
WATER SUPPLY REPORT

BULLARD LANE RESIDENTIAL SUBDIVISION

FEBRUARY 3, 2026

Prepared For:

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Broadalbin, NY 12025

Prepared By:



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I. PROJECT DESCRIPTION

The proposed water distribution system discussed in the following report involves the extension of the Wilton Water & Sewer Authorities municipal water supply to future residents of the Bullard Lane Residential Subdivision. The water extension will provide service to twenty-five (25) single-family homes.

II. SITE DESCRIPTION

The Bullard Lane Residential Subdivision is situated on one parcel having a total area of approximately 72.73 acres. The parcel has tax map number 141.-2-5.2 and is located on Bullard Lane, Saratoga Springs, New York 12866. The applicant is proposing to subdivide the parcel for the construction of twenty-five (25) new single-family homes.

The Soil Survey of Saratoga County, New York prepared by the National Resources Conservation Service (NRCS) indicates the site is mantled with three (3) distinct soil units. These units consists of Oakville Loamy Fine Sand (OaA), (OaB) and (OaC). The majority of the site is well drained with smaller areas of poorly drained soils.

Existing site topography is moderately level to undulating. Based on topographic survey information, the project site generally slopes toward the north and south to the existing wetlands located in the central portion of the parcel area. Areas to the east and south of the developed area are proposed for deed restricted conservation areas including NYSDEC Wetlands and corresponding adjacent areas.

Access to the project will be provided by a new roadway connection to Bullard Lane. The roadway will extend into the project site and will terminate via a cul-de-sac. Construction of the project will progress in several phases to limit the total disturbance at one time to less than five (5) acres. The parcel will be cleared to allow roadway construction and installation of all necessary utilities. Following the general infrastructure installation, construction will then begin on the individual homes.

III. WILTON WATER & SEWER AUTHORITY

The proposed water system will connect to the existing eight (8) inch watermain on the north side of Bullard Lane operated by the Wilton Water & Sewer Authority (WWSA). The proposed 8-inch water main will extend into the project site and follow the direction of the roadways where it will terminate with a dead-end fire hydrant at the cul-de-sac. The overall water extension includes approximately 2,051 linear feet of 8-inch watermain and five (5) hydrants and associated appurtenances. Refer to Appendix A for a diagram of the proposed water distribution system.

The WWSA performed a fire hydrant flow test on 3/15/2021 at Cobble Hill Drive prior to the municipal watermain extension into the Forest Grove Subdivision. The fire hydrant flow test results may be found in Appendix D.

IV. POPULATION AND WATER USE

The proposed water distribution system will serve two primary functions; domestic water use and fire flow protection.

The domestic water use in the project area is based on the population served in the project area. The estimated population for the Biss Parcel Residential Subdivision is sixty-three (63) residents. Refer to Appendix B for the calculated water system demand rates for the proposed project location. For the purpose of this analysis, the peak hourly flow rate from the project was used to provide a conservative analysis. The population multiplied by the peak hourly flow rate indicates that 19.5 gpm is needed for domestic water supply.

V. WATER DISTRIBUTION SYSTEM

The proposed water distribution system has been configured to provide service to each of the proposed twenty-five (25) single family residences. The proposed water extension infrastructure shall be owned and maintained by the WWSA. Each single-family residence will be equipped with a water meter and individual water service.

As noted above, the fire hydrant flow test results indicate that a pressure within the lines located at Cobble Hill Drive is 70 psi.

A computer model of the Wilton Water & Sewer Authority Watermain Extension along the proposed road was created based on the proposed system layout and available data for the connection point. Based on the information above, a computer model was created of the Bullard Lane Residential Subdivision. Refer to Appendix B for the System Layout Diagram. The model traces the proposed layout of the water distribution system with a series of pipes and junctions from the 8" main located along Bullard Lane. Specific data for each pipe was entered to indicate the appropriate length, diameter, material, roughness coefficient and any minor head losses. Additional data for each junction was input into the model indicating the appropriate elevation from the engineering drawings and calculated demand rate. Using the input data, the model simulated various operating conditions which include the steady state analysis and fire flow analysis as discussed in subsequent sections of this report.

The steady state analysis requires the distribution of the calculated 19.5 gpm domestic water demand rate throughout the proposed system to the single-family residences within the project. Once distributed, the steady state analysis can be performed. The steady state analysis calculates the discharge, headloss and headloss gradient for each individual pipe in the water distribution system. The steady state analysis also calculates the hydraulic grade and pressure at each of the junctions in the water distribution system. Refer to Appendix B for the Steady State Analysis Junction Report.

The junction report concludes that the pressures in the system will range between 64 and 70 psi depending on the location/elevation within the proposed system. These reports indicate the proposed water distribution system has adequate capacity to provide the peak hour domestic water flow while maintaining a system pressure above the 35-psi minimum required by the New York State Department of Health. Overall, the water distribution system within the subdivision provides a safe, reliable, and efficient supply of water for domestic use to the anticipated population served without detriment to the population already served.

The fire flow analysis is calculated with the needed fire flow of 1,000 gpm applied to the proposed hydrants simultaneously with the peak hour domestic water flow thus providing an analysis of the system during a worst-case scenario. Additional constraints include a minimum system pressure of 20 psi. The proposed system meets and exceeds the minimum required fire flow rates of 1,000 gpm at the minimum pressure of 20 psi and provides available fire flow rates at a minimum rate of approximately

1,108 gpm. The analysis represents a relatively small portion of the WWSA's water system. Therefore, the calculations assume that the pressures at the proposed distribution system connection points remain consistent. When the fire flow area is implemented, the drop in system pressure will extend beyond the limits of the proposed subdivision distribution system. However, due to the pressures within the existing network and size of the system analyzed the impact on the surrounding system's performance is considered negligible.

The ISO Fire Suppression Rating Schedule requires that the fire flow duration should be 1-hour for single family dwellings with an effective area of 4,800 sf or less. For the 1,000-gpm needed fire flow associated with this project, 60,000 gallons of water storage is necessary to sustain adequate fire flow for 1 hour. The WWSA water system contains adequate capacity to provide the necessary water storage. Therefore, fire flow water storage is currently adequate for meeting the minimum storage for fire flow.

All water mains, valves, hydrants, and services shall be of type approved by AWWA and the WWSA. The installation of all water mains, valves, hydrants, and services shall be in accordance with AWWA standards and the WWSA. All mains shall be disinfected in accordance with AWWA C-651-14 after building services have been connected but prior to the issuance of a Certificate of Occupancy.

VI. FINANCING

The cost of the proposed water system for the Bullard Lane Residential Subdivision includes all piping, valves, fittings, fire hydrants, and installation cost. The total estimated cost for the installation of the proposed water system is approximately \$167,393.61. Refer to Appendix C for the Water Supply Cost Estimate.

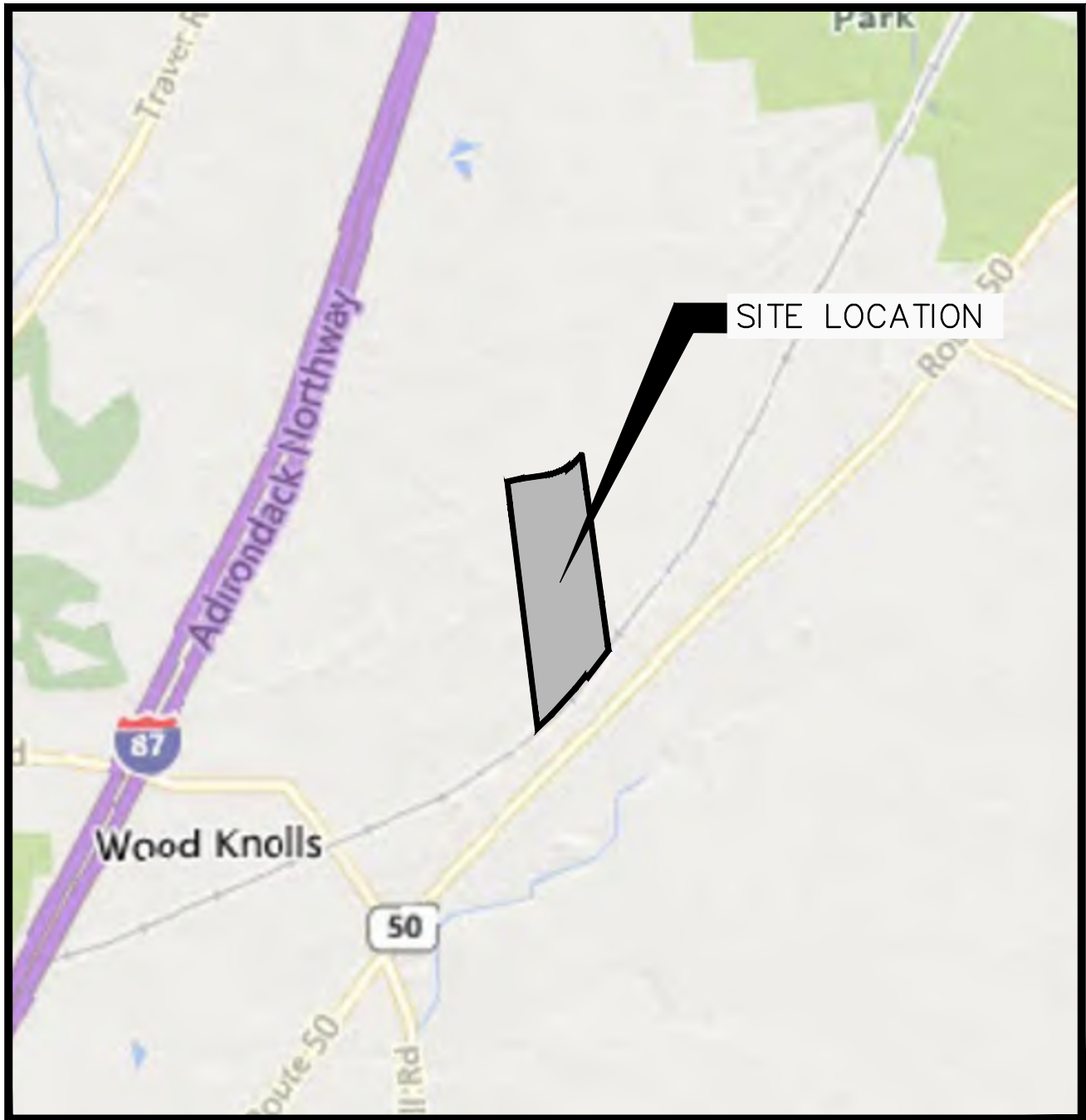
VII. SUMMARY

The layout of the proposed water distribution system for the Bullard Lane Residential Subdivision project has been configured to provide an optimal level of hydraulic performance and reliability.

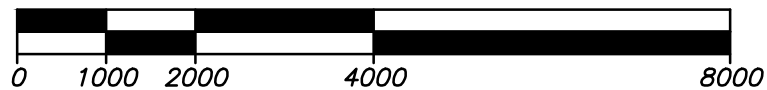
The demand rates for both domestic water use and fire flow protection have been calculated based on the population served and the properties of the structures in the development. The demand rates of 19.5 gpm for peak hour domestic water use and 1,000 gpm required fire flow for single-family residences shall be adequately supplied when modeled as a part of the distribution system within the required design constraints.

Overall, the water distribution system within the subdivision shall provide a safe, reliable, and efficient supply of water for both domestic use and fire protection to the population served without detriment to the surrounding population.

Appendix A
Site Maps



SITE LOCATION MAP



PRELIMINARY / NOT FOR CONSTRUCTION

BULLARD LANE RESIDENTIAL SUBDIVISION

BULLARD LANE, TOWN OF WILTON, SARATOGA COUNTY, NEW YORK

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SITE LOCATION MAP

PROJ. NO: 1061.01
SCALE: AS SHOWN
DATE: 02/03/2025

SLM-1
SHEET 1 OF 1

CIVIL - TRANSPORTATION - ENVIRONMENTAL - LAND SURVEYING

LEGEND	
EXISTING FEATURES	PROPOSED FEATURES
↑	FIRE HYDRANT
—	WATER LINE
□	CATCH BASIN
●	STORM MANHOLE
—	STORM WATER LINE
—	SANITARY GRAVITY LINE
—	SANITARY FORCEMAIN
○	SANITARY STRUCTURE
○	GRINDER PUMP
—	SANITARY CLEANOUT
—	PROPERTY LINE

NOTE: PROPOSED 60' R.O.W. TO BE DEDICATED TO THE TOWN OF WILTON.

- REALLY SUBDIVISION LOT # (TYP.)
- STREET ADDRESS (TYP.)
- PROPOSED APPROXIMATE GARAGE FINISH FLOOR ELEVATION (TYP.)
- APPROXIMATE LOCATION AND DIRECTION OF SIGN

TRAFFIC CONTROL DEVICE SCHEDULE		
PLAN NO.	DESCRIPTION	QTY.
1	R1-1 "STOP" SIGN	2
2	ROAD I.D. SIGN "BULLARD LANE X ROAD A"	1
4	R2-1 "SPEED LIMIT 30 MPH" SIGN	3
5	STORM WATER WARNING SIGN	2
6	DEED RESTRICTED LANDS	18
7	W14-2 NO OUTLET SIGN	1

NOTE: 1. CONTACT HIGHWAY DEPARTMENT FOR SIGN TYPE & SIGN REQUIREMENTS.

