = PROP. HORIZONTAL 45° BEND
- ⊞ = PROP. VERTICAL (UP) 45° BEND
- ⊞ = PROP. VERTICAL (DOWN) 45° BEND
- ⊞ = PROP. HORIZONTAL 22.5° BEND
- ⊞ = PROP. VERTICAL (UP) 22.5° BEND
- ⊞ = PROP. VERTICAL (DOWN) 22.5° BEND
- ⊞ = PROP. PLUG
- ⊞ = PROP. REDUCER
- ⊞ = PROP. WYE
- ⊞ = PROP. AIR RELEASE VALVE

- ▨ REMOVE AND RESTORE ASPHALT
- ▨ REMOVE AND RESTORE BRICK PAVERS
- ▨ REMOVE AND RESTORE CONCRETE



**LINETYPE LEGEND:**

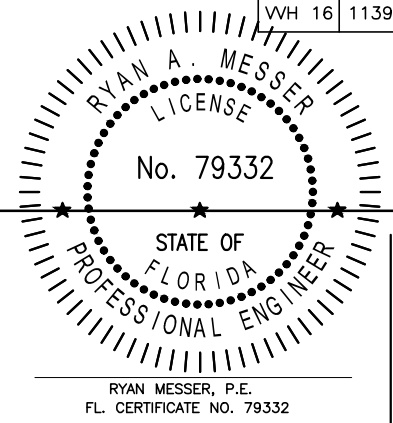
- FM — EXISTING FORCE MAIN
- WM — EXISTING WATER MAIN
- SS — EXISTING SANITARY SEWER
- SD — EXISTING STORM DRAIN
- - - - - EXISTING FENCE
- - - - - RIGHT-OF-WAY
- - - - - FM EASEMENT
- - - - - EXISTING GRADE OVER PIPE
- ==== PROPOSED FM
- — — — — ALIGNMENT/PIPE CENTER LINE
- ##### PLUG AND FILL PIPE

**SITE CONTROL:**

DESIGNATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1141154.50	465580.74	22.56'	IR (LB 7203)
2	1140336.43	465645.62	22.42'	IR (LB 7203)
3	1139525.90	465583.00	22.71'	IR (LB 7203)

**VVH TABLE**

VVH #	NORTHING	EASTING	GRADE ELEVATION	DEPTH TO TOP	TOP OF PIPE	PIPE DIRECTION	SIZE/MATERIAL
VH 1	1138639.96	466322.86	22.19'	5.51'	16.68'	EAST/WEST	14" DIP FM
VH 2	1138655.95	466306.37	21.92'	3.16'	18.76'	NORTH/SOUTH	6" CONC. WM
VH 3	1138642.75	467591.23	18.83'	2.16'	16.67'	NORTH/SOUTH	10" PVC WM
VH 4	1139063.40	467975.78	18.99'	3.80'	15.19'	EAST/WEST	14" DIP FM
VH 5	1140182.62	465574.41	23.06'	4.19'	18.87'	NORTH/SOUTH	8" CIP FM
VH 6	1140936.49	465580.25	22.47'	2.99'	19.48'	NORTH/SOUTH	8" CIP FM
VH 7	1138661.39	467582.78	18.66'	5.58'	13.08'	EAST/WEST	8" CIP FM
VH 8	1138631.25	466988.72	21.29'	3.42'	17.87'	EAST/WEST	6" PVC WM
VH 9	1139814.24	465639.78	22.47'	1.26'	21.21'	EAST/WEST	1" STL WM
VH 10	1139887.36	465570.56	22.43'	4.41'	18.02'	EAST/WEST	6" CONC. ASB WM
VH 11	1140503.28	465578.98	22.60'	3.20'	19.40'	NORTH/SOUTH	8" DIP FM
VH 12	1140655.87	465579.55	22.71'	3.26'	19.45'	NORTH/SOUTH	8" DIP FM
VH 13	1141117.80	465561.32	22.34'	3.70'	18.64'	EAST/WEST	8" DIP WM
VH 14	1139044.28	468187.03	19.00'	3.35'	15.65'	NORTH/SOUTH	5" CONC. ASB WM
VH 15	1139046.76	468020.06	18.62'	3.00'	15.62'	NORTH/SOUTH	4" CONC. ASB WM
VH 16	1139041.24	468556.31	18.52'	2.35'	16.17'	NORTH/SOUTH	4" CONC. ASB WM



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461



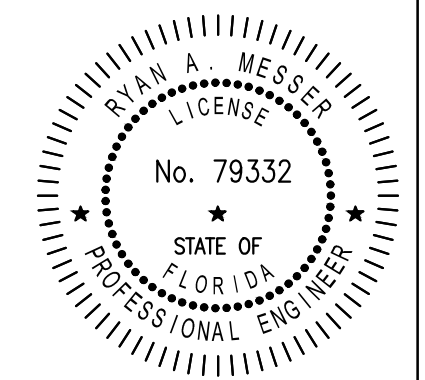
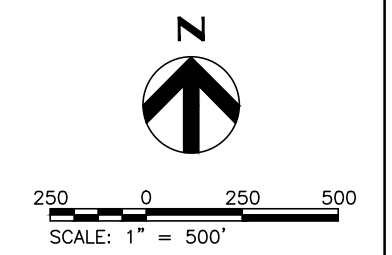
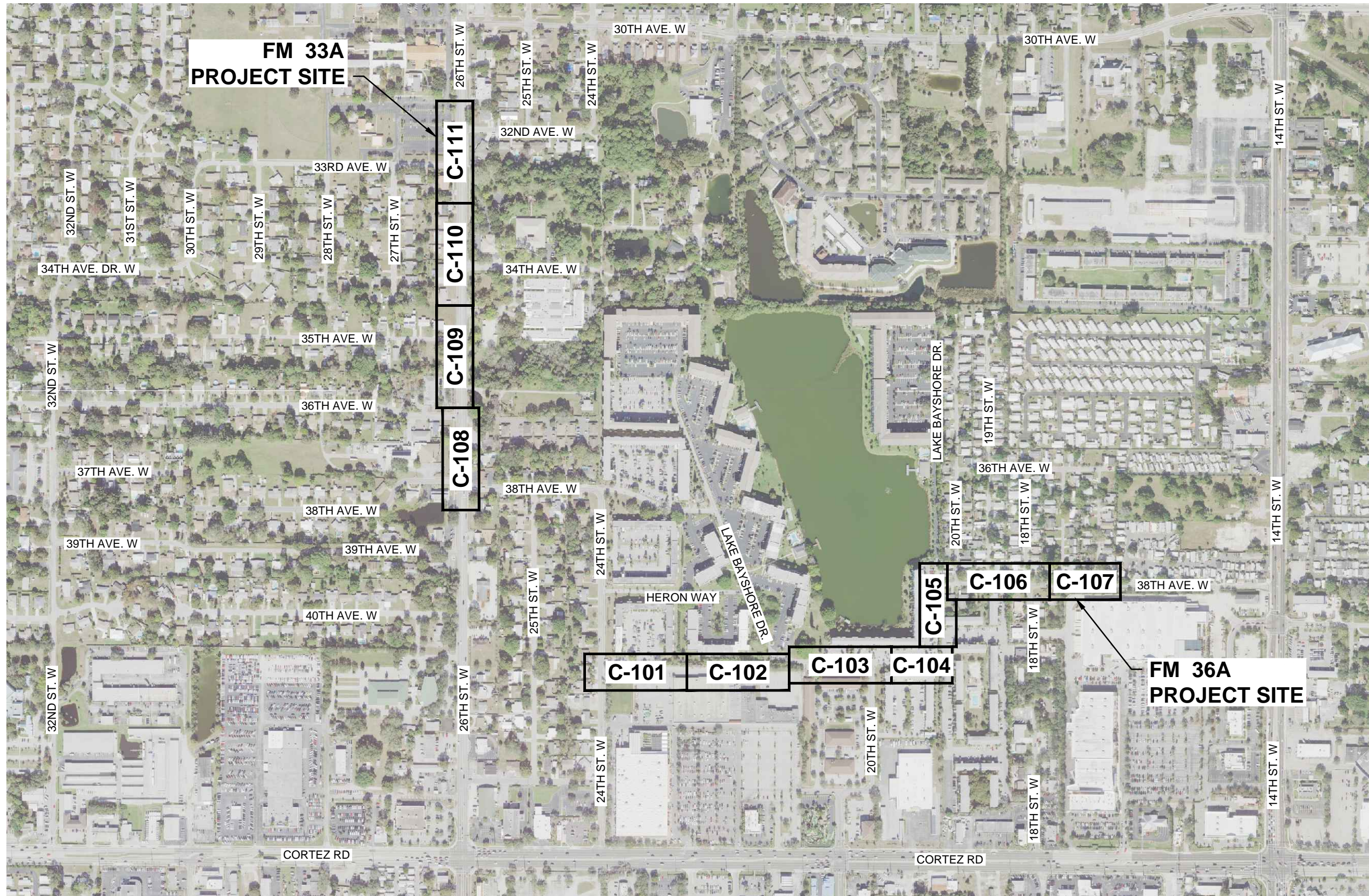
**FM 33A AND FM 36A REPLACEMENT**



**LEGEND AND VVH INFORMATION**

FILENAME: G-104.DWG  
SCALE: NONE

SHEET  
**G-104**



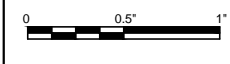
ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

<b>PROJECT MANAGER</b> RYAN MESSER, P.E.	
<b>SENIOR ENGINEER</b>	----
<b>PROCESS DESIGNER</b>	J. THORPE
<b>PROJECT NUMBER</b>	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



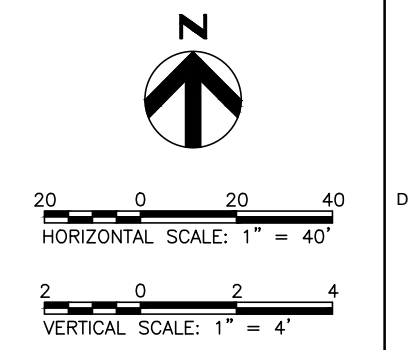
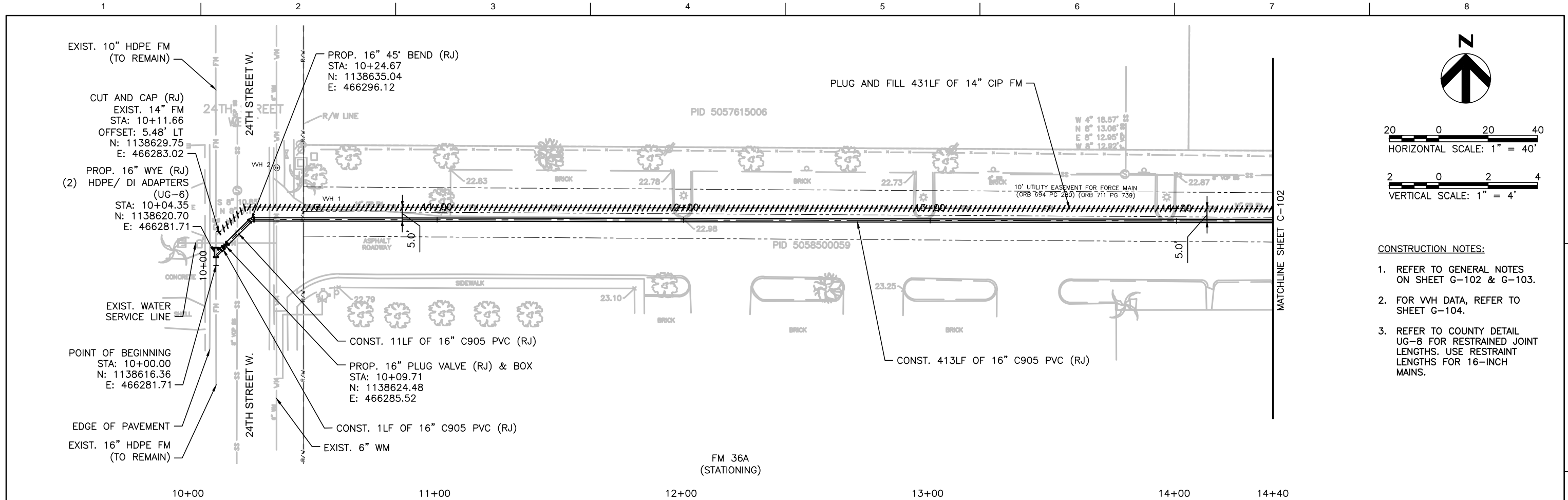
**FM 33A AND FM 36A  
REPLACEMENT**



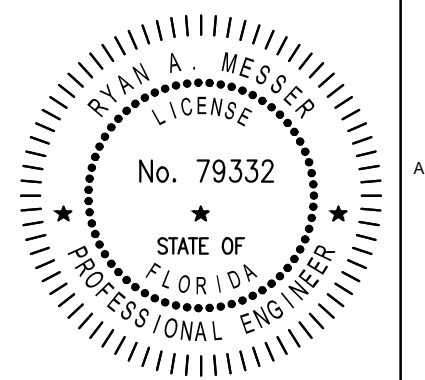
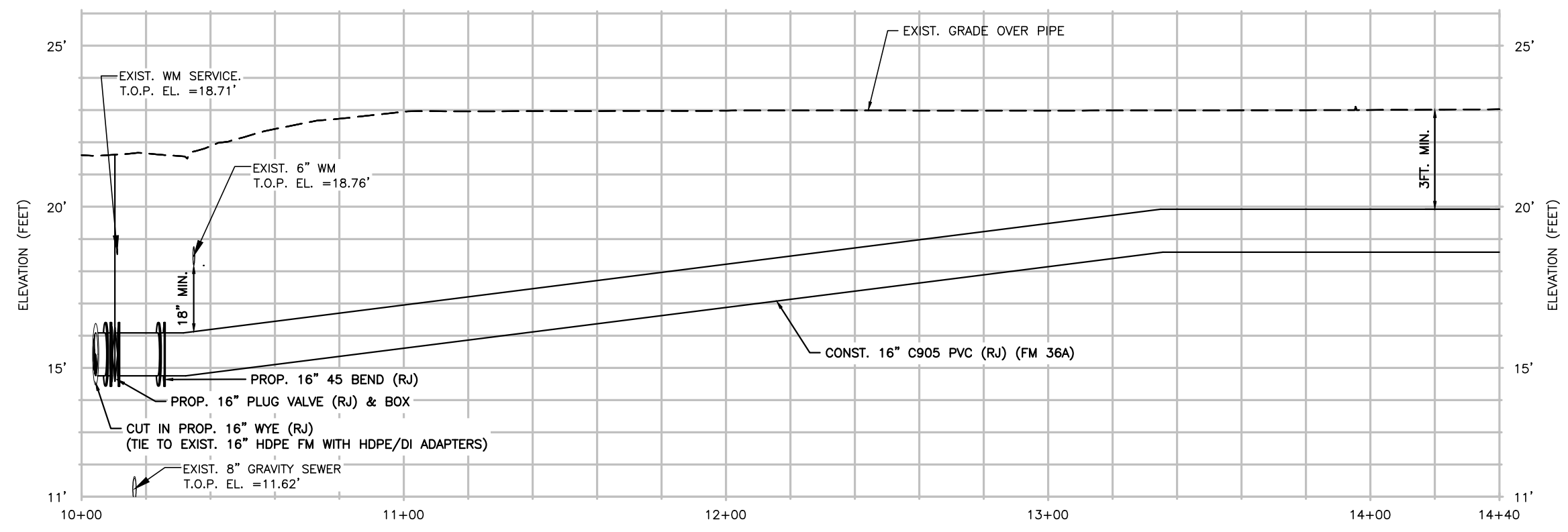
**DRAWING KEY SHEET**

FILENAME | G-105.DWG  
SCALE | AS NOTED

SHEET  
**G-105**



- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR WH DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTHS FOR 16-INCH MAINS.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	-----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



**FM 33A AND FM 36A REPLACEMENT**

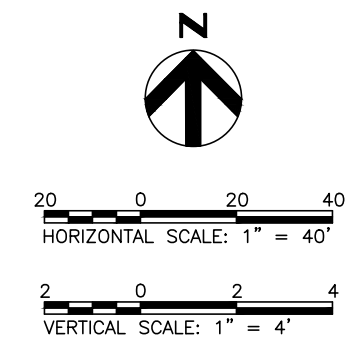
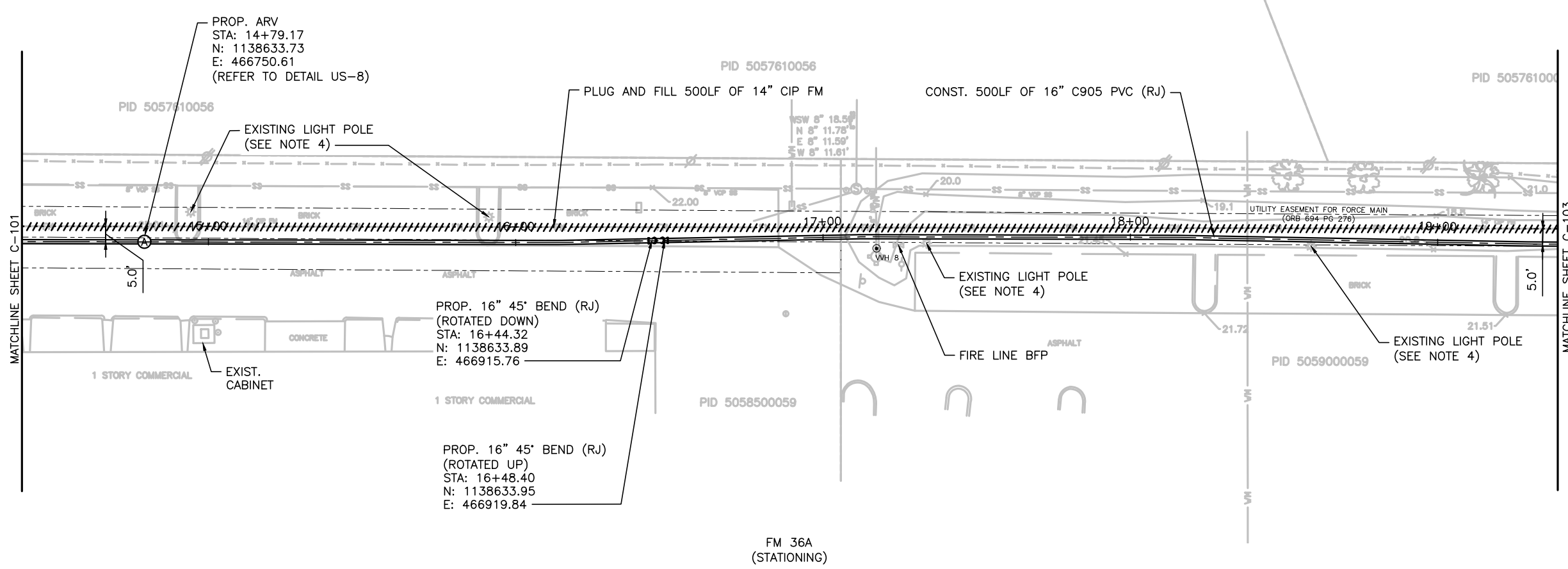
**FM 36A  
PLAN AND PROFILE  
STA: 10+00.00 TO 14+40.00**



