

PRELIMINARY SITE PLAN, CONSTRUCTION PLAN, AND
STORMWATER MANAGEMENT PLAN & REPORT
RETAIL @ FLORA AVE. & US HWY 19 N.

SECTION 31 - TOWNSHIP 26 S - RANGE 16 E
PARCEL NO. 31-26-16-0120-00A00-0125
PASCO COUNTY, FLORIDA

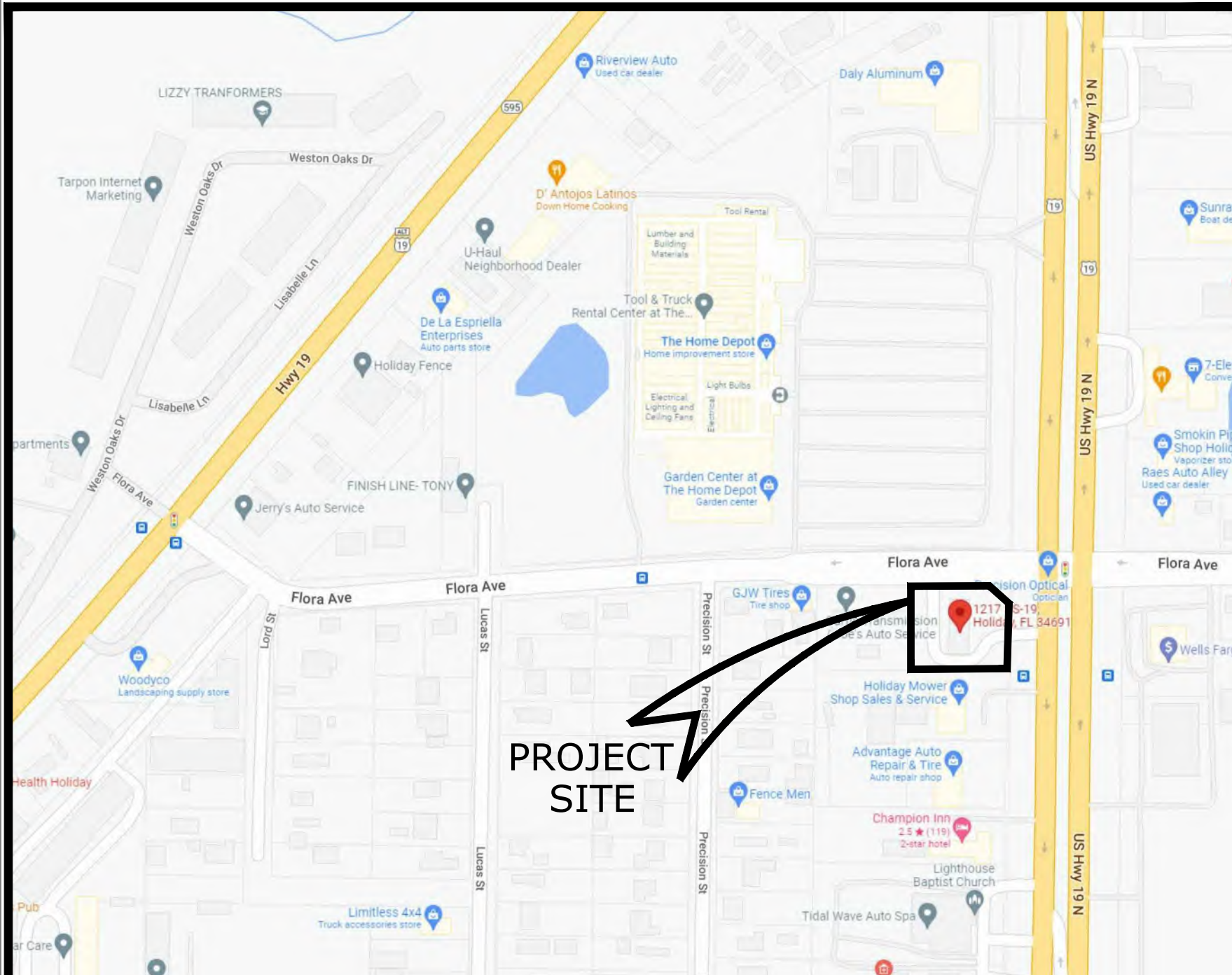
- a. FDOT access permit 2024-A-798-00037
b. FDOT construction access 2024-C-798-000XX (N/A)
c. FDOT drainage permit 2024-D-798-000XX (N/A)
d. FDOT highway segment: # 14-030-000
e. SR 55 Milepost: 0.259
f. Lt Rwy
g. 45 mph
h. ACCESS CLASSIFICATION: 3

LEGAL DESCRIPTION

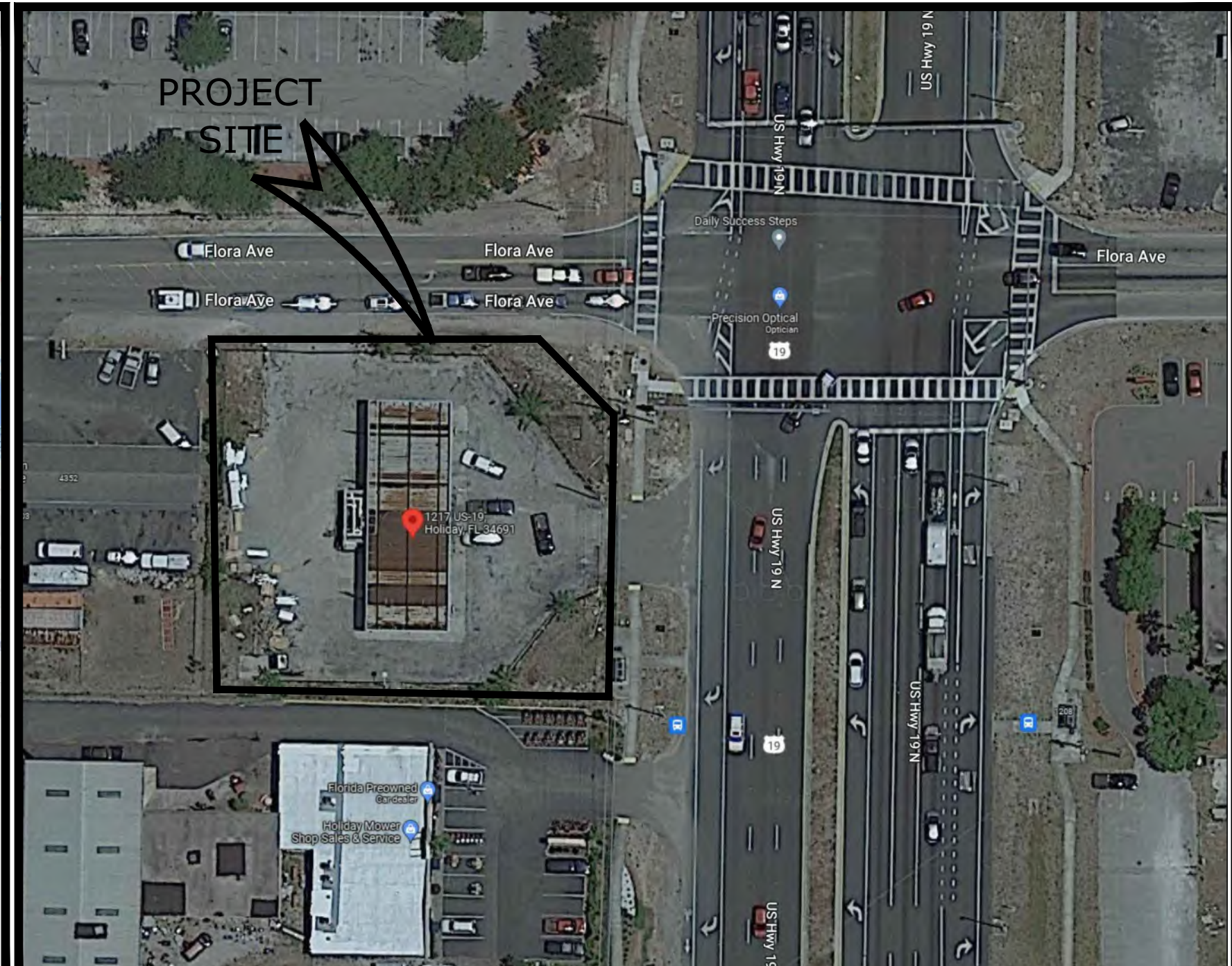
PAPPAS COLONY SUB PB 5 PG 4 PORTION LOTS 11 & 12 BLOCK A DESC AS COM INT W R/W LN US 19 & N BDY LN LOT 12 TH S01DEG 21' 42"W 15.00 FT FOR POB TH CONT ALG W R/W LN US 19 S01DEG 21' 42"W 140.00 FT TH N88DEG 38' 18"W 175.00 FT TH N01DEG 21' 42"E 155.00 FT TO N BDY LN LOT 12 TH S88DEG 38' 18"E 155.00 FT TH S51DEG 46' 06"E 25.00 FT TO POB OR 9121 PG 3305

INDEX OF SHEETS

C1.1	CIVIL SITE DATA
C1.2	CIVIL SPECIFICATIONS
C2.1	SITE PREPARATION / EROSION CONTROL
C2.2	EXISTING CONDITIONS PLAN
C2.3	NPDES DETAILS
C3.1	CIVIL SITE PLAN
C3.2	CIVIL SITE PLAN - FDOT
C4.1	GRADING AND DRAINAGE PLAN
C4.2	STORMTECH DETAILS
C5.1	UTILITY PLAN
C5.2	LIFT STATION
C5.3	UTILITY PLAN - FORCE MAIN
C6.1	CONSTRUCTION DETAILS
C6.2	CONSTRUCTION DETAILS
C6.3	CONSTRUCTION DETAILS
L1.1	LANDSCAPE PLAN
L1.2	LANDSCAPE DETAILS
IR1.1	IRRIGATION PLANS



STREET MAP



AERIAL MAP



OWNER CONTACT

1217 US HWY 19 CROSSING LLC
18167 U.S. HIGHWAY 19 NORTH; STE 450
CLEARWATER, FL 33764
PHONE: (727) 723-3771
EMAIL: MHARPER@EUROPEANEQUITIES.COM

DEVELOPER CONTACT

EUROPEAN EQUITIES CORPORATION
18167 U.S. HIGHWAY 19 NORTH; STE 450
CLEARWATER, FL 33764
PHONE: (727) 723-3771
EMAIL: MHARPER@EUROPEANEQUITIES.COM

DESIGN PROFESSIONALS

CIVIL ENGINEER/PLANNER:	ARCHITECT
NORTHSIDE ENGINEERING, INC. 300 SOUTH BELCHER ROAD CLEARWATER, FLORIDA 33765 727-443-2869	ARCHITECTONICS - Studio- 2600 Dr. MLK Jr. STREET N. STE 600 ST. PETERSBURGE, FLORIDA 33704 727-323-5676
SURVEY	GEOTECH
AMERICAN SURVEYING INC. 4847 NORTH FLORIDA AVENUE TAMPA, FLORIDA 33603 813-234-0103	AWARD, INC. 7804 NORTH FLORIDA AVENUE TAMPA, FLORIDA 33604 813-237-3909

FLOOD ZONE INFORMATION

THIS PROPERTY LIES IN FLOOD ZONES "X", AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP; COMMUNITY PANEL No. 12101C0361G, EFF. 6/5/2020.

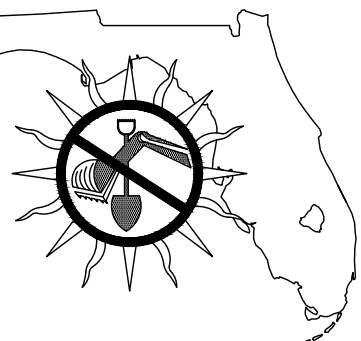
SITE DATA

MATRIX		EXISTING	PROPOSED	ALLOWED/CODE
ZONING:		C2	C2	OK.
USAGE:		RETAIL	RETAIL	OK.
FUTURE LAND USE:		ROR	ROR	OK.
LOT AREA (GROSS):		26,975 S.F. 0.62 ACRES	26,975 S.F. 0.62 ACRES	15,000 S.F. (MIN.)
LOT WIDTH:		140'	140'	90' (MIN.)
BUILDING COVERAGE:		907 S.F.	5,470 S.F.	13,487.5 S.F.(MAX.)
FLOOR AREA RATIO: (FAR)		907 S.F. (0.034)	5,470 S.F. (0.203)	0.60 (MAX)
BLDG. SETBACKS:	FRONT (NORTH)	66'	60.3'	25' SETBACK & 10' TYPE 'D' LANDSCAPE BUFFER
	FRONT (EAST)	73.4'	87.3'	25' SETBACK & 15' TYPE 'D' LANDSCAPE BUFFER
	SIDE (SOUTH)	67.2'	10.5'	0 SETBACK & 10' TYPE 'A' LANDSCAPE BUFFER
	SIDE (WEST)	59.4'	22.7'	0 SETBACK & 10' TYPE 'A' LANDSCAPE BUFFER
BLDG. HEIGHT:		-	1-STY (24')	60' MAX.
VEHICULAR USE AREA (VUA):		17,760 S.F.	11,197 S.F.	-
INTERIOR LANDSCAPING:		-	1,200 S.F. 10.7 %	10% OF VUA (MIN.)
IMPERVIOUS SURFACE RATIO: (I.S.R.)		19,767 S.F. (0.733)	19,844 S.F. (0.736)	-
OPEN SPACE: (S.F. & % OF GROSS SITE)		7,208 S.F. (26.7%)	7,131 S.F. (26.4%)	-
PARKING:		-	25 SPACES + 1 BIKE PARKING + 1 LOADING SPACE	19 SPACES + 1 BIKE PARKING + 1 LOADING SPACE
PARKING CALCULATIONS:		- ON-SITE PARKING: 1 PER 300 sf. GFA = 18.23 = 19 SPACES - BIKE PARKING: 0.02 PER PROVIDED SPACE = 0.02 X 23 = 0.46 = 1 SPACE - 1 LOADING SPACE REQUIRED		

UTILITY COMPANIES

GAS: CLEARWATER GAS SYSTEMS 400 N MYRTLE AVE CLEARWATER, FL 33755 CONTACT: BOBBY MORIG (727) 562-4900 EXT. 7423	SEWER: PASCO COUNTY UTILITIES 194367 CENTRAL BLVD LAND O LAKES , FL 34637 CONTACT: CHARLES CULLEN (813) 235-6012
TELECOM: FRONTIER COMMUNICATIONS 3712 W. WALNUT ST TAMPA, FL 33607 CONTACT: CARLOS BATES (941) 906-6709	WATER: PASCO COUNTY UTILITIES 194367 CENTRAL BLVD LAND O LAKES , FL 34637 CONTACT: CHARLES CULLEN (813) 235-6012
SPECTRUM: 30432 SR 54 WESLEY CHAPEL, FL 33543 CONTACT: MIKE KIKER (813) 862-0522 EXT: 86263	POWER: DUKE ENERGY 4121 SAINT LAWRENCE DR NEW PORT RICHEY, FL 34653 CONTACT: WILLIAM COPPINGER (407) 938-6602
TRAFFIC OPERATIONS: PASCO COUNTY TRAFFIC OPERATIONS DIVISION 7536 STATE ST ROWM 124 NEW PORT RICHEY, FL 34654 CONTACT: JACK KING (727) 847-8139 EXT. 8523	FIRE: PASCO COUNTY FIRE RESCUE - STATION 12 4713 MILE STRETCH DR HOLIDAY, FL 34680 CONTACT: SCOTT CASSIN (813) 929-2750

"INVESTIGATE BEFORE YOU EXCAVATE"



CALL SUNSHINE @ 1-800-432-4770
FL. STATUTE 553.851 (1979) REQUIRES A
MIN. OF 2 DAYS AND MAX. OF 5
DAYS NOTICE BEFORE YOU EXCAVATE.

AGENCY RESPONSE STAMPS

Northside
Engineering, Inc.
300 South Belcher Road, Clearwater, Florida 33765
727-443-2869 Fax: 727-443-5035
info@northsideengineering.net
Est. 1989

Donald B. Fairbairn, P.E. #44971
COPIES OF THESE PLANS ARE NOT VALID UNLESS
EMBEDDED WITH THE SIGNING ENGINEER'S SEAL

PROJECT #		2305
ISSUE DATE:		01/12/23
REVISIONS:		
No.	Date	Description
1	08/23/24	County Com
2	12/10/24	RES. TO FDOT COM.
3	/ /	
4	/ /	
5	/ /	
6	/ /	
7	/ /	
8	/ /	
9	/ /	
10	/ /	

CIVIL SITE DATA
RETAIL@SWC FLORA AVE
& US HWY 19
1217 US HWY 19 N,
HOLIDAY, FLORIDA 34691

Northside
Engineering, Inc.
C1.1

1. 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. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS WORK, PRIOR TO CONSTRUCTION.
2. PRIOR TO THE INITIATION OF SITE CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ANY EXISTING UTILITIES INCLUDING GAS, WATER, ELECTRIC, COMMUNICATIONS, CABLE TV, SANITARY AND STORM SEWERS, ON AND/OR ADJACENT TO THE SITE, REMOVE OR CAP AS NECESSARY.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL CALL "SUNSHINE" AT 1-800-432-4770, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO ARRANGE FOR FIELD LOCATIONS OF BURIED UTILITIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUBCONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT INSPECTION AND CERTIFICATION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS/REQUIREMENTS.
6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRE-CAST AND MANUFACTURED ITEMS TO THE OWNERS ENGINEER FOR APPROVAL, PRIOR TO ORDERING. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
7. ALL UTILITY SERVICE STUB-OUTS (WATER, SANITARY SEWER, etc.) ARE TO BE INSTALLED TO WITHIN 5' OF BUILDING(S), UNLESS OTHERWISE NOTED ON PLANS.
8. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION OF THE EROSION CONTROL DEVICES, AS SHOWN ON THE CONSTRUCTION PLANS, PRIOR TO ANY SITE CLEARING. REFER TO THE "EROSION CONTROL NOTES" SECTION CONTAINED HEREIN FOR ADDITIONAL REQUIREMENTS.
2. PRIOR TO ANY SITE CLEARING, ALL TREES SHOWN TO REMAIN, AS INDICATED ON THE CONSTRUCTION PLANS, SHALL BE PROTECTED IN ACCORDANCE WITH LOCAL TREE ORDINANCES, AND DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. NO TREE(S) SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER AND THE LOCAL AGENCY HAVING JURISDICTION OVER THESE ACTIVITIES.
3. THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL, IMMEDIATELY FOLLOWING CONSTRUCTION.
4. STRIPPED TOPSOIL REMOVED DURING CLEARING AND GRUBBING ACTIVITIES SHALL BE STOCKPILED, TO BE USED FOR LANDSCAPING PURPOSES, UNLESS OTHERWISE DIRECTED BY THE OWNER. REMAINING EARTHWORK THAT RESULTS FROM CLEARING AND GRUBBING OR SITE EXCAVATION IS TO BE UTILIZED ON-SITE, PROVIDED THE MATERIAL IS DEEMED SUITABLE BY THE OWNER'S SOILS TESTING COMPANY. EXCESS MATERIAL IS TO EITHER BE STOCKPILED ON-SITE, AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER, OR REMOVED FROM THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING EXCESS EARTHWORK FROM THE SITE.
5. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE, BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS.
6. THE CONTRACTOR IS TO PREPARE THE SITE IN ACCORDANCE WITH THE SOILS REPORT, COPIES OF WHICH ARE AVAILABLE THROUGH THE OWNER OR SOILS TESTING COMPANY DIRECTLY.

1. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIERS (HAY BALES OR SILTATION CURTAINS) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTORS IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
2. THE CONTRACTOR SHALL LIMIT THE DISCHARGE OF TURBID WATERS OFF-SITE, OR INTO ON-SITE/OFF-SITE WETLANDS (IF APPLICABLE), TO NO MORE THAN THE SPECIFIED NTUS (NEPHELOMETRIC TURBIDITY UNITS) GOVERNED BY THE APPLICABLE GOVERNING JURISDICTION, ABOVE BACKGROUND LEVELS.
3. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
4. CONTRACTOR SHALL INSPECT AND MAINTAIN ON A DAILY BASIS ALL EROSION/SEDIMENTATION CONTROL FACILITIES.
5. THE CONTRACTOR SHALL ENSURE THAT SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF THE DEPTH OF THE SILTATION CONTROL BARRIER SHALL BE IMMEDIATELY REMOVED AND PLACED IN UPLAND AREAS.
6. CONTRACTOR SHALL MAKE SURE THAT UNDUNE SOIL/SAND IS NOT TRACKED OFFSITE, IF IT BECOMES AN ISSUE, CONTRACTOR SHALL ADD A CONSTRUCTION ENTRANCE WITH SEDIMENT REMOVAL (GRAVEL DRIVE) AND SHALL REMOVE ANY SEDIMENT/SOIL TRACKED OFFSITE DAILY OR SOONER.

1. ALL SITE WORK CONSTRUCTION TESTING SHALL BE PERFORMED BY A CERTIFIED/LICENSED GEOTECHNICAL ENGINEERING FIRM.
2. ALL SITE WORK CONSTRUCTION TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECTS GEOTECHNICAL REPORT AND/OR THE TESTING PARAMETERS OF THE LOCAL MUNICIPALITY/AGENCY HAVING JURISDICTION OVER THE SITE WORK. THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
3. COPIES OF PASSING TEST RESULTS SHALL BE PROVIDED TO THE DEVELOPER, ENGINEER OF RECORD, CONTRACTOR AND LOCAL MUNICIPALITY/AGENCY FOR PURPOSES, SUCH AS BUT NOT LIMITED TO, CERTIFICATION, AND ACCEPTANCE OF FACILITIES BY THE DEVELOPER AND/OR MUNICIPALITY/AGENCY.
4. THE SERVICES OF A CONSTRUCTION TESTING GEOTECHNICAL FIRM SHALL BE RETAINED BY THE DEVELOPER, UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS.
5. ENGINEER WILL NOT BE RESPONSIBLE FOR SCHEDULING, COORDINATION OR EVALUATION OF THE SOILS TESTING AND CERTIFICATIONS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER/DEVELOPER TO MAKE THE NECESSARY ARRANGEMENTS DIRECTLY WITH THE SOILS TESTING LABORATORY/GEOTECHNICAL FIRM AND THE SITE CONTRACTOR.

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNERS ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE COST OF THE INSPECTION SHALL BE PROVIDED INSPECTION (TV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE CONTRACTOR SHALL DELIVER COPIES OF THE TV INSPECTION TAPE TO THE ENGINEER, THE OWNER AND THE APPLICABLE MUNICIPALITY/AGENCY.
2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTORS RESPONSIBILITY.
3. ALL FORCE MAINS (IF APPLICABLE) SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTORS RESPONSIBILITY.

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNERS ENGINEER, OR OWNERS SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES UNLESS OTHERWISE NOTED.
5. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.
6. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT, PER DETAILS HEREIN.
7. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE LATEST EDITION OF F.D.O.T. "FDOT DESIGN MANUAL (FDM)" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.
8. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.
9. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER PLACED CONCRETE, ETC.)
10. ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX # 711-001.

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH SITE SPECIFIC GEOTECHNICAL REPORT FOR THE SITE, AS WELL AS THE SCHEDULED TESTING REQUIRED BY FDOT AND THE AFFECTED MUNICIPALITY. UPON COMPLETION OF TESTING, THE SOILS ENGINEER WILL SUBMIT NOTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS, AND THE VARIOUS AGENCIES. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.

1. ALL DIP PIPE SHALL BE CLASS 50 OR HIGHER. ADEQUATE MEASURES AGAINST CORROSION SHALL BE UTILIZED.
2. ALL PVC PIPE SHALL BE SOLID WALL POLYVINYL CHLORIDE PIPE AND COMPLY WITH ASTM D 3034 AND ALL APPLICABLE AND DOCUMENTS AS COVERED IN SECTION NO. 2 OF ASTM D 3034. MAIN LINES SHALL BE A MINIMUM OF 6" DIAMETER, AND LATERALS SHALL BE A MINIMUM 6" DIAMETER.
3. ALL SANITARY SEWER MAINS, LATERALS AND FORCE MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER, UNLESS OTHERWISE NOTED ON PLANS.
4. ALL GRAVITY SEWERS MUST BE SDR 35 PVC OR DIP CLASS 54 PIPE. ALTERNATIVES MUST BE APPROVED BY APPLICABLE JURISDICTION/ENGINEER OF RECORD. ELASTOMERIC GASKET JOINTS SHALL BE UTILIZED FOR PVC PIPE, AND SHALL COMPLY WITH ASTM F477, ASTM D3231 & ASTM F1336. JOINTS SHALL COMPLY WITH ASTM D3212.
5. ALL PVC FORCE MAINS (IF REQUIRED) SHALL BE CLASS 200, DR 14 FOR 4" DIAMETER, AND CLASS 150, DR 18 FOR 6" TO 12" DIAMETER PIPE, IN ACCORDANCE WITH AWWA C900 STANDARDS. PVC FORCE MAIN PIPE SMALLER THAN 4" DIAMETER SHALL BE CLASS 200. SDR 21, IN ACCORDANCE WITH ASTM D 2241. FORCE MAINS SHALL BE SPIRAL WRAPPED WITH 2 INCH WIDE DARK GREEN STICK-ON VINYL TAPE. FORCE MAINS WITHIN THE RIGHT-OF-WAY SHALL BE CLASS 52 DIP, MINIMUM 3" DIAMETER.
6. ALL SANITARY MANHOLES SHALL BE LOCATED NO MORE THAN 400 FEET APART AND SHALL CONFORM TO THE DETAILS CONTAINED HEREIN, AS WELL AS WITH ASTM C478.
7. ALL DUCTILE IRON PIPE SHALL MEET REQUIREMENTS OF AWWA C151, ANSI SPEC. A21.51.
8. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE PROVIDED WITH A VIRGIN POLYETHYLENE INTERIOR LINING COMPLYING WITH ASTM D 1248 (40 MILS THICK) HEND BONDED TO THE INTERIOR OF ALL PIPES. ALL DIP PIPE SHALL HAVE A STANDARD OUTSIDE COATING COMPLYING WITH ASTM C151-8.1.
9. ALL SLOPES FOR GRAVITY SEWER MAINS AND SERVICE CONNECTIONS SHALL COMPLY WITH THE FOLLOWING MINIMUM GRADES: 6" @ 1.00%, 8" @ 0.50%.
10. ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE JURISDICTIONAL STANDARD SPECIFICATIONS.
11. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING PROPOSED FACILITIES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION(S) OF EXISTING CONNECTION POINT(S) AND NOTIFY THE OWNERS ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
12. SANITARY SEWER MAINS SHALL HAVE SUITABLE MAGNETIC LOCATOR TAPE(S) BURIED AT LEAST 18 INCHES ABOVE THE MAIN LINES.
13. FORCE MAINS SHALL HAVE SUITABLE MAGNETIC LOCATOR TAPE(S) BURIED AT LEAST 18 INCHES ABOVE THE FORCE MAIN.

1. SANITARY SEWERS, FORCE MAINS, AND STORM SEWERS SHALL ALWAYS CROSS UNDERNEATH WATER MAINS. INSTALLATIONS OF SANITARY SEWERS, FORCE MAINS AND STORM SEWERS, AT CROSSINGS OF WATER MAINS, SHALL BE PERFORMED SO AS TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE, WHENEVER POSSIBLE. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS AND WATER JOINTS SHALL BE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET BETWEEN ANY TWO JOINTS. WHERE SANITARY SEWERS, FORCE MAINS, AND STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP), AT THE CROSSING. DIP IS NOT REQUIRED FOR STORM SEWERS IF IT IS NOT AVAILABLE IN THE SIZE PROPOSED. A SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO (2) JOINTS IN LIEU OF DIP. THE SANITARY SEWER MAY BE PLACED IN A SLEEVE FOR 20 FEET CENTERED ON THE POINT OF CROSSING. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE LEAK FREE, AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING. WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER WATER MAINS, THE CRITERIA FOR MINIMUM SEPARATION OF 18 INCHES BETWEEN LINES, AND 10 FEET BETWEEN JOINTS CENTERED AT THE POINT OF CROSSING SHALL BE REQUIRED. THE WATER MAIN SHALL BE PLACED IN A SLEEVE FOR 20 FEET CENTERED ON THE POINT OF CROSSING. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (i.e., PIPES CENTERED ON THE CROSSING), WHERE A PROPOSED PIPE CONFLICTS WITH AN EXISTING PIPE, THE PROPOSED PIPE SHALL BE CONSTRUCTED OF DIP, AND THE CROSSING SHALL BE ARRANGED SO AS TO SATISFY THE REQUIREMENTS IDENTIFIED ABOVE.

WHEN THE RECLAIMED WATER LINE IS TRANSPORTING WATER FOR PUBLIC ACCESS IRRIGATION: MAXIMUM OBTAINABLE SEPARATION OF RECLAIMED WATER LINES AND DOMESTIC WATER LINES SHALL BE PRACTICED. A MINIMUM HORIZONTAL SEPARATION OF FIVE FEET (CENTER TO CENTER) OR THREE FEET (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER LINES AND EITHER POTABLE WATER MAINS OR SEWAGE COLLECTION LINES. AN 18 INCH VERTICAL SEPARATION SHALL BE MAINTAINED AT CROSSINGS.

WHEN THE RECLAIMED WATER LINE IS TRANSPORTING WATER FOR NON-PUBLIC ACCESS IRRIGATION:
THE RECLAIMED WATER MAIN SHALL BE TREATED LIKE A SANITARY SEWER, AND A 10-FT. HORIZONTAL AND 18 INCH VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE RECLAIMED WATER MAIN AND ALL EXISTING OR PROPOSED POTABLE WATER MAINS. NO MINIMUM SEPARATION IS REQUIRED BETWEEN THE RECLAIMED WATER MAIN AND SANITARY SEWERS, OTHER THAN NECESSARY TO ENSURE STRUCTURAL INTEGRITY AND PROTECTION OF THE LINES THEMSELVES.