- PROPOSED PROPERTY LINE (TYP.)
- BUILDING SETBACK LINE (TYP.)
- EXISTING TREELINE (TYP.)
- PROPOSED TREELINE (TYP.)
- 8"x8"x8" TAPPING SLEEVE & GY
- APPROXIMATE LOCATION OF EXISTING WATERMAIN. CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.
- 3' WIDE GRAVEL SHOULDER (TYP.)
- PROPOSED 1" HDPE WATER SERVICE (TYP.)
- PROPOSED ASPHALT DRIVEWAY (TYP.)
- STORMWATER INFILTRATION TRENCH #1
- WASTEWATER DISPOSAL SYSTEM (TYP.) SEE NOTES THIS SHEET

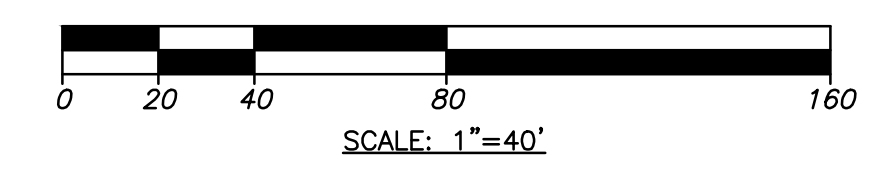


MATCH LINE
SEE SHEET LMG-2

- NOTES:
- ALL LOTS SHALL BE GRADED TO DIRECT SURFACE RUNOFF AWAY FROM THE BUILDINGS AND ALONG THE PROPERTY LINES TO MUNICIPALLY OWNED CONVEYANCE SYSTEMS UNLESS OTHERWISE INDICATED ON THE PLANS.
 - ALL LOTS SHALL DIRECT ROOF STORMWATER RUNOFF TOWARD THE TOWN ROAD AND THE STORMWATER CONVEYANCE SYSTEM. LOTS THAT CAN NOT PROVIDE POSITIVE DRAINAGE TO THE STREET SHALL HAVE GUTTERS INSTALLED TO CONVEY REAR DRAINING ROOF RUNOFF TOWARDS THE TOWN ROAD OR STORMWATER CONVEYANCE SYSTEM.
 - ROADWAY PAVING PERMITTED BETWEEN APRIL 1 AND NOVEMBER 1. REFER TO TOWN CODE SECTION 109-23 FOR ROAD CONSTRUCTION REQUIREMENTS. ANY STRUCTURES IN ROADWAY SHALL BE SET 1' BELOW BINDER AND A RISER RING INSTALLED FOR TOP COURSE PAVING.
 - WATERMAIN SHALL CONSIST OF 8" PVC C900 PIPE PER INSTALLED WATER & SEWER AUTHORITY SPECIFICATIONS. ALL PIPES TO BE WILTON PER AWWA C900 STANDARDS.
 - WATER SERVICES SHALL CONSIST OF 1" CTS HDPE, DR-9 WITH TRACER WIRE, H=15000 CORPORATION VALVE, H=15200 CURB VALVE & H=10314 VALVE BOX AND MATCHING SS STATIONARY ROD. CONTRACTOR SHALL COORDINATE WITH WILTON WATER & SEWER AUTHORITY PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
 - REFER TO DETAIL 7 AND TRAIL AMENITY NOTES ON SHEET DT-4 FOR SPECIFIC TRAIL AND AMENITY NOTES & DETAILS.
 - TEST PITS COMPLETED ON 12/23/2025 AND WITNESSED BY SCOH CONFIRM ADEQUATE SOIL PROFILES AND PERCOLATION RESULTS TO SUPPORT INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS.
 - PER TOWN OF WILTON REGULATIONS, TEST PITS AND PERCOLATION TESTS SHALL BE COMPLETED ON EACH LOT PRIOR TO THE APPLICATION OF A BUILDING/SEPTIC SYSTEM PERMIT.
 - HOME BUILDER/CONTRACTOR SHALL CONFIRM SINGLE-FAMILY RESIDENCE SPECIFICATIONS REGARDING NUMBER OF BEDROOMS. INSTALLATION OF A GARBAGE GRINDER/WHIRLPOOL SPA TO CONFIRM WASTEWATER DISPOSAL SYSTEM SIZING IS ACCURATELY PROVIDED FOR EACH RESIDENCE.
 - INVERT ELEVATIONS OF DRIVEWAY CULVERT CROSSING SHALL BE VERIFIED AT TIME OF EACH INDIVIDUAL PROPERTY SURVEY OF THE GROUND WATER ELEVATION. DITCH LINE ELEVATION SHALL BE MAINTAINED DURING CONSTRUCTION.

Bullard Lane
NOT MAINTAINED BY THE TOWN OF WILTON

LAYOUT & MATERIALS PLAN (NORTH)



TOWN OF WILTON
WATER & SEWER AUTHORITY
PLEASE REFER TO FIRST SHEET FOR APPROVAL DATE AND SIGNATURE

TOWN OF WILTON PLANNING BOARD
PLEASE REFER TO FIRST SHEET FOR APPROVAL DATE AND SIGNATURE

SARATOGA COUNTY DEPARTMENT OF HEALTH

LAYOUT & MATERIALS (NORTH)

PROJ. NO: 1061.01
SCALE: AS SHOWN
DATE: 2/03/2026

LMG-1
SHEET 5 OF 15

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REVISIONS RECORD/DESCRIPTION

DATE

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BULLARD LANE, TOWN OF WILTON, SARATOGA COUNTY, NEW YORK

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SARATOGA COUNTY, NEW YORK
REGISTERED PROFESSIONAL ENGINEER
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PRELIMINARY / NOT FOR CONSTRUCTION

CIVIL / TRANSPORTATION / ENVIRONMENTAL / LAND SURVEYING

LEGEND	
EXISTING FEATURES	PROPOSED FEATURES
↑	FIRE HYDRANT
—	WATER LINE
□	CATCH BASIN
•	STORM MANHOLE
—	STORM WATER LINE
—	SANITARY GRAVITY LINE
—	SANITARY FORCEMAIN
•	SANITARY STRUCTURE
•	GRINDER PUMP
•	SANITARY CLEANOUT
---	PROPERTY LINE
↑	CB
⊕	DMH
⊕	CO

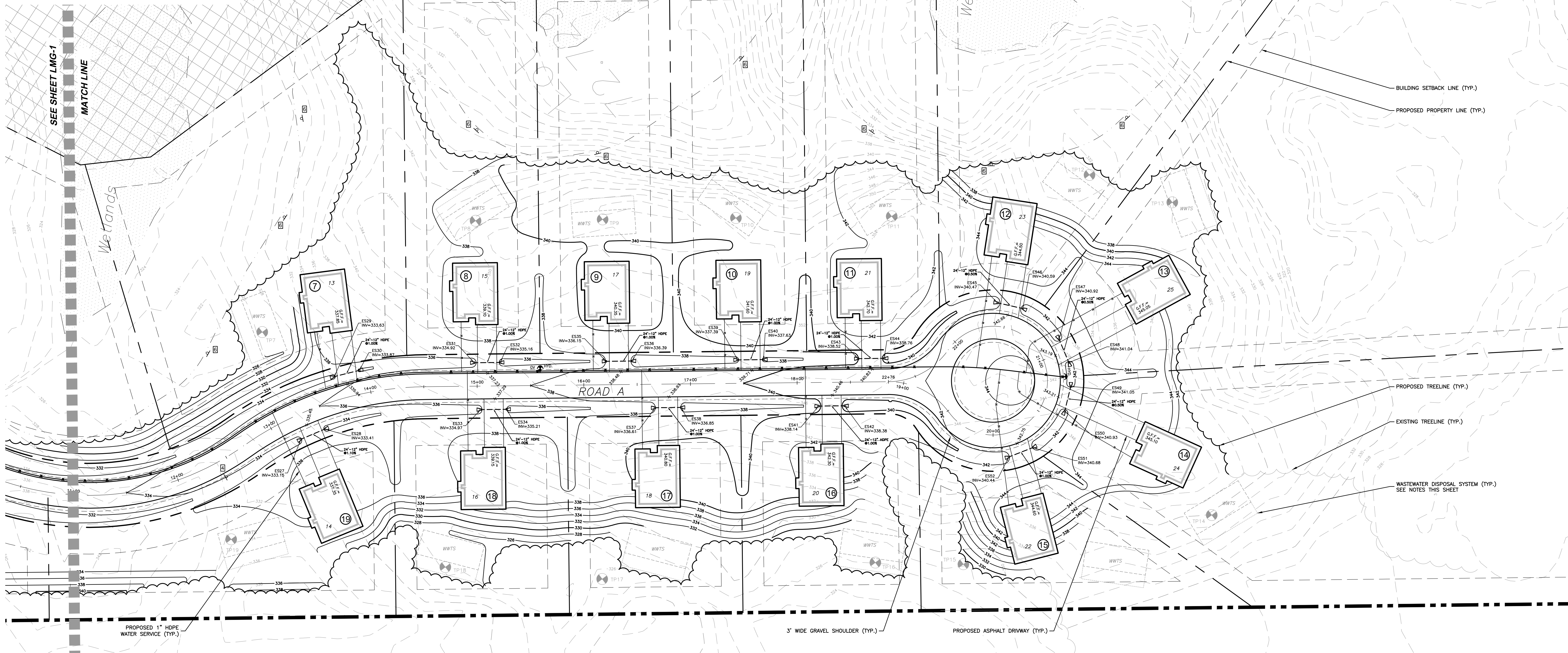
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APPROXIMATE LOCATION AND DIRECTION OF SIGN

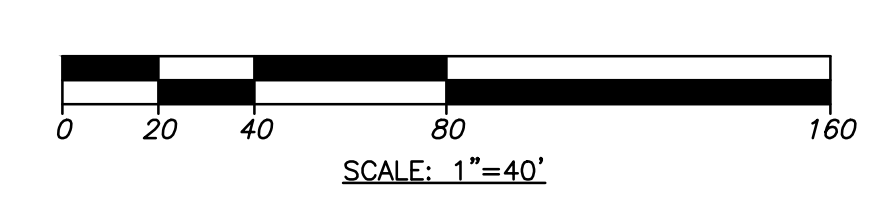
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NOTE:
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LAYOUT & MATERIALS PLAN (SOUTH)



TOWN OF WILTON
 WATER & SEWER AUTHORITY
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TOWN OF WILTON PLANNING BOARD
 PLEASE REFER TO FIRST SHEET FOR APPROVAL DATE AND SIGNATURE

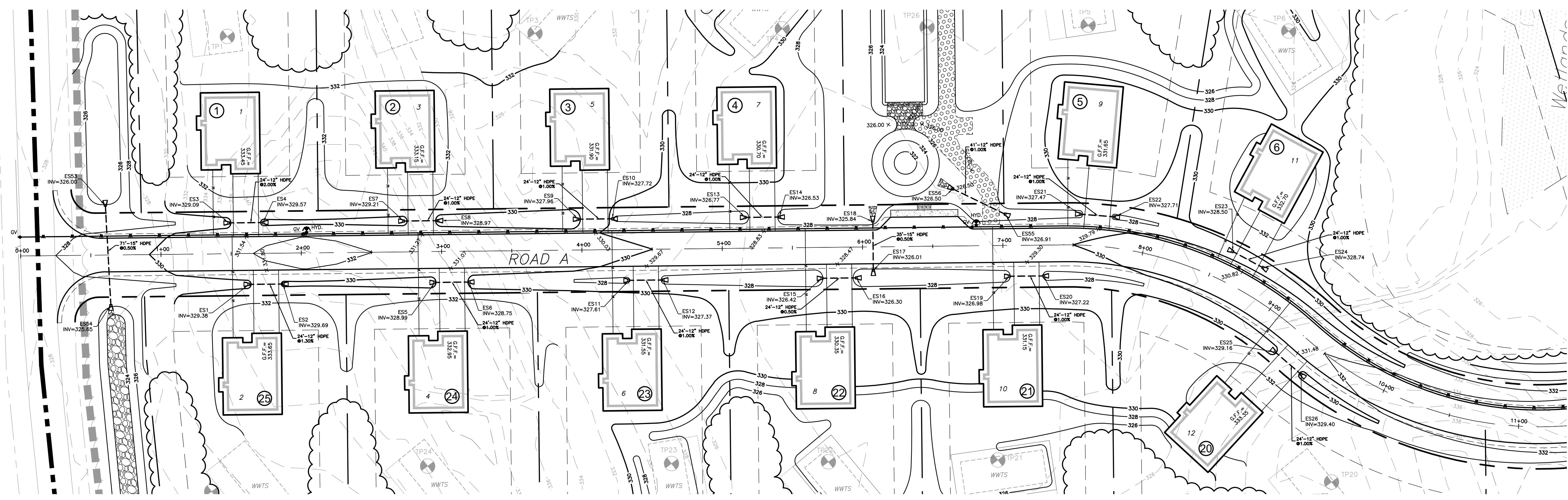
SARATOGA COUNTY DEPARTMENT OF HEALTH

LAYOUT & MATERIALS (SOUTH)

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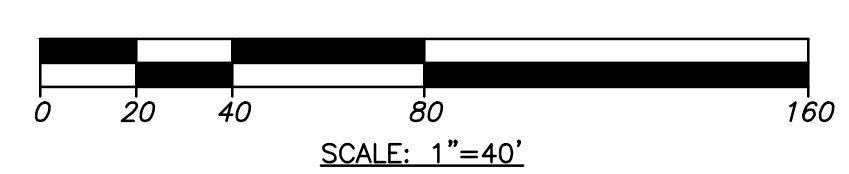
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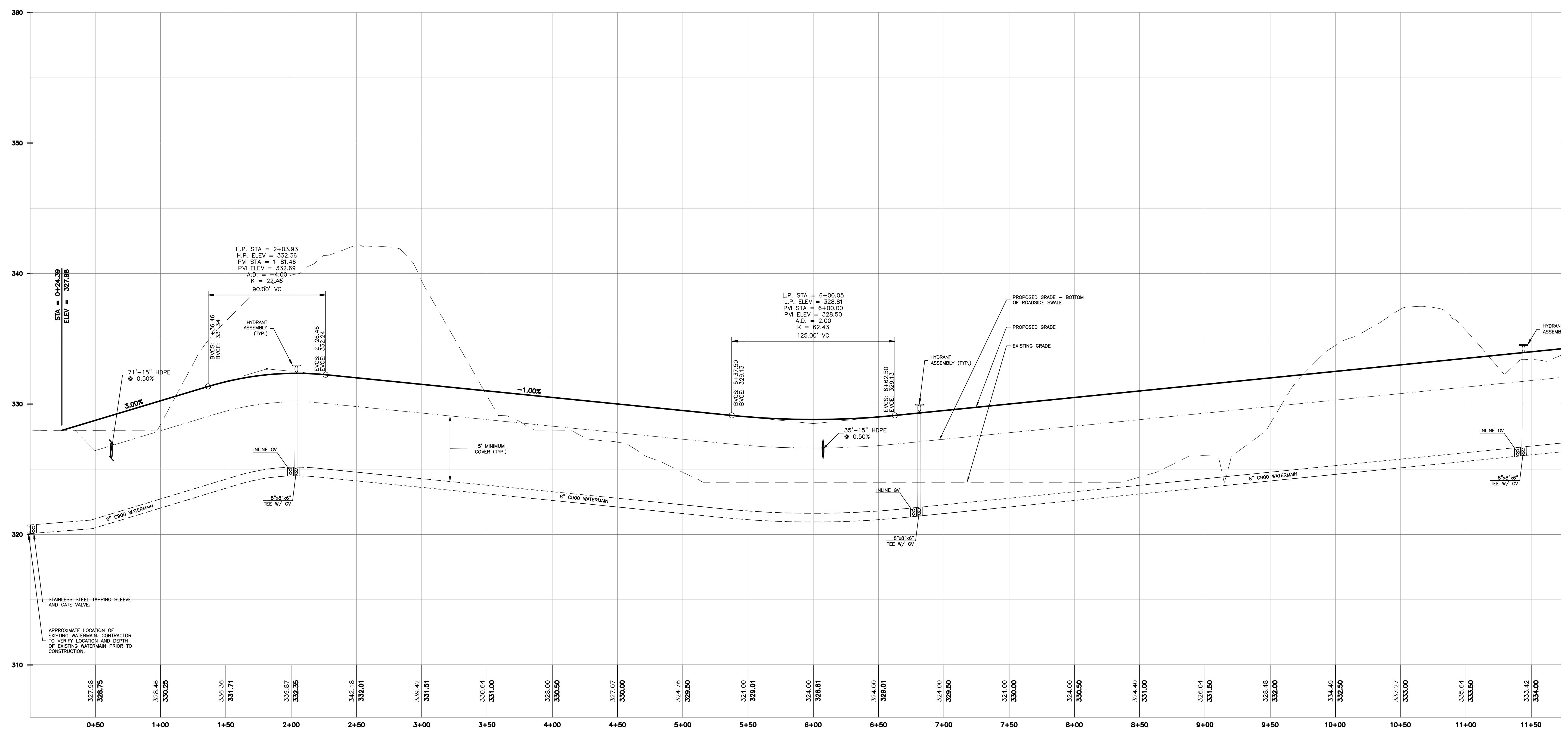