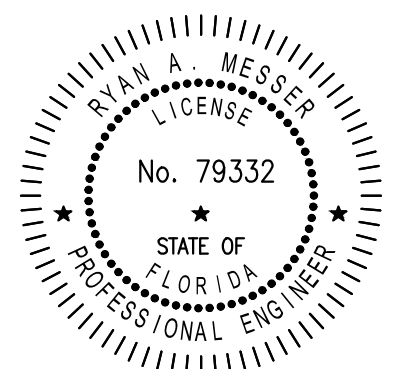
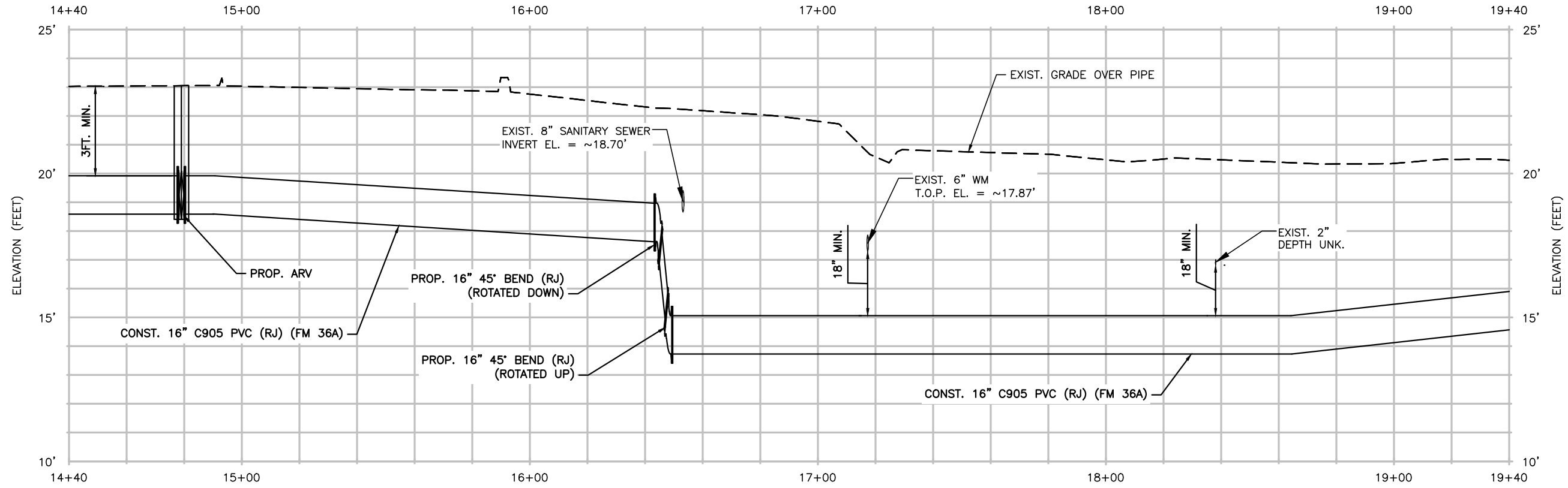
FILENAME C-101.DWG  
SCALE AS NOTED

SHEET  
**C-101**

1 2 3 4 5 6 7 8



- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR WH DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTH FOR 16-INCH MAINS.
  - PROTECT EXISTING LIGHT POLES AND POWER CABLE IN PLACE DURING INSTALLATION OF FORCE MAIN AND PLUGGING AND FILLING OF EXISTING FORCE MAIN. IF CONFLICT BETWEEN THE NEW FORCE MAIN AND LIGHT POLE EXISTS, NOTIFY MANATEE COUNTY IMMEDIATELY.



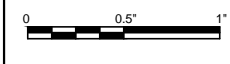
ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	-----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



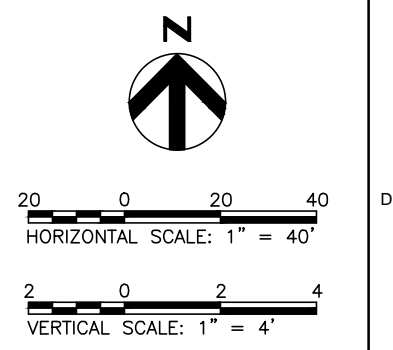
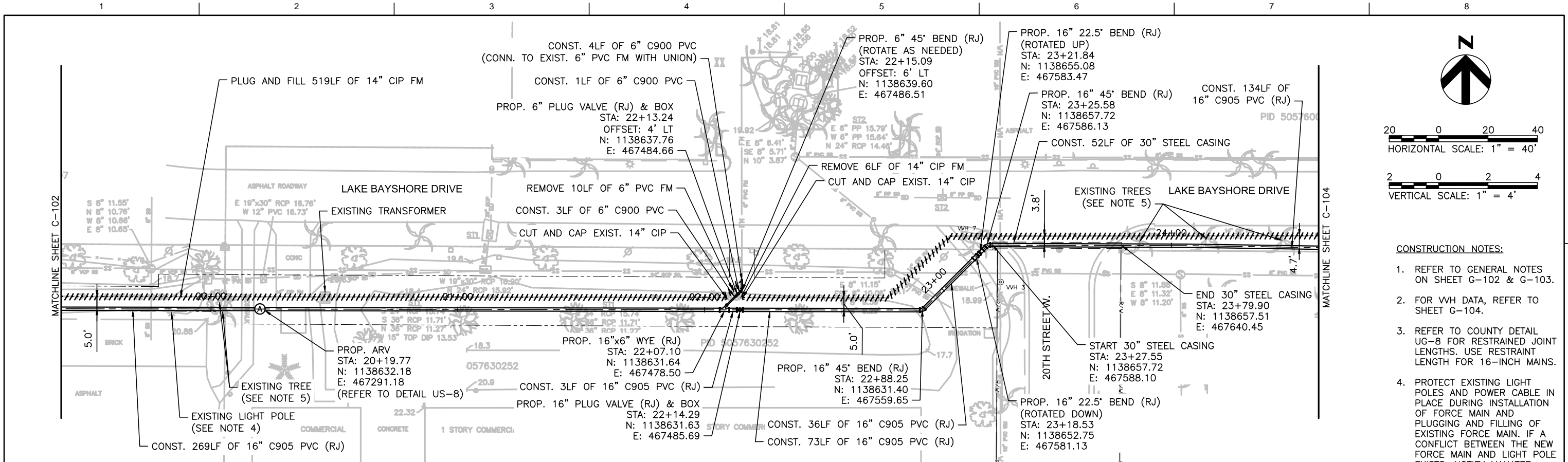
**FM 33A AND FM 36A REPLACEMENT**



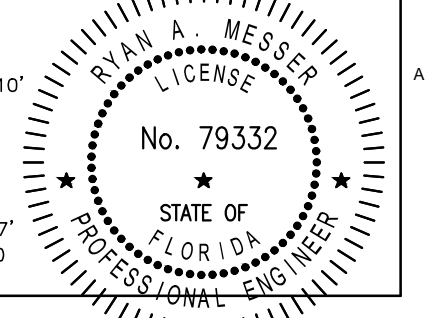
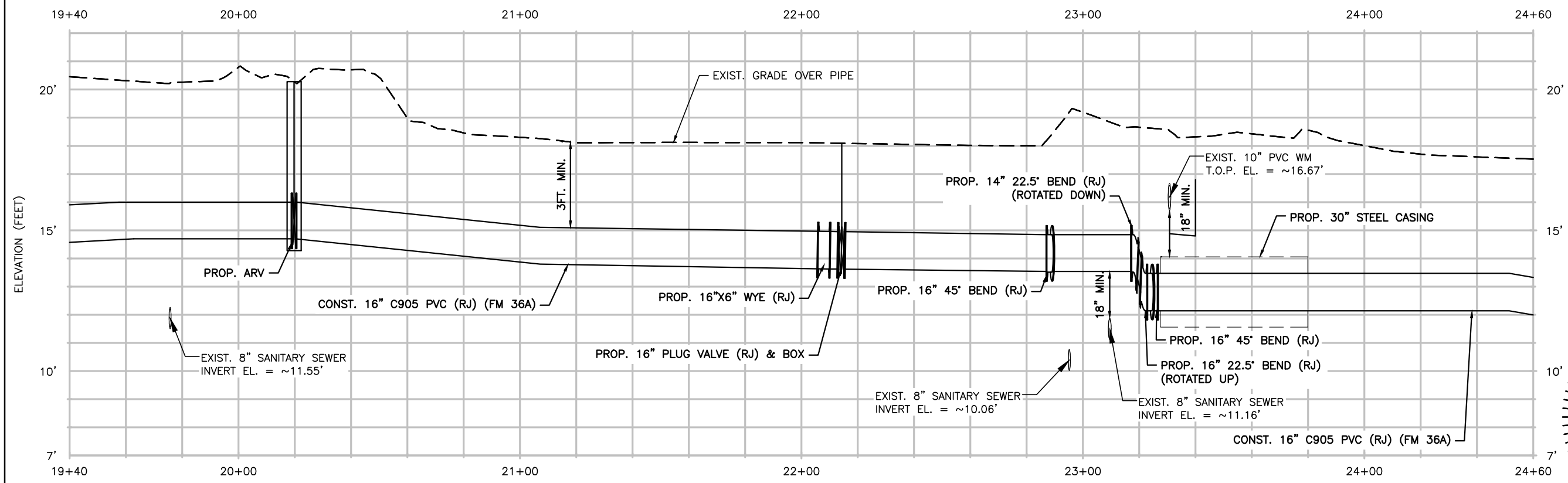
FM 36A  
PLAN AND PROFILE  
STA: 14+40.00 TO 19+40.00

FILENAME C-102.DWG  
SCALE AS NOTED

SHEET  
C-102



- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR VEH DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTH FOR 16-INCH MAINS.
  - PROTECT EXISTING LIGHT POLES AND POWER CABLE IN PLACE DURING INSTALLATION OF FORCE MAIN AND PLUGGING AND FILLING OF EXISTING FORCE MAIN. IF A CONFLICT BETWEEN THE NEW FORCE MAIN AND LIGHT POLE EXISTS, NOTIFY MANATEE COUNTY IMMEDIATELY.
  - PROTECT EXISTING TREES IN PLACE DURING INSTALLATION OF FORCE MAIN AND PLUGGING AND FILLING OF EXISTING FORCE MAIN. IF A CONFLICT BETWEEN THE NEW FORCE MAIN AND TREES EXISTS, NOTIFY MANATEE COUNTY IMMEDIATELY.
  - REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
  - REFER TO COUNTY DETAIL UG-3 FOR CASING CROSSINGS.
  - PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

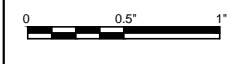
PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



**FM 33A AND FM 36A REPLACEMENT**

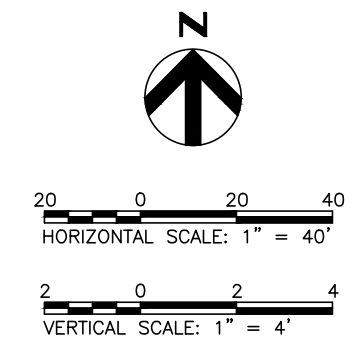
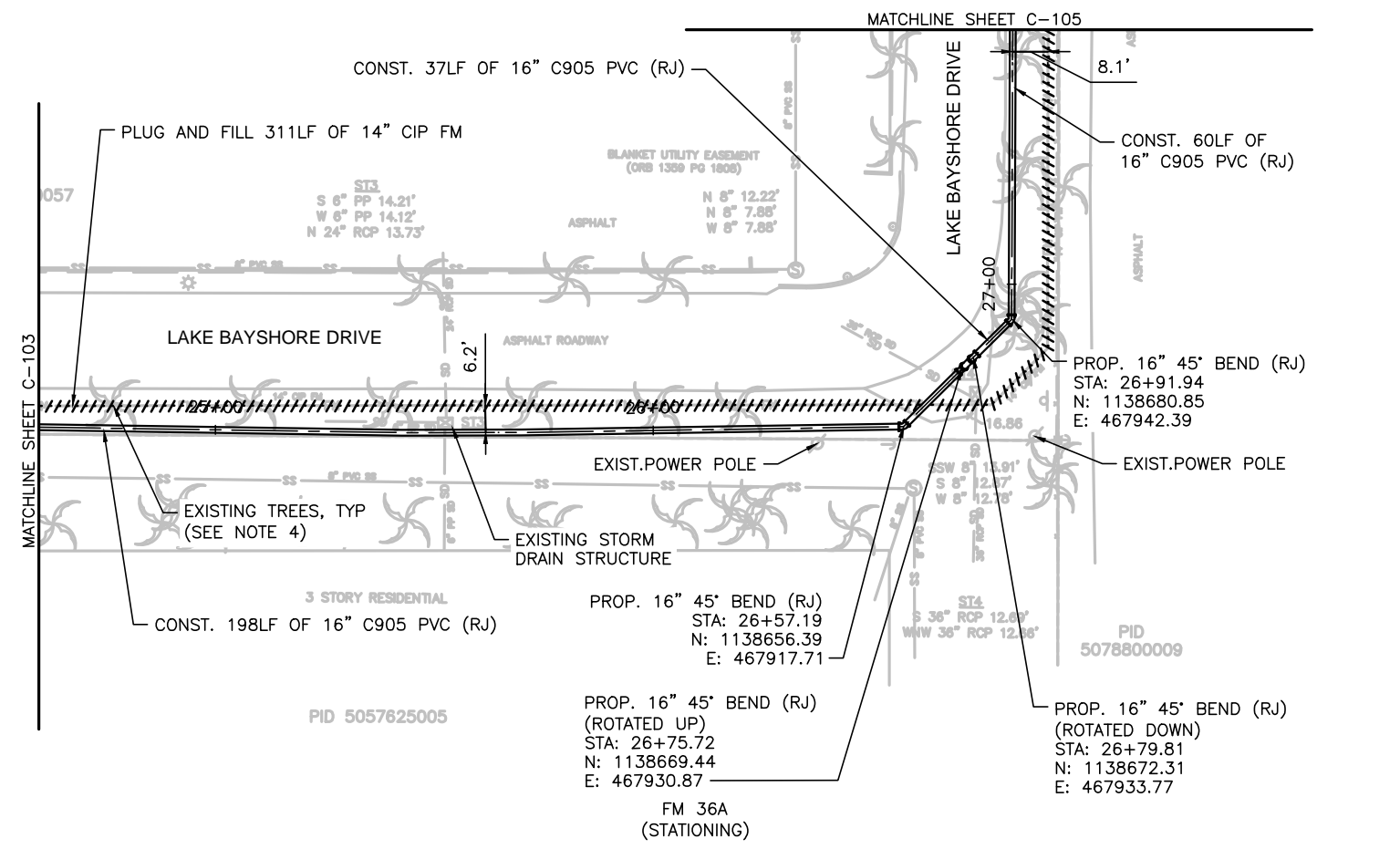
FM 36A  
PLAN AND PROFILE  
STA: 19+40.00 TO 24+60.00



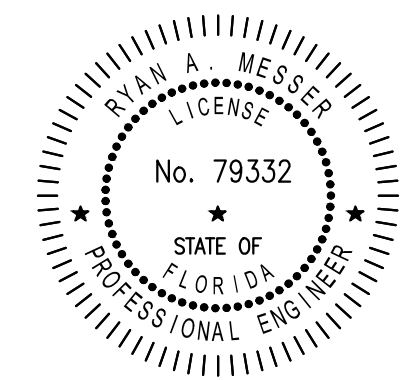
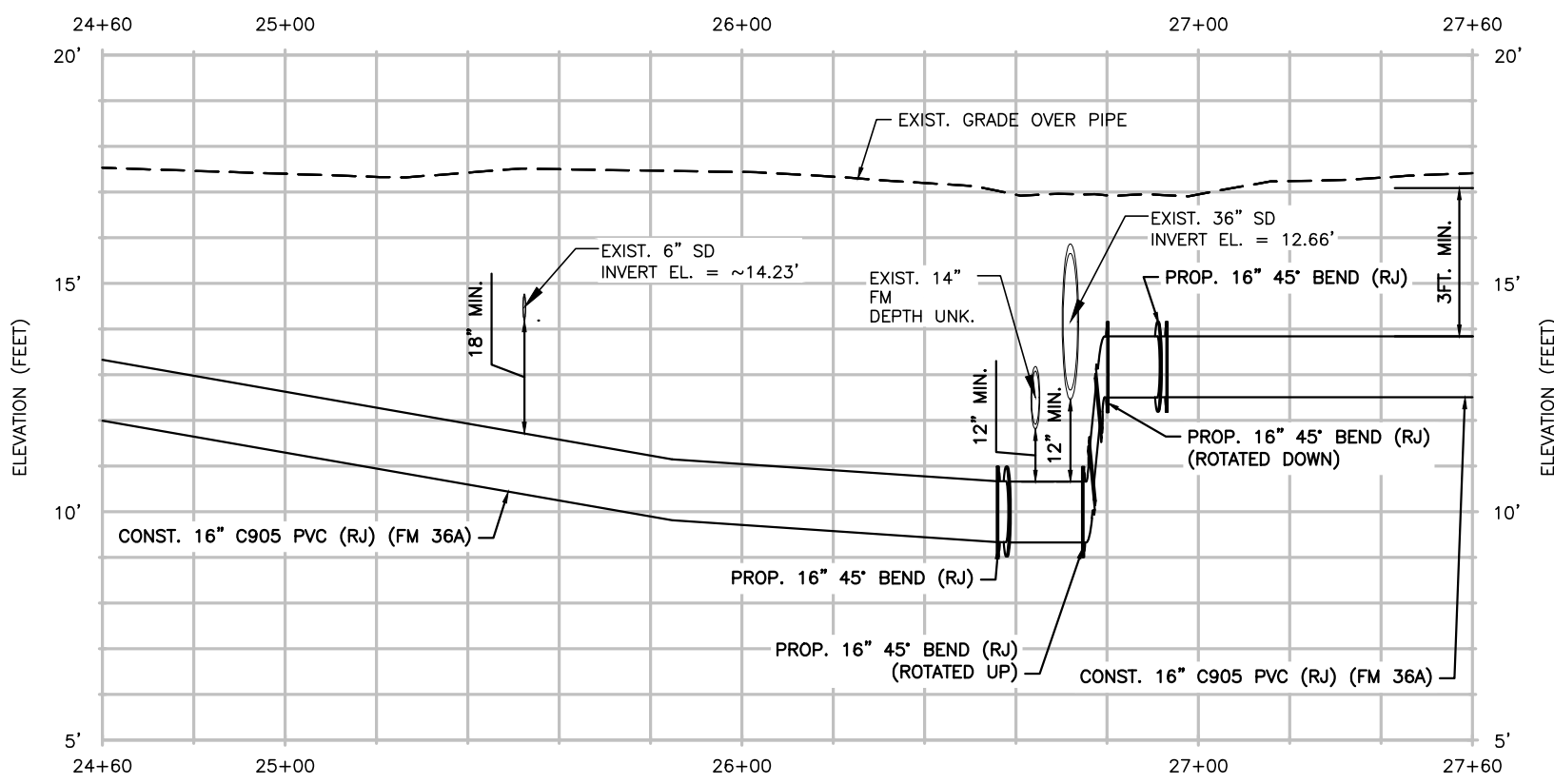
FILENAME C-103.DWG  
SCALE AS NOTED