3. A MINIMUM 10 FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER (INCLUDING FORCE MAINS) AND EXISTING OR PROPOSED WATER MAINS, IN PARALLEL INSTALLATIONS, WHENEVER POSSIBLE. THE DISTANCE FOR SEPARATION SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE INSTALLED IN A SEPARATE TRENCH, OR IN AN UNDISTURBED EARTH SHELF, LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN, AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE, AND WATER AND SEWER JOINTS SHALL BE STAGGERED, WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES, IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR FORCE MAIN SHALL BE CONSTRUCTED OF DIP (IF AVAILABLE IN THE SIZE PROPOSED), WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE LOCATED ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (I.E., STAGGERED JOINTS).
4. ALL DIP PIPE SHALL BE AWWA CLASS 50 OR PRESSURE CLASS 250. REFER TO NOTE # 8 BELOW FOR ADDITIONAL DETAILS. SPECIFICATIONS. ADEQUATE MEASURES AGAINST CORROSION SHALL BE UTILIZED.
5. ALL WATER MAIN PIPE FITTINGS AND APPURTENANCES MUST BE INSTALLED TO COMPLY WITH APPLICABLE UTILITY DEPARTMENT SPECIFICATIONS.
6. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 36 INCHES OF COVER, WHERE POSSIBLE, 48" MAXIMUM COVER.
7. ALL WATER SERVICE LINES, VALVES AND METERS SHALL BE INSTALLED TO COMPLY WITH APPLICABLE MUNICIPALITY/AGENCY DEPARTMENT STANDARDS AND SPECIFICATIONS.
8. THRUST BLOCKING/RESTAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS, IN ACCORDANCE WITH APPLICABLE UTILITY DEPT. SPECIFICATIONS.
9. ALL DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C151/A21.51. PIPE SHALL BE FURNISHED IN 18 OR 20 FOOT SECTIONS, PIPE THICKNESS SHALL BE CLASS 50, UNLESS OTHERWISE SPECIFIED..
10. IF WATER SYSTEM CONSTRUCTION, UP TO AND INCLUDING POINT OF METERING AND BACK FLOW PREVENTION (IF REQUIRED), SHALL BE BUILT ACCORDING TO THE PREVIOUSLY REFERENCED STANDARDS AND SPECIFICATIONS.
11. ALL ON-SITE FIRE HYDRANTS SHALL BE PAINTED WITH HIGH GRADE ENAMEL FLAME, COLOR SHALL COMPLY WITH APPLICABLE UTILITY HAVING JURISDICTION, AND BE OSHA APPROVED, AND MUST BE LOCATED A MINIMUM OF 6 FEET, OR AS APPROVED BY THE APPLICABLE JURISDICTION, FROM THE EDGE OF PAVEMENT OR BACK OF CURB, OTHERWISE BOLLARDS WILL BE REQUIRED FOR PROTECTION. ALL FIRE HYDRANTS SHALL COMPLY WITH AWWA STANDARDS C502-80 THEREOF.
12. CONTRACTOR TO INSTALL TEMPORARY BLOWOFFS, AT THE END(S) OF PROPOSED WATER MAINS AND SERVICE LATERALS TO BUILDING(S), TO ASSURE ADEQUATE FLUSHING AND DISINFECTION/CHLORINATION.
13. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA MANUAL M23, CONCERNING HYDROSTATIC TESTING OF PIPING. OFF-SITE UTILITIES HYDROSTATIC TESTING TO BE WITNESSED BY MUNICIPAL UTILITY DEPARTMENT INSPECTOR.
14. ALL WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE LATEST AWWA SPECIFICATION C651 AND JURISDICTIONAL UTILITY DEPARTMENT SPECIFICATIONS.
15. ALL PVC WATER MAIN, 4" TO 12" DIAMETER PIPING, SHALL CONFORM TO AWWA C900 (DR 18) STANDARD SPECIFICATIONS, PRESSURE CLASS 150 PSI. ALL PVC WATER MAIN PIPING LESS THAN 4" DIAMETER SHALL BE SCHEDULE 80, PRESSURE CLASS 200 PSI.
16. ALL PVC WATER MAINS SHALL HAVE A SUITABLE MAGNETIC LOGIC TAPE BURIED UNDER THE WATER MAIN, BURIED NO LESS THAN 8 INCHES ABOVE MAIN LINES. THE TAPE SHALL BE AT LEAST 5/2 MILS THICK, 2 INCH MINIMUM WIDTH, AND MADE WITH AN ALUMINUM MATERIAL SANDWICHED BETWEEN 2 LAYERS OF POLYETHYLENE IT SHALL HAVE IMPRINTED, IN PERMANENT BLACK INK WITH ONE INCH LALL LETTERS, "CAUTION: WATER LINE BURIED BELOW", ON BLUE BACKGROUND. THE TAPE SHALL BE CONTINUOUS BETWEEN VALVES, AND SECURED TO EACH VALVE. WHERE OTHER LINES OR SERVICE LINES JOIN THE WATER MAIN, THE TAPE USED FOR DETECTION OF THESE LINES SHALL BE SECURED TO THE MAIN LINE TAPE.
17. FIRE LINES SHALL BE INSTALLED BY A CONTRACTOR, DULY LICENSED BY THE STATE OF FLORIDA FIRE MARSHALL'S OFFICE. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO CONSTRUCTION OF THE FIRE PROTECTION SYSTEM.
18. FIRE PROTECTION SHALL MEET ALL THE REQUIREMENTS OF THE APPLICABLE MUNICIPALITY OR COUNTY.

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED, AS-BUILT, AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTING TO BE IN ACCORDANCE WITH APPLICABLE WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY THE OWNER'S ENGINEER AND APPLICABLE AGENCY INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.
2. CONTRACTOR SHALL ARRANGE FOR CHLORINATION AND BACTERIOLOGICAL SAMPLING, AND OBTAIN CLEARANCE OF DOMESTIC AND FIRE LINE WATER SYSTEMS). COPIES OF ALL BACTERIOLOGICAL TEST RESULTS ARE TO BE SUBMITTED TO THE OWNER'S ENGINEER, IMMEDIATELY UPON COMPLETION OF THE WATER SYSTEM, FOR CERTIFICATION PURPOSES.

UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A REGISTERED LAND SURVEYOR. THIS "AS-BUILT" INFORMATION SHALL INCLUDE INVERT ELEVATIONS, DRAINAGE STRUCTURES, WEIRS, LOCATIONS OF STRUCTURES FOR ALL UTILITIES INSTALLED, AS WELL AS TOP OF BANK, TOE OF SLOPE AND GRADE BREAK LOCATIONS AND ELEVATIONS FOR POND AND DITCH/SWALE CONSTRUCTION. NO ENGINEER'S CERTIFICATIONS FOR CERTIFICATE OF OCCUPANCY (C.O.) PURPOSES WILL BE MADE UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.

4. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE OR FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES IS DISCOVERED, PASCO COUNTY AND APPLICABLE AGENCIES SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE. ALL WORK IN THE AFFECTED AREA SHALL COME TO AN IMMEDIATE STOP UNTIL ALL PERTINENT PERMITS HAVE BEEN OBTAINED. AGENCY WRITTEN AUTHORIZATION TO COMMENCE ACTIVITIES HAS BEEN GIVEN, OR UNLESS COMPLIANCE WITH STATE AND FEDERAL GUIDELINES CAN BE DEMONSTRATED.

GENERAL NOTES:

I. ALL WORK PERFORMED WITHIN THE DEPARTMENT'S RIGHT OF WAY SHALL CONFORM TO THE MOST CURRENT EDITION OF THE FOLLOWING PUBLICATIONS:

1. FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. FDOT STANDARD PLANS FOR ROAD CONSTRUCTION.
3. FLORIDA DESIGN MANUAL (FDM)
4. FDOT FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION (FPDM)

II. STANDARD TTCOP NOTES

1. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN PREPARED UNDER THE DIRECTION OF, AND SIGNED AND SEALED BY, A LICENSED FLORIDA PROFESSIONAL ENGINEER WHO IS EXPERIENCED IN PREPARING TRAFFIC CONTROL PLANS AND WHO IS CERTIFIED PER FDOT PROCEDURE, TOPIC NO. 625-010-010.
2. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY, OR CONTRACTOR EMPLOYEE(S) DESIGNING, INSTALLING, AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH DEPARTMENT PROCEDURE, TOPIC NO. 625-010-010.
3. ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR THE FOLLOWING FACILITIES SHALL BE DESIGNED AND INSTALLED TO MEET THE EXISTING POSTED SPEEDS AS STATED FOR ALL TRAFFIC CONTROL PHASES: (SR 55- 45 MPH).
4. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT A MINIMUM 14 DAYS IN ADVANCE OF ANY LANE CLOSURES WITH LANE CLOSURE ANALYSIS IN ACCORDANCE WITH THE FLORIDA DESIGN MANUAL (FDM) SECTION 241.

III. CONTRACTOR SHALL COMPLY WITH OSHA'S STANDARDS 29 CFR PART 1926, SUBPART CC FOR VERTICAL AND HORIZONTAL CLEARANCES TO THE OVERHEAD DISTRIBUTION AND TRANSMISSION POWER LINES.

Northside

Engineering, Inc.

Civil - Land Planning - Traffic Studies - Landscape
Due Diligence Reports - Land Use - Re-Zoning
Stormwater Management - Utility Design
Construction Administration

300 South Belcher Road, Clearwater, Florida 33765
Tel: 727-443-2893 Fax: 727-446-8036
tech@northsideengineering.net
Est. 1989

DONALD B. FAIRBAIRN, P.E. #44971	Project No. 11-21206
-------------------------------------	----------------------

COPIES OF THESE PLANS ARE NOT VALID UNLESS
EMBOSSSED WITH THE SIGNING ENGINEER'S SEAL

[illegible]

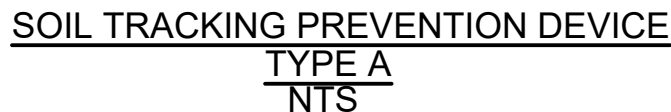
CIVIL SPECIFICATIONS

RETAIL @SWC FLORA AVE
& US HWY 19

1217 US HWY 19 N,
HOLIDAY, FLORIDA 34691

Northside
Engineering, Inc.
C1.2

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the Engineer for points of egress from unstabilized areas of the project to public roads where off site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed through a STPD. Barriers, flagging, or other traffic control measures shall be used as required to limit and direct vehicular egress across the STPD.
2. The contractor may propose an alternative technique to minimize off site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregated shall be described in section 901 excluding 901-2.3. Aggregates shall be FDOT site #1. If this size is not available, the next available smaller size shall be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are not suitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
 $15' \times 50' = 100 \text{ f.t.}$ $30' \times 50' = 200 \text{ f.t.}$
6. As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, hay bales or straw bales shall be placed at the outlet of the swale to reduce the length of the swale.
7. The swale ditch draining the STPD shall have a 0.2% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
8. Mitered end sections are not required when the side drain pipe satisfies the clear zone requirements.
9. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent offset tracking, the STPD shall be rinsed daily when in use. The STPD may be substituted with mud downward through the stone. Additional stabilization shall be required when the STPD is substituted with mud downward through the stone.
10. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD: including but not limited to excavation, grading, temporary pipe (including M.E.S. when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, the STPD, and the filter fabric. The STPD shall be paid for under the contract unit price for Hay or Straw Baled, EA. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, L.F.
11. The nominal size of a standard STPD is 15'X50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.



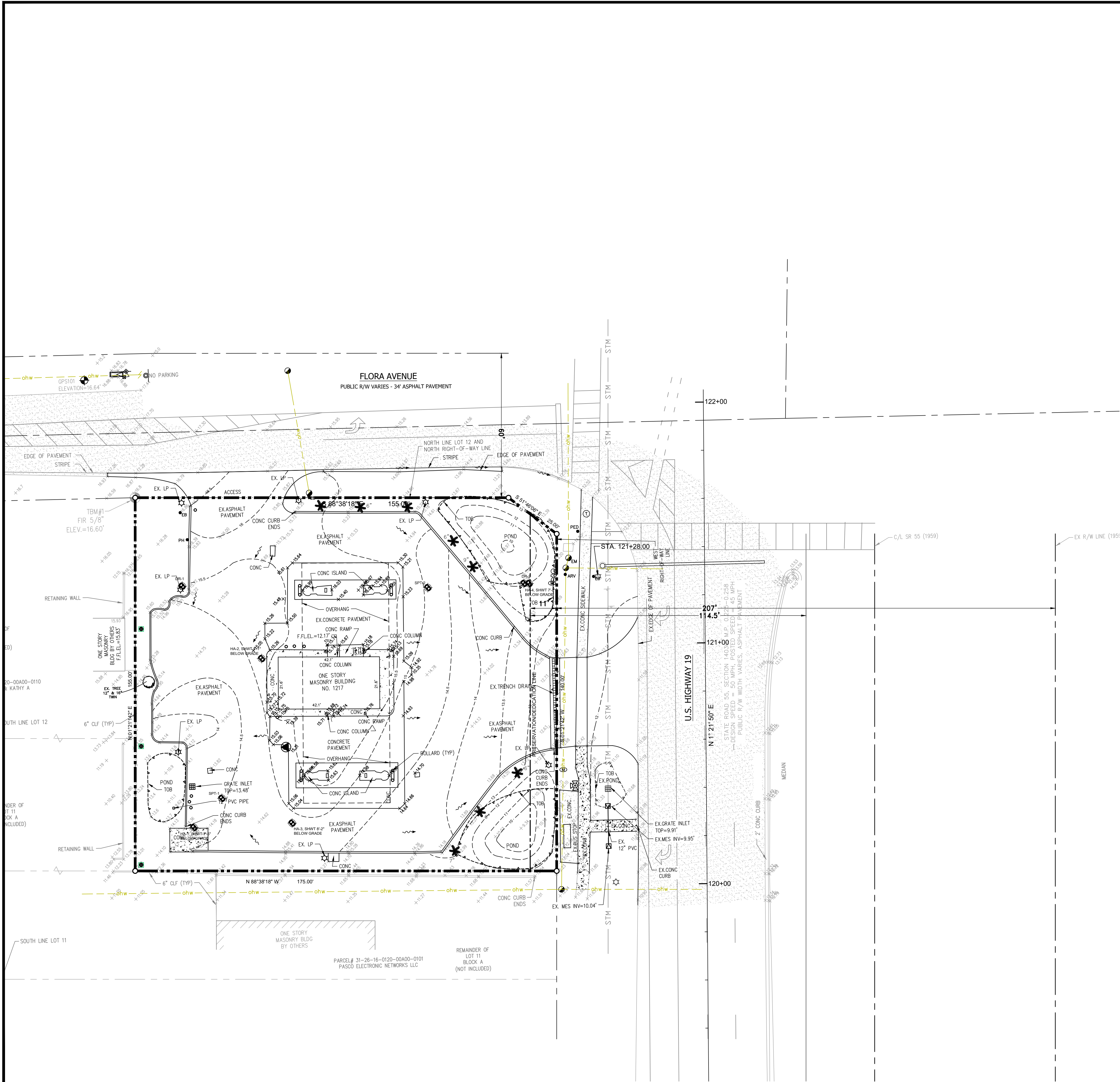
7	REMOVE EX. BUILDING
2	REMOVE EX. CONC. PAVEMENT & CONC. ISLAND
3	REMOVE EX. CURB
4	REMOVE EX. ASPH. & BASE
5	REMOVE EX. TREES
6	REMOVE EX. TRENCH DRAIN
7	REMOVE EX. CANOPY & COLUMNS
8	REMOVE EX. LIGHT POLES
9	REMOVE EX. BOLLARDS
10	EX. POND TO BE FILLED
11	REMOVE EX. BUS STOP CONC. PAD
12	REMOVE EX. MES & 12" PVC

- a. ALL CAVITY & EXCAVATION RESULTING FROM REMOVAL OF TREES, SHRUBS, PIPES, INLETS, GREASE TRAPS, SIGN, AND POLE BASE AND BLDG FOUNDATION SHALL BE FILLED WITH APPROVED SUITABLE MATERIAL AND COMPACTED IN 12" LIFTS TO 95% OF MAX DENSITY.
- b. OFF-SITE DISPOSAL OF STRUCTURES, UTILITIES AND CONSTRUCTION DEBRIS SHALL OCCUR IN SOLID WASTE DISPOSAL FACILITIES APPROVED BY F.D.E.P., AND PASCO COUNTY.



NOTE:
TANKS FROM PREVIOUS GAS STATION HAVE
BEEN REMOVED AND NO FARTHER INSPECTION
REQUIRED.





