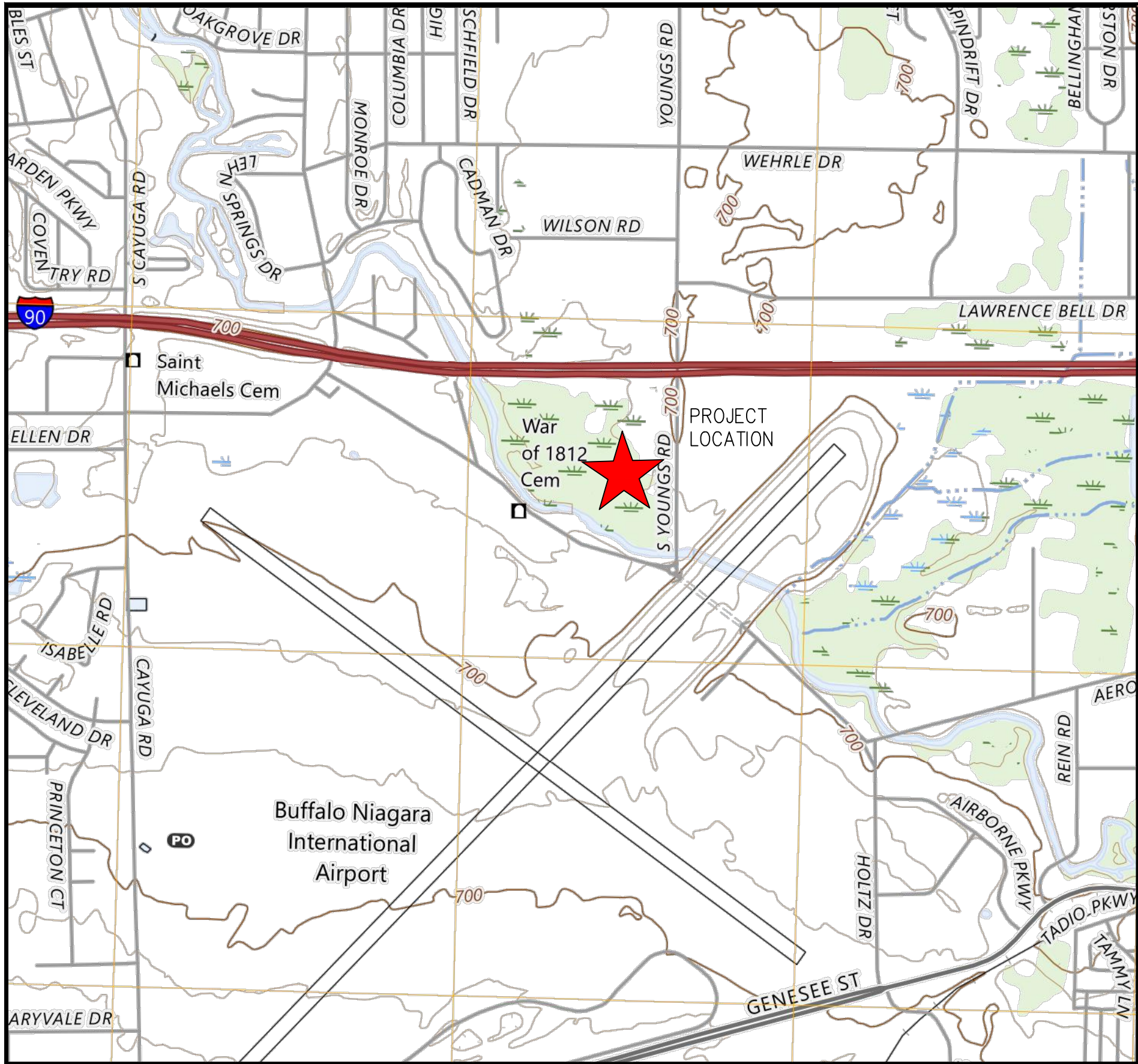
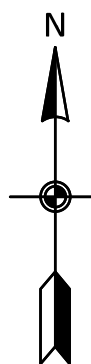


S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN

The Krog Group  
669 S. Youngs Road  
Amherst, New York



PROJECT LOCATION MAP  
N.T.S.

Sheet List Table	
Sheet Number	Sheet Title
00	COVER SHEET
01	EXISTING CONDITIONS PLAN
02	KROG PUMP STATION SITE PLAN
03	KROG PUMP STATION DETAILS
04	PROPOSED PLAN & PROFILE 1
05	PROPOSED PLAN & PROFILE 2
06	PROPOSED PLAN & PROFILE 3
07	FORCEMAIN CROSSING DETAILS
08	FORCEMAIN DETAILS
EL-1	KROG PUMP STATION ELECTRICAL DETAILS

N:\2023\WNY-2300114.00 YOUNGS ROAD PRIVATE PS REDESIGN\CADD\Design Plans\00 COVER SHEET.dwg Wednesday, 5 June 2024 3:48PM

PREPARED FOR  
The Krog Group  
4 Centre Drive  
Orchard Park, NY 14127

THOMAS J. WOLANSKI, P.E.      DATE: 4/24/24

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(716) 633-4844  
Greenman - Pedersen, Inc.  
4950 Genesee Street, Suite 100  
Buffalo, NY, 14225

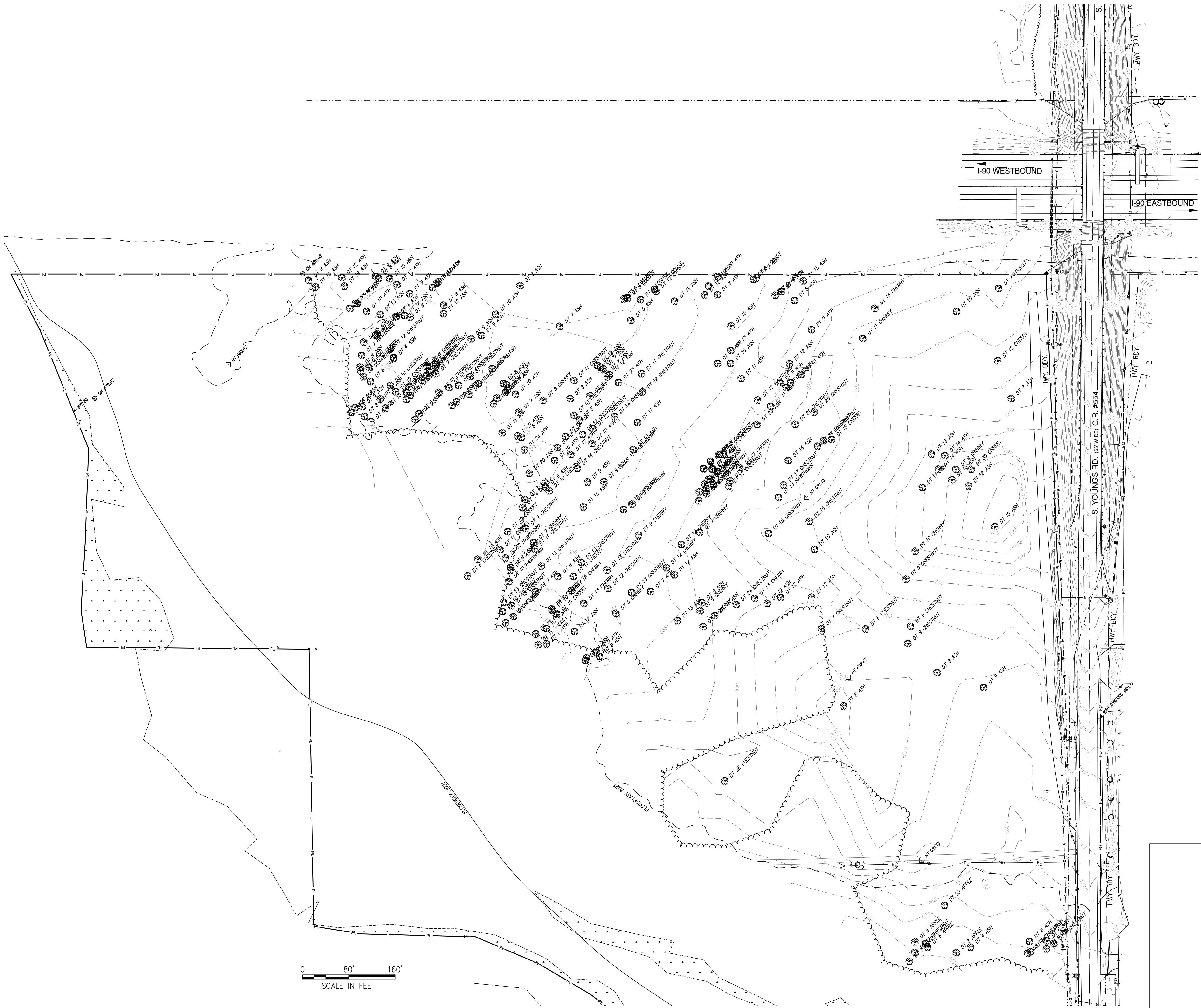
Engineering  
Design  
Planning  
Construction Management  
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Planning  
Construction Management

716) 632-4844  
Greenman - Pedersen, Inc.  
4950 Genesee Street, Suite 100  
Buffalo, NY, 14225

GPINET.COM

PREPARED FOR  
The Krog Group  
4 Centre Drive  
Orchard Park, NY 14127

S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN  
669 S. Youngs Road  
Amherst, New York