- NOTES:
- 1) FILLS GREATER THAN 5" PLACED WITHIN R.O.W. SHALL BE SELECT FILL: SAND, GRAVEL, STONE, OR BLENDS OF THESE MATERIALS FREE FROM ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIALS.
 - 2) ALL FILL SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DENSITY OF THE MATERIAL USED.
 - 3) PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 12" LOOSE DEPTH. LIFT HEIGHT SHALL BE GOVERNED BY THE ABILITY OF THE COMPACTION EQUIPMENT TO OBTAIN THE REQUIRED COMPACTION WITH 12" AS A MAXIMUM LIFT HEIGHT. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO FACILITATE COMPACTION TO THE REQUIRE DENSITY.
 - 4) COMPACTION TESTING SHALL BE PERFORMED AT THE DISCRETION OF THE INSPECTING ENGINEER IN ACCORDANCE WITH AASHTO T238, NUCLEAR METHOD.
 - 5) DO NOT PLACE BACKFILL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST, ICE, PONDED WATER OR EXTRANEIOUS DEBRIS.
 - 6) A MINIMUM OF 18" VERTICAL AND 10' HORIZONTAL SEPARATION IS REQUIRED BETWEEN SEWER (BOTH SANITARY AND STORM) AND WATER LINES.
 - 7) TYP. HYD. ASSEMBLY COMPRISED OF 8"x8"x6" TEE, 6" GATE VALVE AND HYDRANT ASSEMBLY.
 - 8) MINIMUM OF 5' OF COVER IS REQUIRED OVER WATERLINE.
 - 9) WATERMAIN SHALL CONSIST OF 8" PE4710 DR-11 "BLUESTRIPE" FOR DIRECTIONAL DRILLING PER WWSA SPECIFICATIONS. ALL PIPES TO BE INSTALLED PER AWWA C900 STANDARDS.

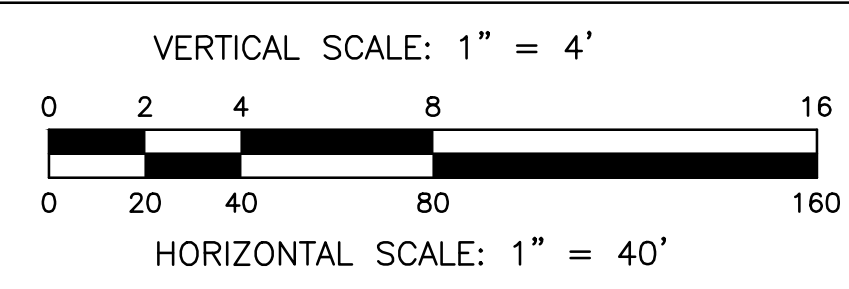
PLAN - ROAD A STA 0+00 TO 11+00



1



PROFILE - ROAD A STA 0+00 TO 11+00



2

TOWN OF WILTON
WATER & SEWER AUTHORITY
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TOWN OF WILTON PLANNING BOARD
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SIGNATURE

SARATOGA COUNTY DEPARTMENT OF HEALTH

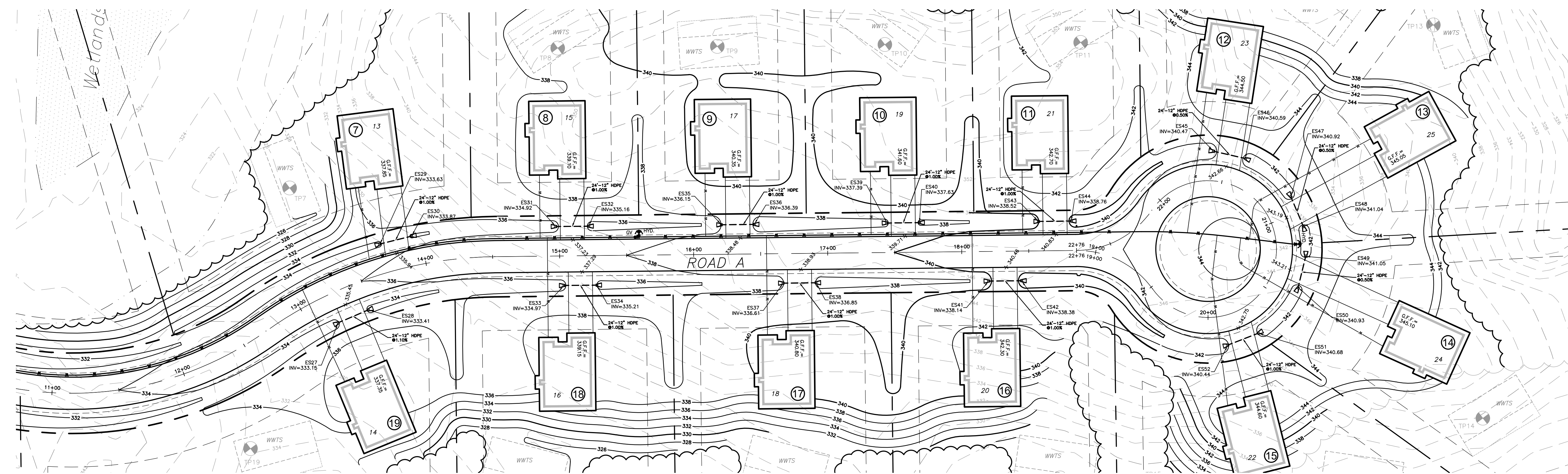
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SARATOGA COUNTY, NEW YORK
100 W. STATE ST. SUITE 201
MALTBY, NY 11759
(815) 888-8888

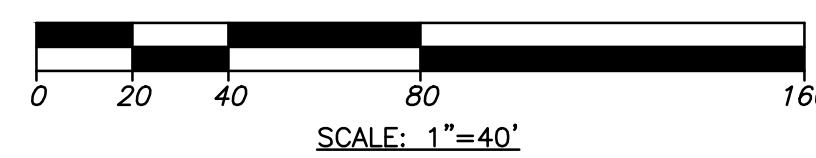
PLAN &
PROFILE ROAD
A (1 OF 2)

PROJ. NO: 1061.01
SCALE: AS SHOWN
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PP-1
SHEET 7 OF 15

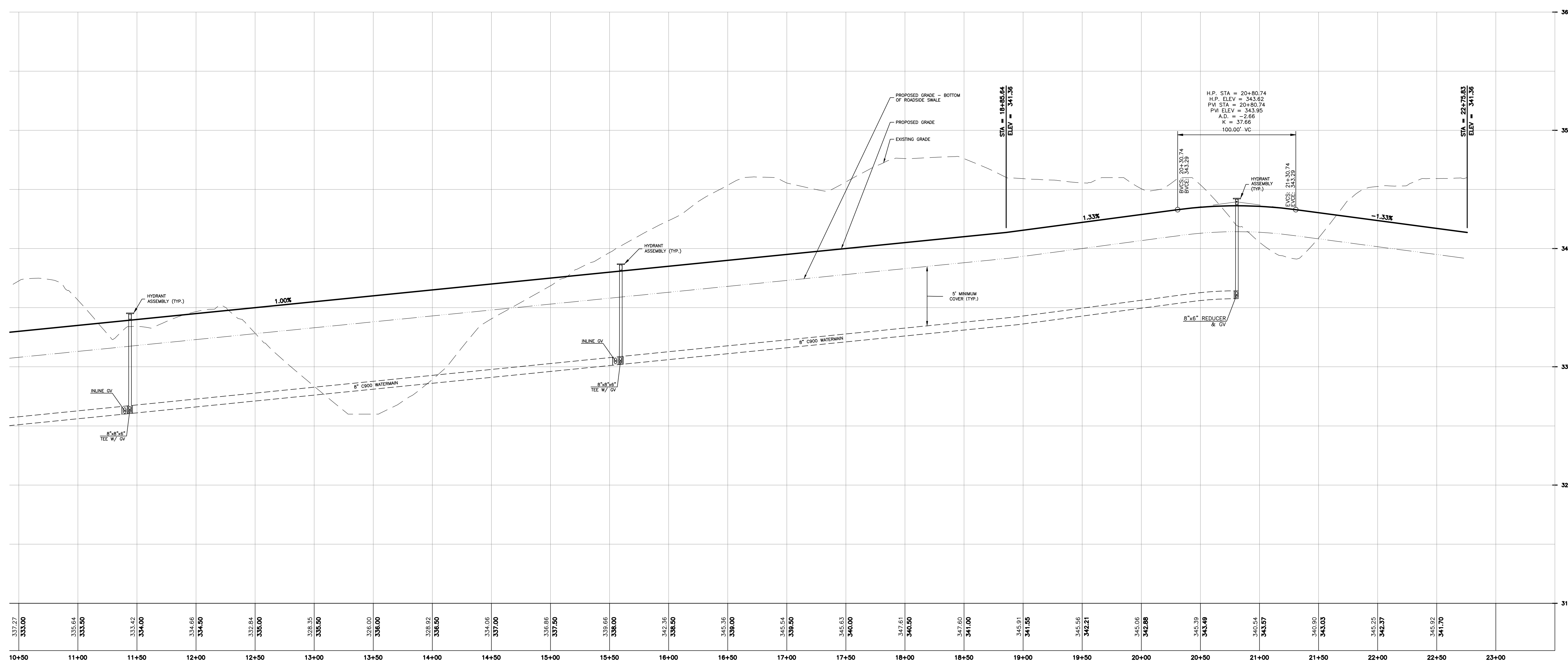


1

PLAN - ROAD A STA 11+00 TO 23+00

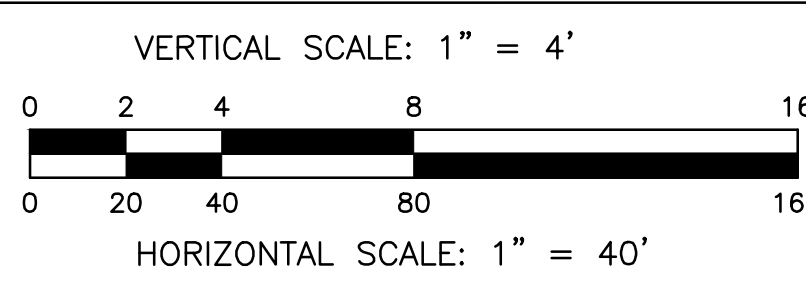


- NOTES:
- 1) FILLS GREATER THAN 6" PLACED WITHIN R.O.W. SHALL BE SELECT FILL: SAND, DURABLE, SAND, GRAVEL, STONE, OR BLENDS OF THESE MATERIALS FREE FROM ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIALS.
 - 2) ALL FILL SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DENSITY OF THE MATERIAL USED.
 - 3) PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 12" LOOSE DEPTH. LIFT HEIGHT SHALL BE GOVERNED BY THE ABILITY OF THE COMPACTOR EQUIPMENT TO OBTAIN THE REQUIRED COMPACTION WITH 12" AS A MAXIMUM LIFT HEIGHT. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO FACILITATE COMPACTION TO THE REQUIRED DENSITY.
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 - 5) DO NOT PLACE BACKFILL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST, ICE, PONDED WATER OR EXTRANEIOUS DEBRIS.
 - 6) A MINIMUM OF 18" VERTICAL AND 10' HORIZONTAL SEPARATION IS REQUIRED BETWEEN SEWER (BOTH SANITARY AND STORM) AND WATER LINES.
 - 7) TYP. HYD. ASSEMBLY COMPRISED OF 8"x6"x6" TEE, 6" GATE VALVE AND HYDRANT ASSEMBLY.
 - 8) MINIMUM OF 5' OF COVER IS REQUIRED OVER WATERLINE.
 - 9) WATERMAN SHALL CONSIST OF 8" PE4710 OR-11 "BLUESTRIPE" FOR DIRECTIONAL DRILLING PER WWSA SPECIFICATIONS. ALL PIPES TO BE INSTALLED PER AWWA C900 STANDARDS.
- | SIETE | PERCENT PASSING |
|---------|-----------------|
| NO. 40 | 100 |
| NO. 100 | 97-70 |
| NO. 200 | 0-10 |



2

PROFILE - ROAD A STA 11+00 TO 23+00



TOWN OF WILTON
WATER & SEWER AUTHORITY
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STATE OF NEW YORK
E-15183 BBS/BS&S

CIVIL / TRANSPORTATION / ENVIRONMENTAL / LAND SURVEYING

PLAN &
PROFILE ROAD
A (2 OF 2)

PROJ. NO: 1061.01
SCALE: AS SHOWN
DATE: 2/03/2026

PP-2
SHEET 8 OF 15

GENERAL WATER NOTES:

- 1) ALL WATER DISTRIBUTION SYSTEM COMPONENTS SHALL BE IN ACCORDANCE WITH THE RULES, REGULATIONS, AND CONSTRUCTION STANDARDS OF THE WILTON WATER AND SEWER AUTHORITY (WWSA), AND MOST RECENT STANDARDS AND SPECIFICATIONS OF THE NYSDOH AND NYSDDEC. ALL WATER MAIN FITTINGS SHALL USE BLUE BOLTS AND GRIPPING (OR EQUAL) MECHANICAL JOINT RESTRAINTS.
- 2) THE CONTRACTOR SHALL VERIFY SIZE, TYPE, HORIZONTAL, AND VERTICAL LOCATION OF THE EXISTING WATER MAIN AT THE PROPOSED CONNECTION POINTS PRIOR TO CONSTRUCTION OF ANY MATERIALS. CONFLICTS WITH OTHER UTILITIES TO BE CONSTRUCTED ARE TO BE AVOIDED. DISCREPANCIES OR CONFLICTS WITH EXISTING UTILITIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- 3) MINIMUM WATER MAIN DEPTH (TOP OF PIPE TO FINISH GRADE) SHALL BE 5'-0".
- 4) ALL FILL BELOW WATER MAIN SHALL BE COMPACTED GRANULAR MATERIAL (MIN 95% MODIFIED PROCTOR TYP).
- 5) ALL TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED TO PREVENT SETTLEMENT. TOP TRENCH WITH 12" MIN. FINE-GRAINED GRAVEL IN PAVED AREAS AND ALONG SIDE OF EXISTING ROAD FOR SHOULDER BASE. REPLACE DAMAGED PAVEMENTS WITH LIKE KIND AND LIKE THICKNESS.
- 6) WATER MAINS SHALL BE 8" PE4710 DR-11 "BLUE STRIPE" AS APPROVED BY THE WWSA.
- 7) WATER MAINS ARE TO BE INSTALLED IN ACCORDANCE WITH AWWA STANDARDS: C600-17 FOR DUCTILE IRON, C900-22 FOR PVC.
- 8) ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CEMENT LINED IN ACCORDANCE WITH AWWA STANDARD C602.
- 9) ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE ENCASED IN ACCORDANCE WITH AWWA C105 UNLESS TEST RESULTS PROVIDED BY THE CONTRACTOR INDICATE THE ABSENCE OF SEVERELY AGGRESSIVE SOILS.
- 10) ALL WATER PIPE AND APPURTENANCES SHALL BE EITHER NSF OR UL APPROVED FOR USE WITH POTABLE WATER AND SHALL BEAR THEIR RESPECTIVE SEAL.
- 11) HYDRANTS SHALL BE LOCATED AT STREET INTERSECTIONS AND AT INTERMEDIATE POINTS AS INDICATED ON THE PLANS. CARE SHALL BE USED, WHEN LAYING MAINS, SO AS TO AVOID CREATING HIGH POINTS BETWEEN HYDRANTS.
- 12) MINIMUM SEPARATIONS BETWEEN WATER MAINS AND SANITARY AND STORM SEWERS ARE REQUIRED PER NYSDOH AND TEN STATE STANDARDS AT CROSSINGS, 18" MIN. WHERE PAVEMENT IS 10 FT. MIN. (MEASURED TO THE CENTER OF THE WATER MAIN).
- 13) THRUST BLOCKING SHALL BE CAST-IN-PLACE CONCRETE AND SHALL BE SIZED AS PER THRUST BLOCK SCHEDULE. MECHANICAL RESTRAINTS MUST BE APPROVED BY THE WWSA.
- 14) ALL NEW WATER MAINS ARE TO BE HYDROSTATICALLY TESTED TO THE CURB STOP IN ACCORDANCE WITH CURRENT AWWA STANDARDS: C600-17 SECT. 4 FOR DUCTILE IRON AND MANUAL M23 FOR PVC. RESULTS TO BE SUBMITTED TO WWSA DIRECTOR. MODIFICATIONS TO EXISTING MAINS SHALL BE DISINFECTED BY SWAB METHOD AND VISUALLY TESTED FOR LEAKS UNDER NORMAL WORKING PRESSURE PRIOR TO BACKFILL.
- 15) ALL WATER MAINS SHALL BE DISINFECTED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH CURRENT AWWA STANDARDS C651-14 (SEE DISINFECTION PROCEDURE THIS SHEET). RESULTS TO BE SUBMITTED TO THE WWSA DIRECTOR.
- 16) CURB BOXES ARE TO BE INSTALLED SO THAT CAPS EXTEND ABOVE FINISHED GRADE 1" AND IDENTIFIED WITH BLUE PAINTED 2X4 LUMBER MARKER EXPOSED 2' ABOVE THE GROUND SURFACE. IN GRASSY AREAS, USE TWO PIECE CURB BOX CAP (W/ PENTAGONAL FLUG) AND CAST IRON CURB BOX SLEEVE TO ALLOW ADJUSTMENT OF THE GROUND KEY LID (MUELLER H-10342 OR APPROVED EQUAL).
- 17) IT WILL BE THE CONTRACTORS RESPONSIBILITY TO ADHERE STRICTLY TO ALL RELEVANT NYS OSHA LABOR SAFETY STANDARDS INCLUDING, BUT NOT LIMITED TO, THOSE RELATING TO CONSTRUCTION SAFETY AND TRENCH SHORING.
- 18) ALL GENERAL AND SPECIFIC NOTES AND DETAILS ON OTHER PLAN SHEETS THAT ARE PART OF THESE PLANS SHALL APPLY.
- 19) UTILITY SERVICE MUST BE MAINTAINED TO ALL SYSTEM USERS DURING CONSTRUCTION ACTIVITIES.
- 20) ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH CURRENT AWWA STANDARDS C-651-14 OR OTHER METHOD APPROVED BY THE WWSA. FOLLOWING FLUSHING, WATER SAMPLES SHALL BE COLLECTED FROM THE MAIN AT EACH BRANCH, FIRE HYDRANTS ARE NOT ACCEPTABLE SAMPLING POINTS. WATER SAMPLES SHALL BE COLLECTED AND THE WATER MAIN SHALL NOT BE PLACED IN SERVICE UNTIL THE WATER HAS BEEN APPROVED AND NOTIFICATION THEREOF RECEIVED.

TOWN OF WILTON WATER & SEWER AUTHORITY (WWSA) STANDARD NOTES:

- 1) ALL WATER SYSTEMS ALONG WITH ALL RELATED PROPERTIES AND EASEMENTS NEEDED FOR WATER SERVICE FOR THIS PROJECT SHALL BE OFFERED WITHOUT COST TO THE WWSA. ALL COSTS ASSOCIATED WITH THE TRANSFER OF PROPERTY AND SYSTEMS SHALL BE AT THE APPLICANT'S EXPENSE. UPON ACCEPTANCE BY THE WWSA, THE WWSA WILL OWN ALL WATER SYSTEMS.
- 2) THE APPLICANT IS RESPONSIBLE TO PROVIDE A CERTIFICATION BY A LICENSED PROFESSIONAL ENGINEER THAT ALL WATER AND SANITARY WASTEWATER SYSTEMS ARE CONSTRUCTED IN COMPLIANCE WITH THE APPROVED PLANS. P.E. STAMPED/SIGNED MYLAR RECORD DRAWINGS SHALL BE SUBMITTED TO THE WWSA.
- 3) THE APPLICANT IS REQUIRED TO COMPLY WITH ALL OF THE WWSA'S PERFORMANCE BOND AND FEE REQUIREMENTS (INCLUDING, BUT NOT LIMITED TO, WATER SERVICE BUY-IN FEES). THE APPLICANT SHOULD CONTACT THE WWSA DIRECTLY TO DETERMINE THE REQUIRED WATER FEES. THE WWSA INSPECTS WATER FACILITIES, WATER MAINS, AND WATER SERVICES.
- 4) WATER SERVICE MUST BE MAINTAINED TO ALL SYSTEM USERS DURING CONSTRUCTION ACTIVITIES.
- 5) ALL WATER DISTRIBUTION SYSTEM COMPONENTS SHALL BE IN ACCORDANCE WITH THE RULES, REGULATIONS, AND CONSTRUCTION STANDARDS OF THE WWSA, AND THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE NYSDOH AND NYSDDEC. PLEASE NOTE THE WWSA'S STANDARD HYDRANT, WATER METER, VALVE, AND PIPE MATERIAL REQUIREMENTS. GRIPPING (OR EQUAL) MECHANICAL JOINT RESTRAINTS AND BLUE BOLTS SHALL BE USED FOR ALL WATER MAIN FITTINGS.
- 6) WATER METERS SHALL BE LOCATED ON EACH WATER SERVICE. COORDINATE WITH THE WWSA FOR PURCHASE OF THE WATER METER.
- 7) ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH CURRENT AWWA STANDARDS C-651-14 OR OTHER METHOD APPROVED BY THE WWSA. FOLLOWING FLUSHING, WATER SAMPLES SHALL BE COLLECTED FROM THE MAIN AND EACH BRANCH. FIRE HYDRANTS ARE NOT ACCEPTABLE SAMPLING POINTS. WATER SAMPLES SHALL BE COLLECTED AND THE WATER MAIN SHALL NOT BE PLACED IN SERVICE UNTIL THE WATER HAS BEEN APPROVED AND NOTIFICATION THEREOF RECEIVED.
- 8) ALL NEWLY INSTALLED WATER MAINS SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA C-600.
- 9) ALL SANITARY WASTEWATER SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, AND TESTED IN ACCORDANCE WITH THE RULES, REGULATIONS, AND CONSTRUCTION STANDARDS OF THE SARATOGA COUNTY SEWER DISTRICT (SCSD) AND THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE NYSDOH AND NYSDDEC.

DISINFECTION PROCEDURE:

- 1) MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH THE CURRENT AWWA STANDARDS FOR DISINFECTING WATER MAINS, C-651-14, WITH THE EXCEPTION OF SECTION 5.1. TABLE METHOD WATER CONTAINING NOT MORE THAN 50 PARTS PER MILLION OF FREE AVAILABLE CHLORINE SHALL BE ALLOWED TO STAND IN ALL LINES AND SYSTEMS FOR AT LEAST 24 HOURS. AFTER WHICH TIME THERE SHALL BE AT LEAST 25 PARTS PER MILLION RESIDUAL CHLORINE REMAINING IN THE WATER. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE THE LINES ARE FILLED WITH HEAVILY CHLORINATED WATER. FOLLOWING CHLORINATION TO THE SATISFACTION OF THE TOWN, ALL DISINFECTING WATER SHALL BE FLUSHED FROM THE LINES UNTIL THE CHLORINE RESIDUAL DOES NOT EXCEED 1.0 PARTS PER MILLION. WHEN ALL LINES HAVE BEEN FLUSHED CLEAN TO THE WATER SUPERINTENDENT'S SATISFACTION, THE OWNER OR HIS REPRESENTATIVE SHALL COLLECT SAMPLES OF WATER AT LOCATIONS DIRECTED BY THE WATER SUPERINTENDENT AND UNDER HIS SUPERVISION. THE SAMPLES SHALL BE SENT TO AN APPROVED TESTING LABORATORY FOR BACTERIAL ANALYSIS AND THE TEST RESULTS SHALL BE SENT TO THE TOWN. DISINFECTING FLUSHING WATER MUST BE DISCHARGED IN ACCORDANCE WITH NYSDDEC REGULATIONS. WATER TO BE NEUTRALIZED ACCORDING TO AWWA C601 APPENDIX B.
- 2) AFTER THE CHLORINATION PROCEDURE IS COMPLETED, AND BEFORE THE WATER MAIN IS PLACED IN SERVICE, WATER FROM THE FULL FACILITY SHALL BE SAMPLED AND TESTED FOR COLIFORM ORGANISMS IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER".

WWSA MATERIAL NOTES:

- 1) HYDRANTS - 5" AMERICAN DARLING B-84-B-5 WITH 6" ALPHA JOINT BASE AS APPROVED BY WWSA, INSTALLED TRULY VERTICAL, FACTORY COATED IN RED, 5" STORZ CONNECTION NOZZLE.
- 2) GATE VALVES - AMERICAN DARLING 2500 SERIES RESILIENT WEDGE GATE VALVE WITH ALPHA RESTRAINT JOINT ENDS, OPEN LEFT.
- 3) WATERMAIN - PVC C900 DR-18.
- 4) DIRECTIONAL DRILLING PIPE - PE4710 DIPS DR-11 "BLUE STRIPE".
- 5) VALVE BOX - DROP STYLE C.I. COVER INCLUDING "WATER" AND OPEN LEFT ARROW CAST IN. (TELESCOPIC PATTERN)
- 6) WATER SERVICE LINES - 1" CTS HDPE, SDR-9 200 PSI PE 3408 TUBING WITH STAINLESS STEEL STIFFENER INSERTS FOR ALL CONNECTIONS.
- 7) CORPORATION STOP - MUELLER H-1500B CORPORATION STOP WITH 110 COMPRESSION CONNECTION.
- 8) CURB STOP - MUELLER MARK II ORISEAL CURB STOP WITH 110 COMPRESSION CONNECTION MODEL H-15209 OR APPROVED EQUAL.
- 9) CURB BOX - MUELLER H-10306 CURB BOX EXTENSION TYPE WITH ARCH PATTERN BASE (54" TO 66" RANGE) AND 51" 82867 STATIONARY ROD, 87081 LD
- 10) PIPE RESTRAINT - CONCRETE THRUST BLOCK OR ROMAC STYLE 611 RESTRAINING SYSTEM AND EBAA PV-2000 RETAINING TYPE GLANDS OR EQUAL.