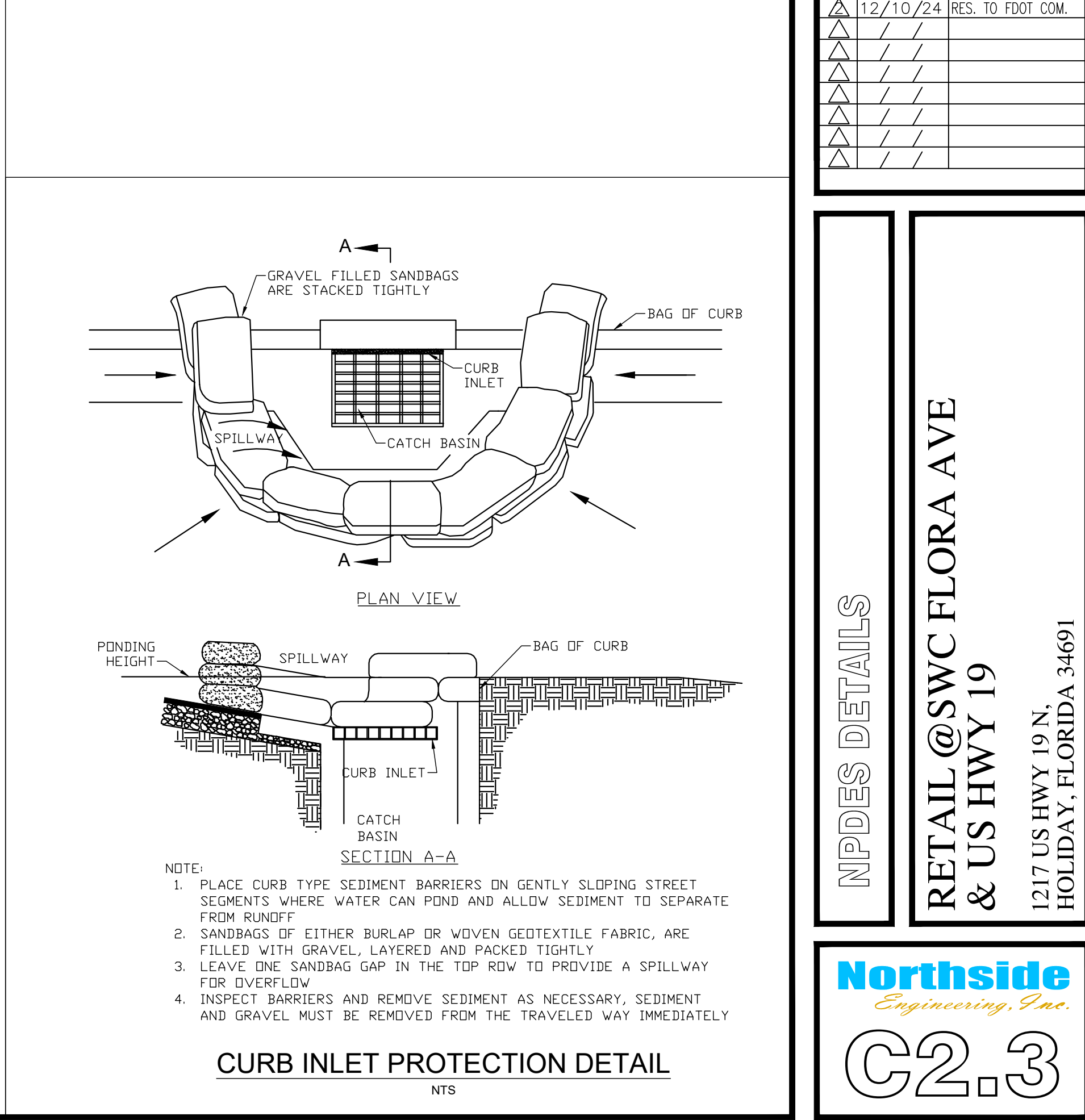
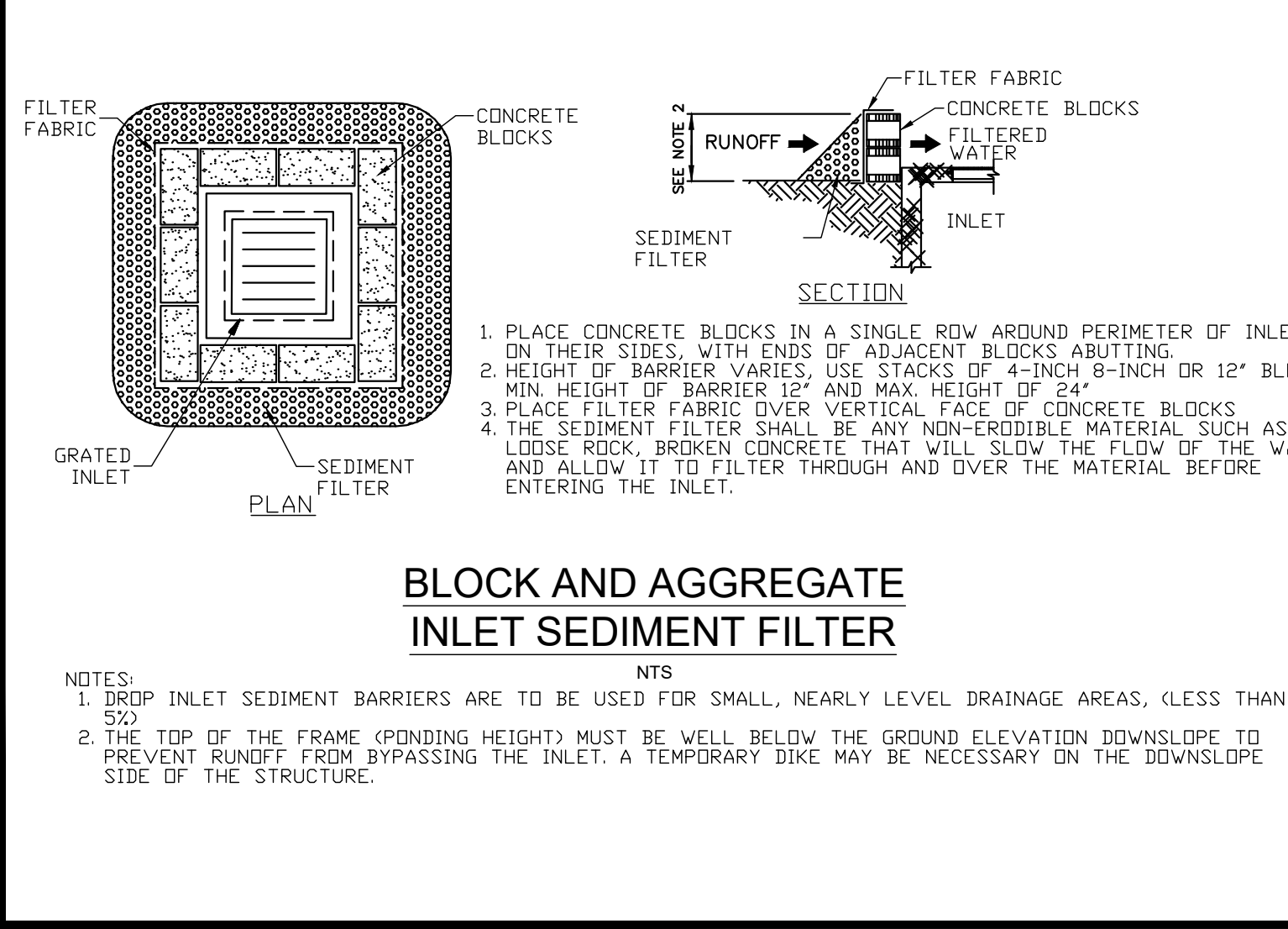
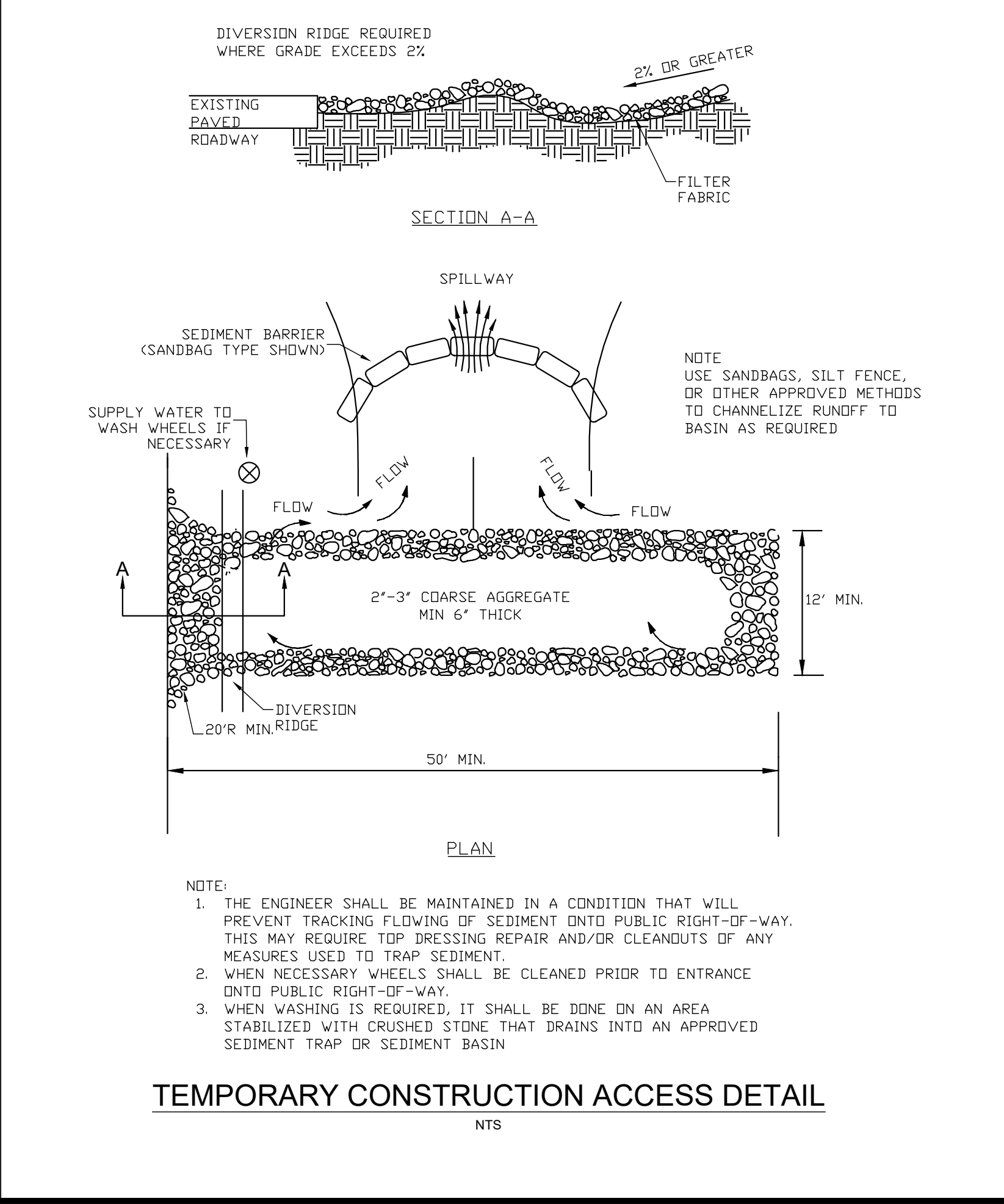
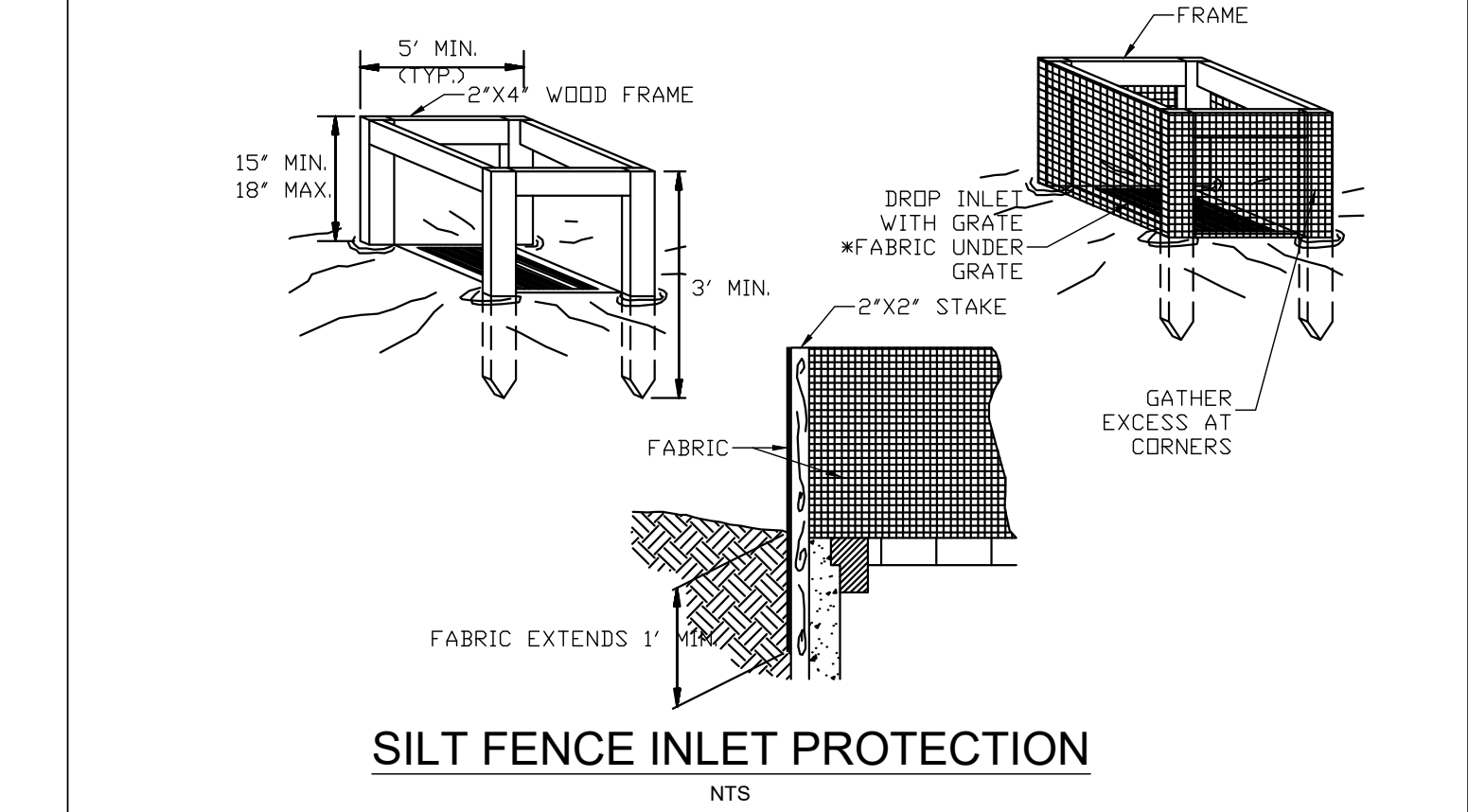
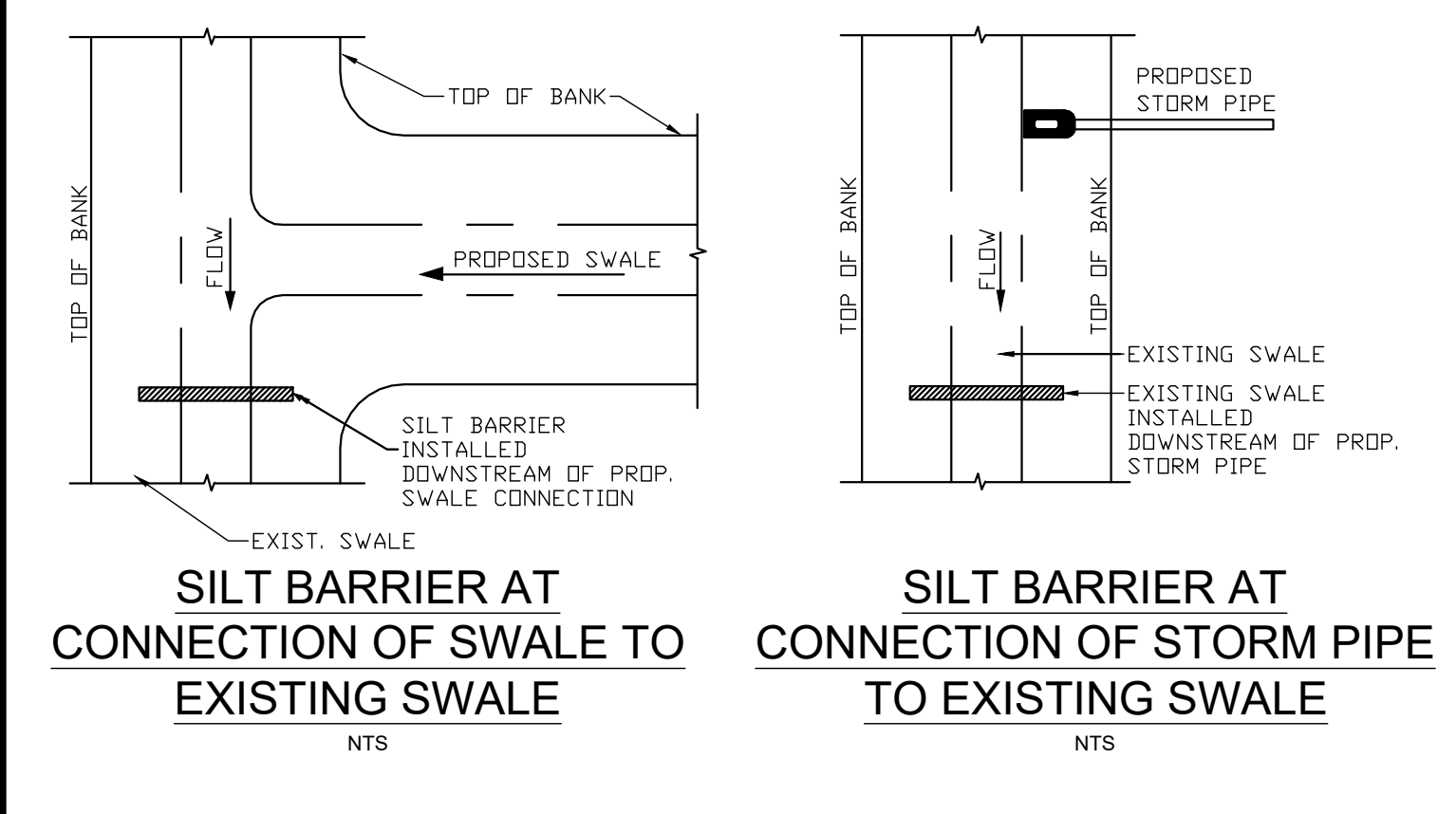
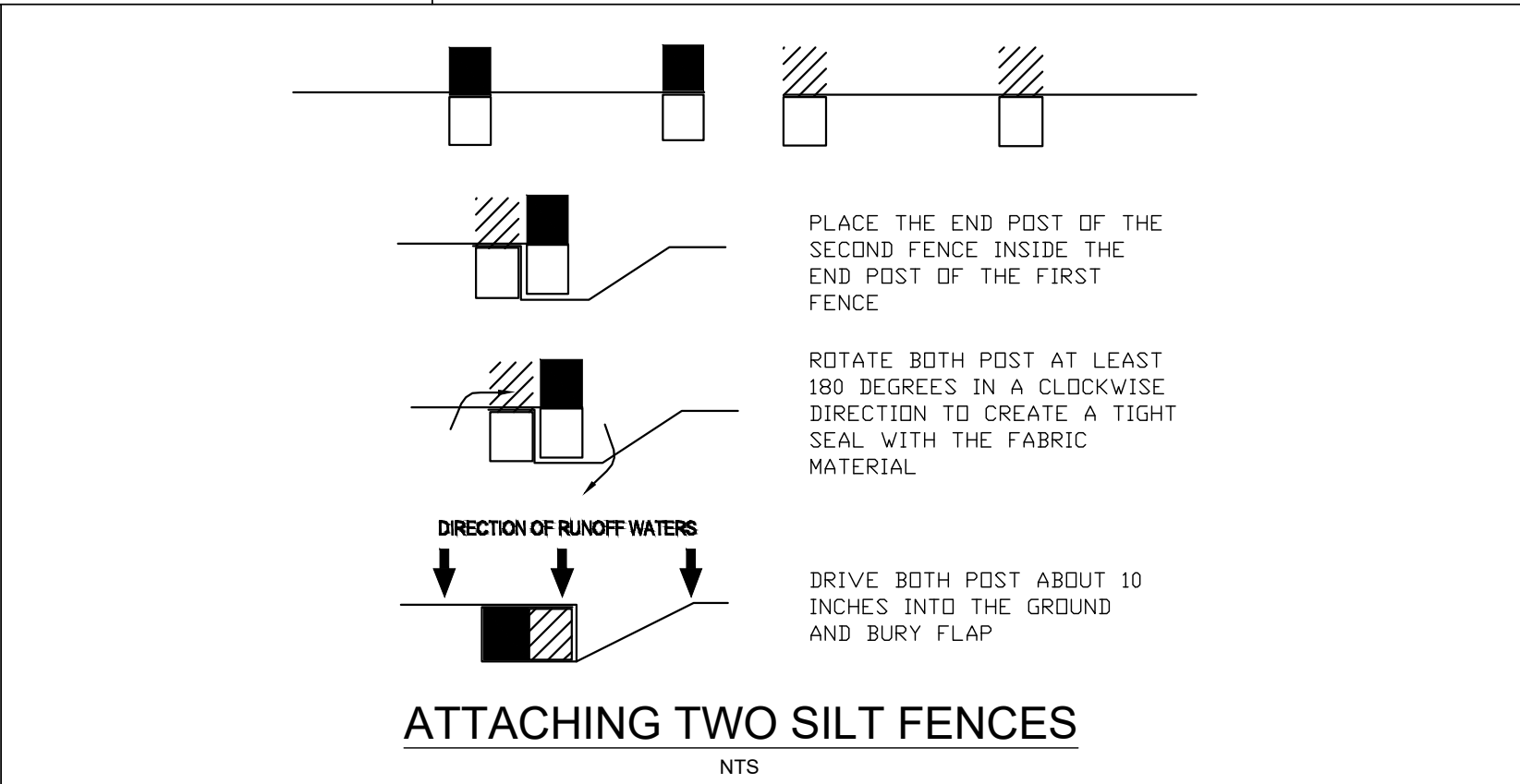
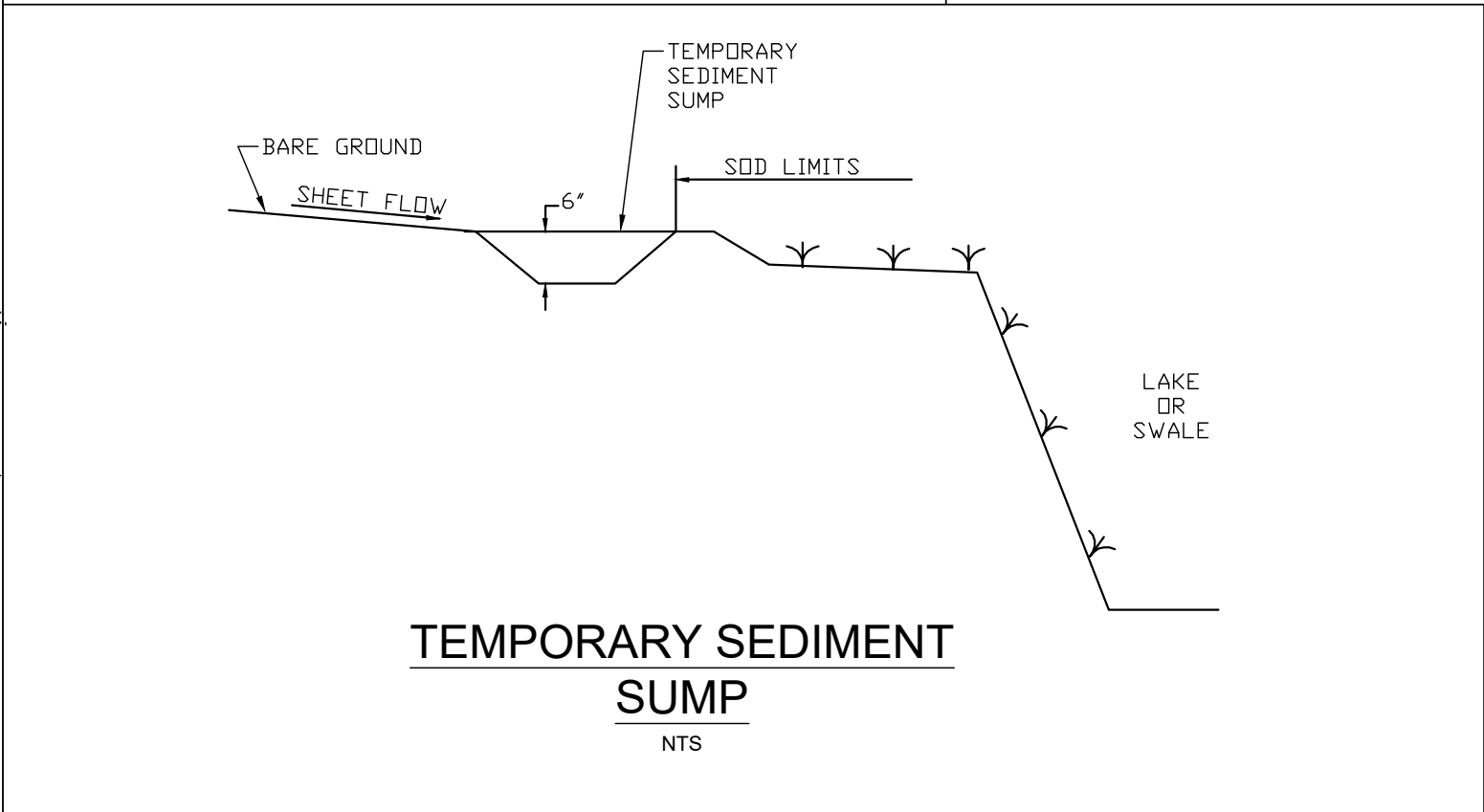
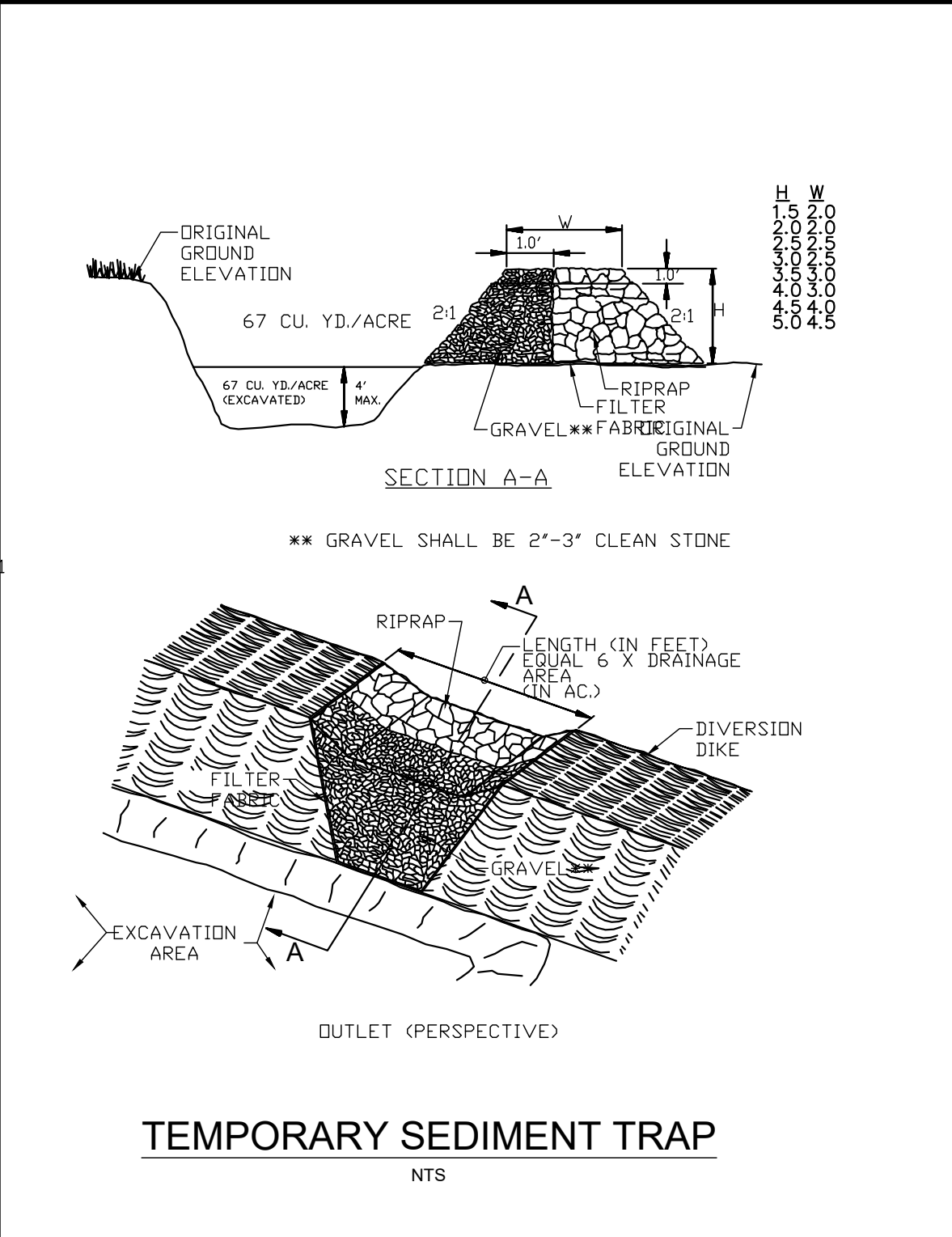
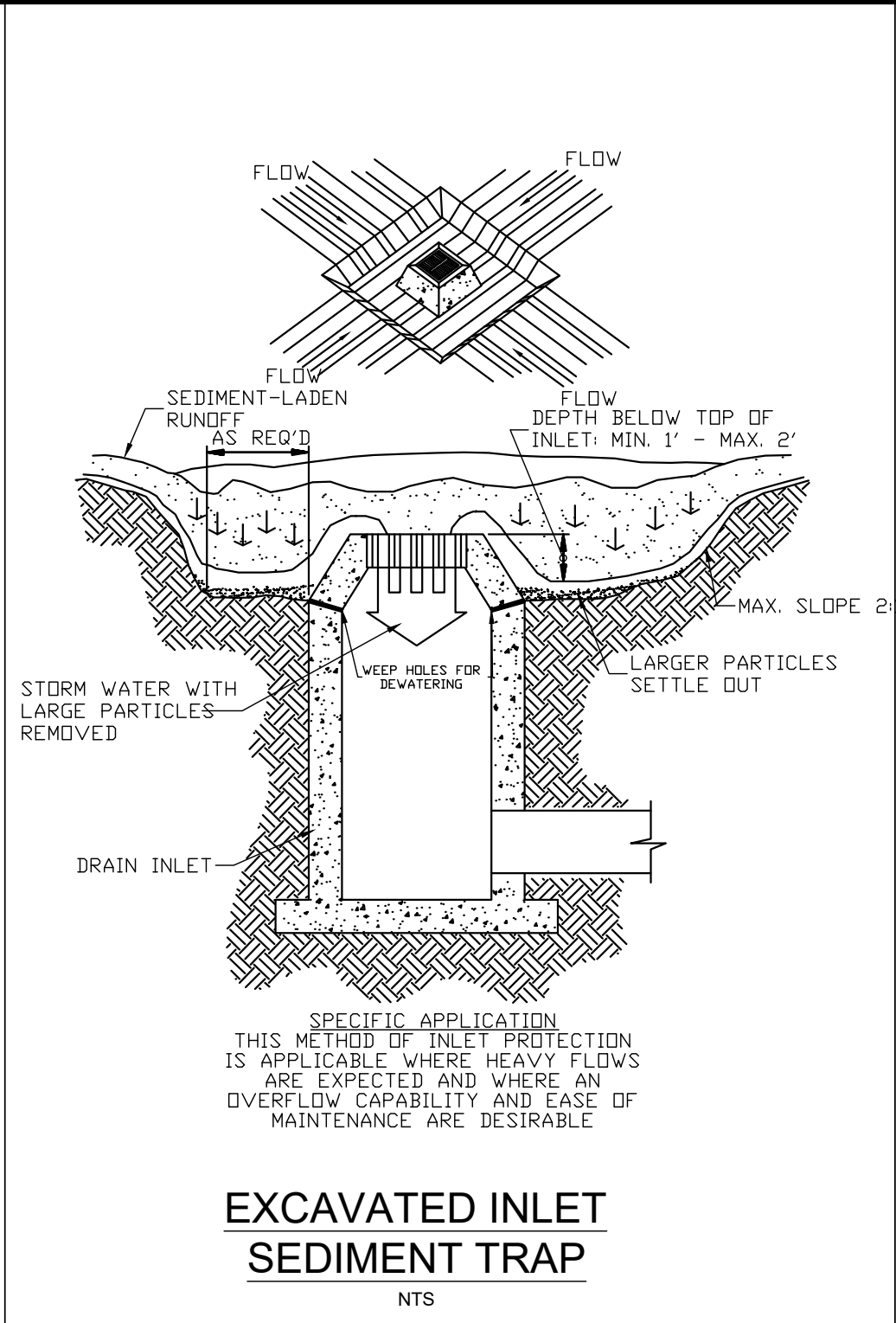
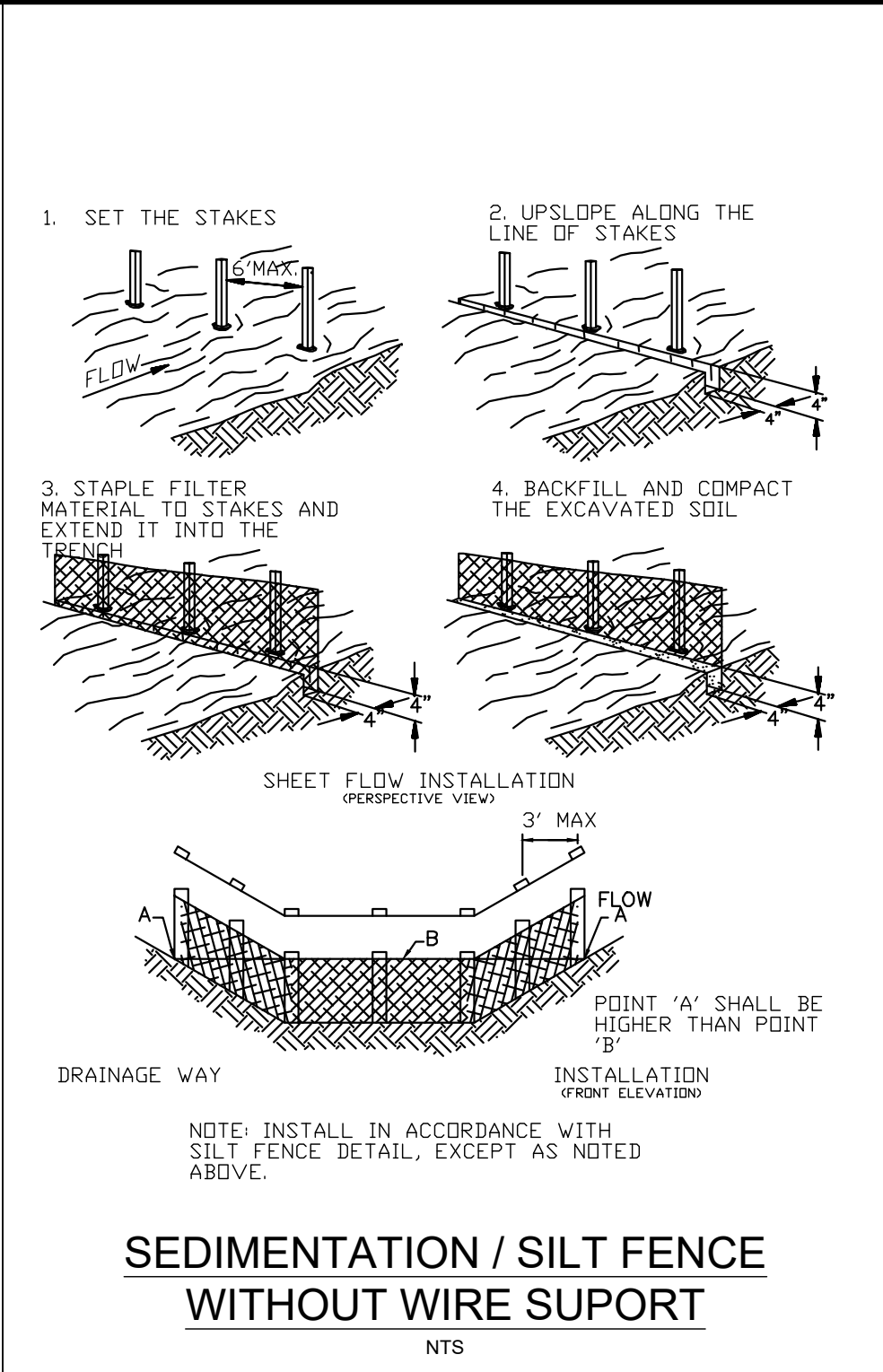
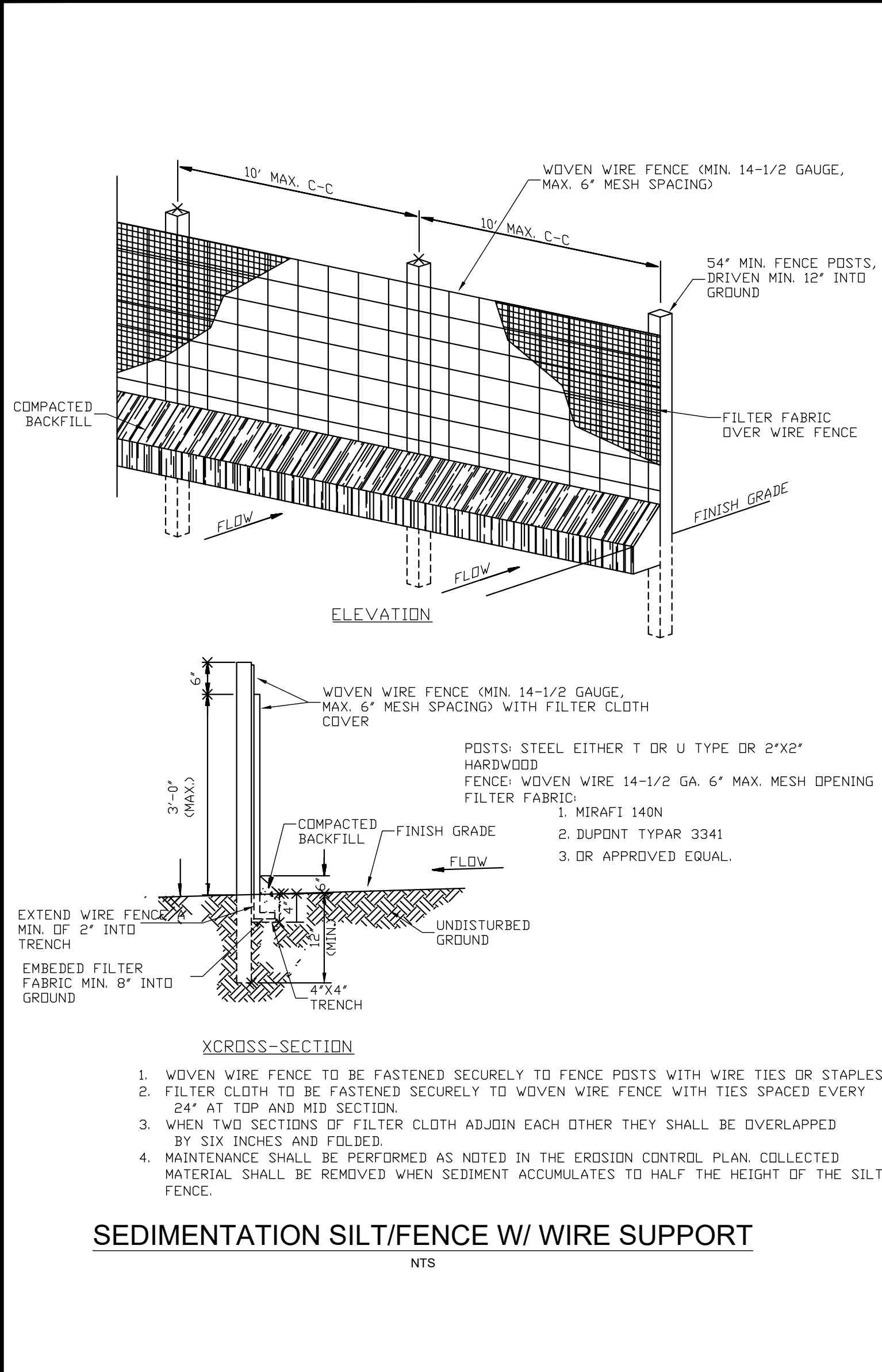
- ① = TELEPHONE MANHOLE
- ⊕ = WATER METER
- ⊕ = WATER VALVE
- ⊕ = TELEPHONE RISER
- ⊕ = TRAFFIC CONTROL BOX
- ⊕ = GRATE TOP INLET
- ⊕ = TRAFFIC SIGN
- ⊕ = UTILITY POLE
- ⊕ = LIGHT POLE
- ⊕ = FIRE HYDRANT
- ⊕ = ELECTRIC SWITCH BOX
- ⊕ = SEWER CLEAN OUT
- ⊕ = ELECTRIC METER
- ⊕ = PAYPHONE
- ⊕ = PEDESTRIAN POLE
- ⊕ = AIR RELEASE VALVE
- ⊕ = BOLLARD
- ⊕ = BACKFLOW PREVENTER
- ⊕ = MITERED END SECTION
- ⊕ = MONITOR WELL
- ⊕ = TRAFFIC LIGHT POLE
- SIR = SET 5/8" IRON ROD LB 7168
- FIR = FOUND IRON ROD
- FIP = FOUND IRON PIPE
- SN&D = SET NAIL AND DISK LB 7168
- FN&D = FOUND NAIL AND DISK
- (TYP) = TYPICAL
- COV = COVERED
- BLDG = BUILDING
- (D) = DEED MEASUREMENT
- (P) = PLAT MEASUREMENT
- (F) = FIELD MEASUREMENT
- O.R. = OFFICIAL RECORDS BOOK
- D.B. = DEED BOOK
- R/W = RIGHT OF WAY
- CONC = CONCRETE
- P.B. = PLAT BOOK
- P.G. = PAGE
- SQ. FT. = SQUARE FEET
- EOP = EDGE OF PAVEMENT
- TOB = TOP OF BANK
- CLF = CHAIN LINK FENCE
- P.O.C. = POINT OF COMMENCEMENT
- P.O.B. = POINT OF BEGINNING
- PVC = POLYVINYL CHLORIDE PIPE
- F.F.L.E.L. = FINISH FLOOR ELEVATION
- = OVERHEAD UTILITY LINE
- = CHAIN LINK FENCE LINE
- ST — = STORM SEWER LINE
- = OAK TREE
- * = PALM TREE

±154'
=EXISTING ELEVATION
ELEVATIONS SHOWN HEREON ARE BASED ON NATIONAL GEODETIC SURVEY BENCHMARK Y 760, NAVD-83 (ELEVATION=13.74') AND ARE IN REFERENCE TO NORTH AMERICAN VERTICAL DATUM 1988

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 51°46'06" E	25.00'

Donald B. Fairbairn, P.E. #44971		Registry # 31306
COPIES OF THESE PLANS ARE NOT VALID UNLESS EMBOSSED WITH THE SIGNING ENGINEER'S SEAL		
PROJECT # 2305		
ISSUE DATE: 01/12/23		
REVISIONS:		
No.	Date	Description
1	08/23/24	County Com.
2	12/10/24	RES. TO FDOT COM.
3		
4		
5		
6		
7		
8		
9		
10		

EXISTING CONDITIONS PLAN	
RETAIL @SWC FLORA AVE & US HWY 19	
1217 US HWY 19 N, HOLIDAY, FLORIDA 34691	



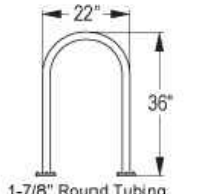
Donald B. Fairbairn, P.E. #44971			Registry # 31206
COPIES OF THESE PLANS ARE NOT VALID UNLESS EMBRASSED WITH THE SIGNING ENGINEER'S SEAL			
PROJECT # 2305			
ISSUE DATE: 01/12/23			
REVISIONS:			
No.	Date	Description	
1	08/23/24	County Com.	
2	12/10/24	RES. TO FDOT COM.	
3			
4			
5			
6			
7			
8			
9			
10			



Traditional Inverted 'U'



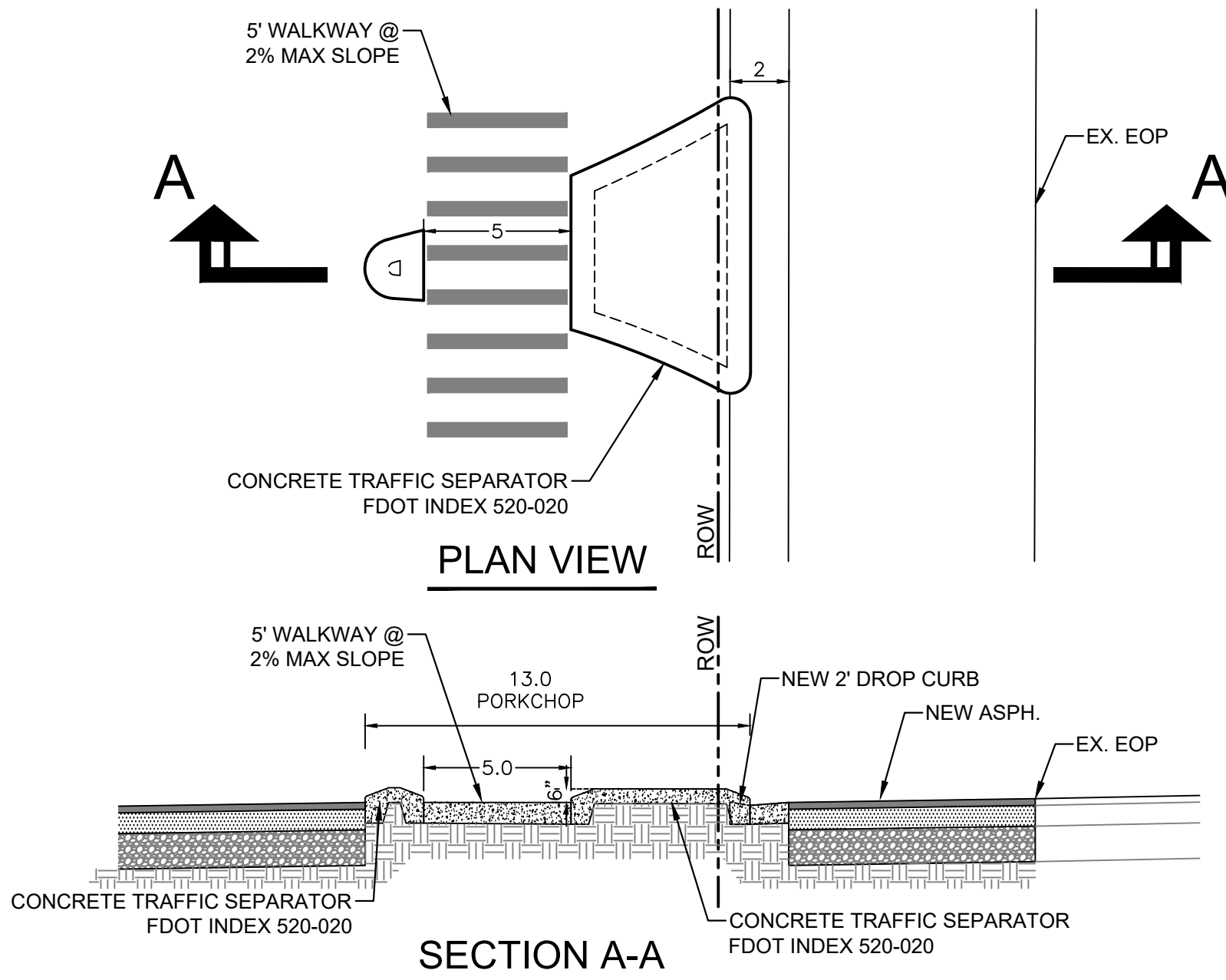
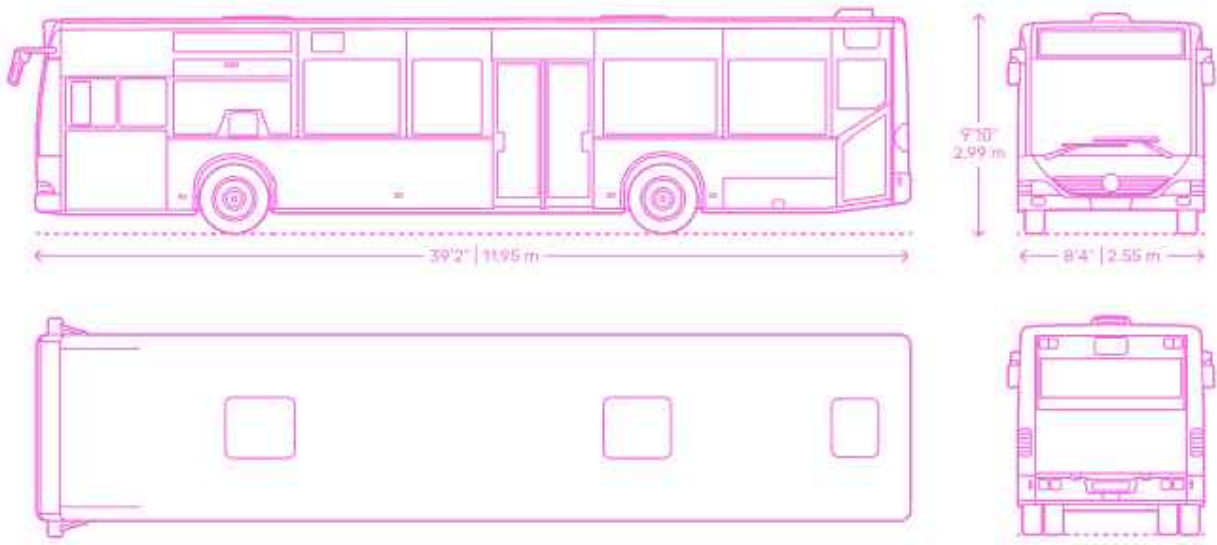
BICYCLE RACK
DETAIL



Model CBBR-ZUR-SS

Dimensions & Sizes

City | Transit Buses have average lengths of 39'2" (11.95 m), widths of 8'4" (2.55 m), heights of 9'10" (2.99 m), and have a capacity of 29 (+1) seats with standing room for 76.



