

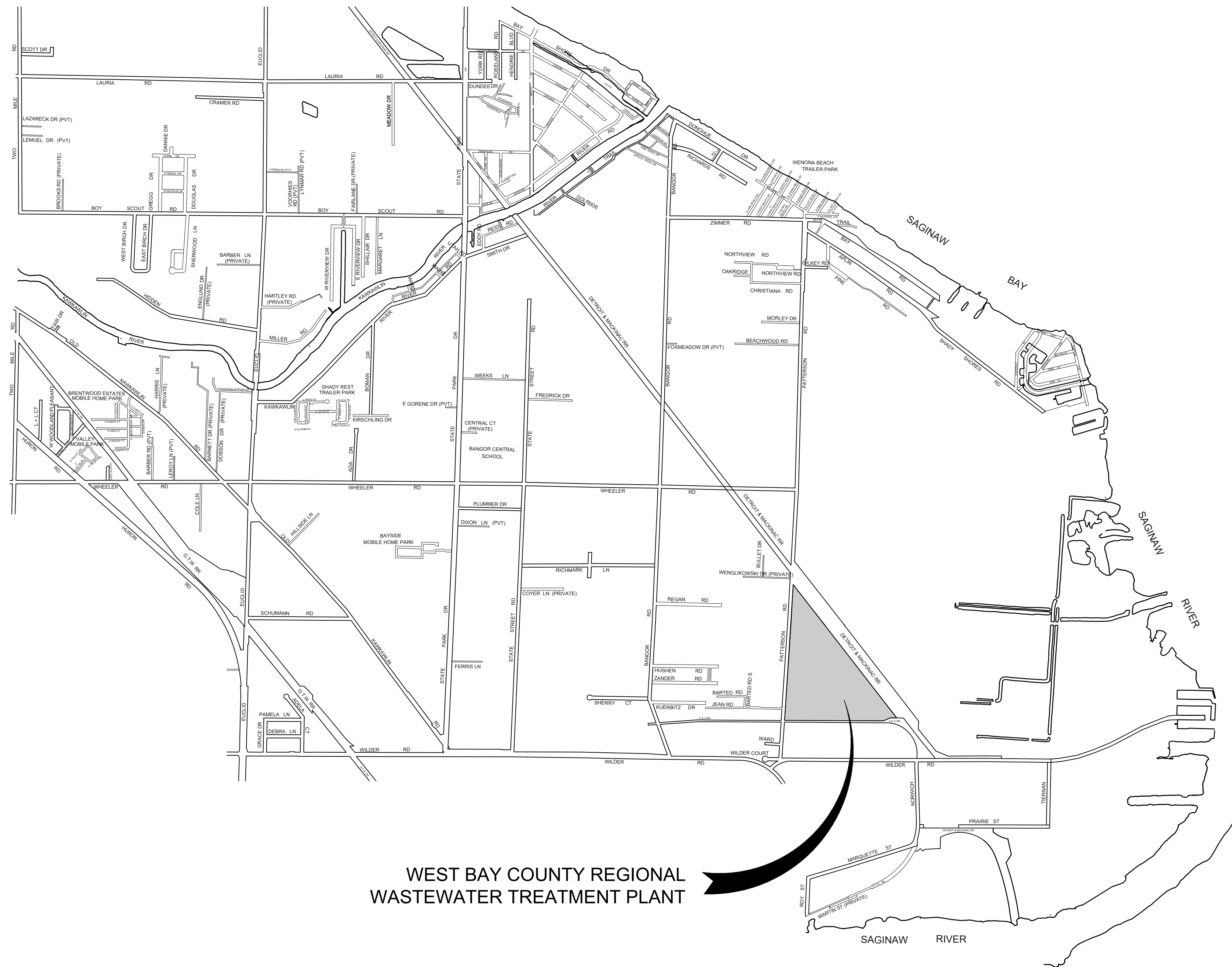
BAY COUNTY

VICINITY MAP

DEPARTMENT OF WATER AND SEWER BAY COUNTY, MICHIGAN

WEST BAY COUNTY REGIONAL WASTEWATER TREATMENT PLANT

PHASE I RAW SEWAGE FORCEMAIN SEPTEMBER 2019



WEST BAY COUNTY REGIONAL
WASTEWATER TREATMENT PLANT

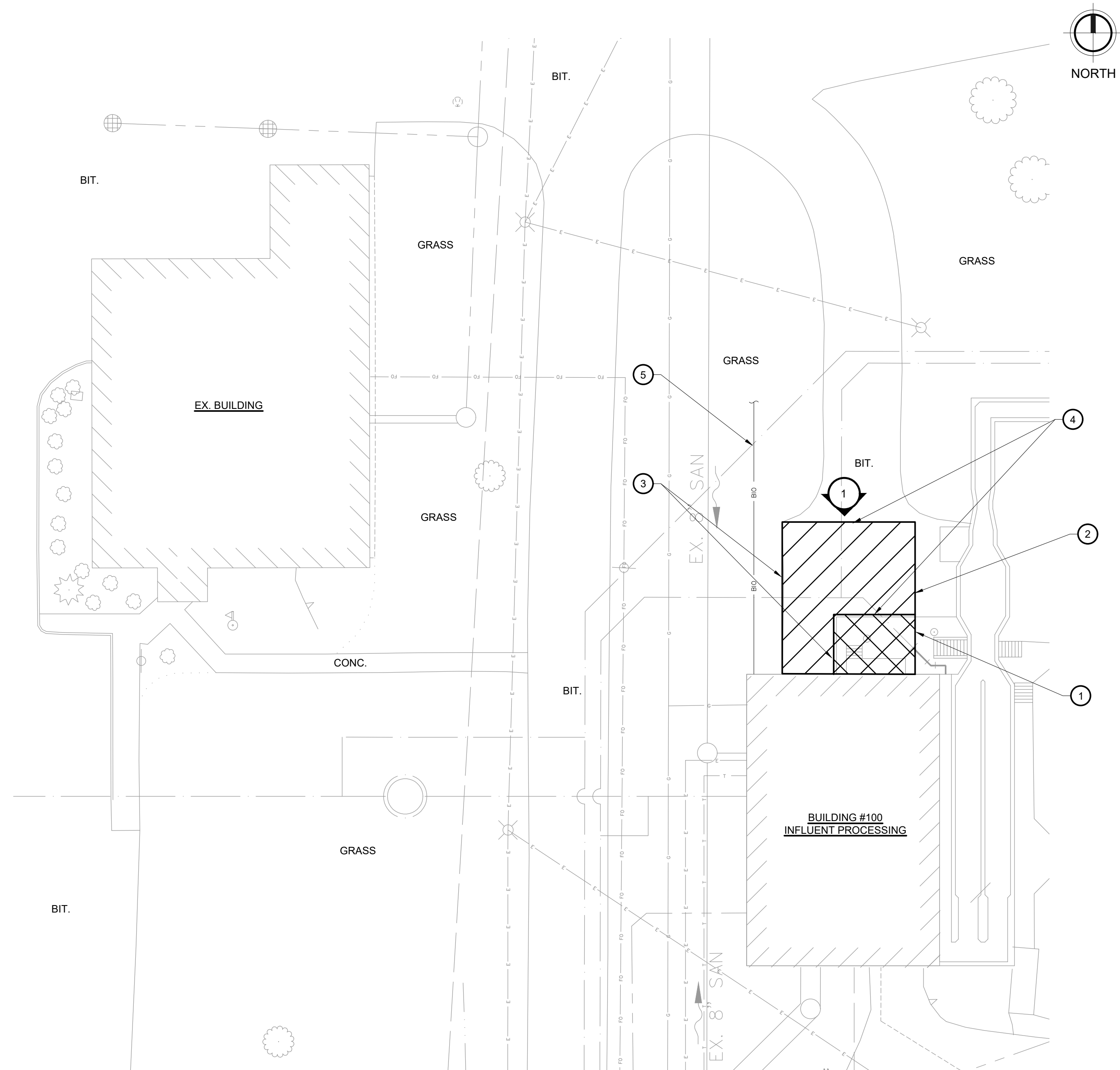
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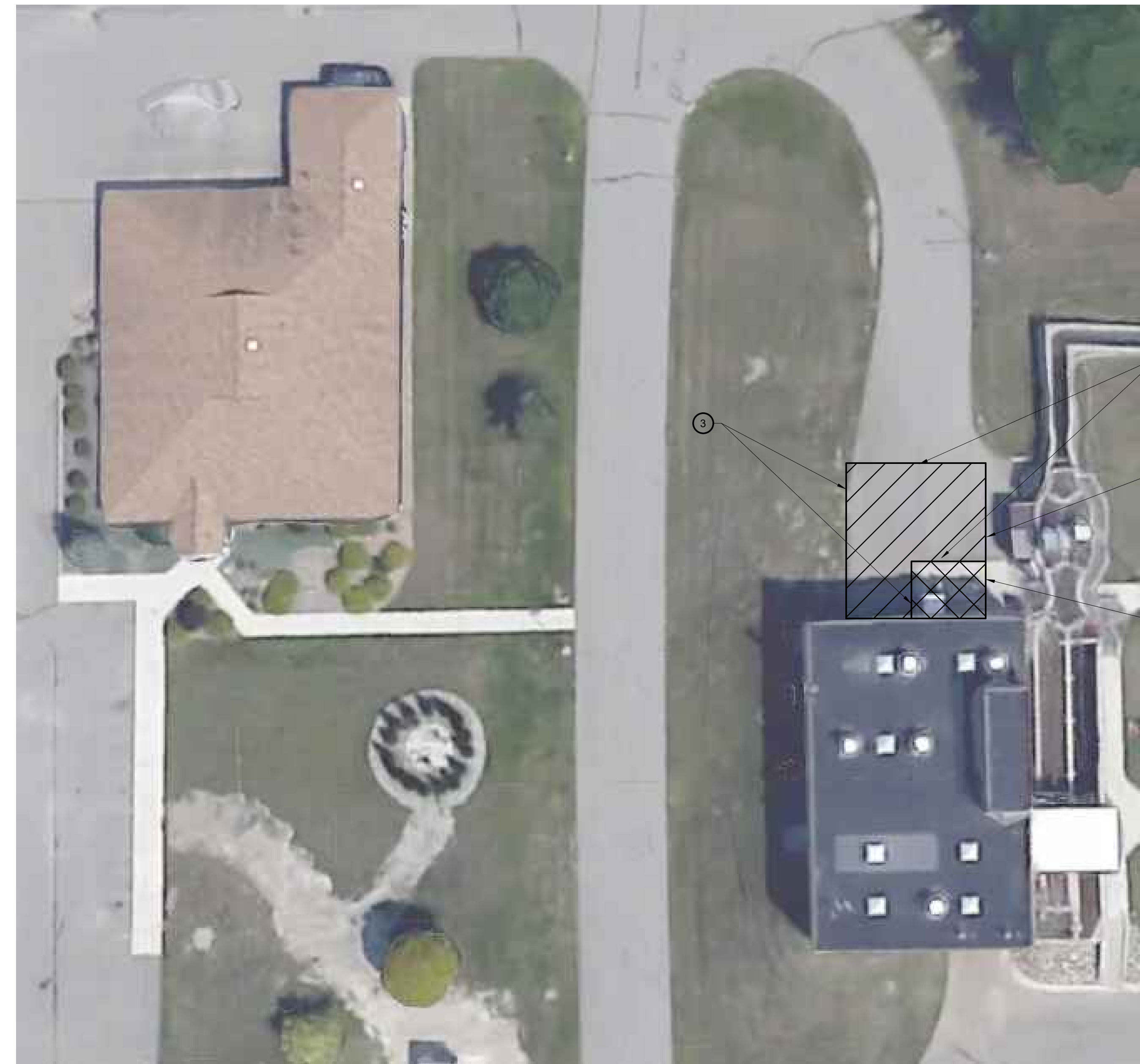
LOCATION MAP



Know what's below.
Call before you dig.



ENLARGED SITE PLAN
SCALE: 1"=20'-0"

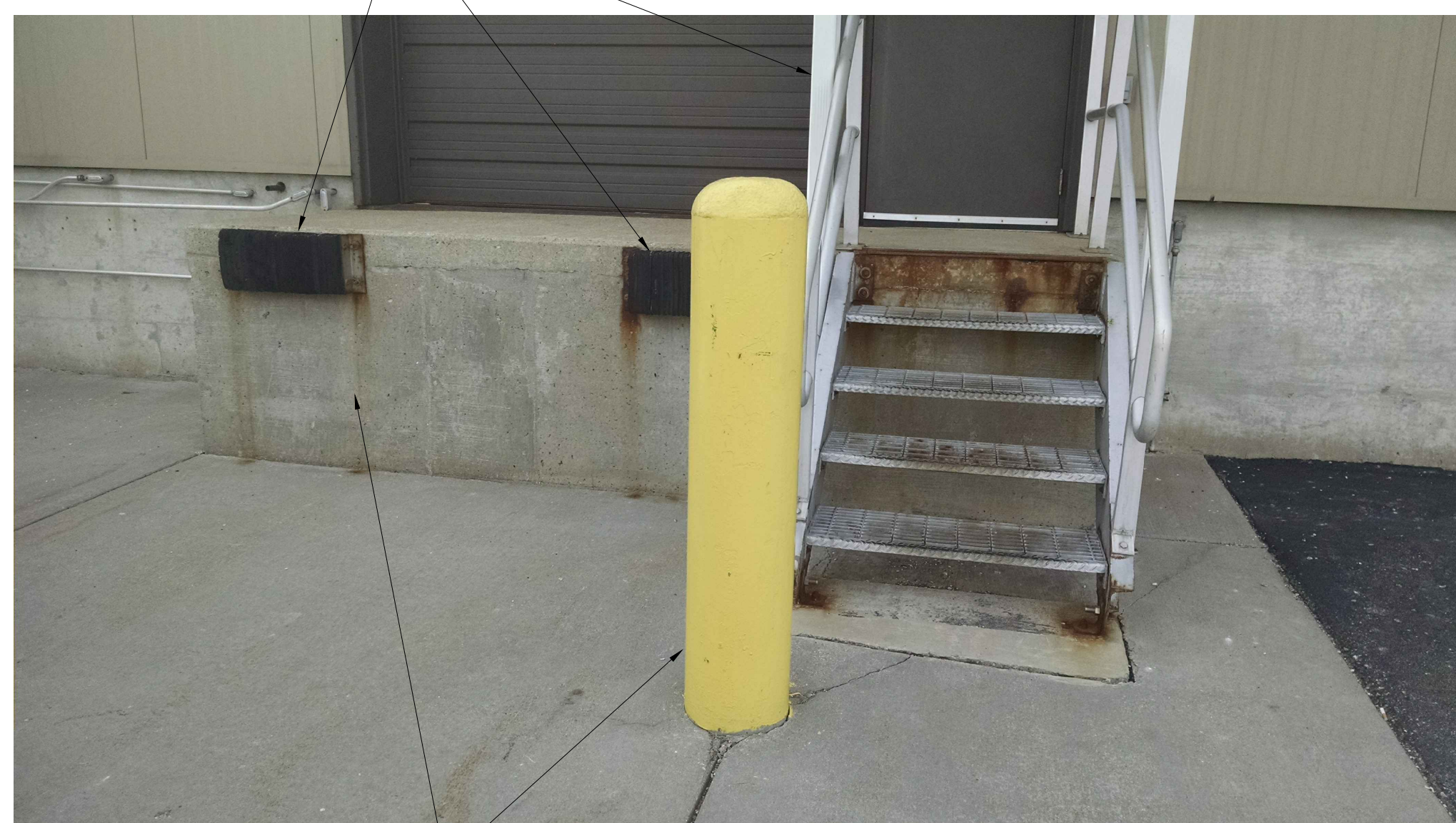


AERIAL VIEW
APPROXIMATE SCALE: 1"=20'-0"

DEMOLITION NOTES:

- 1 CONTRACTOR TO REMOVE APPROXIMATELY 300 SQ. FT. OF CONCRETE PAVEMENT, ALONG WITH WORK SHOWN IN PHOTO 1.
- 2 CONTRACTOR TO REMOVE APPROXIMATELY 1025 SQ. FT. OF BITUMINOUS PAVEMENT.
- 3 ALL MATERIALS TO BE REMOVED AND DISPOSED OF OFF-SITE.
- 4 PAVEMENT TO BE SAWCUT WITH PROTECTED EDGES FOR REPAVEMENT.
- 5 EXISTING BIOGAS PIPING IS UNDOCUMENTED. CONTRACTOR TO FIELD VERIFY ALIGNMENT AND DEPTH AND PROTECT PIPING DURING CONSTRUCTION.