STATE OF NEW YORK  
GREENMAN PEDERSEN INC.  
No. 151  
LICENSED PROFESSIONAL ENGINEER

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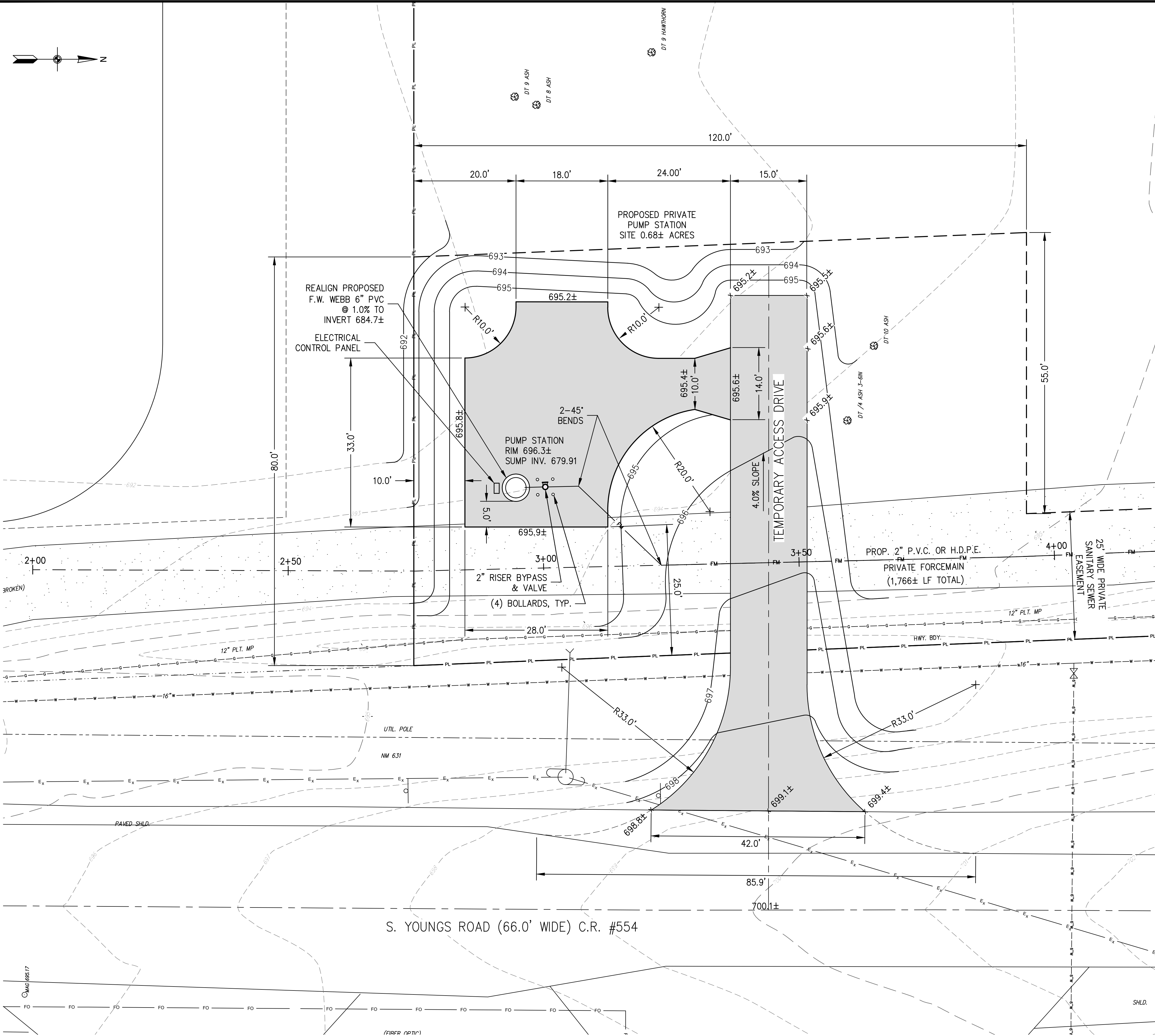
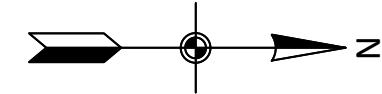
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NO.	REVISION	DATE			
February, 2024					
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DV			RC		

EXISTING  
CONDITIONS PLAN

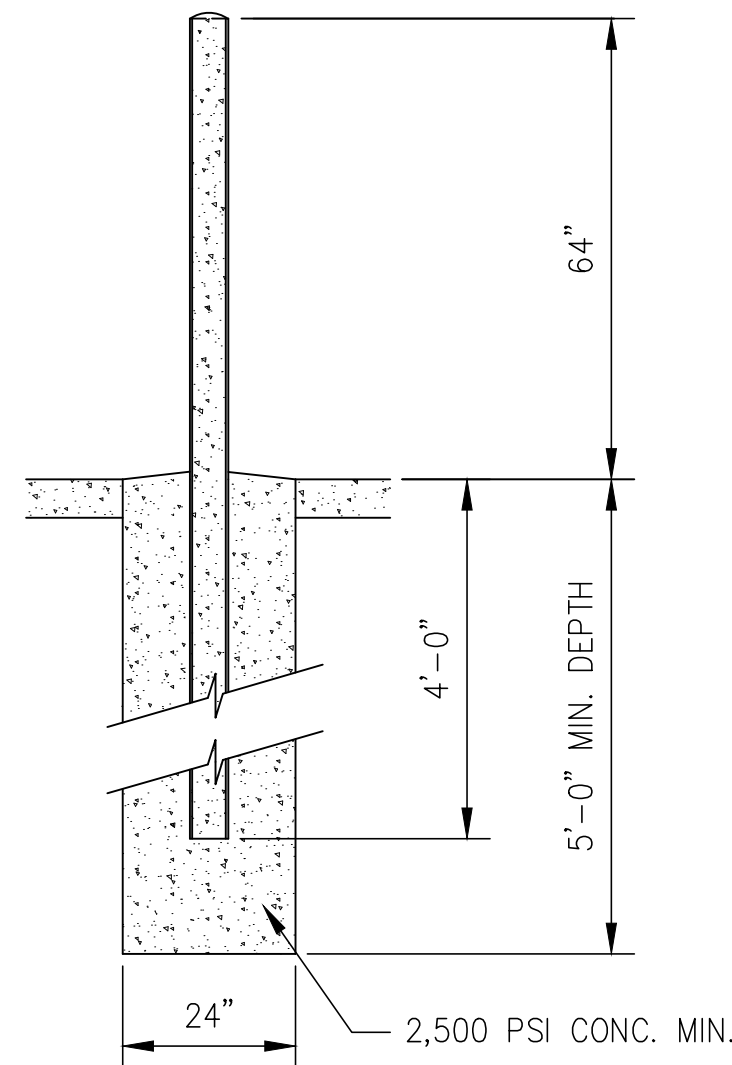
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WNY-2300114.00

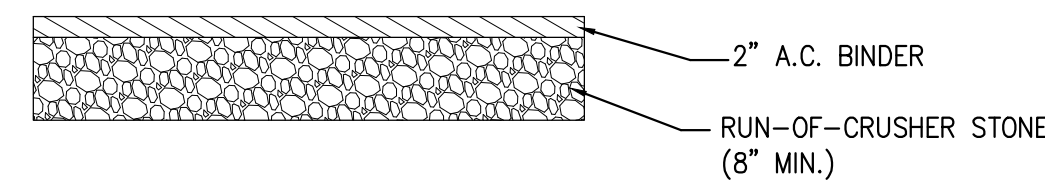
01



4" DIA. SCHEDULE 40 STEEL PIPE BOLLARD  
FILL WITH CONCRETE W/ ROUND TOP  
PAINT - SAFETY YELLOW



BOLLARD DETAIL  
SCALE: N.T.S.



PUMP STATION PAVEMENT SECTION  
NTS

NOTE:

ALL CONSTRUCTION WITHIN S. YOUNGS ROAD (C.H. #554) R.O.W. SHALL CONFORM TO ERIE COUNTY HIGHWAY WORK PERMIT SPECIFICATIONS AND DETAILS.

CONTRACTOR IS TO OBTAIN AND CONFORM TO THE REQUIREMENTS OF A HIGHWAY WORK PERMIT FOR ALL WORK PERFORMED WITHIN THE R.O.W. OF S. YOUNGS ROAD (C.H. #554).

CONTRACTOR WILL BE REQUIRED TO PREPARE A MAINTENANCE & PROTECTION OF TRAFFIC PLAN TO THE ERIE COUNTY HIGHWAY DEPARTMENT PRIOR TO THE SUBMITTAL OF THE WORK PERMIT WITHIN THE RIGHT-OF-WAY OF S. YOUNGS ROAD (C.H. #554).

CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF AMHERST CONSTRUCTION SPECIFICATIONS AND DETAILS. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

NOTE:  
CONSTRUCTION OUTSIDE OF THE NYSTA R.O.W.  
SHALL BE IN ACCORDANCE WITH TOWN OF  
AMHERST CONSTRUCTION SPECIFICATIONS OR  
ERIE COUNTY SPECIFICATIONS WHERE APPLICABLE  
AND/OR SUBJECT TO LATEST REVISION.

PREPARED FOR  
The Krog Group  
4 Centre Drive  
Orchard Park, NY 14127

S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN  
669 S. Youngs Road  
Amherst, New York



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KROG PUMP  
STATION SITE  
PLAN

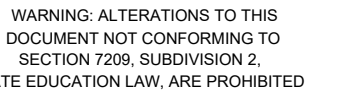
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S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN

669 S. Youngs Road  
Amherst, New York



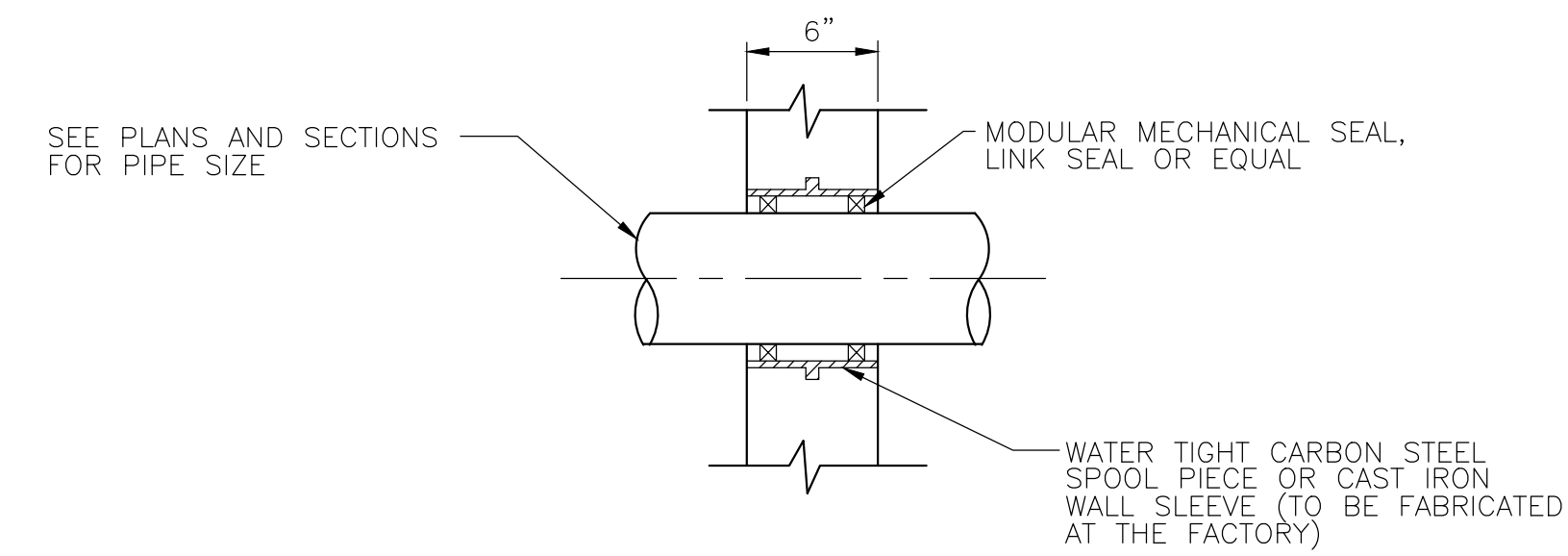
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## KROG PUMP STATION DETAILS

