

SITE LOCATION MAP
NO SCALE

MAALWYCK IMPROVEMENT
PROJECT - PHASE 2

INDEX OF SHEETS FOR
DETAILED SITE PLANS

- SHEET 1 EXISTING CONDITIONS
SHEET 2 MASTER PLAN
SHEET 3 SITE PLAN EAST
SHEET 4 SITE PLAN WEST
SHEET 5 SEWER PROFILES
SHEET 6 WATER PROFILES
SHEET 7 SITE DETAILS
SHEET 8 SITE DETAILS

AREA OF SITE:

ORIGINAL PARCEL: 41.347± ACRES
NORTH PARCEL: 17.95± ACRES
TOTAL: 59.297± ACRES

TAX I.D. 029.00-4-30.3
(BOTH PARCELS COMBINED)

SOIL TEST PIT LOG:

DATE: AUGUST 14, 2017


TEST PIT #1
0" - 18" DARK TOPSOIL
18" - 54" SANDY SILTY LOAM
NO ROCK, LITTLE CLAY
NO WATER ENTERING

TEST PIT #2
0" - 18" DARK TOPSOIL
18" - 54" SANDY SILTY LOAM
NO ROCK, LITTLE CLAY
NO WATER ENTERING

TEST PIT #3
0" - 18" DARK TOPSOIL
MORE LAYER DIFFERENTIATION AT 12"
18" - 54" SANDY SILTY LOAM
NO ROCK, LITTLE CLAY
NO WATER ENTERING, SLIGHTLY WETTER

TEST PIT #4
0" - 6.5 FEET
NO ROCK, DRIER THAN 1-3
SLIGHTLY MORE CLAYEY
NO WATER

TEST PIT #5
0" - 9 FEET
NO ROCK, SLIGHT DRIER THAN #4
SLIGHTLY MORE SANDY
NO WATER



ENVIRONMENTAL DESIGN
PARTNERSHIP, LLP.
900 Route 148 Clifton Park, New York 12065
(518) 571-1621

PHASE 2

MAALWYCK PARK IMPROVEMENT PROJECT

OWNER: TOWN OF GLENVILLE

MAALWYCK PARK (LOCK 8) ROAD


TOWN OF GLENVILLE

SCHENECTADY COUNTY, NEW YORK


TAX MAP NO. 029.00-4-30.3

MARCH 5, 2020

PAUL LESLIE
OLUND
LA 1413
paul@leslieolund.com



BRANDON M.
FERGUSON
96020



SCALE:

1" = 80'

BID SET ISSUED:
03/17/2020

DESIGNED: RICHARD H. LEWIS

SHEET TITLE:

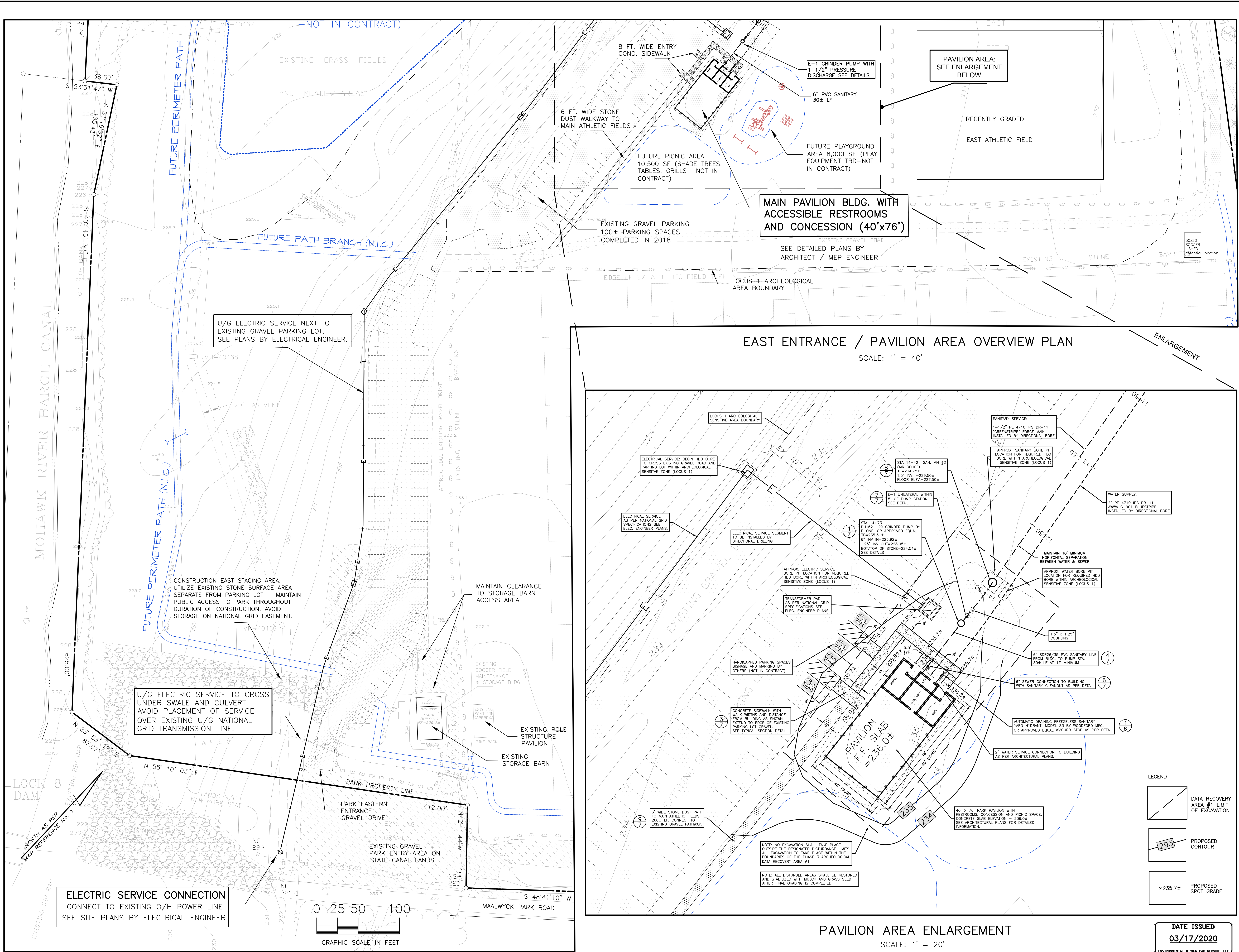
EXISTING CONDITIONS


SHEET:

1

029.00-4-30.3-01.dwg
MAALWYCK PARK (LOCK 8) ROAD IMPROVEMENT PROJECT
PHASE 2
EXISTING CONDITIONS
SHEET 1 OF 8
DATE: 03/17/2020
DRAWN BY: RHL
CHECKED BY: RHL
PROJECT NUMBER: 029.00-4-30.3

REVISION
REVISION
DATE
BY
03/17/2020
RHL
03/17/2020
RHL





ENVIRONMENTAL DESIGN
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900 Route 148 Clifton Park, New York 12065
(518) 371-1421

PHASE 2

MAALWYCK PARK IMPROVEMENT PROJECT

OWNER: TOWN OF GLENVILLE

MAALWYCK PARK (LOCK 8) ROAD

TOWN OF GLENVILLE

SCHENECTADY COUNTY, NEW YORK

TAX MAP No. 029.00-4-30.3

MARCH 5, 2020

DRAWN BY: XXX

CHECKED BY: XXX

DATE: 03/17/2020

REVISION

DATE

BY

PAUL LESLIE

OLUND

LA 1413

03/17/2020

BRANDON M.