SHEET  
C-103





- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR V.H. DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTH FOR 16-INCH MAINS.
  - PROTECT EXISTING TREES IN PLACE DURING INSTALLATION OF FORCE MAIN AND PLUGGING AND FILLING OF EXISTING FORCE MAIN. IF A CONFLICT BETWEEN THE NEW FORCE MAIN AND TREES EXISTS, NOTIFY MANATEE COUNTY IMMEDIATELY.
  - REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
  - PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



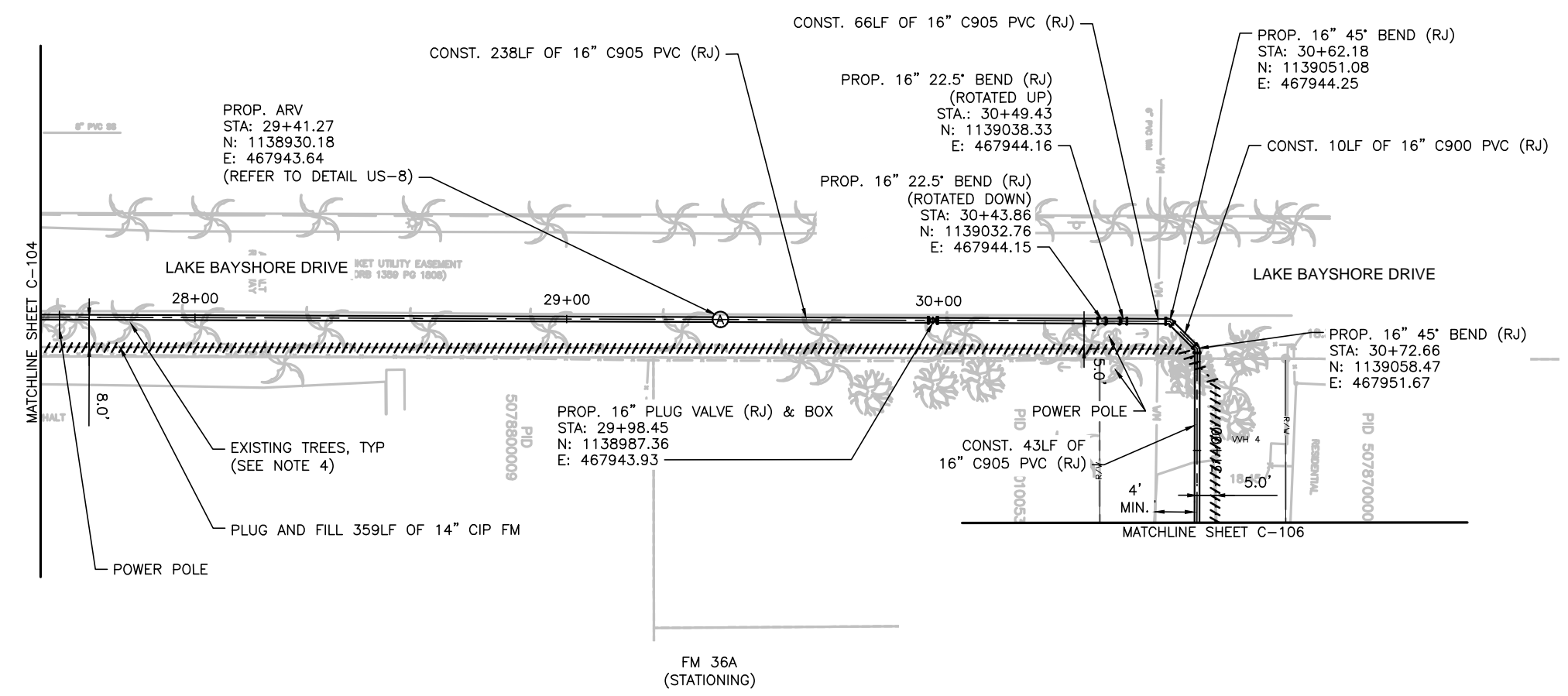
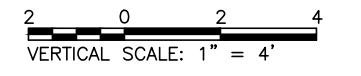
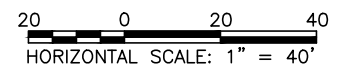
**FM 33A AND FM 36A REPLACEMENT**



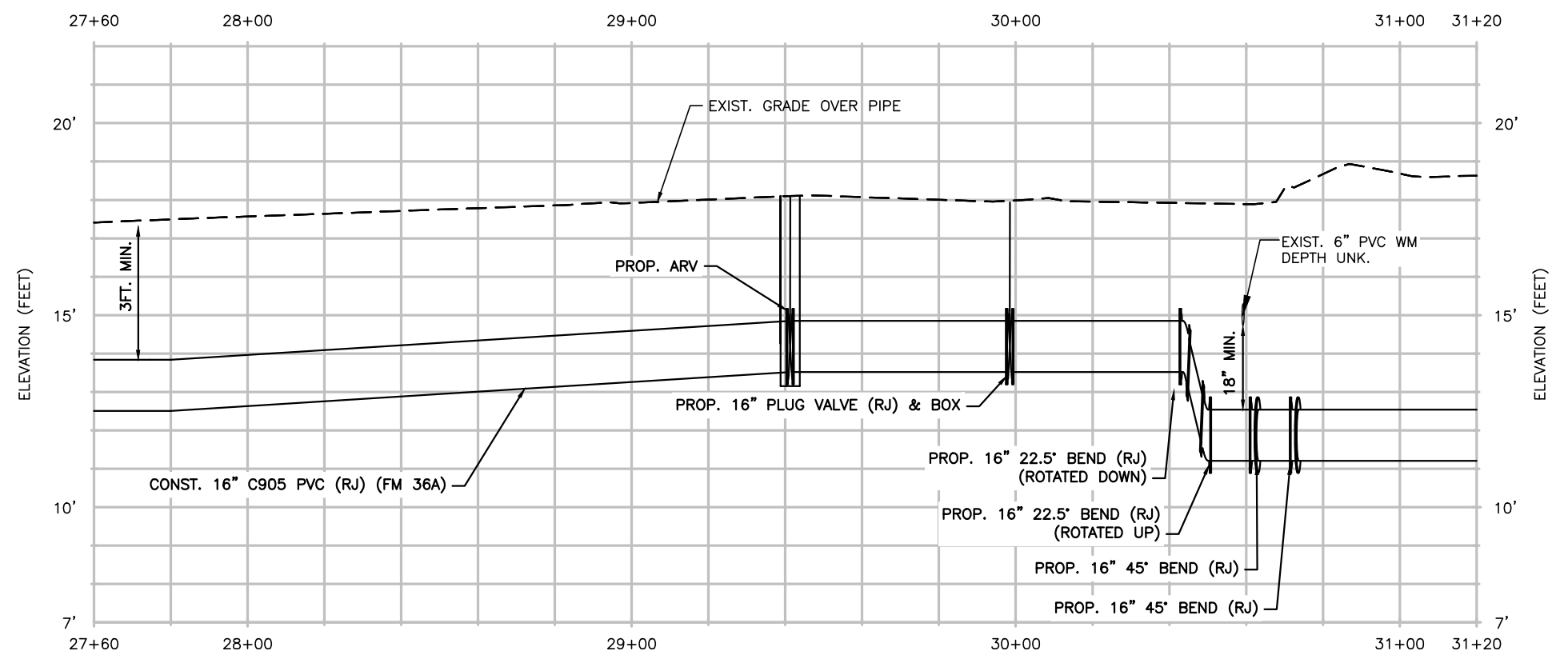
**FM 36A  
PLAN AND PROFILE  
STA: 24+60.00 TO 27+60.00**

FILENAME C-104.DWG  
SCALE AS NOTED

SHEET  
**C-104**



- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR WH DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTH FOR 16-INCH MAINS.
  - PROTECT EXISTING TREES IN PLACE DURING INSTALLATION OF FORCE MAIN AND PLUGGING AND FILLING OF EXISTING FORCE MAIN. IF A CONFLICT BETWEEN THE NEW FORCE MAIN AND TREES EXISTS, NOTIFY MANATEE COUNTY IMMEDIATELY.
  - REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
  - PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

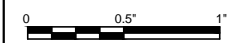
<b>PROJECT MANAGER</b> RYAN MESSER, P.E.	
<b>SENIOR ENGINEER</b>	----
<b>PROCESS DESIGNER</b>	J. THORPE
<b>PROJECT NUMBER</b>	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



**FM 33A AND FM 36A REPLACEMENT**

**FM 36A  
PLAN AND PROFILE  
STA: 27+60.00 TO 31+20.00**



FILENAME C-105.DWG  
SCALE AS NOTED

SHEET  
**C-105**

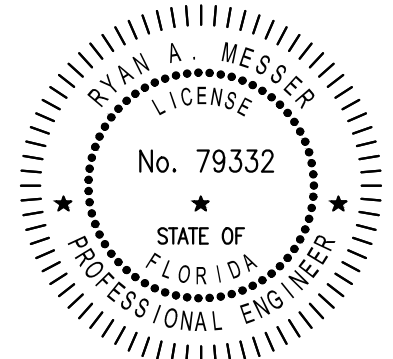
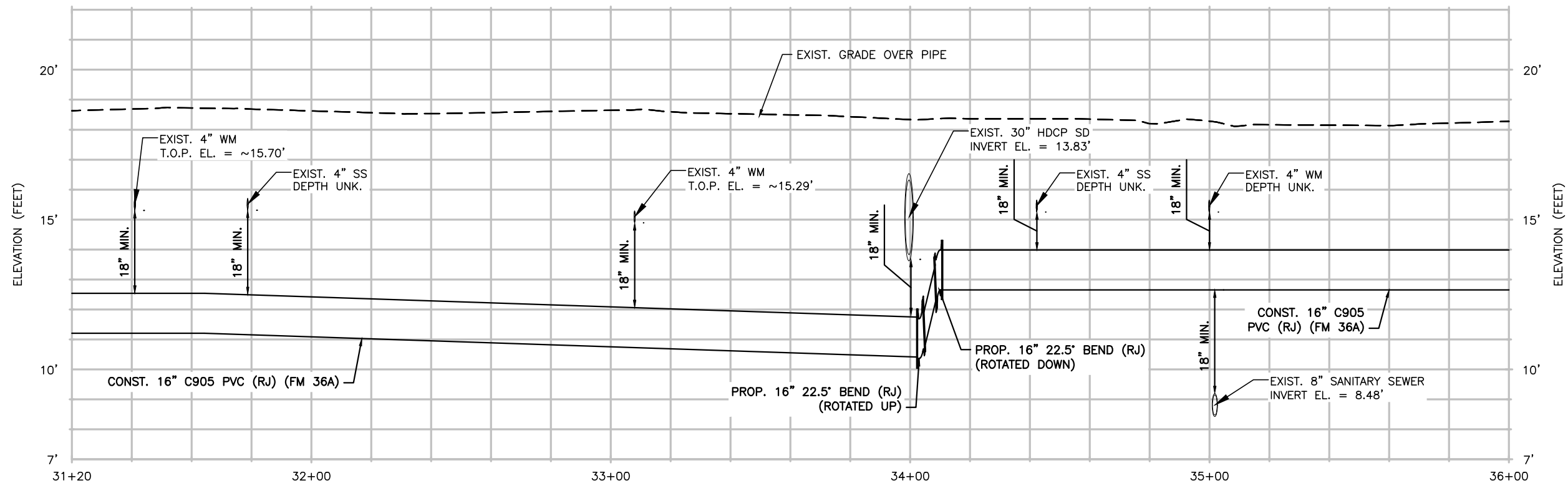
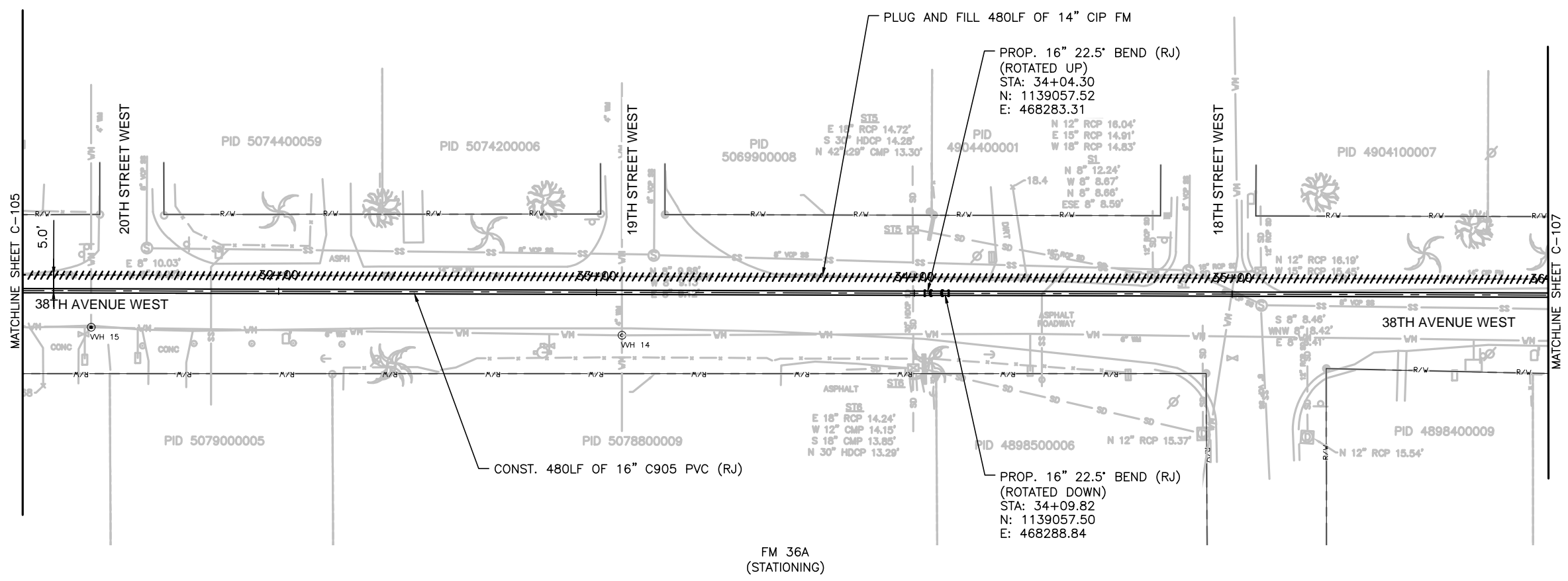


20 0 20 40  
HORIZONTAL SCALE: 1" = 40'

2 0 2 4  
VERTICAL SCALE: 1" = 4'

**CONSTRUCTION NOTES:**

1. REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
2. FOR VH DATA, REFER TO SHEET G-104.
3. REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTH FOR 16-INCH MAINS.
4. REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
5. PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



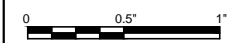
ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