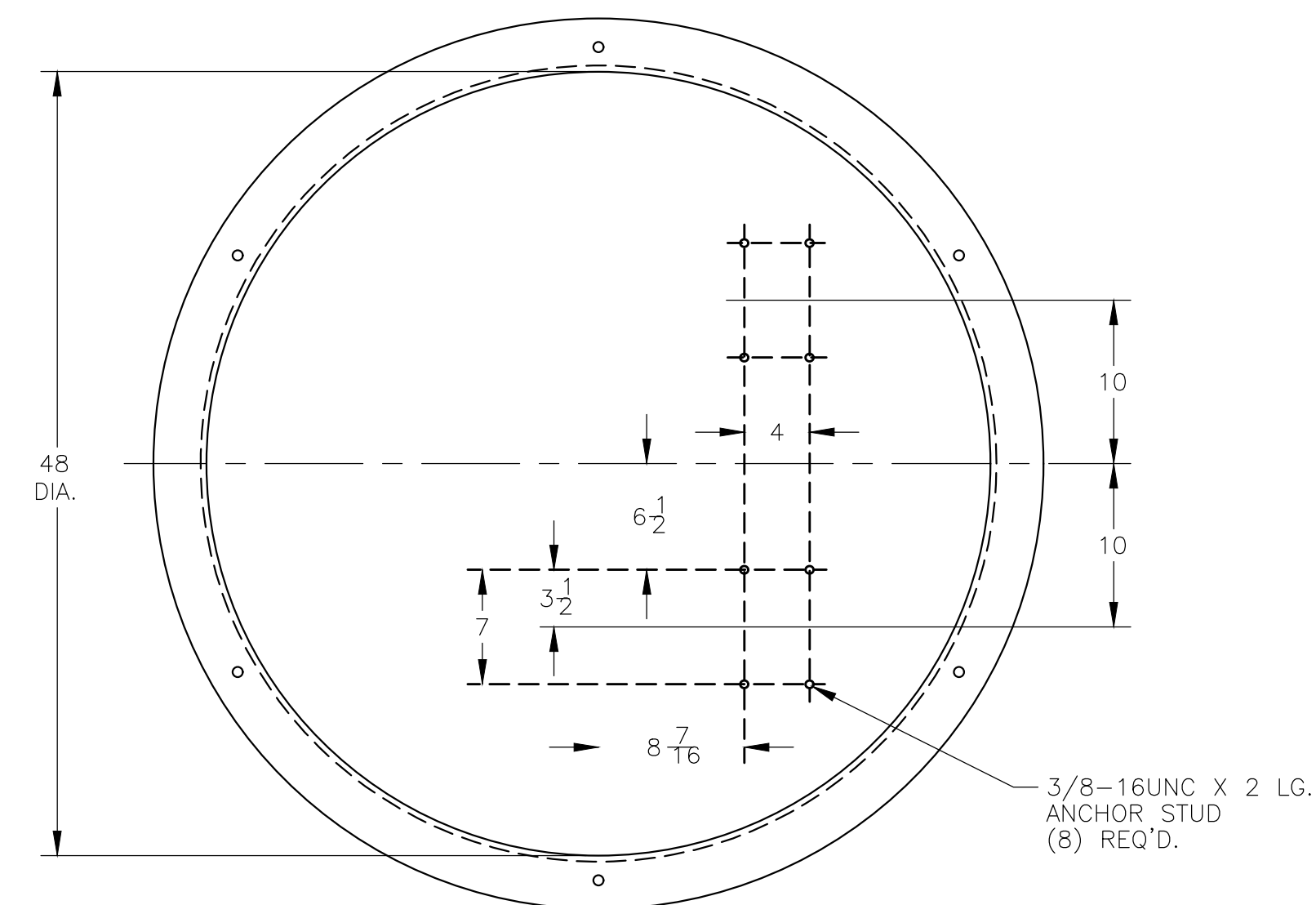
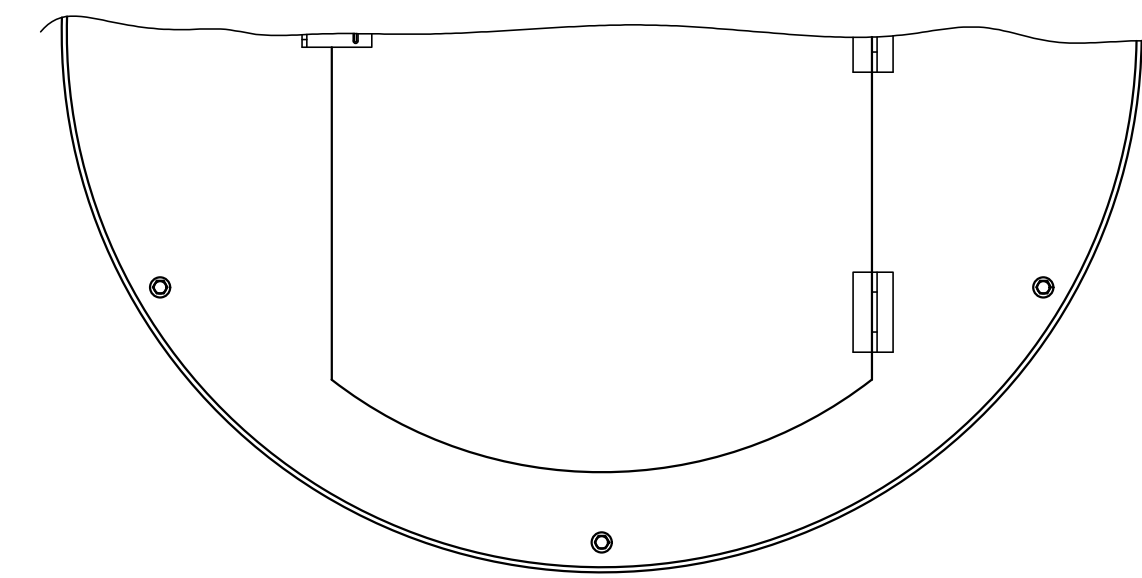
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03