FERGUSON

96020

SCALE:

1" = 40'

BID SET ISSUED:

03/17/2020

SHEET TITLE:

SITE PLAN EAST

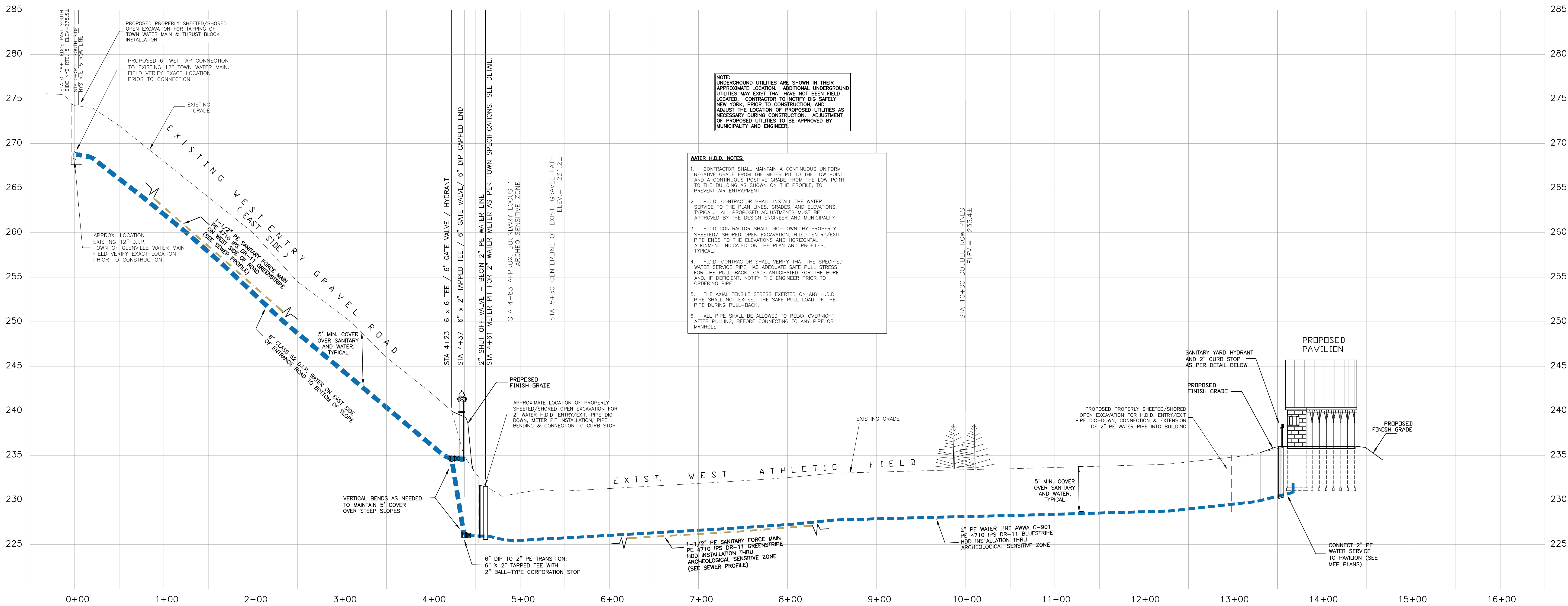
SHEET:

3

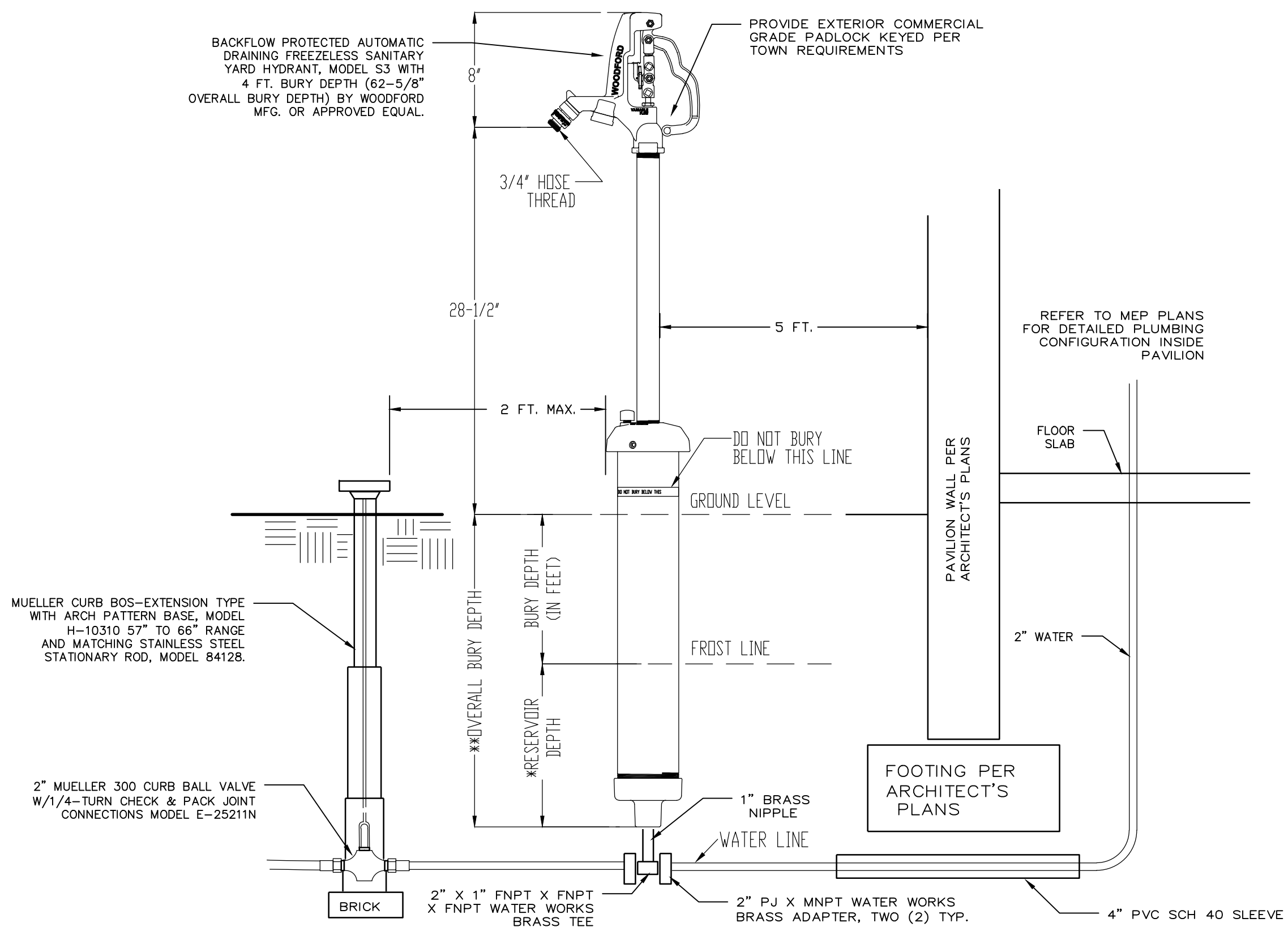
DATE ISSUED:

03/17/2020

ENVIRONMENTAL DESIGN PARTNERSHIP, LLP

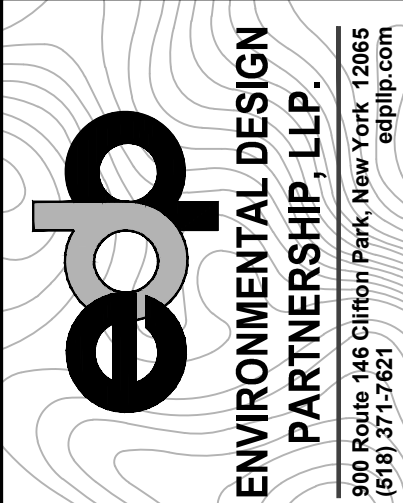


MAALWYCK PARK SANITARY SERVICE PROFILE
HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5'



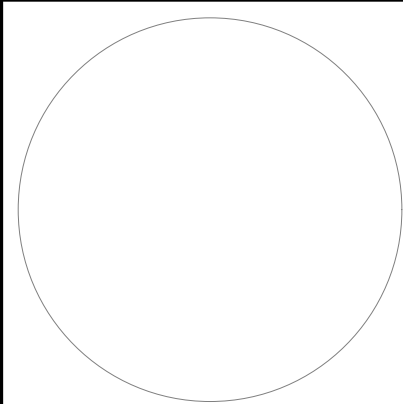
1 WATER BLOWOUT DETAIL FOR PAVILION WINTERIZATION
6 NOT TO SCALE

DATE ISSUED:
03/17/2020
ENVIRONMENTAL DESIGN PARTNERSHIP, LLP



PHASE 2
MAALWYCK PARK IMPROVEMENT PROJECT
OWNER: TOWN OF GLENVILLE
MAALWYCK PARK (LOCK 8) ROAD
TOWN OF GLENVILLE
SCHENECTADY COUNTY, NEW YORK

| | |
|--------------------|------|
| DRAWN BY | XXX |
| CHECKED BY | XXX |
| FOR PROJECT NUMBER | XXX |
| REVISION | DATE |
| BY | BY |