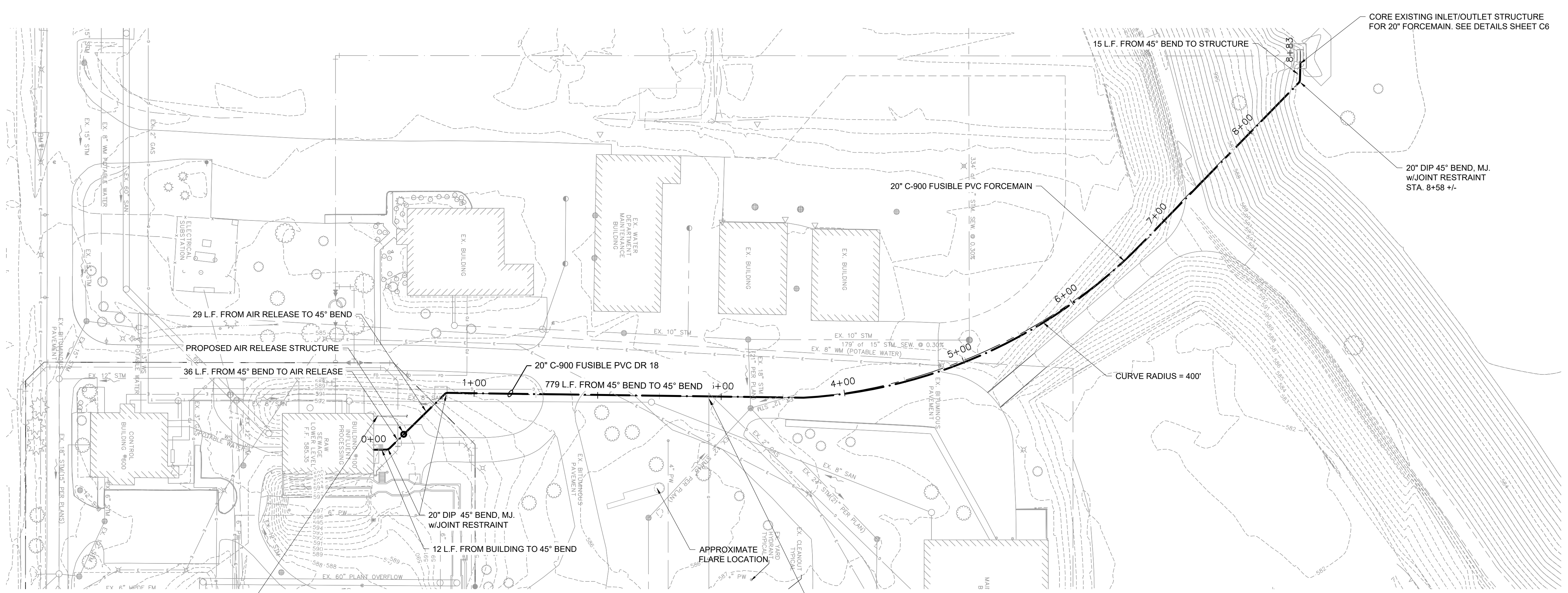
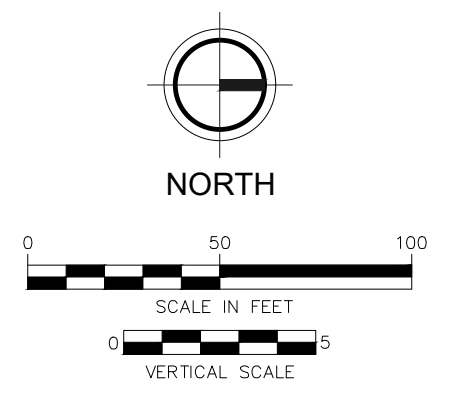
OWNER TO REMOVE AND REINSTALL AWNING (NOT SHOWN), STAIRWAY AND DOCK BUMPERS



CONTRACTOR TO REMOVE AND RECONSTRUCT CONCRETE LOADING DOCK AND BOLLARD. SEE DETAIL, SHEET C8.

PHOTO 1

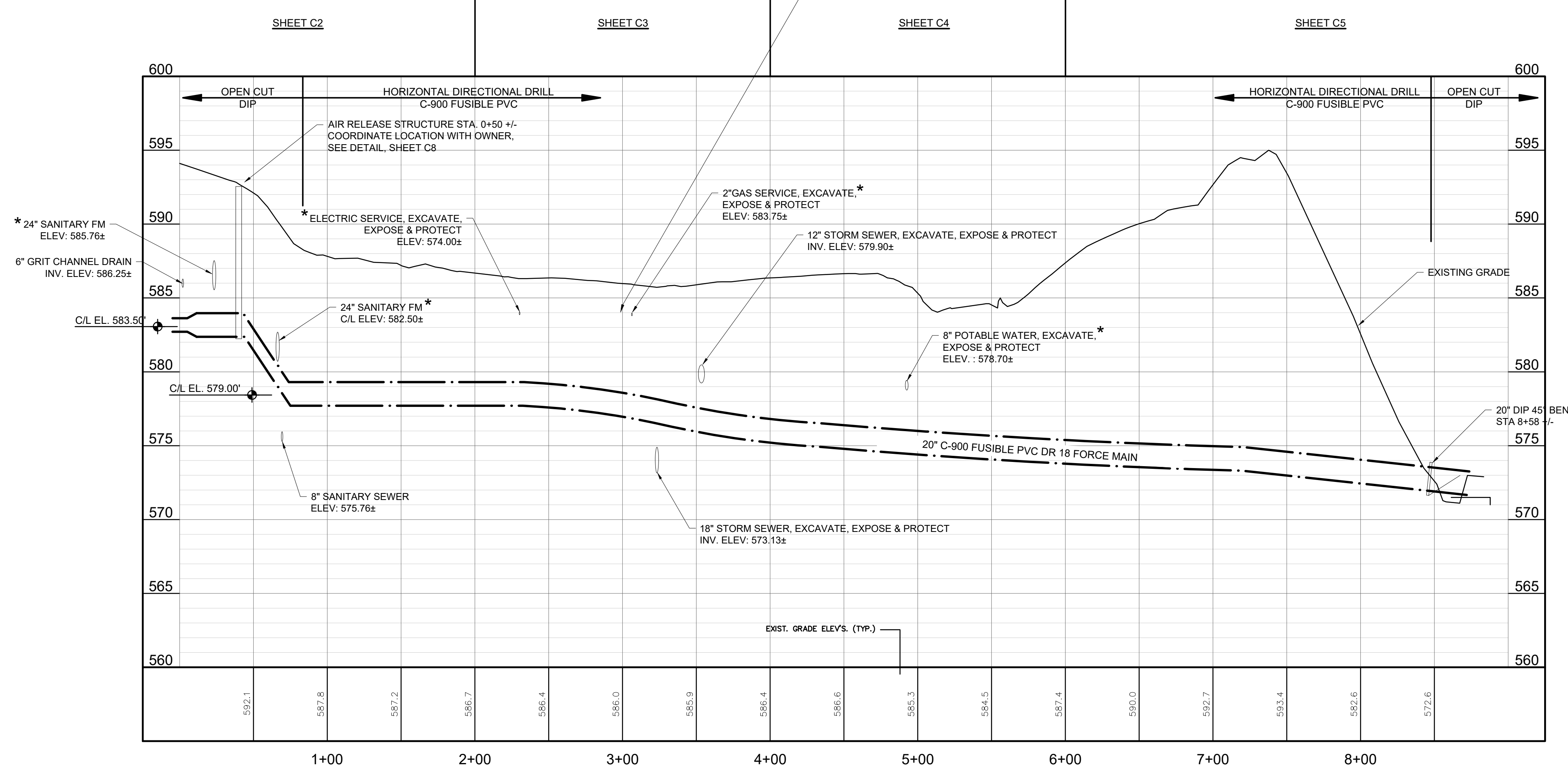
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CAUTION:
UNDOCUMENTED BIOGAS LINE -
BURIED. FIELD LOCATE, EXPOSE PRIOR
TO START OF CONSTRUCTION.

CAUTION:
UNDOCUMENTED BIOGAS LINE -
BURIED. FIELD LOCATE, EXPOSE PRIOR
TO START OF CONSTRUCTION.

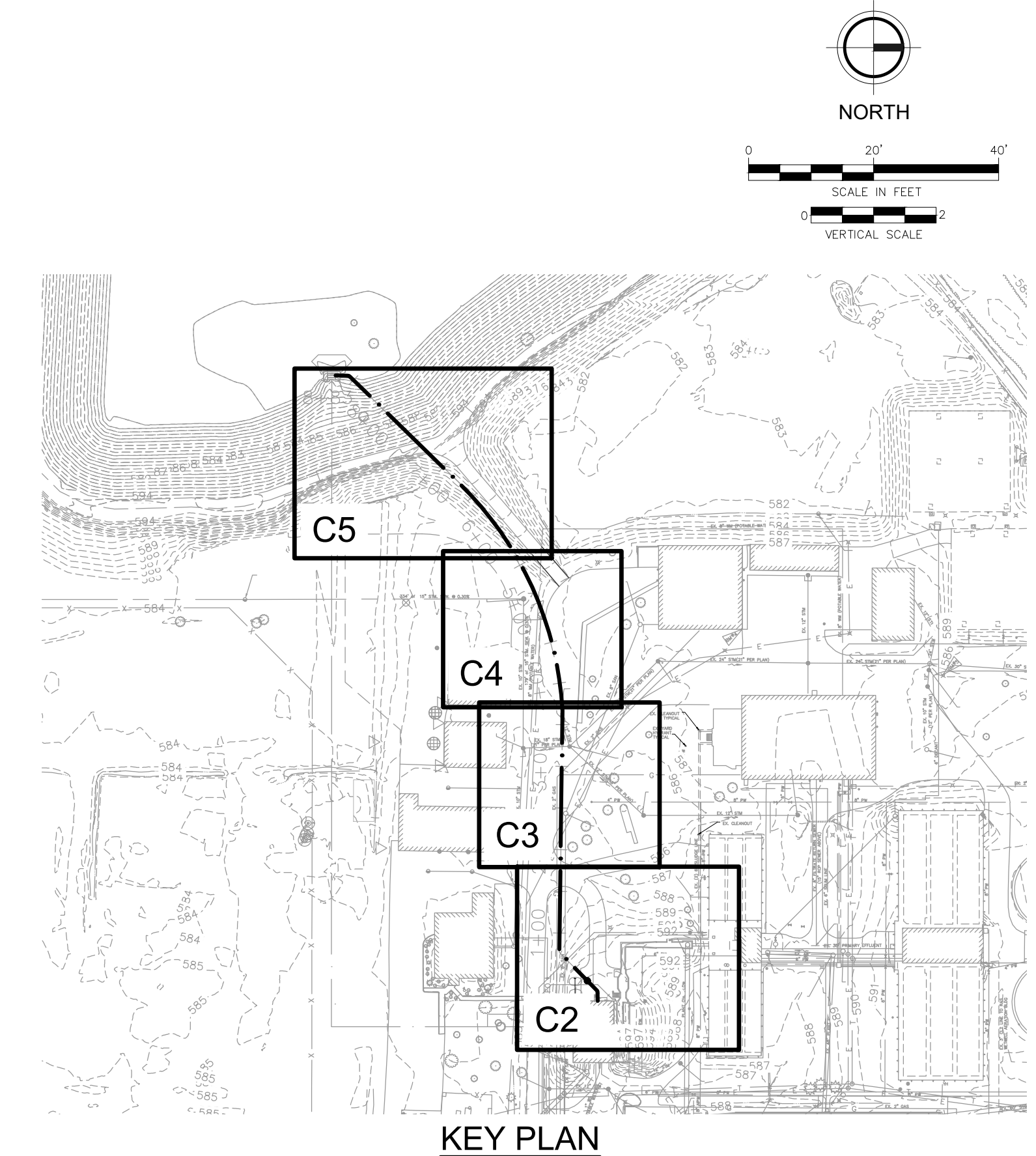
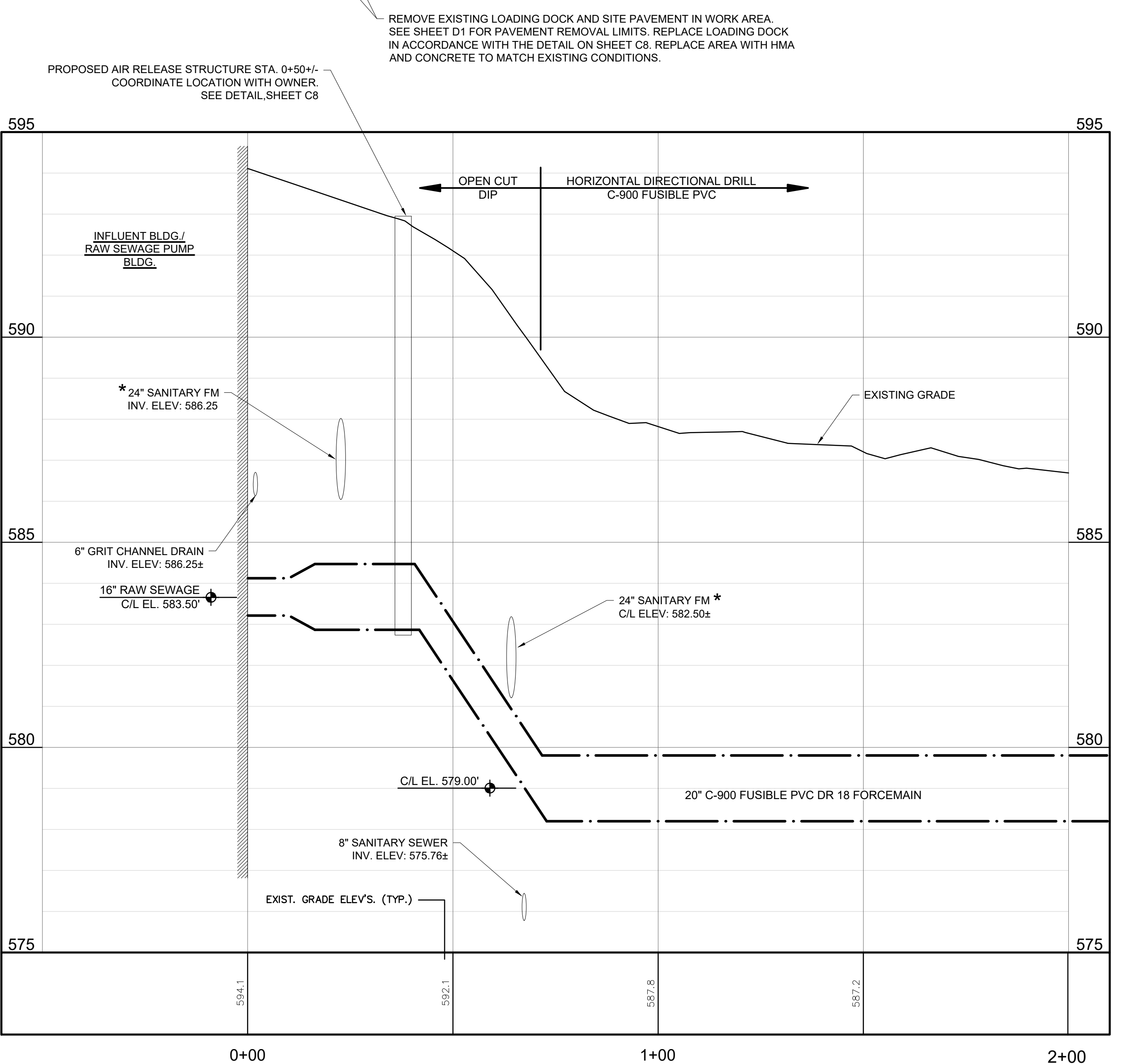
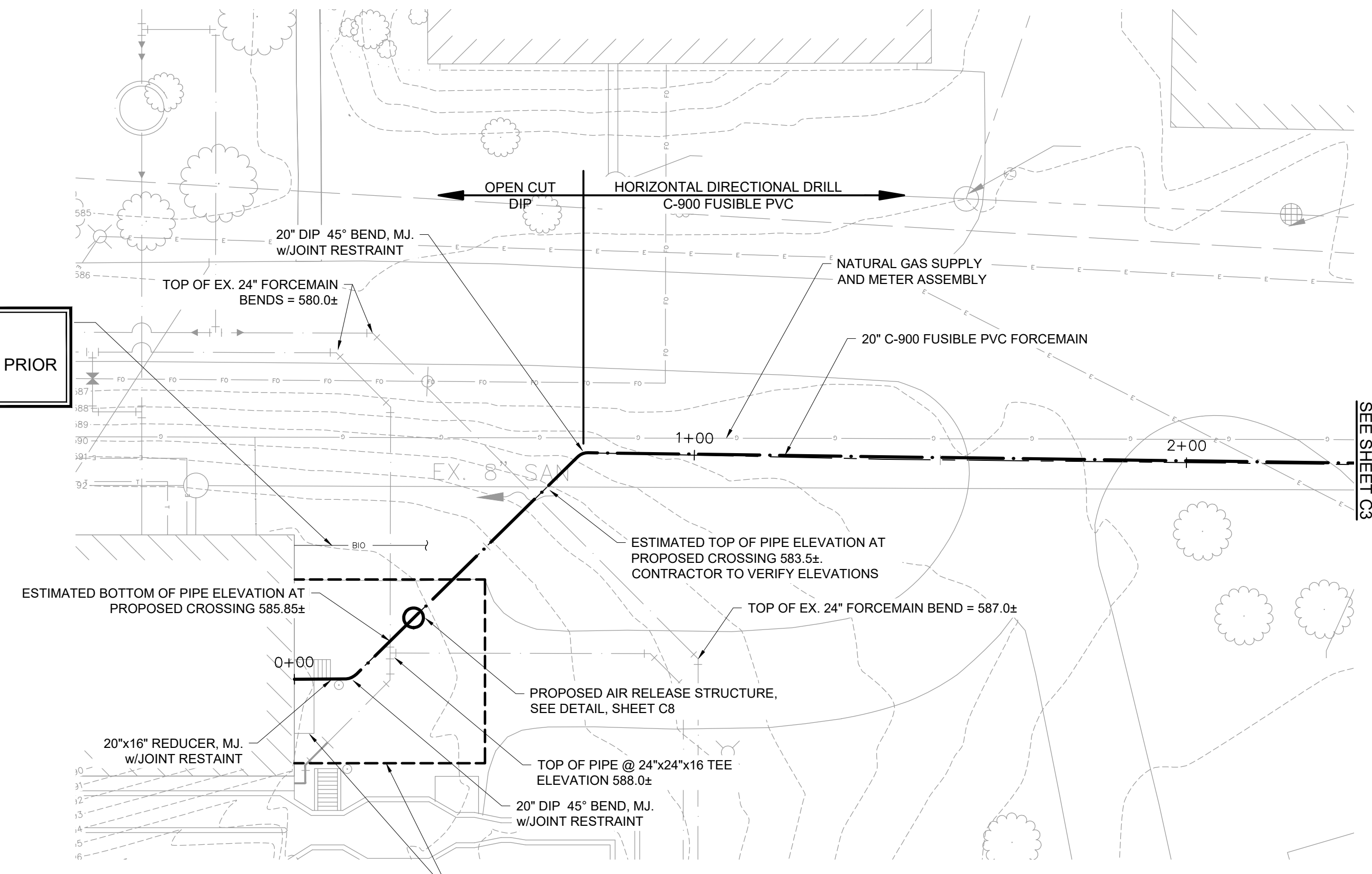
LEGEND:
 PROPOSED SANITARY FORCEMAIN
 REMOVE AND REPLACE CONCRETE
 * = ESTIMATED FROM CONSTRUCTION RECORD DRAWINGS