PLAN VIEW

SECTION A-A

CONCRETE TRAFFIC SEPARATOR
(PORKCHOP)

N.T.S.

LEGEND

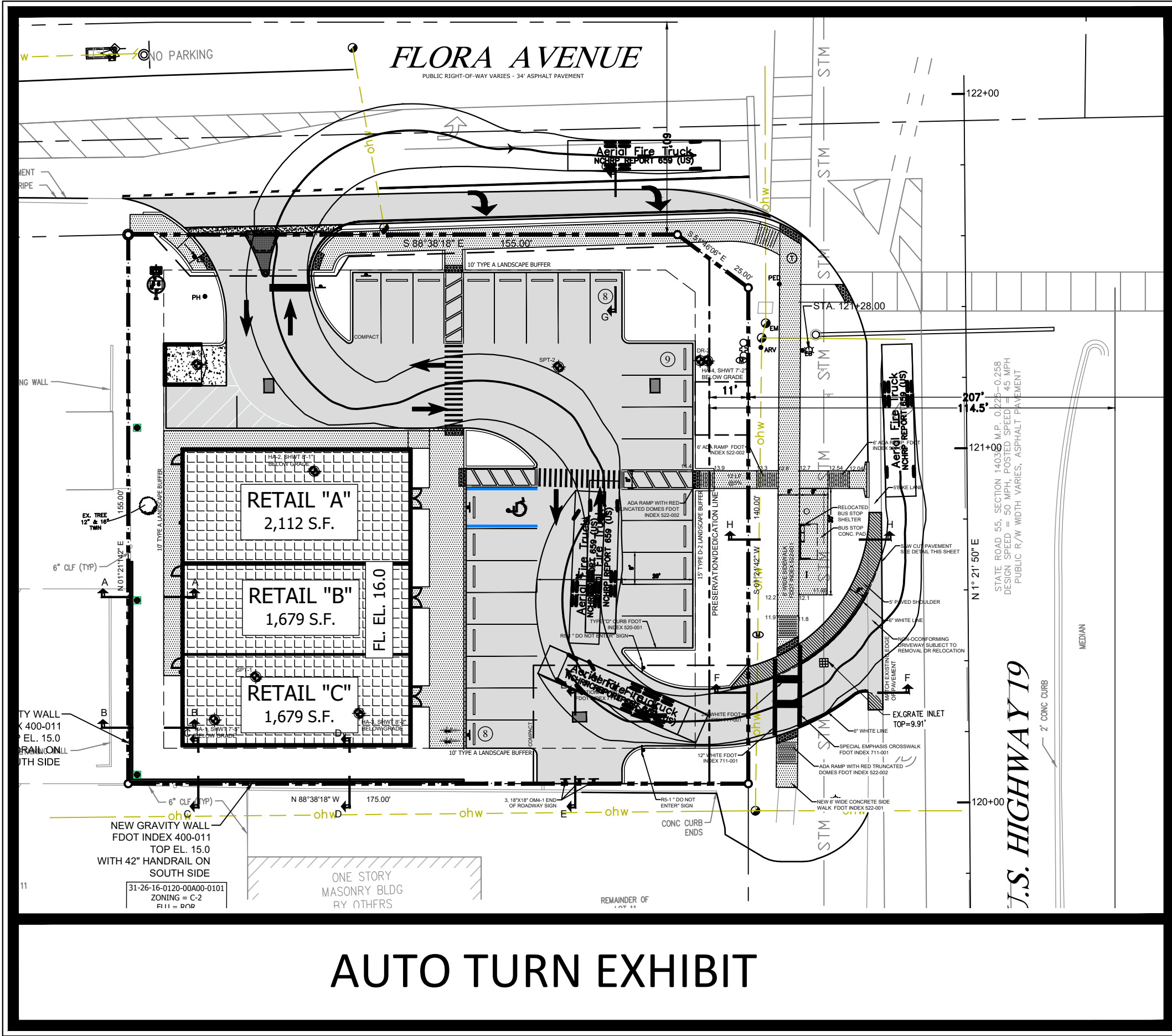
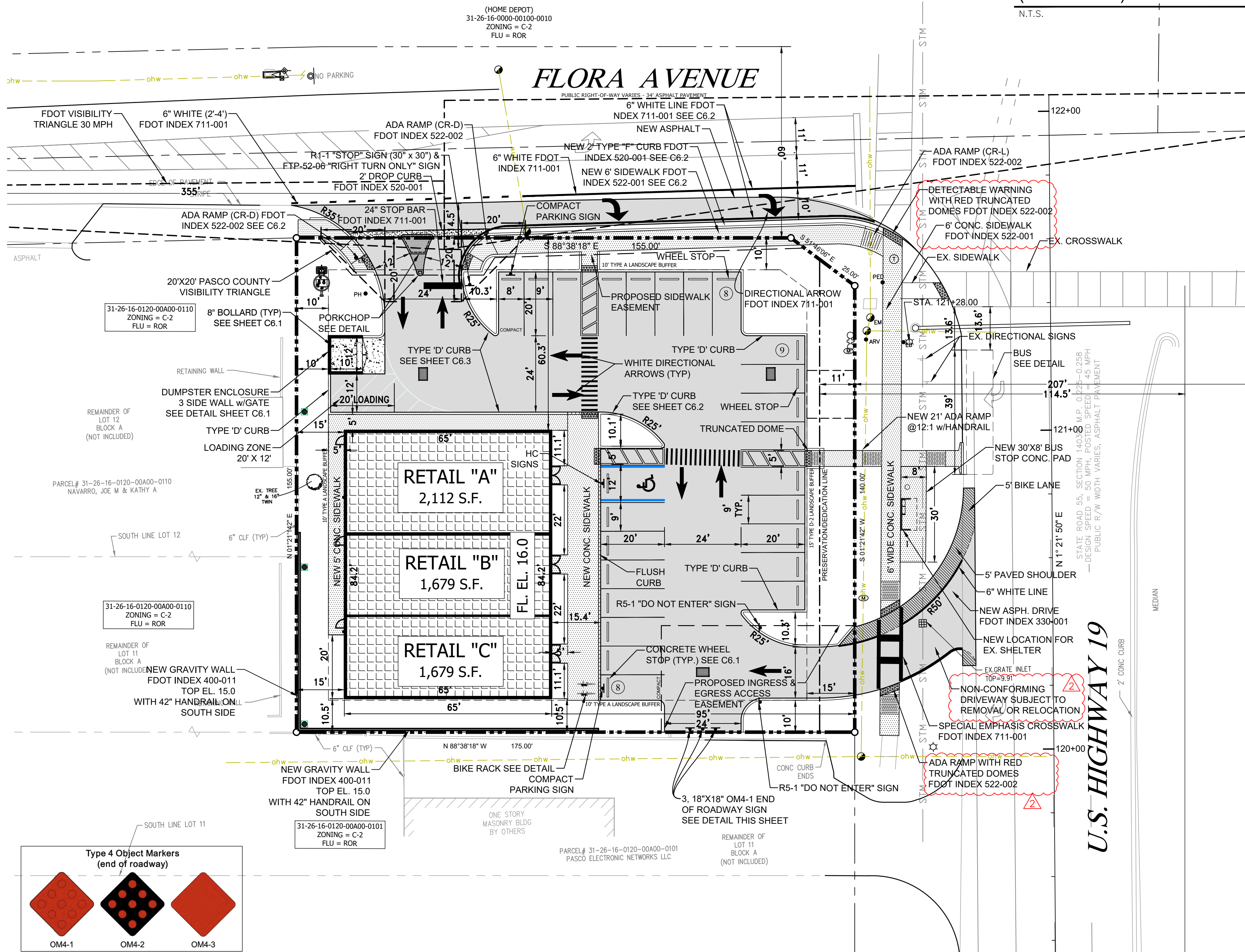
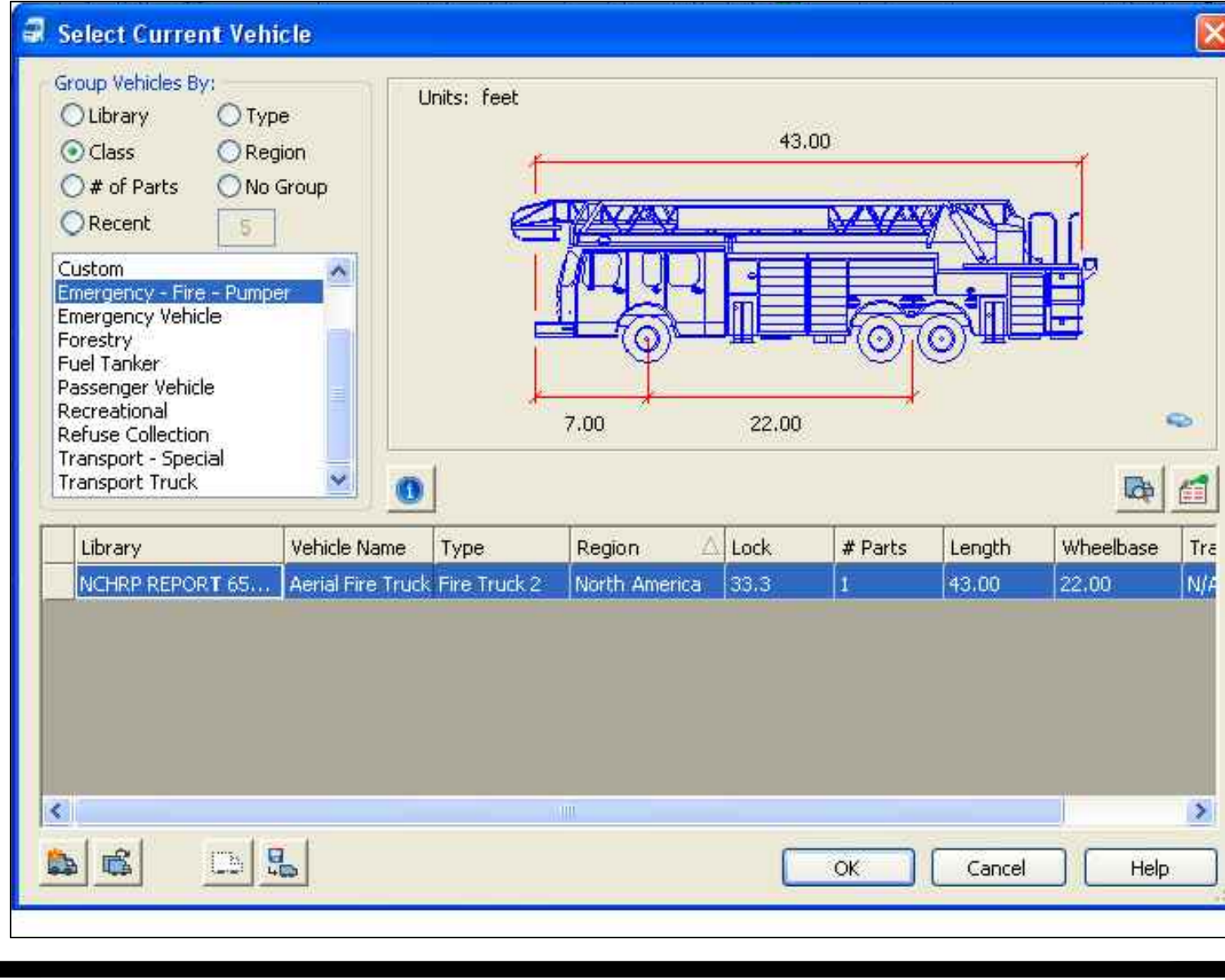
PROPERTY LINE	
PROPOSED BUILDING	
PROPOSED ASPHALT	
PROPOSED CONC.	
SEE SHEET C6.1	

NOTE:
BUSINESS WILL NOT BE GETTING
DELIVERY VIA SEMI-TRACTOR TRAILER

NOTE:
IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE OR FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES IS DISCOVERED, PASCO COUNTY AND APPLICABLE AGENCIES SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE. ALL WORK IN THE AFFECTED AREA SHALL COME TO AN IMMEDIATE STOP UNTIL ALL PERTINENT PERMITS HAVE BEEN OBTAINED, AGENCY WRITTEN AUTHORIZATION TO COMMENCE ACTIVITIES HAS BEEN GIVEN, OR UNLESS COMPLIANCE WITH STATE AND FEDERAL GUIDELINES CAN BE DEMONSTRATED.



SCALE: 1"=20'



Donald B. Fairbairn, P.E. #44971
COPIES OF THESE PLANS ARE NOT VALID UNLESS
EMBEDDED WITH THE SIGNING ENGINEER'S SEAL

PROJECT #		2305
ISSUE DATE:		01/12/23
REVISIONS:		
No.	Date	Description
△	08/23/24	County Com
△	12/10/24	RES. TO FDOT COM.
△	/ /	
△	/ /	
△	/ /	
△	/ /	
△	/ /	
△	/ /	
△	/ /	

CIVIL SITE PLAN
RETAIL @SWC FLORA AVE
& US HWY 19
1217 US HWY 19 N,
HOLIDAY, FLORIDA 34691

F.D.O.T. NOTES:

- a. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN PREPARED UNDER THE DIRECTION OF, AND SIGNED AND SEALED BY, A LICENSED FLORIDA PROFESSIONAL ENGINEER WHO IS EXPERIENCED IN PREPARING TRAFFIC CONTROL PLANS AND WHO IS CERTIFIED PER FDOT PROCEDURE, TOPIC NO. 625-010-010.
- b. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY, OR CONTRACTOR EMPLOYEE(S) DESIGNING, INSTALLING, AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH DEPARTMENT PROCEDURE, TOPIC NO. 625-0110-010.
- c. ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR THE FOLLOWING FACILITIES SHALL BE DESIGNED AND INSTALLED TO MEET THE EXISTING POSTED SPEEDS AS STATED FOR ALL TRAFFIC CONTROL PHASES: SR 55 US 19 - 45 MPH
- d. CONTACT FDOT JAMES MEYER 48 HOURS (2 BUSINESS DAYS) BEFORE WORKING IN FDOT R/W 352-848-2610, TO ACTIVATE PERMIT AND SCHEDULE PRE-CONSTRUCTION MEETING.
- e. SIDEWALK SHALL NOT BE CLOSED MORE THAN 2 WEEKS THE DURATION OF THE PERMIT. THE CONTRACTOR WILL NEED TO MAKE ACCOMMODATIONS FOR PEDESTRIANS.

BROOKSVILLE MAINTENANCE F.D.O.T. GENERAL NOTES:

- ALL WORK PERFORMED IN THE DEPARTMENT'S RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT EDITIONS OF:
- A) FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- B) FDOT DESIGN STANDARD FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM.
- C) FDOT DESIGN MANUAL (FDM)
- D) FDOT FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION.
- 1) ALL AREAS IN THE FDOT RIGHT OF WAY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED, COMPACTED, SODDED AND WATERED IN CONFORMANCE WITH THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 570 AND 981 AND DESIGN STANDARDS INDEX 570-010
- 2) FDOT ENGINEER MUST APPROVE ALL LANE CLOSURES AT LEAST 48 HOURS IN ADVANCE. WHETHER DAYTIME OR NIGHTTIME CLOSURES WILL BE REQUIRED WILL DEPEND ON THE LOCATION OF THE PROJECT. THE APPLICANT MUST NOTIFY THE FLORIDA DEPARTMENT OF TRANSPORTATION LOCAL MAINTENANCE OFFICE 48 HOURS IN ADVANCE OF STARTING ANY PROPOSED WORK. CALL: BROOKSVILLE MAINTENANCE, JAMES MEYER @ 352-848-2610.
- 3) ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC. THE PERMITTEE SHALL FURNISH THE DEPARTMENT WITH THE MANUFACTURER'S CERTIFICATION THAT THE THERMOPLASTIC IS 'LEAD FREE'. REMOVAL OF EXISTING STRIPING SHALL BE DONE BY MILLING AND RESURFACING OF THE FRICTION/SURFACE COURSE TO OBLITERATE OBSOLETE PAVEMENT MARKINGS.
- 4) ALL PROPOSED TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH AND CONSTRUCTED TO THE FDOT DESIGN STANDARDS INDEX SERIES 600 AND 700 SERIES. THE PROPERTY OWNER MUST MAINTAIN THE TRAFFIC SIGNS AND MARKINGS FOR THE DRIVEWAY.
- 5) THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY OR CONTRACTOR EMPLOYEE(S) INSTALLING AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN. DOCUMENTATION IS TO BE FURNISHED TO THE DEPARTMENT AT THE PRE-CONSTRUCTION MEETING OR BEFORE OCCUPYING STATE RIGHT-OF-WAY.
- 6) MAINTENANCE OF TRAFFIC PLAN FOR WORK ZONES SHALL BE IN CONFORMANCE WITH ALL APPLICABLE INDICES OF THE FDOT DESIGN STANDARD INDEX 102 SERIES ACCORDING TO THE TYPE OF ROADWAY AND TYPE OF WORK BEING PERFORMED.
- 7) SILT FENCE FOR EROSION CONTROL IN CONFORMANCE WITH THE FLORIDA EROSION SEDIMENT CONTROL MANUAL IS REQUIRED FOR ALL AREAS OF CONSTRUCTION WITHIN FDOT R/W, PERPENDICULAR TO AND PARALLEL WITH THE STATE ROAD.
- 8) SIDEWALK SHALL BE CONSTRUCTED PER FDOT INDEX 522-001 AND 522-002. DETECTABLE WARNING STRIPS, A.K.A. TRUNCATED DOMES, FOR DISTRICT SEVEN CONSTRUCTION AND MAINTENANCE SHOULD BE EITHER INSET CERAMIC TILES OR THERMOPLASTIC DETECTABLE WARNING STRIPS.
- 9) MAINTENANCE OF TRAFFIC PLAN MUST INCLUDE FDOT DESIGN STANDARDS INDEX 102-660 PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS.
- 10) FDOT REQUIRES A PIPE VIDEO BE DONE ON ALL PIPES ASSOCIATED WITH PERMIT PROJECT IN FDOT ROW. SPEC 430-4.8.

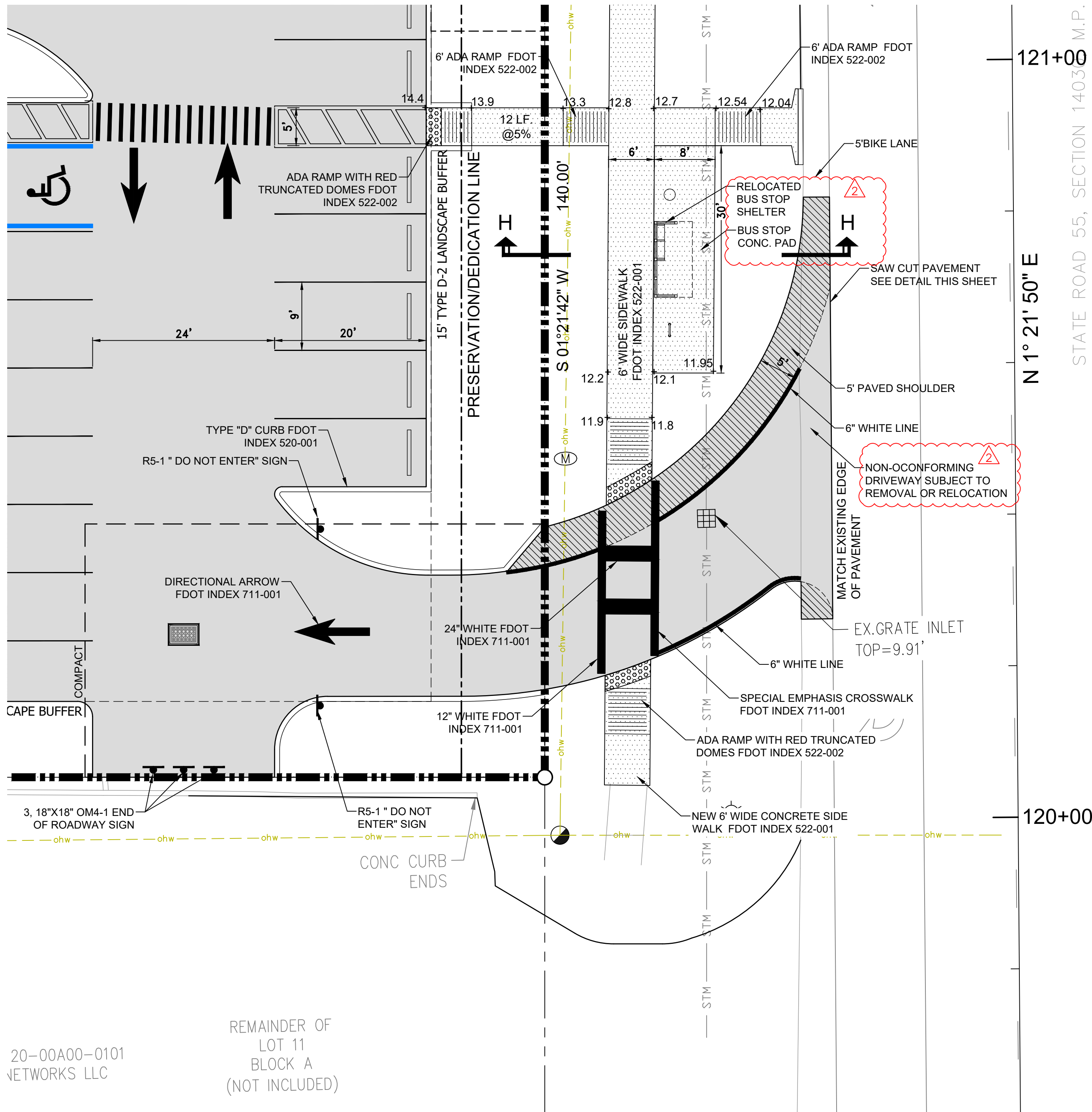
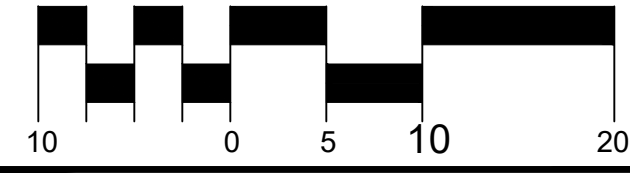
LEGEND

PROPERTY LINE	
PROPOSED BUILDING	
PROPOSED ASPHALT	
PROPOSED CONC.	
SEE SHEET C6.1	
SEE SHEET C6.1	

NOTE:
BUSINESS WILL NOT BE GETTING
DELIVERY VIA SEMI-TRACTOR TRAILER



SCALE: 1"=10'



121+00

N 1° 21' 50" E

STATE ROAD 55, SECTION 14033 M.P.
DESIGN SPEED = 50 MPH, POSTED SPE
PUBLIC R/W WIDTH VARIES, ASPHALT

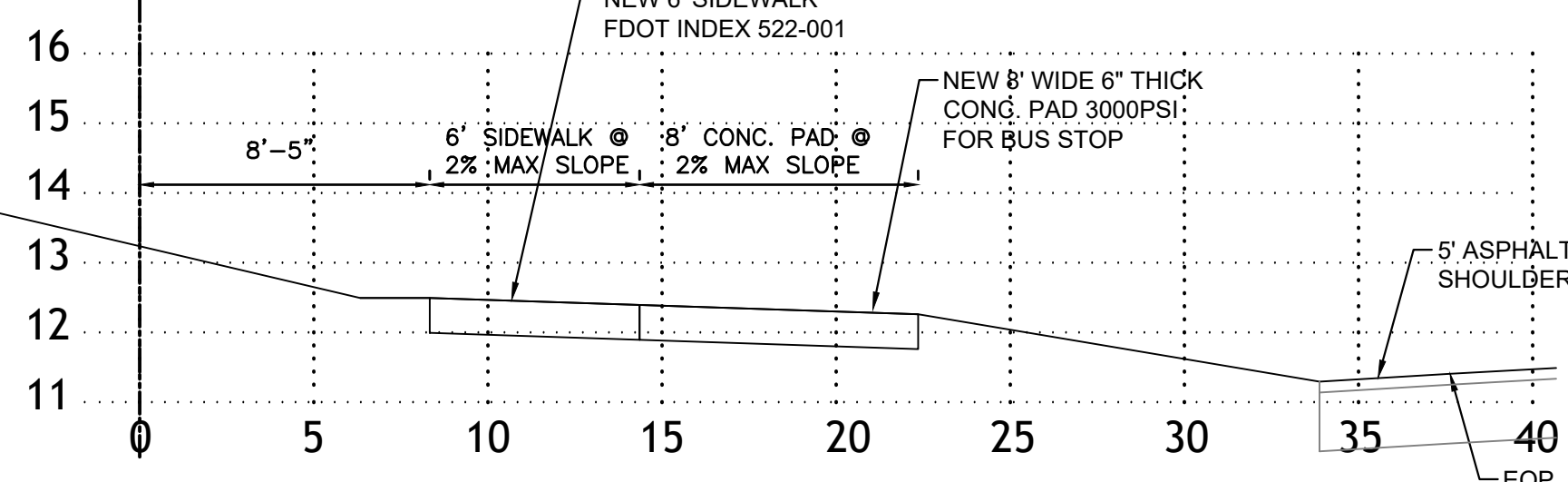
120+00

U.S. HIGHWAY 19

MEDIAN

2' CONC CURB

ROW



SECTION H-H
1:2.5' X 1:5'

20-00A00-0101
NETWORKS LLC

REMAINDER OF
LOT 11
BLOCK A
(NOT INCLUDED)

Northside
Engineering, Inc.

Civil, Land, Planning, Traffic Studies, Landscape
Due Diligence Reports, Land Use, Rezoning
Stormwater Management, Utility Design
Construction Administration

300 South Belcher Road, Clearwater, Florida 33765
Tel: 727-432-8868 Fax: 727-445-5105
tec@northsideengineering.net
Est. 1989

Donald B. Fairbairn, P.E. #44971

COPIES OF THESE PLANS ARE NOT VALID UNLESS
EMBOSSED WITH THE SIGNING ENGINEER'S SEAL

PROJECT # 2305

ISSUE DATE: 01/12/23

REVISIONS:

No.	Date	Description
1	08/23/24	County Com.
2	12/10/24	RES. TO FDOT COM.
3		
4		
5		
6		
7		
8		
9		
10		

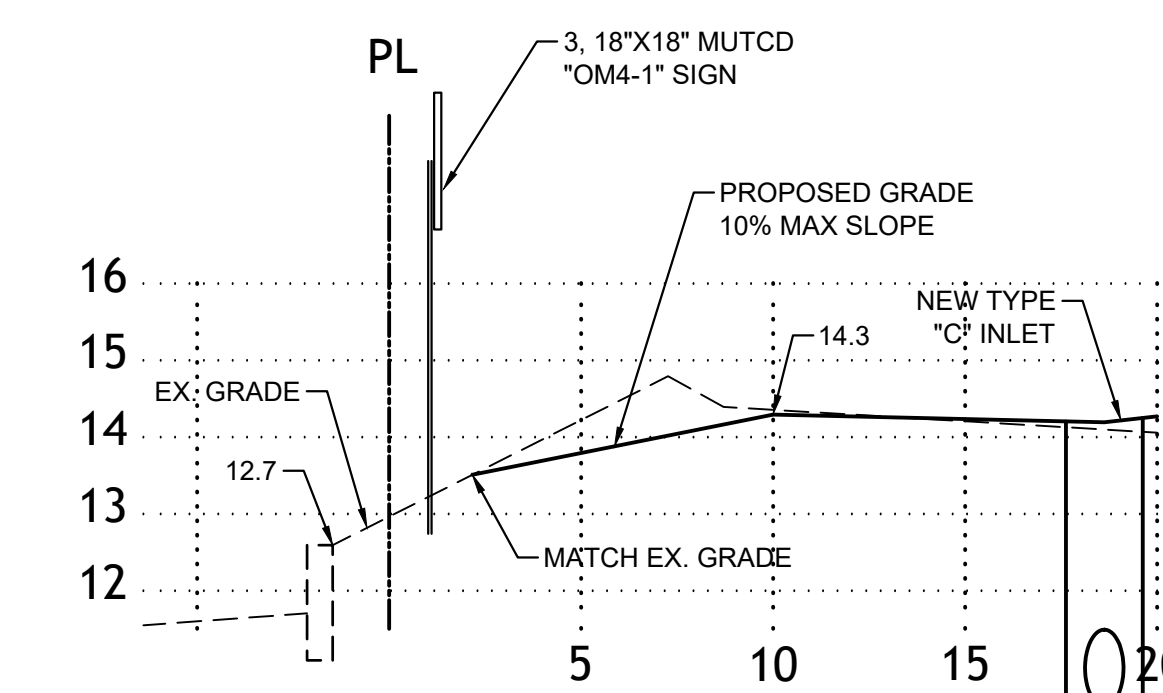
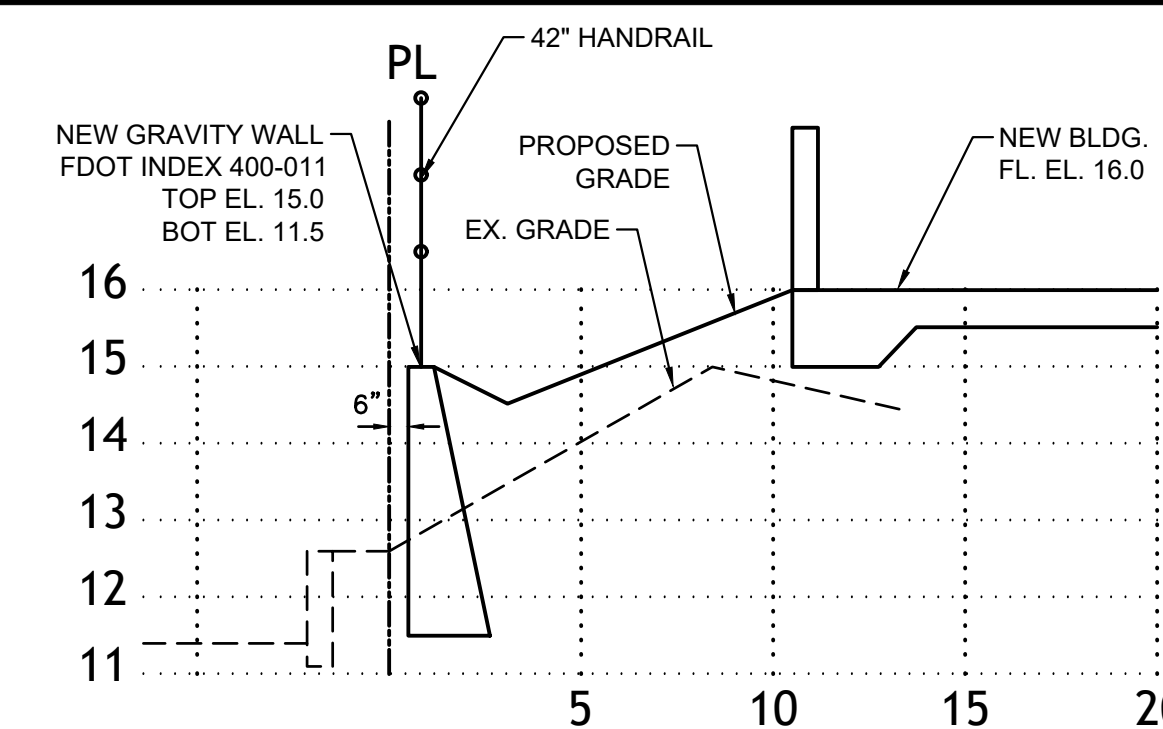
CIVIL SITE PLAN - F.D.O.T.