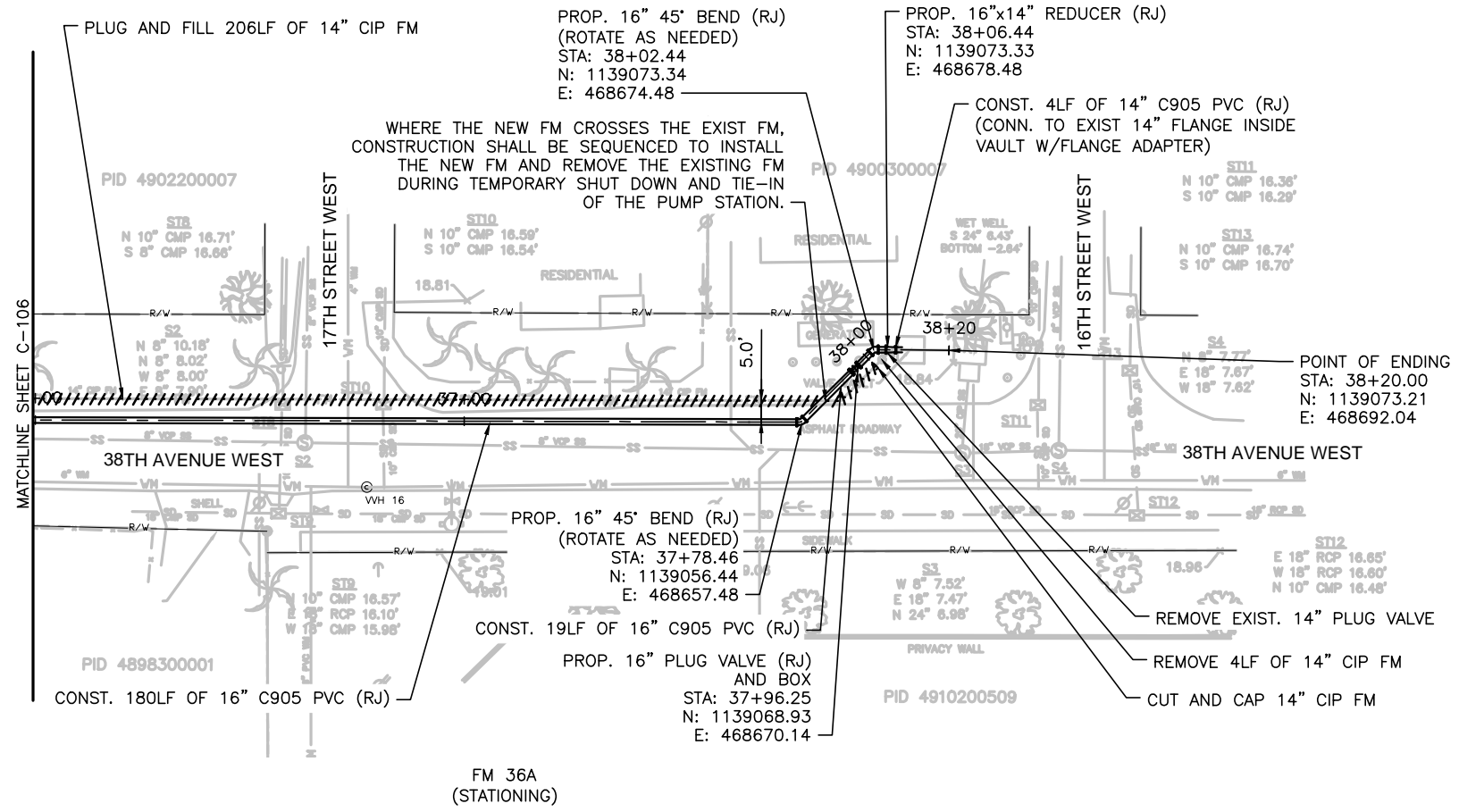
**FM 33A AND FM 36A REPLACEMENT**



FM 36A  
PLAN AND PROFILE  
STA: 31+20.00 TO 36+00.00

FILENAME C-106.DWG  
SCALE AS NOTED

SHEET  
C-106

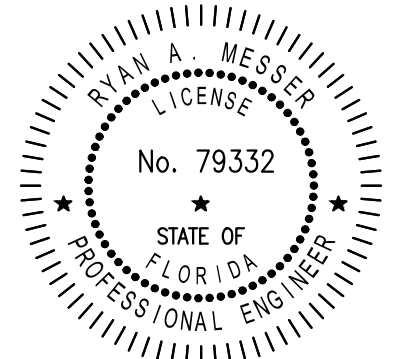
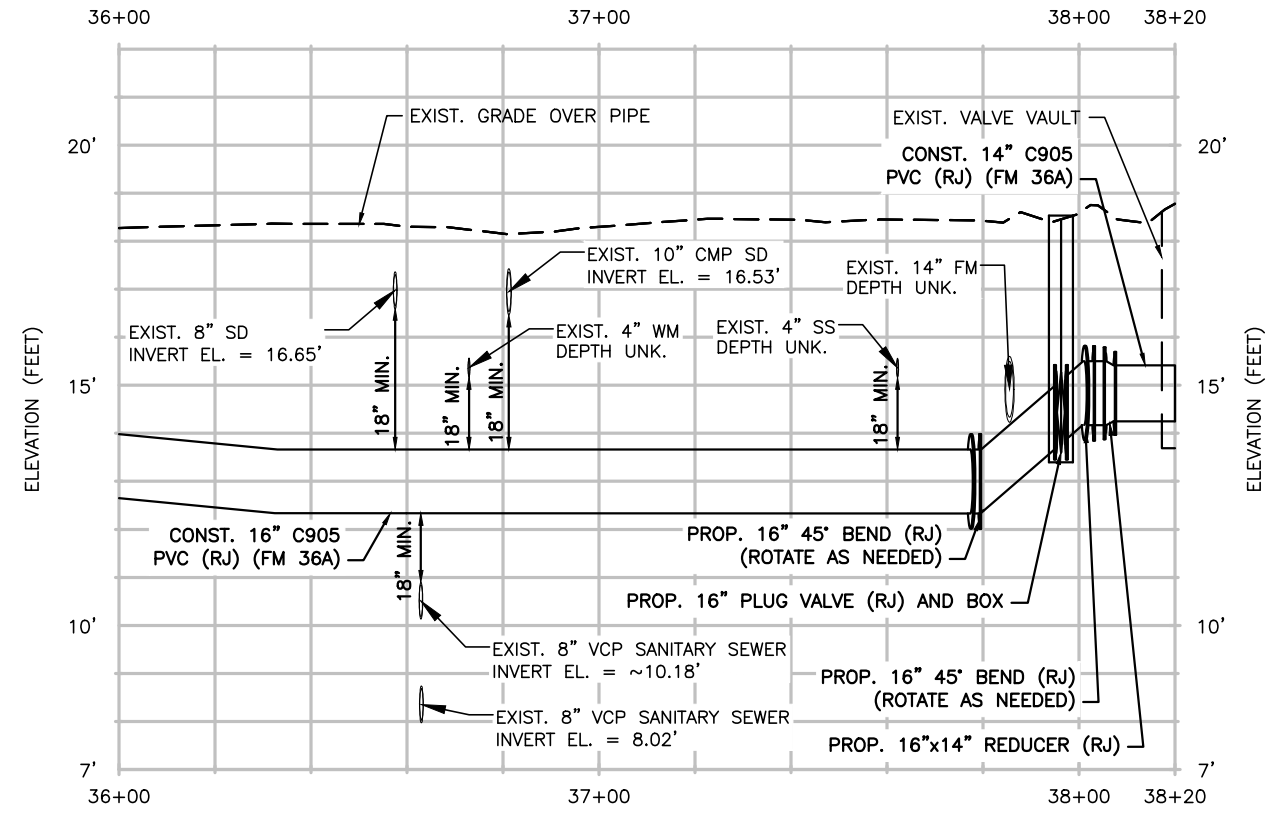


20 0 20 40  
HORIZONTAL SCALE: 1" = 40'

2 0 2 4  
VERTICAL SCALE: 1" = 4'

**CONSTRUCTION NOTES:**

1. REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
2. FOR WH DATA, REFER TO SHEET G-104.
3. REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS. USE RESTRAINT LENGTH FOR 16-INCH MAINS.
4. REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
5. PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

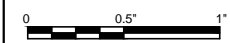
PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	-----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



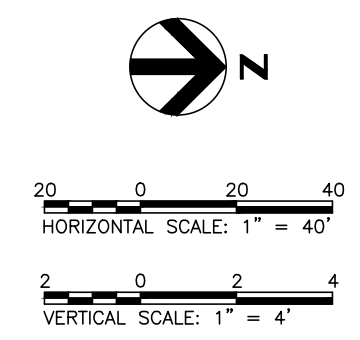
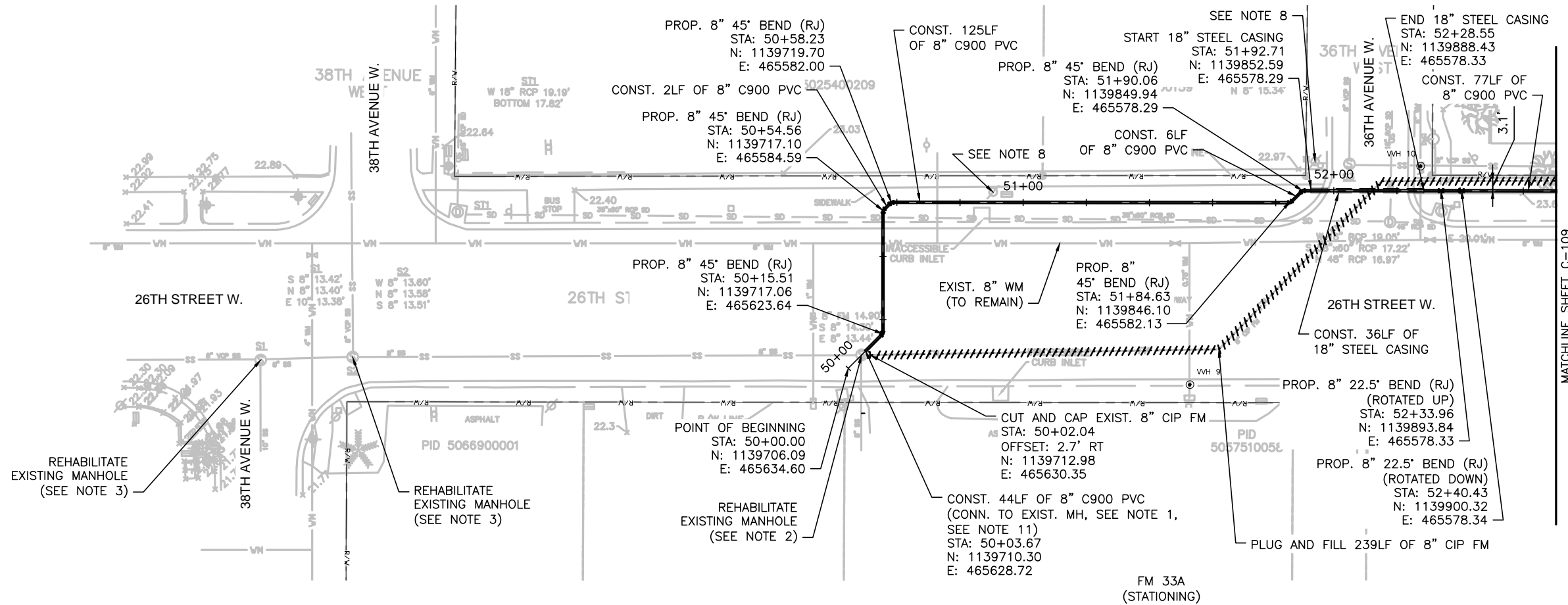
**FM 33A AND FM 36A REPLACEMENT**

FM 36A  
PLAN AND PROFILE  
STA: 36+00.00 TO 38+20.00



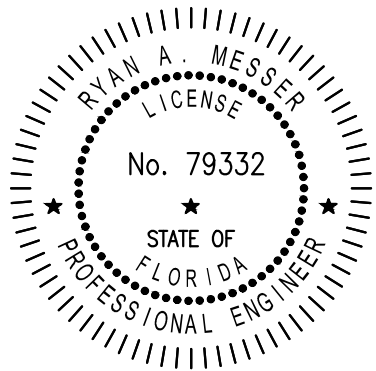
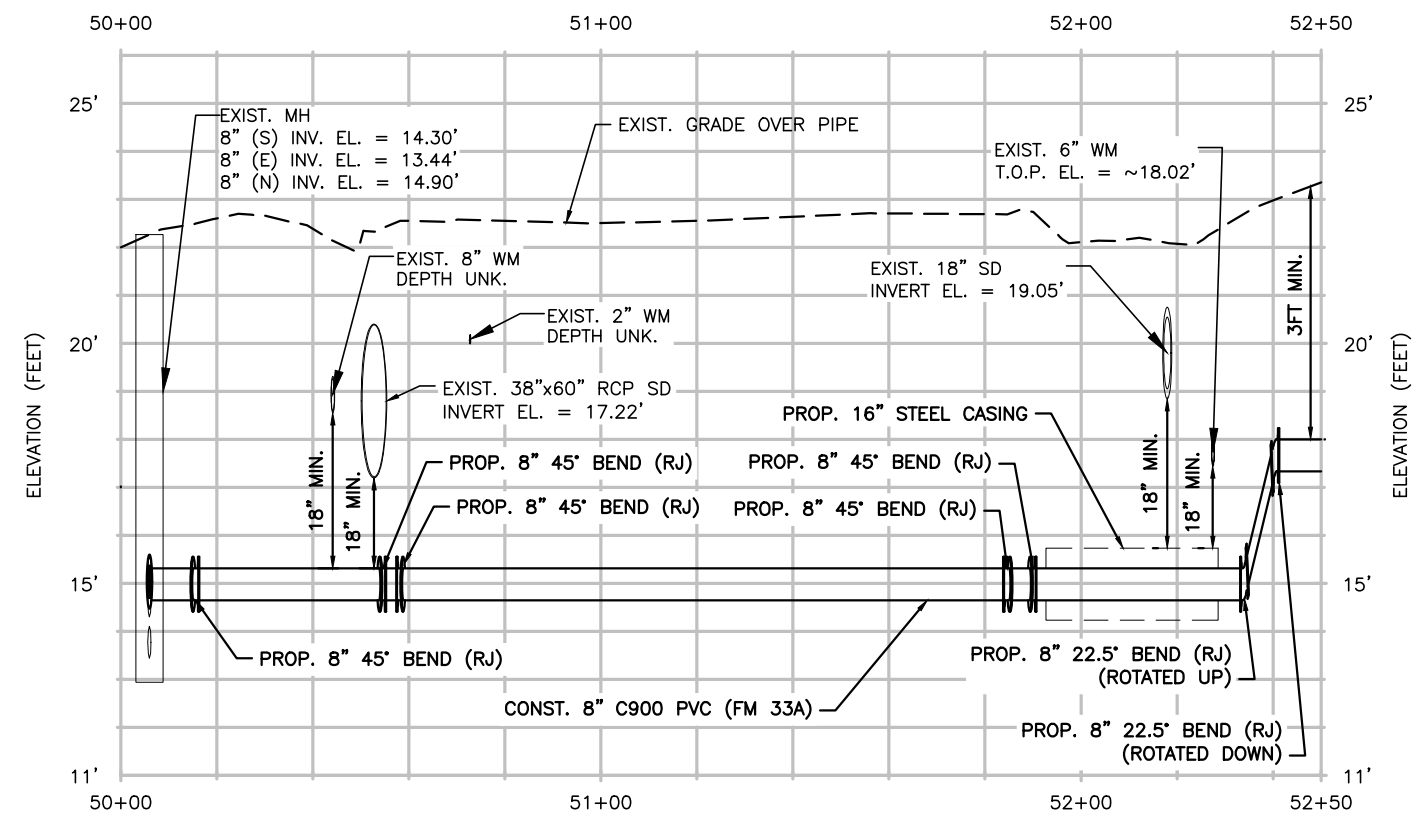
FILENAME C-107.DWG  
SCALE AS NOTED

SHEET  
C-107



**CONSTRUCTION NOTES:**

1. CONNECTION OF REPLACEMENT FORCE MAIN TO EXISTING MANHOLE SHALL BE MADE PER MANATEE COUNTY STANDARD DETAIL US-7B.
2. EXISTING MANHOLE BEING CONNECTED TO MUST BE REHABILITATED ACCORDING TO SPECIFICATION 02064.
3. THE 2 EXISTING MANHOLES DOWNSTREAM OF THE MANHOLE BEING TIED INTO MUST ALSO BE REHABILITATED ACCORDING TO SPECIFICATION SECTION 02064.
4. REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
5. FOR VH DATA, REFER TO SHEET G-104.
6. REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS.
7. REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
8. CONTRACTOR TO PROTECT AND SUPPORT EXISTING POLE AS NECESSARY DURING CONSTRUCTION.
9. REFER TO COUNTY DETAIL UG-3 FOR CASING CROSSINGS.
10. PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION. IF LANE CLOSURES ARE NECESSARY TO PERFORM THE WORK ALONG 26TH ST. W, AT LEAST ONE LANE OF TRAFFIC IN BOTH DIRECTIONS MUST BE MAINTAINED AT ALL TIMES.
11. CONTRACTOR TO VERIFY THAT THE NEW MANHOLE PENETRATIONS WILL BE PERFORMED IN SUITABLE MATERIAL OR PROVIDE ALIGNMENT MODIFICATIONS.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

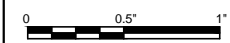
PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



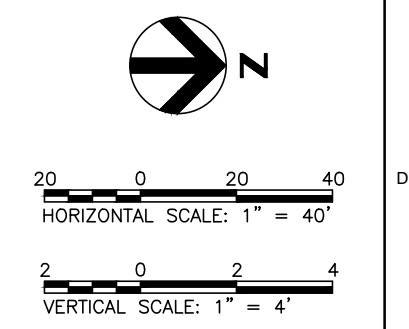
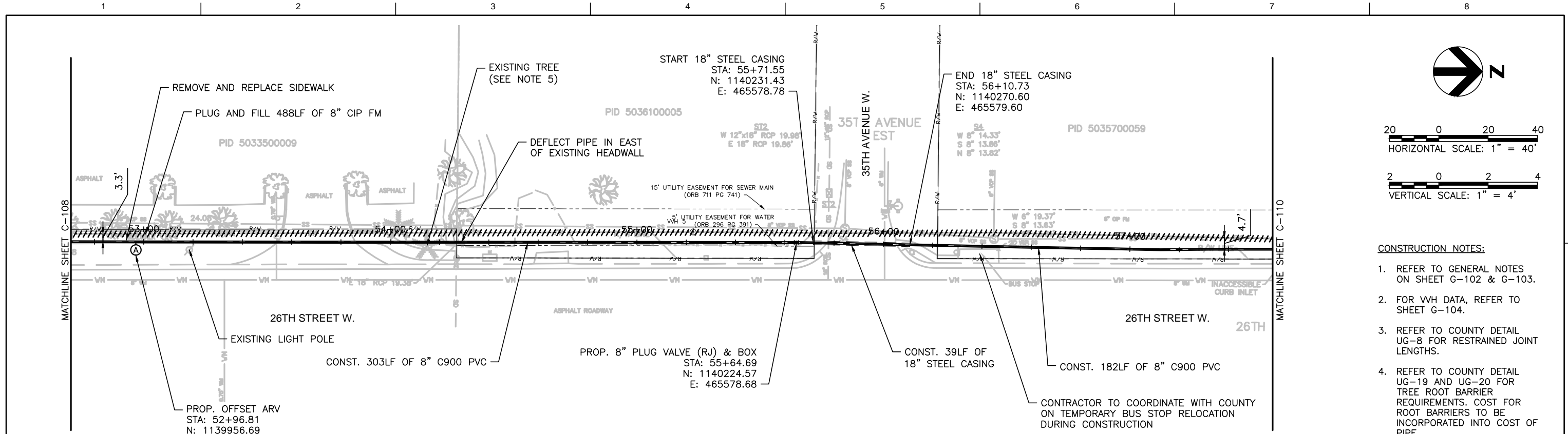
**FM 33A AND FM 36A REPLACEMENT**