TYPICAL WALL PENETRATION  
VALVE PIT AND PUMP STATION

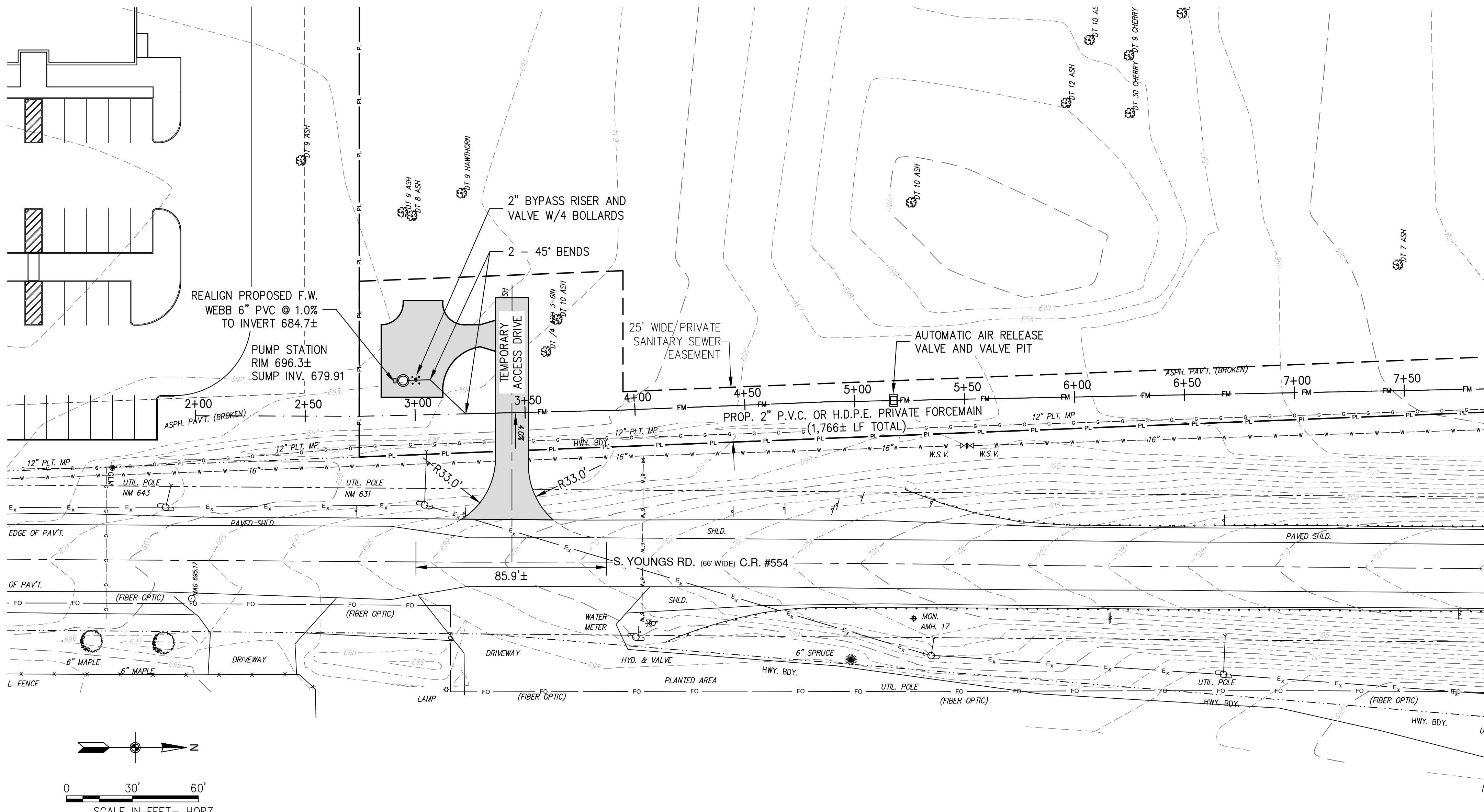
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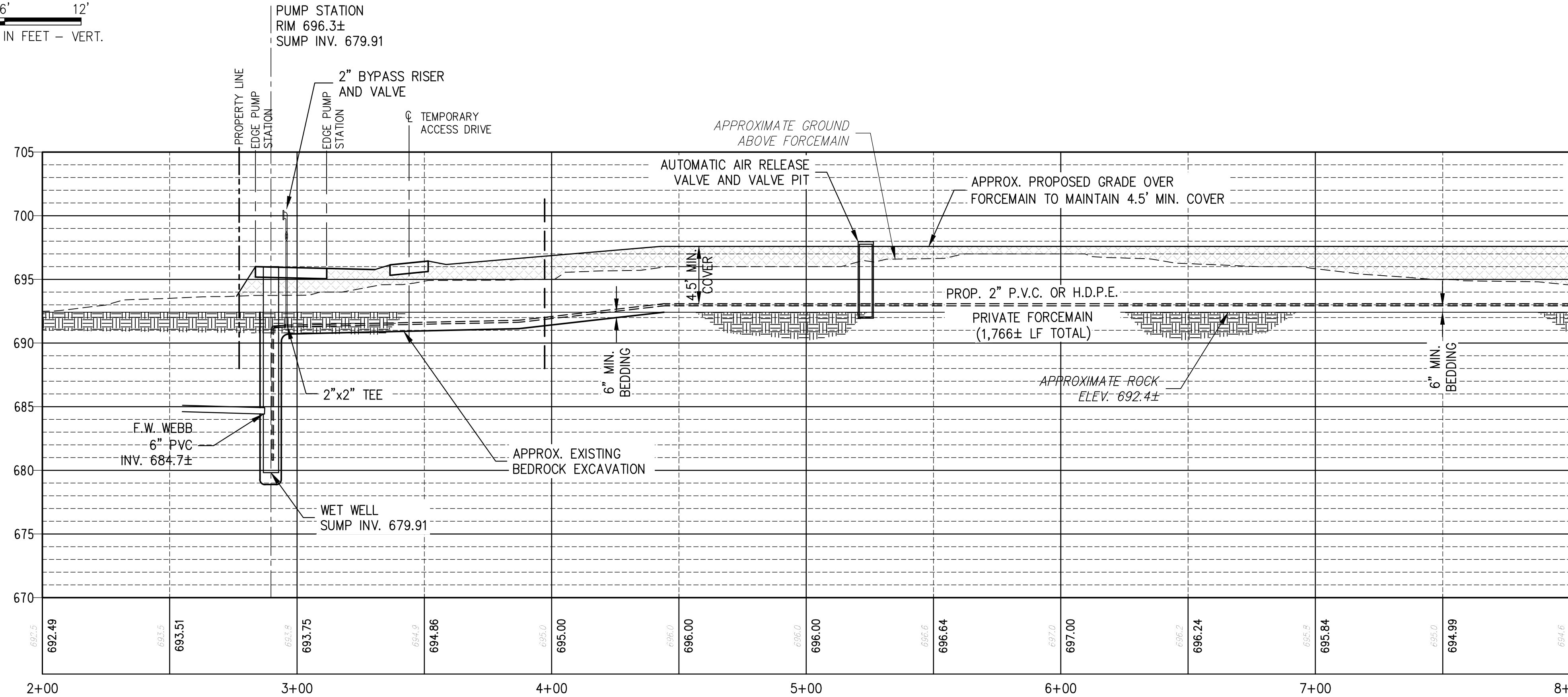
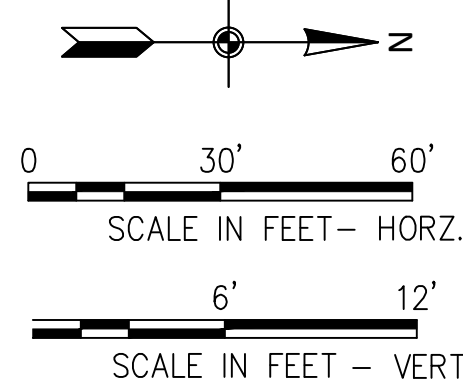
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MATCH LINE - SEE DWG. NO. 5



MATCH LINE - SEE DWG. NO. 5

#### FM BORING INSTALLATION NOTES:

1. THERE WILL BE A CREW WORKING WITHIN R.O.W.
2. THE DIRECTIONAL BORING MACHINE WILL BE LOCATED NEAR THE RIGHT OF WAY ON THE SOUTH SIDE. MAINTAIN A CLEAR ZONE OF 30 FEET FROM EDGE OF PAVEMENT. BORING IS TO PROCEED NORTH UNDER THE MAINLINE ROUTE 90. EXCAVATE THE TERMINUS OF THE BORE AND ATTACH THE 2" FORCEMAIN & 6" CASING PIPE AND PULL BACK THROUGH THE HOLE.
3. USING THE BACKHOE, EXCAVATE AND BURY THE FORCEMAIN FROM THE BORE TERMINUS TO THE NYSTA RIGHT OF WAY.

#### FM OPEN CUT INSTALLATION NOTES:

1. ALL TRENCHING, EXCAVATION AND BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITY.
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3. TRENCH EXCAVATIONS GREATER THAN FIVE FEET IN DEPTH SHALL BE ADEQUATELY SHORED PER OSHA STANDARDS.
4. SANITARY SEWER FORCEMAIN MARKING TAPE SHALL BE PLACED OVER ALL DIRECT BURIED FORCEMAINS.
5. CONTRACTOR TO PATCH AND REPAIR DAMAGED SURFACES EQUAL TO OR GREATER THAN CONDITIONS PRIOR TO CONSTRUCTION ACTIVITIES. ALL REPAIRS SHALL BE CONSTRUCTED PER THE CURRENT STANDARD CONSTRUCTION SPECIFICATIONS.
6. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND CALCULATING THE EXCAVATION QUANTITIES.
7. ROCK IS VERY SHALLOW AND VERY HARD. NO BLASTING SHALL BE ALLOWED.
8. CONTRACTOR TO SUPPLY NYSTA WITH PROPOSED EXCAVATION PLANS PRIOR TO ISSUANCE OF WORK PERMIT.
9. CONTRACTOR TO PRODUCE AND SUBMIT RECORD DRAWINGS WITHIN 30 DAYS OF COMPLETION OF INSTALLATION.

#### GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL LOCATIONS OF UNDERGROUND UTILITIES, ESPECIALLY THE GS SECURE INTEGRATION FIBER OPTIC CABLE OWNED BY NYSTA.
2. CONTRACTOR TO BE SURE ALL COUNTY OF ERIE, TOWN OF AMHERST, NYSTA, ETC. PERMITS ARE IN HAND PRIOR TO ANY CONSTRUCTION.
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#### PROPOSED PLAN & PROFILE 1

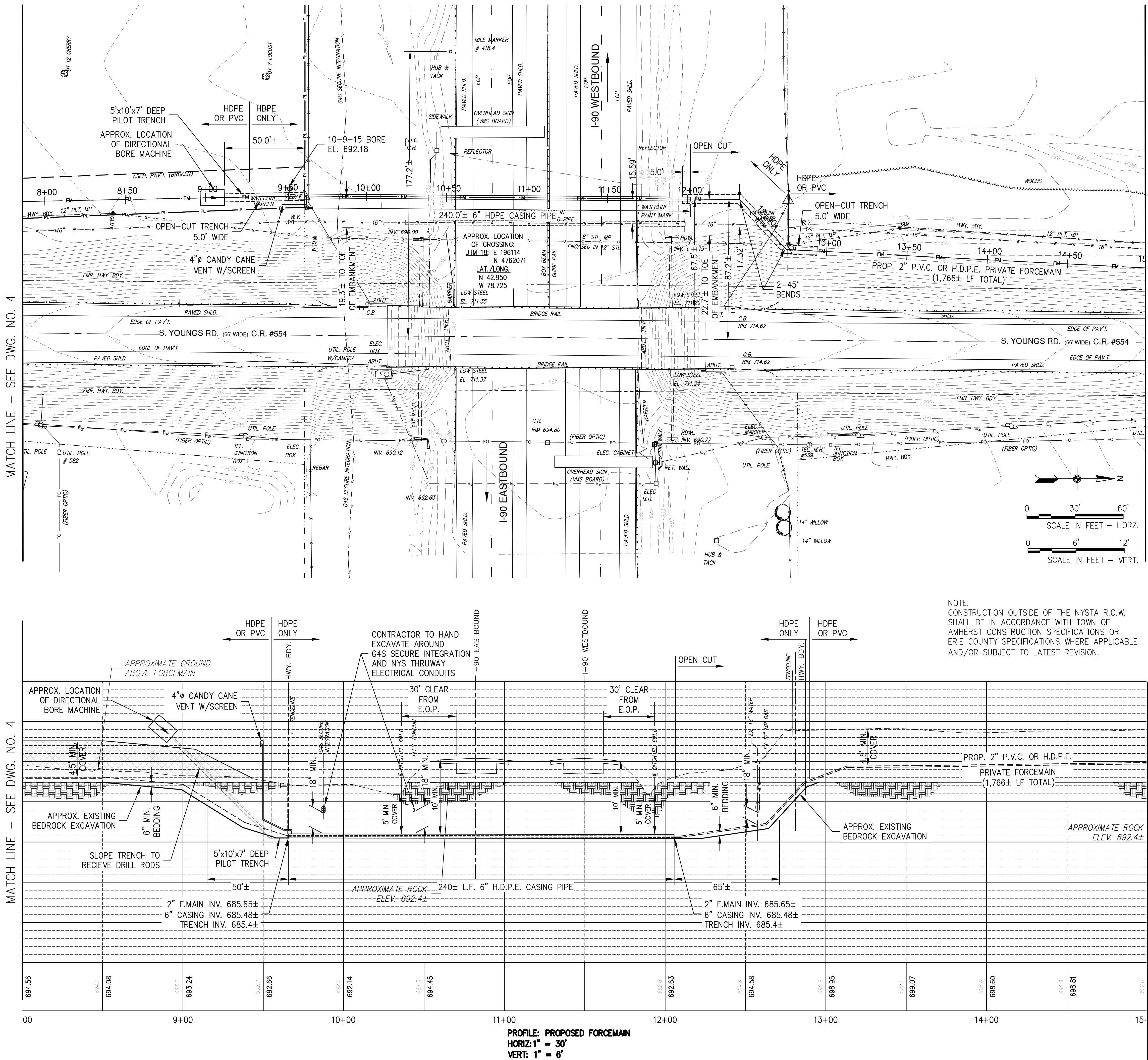
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As Noted

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MATCH LINE - SEE DWG. NO. 4

MATCH LINE - SEE DWG. NO. 4



△ **UTILITY MARKER - 4 REQ'D 9**  
(3 NYSTA, 1 YOUNGS RD. CROSSING)  
TWO ARE LOCATED WHERE FORCEMAIN CROSSES THE R.O.W. AND ONE ON ALIGNMENT AT THE R.O.W. OFFSET 31' FROM 45' BEND ON NORTH SIDE.  
UTILITY MARKER TO INDICATE: OWNER NAME, CONTACT TELEPHONE NUMBER, AND "SANITARY SEWAGE FORCEMAIN UNDER 40 PSI PRESSURE AT \_\_\_\_' DEPTH FROM EXISTING GROUND".