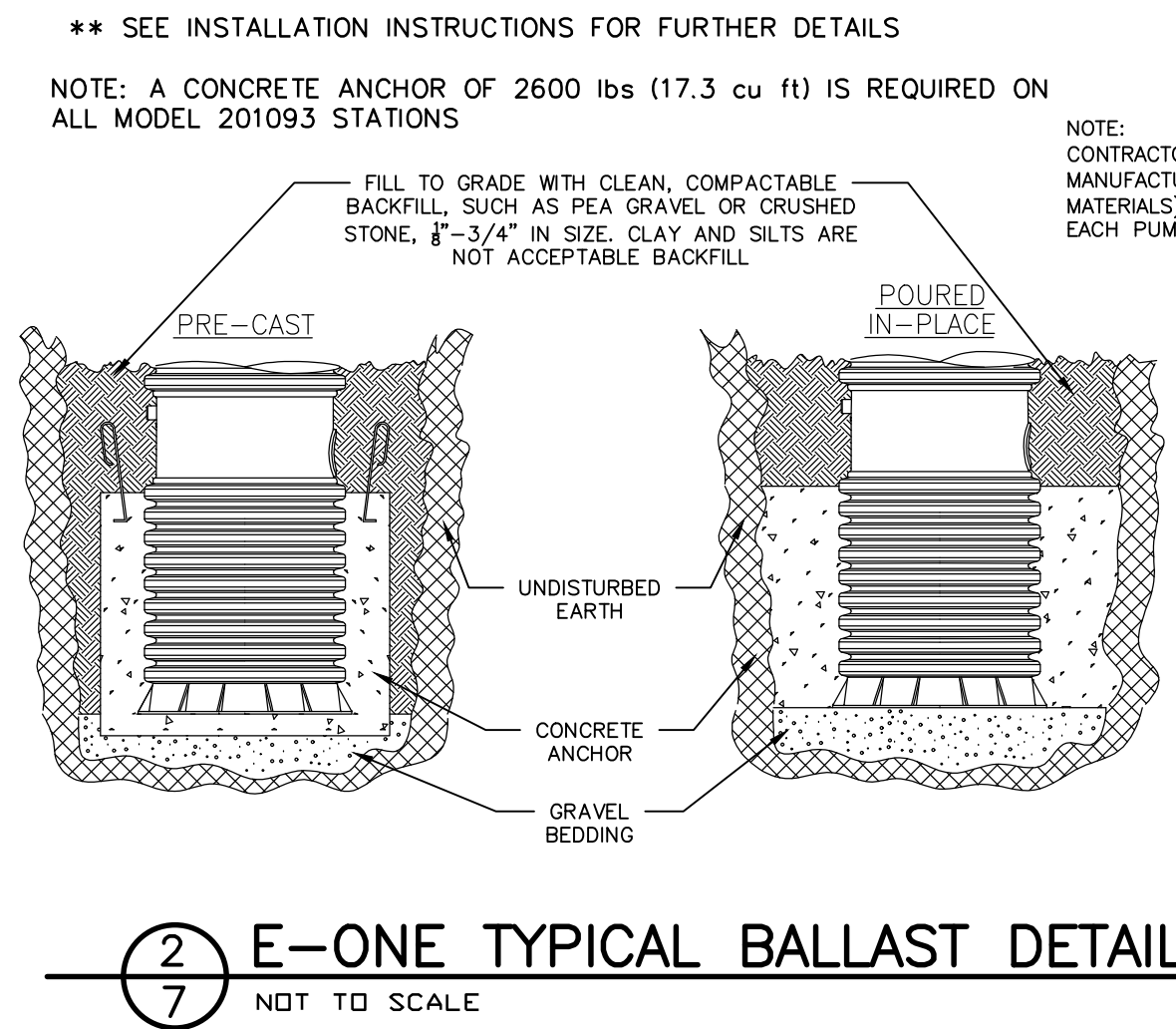
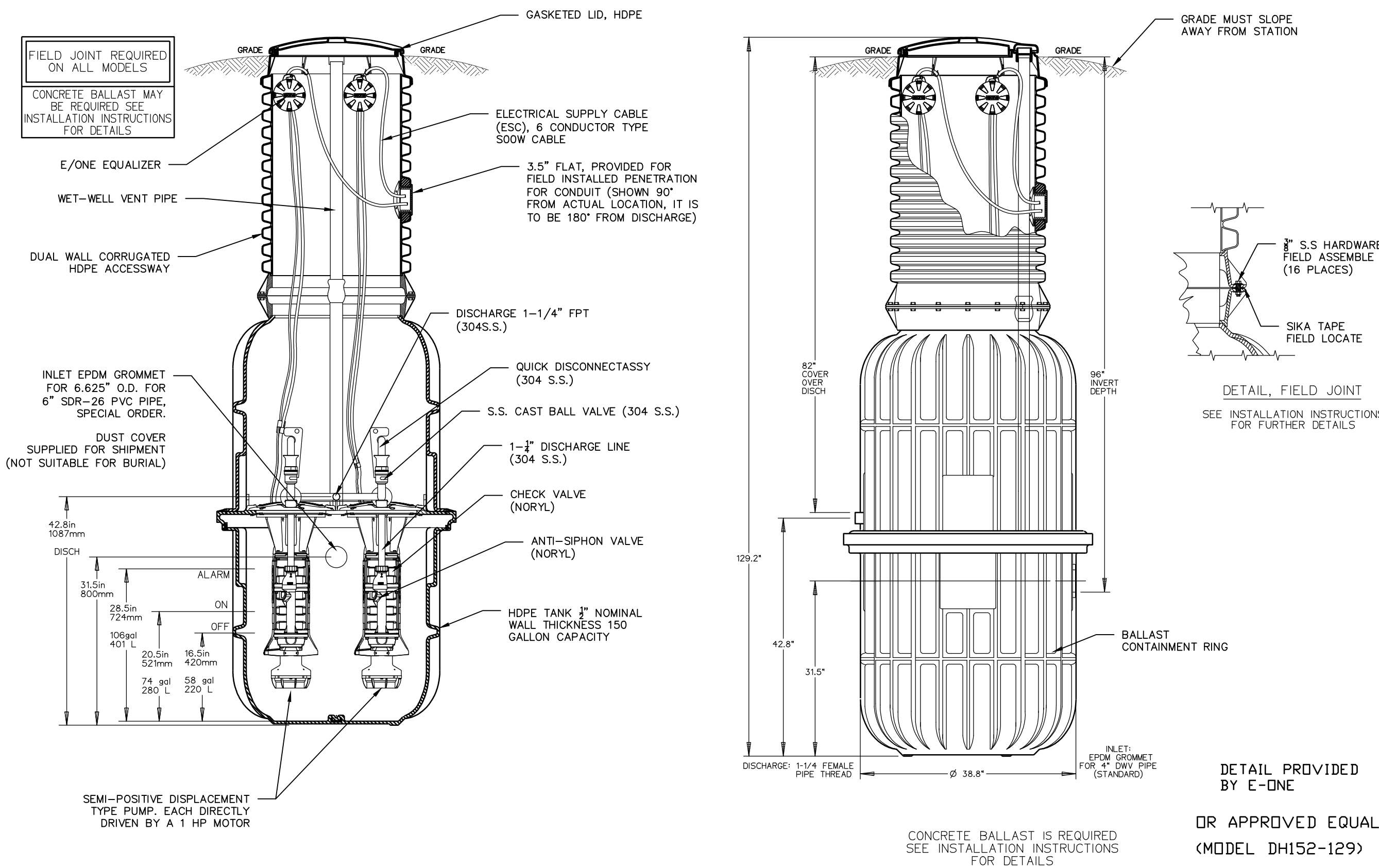
BRANDON M. FERGUSON
96020

SCALE:
AS NOTED

BID SET ISSUED:
03/17/2020
ENVIRONMENTAL DESIGN PARTNERSHIP, LLP

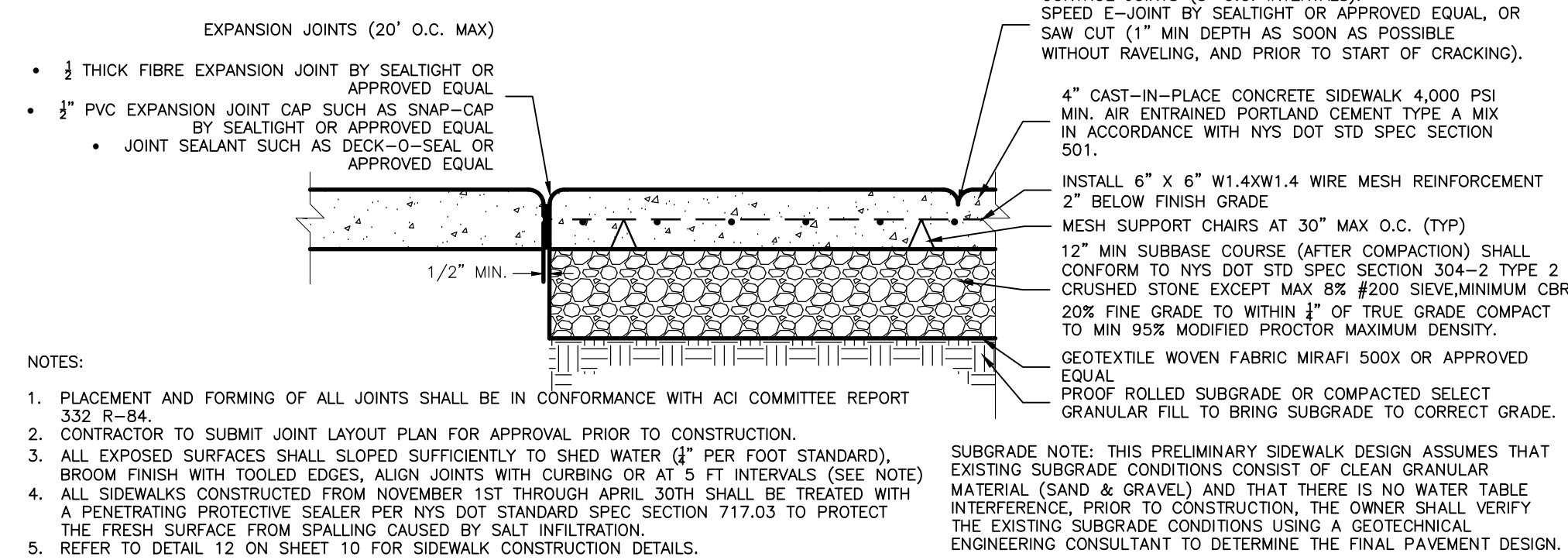
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WATER UTILITY PROFILES