FM 33A  
PLAN AND PROFILE  
STA: 50+00.00 TO 52+50.00

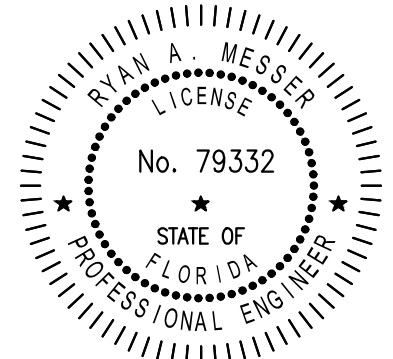
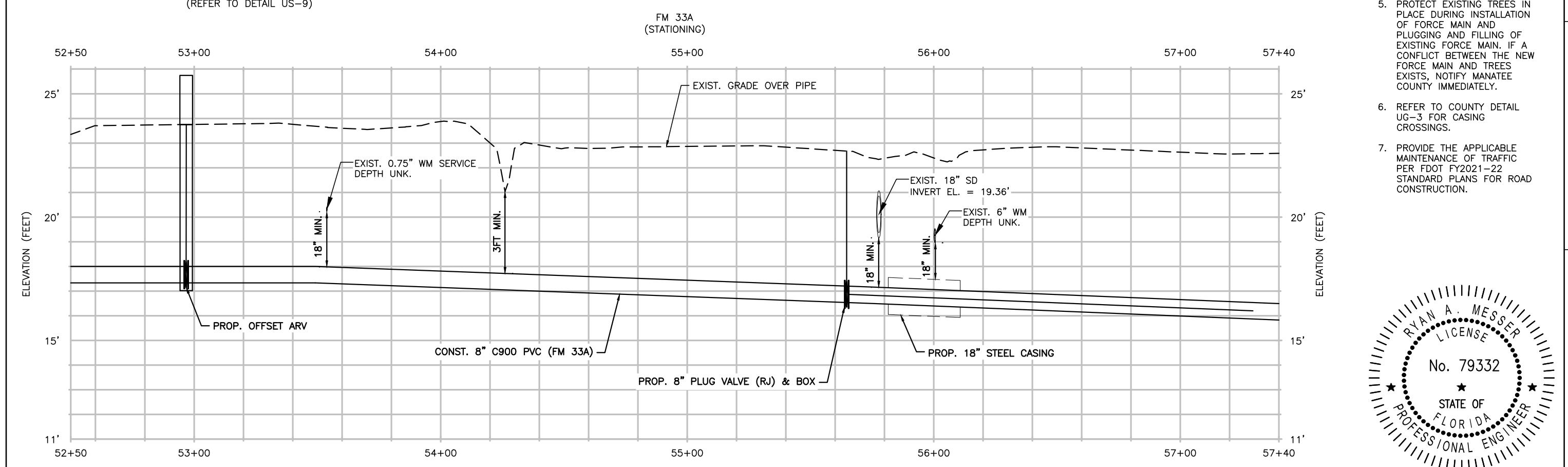


FILENAME C-108.DWG  
SCALE AS NOTED

SHEET  
C-108



- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR VH DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS.
  - REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
  - PROTECT EXISTING TREES IN PLACE DURING INSTALLATION OF FORCE MAIN AND PLUGGING AND FILLING OF EXISTING FORCE MAIN. IF A CONFLICT BETWEEN THE NEW FORCE MAIN AND TREES EXISTS, NOTIFY MANATEE COUNTY IMMEDIATELY.
  - REFER TO COUNTY DETAIL UG-3 FOR CASING CROSSINGS.
  - PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT PLAN 2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



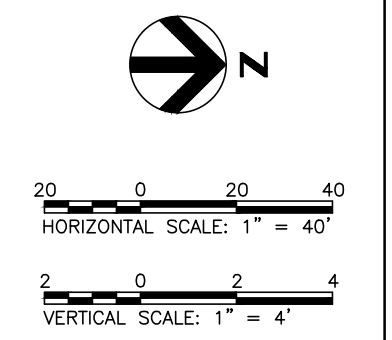
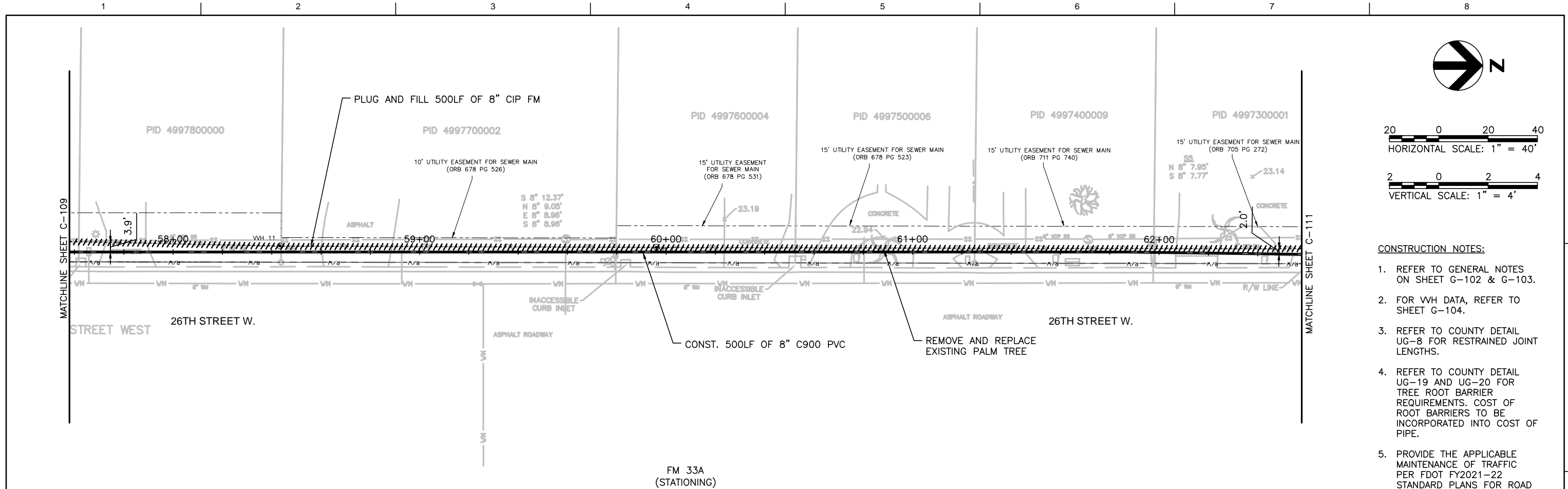
**FM 33A AND FM 36A REPLACEMENT**

FM 33A  
PLAN AND PROFILE  
STA: 52+50.00 TO 57+40.00

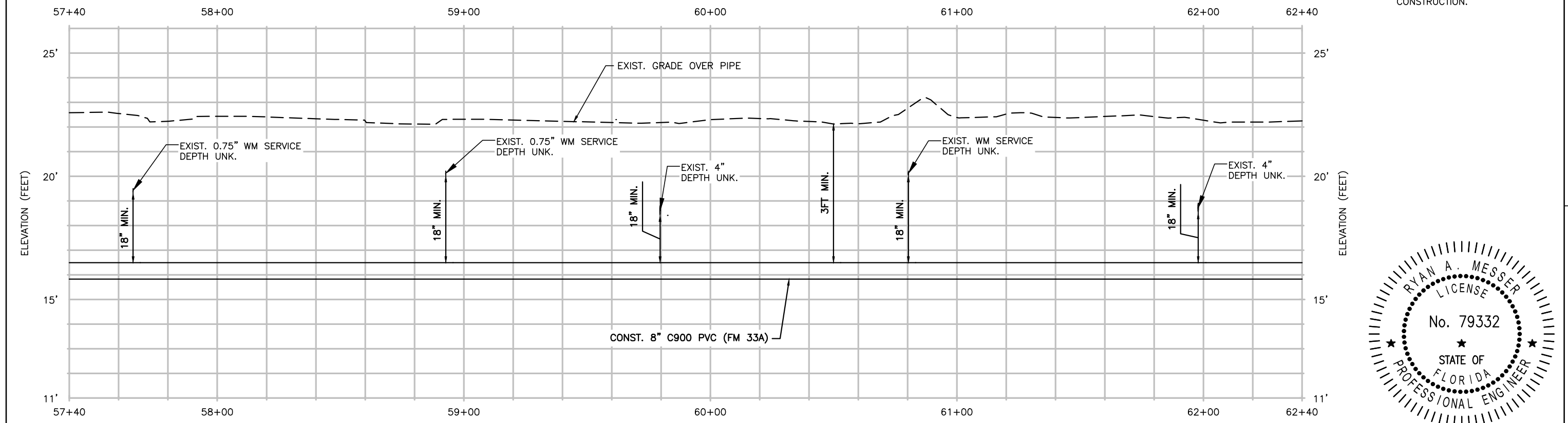


FILENAME C-109.DWG  
SCALE AS NOTED

SHEET  
C-109



- CONSTRUCTION NOTES:**
- REFER TO GENERAL NOTES ON SHEET G-102 & G-103.
  - FOR VH DATA, REFER TO SHEET G-104.
  - REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS.
  - REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST OF ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
  - PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



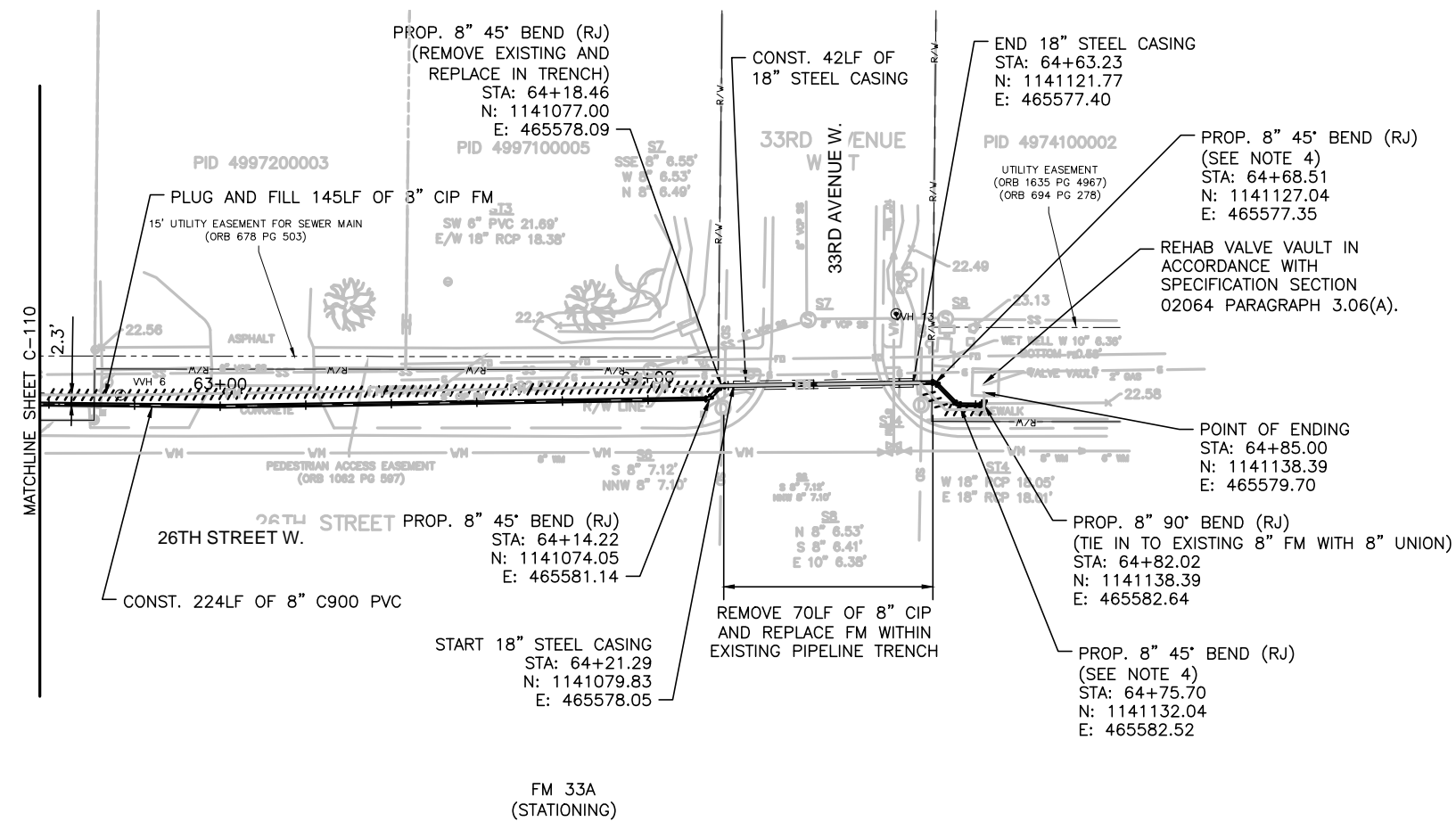
**FM 33A AND FM 36A REPLACEMENT**



FM 33A  
PLAN AND PROFILE  
STA: 57+40.00 TO 62+40.00

FILENAME C-110.DWG  
SCALE AS NOTED

SHEET  
C-110

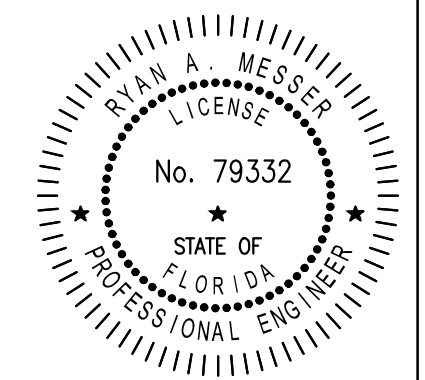
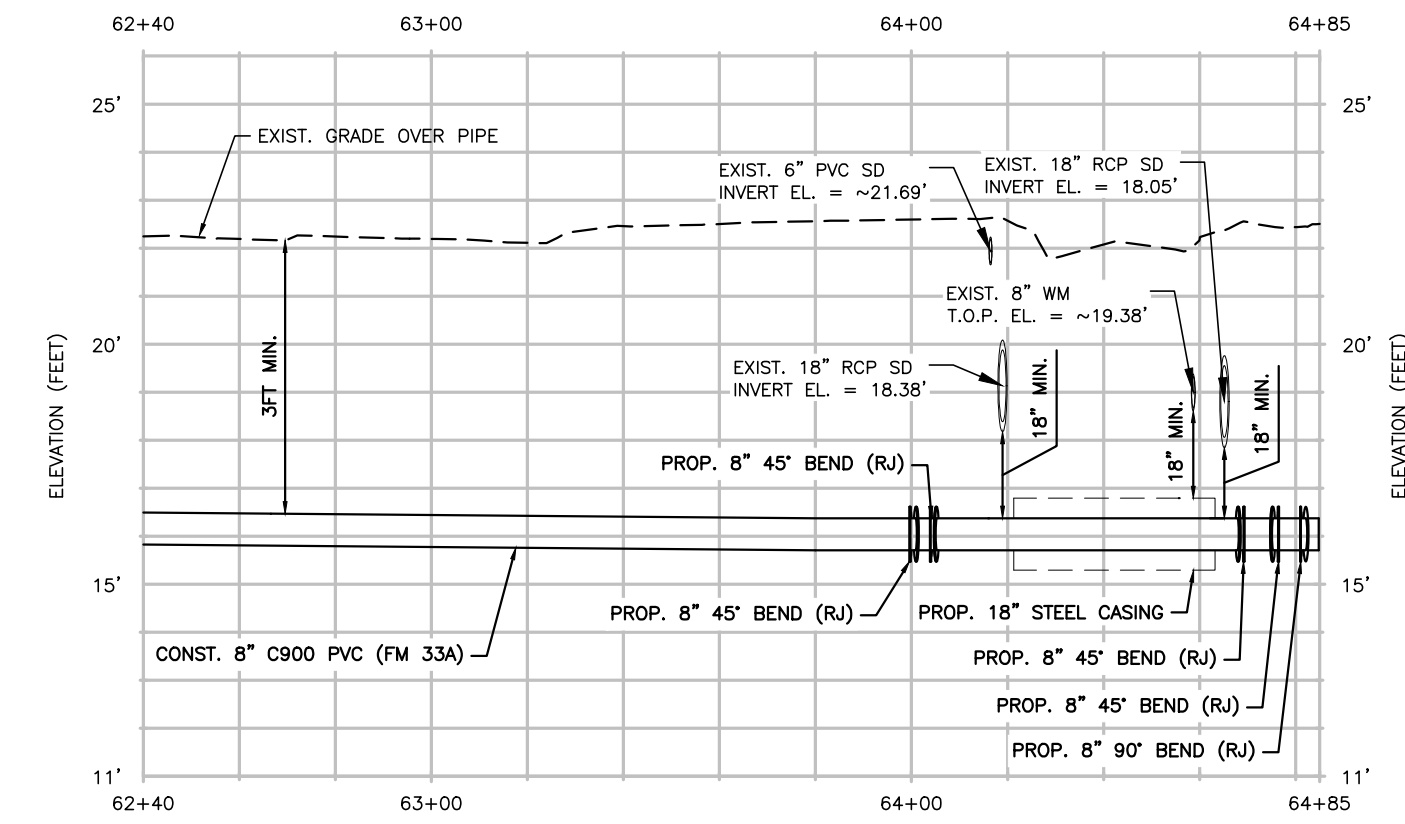


20 0 20 40  
HORIZONTAL SCALE: 1" = 40'

2 0 2 4  
VERTICAL SCALE: 1" = 4'

**CONSTRUCTION NOTES:**

- REFER TO GENERAL NOTES ON SHEET G-102 & G-103
- FOR VH DATA, REFER TO SHEET G-104.
- REFER TO COUNTY DETAIL UG-8 FOR RESTRAINED JOINT LENGTHS.
- REFER TO COUNTY DETAIL UG-19 AND UG-20 FOR TREE ROOT BARRIER REQUIREMENTS. COST FOR ROOT BARRIERS TO BE INCORPORATED INTO COST OF PIPE.
- ROTATE FITTINGS AS NEEDED TO ADJUST TO VALVE VAULT TIE IN ELEVATION.
- REFER TO COUNTY DETAIL UG-3 FOR CASING CROSSINGS.
- PROVIDE THE APPLICABLE MAINTENANCE OF TRAFFIC PER FDOT FY2021-22 STANDARD PLANS FOR ROAD CONSTRUCTION.