RETAIL @SWC FLORA AVE
& US HWY 19

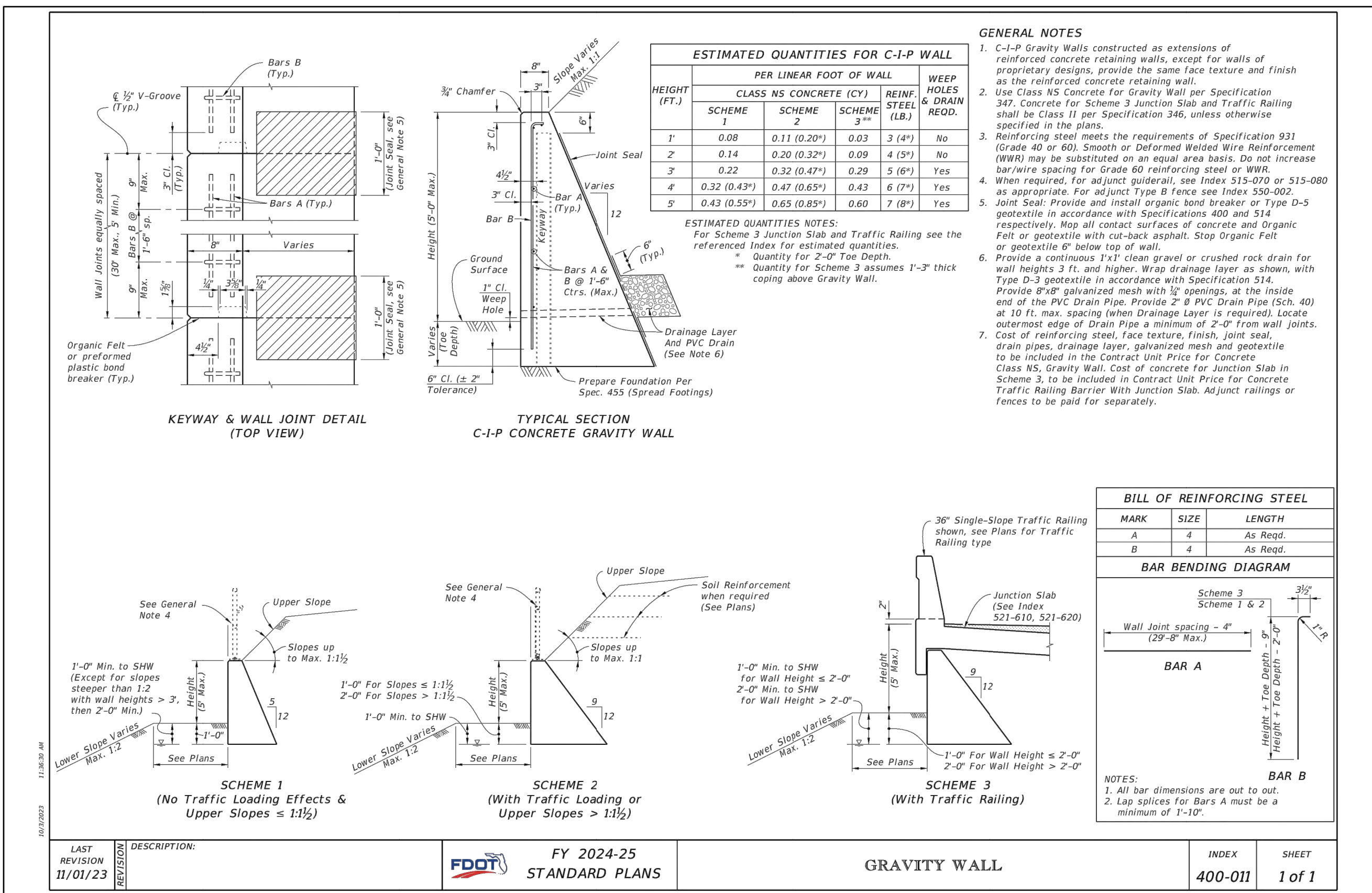
1217 US HWY 19 N,
HOLIDAY, FLORIDA 34691

Northside
Engineering, Inc.

C3.2



Profile view of ROW showing elevations and stationing. The profile includes labels for 'NEW TYPE D CURB', 'NEW 6 SIDEWALK', 'NEW TYPE E CURB', '6 WHITE LINE', 'NEW ASPHALT PAVEMENT', and 'EX. ASPHALT PAVEMENT'. Elevation markers range from 12 to 16, and stationing markers range from 0 to 40.





SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT². THE ABC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

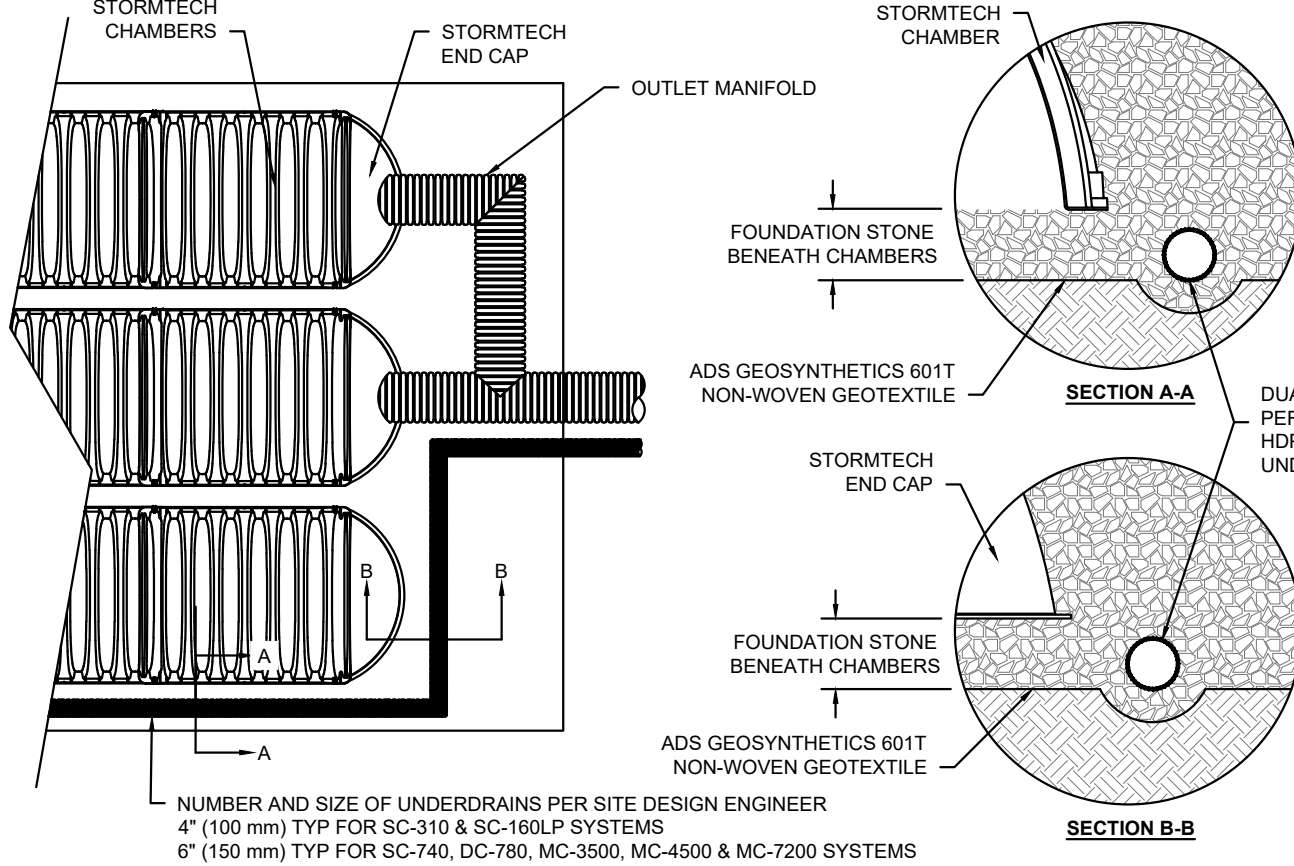
- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONE/SHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4"-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

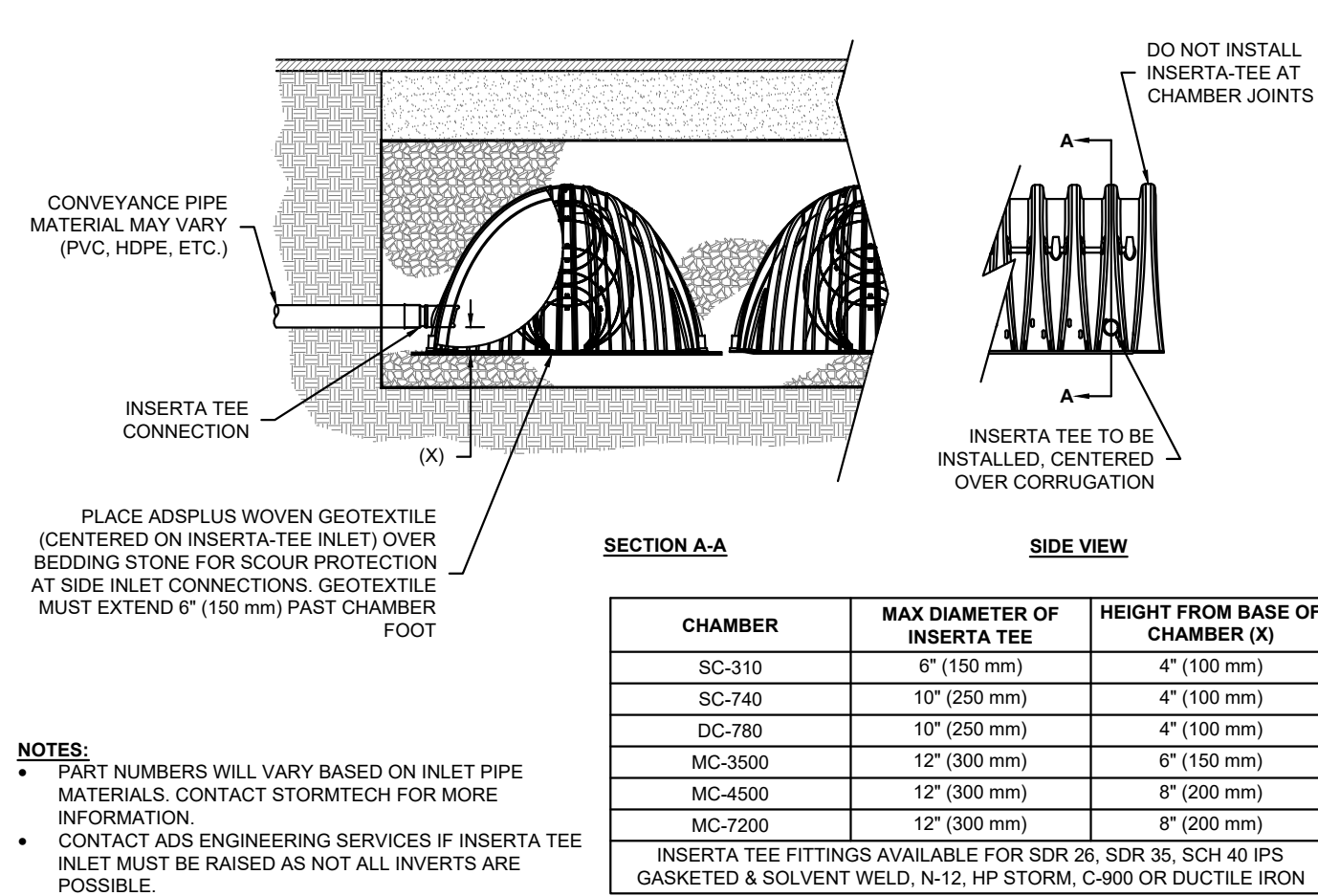
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



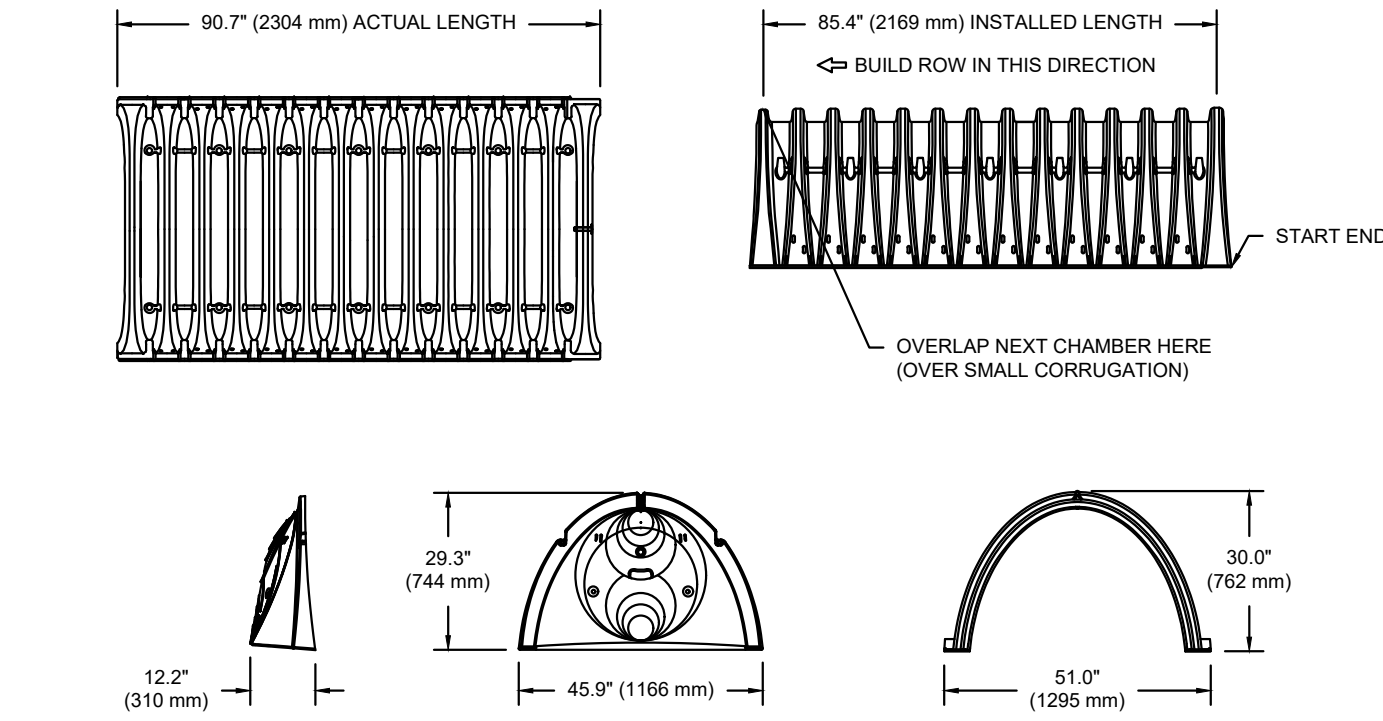
5 UNDERDRAIN DETAIL



- NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
 - CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)

6 INSERTA-TEE SIDE INLET DETAIL



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)
CHAMBER STORAGE
MINIMUM INSTALLED STORAGE*
WEIGHT

51.0" X 30.0" X 85.4"
45.9 CUBIC FEET
74.9 CUBIC FEET
75.0 lbs.
(1.30 m³)
(2.12 m³)
(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "C"

PART #	STUB	A	B	C
SC740EPE001 / SC740EPE001PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	0.5" (13 mm)
SC740EPE008 / SC740EPE008PC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.6" (15 mm)
SC740EPE008 / SC740EPE008PC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740EPE101 / SC740EPE101PC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	1.2" (30 mm)
SC740EPE121 / SC740EPE121PC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	1.3" (33 mm)
SC740EPE151 / SC740EPE151PC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740EPE181 / SC740EPE181PC	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)
SC740EPE248*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE248/SC740EPE248R ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE248/SC740EPE248R THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

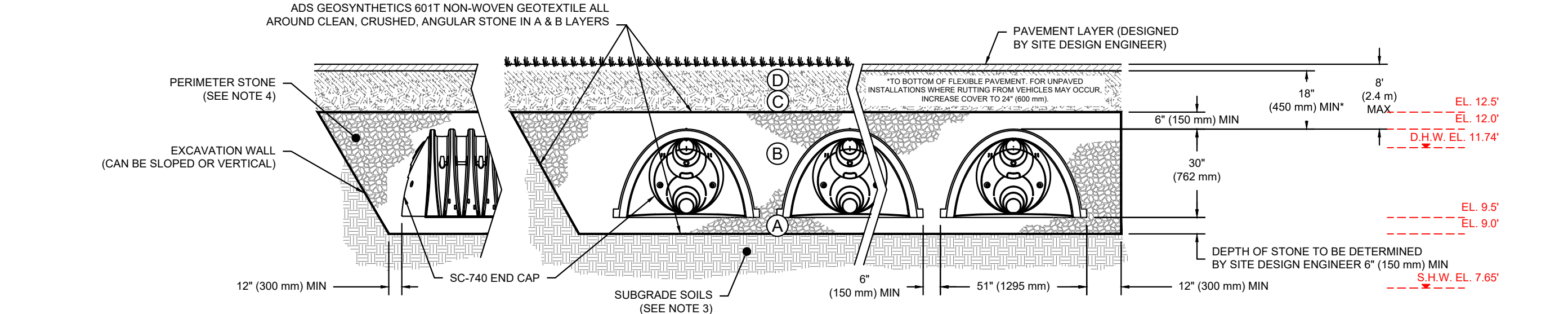
2 SC-740 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



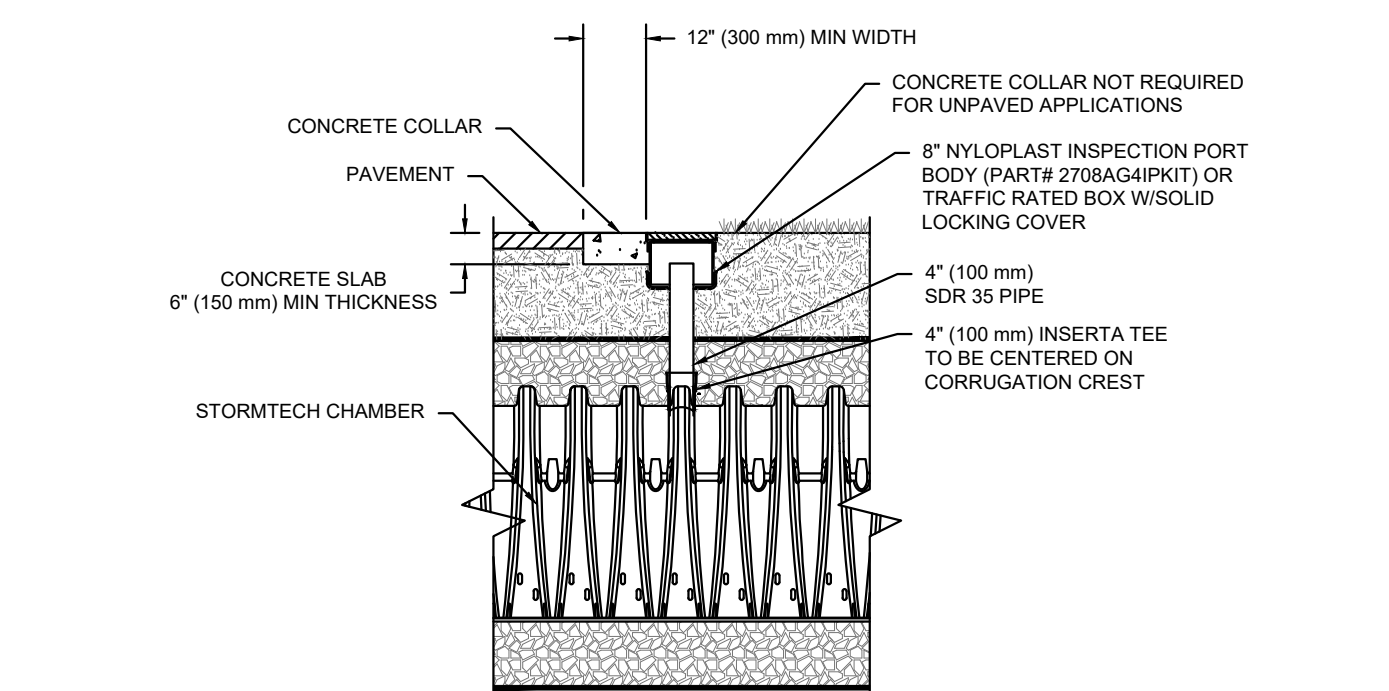
NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT². AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

NUM

SC-740 CROSS SECTION DETAIL

3 SC-740 ISOLATOR ROW PLUS DETAIL



INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
- A.1. REMOVE/OPEN LID ON NYLON/PLASTIC INLINE DRAIN
- A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- A.3. USING A FLASHLIGHT AND STADA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
- i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
- ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

4 4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)

SC-740

STANDARD DETAILS

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026



SHEET

DATE: PROJECT NO: NOT TO SCALE

DRAWN: REVIEWED: REV:

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON REFERENCED STANDARDS. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. UNLESS THE PLANS ARE SIGNED AND SEALED BY THE SITE DESIGN ENGINEER, THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.



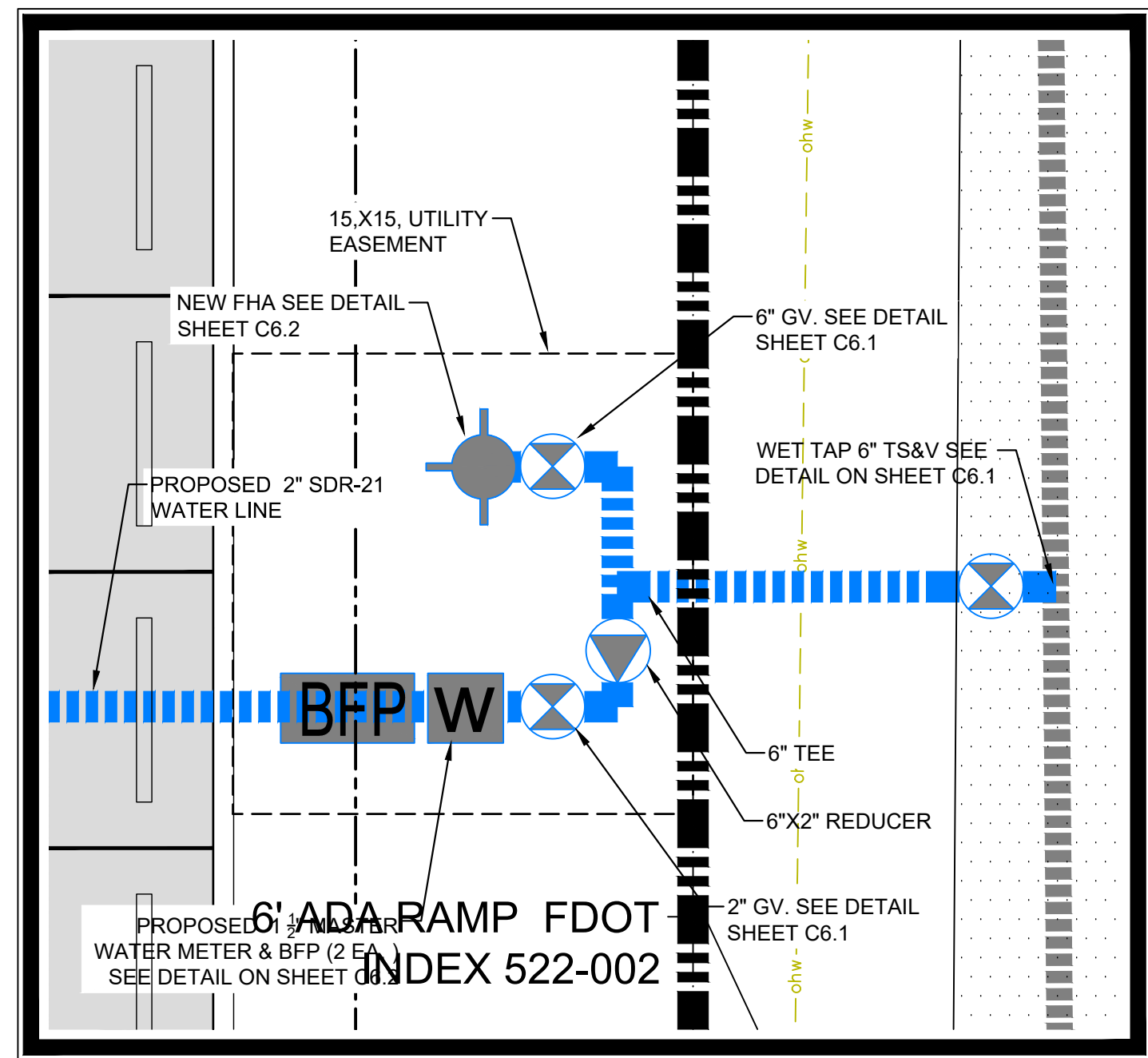
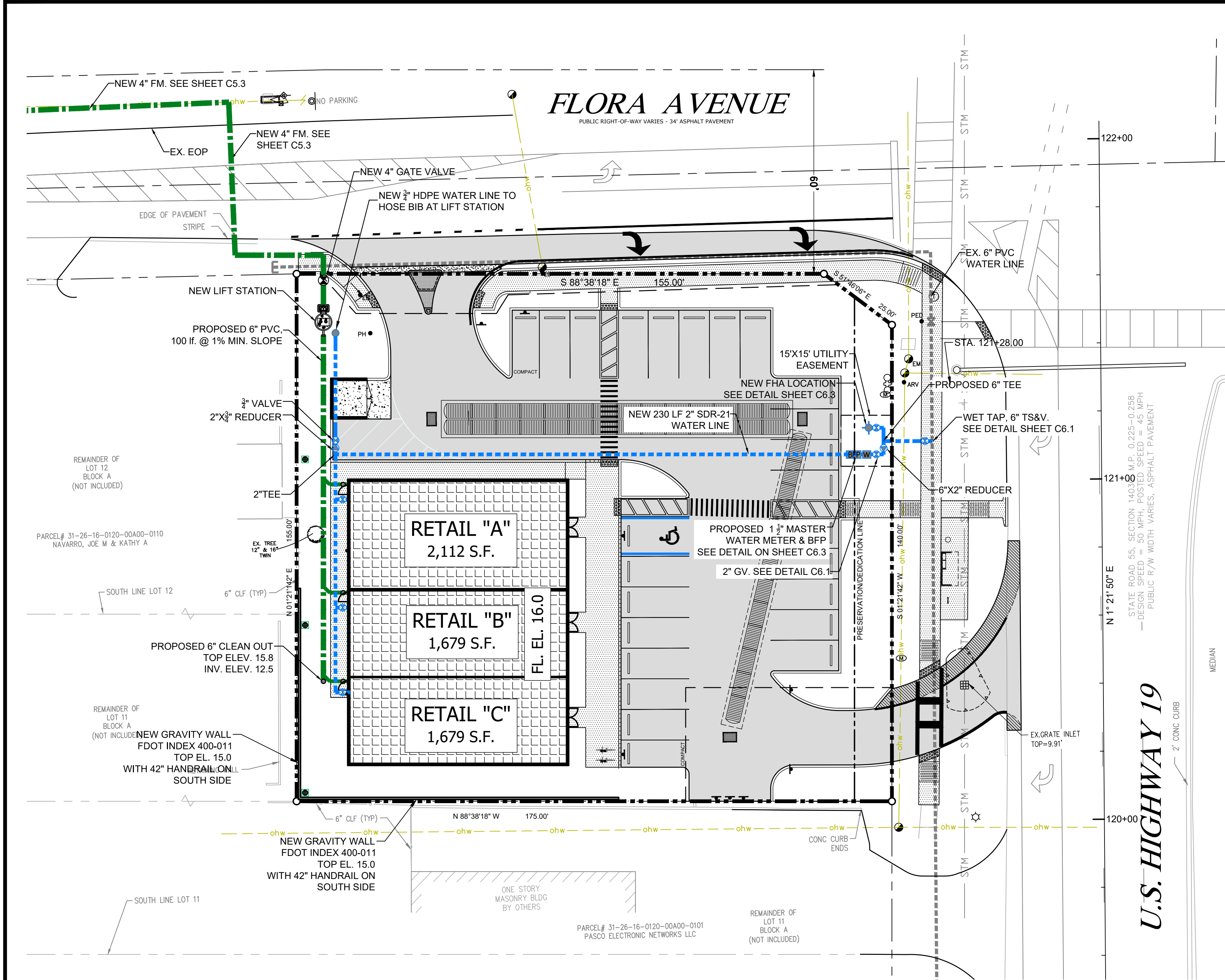
Donald B. Fairbrain, P.E. #44971	
COPIES OF THESE PLANS ARE NOT VALID UNLESS SIGNED BY THE SIGNING ENGINEER'S SEAL	
PROJECT # 2305	
ISSUE DATE: 01/12/23	
REVISIONS:	
No.	Date Description
1	08/23/24 County Com.
2	12/10/24 RES. TO FDOT COM.
3	
4	
5	
6	
7	
8	
9	
10	

STORMTECH DETAILS

RETAIL @SWC FLORA AVE
& US HWY 19

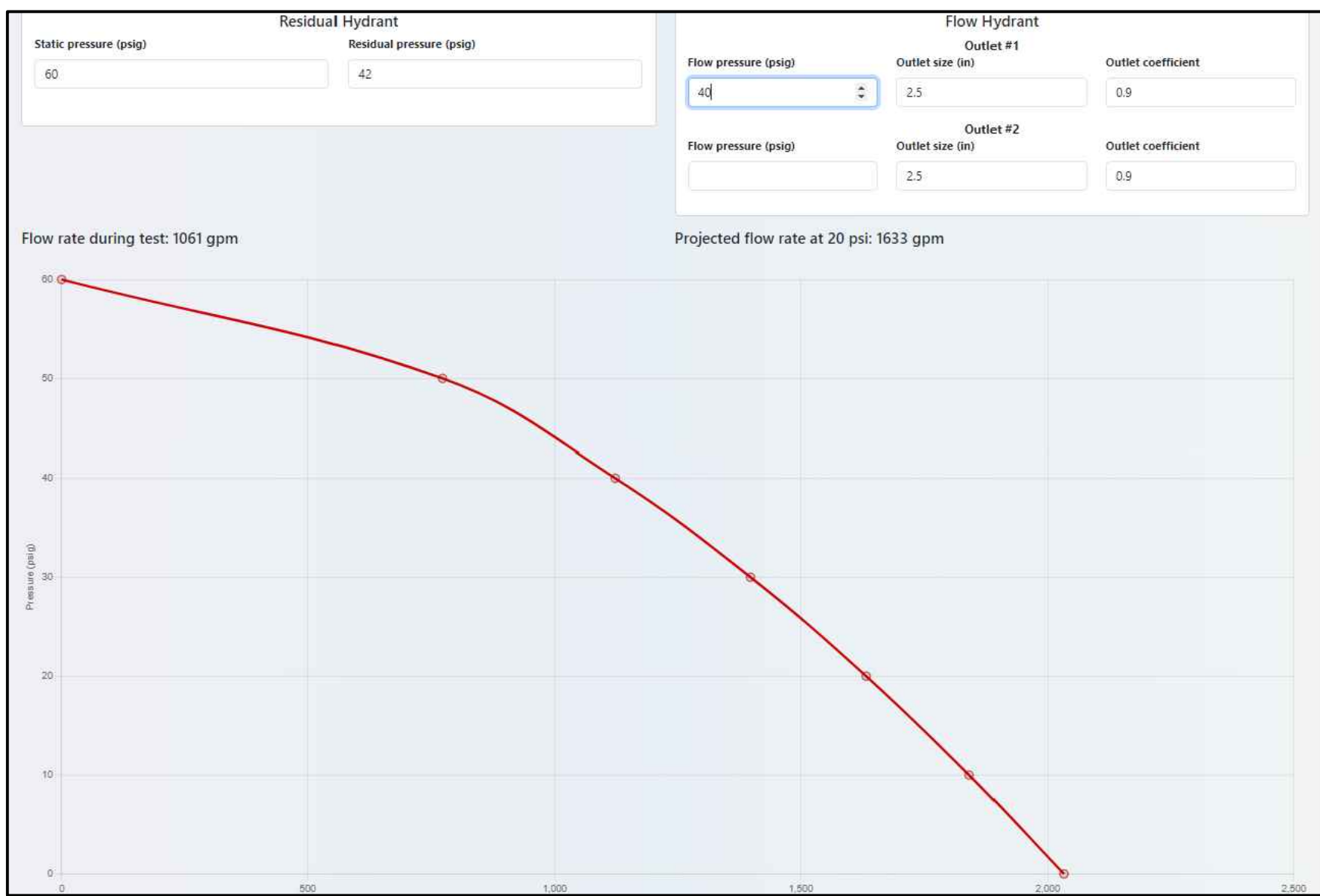
1217 US HWY 19 N,
HOLIDAY, FLORIDA 34691