SHEET:

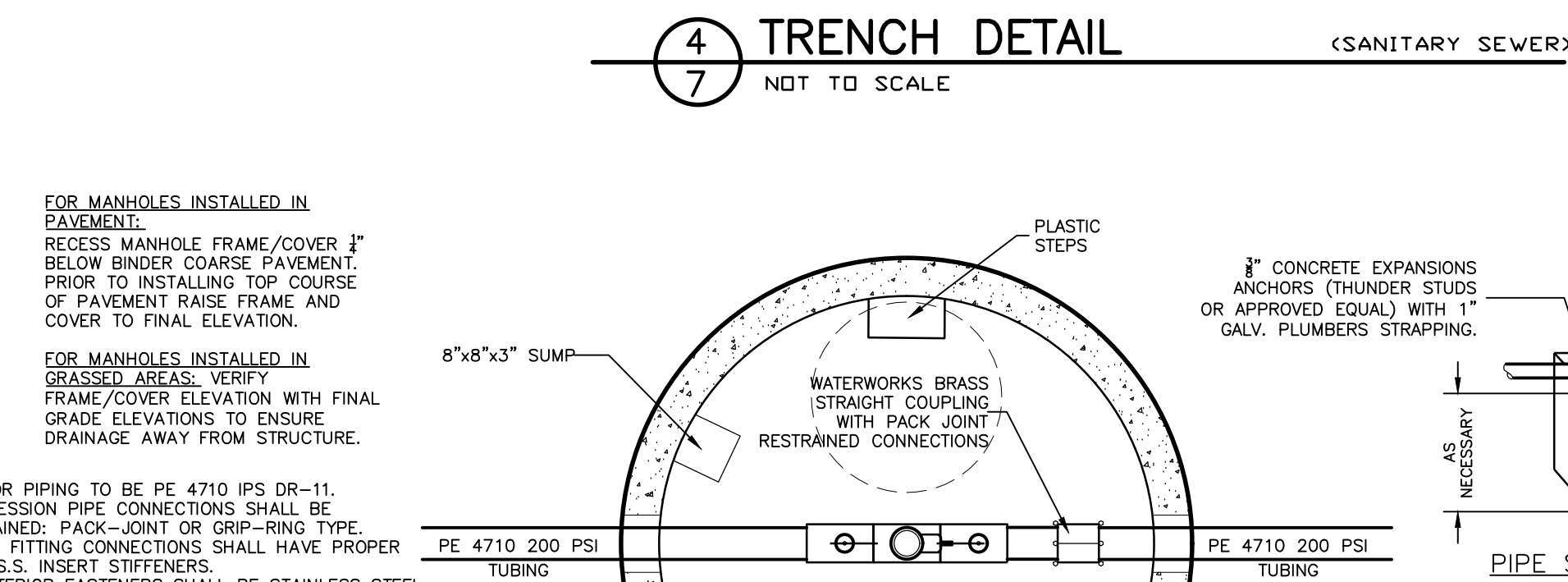
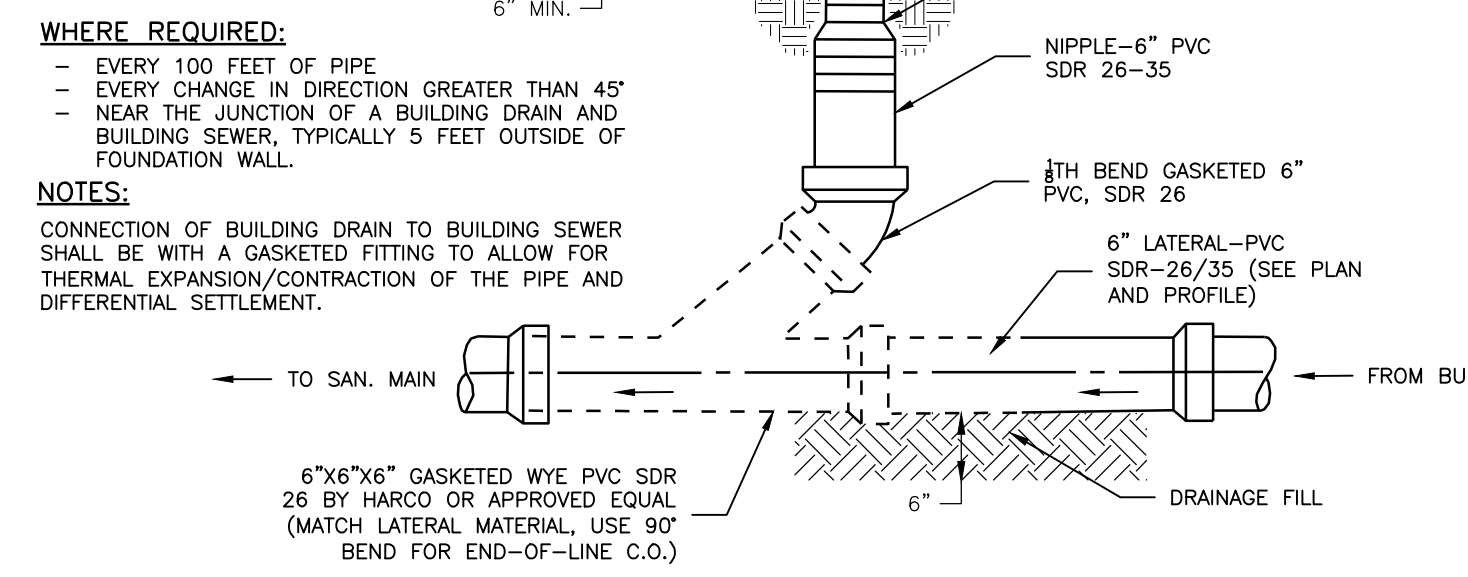
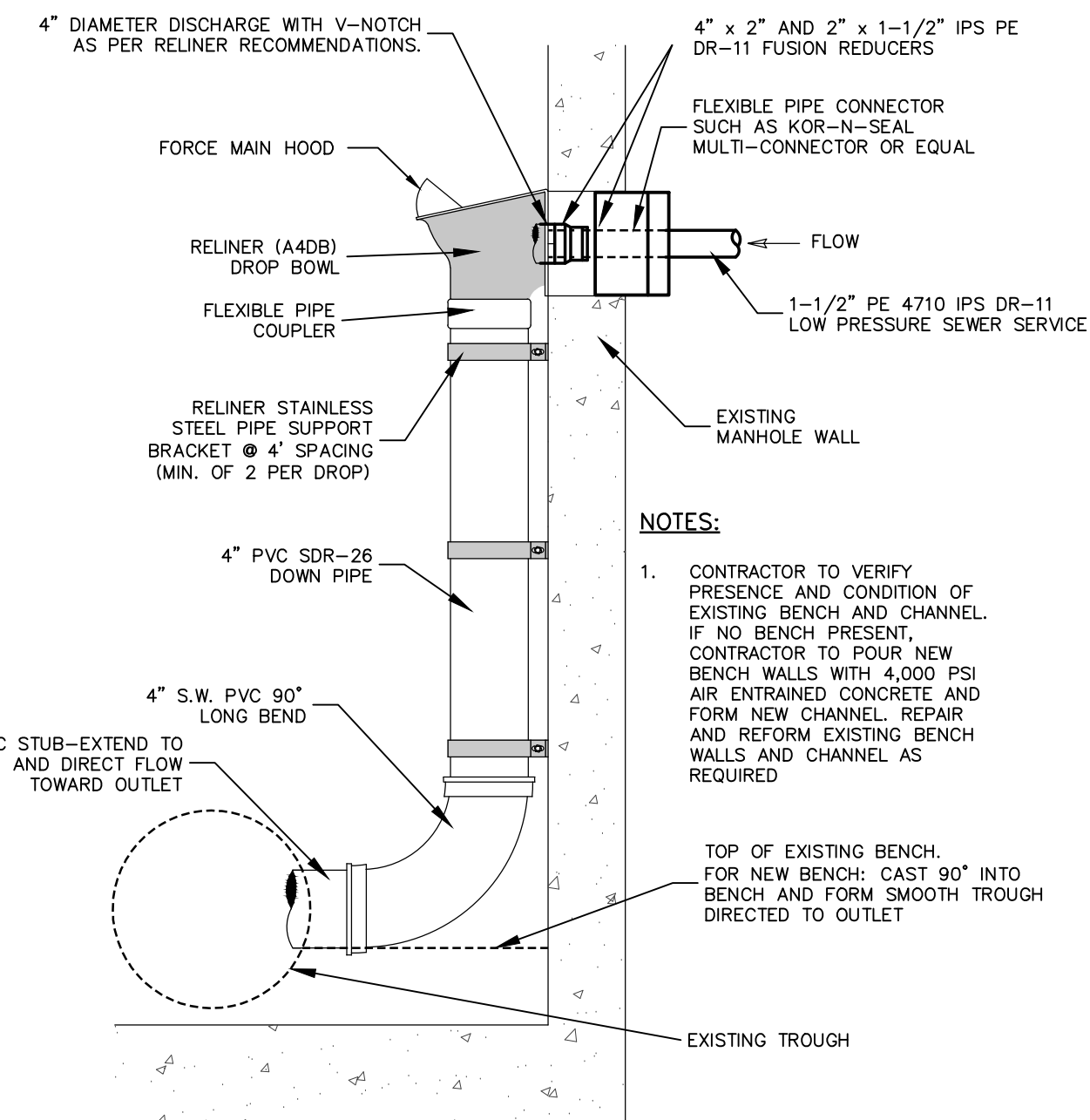
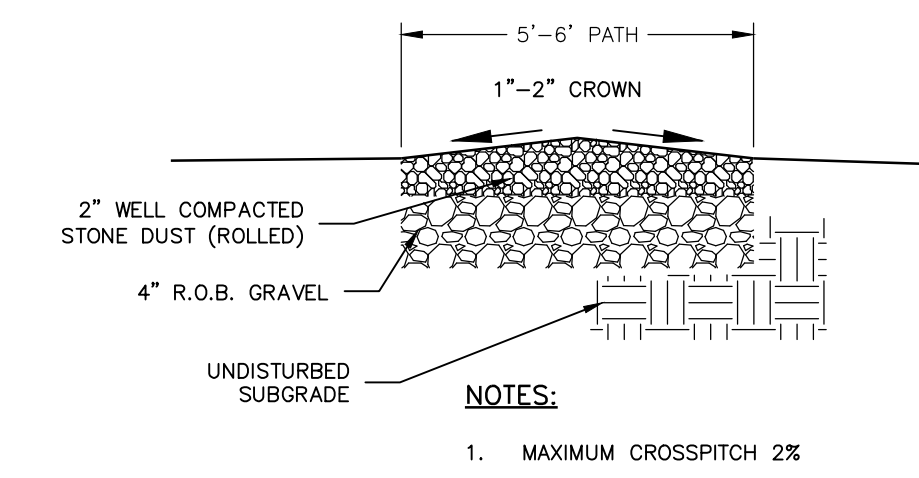