- NOTES:**
1. ALL EXCESS MATERIALS RESULTING FROM DIRECTIONAL DRILLING OPERATION AND ALL OTHER REMOVED MATERIAL SHALL BE DISPOSED OF OFF SITE. ALL MATERIALS SHALL BE DISPOSED IN ACCORDANCE WITH ALL LAWS, REGULATIONS, CODES, ORDINANCE, AND SPECIFICATIONS.
 2. BEFORE STARTING EXCAVATION/DRILLING FIELD VERIFY ALL UNDERGROUND UTILITIES WITHIN WORK AREA. EXCAVATE AND EXPOSE EXISTING UNDERGROUND UTILITIES PRESENTING POTENTIAL CONFLICT TO DETERMINE EXACT LOCATION AND ELEVATION.
 3. PROTECT ANY EXCAVATION BY SHORING, BRACING, SHEET PILING OR OTHER METHODS AS REQUIRED.
 4. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE DRILL ENTRANCE AND EXIT PITS.
 5. DRILLING FLUID WILL NOT BE ALLOWED TO FLOW FREELY ON SITE OR AROUND THE ENTRANCE AND EXIT PITS. FLUIDS SPILLED MUST BE REMOVED AS SOON AS POSSIBLE AND THE GROUND RESTORED TO ORIGINAL CONDITION.
 6. NOTIFY ENGINEER AND OBTAIN INSTRUCTIONS TO PROCEED WHERE THERE IS A GRADE DISCREPANCY, OR AN OBSTRUCTION NOT SHOWN ON THE PLANS.
 7. ALL OPEN CUT PIPING MUST BE BACKFILLED WITH 6A GRAVEL AND HAVE A MINIMUM OF 12" COVER.

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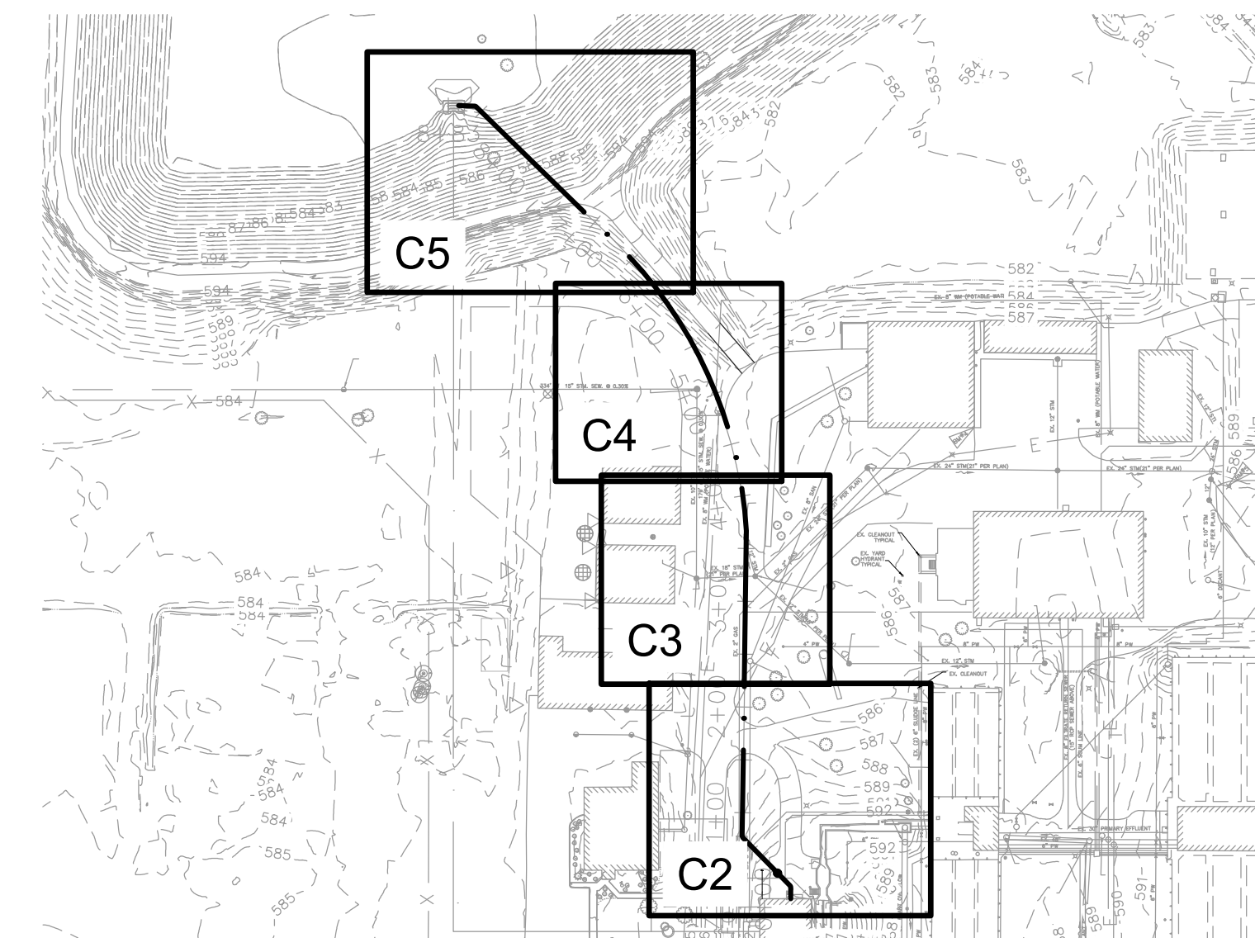
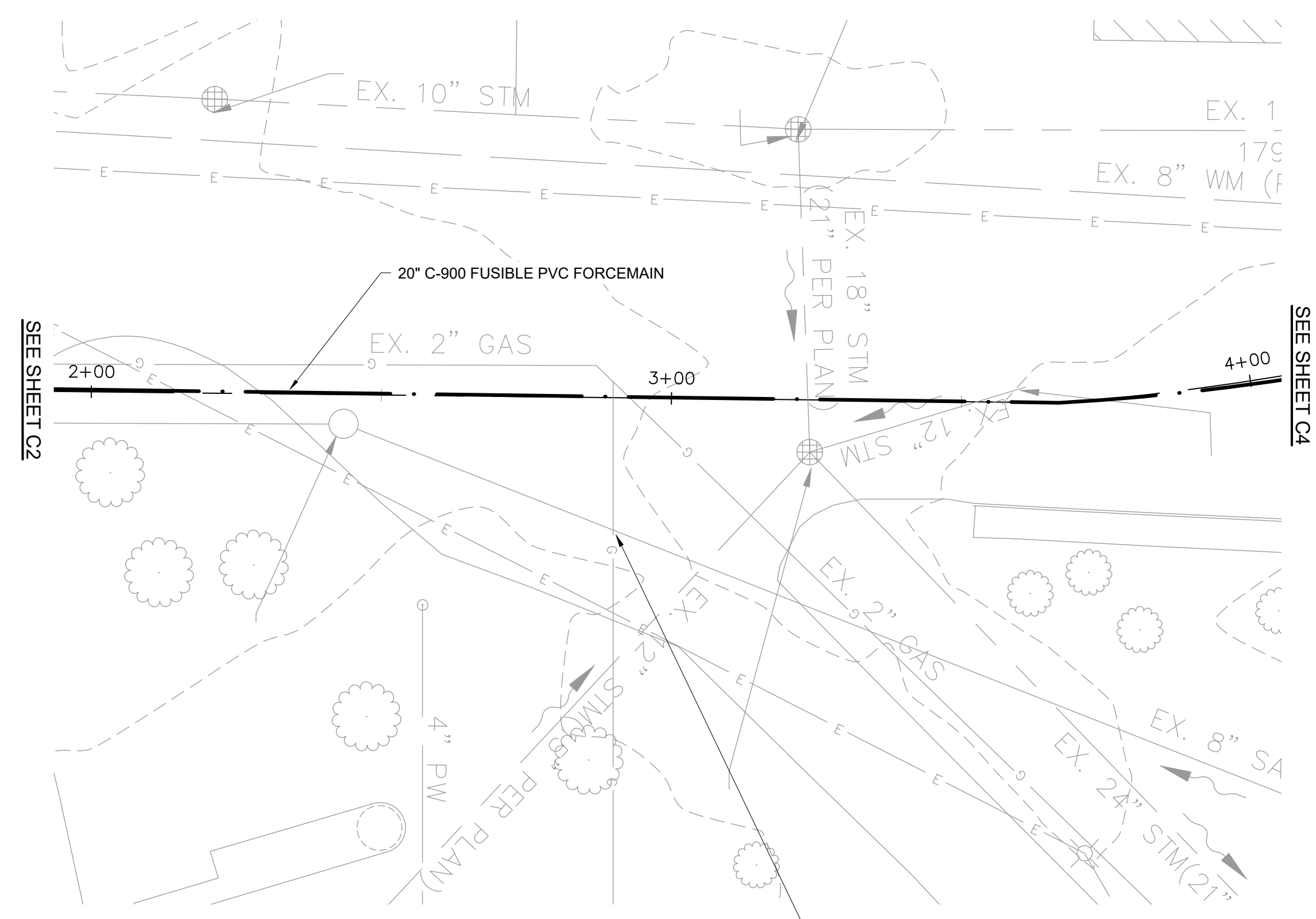
CAUTION:
UNDOCUMENTED BIOGAS LINE -
BURIED. FIELD LOCATE EXPOSE PRIOR
TO START OF CONSTRUCTION.



LEGEND:
 PROPOSED SANITARY FORCEMAIN
 * = ESTIMATED FROM CONSTRUCTION RECORD DRAWINGS

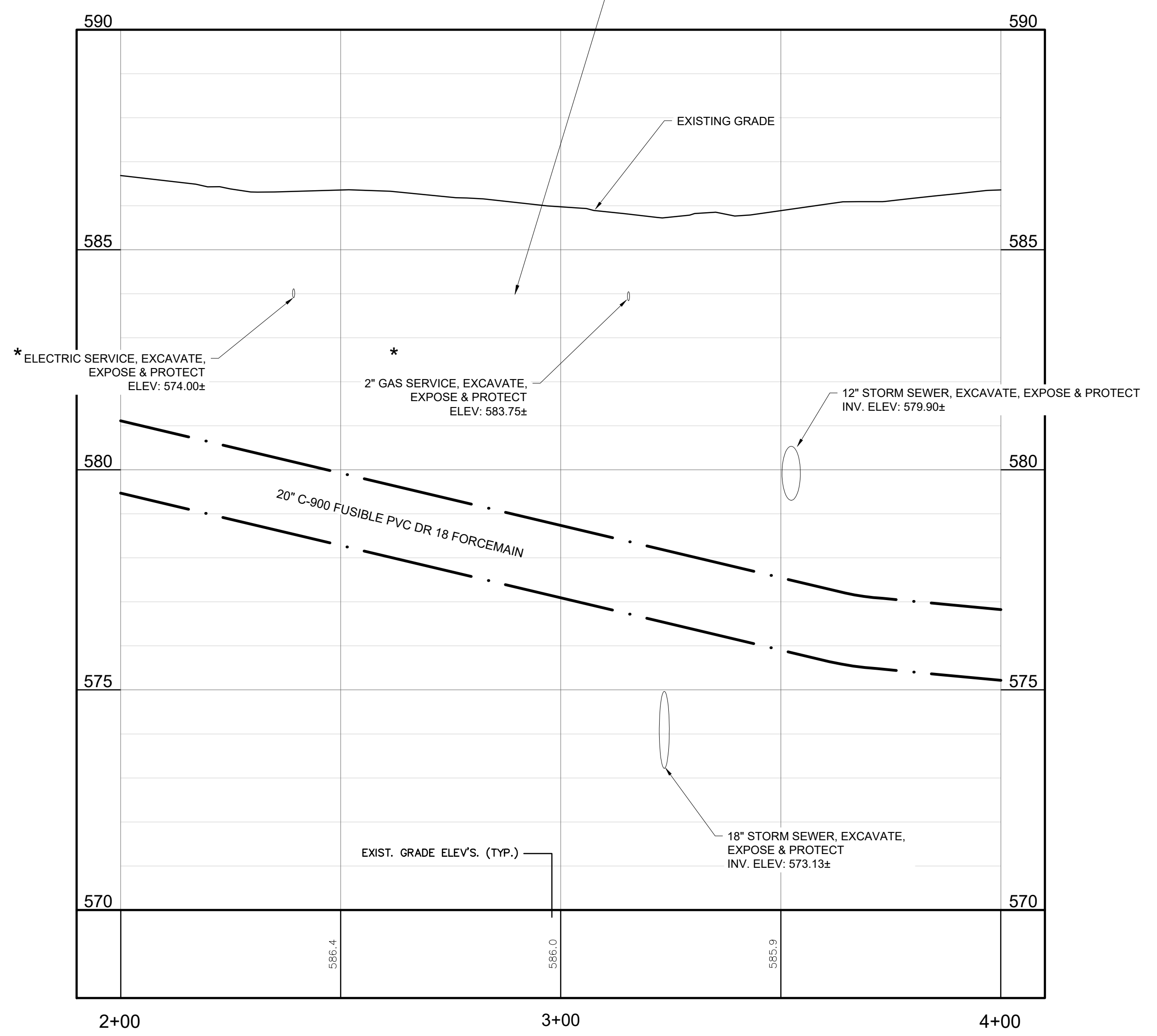
NOTE:
 1. TOP OF PIPE ELEVATION INFORMATION FROM RECORD DRAWINGS.
 CONTRACT #1, ENGINEER: FLEIS & VANDENBRINK, PROJECT NO. 803680,
 SHEET C7.