SITE DETAIL - A
NTS

LEGEND	
PROPERTY LINE	---
NEW STORM SERVICE	---
EXIST STORM SERVICE	---
NEW WATER SERVICE	---
EXIST. WATER SERVICE	---
NEW SAN. SEWER	---
EXIST. SAN. SEWER	---
PROPOSED SAN. MH	●
PROPOSED CLEAN-OUT	○
PROPOSED STORM INLET	⊗
PROPOSED LIFT STATION	⊕
FLOW ARROW	→
EX. ELEV.	+
PROP. ELEV.	×



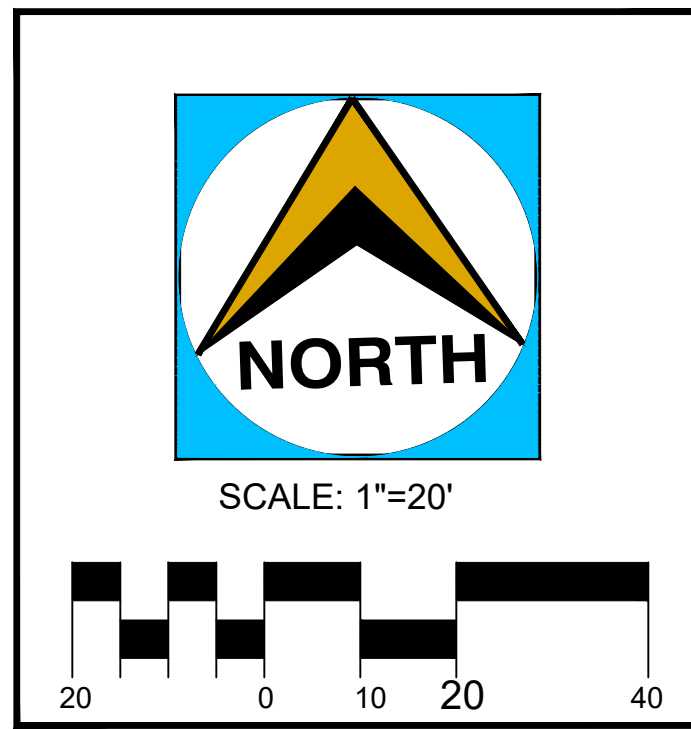
BUILDING TYPE	
IIIB	
BUILDING AREA	
5,470	

FIRE HYDRANT DATA				
HYDRANT #	STATIC	RESIDUAL	FLOW GPM	@ 20 P.S.I.
FH 1-030	60	42	1061	1633

REQUIRED FIRE FLOW FROM NFPA 1, TABLE 18.4.5.2.1: 15,00 GPM FOR 2 HOURS

UTILITY NOTES

1. REFER TO SHEET C6.1 FOR UTILITY DETAILS.
2. REFER TO MEP PLANS FOR ALL UTILITY LEADS INTO BUILDING.
3. SANITARY SEWER PIPES SHALL HAVE A MINIMUM SLOPE OF 1.00%.
4. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND THEIR LOCATIONS AND ELEVATIONS. IF ANY DISCREPANCIES OCCUR, THE CONTRACTOR SHALL ALERT ENGINEER IMMEDIATELY.
5. ALL PUBLIC UTILITIES INSPECTIONS SHALL BE SCHEDULED BY THE CONTRACTOR AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.
6. ALL DEMOLITION AND CONSTRUCTION WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE WITH GOVERNING JURISDICTIONAL CODES.
7. ALL UTILITY CONDUIT MATERIAL FOR TELEPHONE, CABLE, AND ELECTRIC SHALL BE INSTALLED PER UTILITY PROVIDER SPECIFICATIONS BY THE CONTRACTOR.
8. CONTRACTOR SHALL BUILD CONCRETE TRANSFORMER PAD AND INSTALL SCHEDULE 80 PVC CONDUIT AND PULL STRING WITH SWEEPING BENDS, IF APPLICABLE BY ELECTRIC COMPANY.
9. ALL SANITARY GRAVITY PIPES, SERVICE LATERALS, AND FITTINGS SHALL BE MATERIALS APPROVED BY THE GOVERNING JURISDICTION.
10. ALL NON-METALLIC PIPE WILL BE INSTALLED WITH 2 PAIR, 10 GAUGE, COPPER TRACE WIRE.
11. CONTRACTOR SHALL COORDINATE WITH GOVERNING JURISDICTION(S) FOR ANY PROPOSED WET TAPS AND R.O.W. CONNECTIONS.
12. ALL UTILITIES SHALL MAINTAIN AT LEAST 3 FEET OF COVER FROM TOP OF PIPE TO SURFACE ELEVATION. CONTRACTOR SHALL DEFLECT WATER AND FORCE MAINS AS NECESSARY TO ACHIEVE MINIMUM GOVERNING JURISDICTION(S) SEPARATION REQUIREMENTS.
13. CONTRACTOR MUST COORDINATE THE SHUTDOWN OF THE EXISTING POTABLE WATER, WASTEWATER FORCEMAIN, OR RECLAIMED WATER MAIN WITH GOVERNING JURISDICTION(S), IF NECESSARY.
14. OVER STORY TREES SHALL NOT BE LOCATED WITHIN 12 FT OF ANY PUBLIC UNDERGROUND OR OVERHEAD UTILITY LINE.
15. CONTRACTOR SHALL VERIFY LOOP DETECTORS TO AVOID UTILITY CONFLICTS PRIOR TO CONSTRUCTION, IF APPLICABLE.
16. CONTRACTOR SHALL PROTECT ALL UTILITIES OUTSIDE LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED IN THE CONSTRUCTIONS PLANS OR SPECIFICATIONS.
17. ALL DISTURBED AREAS WITHIN THE SIDEWALK/ CURB AND GUTTER/ ROAD PAVEMENT SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITIONS.
18. THE SANITARY SEWER SYSTEM IN ALL ITS ENTIRETY IS PRIVATELY OWNED AND MAINTAINED WITHIN PROPERTY BOUNDARIES.
19. THE LOCATION OF ALL NEWLY INSTALLED FIRE HYDRANTS SHALL BE IDENTIFIED WITH A BLUE REFLECTIVE PAVEMENT MARKER INSTALLED ON THE ROADWAY, PERPENDICULAR TO THE FIRE HYDRANT, THE REFLECTIVE MARKER WILL BE LOCATED IN THE CENTER OF THE LANE CLOSEST TO THE HYDRANT, IF APPLICABLE.
20. IF APPLICABLE, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FLOW TESTING AND COLOR CODING OF ALL NEWLY INSTALLED FIRE HYDRANTS IN THE GOVERNING JURISDICTION(S) RIGHT OF WAY AND UTILITY EASEMENTS THAT ARE TO BE DEDICATED TO GOVERNING JURISDICTION(S) PRIOR TO THE FINAL INSPECTION OF THE PROJECT. THE CONTRACTOR SHALL REFER TO NFPA STANDARD 291 FOR FLOW TESTING AND COLOR CODING METHODS AND PROCEDURES.
21. ALL PROPOSED WATER SUPPLY AND FIRE HYDRANTS SHALL COMPLY NFPA-1, CHAPTER 18.3
22. CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD (E.O.R.) 72 HOURS IN ADVANCE OF ALL INSPECTIONS THAT REQUIRE THE E.O.R. OR E.O.R. REPRESENTATIVES PRESENCE.
23. CONTRACTOR SHALL DEFLECT ALL PROPOSED WATER MAINS AND FORCE MAINS TO ACHIEVE 18" MIN. VERTICAL CLEARANCE FROM ALL EXISTING AND PROPOSED UTILITIES.
24. CONTRACTOR SHALL ADJUST TOP OF ALL CLEANOUTS, VALVES, AND STRUCTURE RIMS TO BE FLUSH WITH FINAL GRADE.
25. ALL TRENCHING AND BACKFILL OPERATIONS SHALL COMPLY WITH GOVERNING JURISDICTIONAL STANDARDS. SEE SHEET C6.1 FOR PIPE TRENCHING DETAILS.



PASCO COUNTY UTILITY NOTES

1. PASCO COUNTY SHALL NOT OWN OR MAINTAIN ANY WATER LINES, SEWER LINES, OR FACILITIES CONSTRUCTED ON PRIVATE PROPERTY.
2. ALL MATERIALS AND LABOR SHALL MEET THE SPECIFICATIONS REQUIRED BY THE COUNTY. ALL CONSTRUCTION SHALL BE PERFORMED UNDER THE INSPECTION OF THE COUNTY AND IN STRICT COMPLIANCE WITH THE STANDARDS OF THE COUNTY DESIGN STANDARDS.
3. ALL NEWLY INSTALLED WATER DISTRIBUTION MAINS AND SERVICE LATERALS SHALL BE COLOR CODED BLUE.
4. ALL NEWLY INSTALLED FORCE MAINS AND GRAVITY LINES SHALL BE COLOR CODED GREEN.
5. ALL NEWLY INSTALLED RECLAIM WATER DISTRIBUTION MAINS AND SERVICE LATERALS SHALL BE COLOR CODED PURPLE.
6. CONNECTIONS TO THE COUNTY'S SYSTEM SHALL BE MADE BY WET TAP. WET TAPS SHALL BE PERFORMED EXCLUSIVELY BY PASCO COUNTY UTILITIES AT THE DEVELOPER'S EXPENSE. EXCAVATION, BACKFILL, AND SURFACE RESTORATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
7. CONTRACTOR'S RESPONSIBILITIES REGARDING WET TAPS TWO INCHES AND LARGER SHALL BE AS FOLLOWS: .2\"/>
8. THE CONTRACTOR IS RESPONSIBLE FOR THE EXCAVATION BEFORE ANY COUNTY PERSONNEL WILL ENTER AN EXCAVATED AREA. IF THE TRENCH IS FOUR FEET IN DEPTH OR DEEPER, IT WILL REQUIRE A TRENCH BOX OR SLOPING, AND A LADDER ACCORDING TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.
9. THE TAPPING VALVE WILL REQUIRE A BLOCKING DEVICE MADE OF SUITABLE MATERIAL OR DEVICE. THIS BLOCKING DEVICE OR MATERIAL WILL BE PLACED UNDER THE VALVE AND REMAIN IN PLACE UNTIL THE TAP MACHINE IS REMOVED AND THE TAP IS COMPLETED.
10. IF THE CONTRACTOR HAS NOT FULFILLED HIS RESPONSIBILITIES, AS STATED ABOVE, PRIOR TO THE ABRIVAL OF PASCO COUNTY UTILITIES OPERATIONS AND MAINTENANCE TAPPING CREW, THERE WILL BE AN ADDITIONAL CHARGE OF \$96.00.
11. FIRE HYDRANT SHALL BE FLOW-TESTED AND COLOR-CODED BASED ON FLOW RESULTS.
12. PRIVATE FIRE LINES AND HYDRANTS SHALL BE INSTALLED ONLY BY A FLORIDA STATE CERTIFIED FIRE SYSTEM CONTRACTOR.
13. ADD NOTE OF REQUIRED FIRE FLOW AN FLOW DURATION.
14. PASCO COUNTY SHALL NOT OWN OR MAINTAIN ANY WATER LINE, SEWER LINES, OR FACILITIES CONSTRUCTED ON PRIVATE PROPERTY.
15. ALL MATERIALS AND LABOR SHALL MEET THE SPECIFICATIONS REQUIRED BY THE COUNTY. ALL CONSTRUCTION SHALL E PERFORMED UNDER THE INSPECTION OF THE COUNTY AND IN STRICT COMPLIANCE WITH THE STANDARDS OF THE COUNTY DESIGN STANDARDS.

Pasco County Utilities Hydrant Flow Request

Work order #: 1330098 Date: 4/23/2024 Time Of Test: 6:00

Flow tests to be performed between 6:00 AM to 8:00 AM & 5:00 PM to 8:00 PM

FLOW HYDRANT DATA

Flow Hydrant Location: Map No: 30 Hydrant No: 1

Address: 1217 US 19

(If no address available, land mark identification will be required, e.g., "Hyd 500' north of ...")

Main size at the flow location: 6" Make: Waterouse

(this is the mainline size, not the hydrant branch size) Model: Pacor Year: 1985

Nozzle Outlet Inside Diameter, d: 2.5 In.

Nozzle Outlet Coefficient, c: 0.9

RESIDUAL HYDRANT DATA

Residual Hydrant Location: Map No: 30 Hydrant No: 9

Address: 1041 US Hwy 19 (Louis ave)

(If no address available, land mark identification will be required, e.g., "Hyd 500' north of ...")

Main size at the flow location: 6" Make: American Darling

(this is the mainline size, not the hydrant branch size) Model: B84B Year: 2021

HYDRANT READINGS

Flow Hydrant Pitot-tube Gauge Reading, P: 40 PSI

Residual Hydrant Static Pressure, h_s: 60 PSI

Residual Hydrant Residual Pressure, h_r: 42 PSI

FLOW CALCULATIONS

Flow Hydrant Discharge, Q_f: 1061 GPM (Note 1)

Flow Available at Residual Pressure of 20 PSI, Q_r: 1633 GPM (Note 2)

Equations taken from AWWA M17, Fire Hydrants: Installation, Field Testing, and Maintenance, 5th Edition

Note 1: Per Equation $Q_f = 29.83 c d^{1/2} \sqrt{P}$ Note 2: Per Equation $Q_r = Q_f \left[\frac{(h_s - 20)^{0.54}}{(h_s - h_r)^{0.54}} \right]$

Comments:

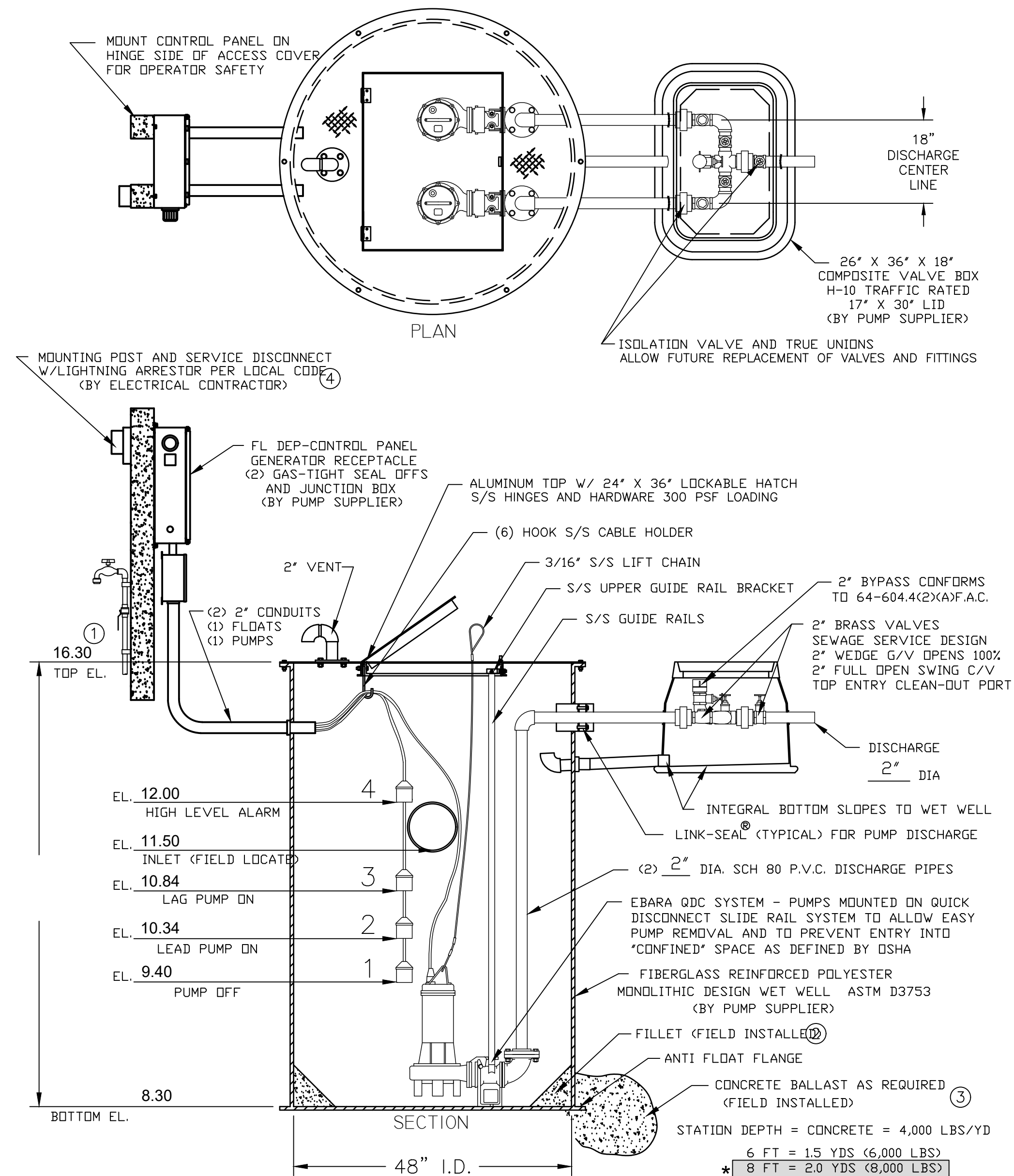
Test Performed By: N.Payne U.W.3

Electronic signature: Nicholas Payne

C:\Users\vpayne\Desktop\PCU Hydrant Flow Report 4/23/2024

Donald B. Fairbairn, P.E. #44971		Registry # 31306
COPIES OF THESE PLANS ARE NOT VALID UNLESS EMBOSSED WITH THE SIGNING ENGINEER'S SEAL		

PROJECT # 2305		
ISSUE DATE: 01/12/23		
REVISIONS:		
No.	Date	Description
1	08/23/24	County Com.
2	12/10/24	RES. TO FDOT COM.
3		
4		
5		
6		
7		
8		
9		
10		



48" DUPLEX STATION - 2" PIPING
WITH SLIDE RAIL SYSTEM, V.B. AND F.D.E.P. PANEL

TSC PRE-FAB PUMP SOLUTIONS®

MODEL
TSC2-40.1.dwg ©
REV 2002

4. MOUNTING POST, SERVICE DISCONNECT AND LIGHTING ARRESTOR PER LOCAL CODE
 3. CONCRETE BALLAST AS REQUIRED
 2. GROUT FILLET (1 TO 1 SLOPE TO "HOPPER" BOTTOM)
 1. HOSE BIBB WITH REDUCED PRESSURE BACK FLOW PREVENTER
- FIELD INSTALL BY CONTRACTOR

GENERAL NOTES

FURNISH AND INSTALL EBARA SUBMERSIBLE PUMPS:

DESIGN CONDITION:

MODEL	EBARA 500 GF	3	HP
GPM	82	51.18	FT/TDH
VOLTAGE	208/230 OR 460	SINGLE OR THREE	PHASE
DISCHARGE	2"	137 mm 5-3/8"	IMPELLER

- SEWAGE PUMP:** 1. RATED FOR TWENTY (20) STARTS PER HOUR.
2. AIR FILLED MOTOR DESIGNED FOR SEWAGE APPLICATION WITH CLASS F INSULATION.
3. DUAL MECHANICAL SHAFT SEALS (SILICON CARBIDE / SILICON CARBIDE) LOCATED OUT OF THE PUMPAGE, IN A SEPARATE OIL FILLED CHAMBER.
4. HIGH TEMPERATURE BALL BEARINGS B-10 RATING OF 60,000 HOURS, UPPER BEARING - SINGLE ROW AND LOWER BEARINGS - DOUBLE ROW TYPE.
5. PUMP SHAFT HORSEPOWER (BHP) SHALL NOT EXCEED MOTOR RATED HORSEPOWER THROUGHOUT THE ENTIRE OPERATING RANGE OF THE PUMP PERFORMANCE CURVE.
6. SINGLE PHASE MOTORS SHALL BE DUAL WOUND, CAPACITOR START-RUN AND CAPABLE OF OPERATING ON 208/230 VOLT WITH A 10% TOLERANCE VOLTAGE (190 TO 260). THREE PHASE MOTORS SHALL BE DUAL WOUND AND CAPABLE OF OPERATING ON 208/230 VOLT WITH A 10% TOLERANCE VOLTAGE (190 TO 260) OR OPERATE ON 460 VOLT BY CHANGING THE MOTOR LEADS INSIDE THE PUMP.

FIBERGLASS WET WELL: SHALL BE A ONE PIECE UNIT WITH INTEGRAL BOTTOM, WALL AND UPPER FLANGE. THE ENTIRE FIBERGLASS WET WELL SHALL HAVE A DYNAMIC LOAD RATING OF 16,000 FT/LBS. EACH UNIT MUST BE SERIAL NUMBERED TO IDENTIFY THE TEST PROCEDURE. ASTM D 3753 SPECIFICATIONS SHALL BE REQUIRED AS MINIMUM.

ALUMINUM HATCH: TSC MODEL-54R (54") ROUND WITH 24" X 36" LOCKABLE HATCH, REINFORCED FOR LOAD RATING OF 300 LBS/FT WITH HOLD OPEN SAFETY ARM, LOCKING DEVICE FOR HASP TYPE PADLOCK AND STAINLESS STEEL HARDWARE.

VALVE BOX: FIBERGLASS COMPOSITE (H-10 TRAFFIC RATED) WITH INTEGRAL BOTTOM. (FOR 1 1/4" AND 2" DISCHARGE PIPING SXS HEADER SYSTEM) SHALL BE 26" X 36" X 18" WITH 17" X 30" LIMITED ACCESS LID

ACCESSORIES: #304 S/S - GUIDE RAILS, UPPER GUIDE RAIL BRACKETS, CABLE HOLDER, ANCHOR BOLTS AND PUMP LIFTING CHAINS.

VALVES: SHALL BE SEWAGE SERVICE DESIGN BRASS SWING CHECK VALVES WITH TOP ENTRY CLEAN-OUT PORT AND BRASS WEDGE GATE VALVES OPEN 100%.

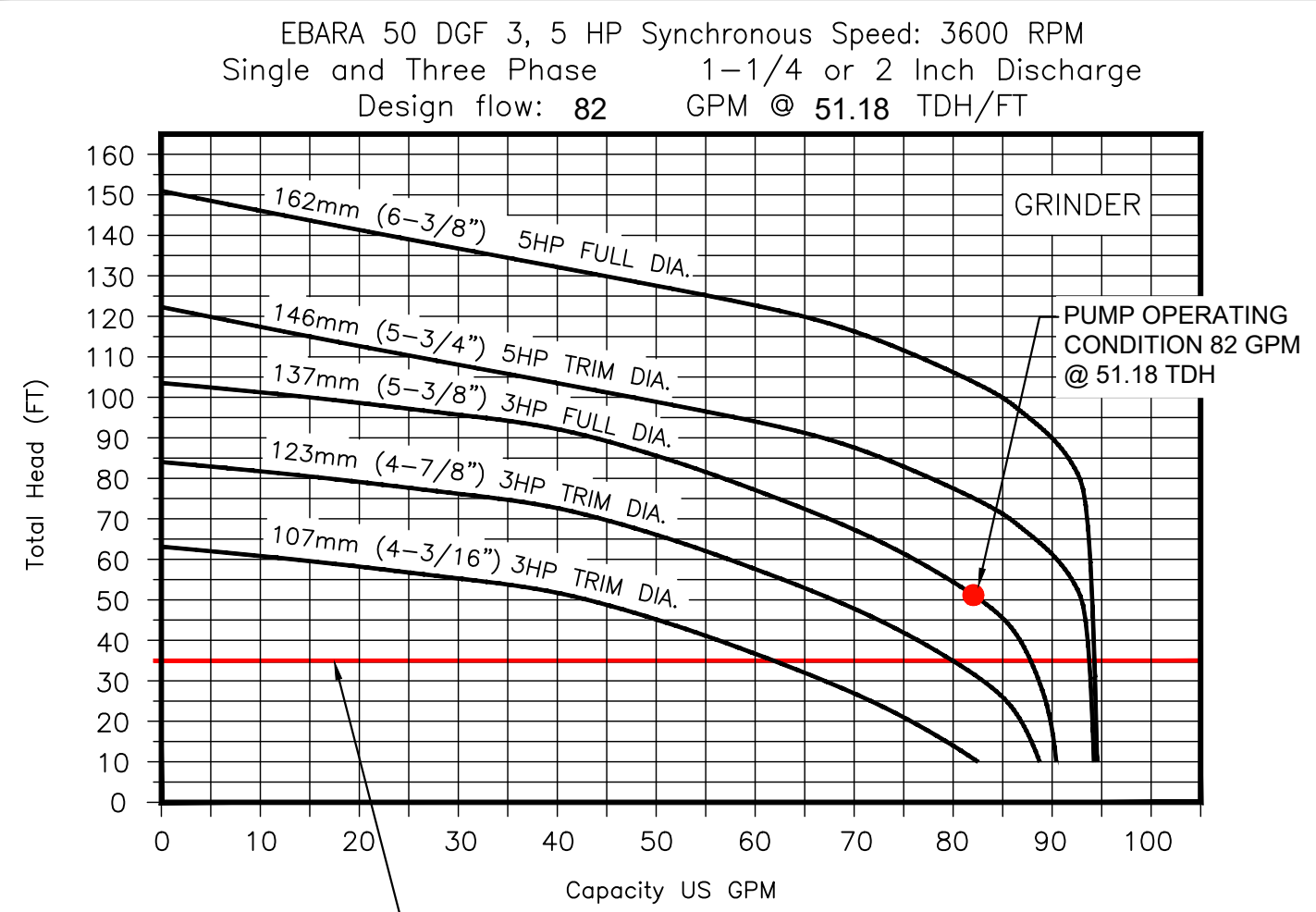
PIPING: 2" SCHEDULE 80 PVC.

FLOAT SWITCHES: UL LISTED SJ ELECTRO MODEL (SJ 30 SWENO).

PUMP SUPPLIER SHALL PROVIDE SUBMERSIBLE PUMPS, SLIDE RAIL ASSEMBLIES, CONTROL PANEL, JUNCTION BOX, FLOAT SWITCHES, ALUMINUM HATCH AND ACCESSORIES TO INSURE PROPER OPERATION AND WARRANTY.

THE COMPLETE PACKAGE PUMPING STATION SHALL HAVE PUMP BASES, SLIDE RAIL ASSEMBLIES AND DISCHARGE PIPING ASSEMBLED BY TECHNICAL SALES CORPORATION READY TO SHIP FOR FIELD INSTALLATION.

THE STOCKING DISTRIBUTOR FOR EBARA SUBMERSIBLE PUMPS: TECHNICAL SALES CORPORATION, 4621 N. HALE AVE TAMPA, FL 33614 (813)876-9256



PUMP PERFORMANCE CURVE

CONTROL PANEL -SHALL CONFORM TO FL DEP 64-604.42(A)

CONTROL PANEL SHALL BE TSC MODEL # 38-D IN NEMA 4X FIBERGLASS ENCLOSURE. THE PANEL SHALL MEET STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), ENVIRONMENTAL PROTECTION COMMISSION (EPC) AND LOCAL CODE REQUIREMENTS GOVERNING PRIVATE LIFT STATIONS.

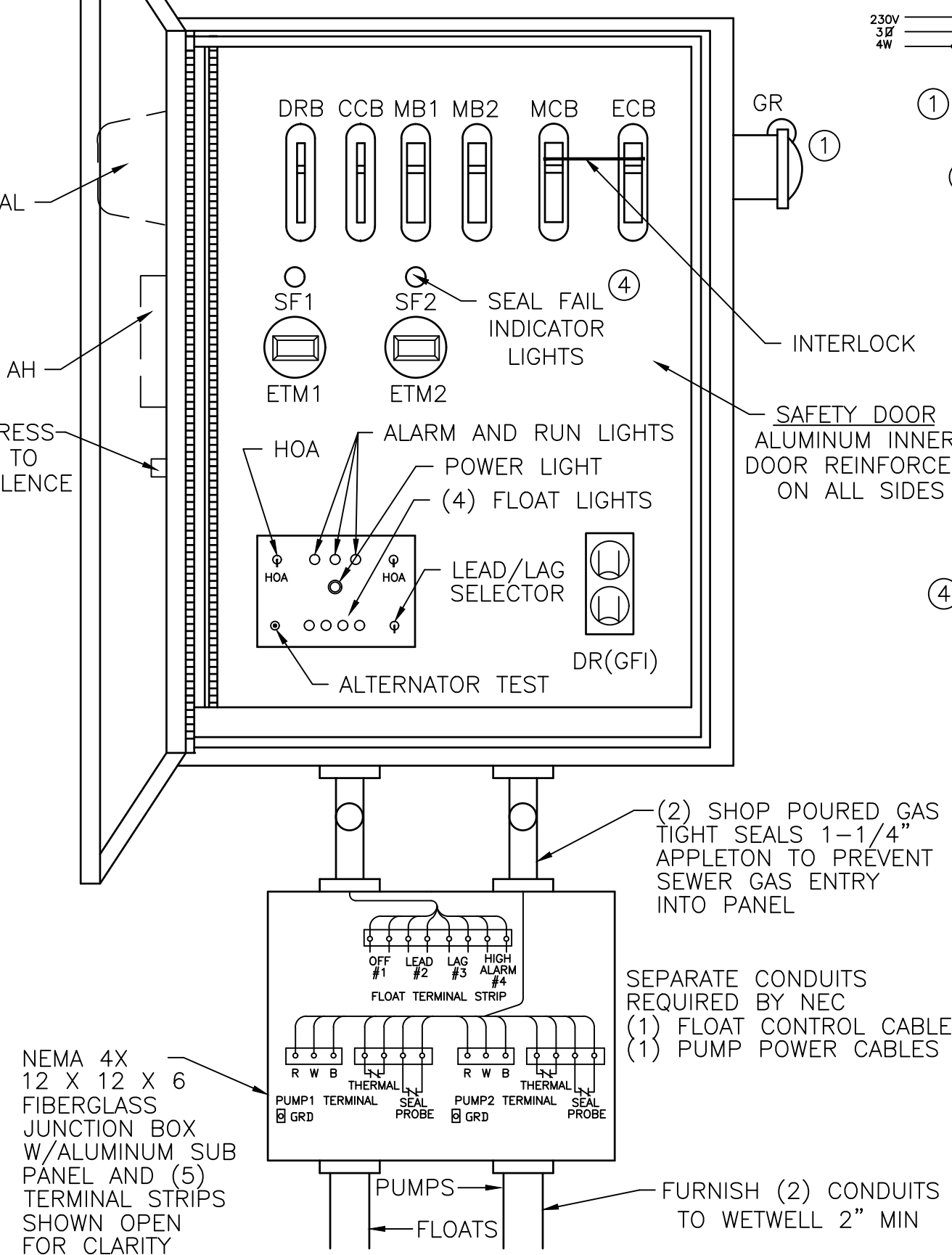
FLOAT SWITCHES AND CONTROL SYSTEM SHALL BE UL LISTED AND INTRINSICALLY SAFE. ALL COMPONENTS SHALL BE UL LISTED.