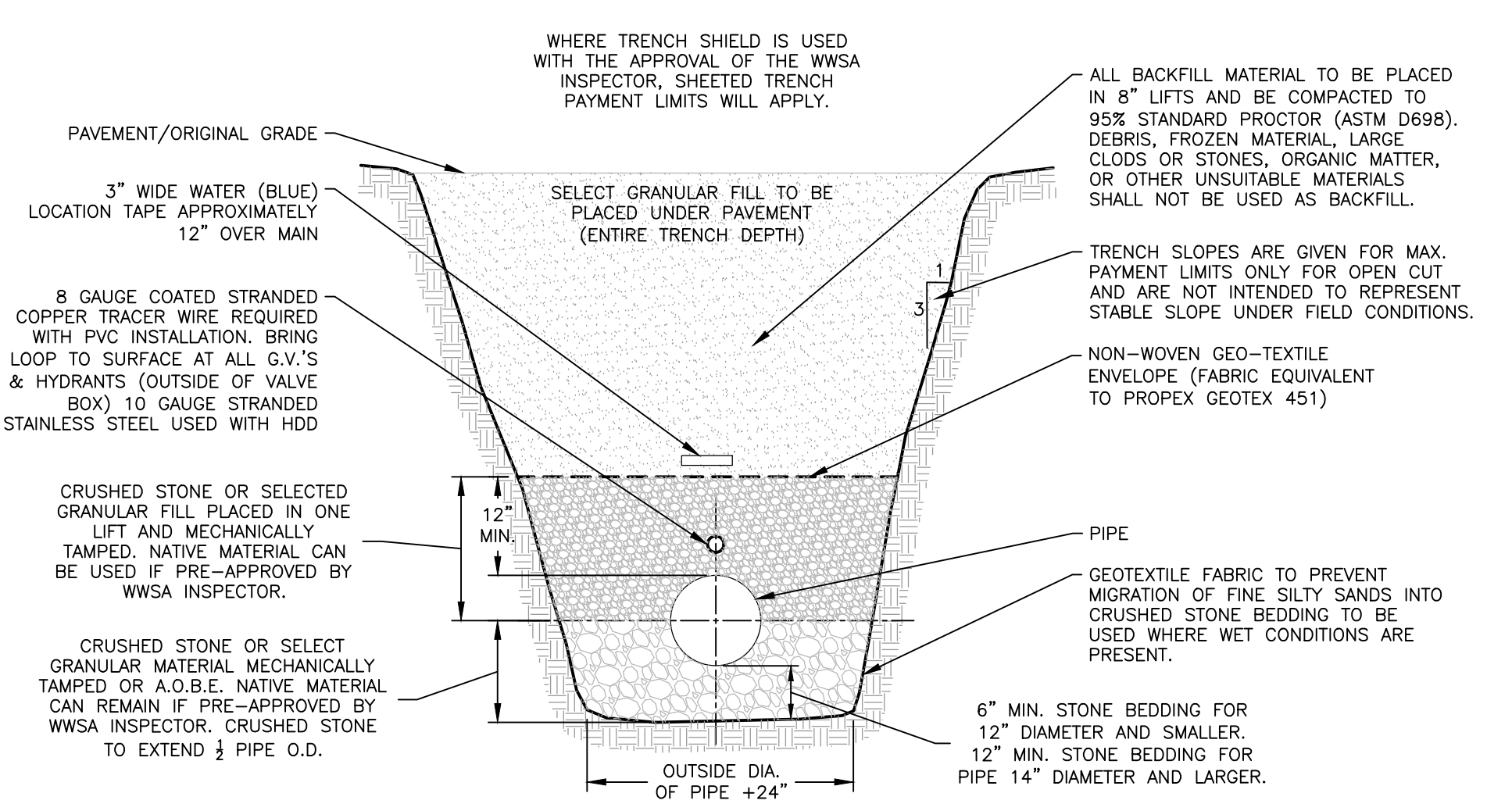
THRUST BLOCK NOTES:

- 1) VALVES FOR TEES APPLY TO TEES, END PLUGS, CAPS AND TAPPING SLEEVES.
- 2) REQUIRED BEARING AREAS ARE DUE TO THRUSTS CAUSED BY 150 PSI WORKING PRESSURE PLUS 50% (75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE.
- 3) REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 3,000 PSF. IF OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED BY THE WATER SUPERINTENDENT.
- 4) IN MUCK, PEAT OR RECENTLY PLACED FILL, ALL THRUSTS SHALL BE RESISTED BY PILES OR THE RODS TO SOLID FOUNDATIONS OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACED WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS. ALL AS REQUIRED BY THE WATER SUPERINTENDENT.
- 5) ALL THRUST BLOCKS SHALL BE CAST-IN-PLACE.
- 6) ALL DUCTILE IRON WATER MAIN SHALL BE ENCASED IN POLYETHYLENE, IF TESTING WARRANTS.

BEARING STRENGTH = % (LB/SQ.FT.)	
SOIL	SOIL
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

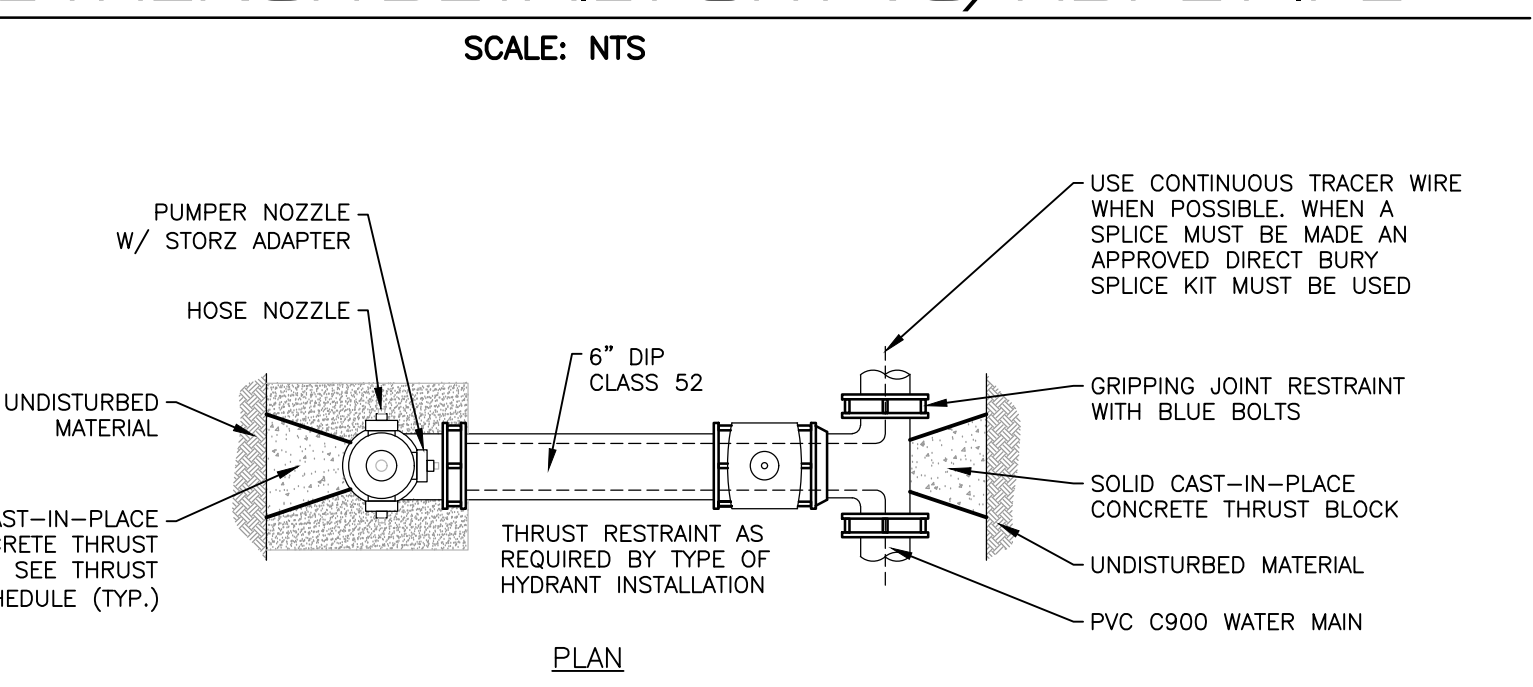
REQUIRED BEARING AREAS FOR THRUST BLOCKS (SQ.FT.)					THRUST REACTIONS (PER 100 PSI INTERNAL PRESSURE) = R(LB)					THRUST BLOCK DIMENSIONS ON VERTICAL TRENCH WALL ORIGINAL GROUND (FEET)				
PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	11K' BEND	PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	11K' BEND	PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	11K' BEND
4	2.0	2.8	1.5	0.8	4	1.810	2.559	1.385	706	4	1.0x2.0	1.0x2.8	0.75x2.0	0.8x1.0
6	4.2	5.9	3.2	1.6	6	3.739	5.288	2.862	1,459	6	1.5x2.8	1.5x4.0	1.0x3.2	1.0x1.6
8	7.2	10.1	5.5	2.8	8	6.433	9.097	4.923	2,510	8	2.0x3.8	2.0x5.1	1.4x3.9	1.4x2.0
10	10.9	15.4	8.3	4.2	10	9.877	13.885	7.408	3,778	10	2.5x4.4	2.5x6.2	1.7x4.9	1.75x2.4
12	15.6	21.8	11.8	6.0	12	13.889	19.353	10.474	5,340	12	3.0x5.2	3.0x7.3	2.0x5.8	2.0x3.0
14	20.4	29.1	15.8	8.0	14	18.385	26.001	14.072	7,174	14	3.5x5.9	3.5x8.3	2.5x6.3	2.5x3.2
16	26.8	37.9	20.5	10.4	16	23.779	33.628	18.199	9,278	16	4.0x6.7	4.0x9.5	2.7x7.6	2.75x3.8
18	33.6	47.5	25.7	13.1	18	29.865	42.235	22.858	11,653	18	4.5x7.5	4.5x10.6	3.0x8.6	3.0x4.4
20	41.2	58.2	31.5	16.1	20	36.644	51.822	28.046	14,298	20	5.0x8.25	5.0x11.7	3.4x9.3	3.4x4.75
24	58.8	81.5	45.0	22.9	24	52.279	73.934	40.013	20,398	24	6.0x9.8	6.0x13.9	4.0x11.25	4.0x5.75
30	90.5	128.0	69.2	35.3	30	80.425	113.738	61.554	31,380	30	7.5x12.1	7.5x17.1	5.0x13.8	5.0x7.1
36	129.6	183.3	99.1	50.5	36	115.209	162.931	88.177	44,952	36	9.0x14.4	9.0x20.4	6.0x16.5	6.0x8.4

*FACTOR OF SAFETY=1.5
SOIL BEARING OF 3,000 PSF
225 PSI DESIGN PRESSURE

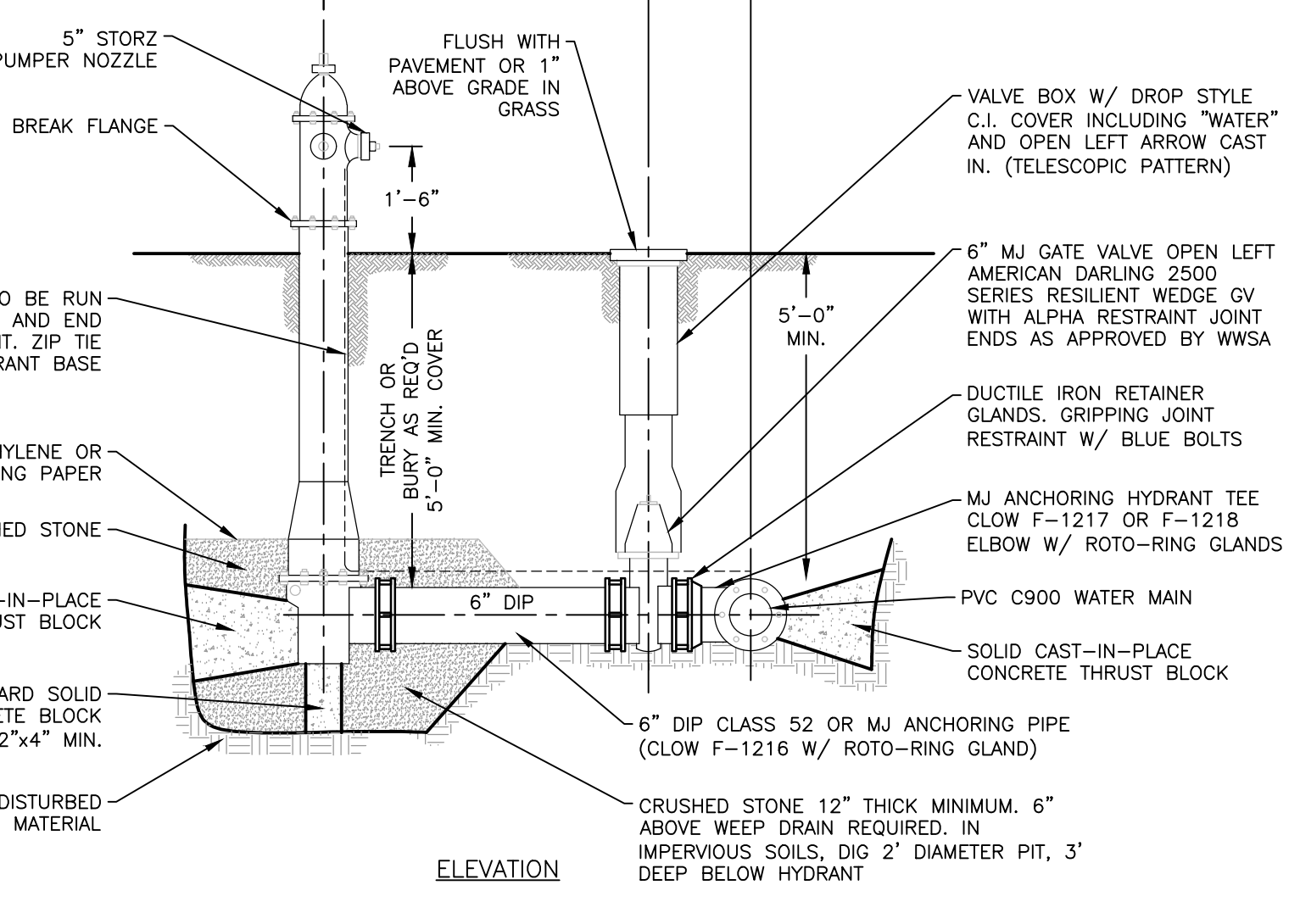


- NOTES:**
- 1) CONTRACTORS MUST COMPLY WITH ALL LOCAL STATE & FEDERAL SAFETY REGULATIONS.
 - 2) STANDARD PIPE INSTALLATION TRENCH: ANSI/AWWA C-600-17 LAYING CONDITION TYPE 2.
 - 3) CRUSHED STONE NOT TO EXCEED #2 IN SIZE.
- SELECT GRANULAR FILL TO MEET THE FOLLOWING REQUIREMENT:
0% IN EXCESS OF 1-1/2" 25%-75% PASSING #4 SIEVE
0%-15% PASSING #20 SIEVE