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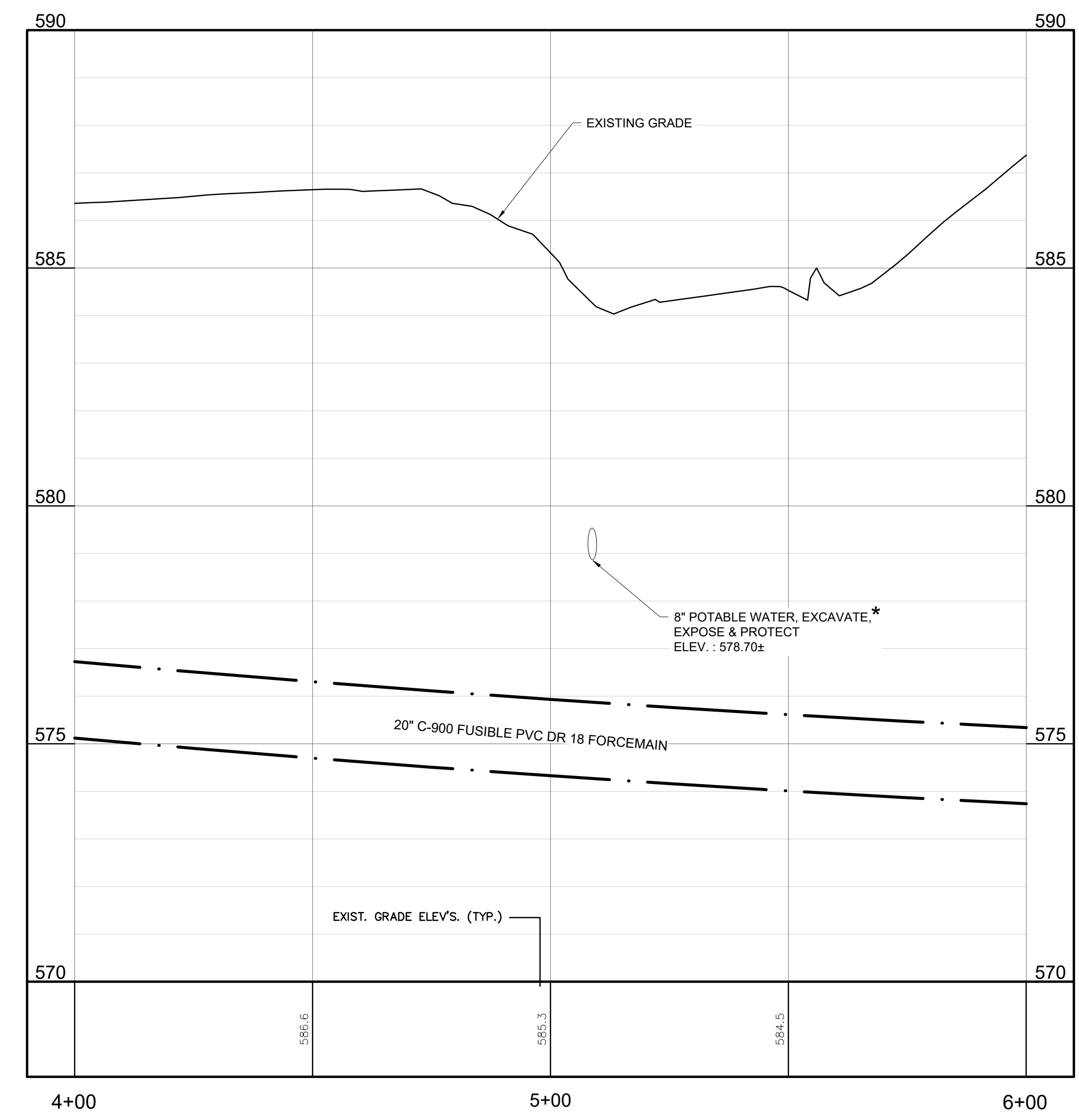
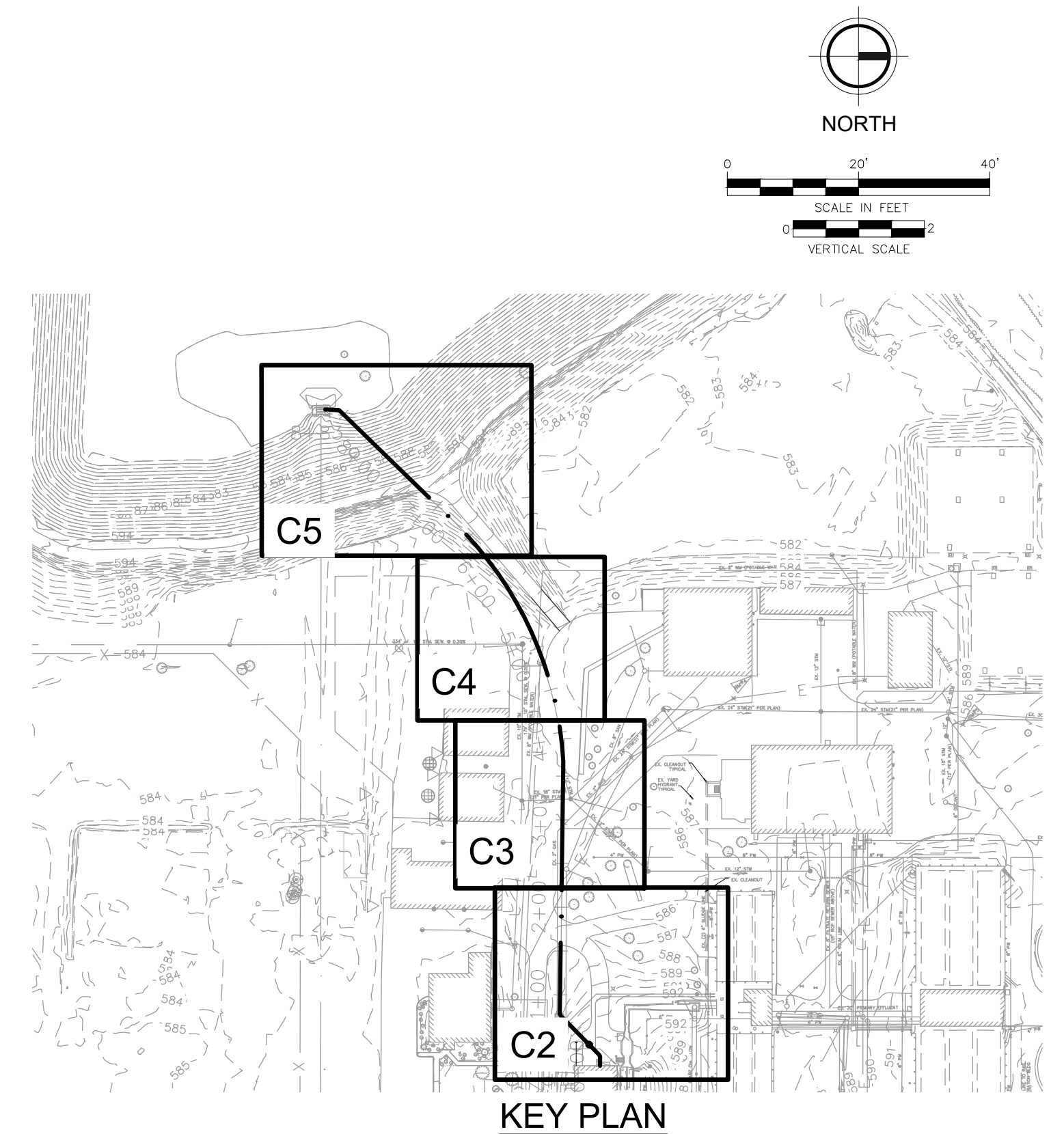


CAUTION:
 UNDOCUMENTED BIOGAS LINE -
 BURIED. FIELD LOCATE, EXPOSE PRIOR
 TO START OF CONSTRUCTION.

LEGEND:
 - - - - - PROPOSED SANITARY FORCEMAIN
 * = ESTIMATED FROM CONSTRUCTION RECORD DRAWINGS



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LEGEND:
 - - - - - PROPOSED SANITARY FORCEMAIN
 * = ESTIMATED FROM CONSTRUCTION RECORD DRAWINGS

FLEISCHMANN
 DESIGN. BUILD. OPERATE.

2960 Lucerne Drive SE
 Grand Rapids, MI 49546
 P: 616.977.1000
 F: 616.977.1005

Issued For Bid 09/25/2019 JMB 1

REVISION:

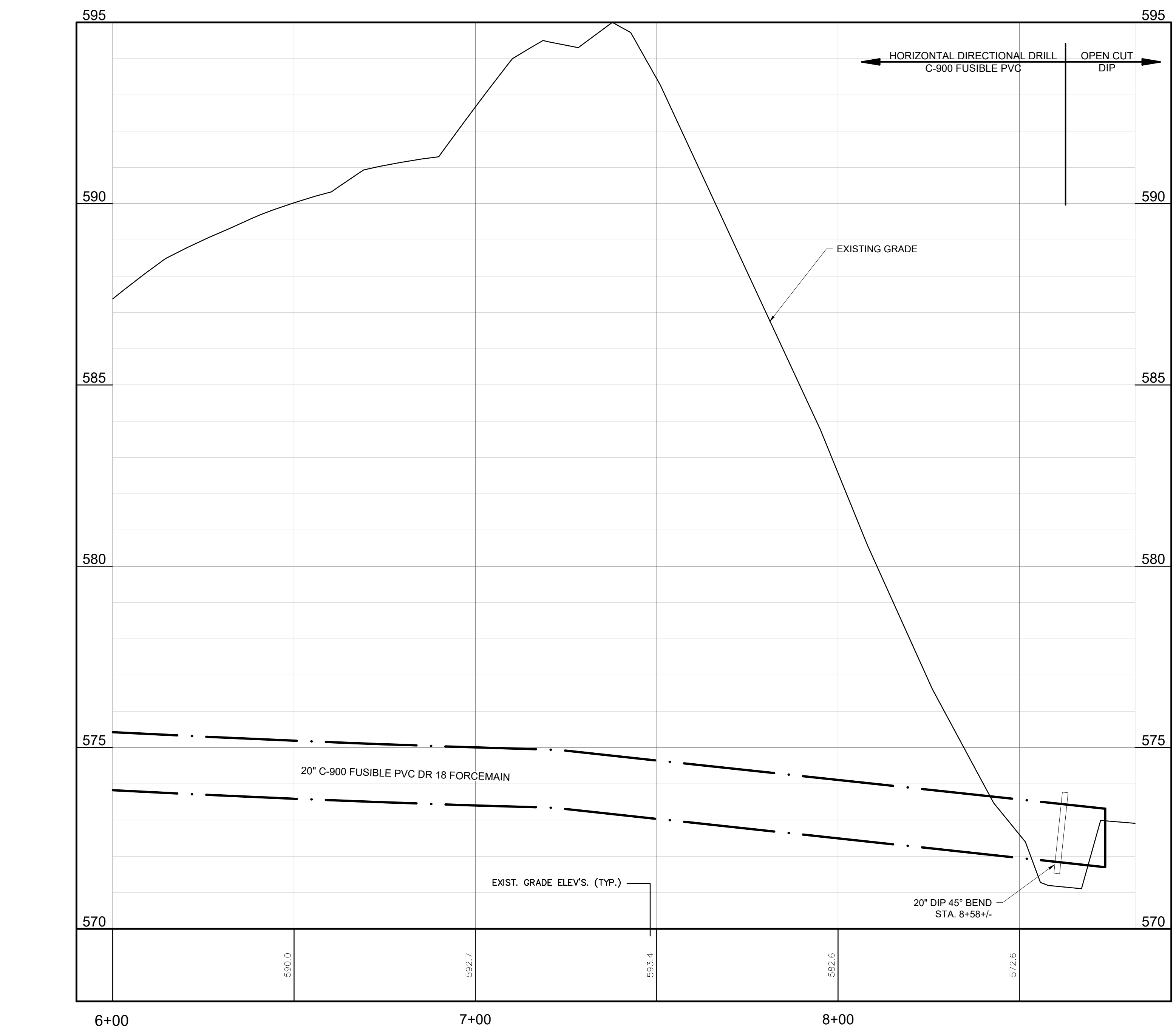
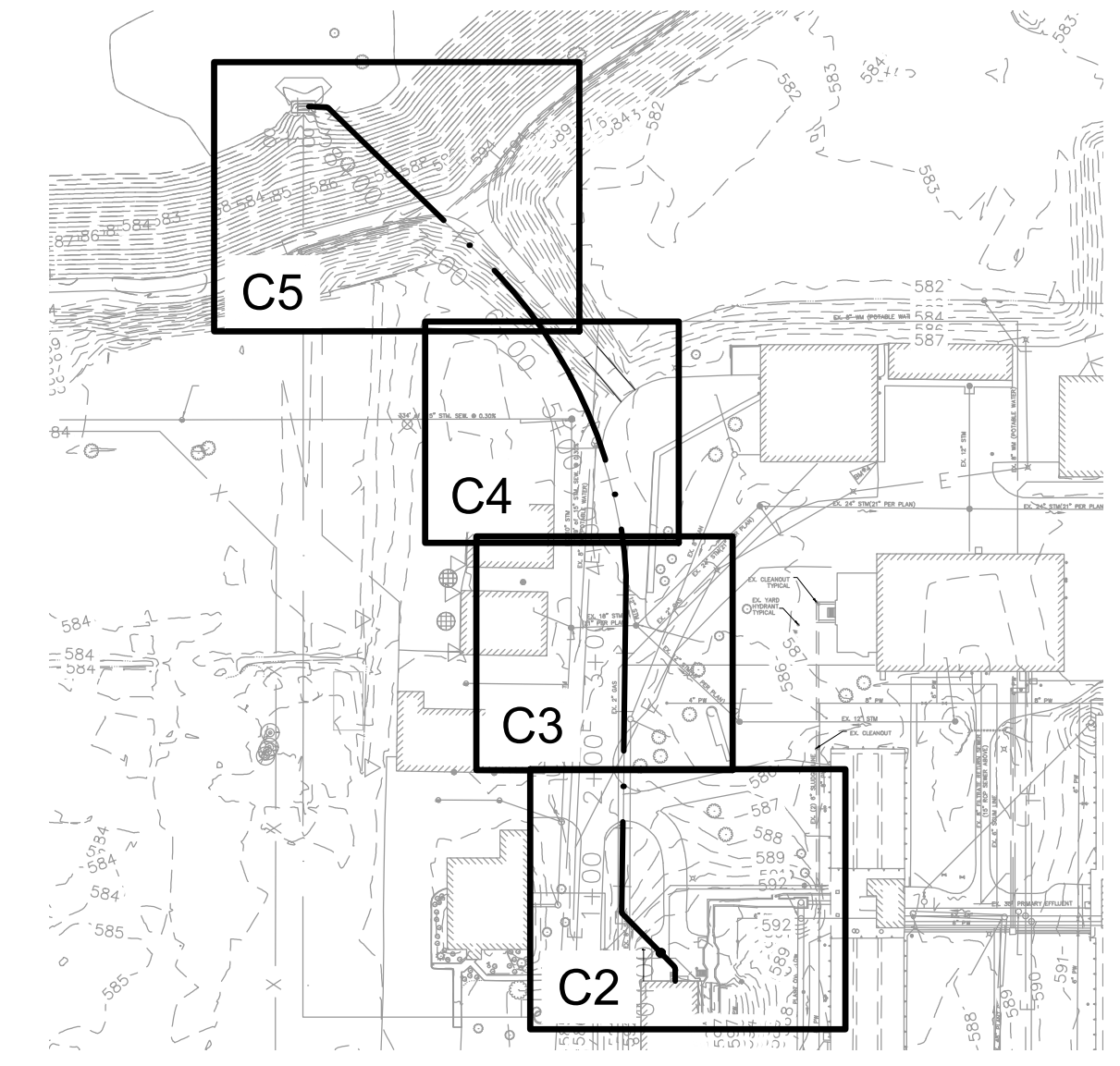
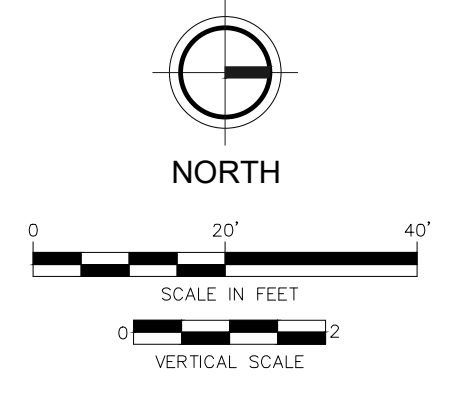
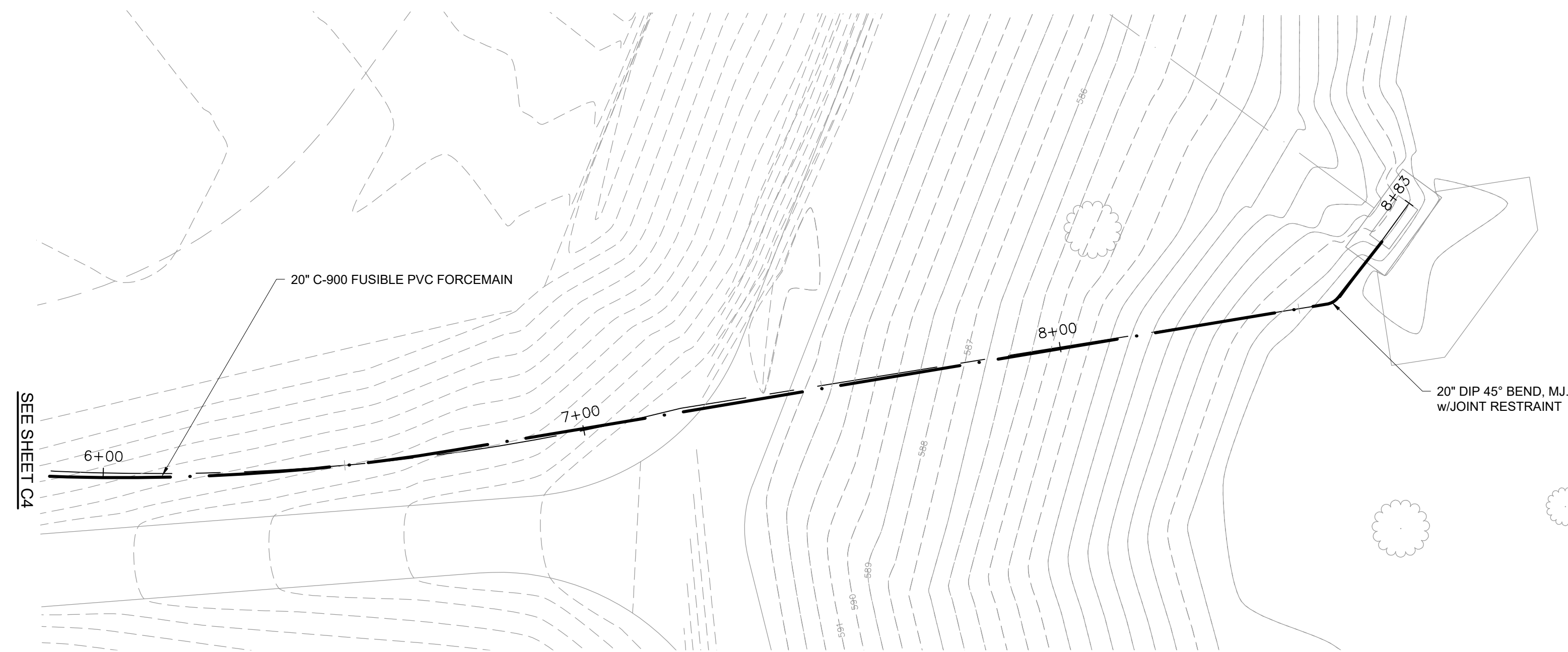
WEST BAY COUNTY REGIONAL WWTP
 BAY COUNTY, MI
PHASE I RAW SEWAGE FORCEMAIN
PLAN & PROFILE STA. 4+00 TO 6+00

DESIGN TEAM:
 BWL, AMS, DCT
 CHECK BY:
 JKP SEPT. 2019
 DRAWING INFORMATION:
 837630_C4-1
 davek

SEPTEMBER 2019
 P&V PROJECT NO.
 837630

C4

M:\Proj\837001-839000\837630 Bay Co WWTP Raw Sewage Pumps\CalPlusPhase I - Formain\837630_C4-1.dwg, 9/23/2019 2:15:52 PM, davek.DWG To PDF.plt



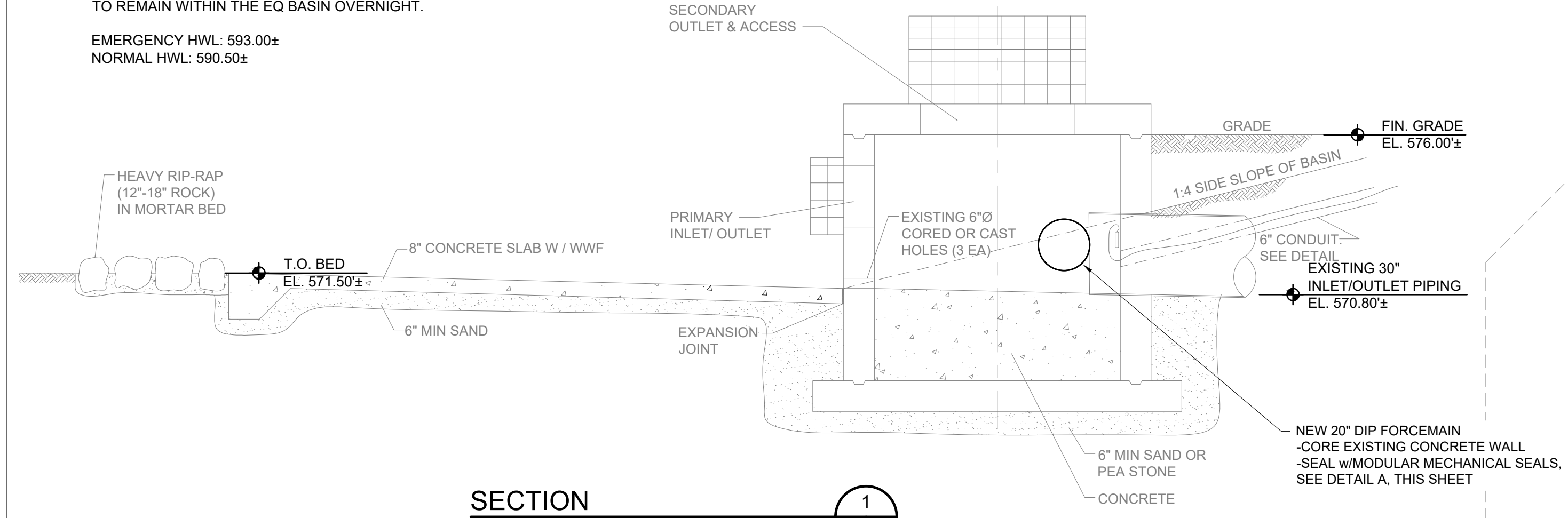
LEGEND:
 - - - - - PROPOSED SANITARY FORCEMAIN

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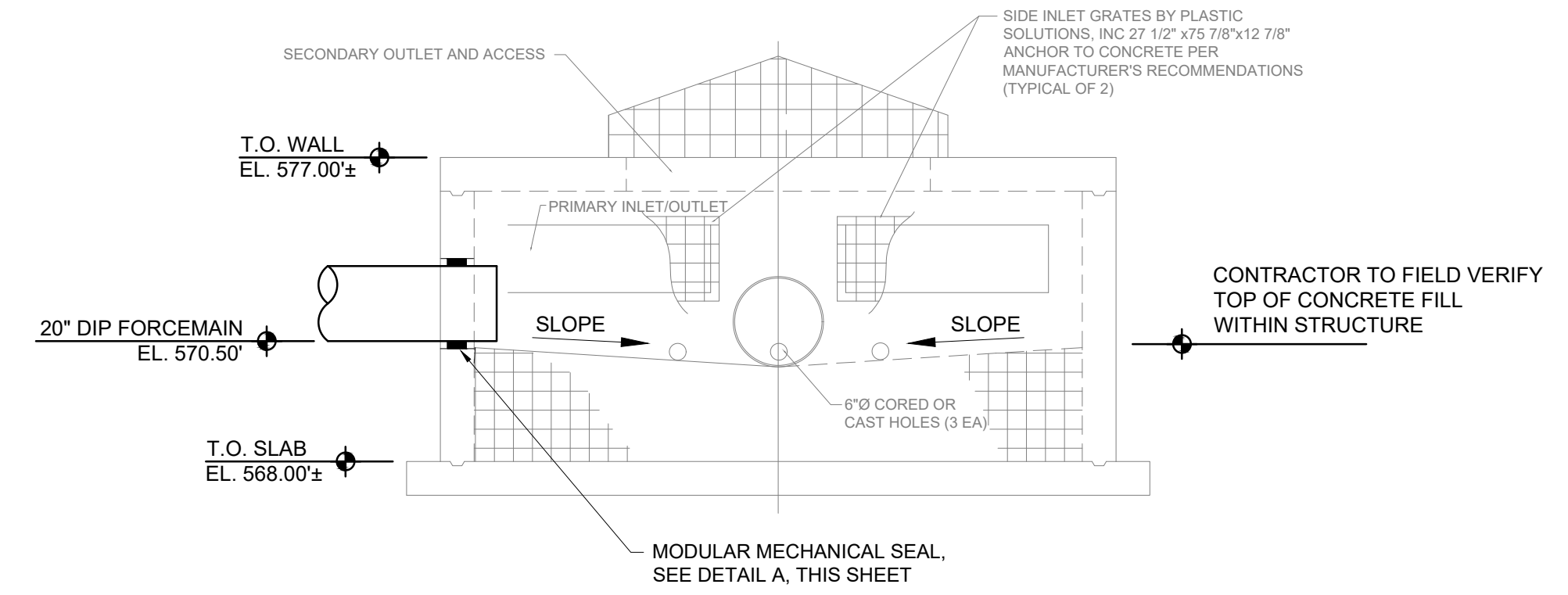
Issued For Bid 09232019 JMB 1

NOTES:
 CONTRACTOR SHALL MAINTAIN WORK AREA IN READINESS-TO-SERVE CONDITION FOR EQUALIZATION OF PEAK WASTEWATER FLOW CONDITIONS. CONSULT OWNER EACH DAY PRIOR TO WORK WITHIN EQ BASIN ON INLET FLOW AND WEATHER CONDITIONS. NO EQUIPMENT OR UNINSTALLED MATERIALS ARE TO REMAIN WITHIN THE EQ BASIN OVERNIGHT.

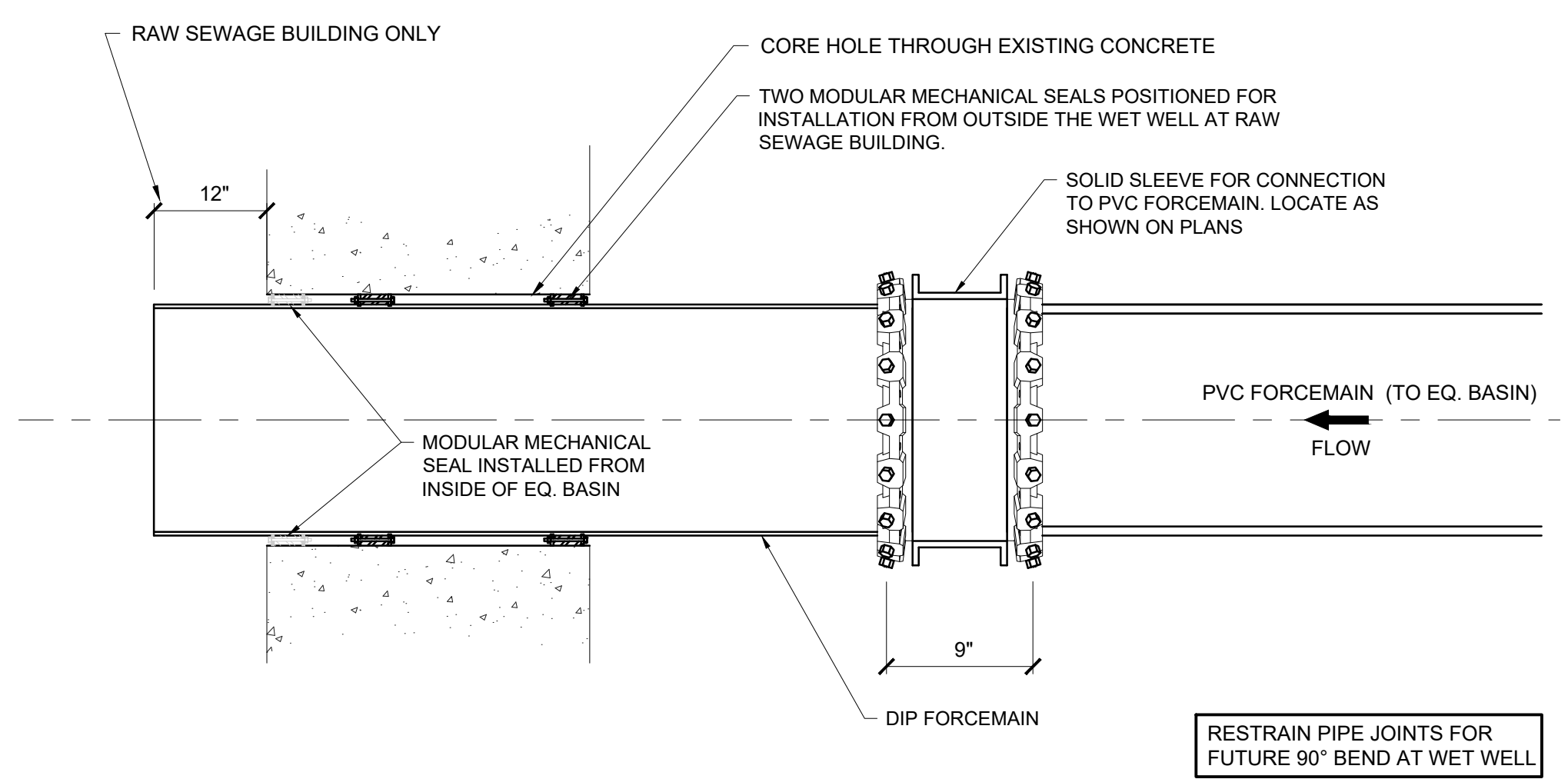
EMERGENCY HWL: 593.00±
 NORMAL HWL: 590.50±