A JUNCTION BOX IS REQUIRED, WITH SHOP POURED SEALS BETWEEN BOX AND CONTROL PANEL TO PREVENT SEWER GAS ENTRY INTO CONTROL PANEL.

ELECTRICAL CONTRACTOR TO PROVIDE SERVICE DISCONNECT WITH LIGHTNING ARRESTOR MOUNTED PER LOCAL CODES.

THE CONTROL PANEL SHALL BE SUITABLY INSTALLED TO PREVENT SETTLING OR TIPPING.

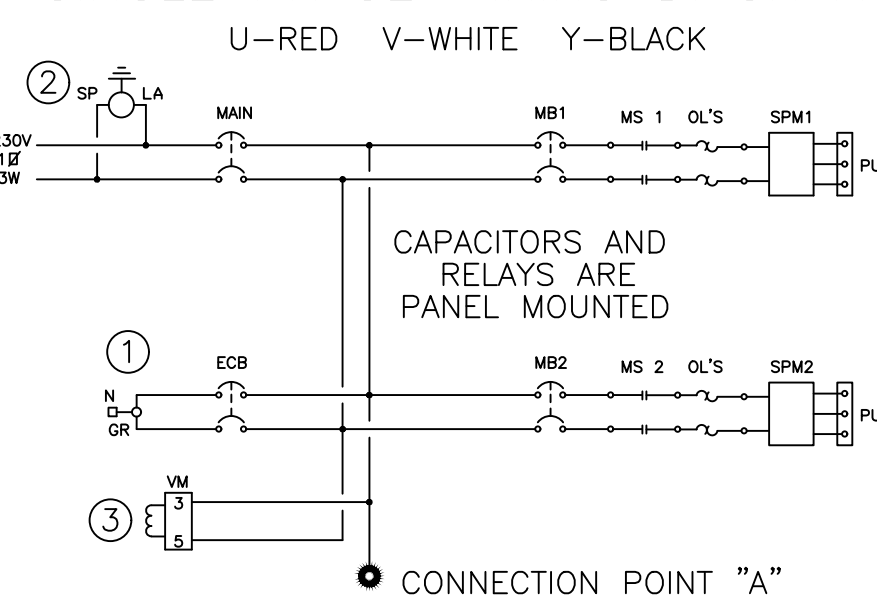
CONTROL PANEL LAYOUT



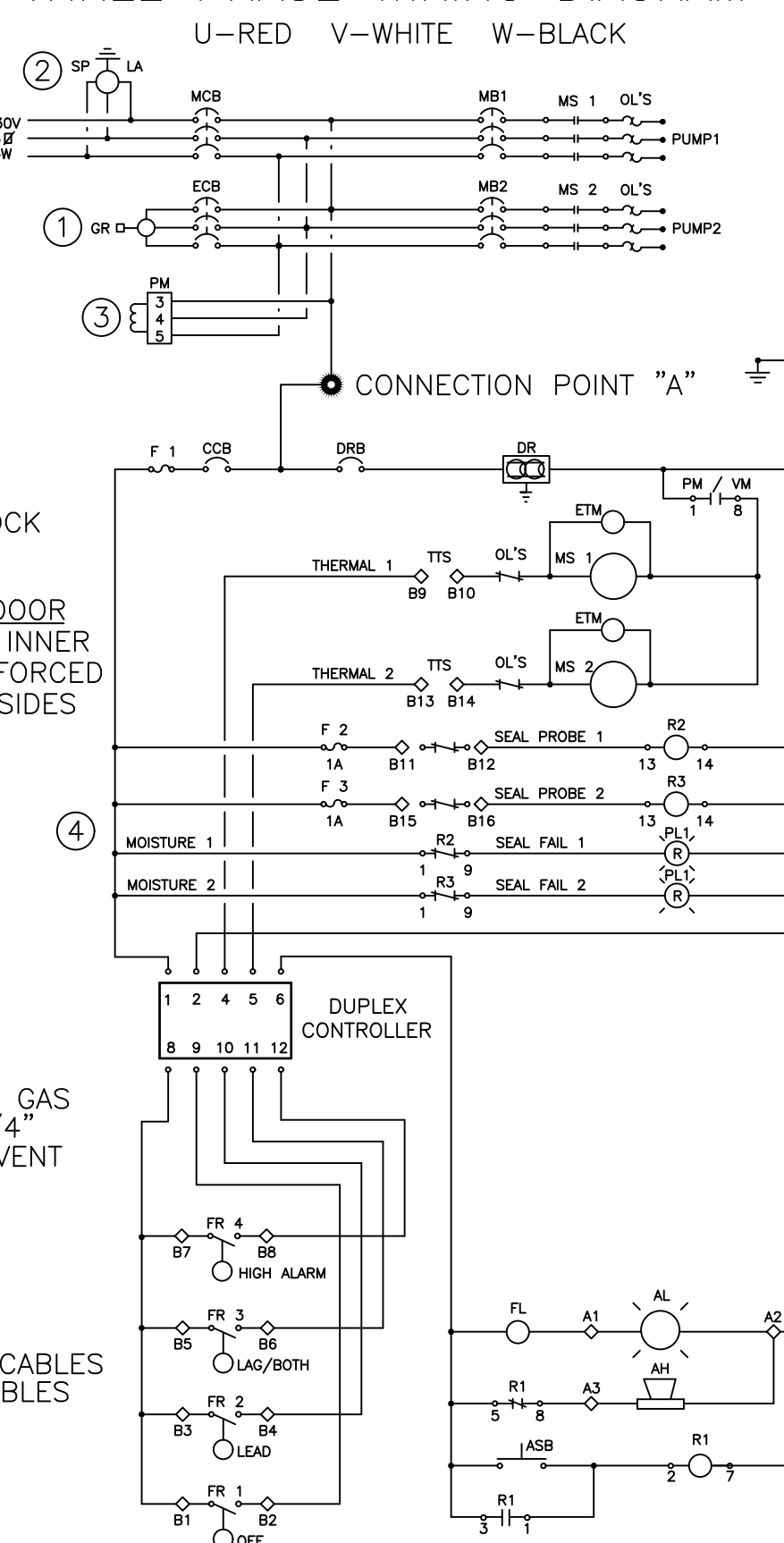
LEGEND

- AH ALARM HORN
- AL ALARM LIGHT
- ASB ALARM SILENCE BUTTON
- ATS ALTERNATOR TEST SWITCH
- CCB CONTROL CIRCUIT BREAKER
- DR DUPLEX RECEPTACLE
- DRB DUPLEX RECEPTACLE BREAKER
- ECB EMERGENCY CIRCUIT BREAKER
- ETM ELAPSED TIME METER
- F FUSE
- FL FLASHER
- FS FLOAT SWITCH (REGULATOR)
- GR GENERATOR RECEPTACLE
- GRD GROUND
- HOA HAND-OFF-AUTOMATIC SELECTOR
- LA LIGHTNING ARRESTOR
- MB MOTOR BREAKER
- MCB MAIN CIRCUIT BREAKER
- MS MOTOR STARTER
- N NEUTRAL
- OL'S OVERLOAD HEATERS
- PM PHASE MONITOR
- PTS PUMP TERMINAL STRIP
- R RELAY
- RC RUN CAPACITOR
- RD DISCHARGE RESISTOR
- RL PUMP RUN INDICATORS
- RTS REGULATOR TERMINAL STRIP
- SC START CAPACITOR
- SF SEAL FAIL
- SR START RELAY
- SP SURGE PROTECTOR
- TTS THERMAL TERMINAL STRIP

SINGLE PHASE WIRING DIAGRAM



THREE PHASE WIRING DIAGRAM



PANEL WIRING DIAGRAM

PANELS SHALL CONFORM TO FLORIDA DEP 64-604.400

- ① GENERATOR RECEPTACLE FOR EMERGENCY POWER CONNECTION WITH INTERLOCK
- ② SURGE PROTECTION AND LIGHTNING PROTECTION ON ALL INCOMING LEGS
- ③ PHASE PROTECTION SHALL BE PROVIDED
- ④ SEAL FAIL DETECTING

PANEL MANUFACTURER SHALL BE A "UL" LISTED SHOP.

EBARA DUPLEX GRINDER PUMP STATION
FIBERGLASS WET WELL

TECHNICAL SALES
CORPORATION

TSC PRE-FAB PUMP SOLUTIONS®

WATERWORKS & WASTEWATER SPECIALTIES

Representing Innovative Manufacturers

MODEL TSC2-40.1©

4621 N. HALE AVENUE PH (813)876-9256

TAMPA, FL 33614 FAX (813)874-1194

EMAIL: Sales@TSCtampa.com

REV 0102 SCALE: N.T.S.

Northside Engineering, Inc.
Civil, Land, Planning, Traffic Studies, Landscape
Due Diligence Reports, Land Use, Re-Zoning
Stormwater Management, Utility Design
Construction Administration
300 South Butler Road, Clearwater, Florida 37965
Tel: (813) 432-8888 Fax: (813) 432-8888
tech@northsideengineering.net Est. 1989

Donald B. Fairbairn, P.E. #44971

PROJECT # 2305

ISSUE DATE: 01/12/23

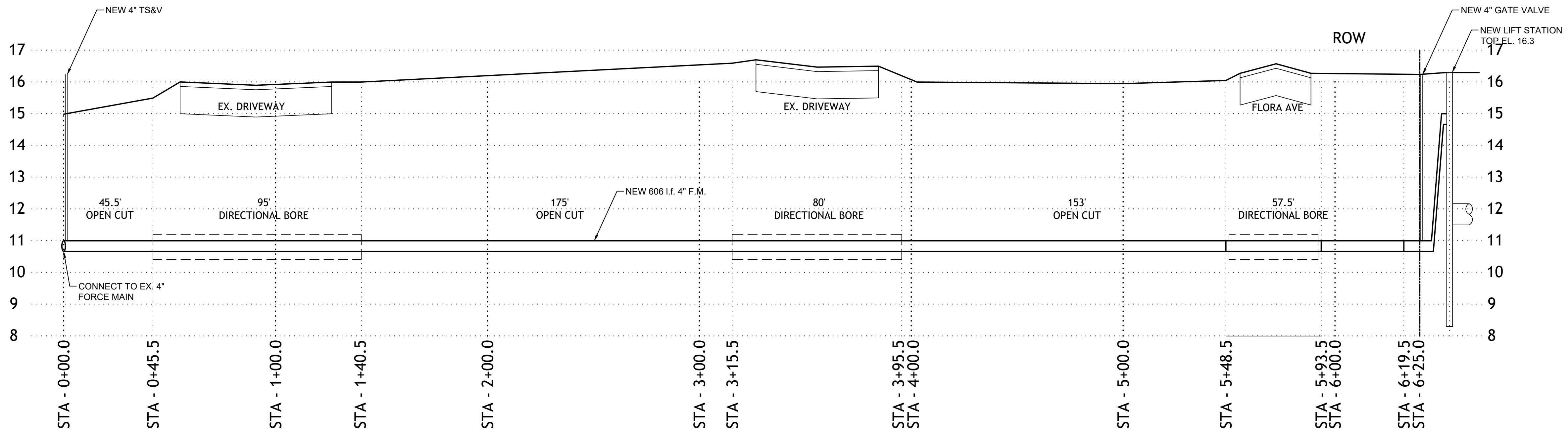
REVISIONS:

No.	Date	Description
1	08/23/24	County Com.
2	12/10/24	RES. TO FDOT COM.
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

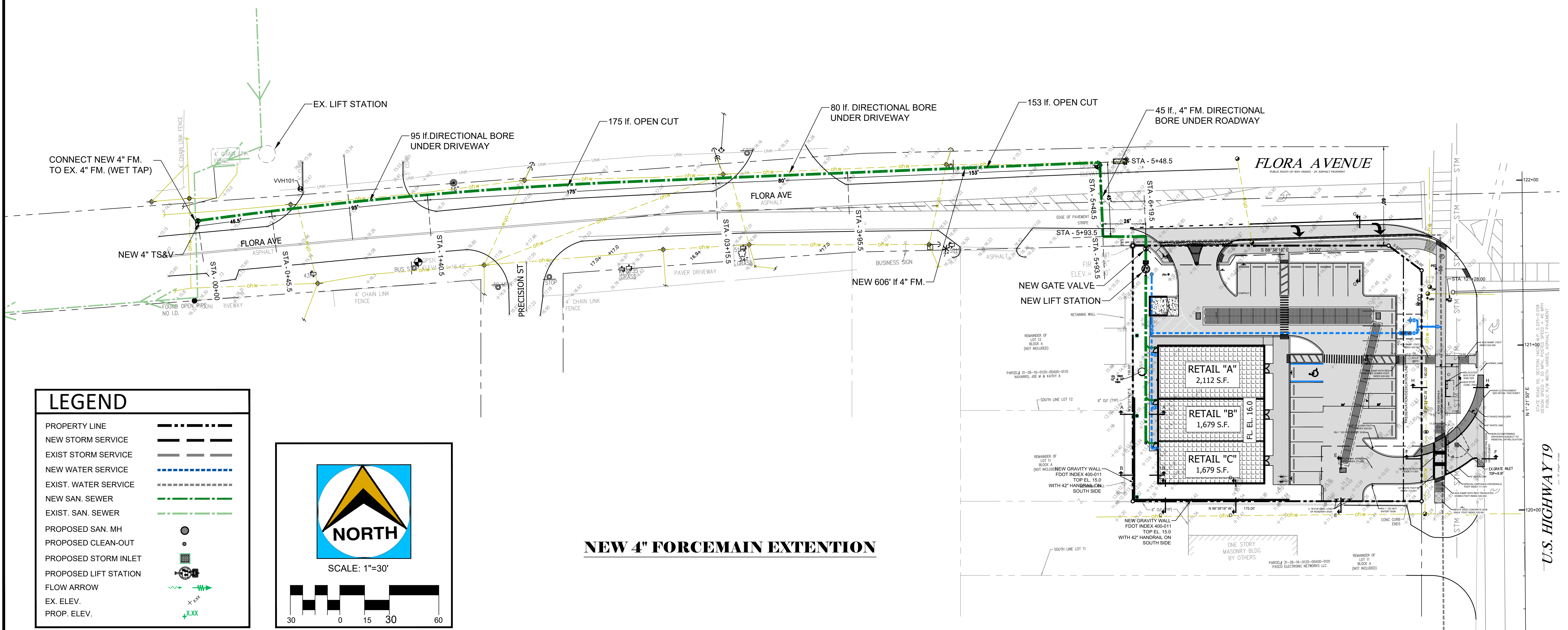
LIFT STATION
RETAIL @SWC FLORA AVE
& US HWY 19
1217 US HWY 19 N.
HOLIDAY, FLORIDA 34691

Northside Engineering, Inc.
C5.2

48" DUPLEX STATION - 2" PIPING WITH SLIDE RAIL SYSTEM, VALVE BOX AND F.D.E.P. PANEL TSC2-40.1©



PROFILE
 HOZ 30'=" - VER 2'="



LEGEND

- PROPERTY LINE
- NEW STORM SERVICE
- EXIST STORM SERVICE
- NEW WATER SERVICE
- EXIST. WATER SERVICE
- NEW SAN. SEWER
- EXIST. SAN. SEWER
- PROPOSED SAN. MH
- PROPOSED CLEAN-OUT
- PROPOSED STORM INLET
- PROPOSED LIFT STATION
- FLOW ARROW
- EX. ELEV.
- PROP. ELEV.

NORTH

SCALE: 1"=30'

NEW 4" FORCEMAIN EXTENTION

Northside Engineering, Inc.

Civil, Land, Planning, Traffic Studies, Landscape
 Due Diligence Reports, Land Use Re-Zoning
 Stormwater Management, Utility Design
 Construction Administration

300 South Bulcher Road, Clearwater, Florida 37955
 Tel: 727-443-3865 Fax: 727-443-3036
 tech@northsideengineering.net
 Est. 1989

Donald B. Fairbairn, P.E. #44971

COPIES OF THESE PLANS ARE NOT VALID UNLESS
 ENDORSED WITH THE SIGNING ENGINEER'S SEAL

Registry # 31306

PROJECT # 2305		
ISSUE DATE: 01/12/23		
REVISIONS:		
No.	Date	Description
1	08/23/24	County Com.
2	12/10/24	RES. TO FDOT COM.

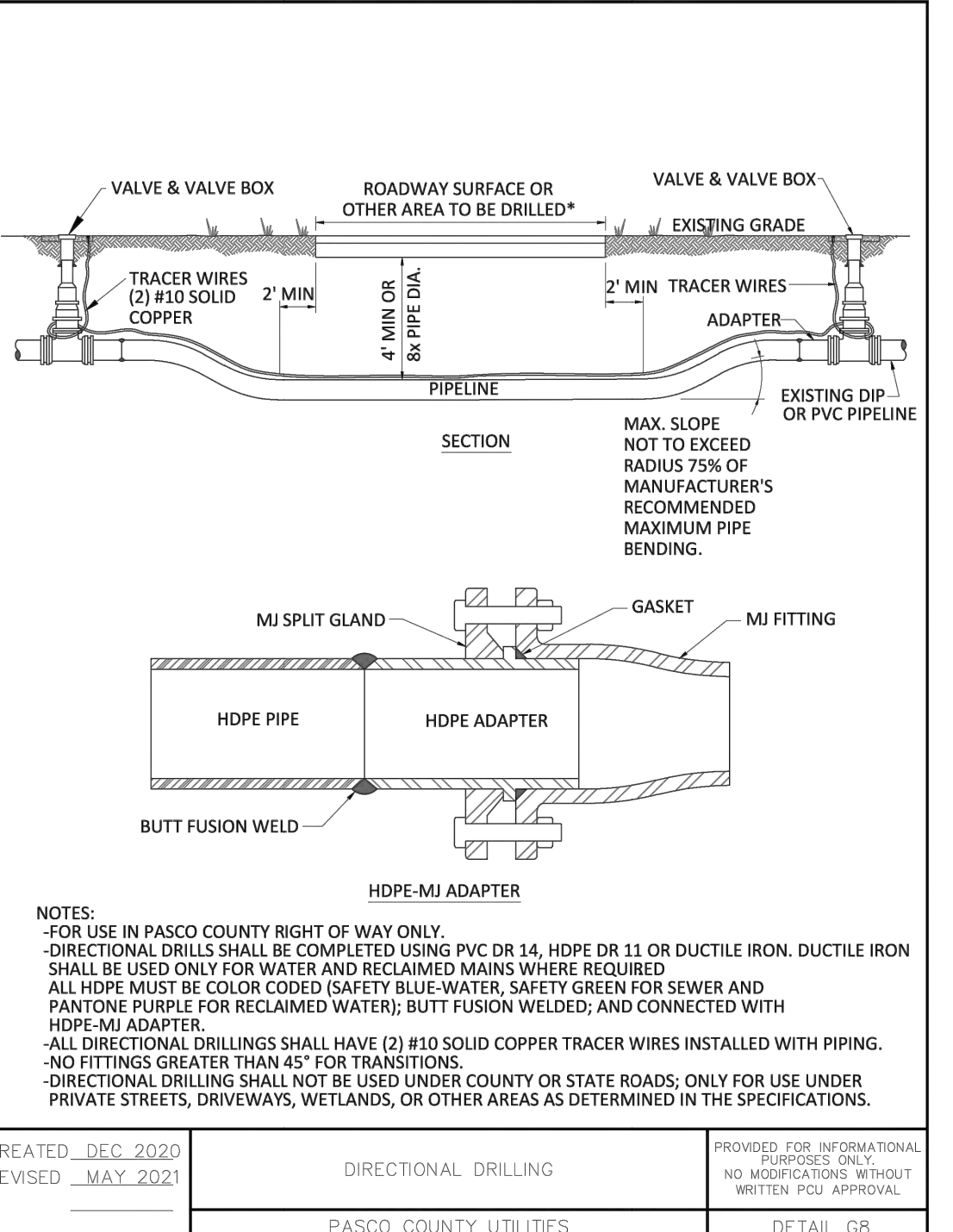
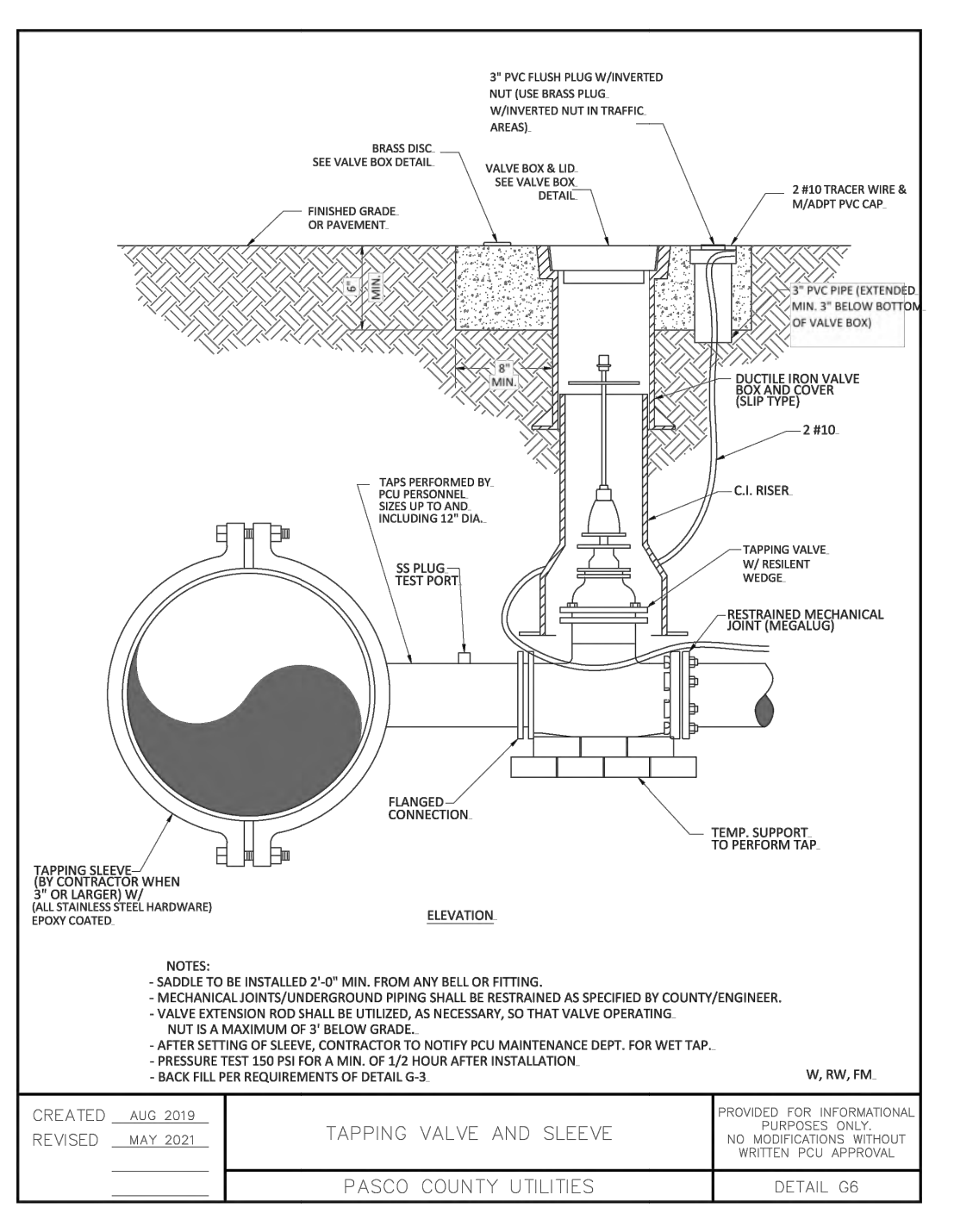
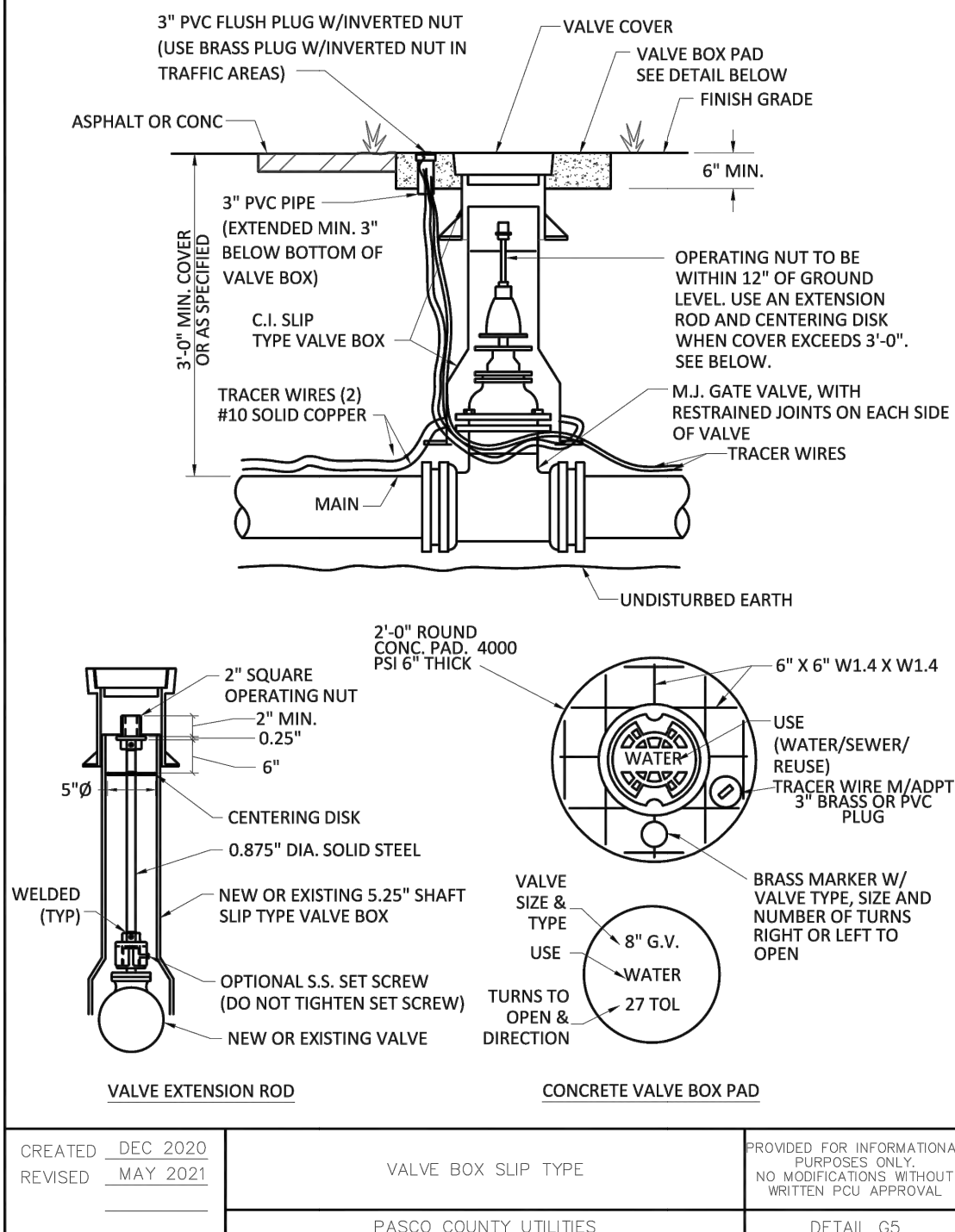
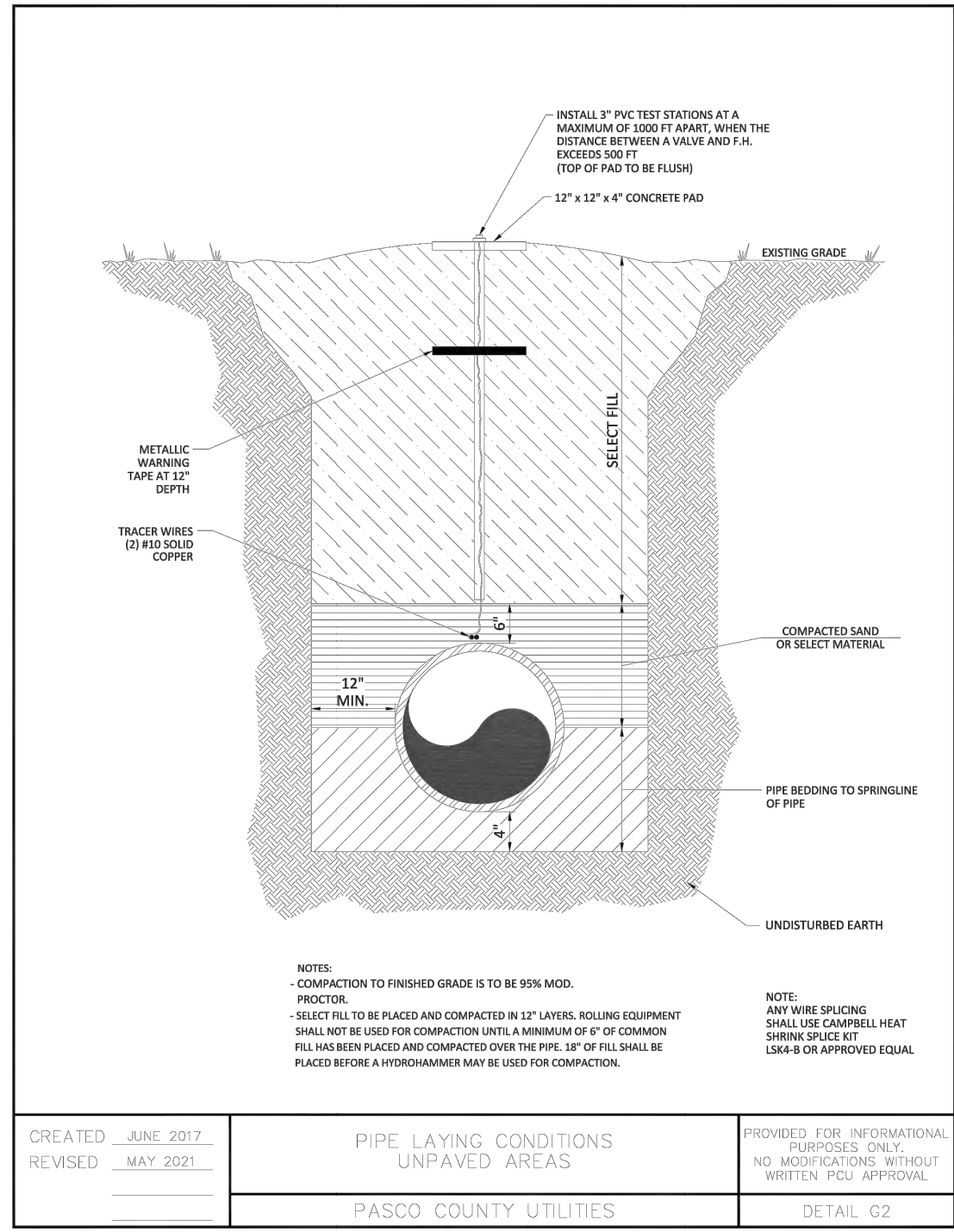
UTILITY PLAN - FORCE MAIN