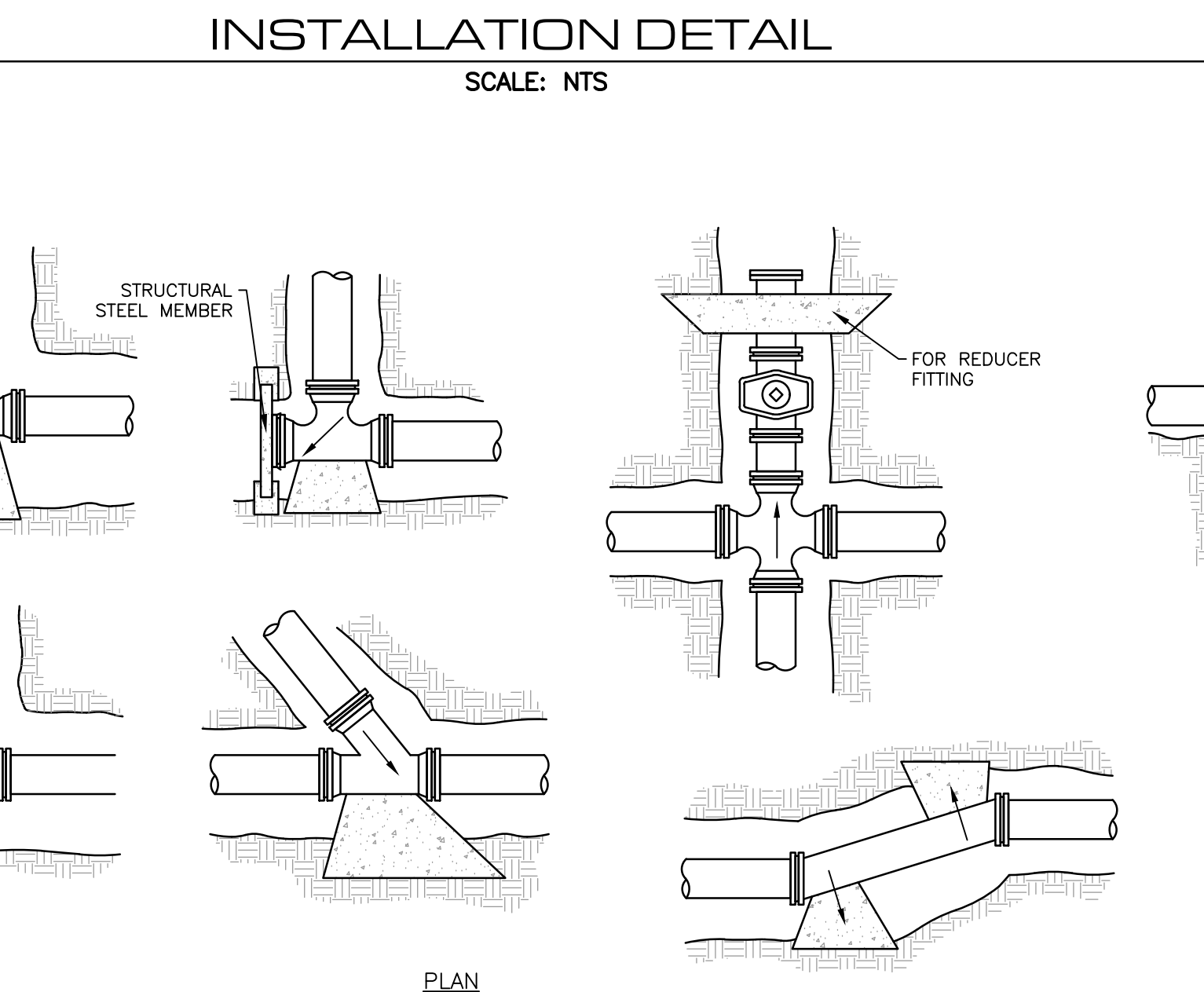
1 TYPICAL TRENCH DETAIL FOR PVC/HDPE PIPE
SCALE: NTS



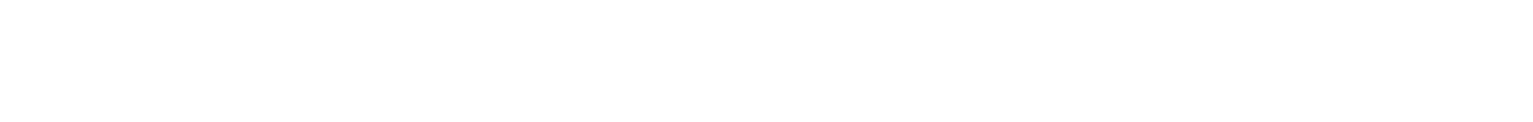
2 TYPICAL HYDRANT INSTALLATION DETAIL
SCALE: NTS



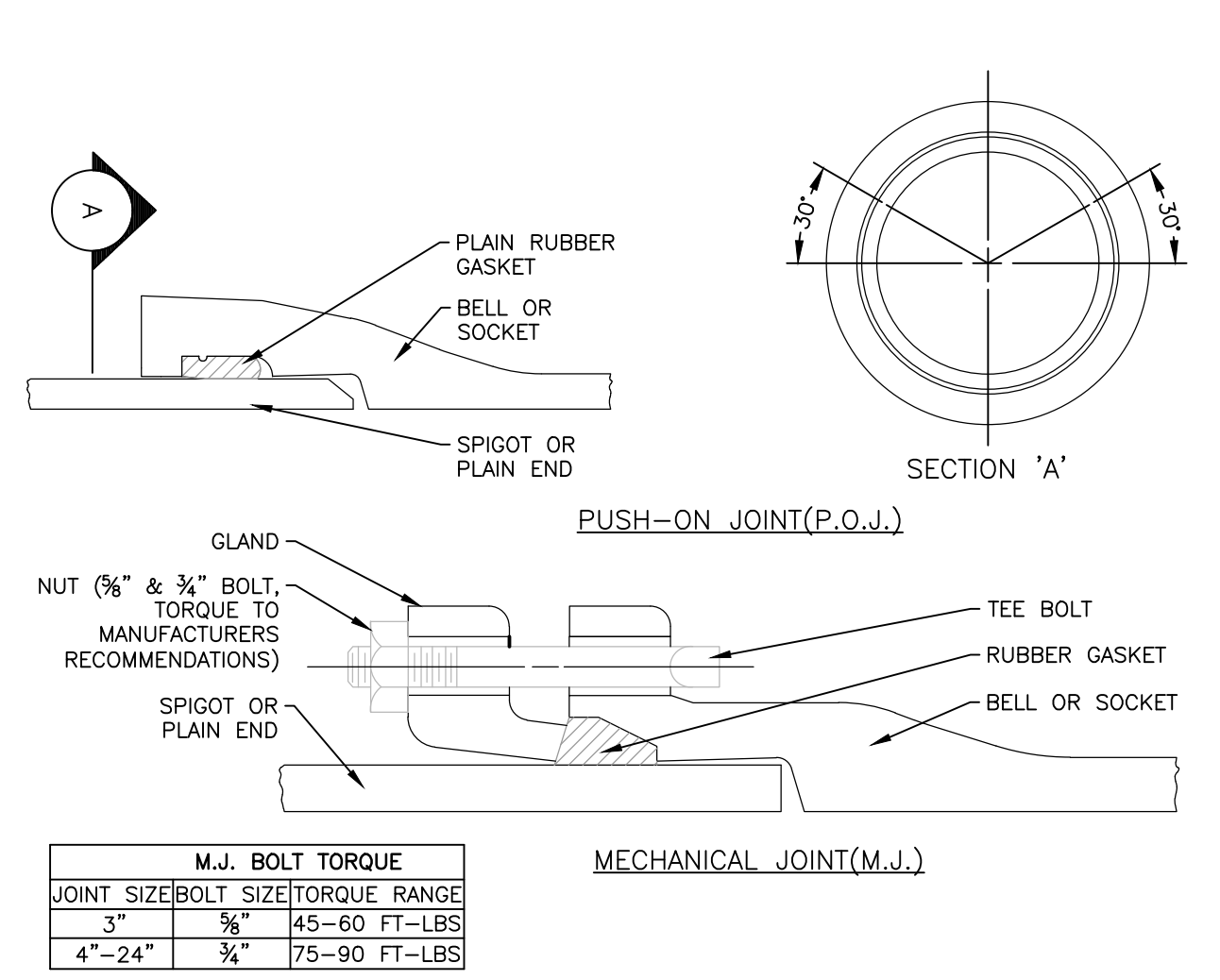
3 TYPICAL CONC THRUST BLOCK DETAILS
SCALE: NTS



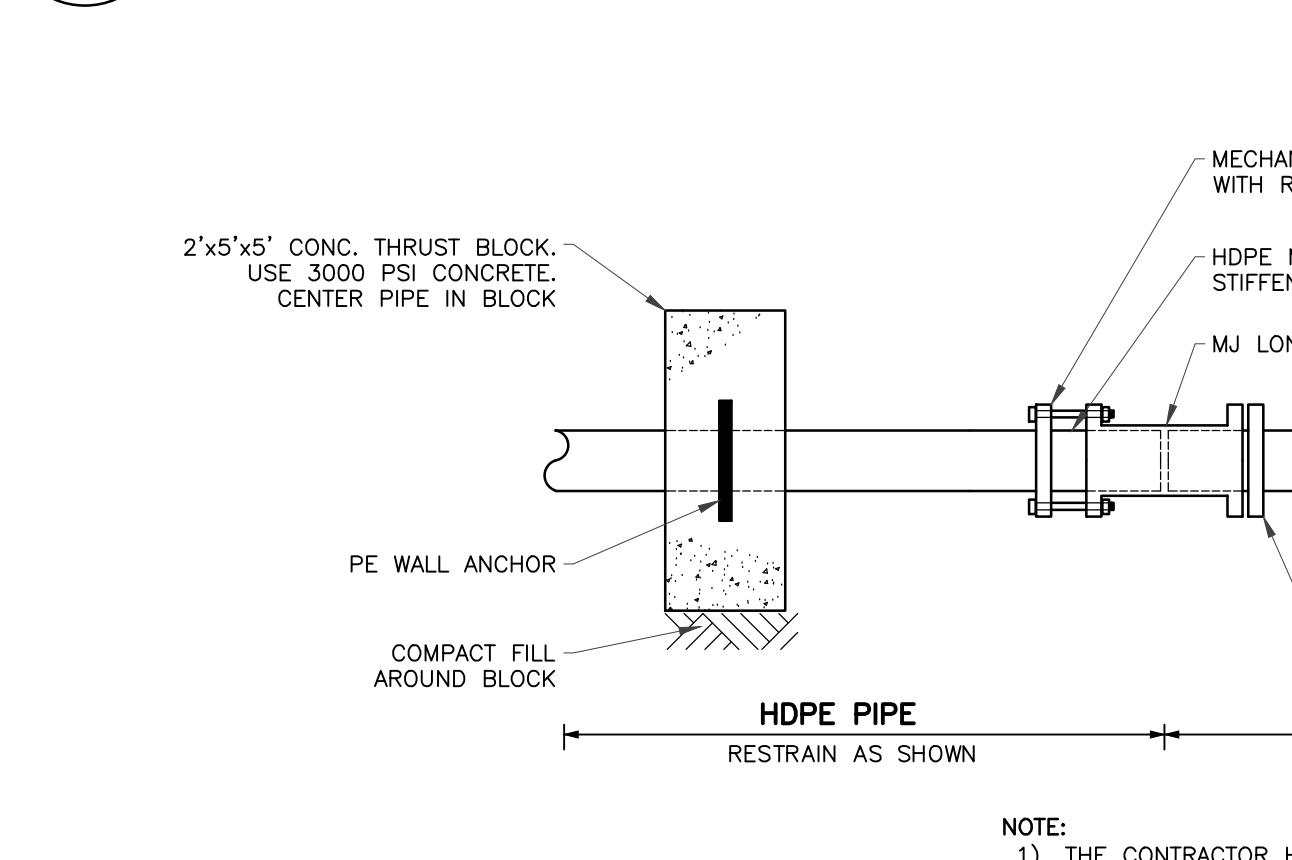
4 TYPICAL HDPE TO PVC TRANSITION DETAIL
SCALE: NTS