- PUMP STATION ELECTRICAL NOTES:**
- CONTRACTOR TO VERIFY LINE VOLTAGE AT THE SITE.
 - ELECTRONIC/ELECTRIC CONTROL PANEL SHALL BE SENTRY PROTECT PLUS DUPLEX (DUPLEX FOR W-SERIES ALTERNATING ALARM PANEL, AS SUPPLIED BY E-ONE OR APPROVED EQUAL. PANEL INCLUDES, AS STANDARD, AN AUDIBLE ALARM WITH SILENCE AND VISUAL ALARM LIGHT FOR HIGH WATER CONDITIONS IN THE WET WELL.
 - PANEL OPTIONS SHALL INCLUDE GENERATOR RECEPTACLE W/ AUTO TRANSFER AND GFCI RECEPTACLE. PANEL TO BE LOCATED IN A CONSPICUOUS LOCATION AS APPROVED BY THE OWNER. OUTSIDE OR SIDE OF BUILDING FACING THE UNIT OR ON AN ANCHORED 6"X6" POST NEAR THE UNIT. INSIDE IN AN UNHURLED ROOM-BASEMENT OR STAIRWELL. ALARM CONTROL PANEL SHALL BE WITHIN THE LINE OF SIGHT OF THE GRINDER PUMP.
 - ALL ELECTRICAL WORK TO BE DONE IN FULL COMPLIANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE AND ALL STATE AND LOCAL CODES.
 - THERE SHALL BE NO ELECTRICAL SPLICES, JUNCTION BOXES, OR CONNECTIONS OF ANY KIND IN THE PUMP TANK.
 - IN THE EVENT THAT THE NEMA 4 CONTROL PANEL IS TO BE LOCATED OUTSIDE, A THERMOSTATED HEATER SHALL BE PROVIDED TO PREVENT CONDENSATION. ANY CONTROL PANEL OR JUNCTION BOX SHALL BE LOCATED A MINIMUM OF 5 FEET FROM VENT/HATCH OPENINGS (CLASS 1, DIVISION 1 WITHIN 3 FT AND CLASS 1 DIVISION 2 WITHIN 5 FEET RADIUS).
 - THE NEW YORK BOARD OF FIRE UNDERWRITERS MUST CERTIFY ELECTRICAL EQUIPMENT INSTALLED PURSUANT TO THIS PLAN. A COPY OF THAT CERTIFICATE SHALL BE FURNISHED TO THE ENGINEER OF RECORD AND THE OWNER PRIOR TO ISSUANCE OF FINAL PAYMENT.
 - LEVEL CONTROL SWITCHES SHALL BE INTRINSICALLY SAFE.