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



**FM 33A AND FM 36A  
REPLACEMENT**

FM 33A  
PLAN AND PROFILE  
STA: 62+40.00 TO 64+85.00

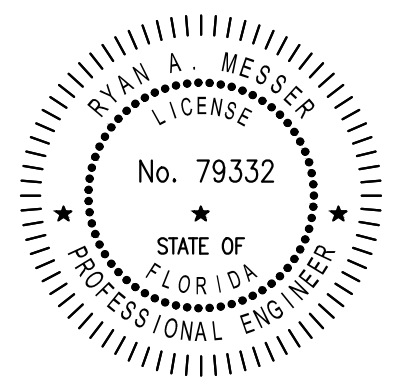
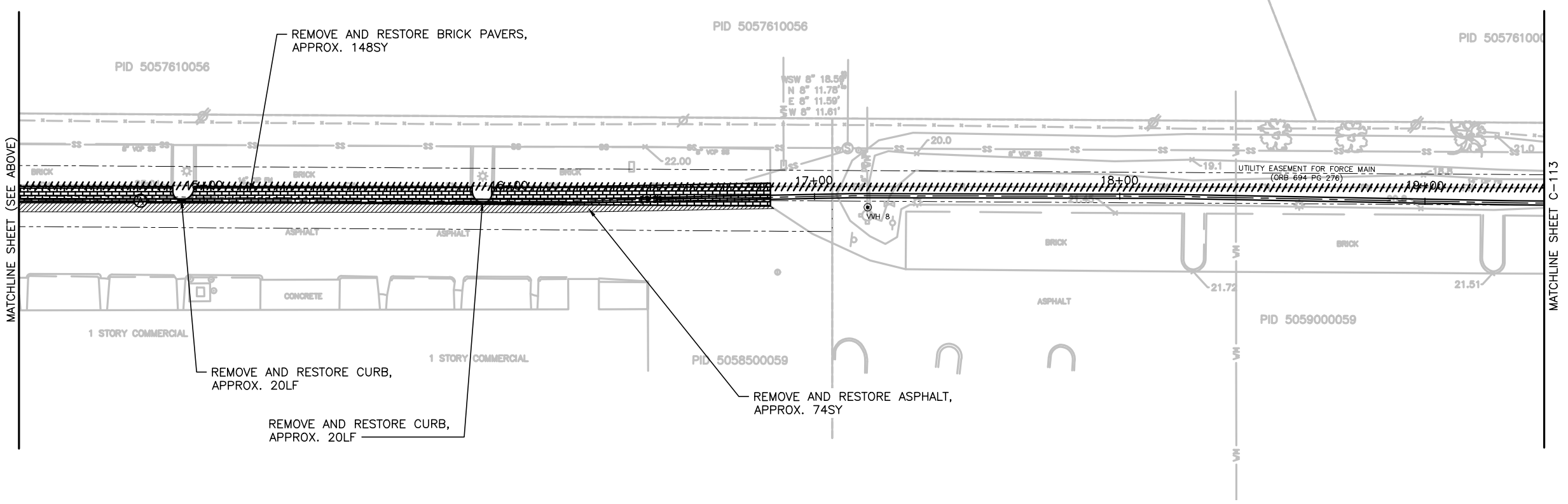
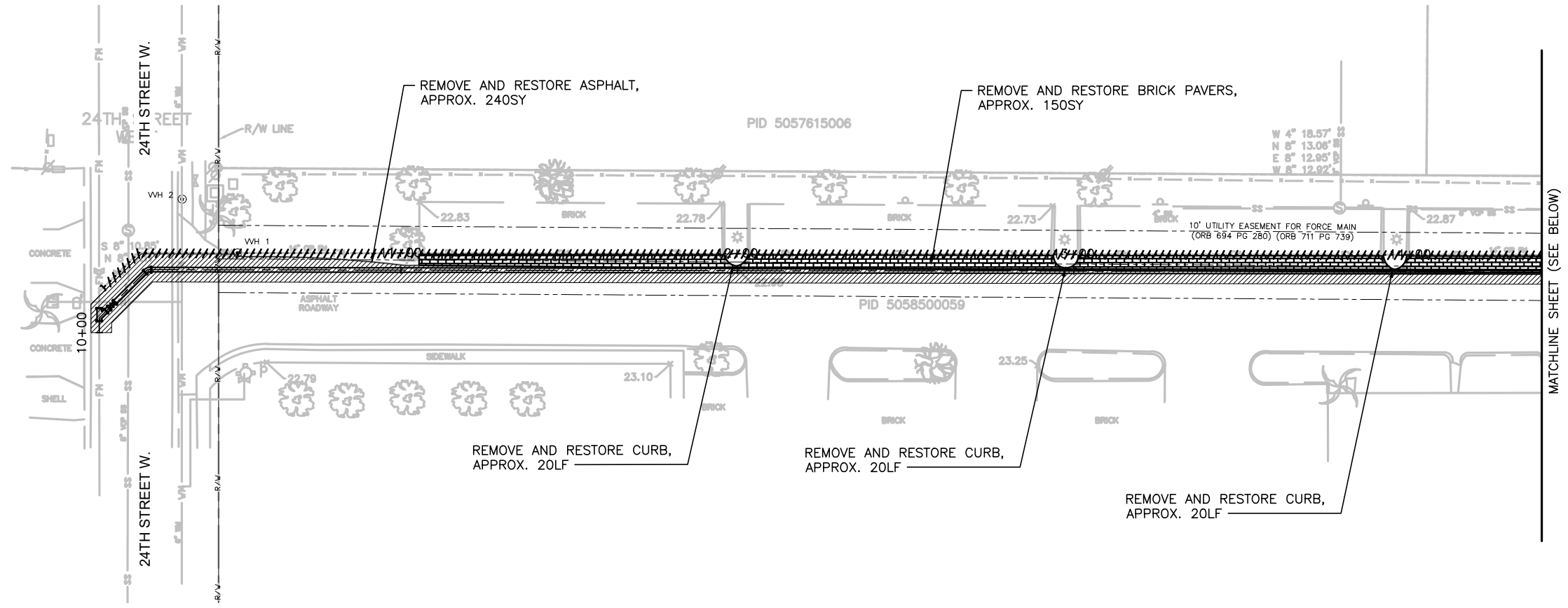
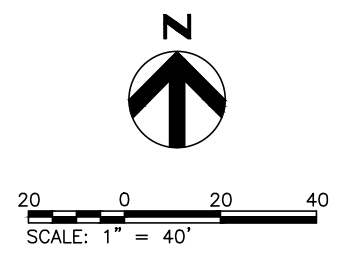
0 0.5 1  
SCALE AS NOTED

FILENAME C-111.DWG  
SCALE AS NOTED

SHEET  
C-111



1 2 3 4 5 6 7 8



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER RYAN MESSER, P.E.	
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER 10171461	

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332

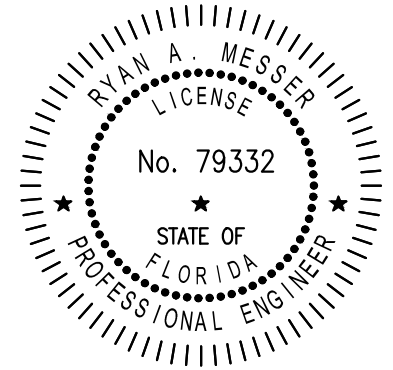
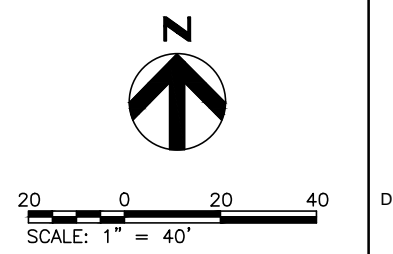
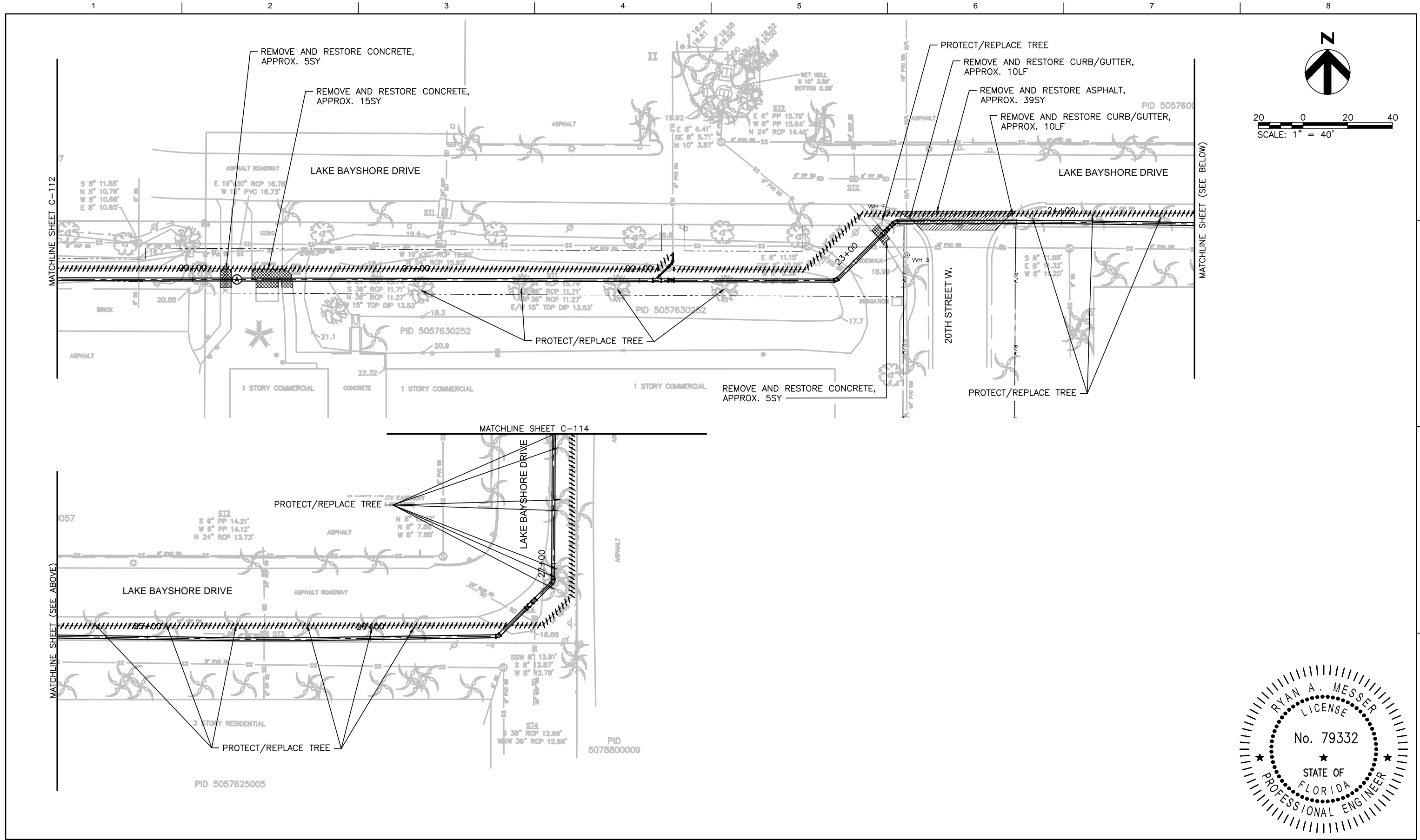


FM 33A AND FM 36A  
REPLACEMENT

FM 36A  
PAVEMENT RESTORATION

FILENAME C-112.DWG  
SCALE 1" = 40'

SHEET  
C-112



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	-----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332

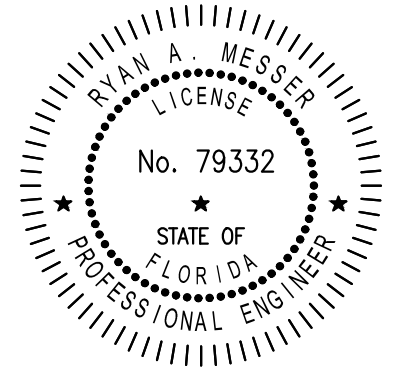
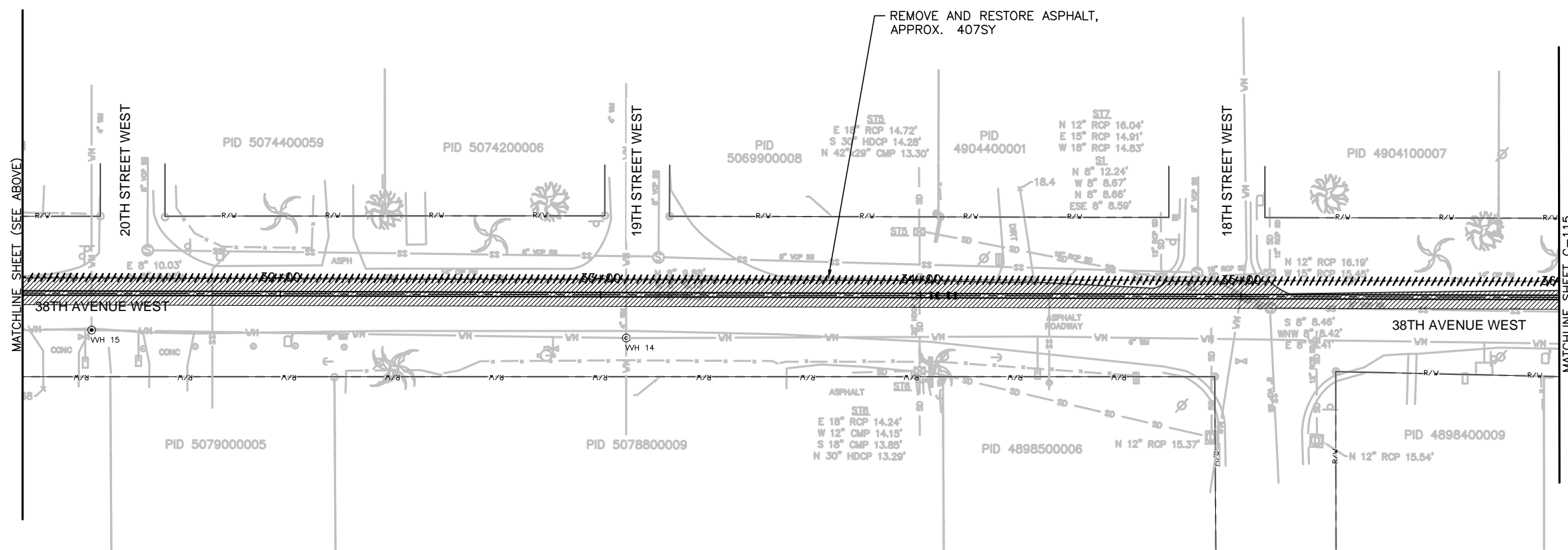
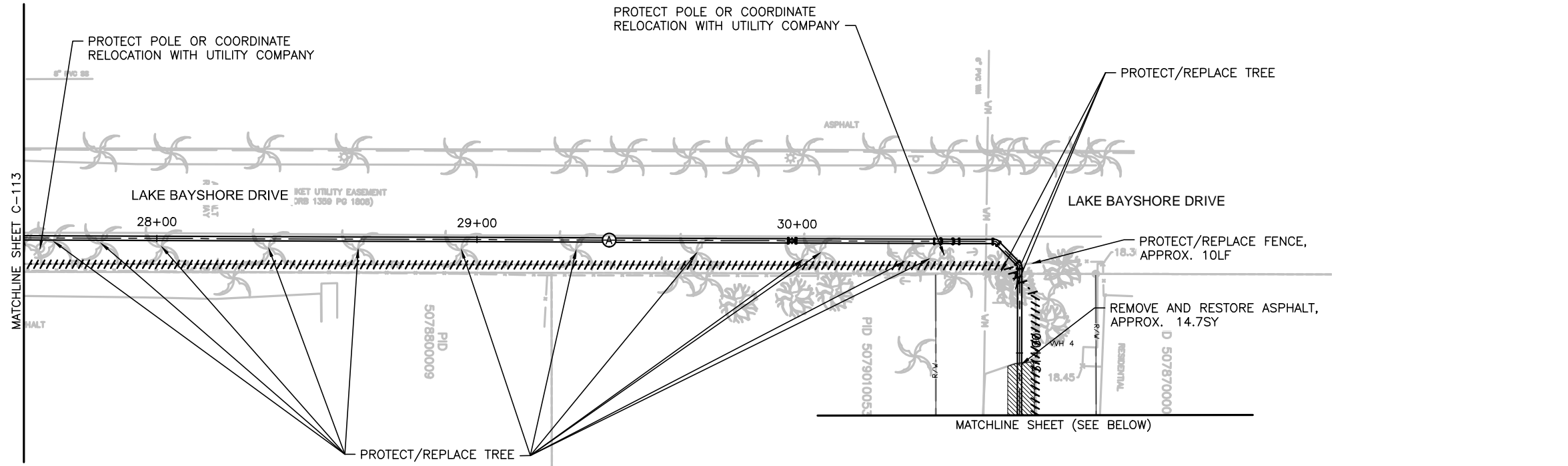
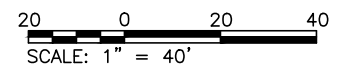


FM 33A AND FM 36A  
REPLACEMENT

FM 36A  
PAVEMENT RESTORATION

FILENAME C-113.DWG  
SCALE 1" = 40'

SHEET  
C-113



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	-----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