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**GPI**

Engineering  
Design  
Planning  
Construction Management

7610 633-4844

Greenman - Pedersen, Inc.  
4950 Genesee Street, Suite 100  
Buffalo, NY, 14225

PREPARED FOR

The Krog Group  
4 Centre Drive  
Orchard Park, NY 14127

S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN

669 S. Youngs Road  
Amherst, New York

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PROPOSED PLAN  
& PROFILE 2

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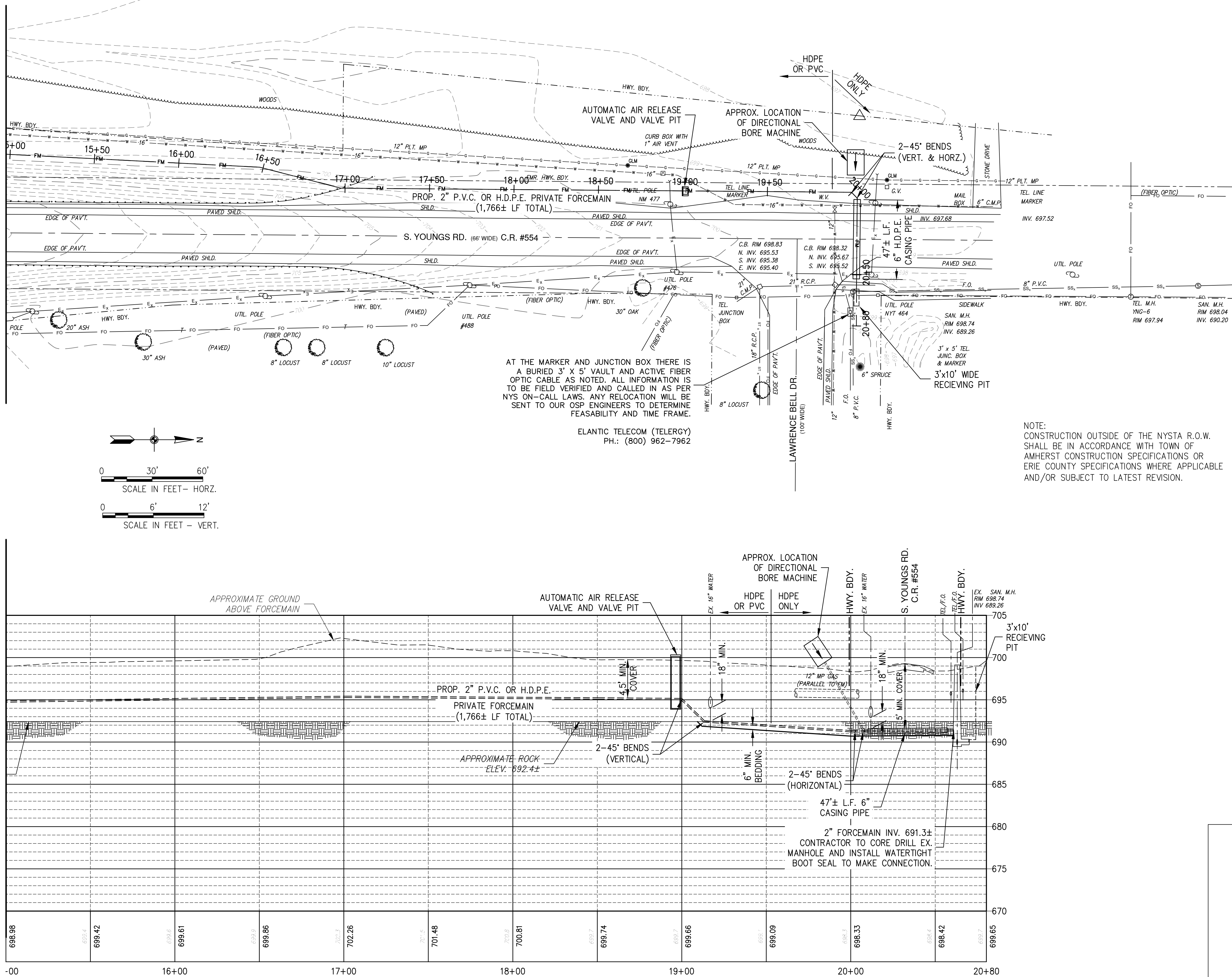
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UTILITY MARKER - 4 REQ'D 9  
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PREPARED FOR  
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Orchard Park, NY 14127

**S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN**  
  
669 S. Youngs Road  
Amherst, New York



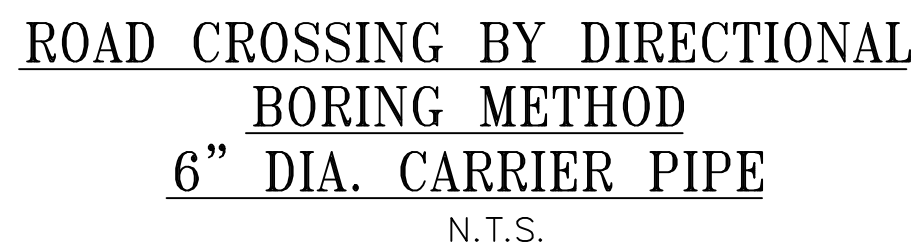
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**PROPOSED PLAN  
& PROFILE 3**

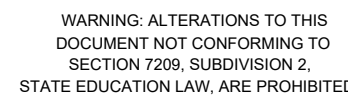
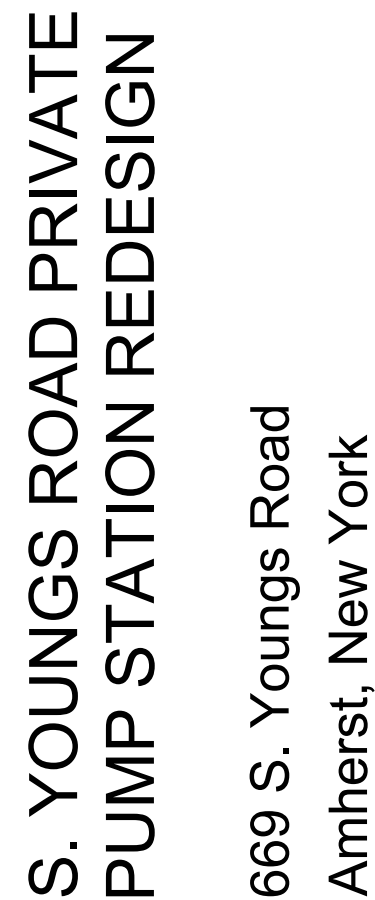
SCALE:  
As Noted

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NEW YORK STATE THRUWAY (MILE MARKER 418.36)

\* FAA – Farmington cherty loam, limestone bedrock is at a depth of 10 to 20 inches.



## FORCEMAIN CROSSING DETAILS

07



N:\2023\WNY-2300114.00 YOUNGS ROAD PRIVATE PS REDDESIGN CAD\DWG Plans\08 FORCEMAIN DETAILS.dwg Wednesday, 5 June 2024 3:59PM

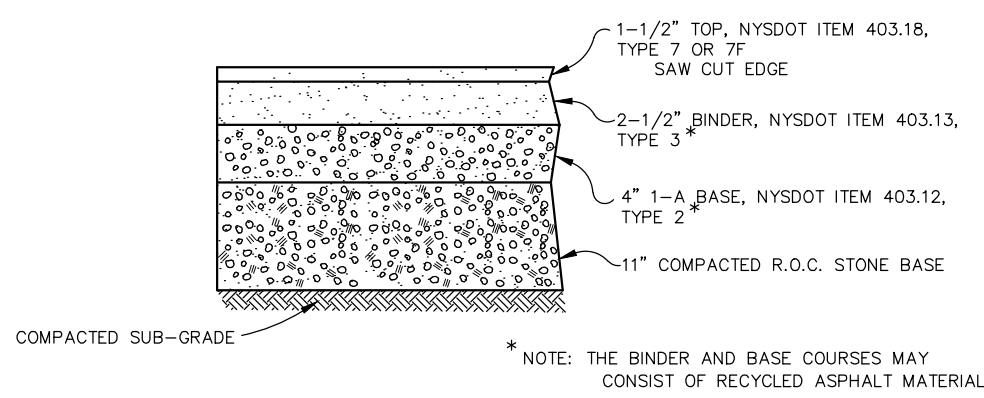
GENERAL NOTES:

01. THE CONTRACTOR SHALL COMPLY WITH THE TOWN OF AMHERST STANDARD DRAWINGS AND SPECIFICATIONS.
02. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE TOWN OF AMHERST ENG. DEPT. OF ANY HAZARDOUS SUBSTANCE ENCOUNTERED DURING THE CONSTRUCTION OF THE WORK. HE SHALL AT HIS EXPENSE, CONFORM TO ALL LAWS, RULES, REGULATIONS AND DIRECTIONS AS PROMULGATED BY THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, THE NEW YORK STATE DEPARTMENT OF HEALTH AND ANY SUCH LOCAL RULES, ORDINANCES AND LAWS WHEN ENCOUNTERING OR WORKING WITH ANY SUCH HAZARDOUS SUBSTANCE.
03. THE CONTRACTOR SHALL COMPLY IN ALL RESPECTS TO THE INDUSTRIAL CODE PART (RULE NO.) 53 RELATING TO CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES, AS ISSUED BY THE STATE OF NEW YORK DEPARTMENT OF LABOR, BOARD OF STANDARD AND APPEALS.
04. SINCE THE ERIE COUNTY WATER AUTHORITY OPERATES AND MAINTAINS THE EXISTING WATER LINES, THEY ARE TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION. ALL EXISTING VALVES ARE TO BE OPERATED BY THE ERIE COUNTY WATER AUTHORITY PERSONNEL.
05. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO THAT, IF MINOR ADJUSTMENTS MUST BE MADE IN ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
06. WHERE SUCH FACILITIES ARE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER, HE SHALL CERTIFY TO THE ENGINEERING DEPARTMENT OF THE TOWN OF AMHERST THAT SAID FACILITIES AS CONSTRUCTED WERE SUPERVISED BY HIMSELF (HERSELF) AND THAT THE WORKS HAVE BEEN FULLY COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING REPORTS, PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS AND ANY AND ALL ADDENDA TO SAME.
07. THE CONSTRUCTION OF THE FACILITIES SHALL BE UNDER THE SUPERVISION OF A PERSON OR FIRM QUALIFIED TO PRACTICE PROFESSIONAL ENGINEERING IN NEW YORK STATE UNDER THE EDUCATION LAW OF THE STATE, WHENEVER ENGINEERING SERVICES ARE REQUIRED BY SUCH LAW FOR SUCH PURPOSES.
08. A WRITTEN CERTIFICATE OF CONSTRUCTION COMPLIANCE, INCLUDING THE RESULTS OF HYDROSTATIC LEAKAGE TESTS, MADE BY THE PROFESSIONAL ENGINEER SUPERVISING THE CONSTRUCTION, SHALL BE SUBMITTED TO THE ERIE COUNTY DEPT. OF ENVIRONMENT PLANNING AND NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION WITHIN THIRTY (30) DAYS AFTER CONSTRUCTION COMPLETION.
09. UNSUITABLE MATERIALS SUCH AS FROZEN ORGANIC AND/OR VEGETABLE MATERIAL, DEBRIS, TREES, LUMBER, LARGE STONES OR CLOUDS (6" OR LARGER), MUCK, PEAT, ORGANIC SILT WILL NOT BE ACCEPTABLE FILL AND CERTAIN MAN-MADE DEPOSITS OF INDUSTRIAL WASTE, SLUDGE OR LANDFILL MAY ALSO BE DETERMINED AS UNSUITABLE HAZARDOUS MATERIAL.
10. THE COMPACTION OF ALL MATERIALS WILL OCCUR AT 6" INCREMENTS.
11. VERIFICATION OF ALL EXISTING EASEMENTS IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND THEY MUST BE SHOWN ALONG WITH ALL PROPOSED EASEMENTS ON PLAN DRAWINGS.
12. SHOULD A FLUID CONDITION BE ENCOUNTERED AT THE TRENCH BOTTOM, THE CONTRACTOR IS TO INSTALL ADDITIONAL STONE CRADLE AS ORDERED BY THE ENGINEER.
13. ALL PIPE CROSSING UNDER PAVED AREAS ARE TO BE BACKFILLED TO SUBGRADE WITH COMPACTED SELECT MATERIAL TO FIVE (5) FEET OUTSIDE THE PAVEMENT EDGES.
14. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED TREE EXPERT TO REMOVE, WHERE NECESSARY, BRANCHES WHICH INTERFERE WITH THE CONSTRUCTION OPERATION, OR REPAIR TREES HAVING SUFFERED DAMAGE BY CONSTRUCTION ACTIVITIES. THE COST INVOLVED IN THE ABOVE IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
15. SEWERS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATERMAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A TEN FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY MAY ALLOW DEVIATION ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATERMAIN, PROVIDED THAT THE WATERMAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATERMAIN IS AT LEAST 18" (46CM) ABOVE THE TOP OF THE SEWER.
16. SEWERS CROSSING WATERMAINS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL DISTANCE OF 18" (46CM) BETWEEN THE OUTSIDE OF A WATERMAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATERMAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATERMAIN JOINTS. WHERE A WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER, TO PREVENT DAMAGE TO THE WATERMAIN.
17. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE AND SHALL BE PRESSURE TESTED AS TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING.
18. THE PIPE SHALL BE P.V.C. SEWER PIPE CONFORMING TO THE LATEST REVISIONS OF ASTM DESIGNATION D-3034, SDR-35, INSTALLED IN ACCORDANCE WITH ASTM.
19. THE MANHOLE COVERS ARE TO BEAR THE INSCRIPTION "AMHERST SANITARY".

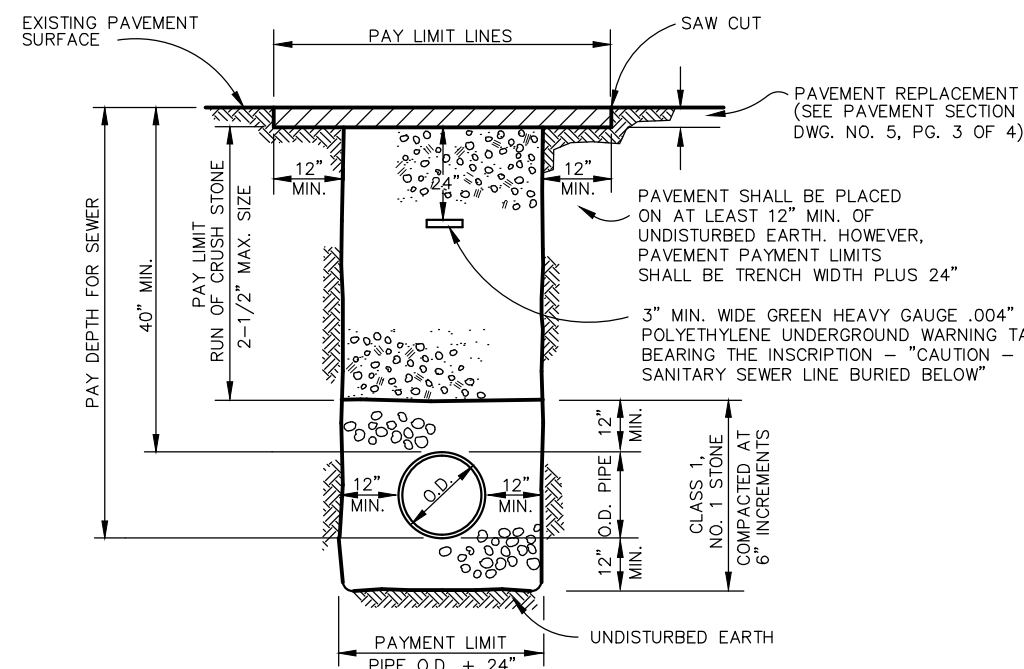
SANITARY SEWER TESTING METHODS  
GENERAL NOTES

- (A) LEAKAGE TESTS
01. THE TEST PERIOD WHEREIN THE MEASUREMENTS ARE TAKEN SHALL NOT BE LESS THAN 24 HOURS, REGARDLESS OF THE TEST METHOD USED.
  02. THE TOTAL LEAKAGE OF ANY SECTION TESTED BY ANY TEST METHOD SHALL NOT EXCEED THE RATE OF 200 GALLONS PER MILE OF PIPE PER 24 HOURS PER INCH OF NOMINAL PIPE DIAMETER.
  03. MANHOLES SHALL BE CONSIDERED AS SECTIONS OF 48" DIAMETER PIPE AND THE EQUIVALENT LEAKAGE ALLOWANCE SHALL BE COMPUTED PER NOTE 02 USING THE SUBMERGED HEIGHT OF MANHOLE AS THE LENGTH.
  04. WHEN MANHOLES ARE TESTED SEPARATELY, ALL PIPE OPENINGS SHALL BE PLUGGED AND THE TEST PROCEDURES AND CRITERIA SHALL BE APPLIED IN THE SAME MANNER AS FOR TESTS INVOLVING ONLY THE PIPE OR A COMBINATION OF PIPE AND MANHOLES.
- (B) INFILTRATION TEST CRITERIA FOR USE
01. THIS TEST METHOD MAY ONLY BE USED WHEN GROUND WATER LEVELS ARE AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE FOR THE ENTIRE LENGTH OF THE SECTION TO BE TESTED DURING THE ENTIRE PERIOD OF THE TESTS.
  02. GROUND WATER LEVELS MAY BE MEASURED IN AN OPEN TRENCH OR IN STANDPIPES PREVIOUSLY PLACED IN BACKFILLED TRENCHES DURING BACKFILLING.
  03. THE NUMBER OF STANDPIPES REQUIRED AND LOCATION OF THE SAME ARE TO BE AS ORDERED BY THE ENGINEER. STANDPIPES MAY BE OF ANY PIPE MATERIAL BUT MUST BE OF SUCH DIAMETER (2-1/2" MINIMUM) AS TO PERMIT THE INSERTION OF A RULE OR LEVEL ROD. CRUSHED STONE SHALL BE PLACED AROUND THE LOWER OPEN ENDS OF THE STANDPIPES.
  04. STANDPIPES ARE TO BE REMOVED AT THE SATISFACTORY COMPLETION OF THE TESTS.
  05. IF IN LIEU OF STANDPIPES, THE TRENCH IS TO BE LEFT OPEN FOR GROUND WATER OBSERVATION. THE LENGTH OF UNBACKFILLED TRENCH AT ANY ONE TIME MAY HAVE TO BE LIMITED FOR REASONS OF SAFETY.
- (C) EXFILTRATION TEST CRITERIA FOR USE
01. THIS TEST CONSISTS OF FILLING THE PIPE WITH WATER TO PROVIDE A HEAD OF AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE OR ABOVE GROUND WATER WHICHEVER IS HIGHER AT THE HIGHEST POINT OF THE PIPE LINE UNDER TEST, AND THEN MEASURING THE LOSS OF WATER TO MAINTAIN THE ORIGINAL LEVEL.
  02. IN THIS TEST THE PIPE LINE MUST BE FILLED WITH WATER AND ALLOWED TO REMAIN SO FILLED FOR AT LEAST 24 HOURS PRIOR TO TAKING MEASUREMENTS.
  03. REGARDING GROUND WATER MEASUREMENTS: SEE NOTES 02 THROUGH 05 ABOVE.
  04. REGARDING THE TEST STANDPIPE: THERE MUST BE SOME POSITIVE METHOD OF RELEASING ENTRAPPED AIR IN THE SEWER PRIOR TO TAKING MEASUREMENTS.
- (D) DEFLECTION TEST FOR PVC SEWER PIPE
01. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE GRAVITY SEWER PIPE. TESTS SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS.
  02. NO PIPE SHALL EXCEED DEFLECTION OF 5% DEFLECTION GAGE MAY BE BORROWED FROM THE TOWN ENGINEER FOR 8" AND 10" PIPE. THE DEFLECTION TEST MUST BE EXECUTED AFTER 30 DAYS OF PLACEMENT OF FINAL BACKFILL. THE TEST WILL ALSO BE DONE WITHOUT MECHANICAL PULLING DEVICES.