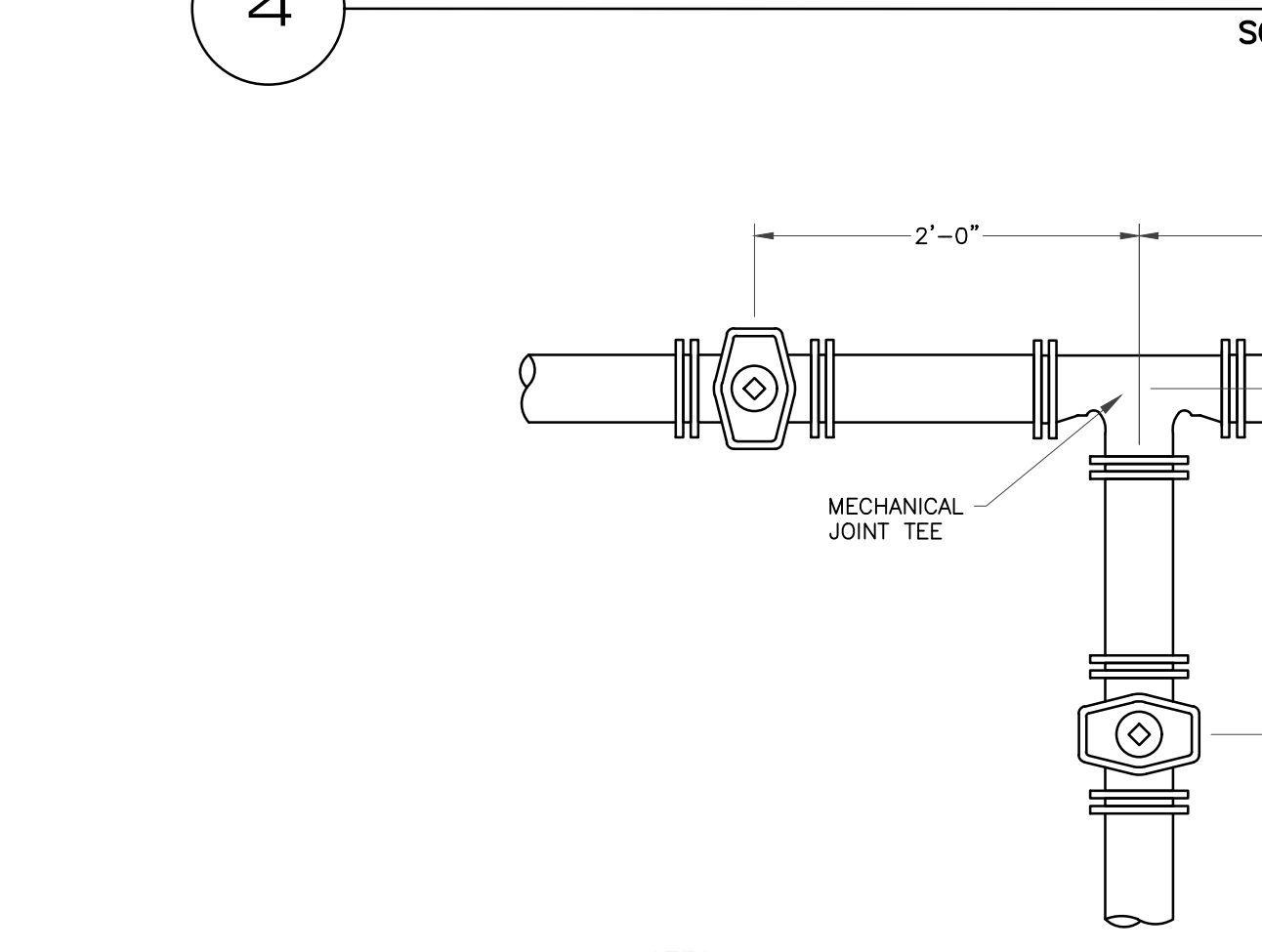
5 TYPICAL JUNCTION LAYOUT
SCALE: NTS



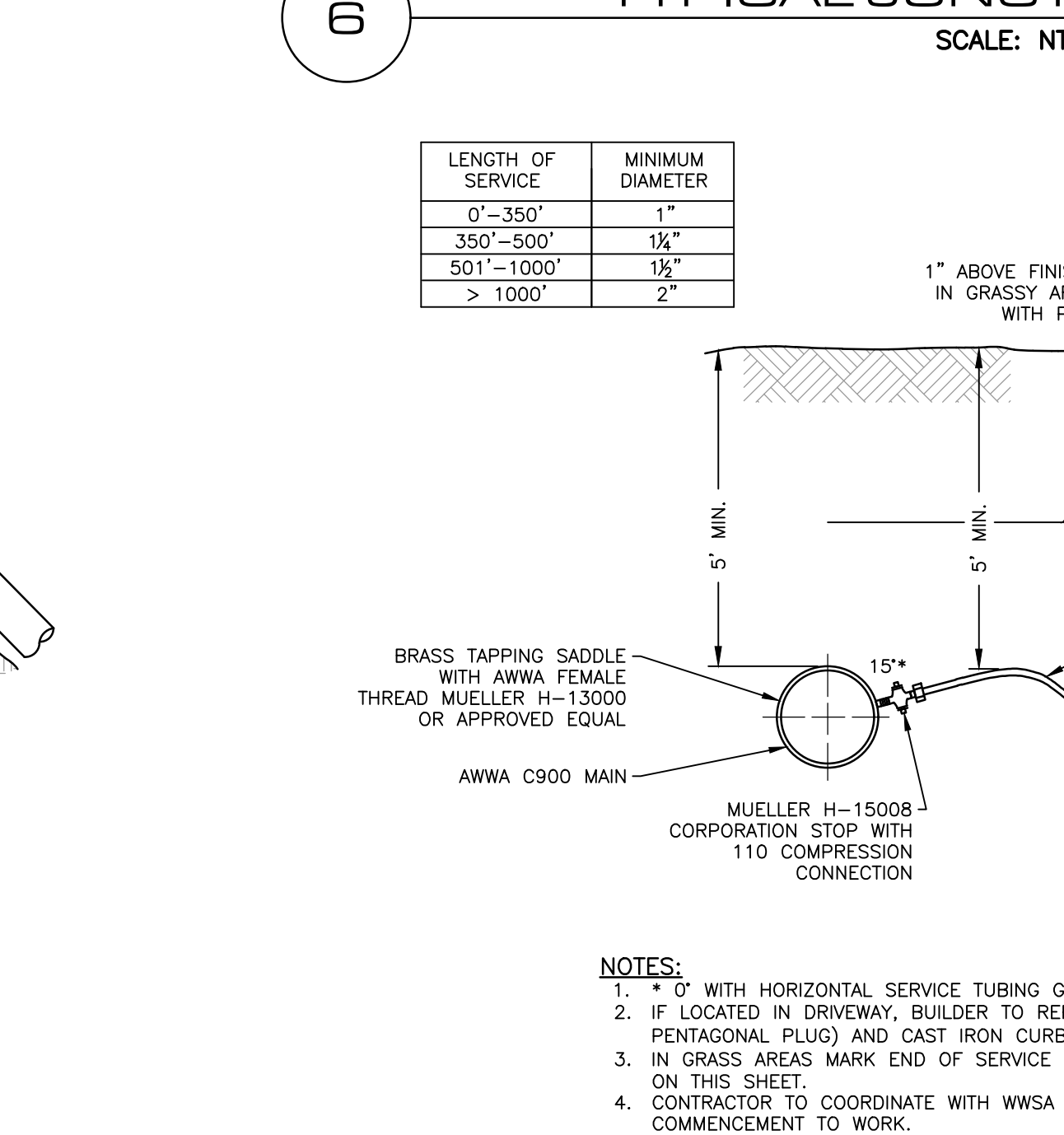
6 TYPICAL JOINT DETAIL
SCALE: NTS



7 TYP. SEPARATION REQUIREMENTS
SCALE: NTS



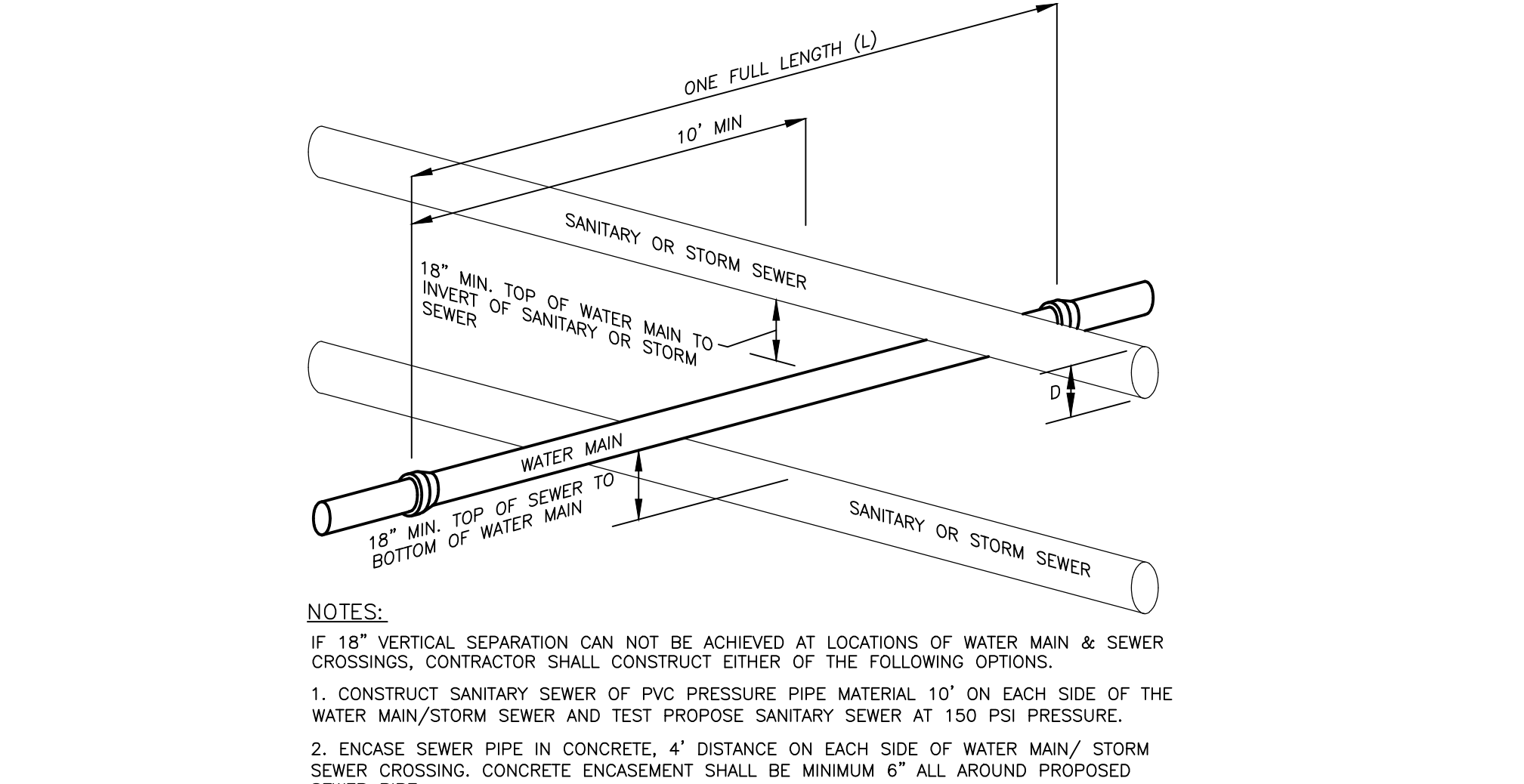
8 TYPICAL HDPE SERVICE PIPE
SCALE: NTS



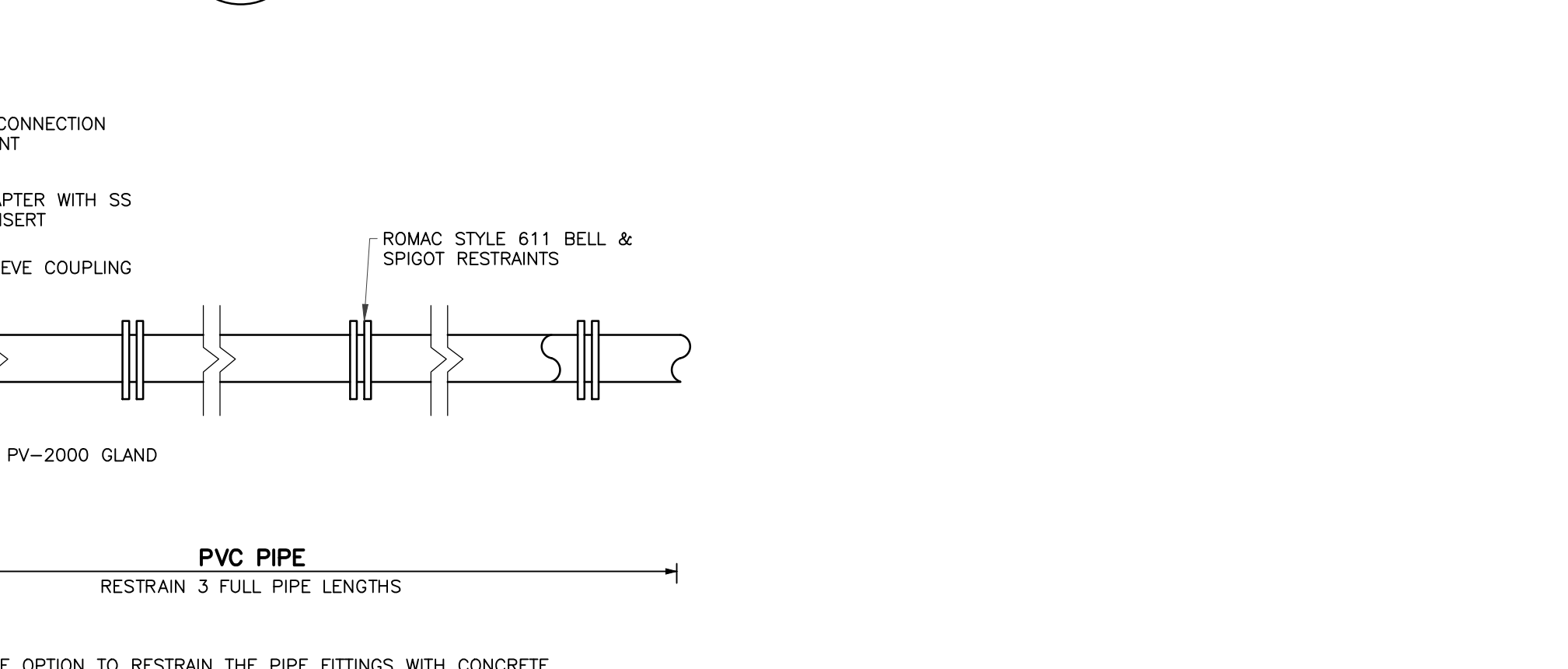
9 TYPICAL JUNCTION LAYOUT
SCALE: NTS



10 TYPICAL JUNCTION LAYOUT
SCALE: NTS



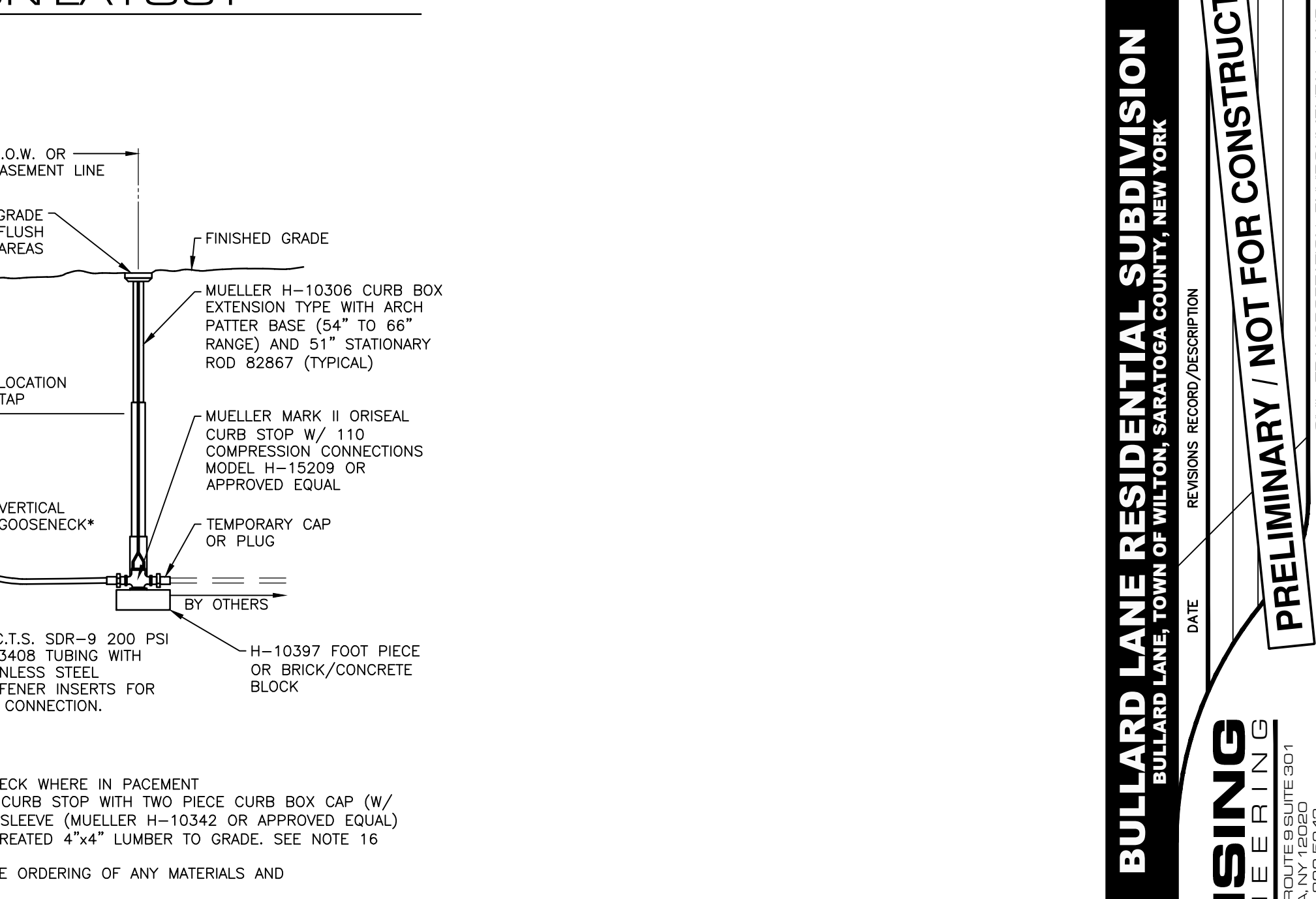
11 TYPICAL JUNCTION LAYOUT
SCALE: NTS



12 TYPICAL JUNCTION LAYOUT
SCALE: NTS



13 TYPICAL JUNCTION LAYOUT
SCALE: NTS



14 TYPICAL JUNCTION LAYOUT
SCALE: NTS



15 TYPICAL JUNCTION LAYOUT
SCALE: NTS

UNAUTHORIZED TO ADD TO THIS PROJECT. ANY ADDITION TO THE LOCATION OF THE MAINS OR THE LOCATION OF THE SUPPORT LANSING ENGINEERING, P.C.