DETAIL PROVIDED BY E-ONE



STONE DUST PATH
NOT TO SCALE



PRESSURE SEWER CONNECTION TO SANITARY MH & INSIDE DROP PIPE DETAIL
NOT TO SCALE

SANITARY SEWER CLEANOUT
NOT TO SCALE

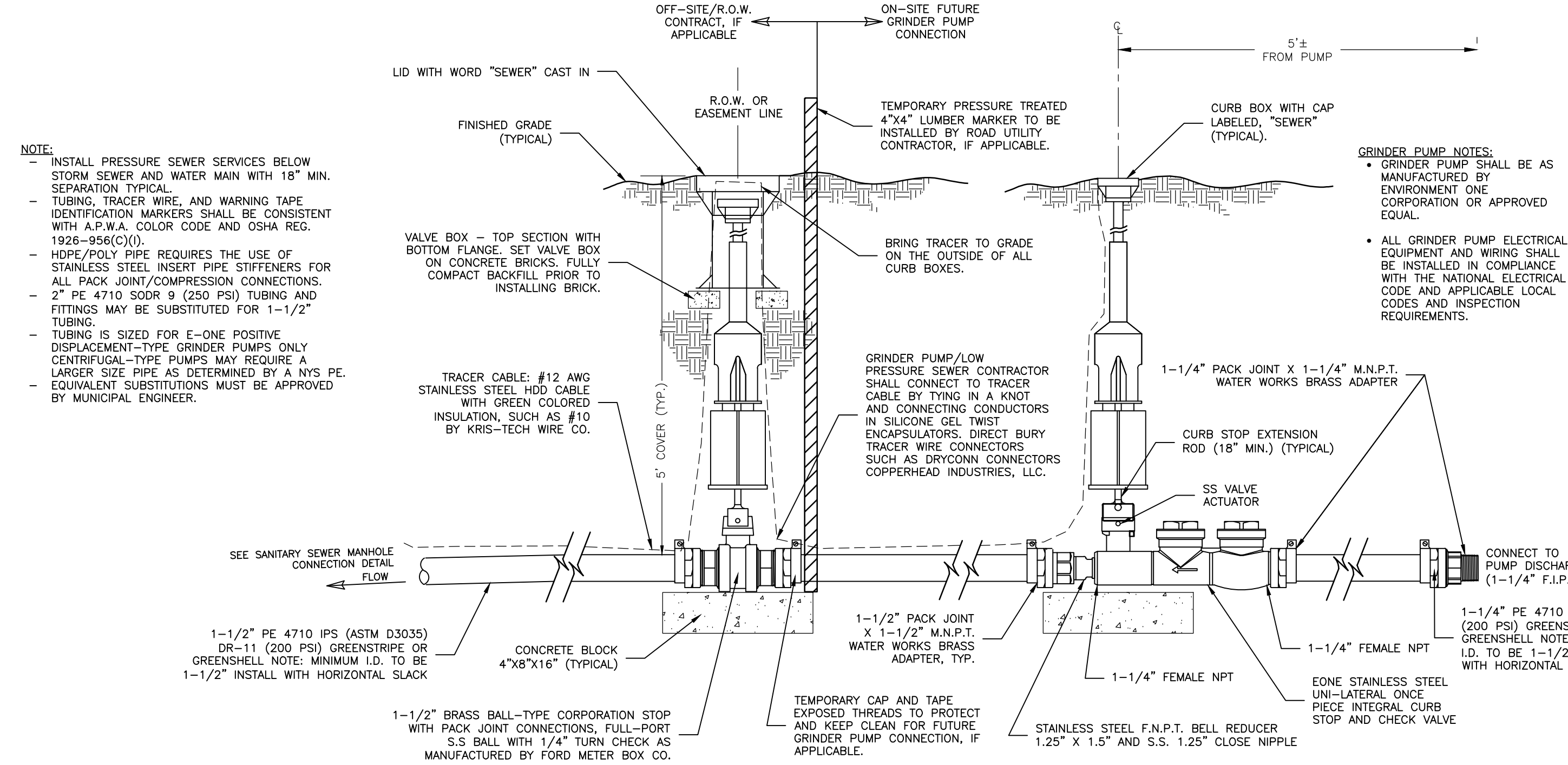
TRENCH DETAIL
NOT TO SCALE

(SANITARY SEWER)

PIPE SECURING DETAIL

STONE NOTES:

AGGREGATE NOTES:



PRESSURE SANITARY SEWER IN-LINE CLEAN OUT AND AIR RELIEF STATION
NOT TO SCALE

ENVIRONMENTAL DESIGN PARTNERSHIP, LLP.
900 Route 448 Clifton Park, New York 10865
(914) 971-1421

PHASE 2 MAALWYCK PARK IMPROVEMENT PROJECT
OWNER: TOWN OF GLENVILLE
MAALWYCK PARK (LOCK 8) ROAD
TOWN OF GLENVILLE
SCHENECTADY COUNTY, NEW YORK