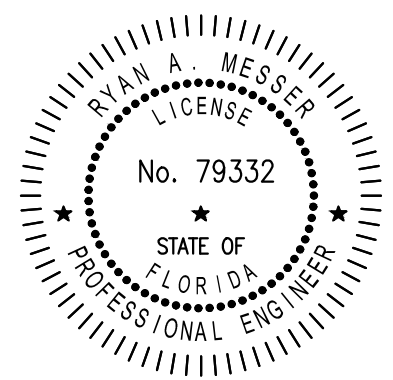
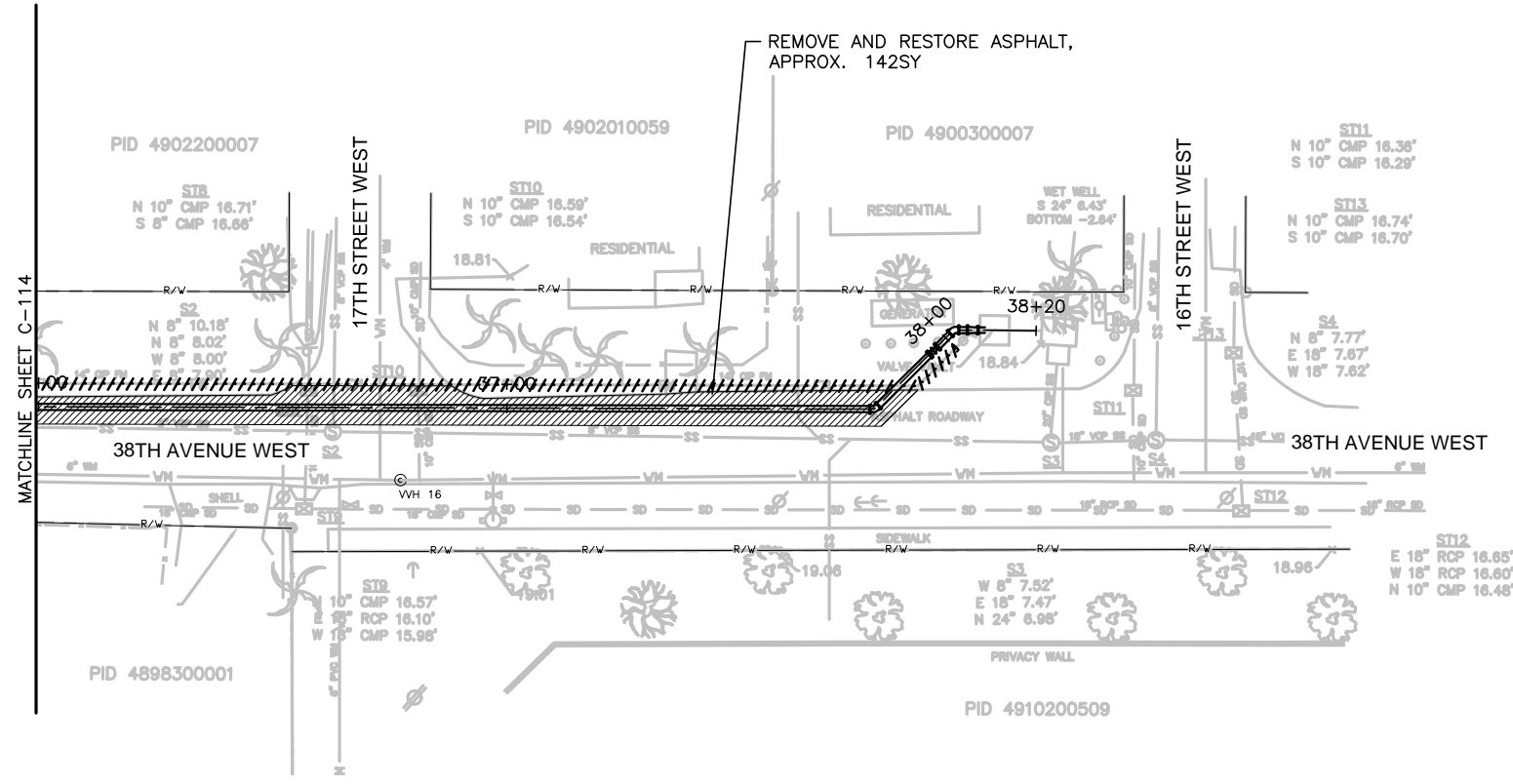
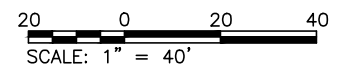
FM 33A AND FM 36A  
REPLACEMENT

FM 36A  
PAVEMENT RESTORATION



FILENAME C-114.DWG  
SCALE 1" = 40'

SHEET  
C-114



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



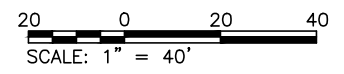
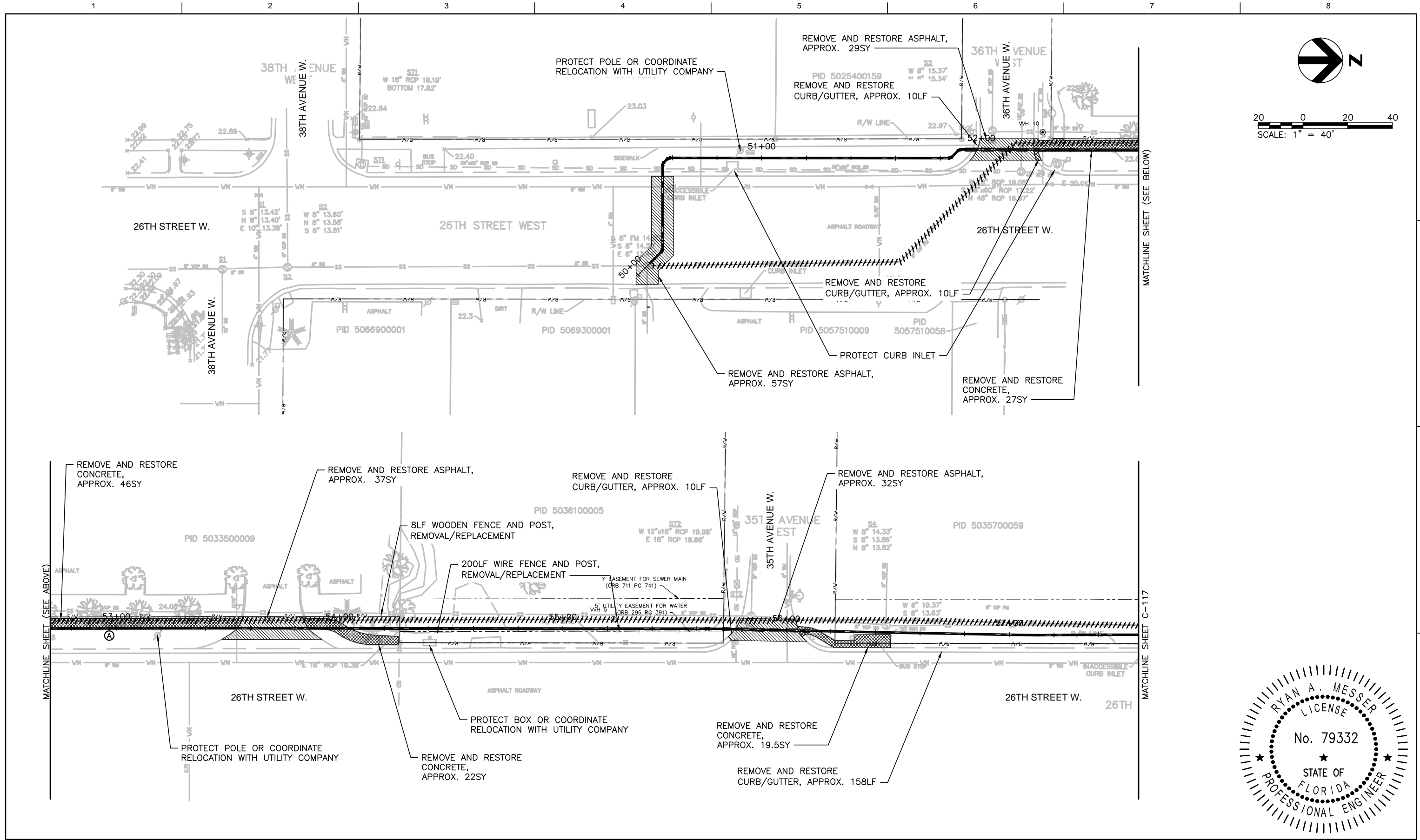
FM 33A AND FM 36A  
REPLACEMENT



FM 36A  
PAVEMENT RESTORATION

FILENAME C-115.DWG  
SCALE 1" = 40'

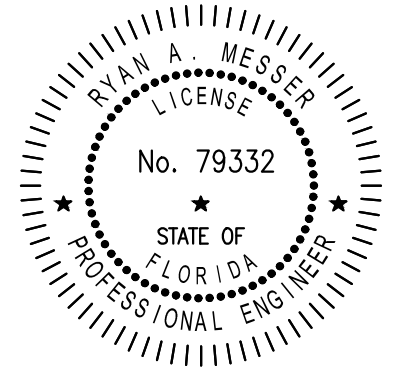
SHEET  
C-115



MATCHLINE SHEET (SEE ABOVE)

MATCHLINE SHEET (SEE BELOW)

MATCHLINE SHEET C-117



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER RYAN MESSER, P.E.	
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



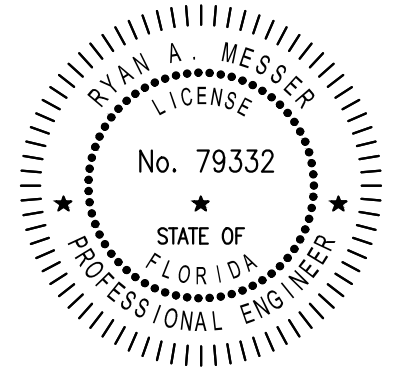
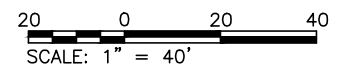
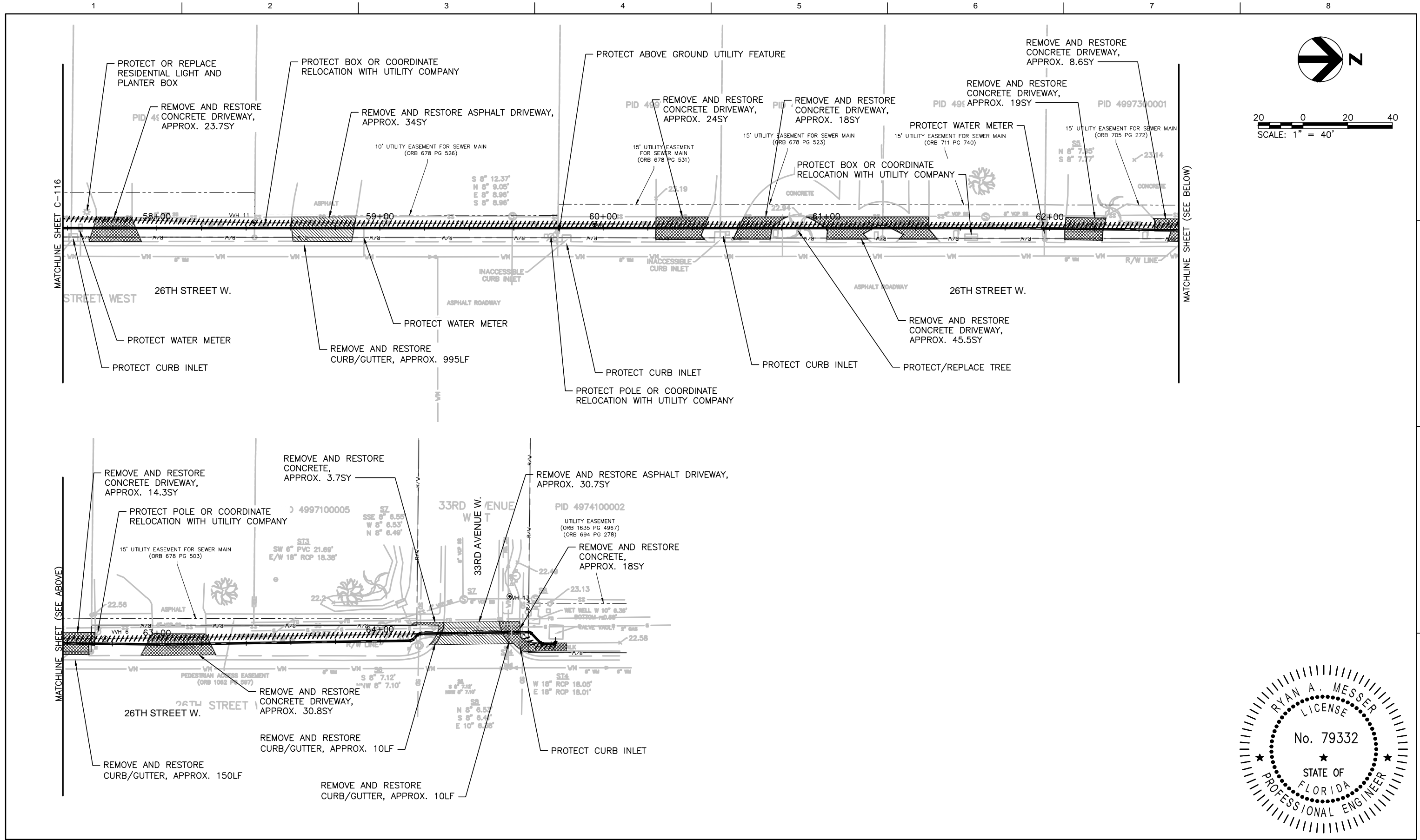
**FM 33A AND FM 36A REPLACEMENT**

**FM 33A PAVEMENT RESTORATION**



FILENAME C-116.DWG  
SCALE 1" = 40'

SHEET  
C-116



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER	RYAN MESSER, P.E.
SENIOR ENGINEER	----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332

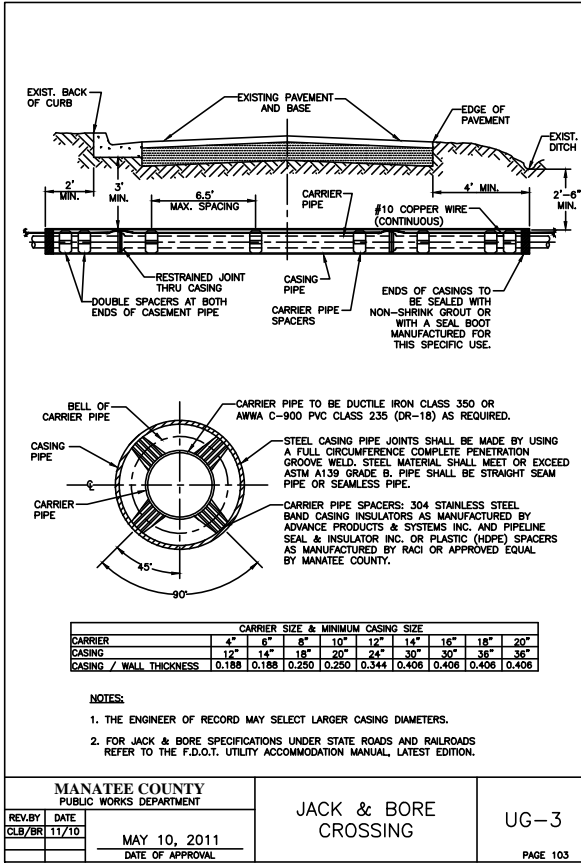


FM 33A AND FM 36A  
REPLACEMENT

FM 33A  
PAVEMENT RESTORATION

FILENAME C-117.DWG  
SCALE 1" = 40'

SHEET  
C-117



**CARRIER SIZE & MINIMUM CASING SIZE**

CARRIER	4"	6"	8"	10"	12"	14"	16"	18"	20"
CASING	1.22	1.44	1.67	2.00	2.42	2.97	3.61	4.35	5.20
CASING / WALL THICKNESS	0.188	0.168	0.250	0.250	0.344	0.406	0.406	0.406	0.406

- NOTES:**
1. THE ENGINEER OF RECORD MAY SELECT LARGER CASING DIAMETERS.
  2. FOR JACK & BORE SPECIFICATIONS UNDER STATE ROADS AND RAILROADS REFER TO THE F.D.O.T. UTILITY ACCOMMODATION MANUAL, LATEST EDITION.

**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

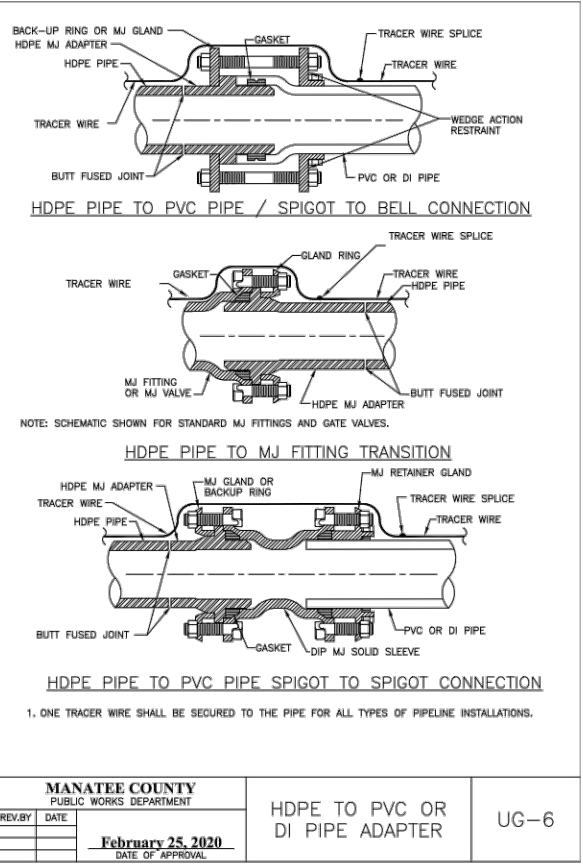
REV. BY DATE  
CLB/BR 11/10

**MAY 10, 2011**  
DATE OF APPROVAL

**JACK & BORE CROSSING**

UG-3

PAGE 103



**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**HDPE TO PVC OR DI PIPE ADAPTER**

UG-6

**REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)**

MAIN PIPE SIZE	HORIZ. BENDS			TEES		REDUCERS		PLUGS & VALVES		
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH			
24	90	38	18	K20	160	K16	90	K20	64	214
20	78	32	16	K16	130	K12	78	K16	50	184
16	66	27	13	K12	111	K10	66	K12	44	151
12	52	22	10	K10	86	K8	52	K10	36	118
10	44	18	9	K8	70	K6	44	K8	30	100
8	37	15	7	K6	60	K4	37	K6	24	83
6	29	12	6	K4	48	K3	29	K4	18	63
4	21	8	4	K3	36	K2	21	K3	14	45

**NOTES:**

1. RESTRAIN 11.25" BENDS 50% OF LENGTH FOR 22.5° BENDS.
2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
4. PIPE SIZES ARE GIVEN IN INCHES.
5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
6. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
7. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
8. RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL UG-10 RESTRAINED LENGTHS FOR PIPE.
9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.17 OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.
10. ALL THREE "LEGS" OF TEES SHALL BE RESTRAINED PER THE STATED LENGTH IN THE TABLE.