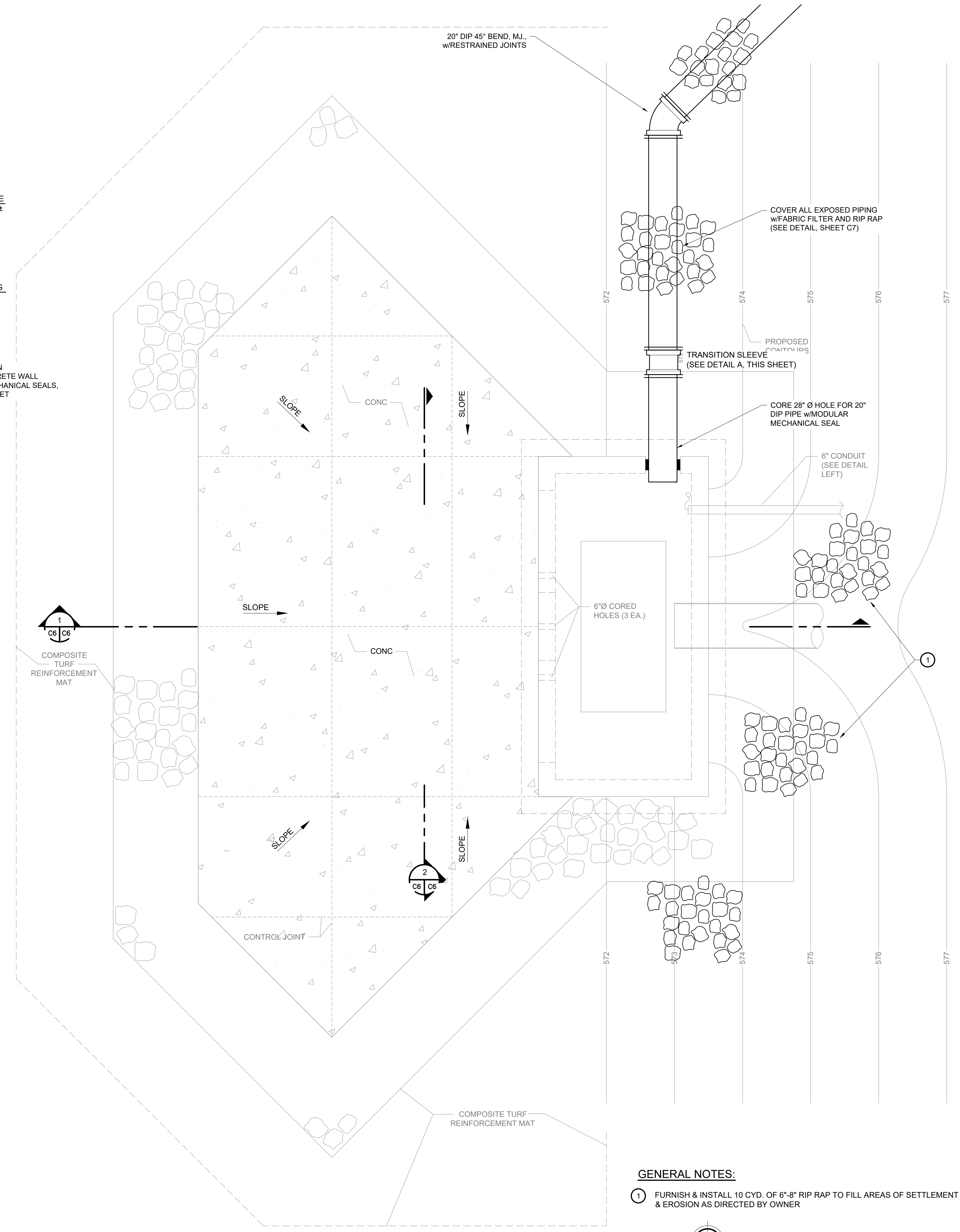
SECTION 1
 EX. INLET/OUTLET STRUCTURE LOOKING EAST
 APPROX. SCALE: 1/4"=1'-0"



SECTION 2
 EX. INLET/OUTLET STRUCTURE LOOKING SOUTH
 APPROX. SCALE: 1/4"=1'-0"



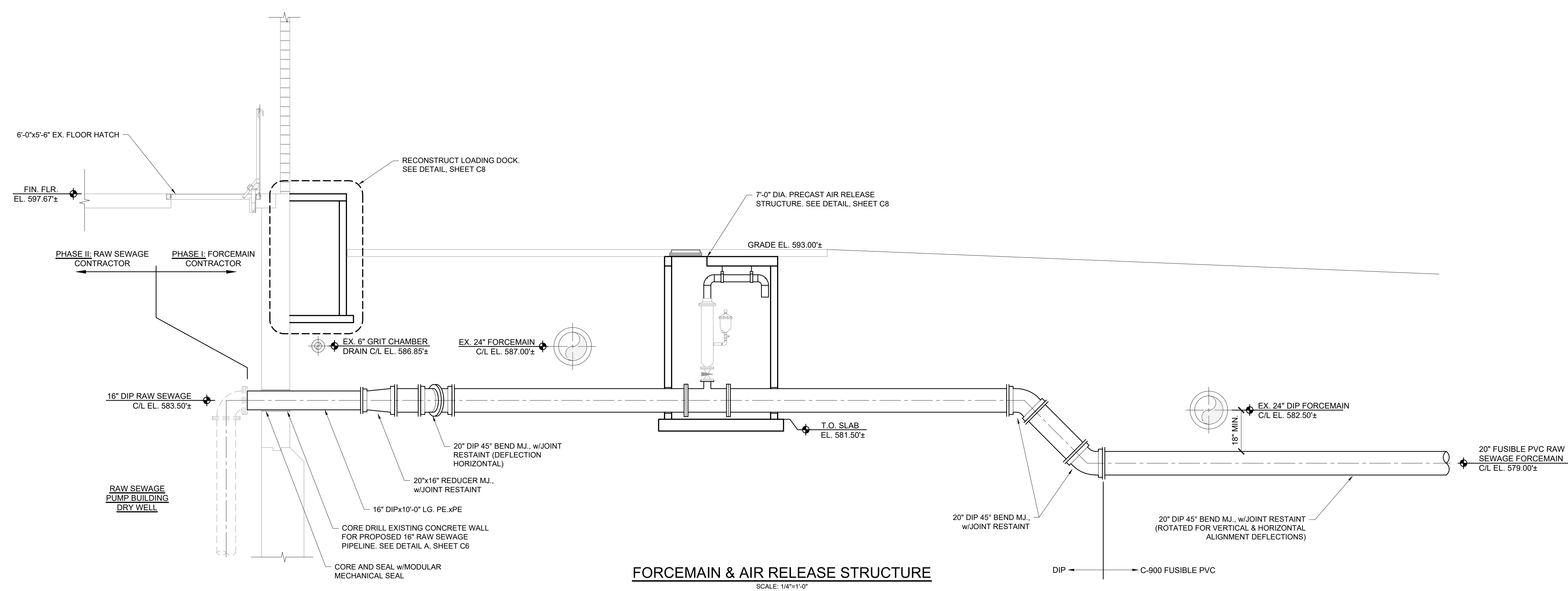
DETAIL A
 PIPE TRANSITION
 SCALE: NOT TO SCALE



EXISTING INLET/OUTLET STRUCTURE
 APPROX. SCALE: 1/4"=1'-0"

GENERAL NOTES:
 1 FURNISH & INSTALL 10 CYD. OF 6"-8" RIP RAP TO FILL AREAS OF SETTLEMENT & EROSION AS DIRECTED BY OWNER

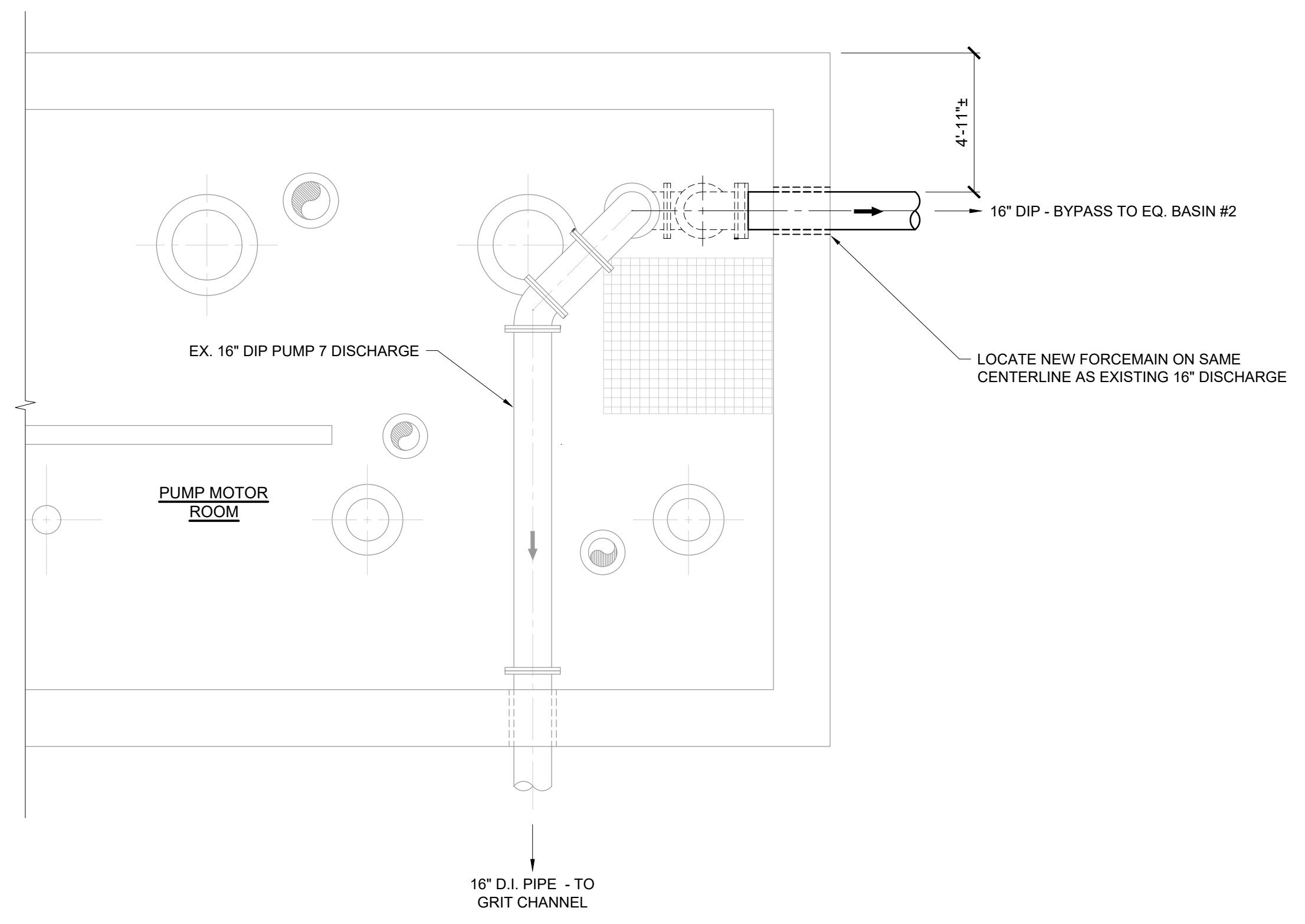
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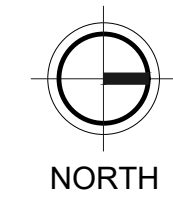
FORCEMAIN & AIR RELEASE STRUCTURE
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. EXTEND 16" PIPE 12" INTO DRYWELL TO ACCOMMODATE A MECHANICAL FLANGE ADAPTER AND INSTALLATION BY THE PHASE II CONTRACTOR.



RAW SEWAGE PUMP BUILDING - PLAN VIEW
SCALE: 1/4"=1'-0"



REVISION:

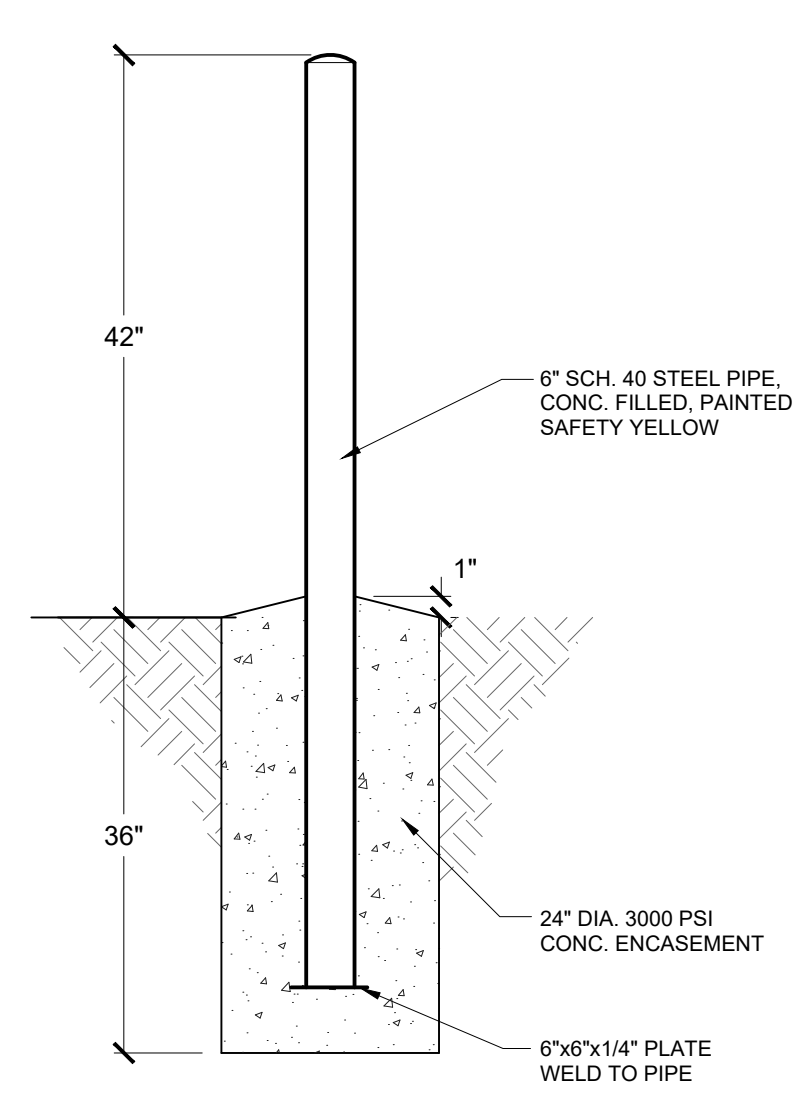
WEST BAY COUNTY REGIONAL WWTP
BAY COUNTY, MI
PHASE I RAW SEWAGE FORCEMAIN
SITE PIPING DETAILS STA. 0+00 TO 0+75