RETAIL @SWC FLORA AVE & US HWY 19

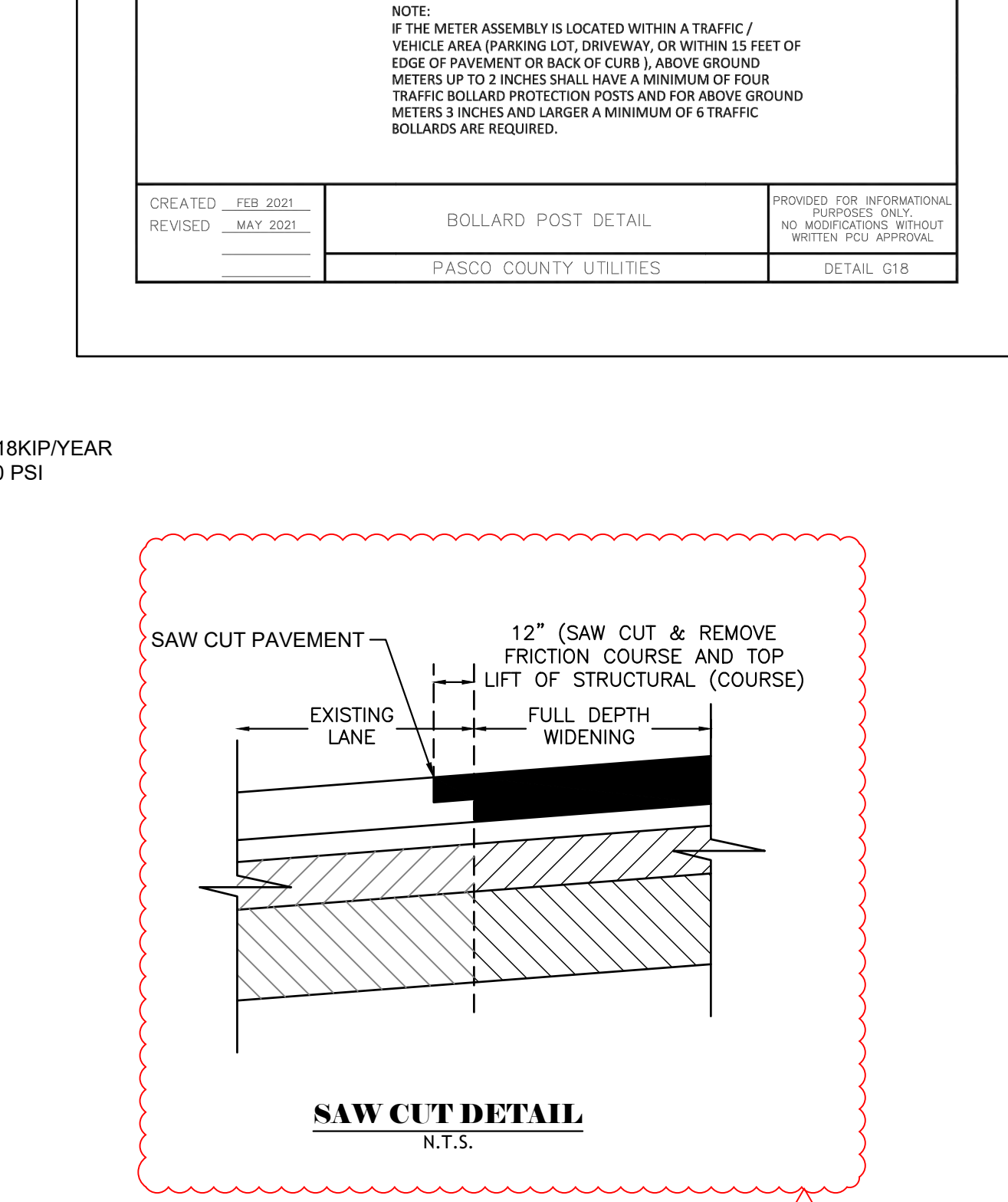
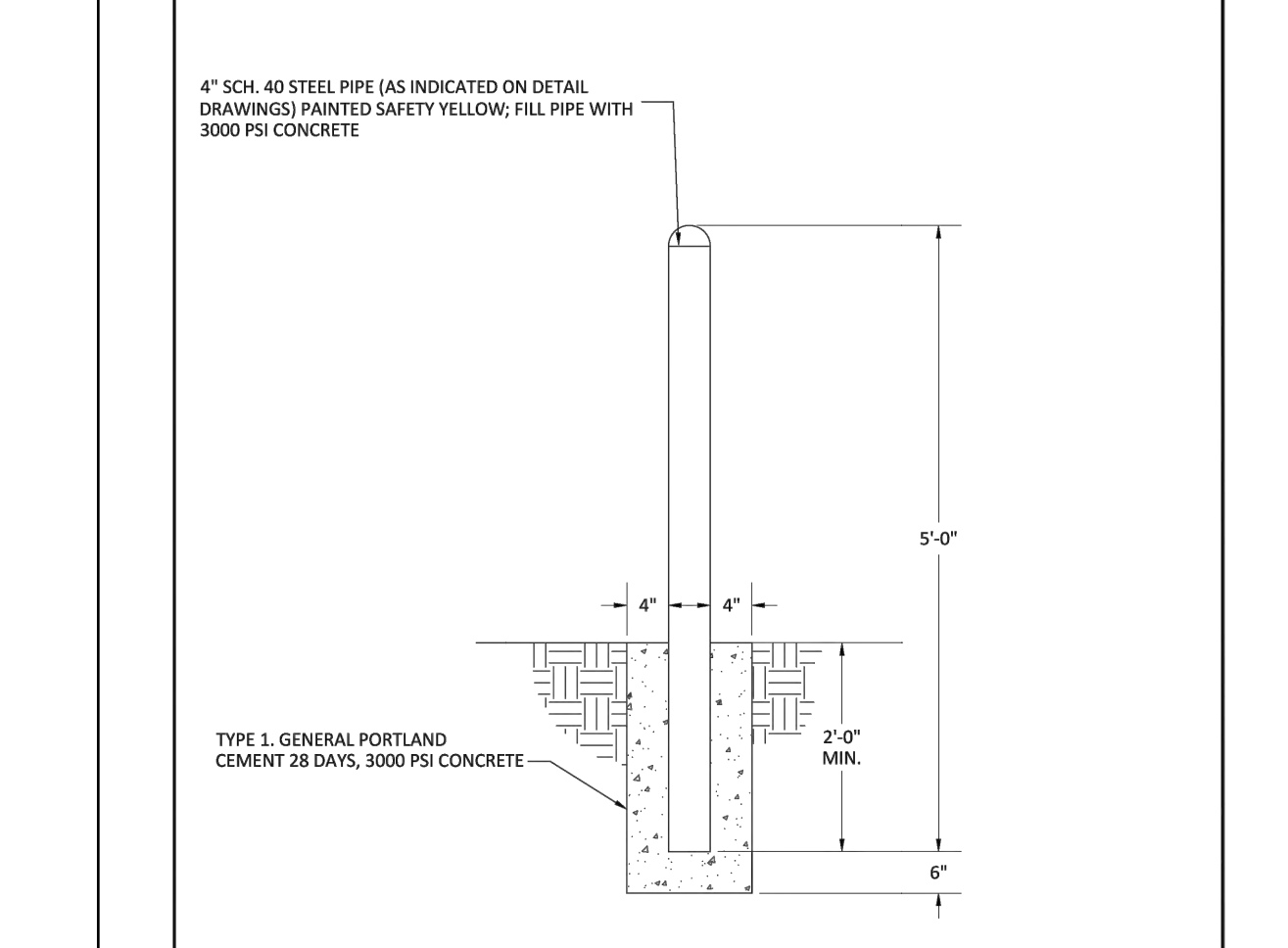
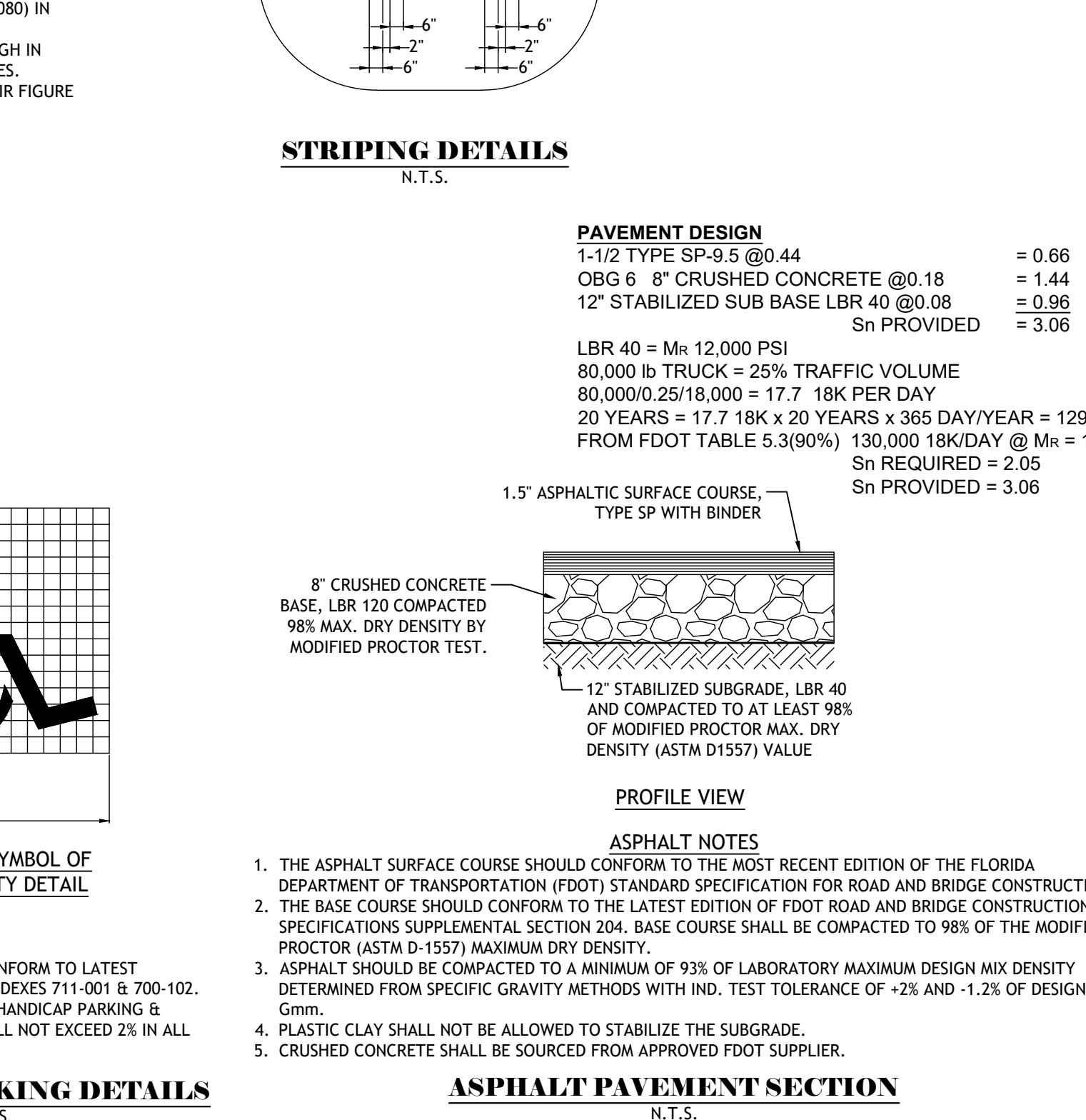
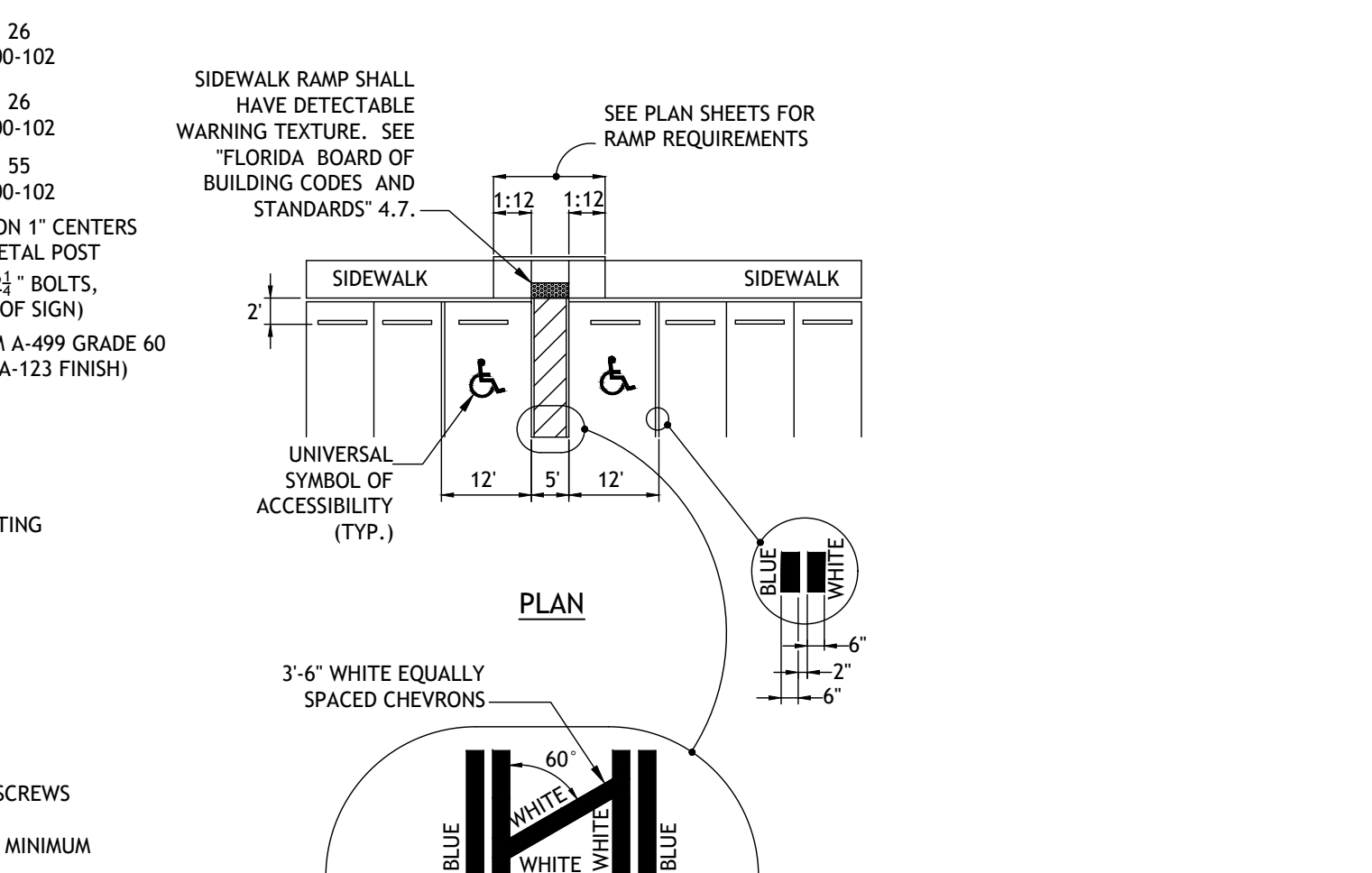
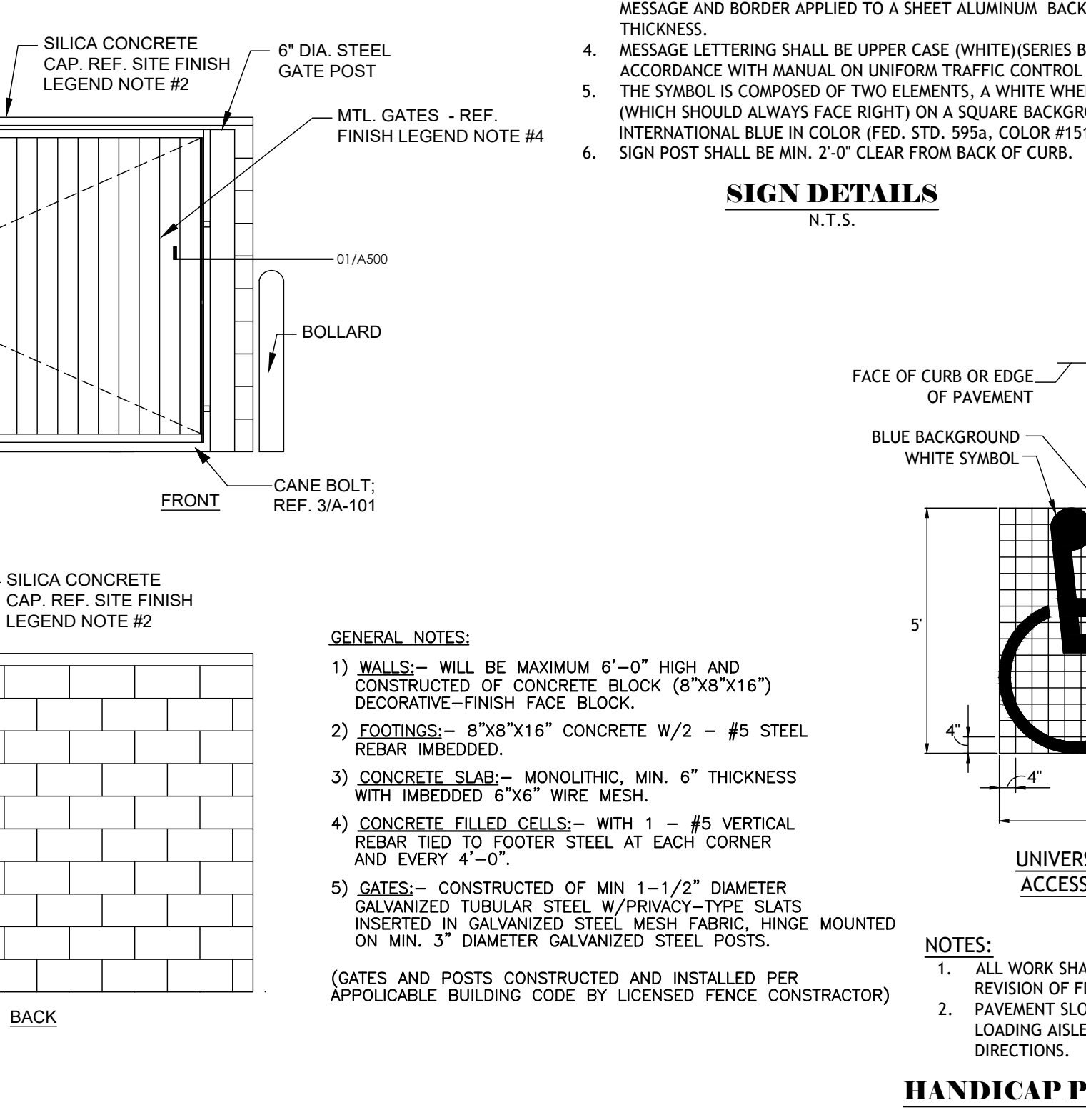
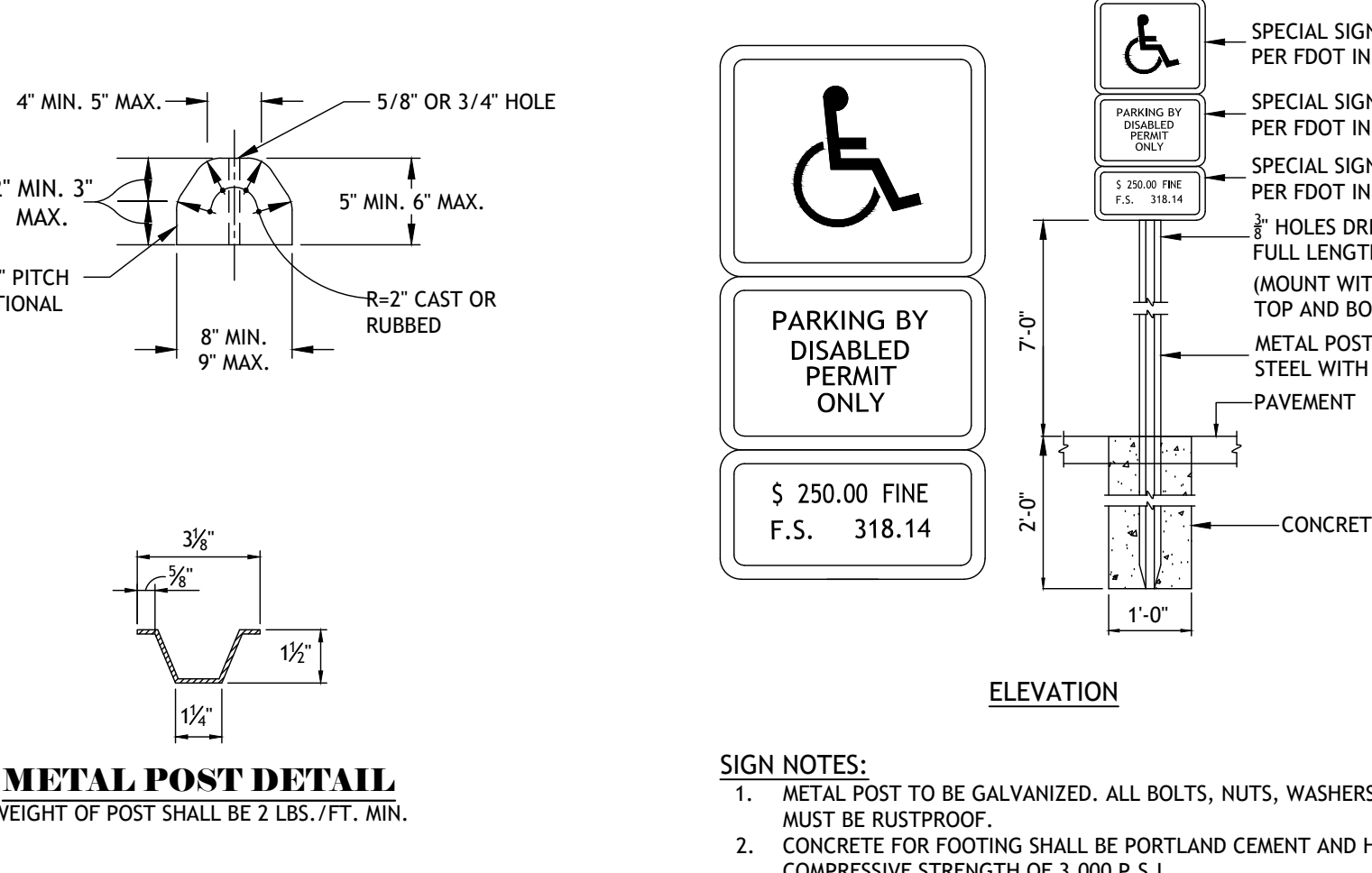
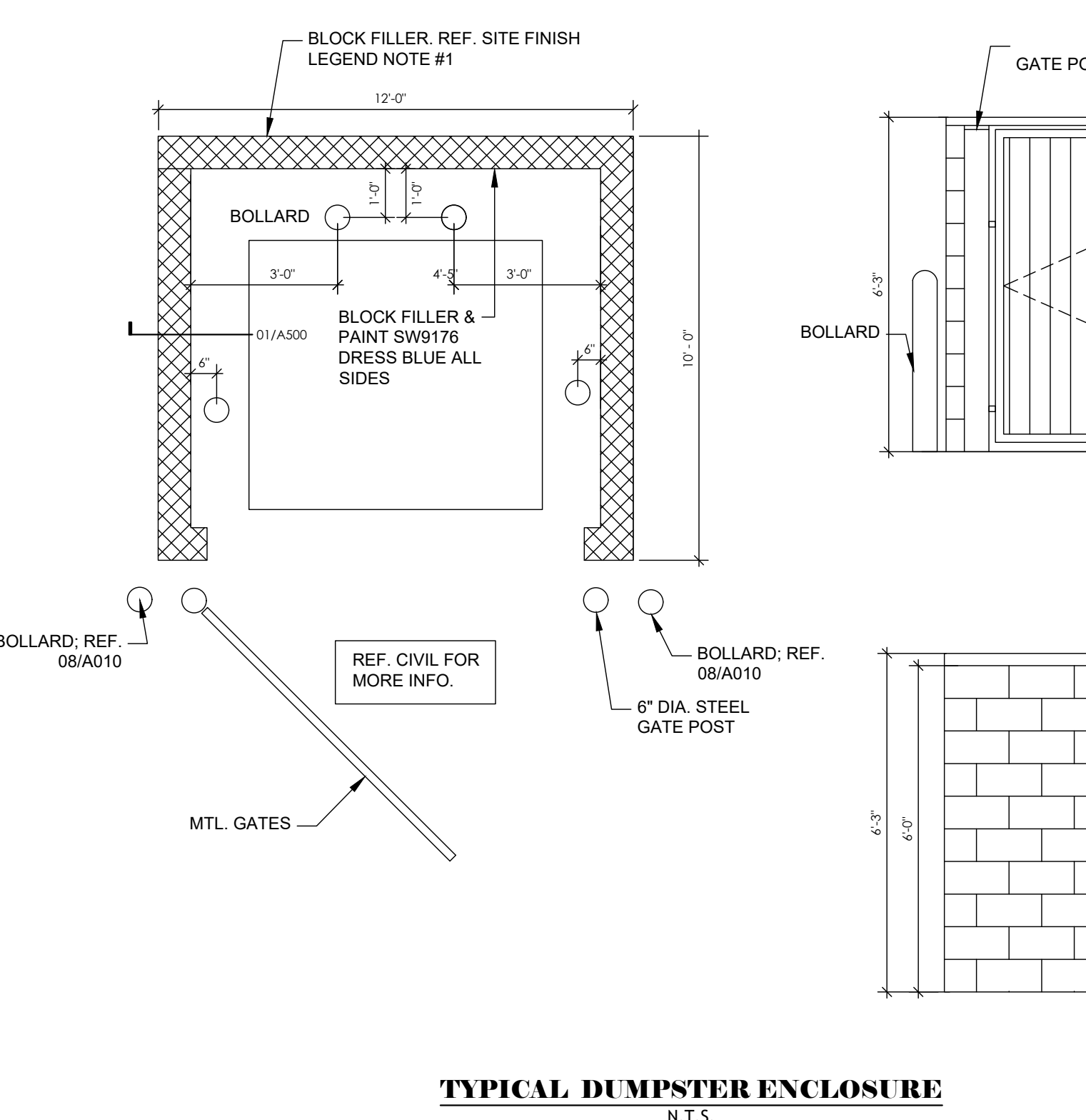
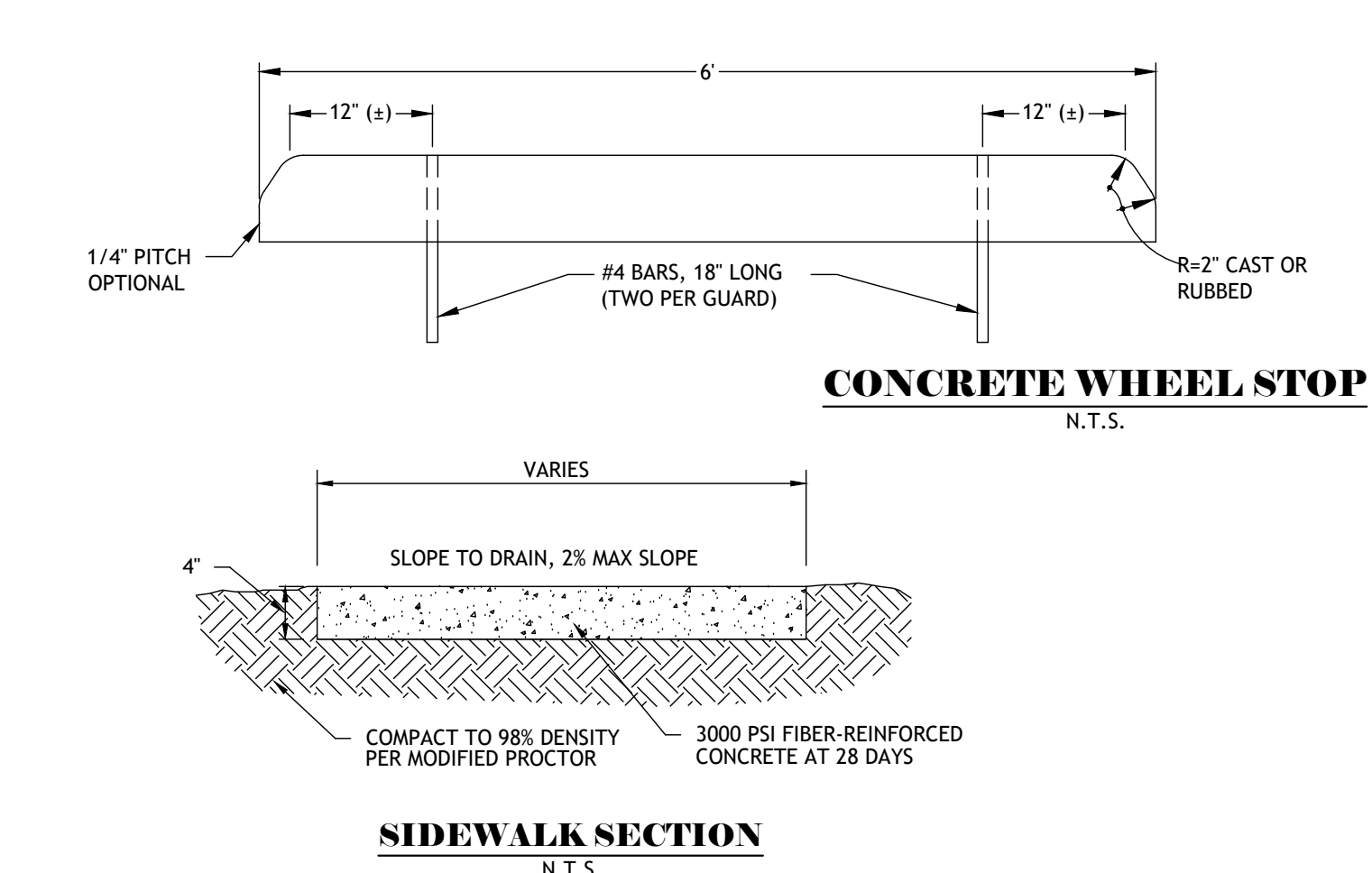
1217 US HWY 19 N,
 HOLIDAY, FLORIDA 34691

Northside Engineering, Inc.

C5.3



SEE NOTES DETAIL G-11												
	4"	6"	8"	12"	16"	20"	24"	30"	36"	42"	48"	
A	100	100	100	100	100	100	100	100	100	100	100	
B	100	100	100	100	100	100	100	100	100	100	100	
C	100	100	100	100	100	100	100	100	100	100	100	
D	100	100	100	100	100	100	100	100	100	100	100	
E	100	100	100	100	100	100	100	100	100	100	100	
F	100	100	100	100	100	100	100	100	100	100	100	
G	100	100	100	100	100	100	100	100	100	100	100	
H	100	100	100	100	100	100	100	100	100	100	100	
I	100	100	100	100	100	100	100	100	100	100	100	
J	100	100	100	100	100	100	100	100	100	100	100	
K	100	100	100	100	100	100	100	100	100	100	100	
L	100	100	100	100	100	100	100	100	100	100	100	
M	100	100	100	100	100	100	100	100	100	100	100	
N	100	100	100	100	100	100	100	100	100	100	100	
O	100	100	100	100	100	100	100	100	100	100	100	
P	100	100	100	100	100	100	100	100	100	100	100	
Q	100	100	100	100	100	100	100	100	100	100	100	
R	100	100	100	100	100	100	100	100	100	100	100	
S	100	100	100	100	100	100	100	100	100	100	100	
T	100	100	100	100	100	100	100	100	100	100	100	
U	100	100	100	100	100	100	100	100	100	100	100	
V	100	100	100	100	100	100	100	100	100	100	100	
W	100	100	100	100	100	100	100	100	100	100	100	
X	100	100	100	100	100	100	100	100	100	100	100	
Y	100	100	100	100	100	100	100	100	100	100	100	
Z	100	100	100	100	100	100	100	100	100	100	100	



Northside Engineering, Inc.

Civil, Land, Planning, Traffic Studies, Landscape
Due Diligence Reports, Land Use, Re-Zoning
Stormwater Management, Utility Design
Construction Administration

300 South Belcher Road, Clearwater, Florida 34616
Tel: 727-442-3888 Fax: 727-442-3038
tec@northsideengineering.net Est. 1989

Donald B. Fairbairn, P.E. #44971	Registry # 31306
COPIES OF THESE PLANS ARE NOT VALID UNLESS EMBEDDED WITH THE SIGNING ENGINEER'S SEAL	

CONSTRUCTION DETAILS

**RETAIL @SWC FLORA AVE
& US HWY 19**

1217 US HWY 19 N,
HOLIDAY, FLORIDA 34691

PROJECT # 2305
ISSUE DATE: 01/12/23

REVISIONS:

No.	Date	Description
08/23/24	County Com.	
12/10/24	RES. TO FDOT COM.	

Northside Engineering, Inc.

C6.1