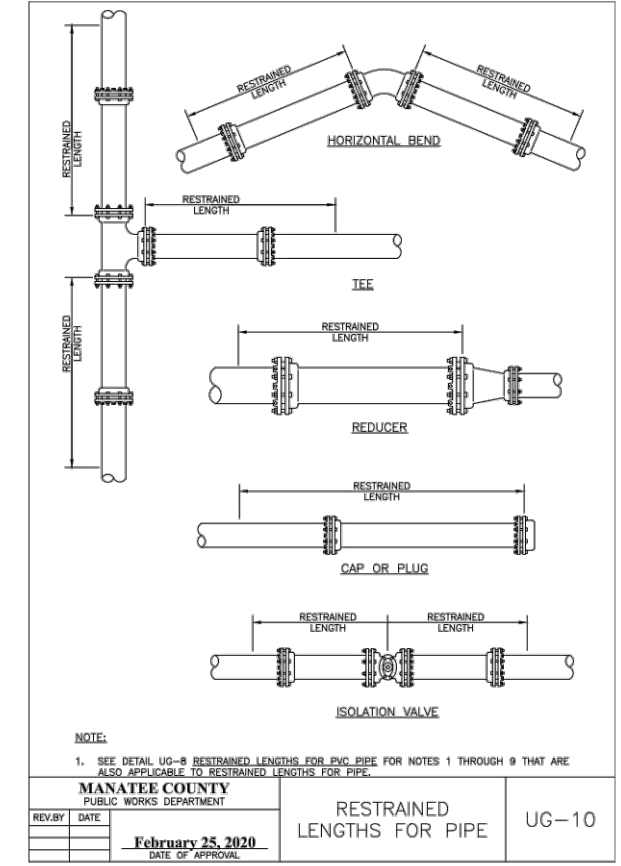
**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**RESTRAINED LENGTHS FOR PVC PIPE**

UG-8



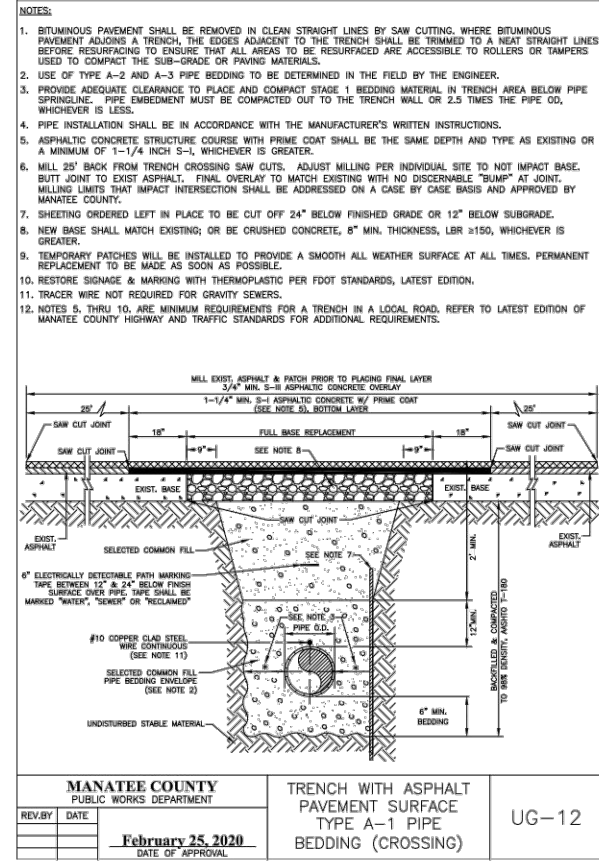
**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**RESTRAINED LENGTHS FOR PIPE**

UG-10



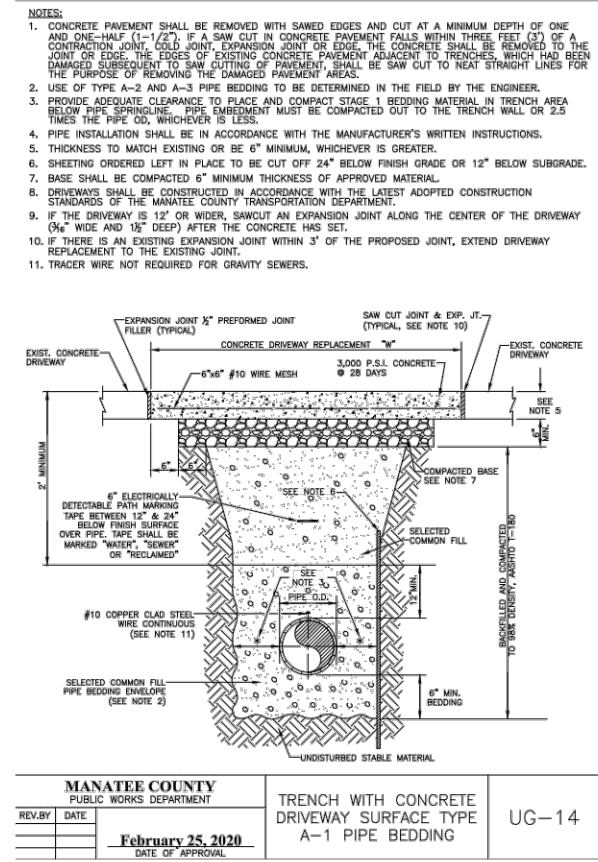
**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING (CROSSING)**

UG-12



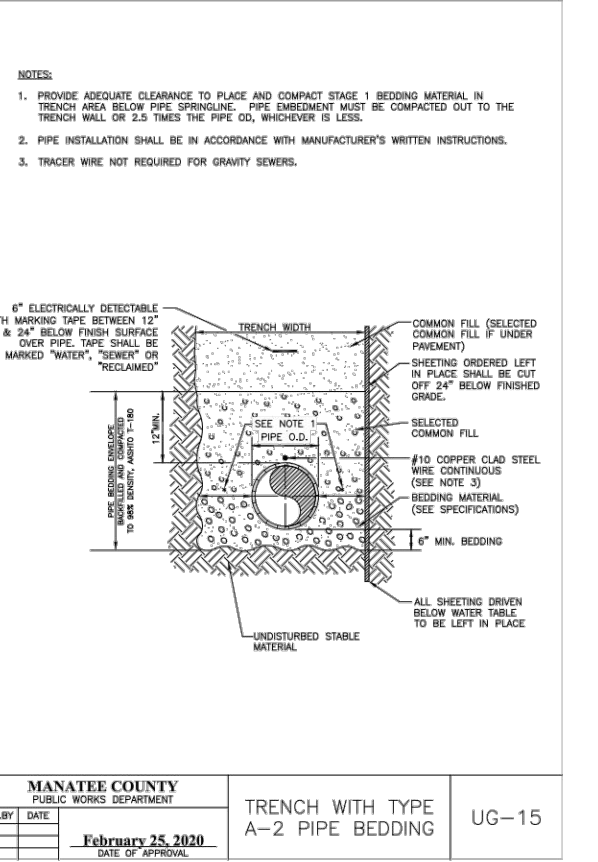
**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING**

UG-14



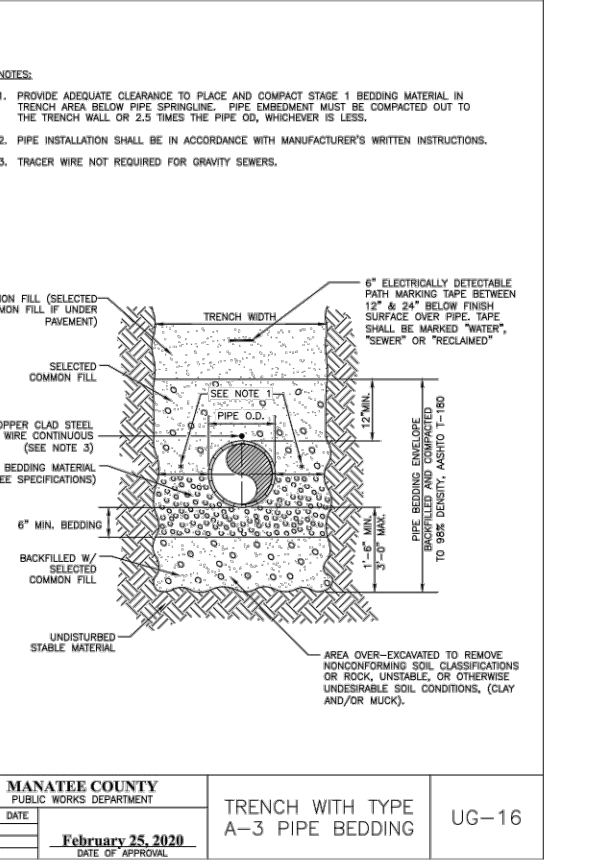
**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**TRENCH WITH TYPE A-2 PIPE BEDDING**

UG-15



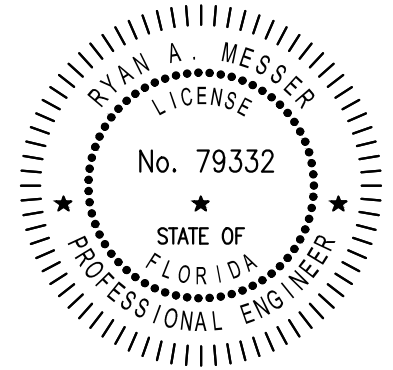
**MANATEE COUNTY PUBLIC WORKS DEPARTMENT**

REV. BY DATE  
February 25, 2020

**February 25, 2020**  
DATE OF APPROVAL

**TRENCH WITH TYPE A-3 PIPE BEDDING**

UG-16



ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

**PROJECT MANAGER** RYAN MESSER, P.E.

**SENIOR ENGINEER** -----

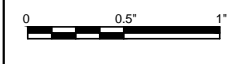
**PROCESS DESIGNER** J. THORPE

**PROJECT NUMBER** 10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



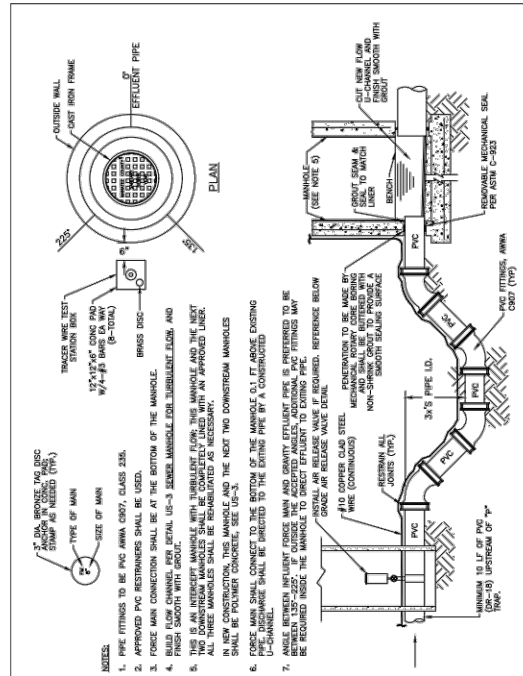
**FM 33A AND FM 36A REPLACEMENT**



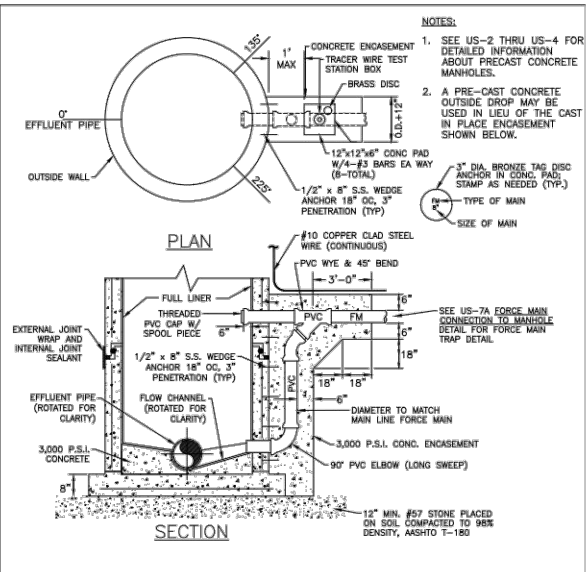
**DETAILS I**

FILENAME C-501.DWG  
SCALE AS NOTED

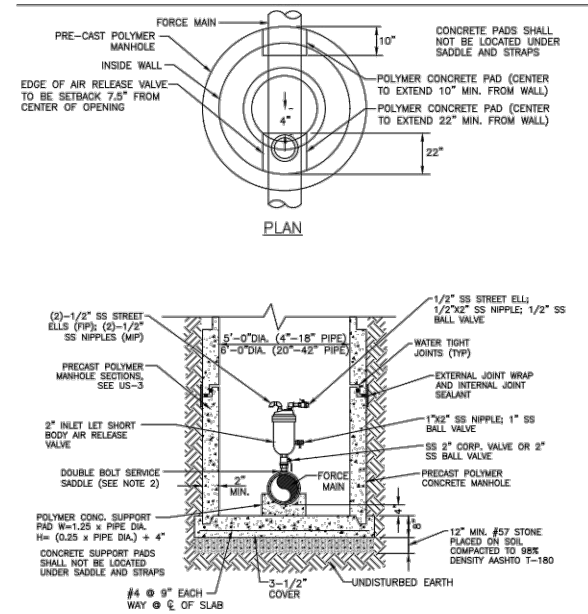
SHEET  
**C-501**



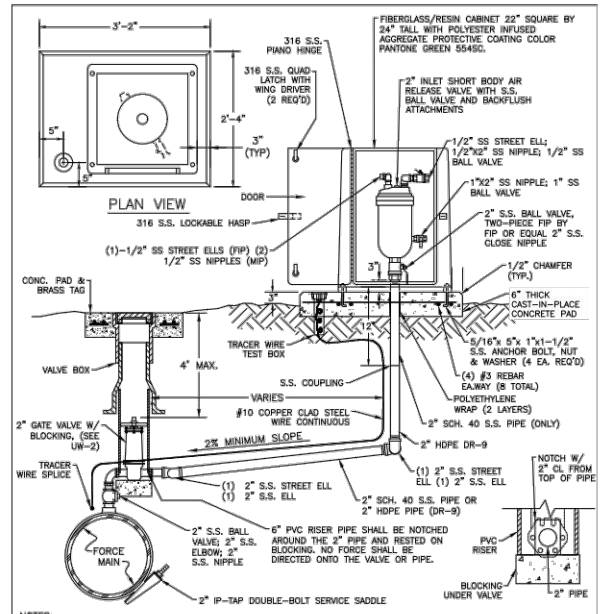
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		FORCE MAIN CONNECTION TO EX. PORTLAND CONCRETE MANHOLE (3-6 FEET DEEP)	US-7A
REV. BY	DATE		
	February 25, 2020		
	DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		FORCE MAIN CONNECTION TO EX. PORTLAND CONCRETE MANHOLE (>6 FEET DEEP)	US-7B
REV. BY	DATE		
	February 25, 2020		
	DATE OF APPROVAL		

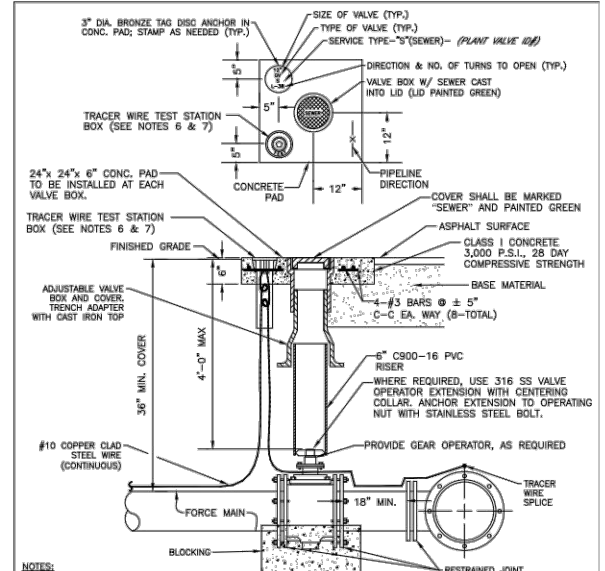


MANATEE COUNTY PUBLIC WORKS DEPARTMENT		BELOW GRADE AIR RELEASE VALVE FOR FORCE MAINS	US-8
REV. BY	DATE		
	February 25, 2020		
	DATE OF APPROVAL		

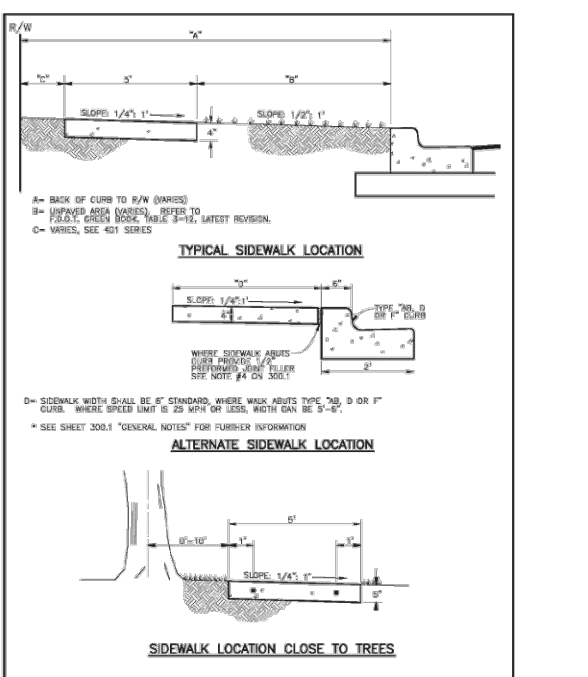


MANATEE COUNTY PUBLIC WORKS DEPARTMENT		ABOVE-GROUND AIR RELEASE VALVE ASSY. FOR FORCE MAINS	US-9
REV. BY	DATE		
	February 25, 2020		
	DATE OF APPROVAL		

NOTE:  
1. US-9 AMENDED, HEIGHT FOR ENCLOSURE TO BE 36-INCH MINIMUM IN LIEU OF NOTED 24-INCH.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		VALVE, BOX, COVER AND TAG	US-11
REV. BY	DATE		
	February 25, 2020		
	DATE OF APPROVAL		



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



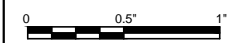
ISSUE	DATE	DESCRIPTION
3	03/2021	100% SUBMITTAL
2	11/2020	75% SUBMITTAL
1	07/2019	30% SUBMITTAL

PROJECT MANAGER RYAN MESSER, P.E.	
SENIOR ENGINEER	-----
PROCESS DESIGNER	J. THORPE
PROJECT NUMBER	10171461

RYAN MESSER, P.E.  
FL. CERTIFICATE NO. 79332



FM 33A AND FM 36A  
REPLACEMENT



DETAILS II

FILENAME C-502.DWG  
SCALE AS NOTED

SHEET  
C-502