DESIGN TEAM:
BWL, DCT
CHECK BY:
JKP SEPT. 2019
DRAWING INFORMATION:
837630_C7-1
dewt

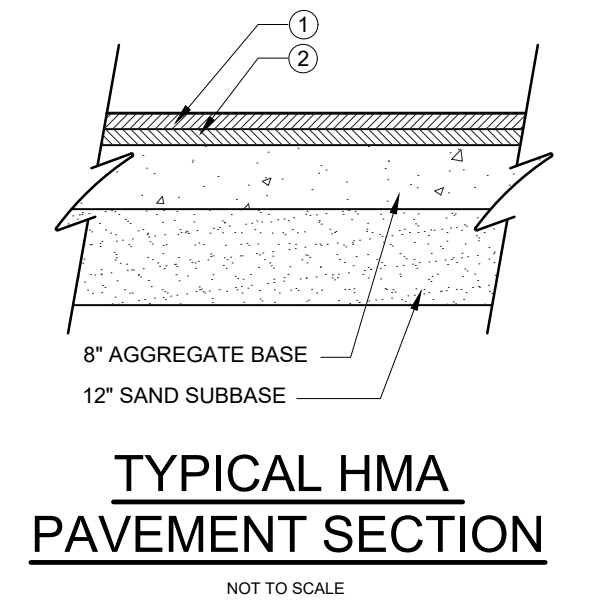
SEPTEMBER 2019
F&V PROJECT NO.
837630



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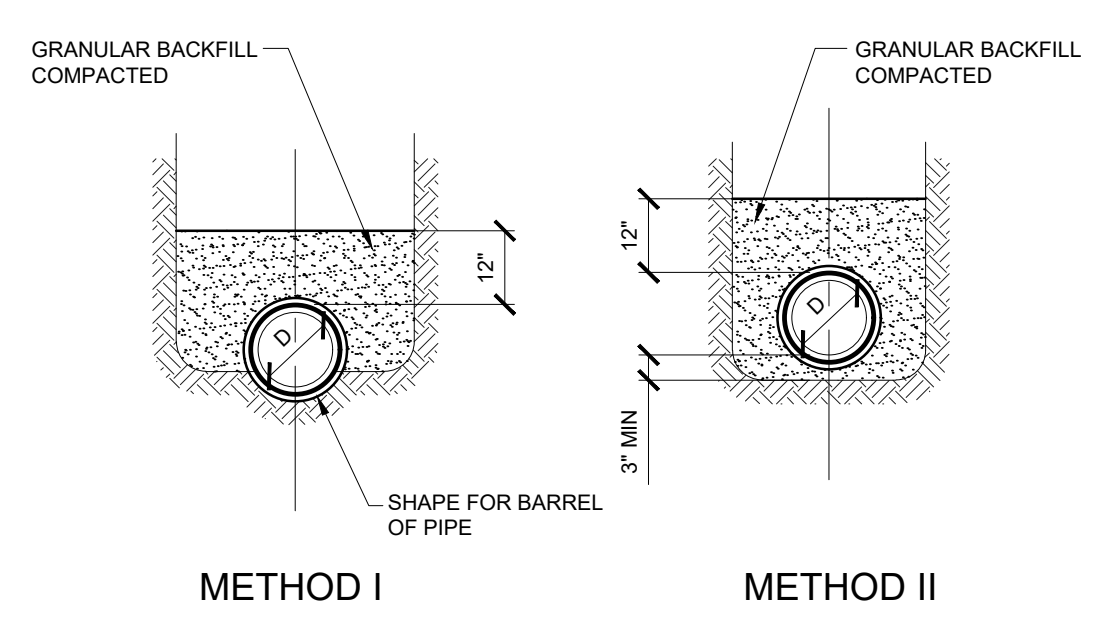
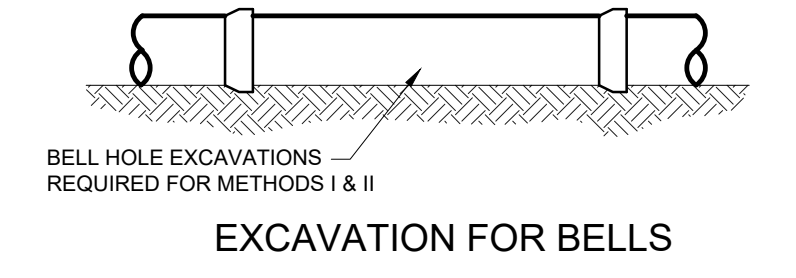
PIPE BOLLARD DETAIL
SCALE: NOT TO SCALE



HMA APPLICATION TABLE

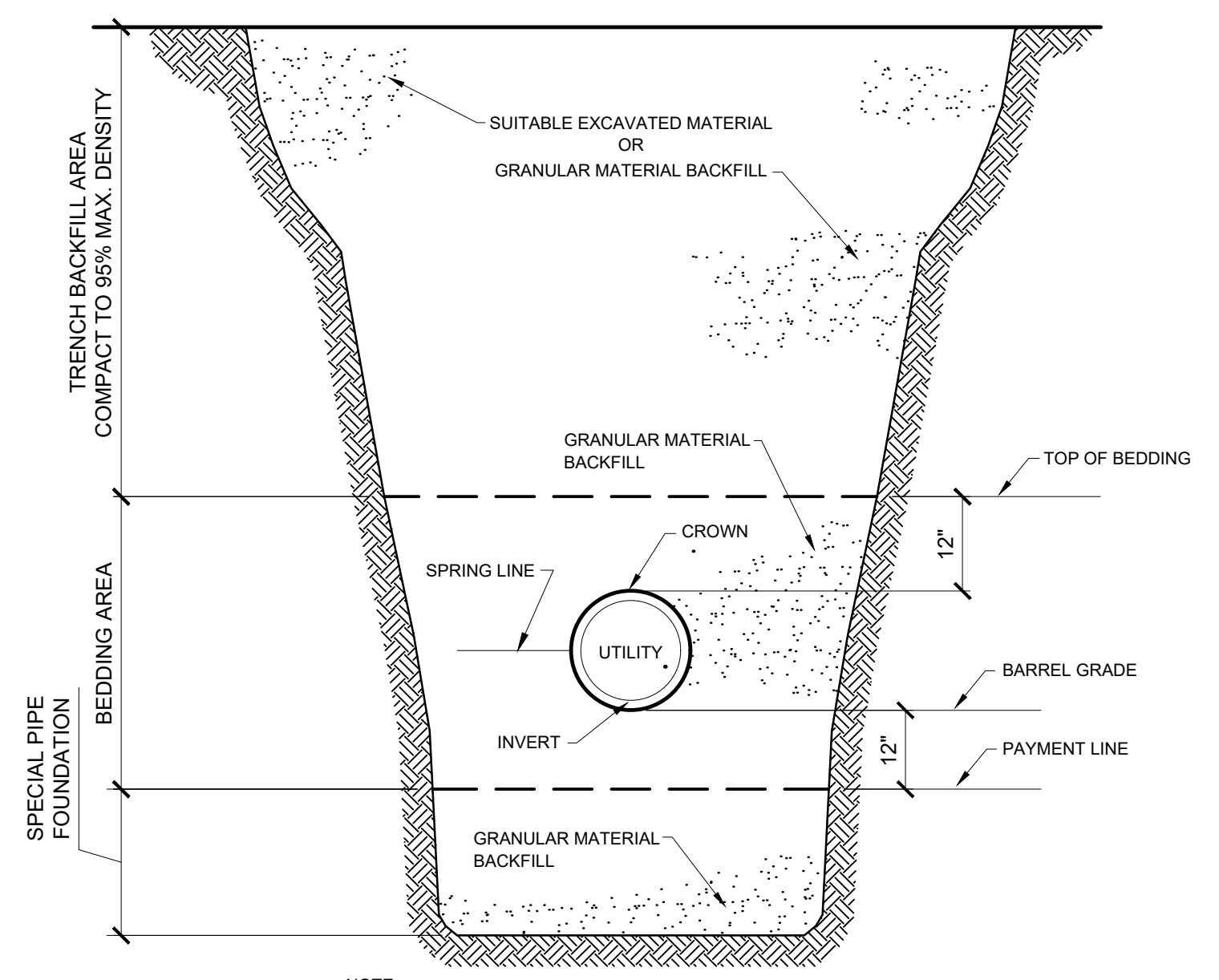
COURSE	TYPE	ITEM	EST. YIELD
①	SURFACE	HMA, 36A	165 LBS/SYD
②	LEVELING	HMA, 13A	275 LBS/SYD

NOTE:
TACK COAT SHALL BE APPLIED BETWEEN SUCCESSIVE COURSES OF HMA (PAYMENT INCLUDED IN HMA MIX). APPLICATION RATE 0.06 - 0.10 GAL/SYD, AS DIRECTED BY ENGINEER.



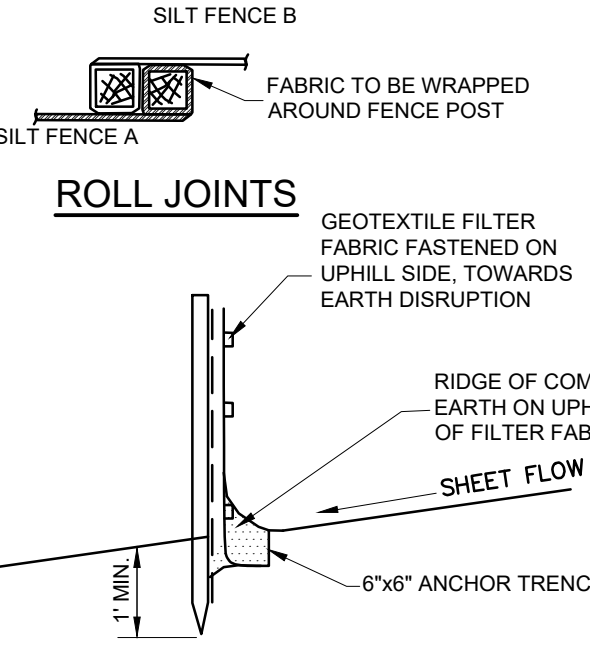
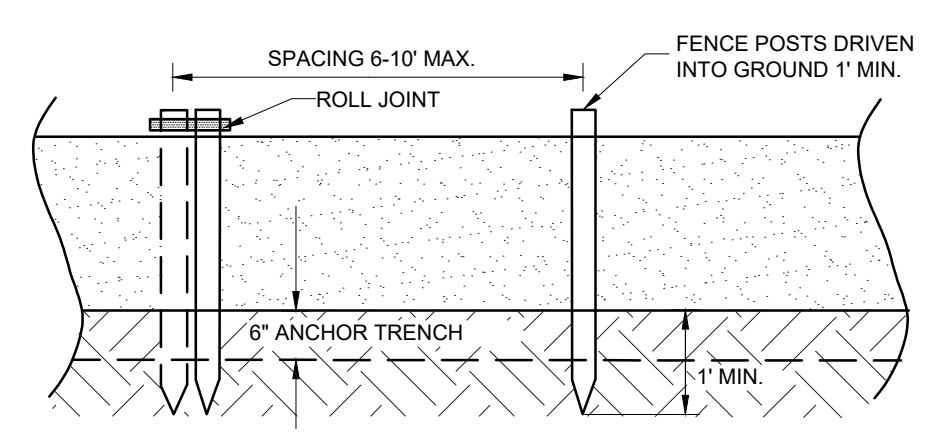
NOTES:
1. METHOD I: IN AREAS OF UNCONSOLIDATED SOILS (SAND, GRAVEL, ETC.)
2. METHOD II: IN AREAS OF CONSOLIDATED SOILS (CLAY, HARDPAN, ROCK, ETC.)

METHODS OF BEDDING PRESSURE PIPE

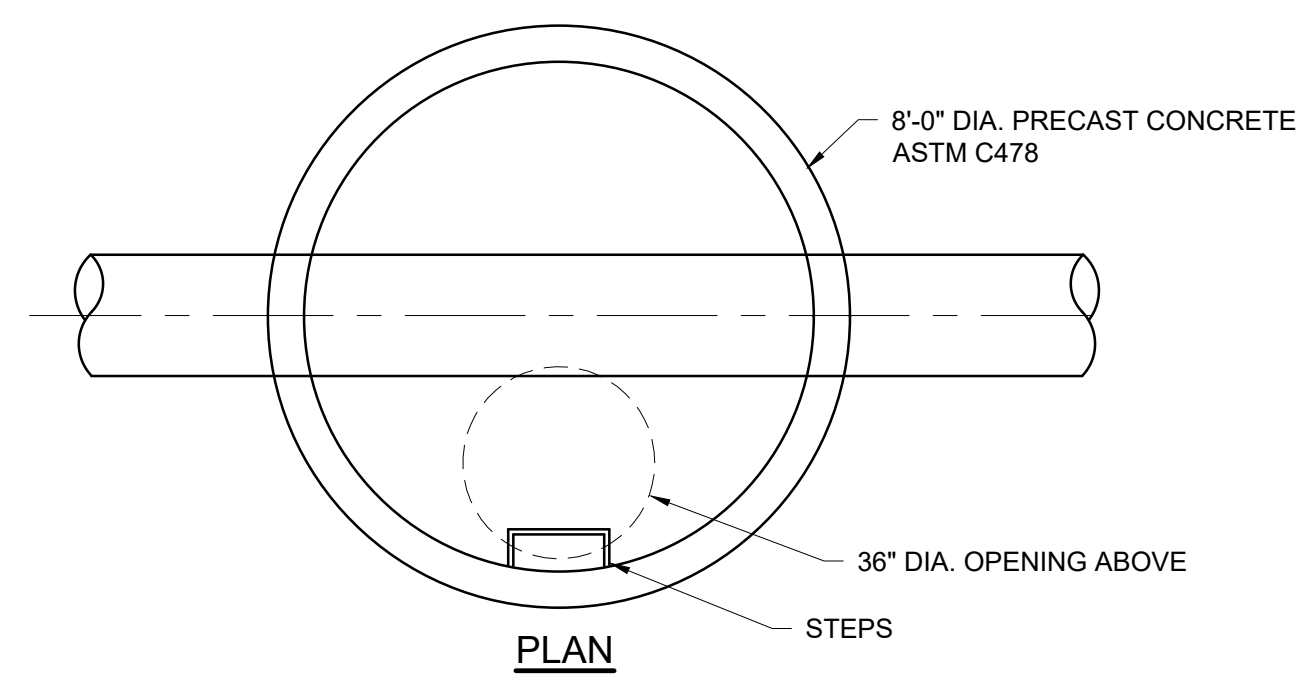


NOTE:
EXCESS EXCAVATED COHESIVE SOILS FROM PIPE TRENCHES ON ALL CONTRACTS SHALL BE UTILIZED BY CONTRACT 1A CONTRACTOR IN THE BERM CONSTRUCTION. CONTRACTORS ON CONTRACTS OTHER THAN 1A SHALL DELIVER THEIR EXCESS EXCAVATED SOILS TO THE BASIN AREA IN AN AREA TO BE DESIGNATED BY THE CM.