BULLARD LANE RESIDENTIAL SUBDIVISION
 BULLARD LANE, TOWN OF WILTON, SARATOGA COUNTY, NEW YORK

PRELIMINARY / NOT FOR CONSTRUCTION

LANSING ENGINEERING

SARATOGA COUNTY DEPARTMENT OF HEALTH

TOWN OF WILTON WATER & SEWER AUTHORITY
 PLEASE REFER TO FIRST SHEET FOR APPROVAL DATE AND SIGNATURE

TOWN OF WILTON PLANNING BOARD
 PLEASE REFER TO FIRST SHEET FOR APPROVAL DATE AND SIGNATURE

WATER SYSTEM DETAILS

PROJ. NO: 1061.01
 SCALE: AS SHOWN
 DATE: 2/03/2026

DT-2
 SHEET 12 OF 15

Appendix B
Water System Calculations

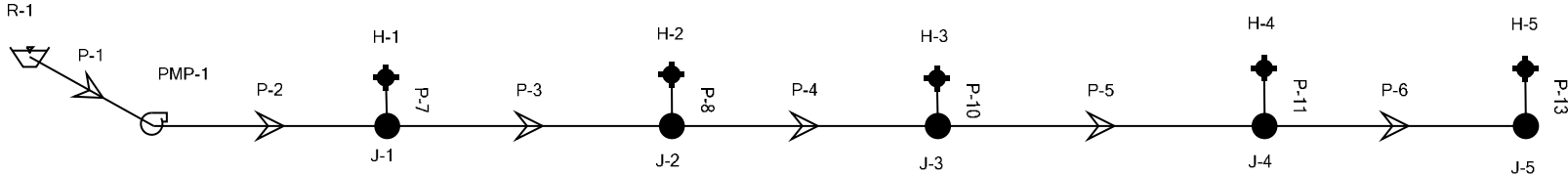
Water System Demand Rates

Project:	Bullard Lane Residential Subdivision
Date:	1/29/2026

Project Water Demand								
gpd = Gallons Per Day Residential Flow = Units x Residents per Unit x Per Capita Flow Commercial Flow = Square Feet x Flow per Square Feet Average Day = Average Per Capita Flow Percentage Max Day = Maximum Per Capita Flow Percentage Peak Day = Peak Per Capita Flow Percentage in One Hour					Per Capita Flow	100		gpd
					Flow Per Sq Ft			gpd
					Total Population	63		
					Average Day	100		%
					Max Day	165		%
					Peak Day	450		%
Project Area	Type	Residents/Unit	Units	Square Feet	Flow			
1	Residential	2.5	25		6,250	gpd	4.34	gpm
2					0	gpd	0.00	gpm
3					0	gpd	0.00	gpm
4					0	gpd	0.00	gpm
5					0	gpd	0.00	gpm
Total Water Demand for Service Area =					6,250.0	gpd	4.3	gpm
Total Average Day Water Demand for Service Area =					6,250.0	gpd	4.3	gpm
Total Max Day Water Demand for Service Area =					10,312.5	gpd	7.2	gpm
Total Peak Hour Water Demand for Service Area =					28,125.0	gpd	19.5	gpm

Fire Flow Demands		
gpm = Galons Per Minute SF = Square Feet gpm = gpd / 1,440 (Minutes Per Day)		
Total Fire-Flow Calculation Area (SF)=	1,800	SF
Building Construction Type:	Type V-B	In accordance with IBC
Building Use:	One Family Dwelling	In accordance with IFC Appendix B
Compliant Automatic Sprinkler System:	No Sprinkler System	In accordance with IFC Section 903.3
Minimum Fire-Flow (gpm) =	1000	gpm
Flow Duration (hours) =	1.00	hours

Scenario: Base



FlexTable: Junction Table

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
35	J-2	322.85	<None>	<Collection: 0 items>	0	484.67	70
33	J-1	326.00	<None>	<Collection: 0 items>	0	484.68	69
37	J-3	327.49	<None>	<Collection: 0 items>	0	484.67	68
39	J-4	331.63	<None>	<Collection: 0 items>	0	484.66	66
41	J-5	337.16	<None>	<Collection: 1 items>	20	484.66	64

FlexTable: Pipe Table

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
45	P-7	11	J-1	H-1	6.0	Ductile Iron	130.0	0.000	0	0.00	0.000	True	5
47	P-8	12	J-2	H-2	6.0	Ductile Iron	130.0	0.000	0	0.00	0.000	True	5
52	P-10	11	J-3	H-3	6.0	Ductile Iron	130.0	0.000	0	0.00	0.000	True	5
54	P-11	13	J-4	H-4	6.0	Ductile Iron	130.0	0.000	0	0.00	0.000	True	5
58	P-13	13	J-5	H-5	6.0	Ductile Iron	130.0	0.000	0	0.00	0.000	True	5
32	P-1	33	R-1	PMP-1	8.0	PVC	150.0	0.000	20	0.12	0.000	True	1
34	P-2	54	PMP-1	J-1	8.0	PVC	150.0	0.000	20	0.12	0.000	True	204
36	P-3	65	J-1	J-2	8.0	PVC	150.0	0.000	20	0.12	0.000	True	477
38	P-4	61	J-2	J-3	8.0	PVC	150.0	0.000	20	0.12	0.000	True	463
40	P-5	75	J-3	J-4	8.0	PVC	150.0	0.000	20	0.12	0.000	True	415
42	P-6	60	J-4	J-5	8.0	PVC	150.0	0.000	20	0.12	0.000	True	521

Fire Flow Node FlexTable: Fire Flow Results Table

Label	Satisfies Fire Flow Constraints?	Fire Flow Status	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (System Lower Limit) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)	Is Fire Flow Run Balanced?
H-1	True	Passed	1,000	1,464	1,000	1,464	20	20	0	16	H-5	(N/A)	16	H-5	True
H-2	True	Passed	1,000	1,394	1,000	1,394	20	20	0	14	H-5	(N/A)	14	H-5	True
H-3	True	Passed	1,000	1,288	1,000	1,288	20	20	0	16	H-5	(N/A)	16	H-5	True
H-4	True	Passed	1,000	1,204	1,000	1,204	20	20	0	18	H-5	(N/A)	18	H-5	True
H-5	True	Passed	1,000	1,108	1,000	1,108	20	20	0	23	J-5	(N/A)	23	J-5	True

Appendix C
Cost Estimate

Bullard Lane Residential Subdivision
WATER MAIN COST OPINION
 TOWN OF WILTON, NEW YORK
 1/29/2026

LABOR AND MATERIAL ITEM	UNIT	QUANTITY	UNIT COST	EXTENSION
PIPE NETWORK				
WATER SERVICE TO ROW	EA	25	\$400.00	\$10,000.00
1" CURB STOP & BOX	EA	25	\$325.00	\$8,125.00
8" PVC C900	LF	2,051	\$20.50	\$42,045.50
6" DIP (FOR HYDRANT ASSEMBLY)	LF	25	\$33.00	\$825.00
FIRE HYDRANT ASSEMBLY	EA	5	\$4,100.00	\$20,500.00
8" GATE VALVE	EA	5	\$2,905.00	\$14,525.00
6" GATE VALVE	EA	5	\$1,650.00	\$8,250.00
8" x 8" x 6" TEE	EA	5	\$255.00	\$1,275.00
8" X 8" TAPPING SLEEVE	EA	1	\$2,975.00	\$2,975.00
MISCELLANEOUS BENDS & FITTINGS	EA	4	\$112.00	\$448.00
TRENCHING				
EXCAVATION	CY	2,509	\$6.80	\$17,063.47
PIPE BEDDING	CY	118	\$21.00	\$2,470.22
COMPACTED PIPE ZONE BACKFILL	CY	392	\$15.00	\$5,875.60
COMPACTED BACKFILL	CY	2,000	\$10.00	\$19,999.97
SPREAD EXISTING TOPSOIL	CY	284	\$7.25	\$2,061.15
SEED/FERTILIZE/MULCH	SY	1,728	\$3.50	\$6,047.61
MISCELLANEOUS				
MOBILIZATION AND SETUP	LS	1%	\$162,486.52	\$1,624.87
CONSTRUCTION STAKEOUT	LS	2%	\$164,111.38	\$3,282.23
TOTAL				\$167,393.61

Item costs were determined by referencing the "RS Means Site Work and Landscape Cost Data", "RS Means Heavy Construction Cost Data", the New York State Department of Transportation weighted average bid price program, as well as similar projects and professional experience.

Appendix D
Water System Data

HYDRANT FLOW TEST

DATE AND TIME: MARCH 15 3:10

PROJECT: EDIE RD TO FOREST GROVE LOOP.

LOCATION: COBBLE HILL DR. NEAR NORTHWAY CROSSING

FLOW HYDRANT LOCATION COBBLE HILL & CURVIE PASS.

RESIDUAL HYDRANT LOCATIONS COBBLE HILL & FIRESTONE,

	RESIDUAL HYDRANT	FLOW HYDRANT
ELEVATION	340	340
STATIC	70	70
RESIDUAL	57	48
FLOW		800 GPM
FLOW RATE @ 20 PSI		1600 GPM

PERSON TAKING TEST: MILSE MOONEY

WITNESS: BOB CAMPCHERO

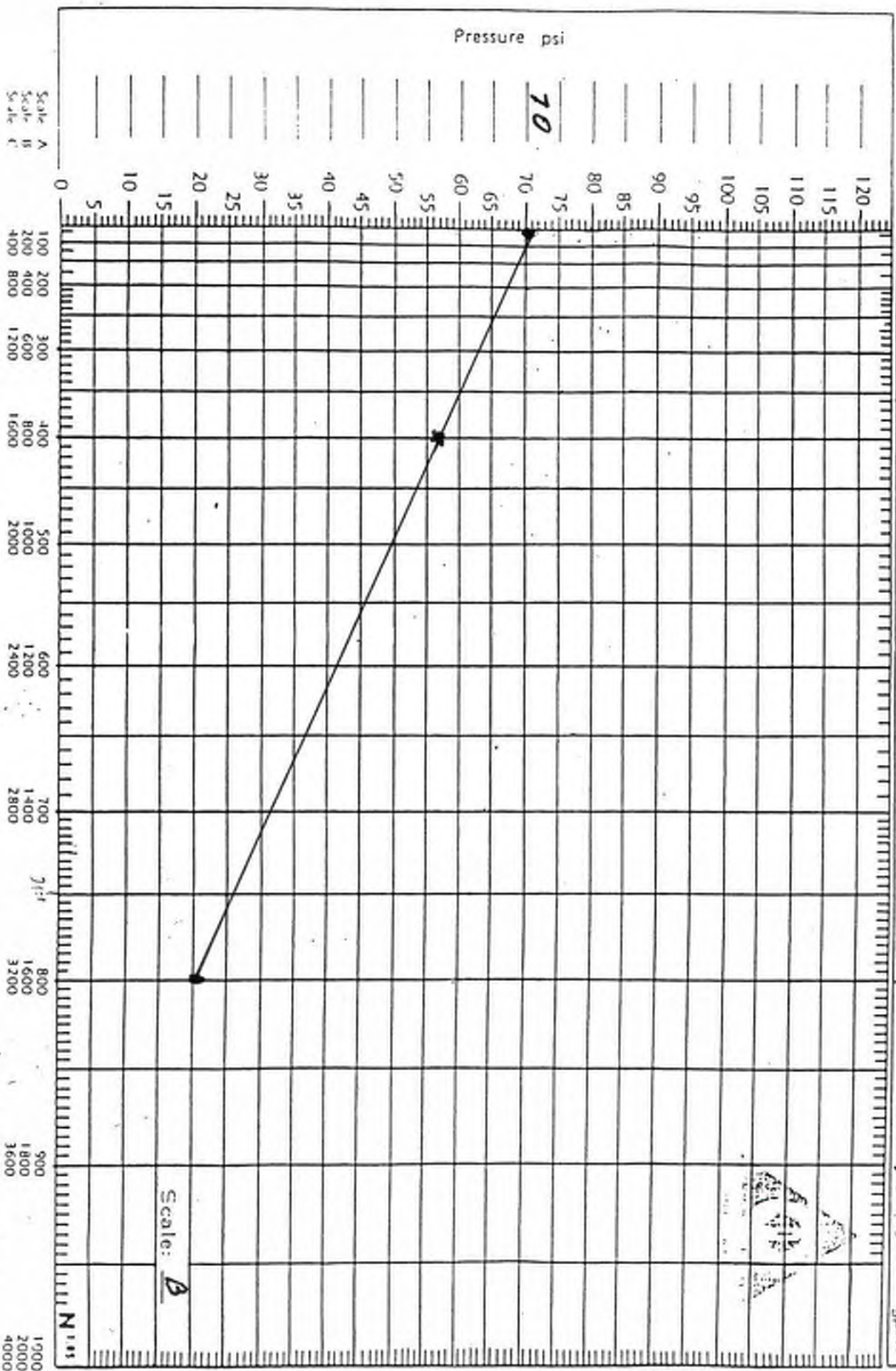
COMMENTS OR SPECIAL CONDITIONS _____

WATER FLOW TEST SUMMARY SHEET

Hydr. No.	Outlet I.D. inches	Pitot Press. psi	Flow gpm	Residual psi
1	2 1/2	48	800	57
2				
3				
Total Flow				

DATE 3-16-22 Time: 3:15 Cont. No. ()
 Cont. Name: WILTON WATER & SEWER AUTHORITY
 Address: COBBLE HILL DR.

Static Press: 70 psi Flow @ 20 psi 1600 gpm



Legend



200 ft

FLOW TEST

Residual Hydrant

Flow Hydrant

Google Earth