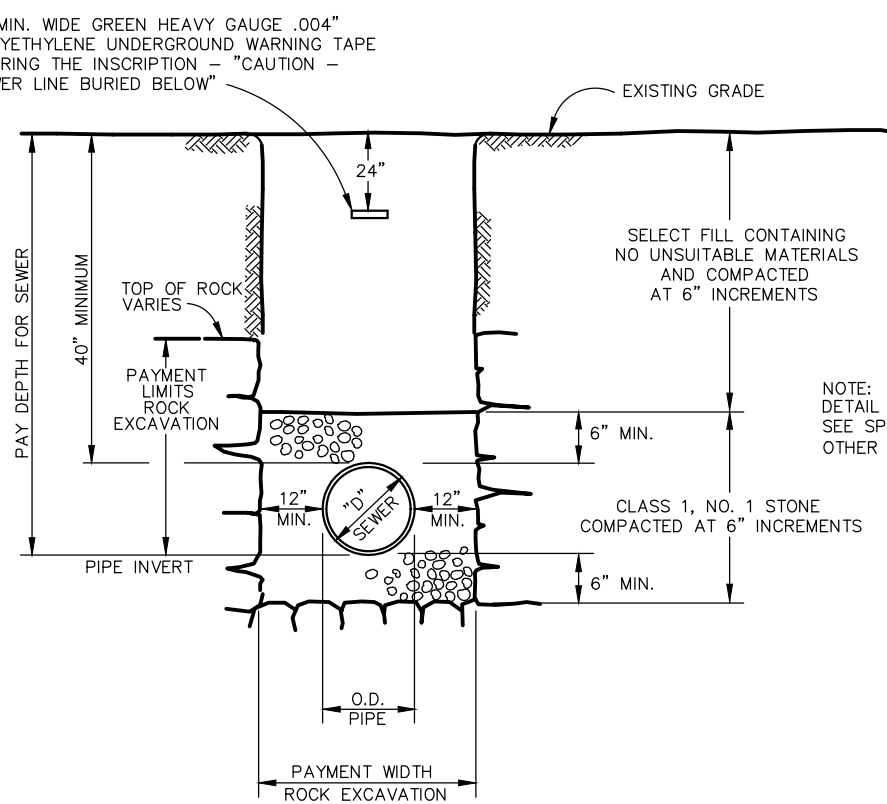
TYPICAL PAVEMENT SECTION



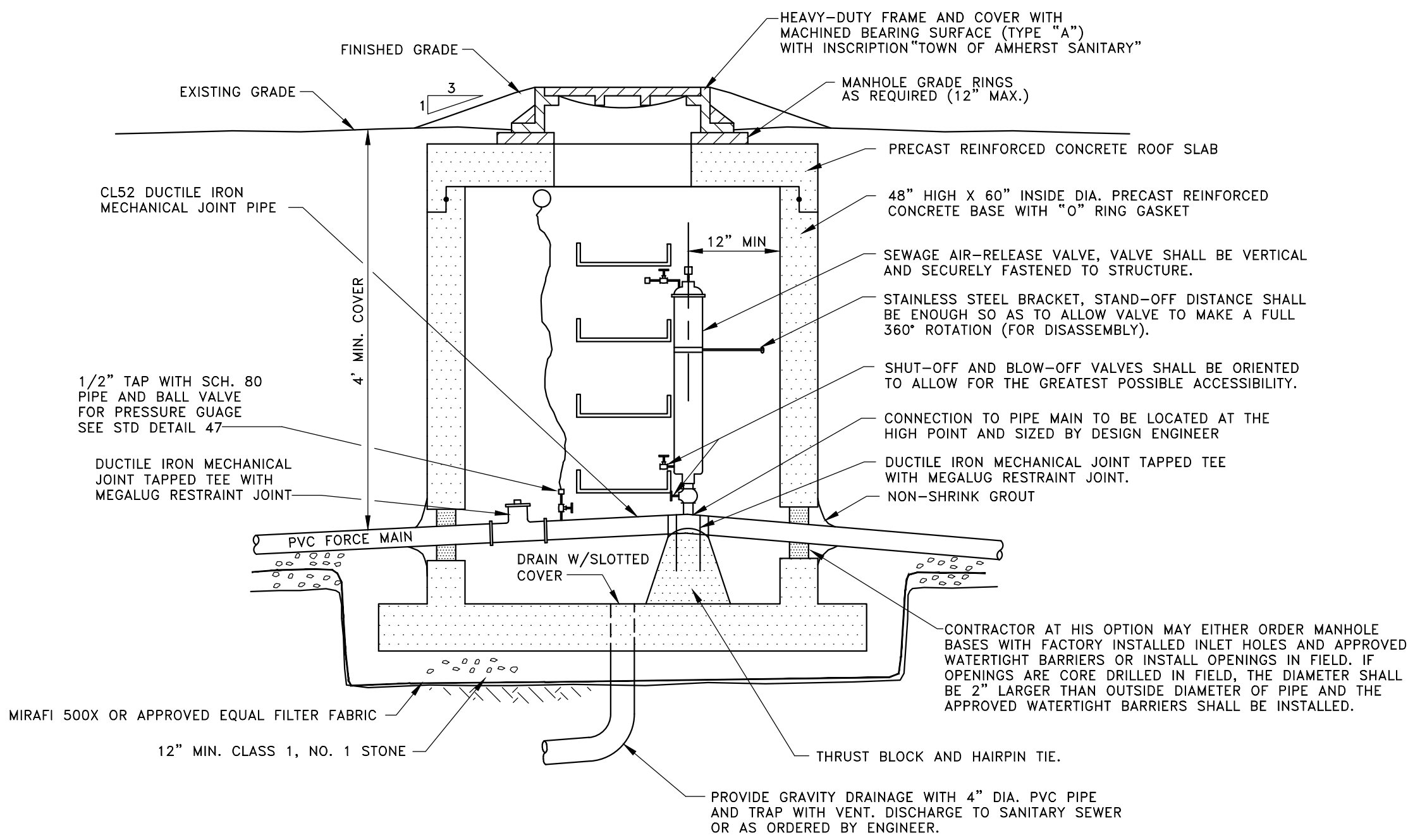
TYPICAL TRENCH DETAIL – PAVEMENT CROSSING  
FOR MAIN SEWERS  
& HOUSE AND BUILDING CONNECTIONS



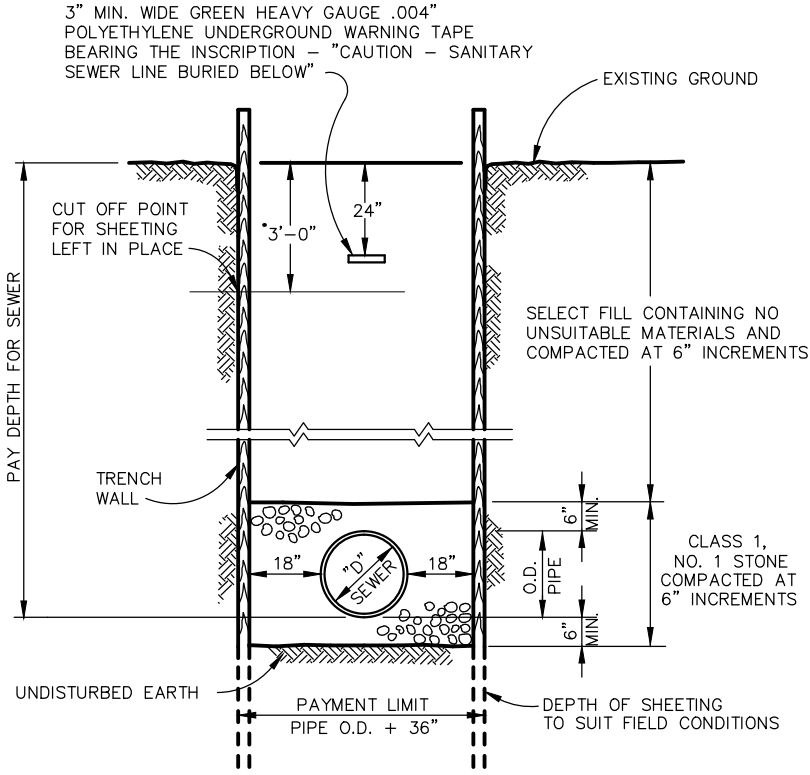
TYPICAL ROCK TRENCH DETAIL  
(UNPAVED AND UNTRAVELED WAYS AND AREAS)