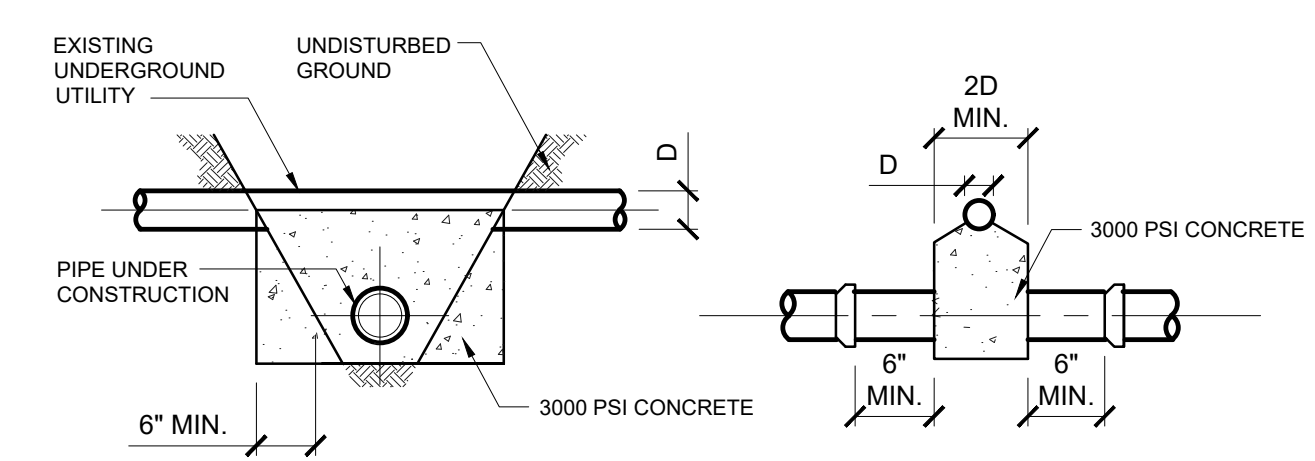
UTILITY EXCAVATING AND BACKFILLING TERMINOLOGY



SILT FENCE

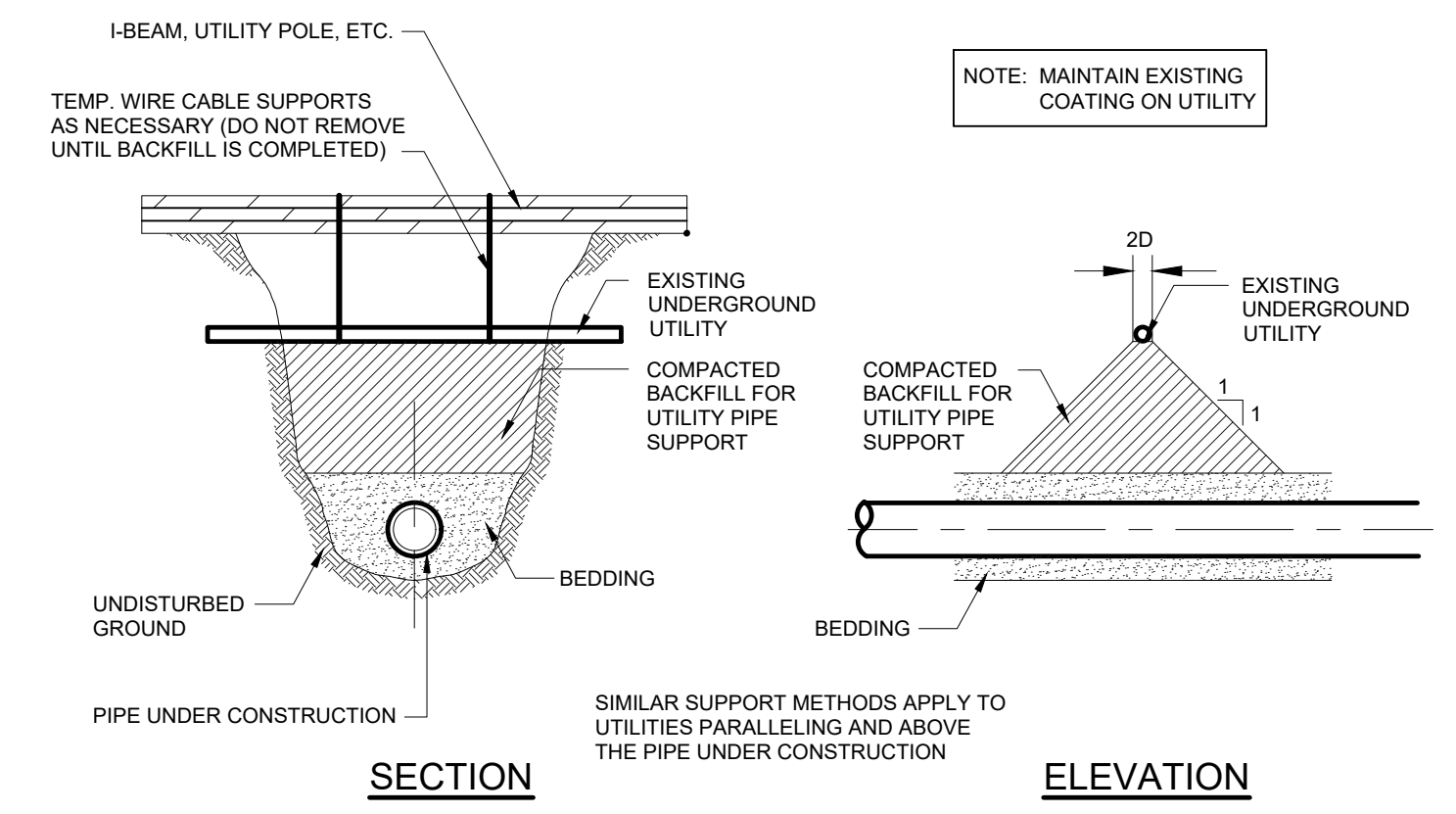


PLAN

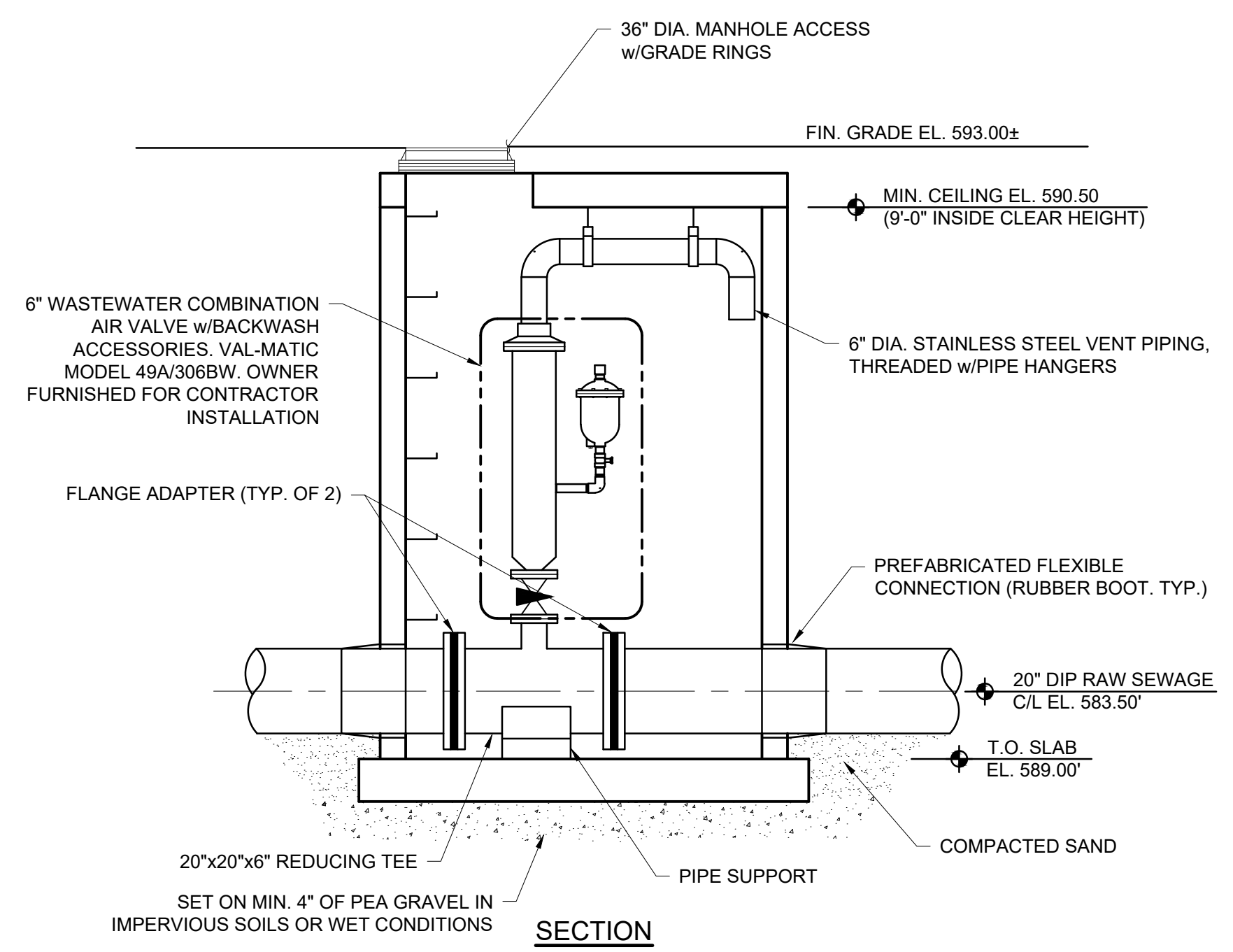


NOTE:
1. PIPE SADDLE IS NOT REQUIRED FOR PLASTIC, STEEL, LEAD OR COPPER PIPE 2\"/>

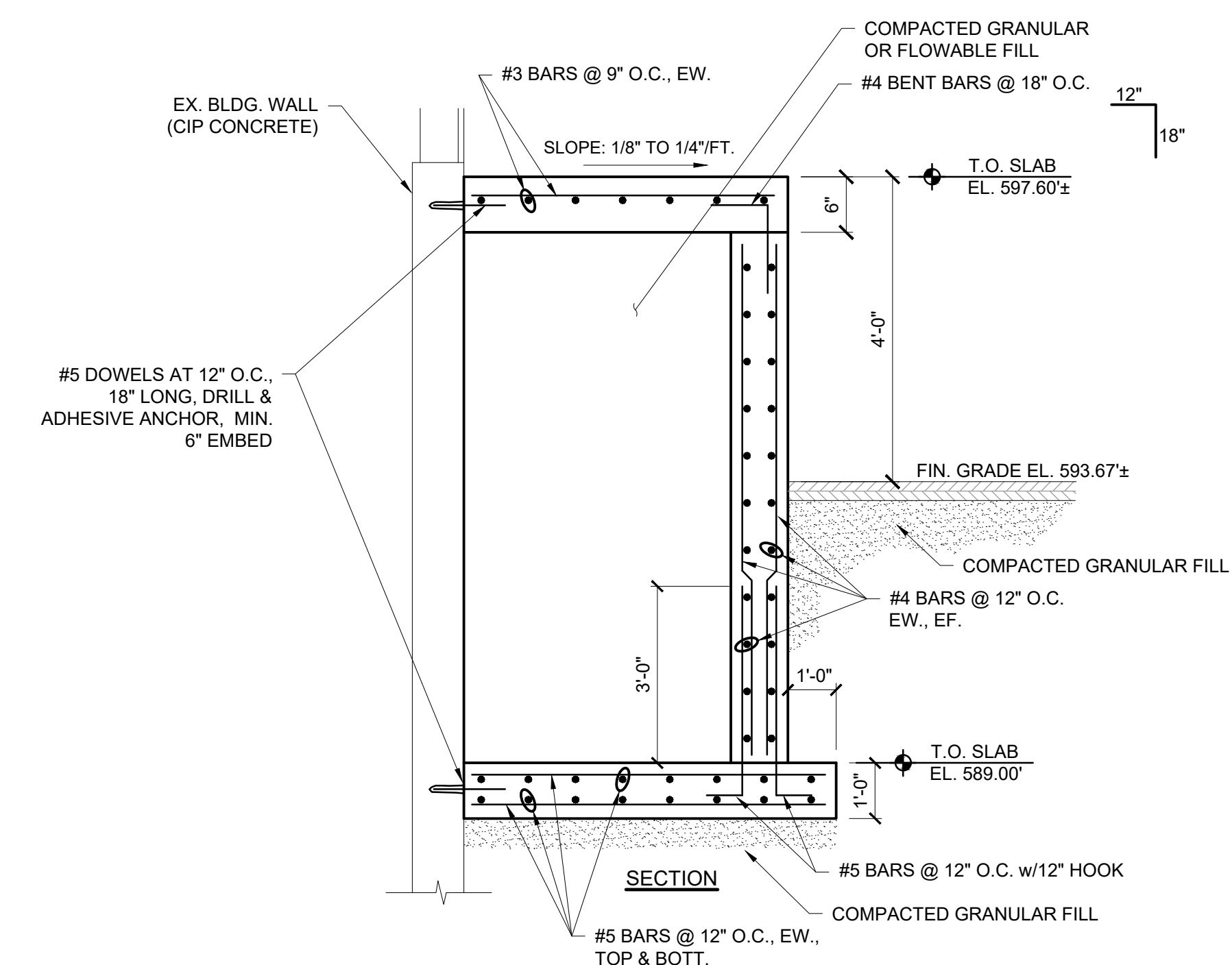
SECTION ELEVATION PIPE SADDLES



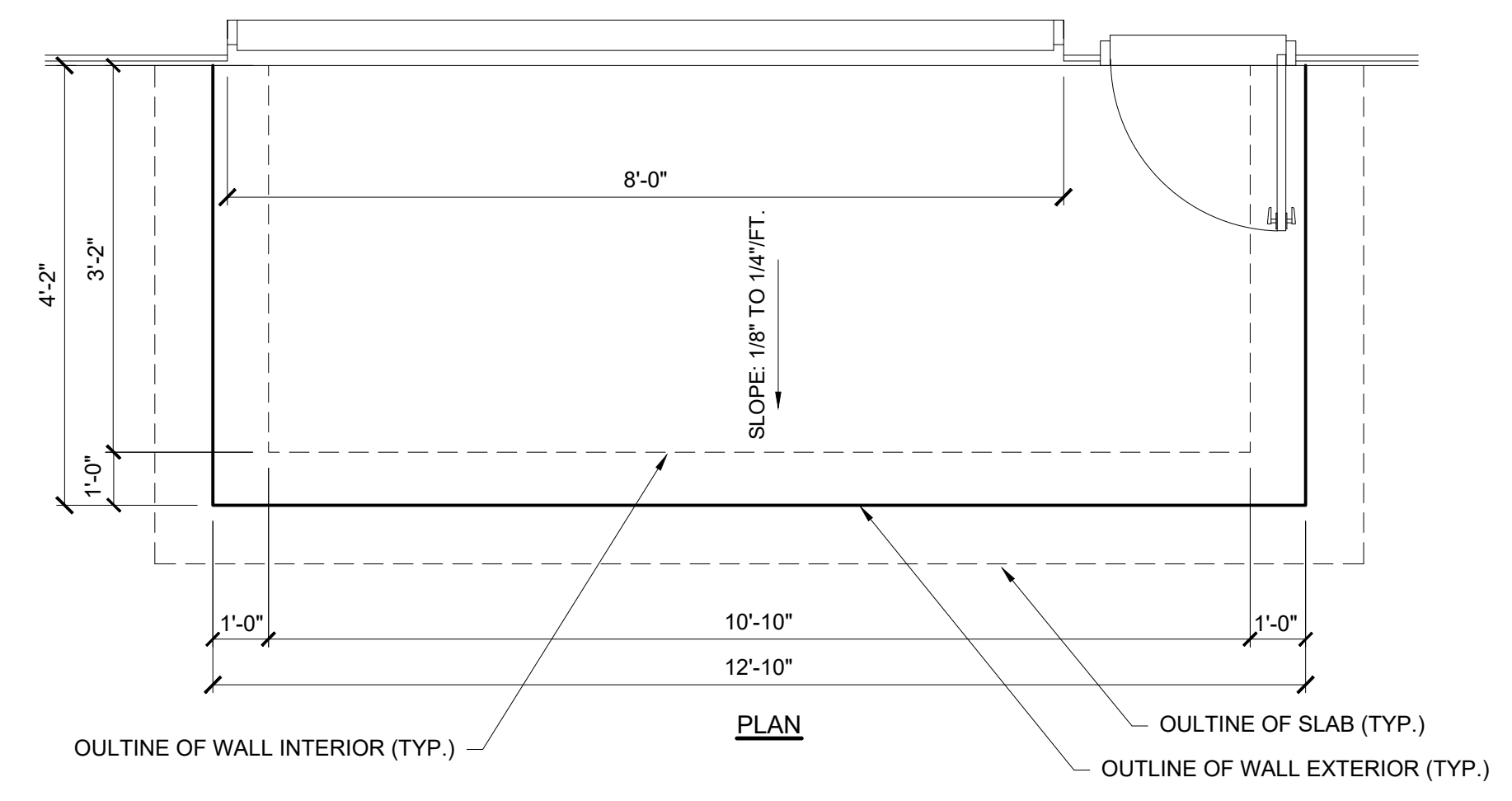
SECTION ELEVATION SPECIAL SUPPORTS FOR UNDERGROUND UTILITIES



AIR RELEASE VALVE CHAMBER
SCALE: NOT TO SCALE



LOADING DOCK DETAIL
SCALE: NOT TO SCALE



PLAN