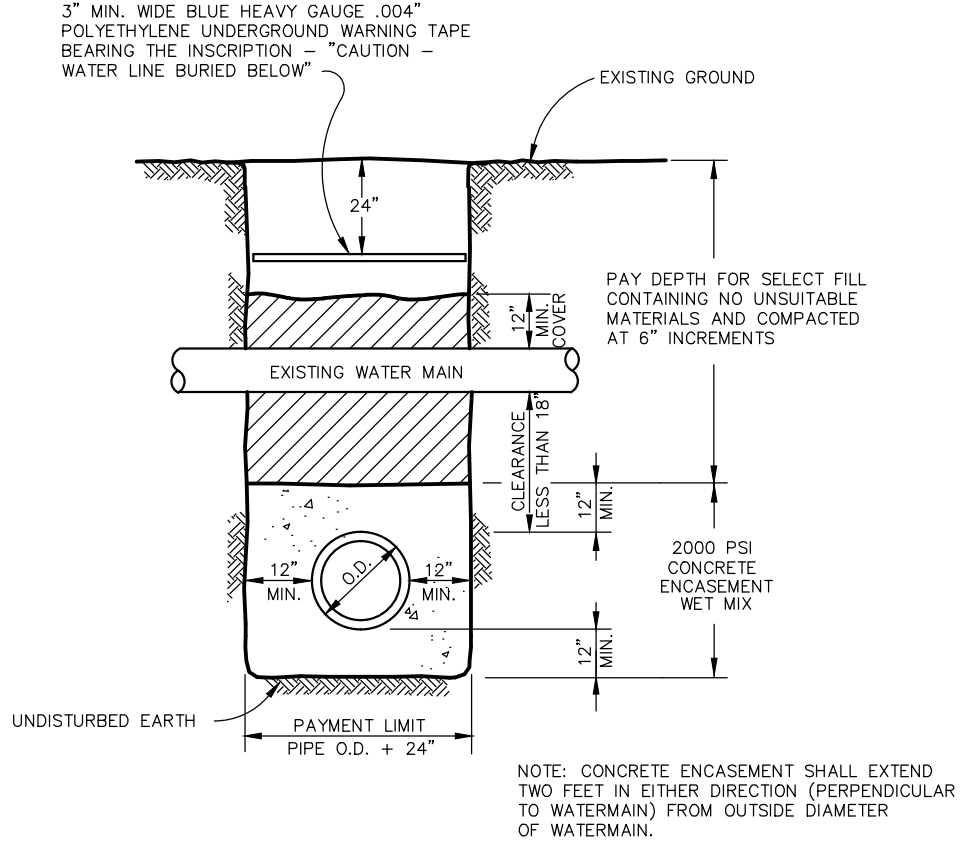
SEWER AIR RELEASE VALVE AND MANHOLE



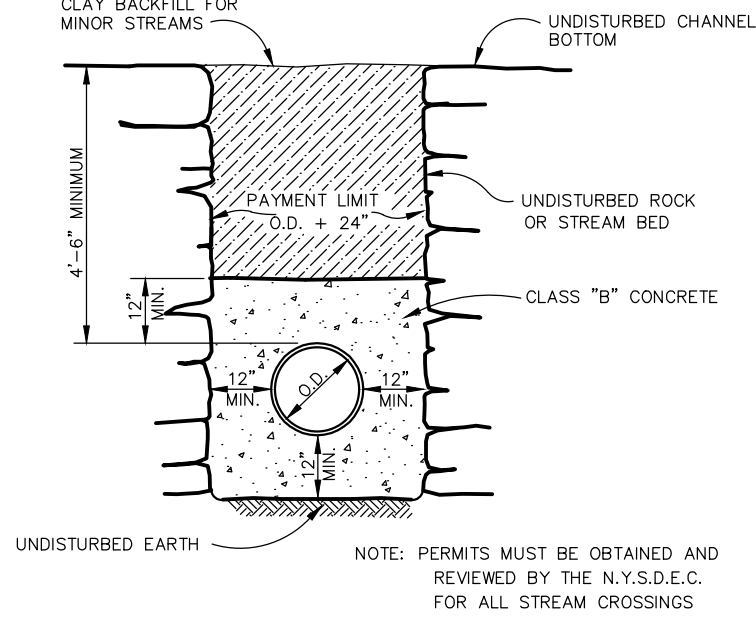
SHEETED TRENCH DETAIL



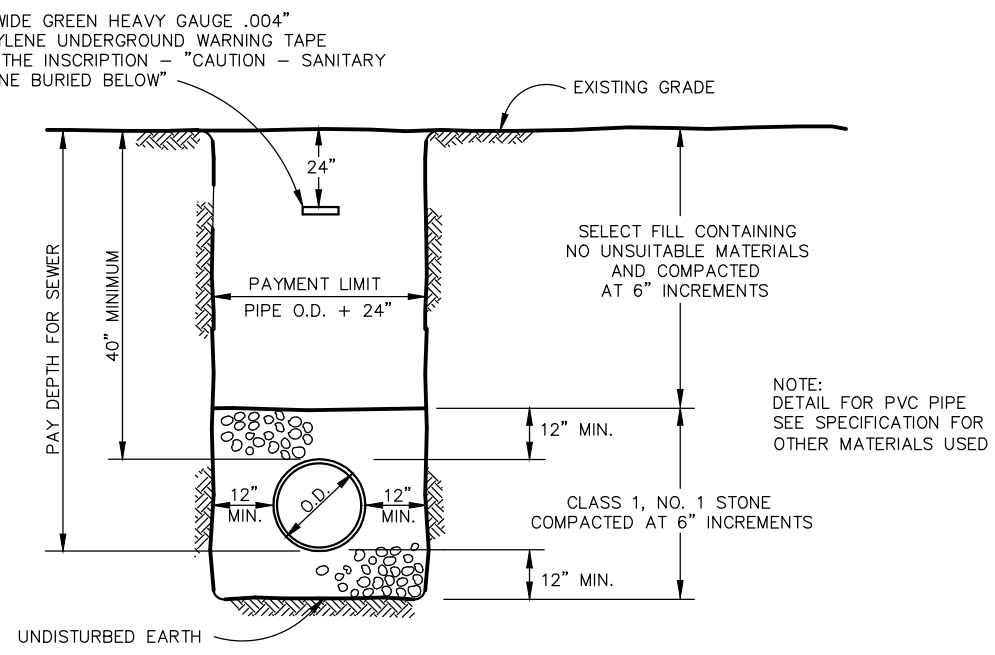
WATER CROSSING DETAIL  
CLEARANCE LESS THAN 18"



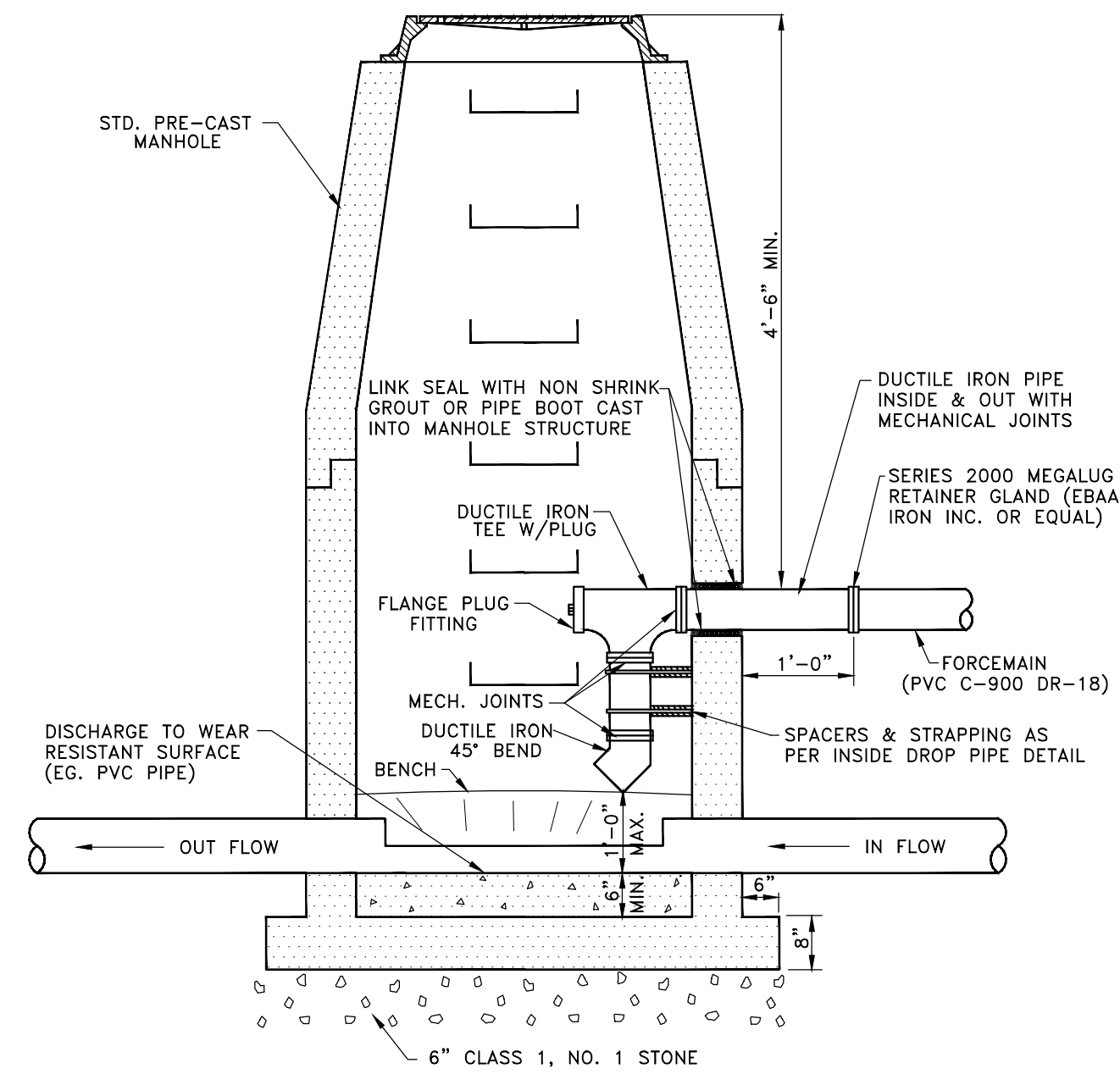
CONCRETE ENCASED STREAM CASING



TYPICAL EARTH TRENCH DETAIL  
UNPAVED AND UNTRAVELED AREAS



TYPICAL FORCEMAIN MANHOLE  
(NOVEMBER 2007)



**GPI**

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Design  
Planning  
Construction Management

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Buffalo, NY, 14225

GPINET.COM

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Orchard Park, NY 14127

S. YOUNGS ROAD PRIVATE  
PUMP STATION REDESIGN

669 S. Youngs Road  
Amherst, New York

STATE OF NEW YORK  
GREENMAN PEDERSEN INC.  
No. 151  
LICENSED PROFESSIONAL ENGINEER

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DETAILS

SCALE: As Noted

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KROG PUMP STATION LANDSCAPE PLAN	
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