TAX MAP NO. 025.00-4-30-3
MARCH 5, 2020

| REVISION | DATE | BY |
|----------|------------|---------------------|
| 1 | 03/17/2020 | BRANDON M. FERGUSON |

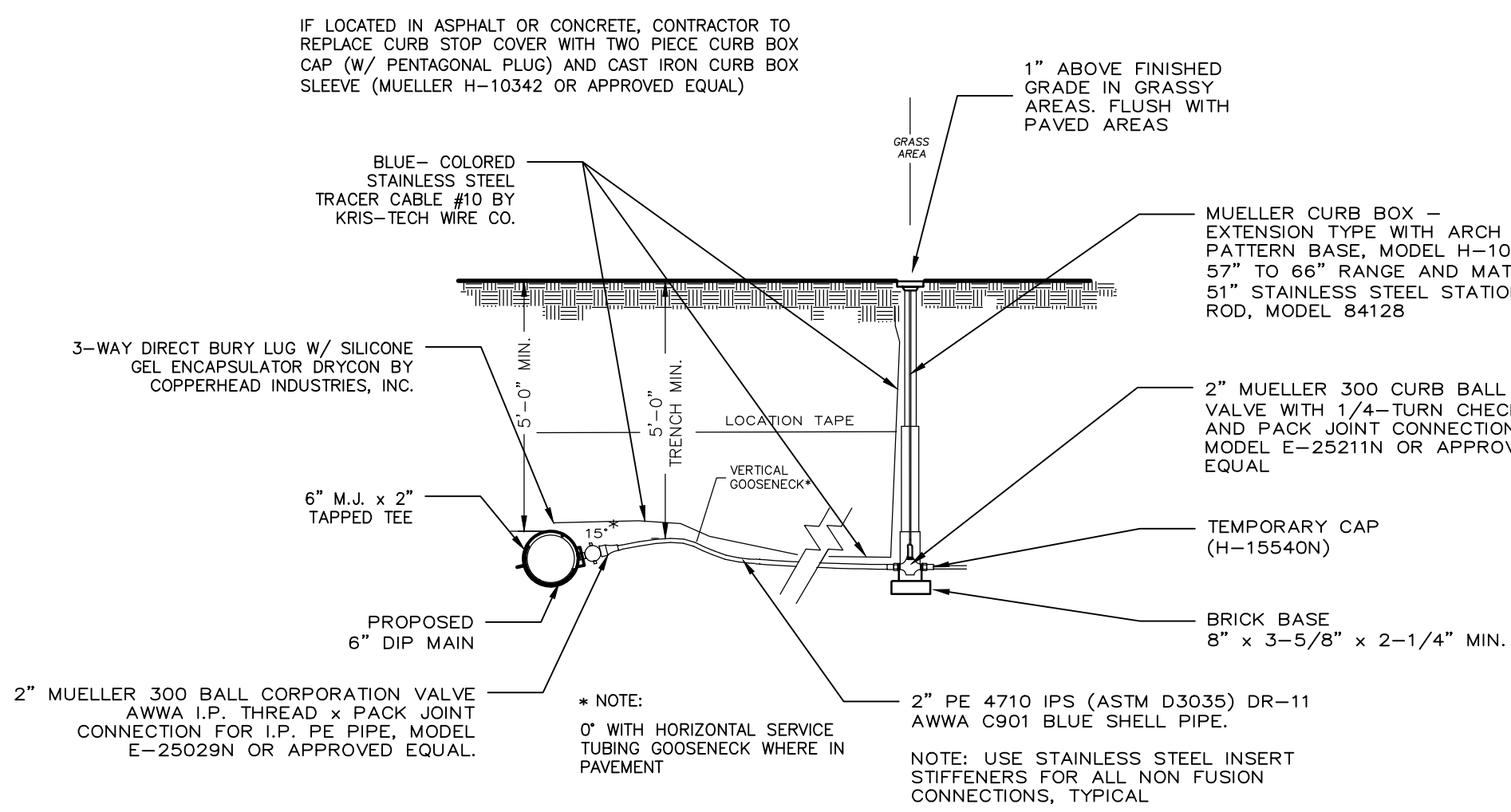
BRANDON M. FERGUSON
96020

AS NOTED

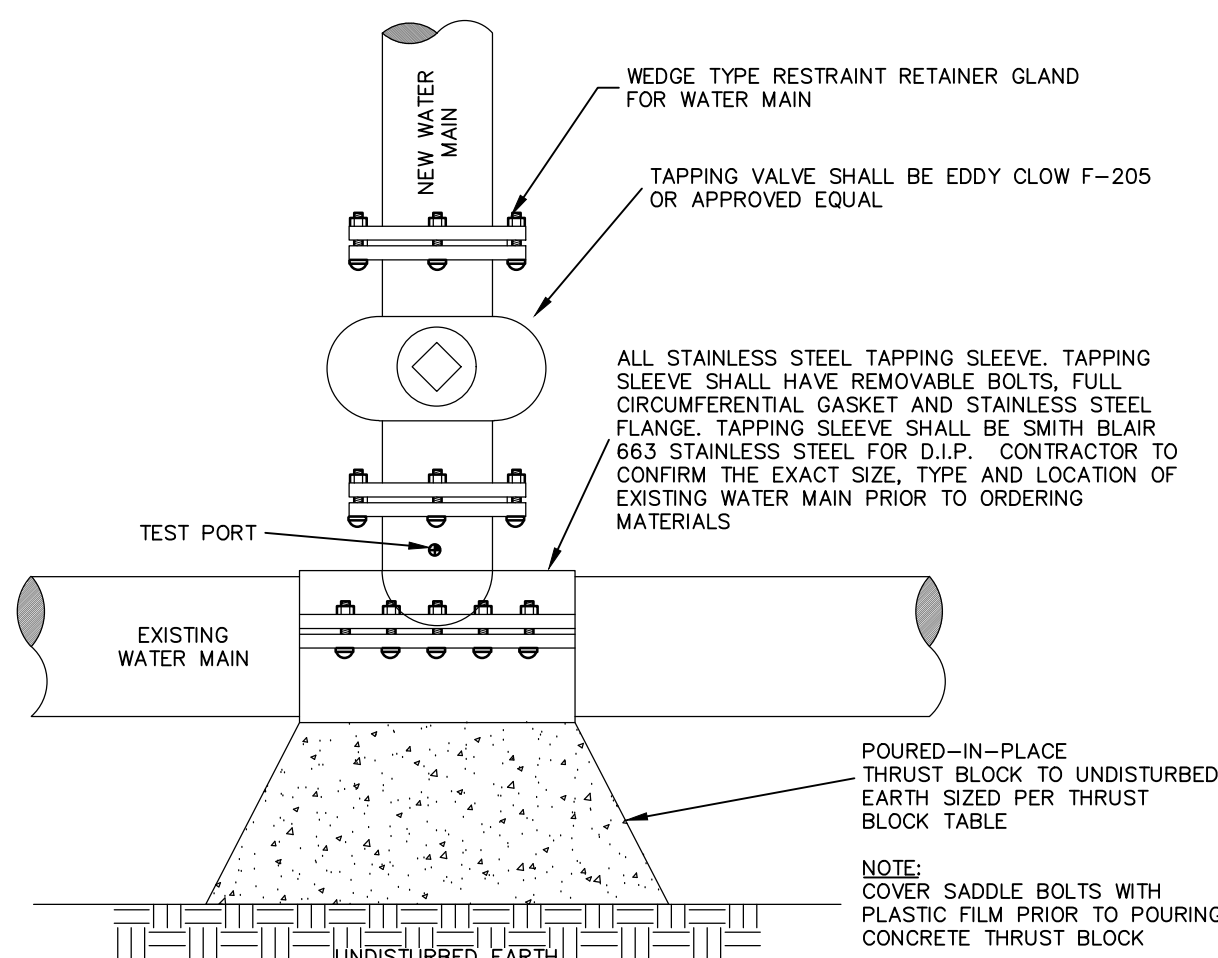
BID SET ISSUED: 03/17/2020

SANITARY & SITE DETAILS

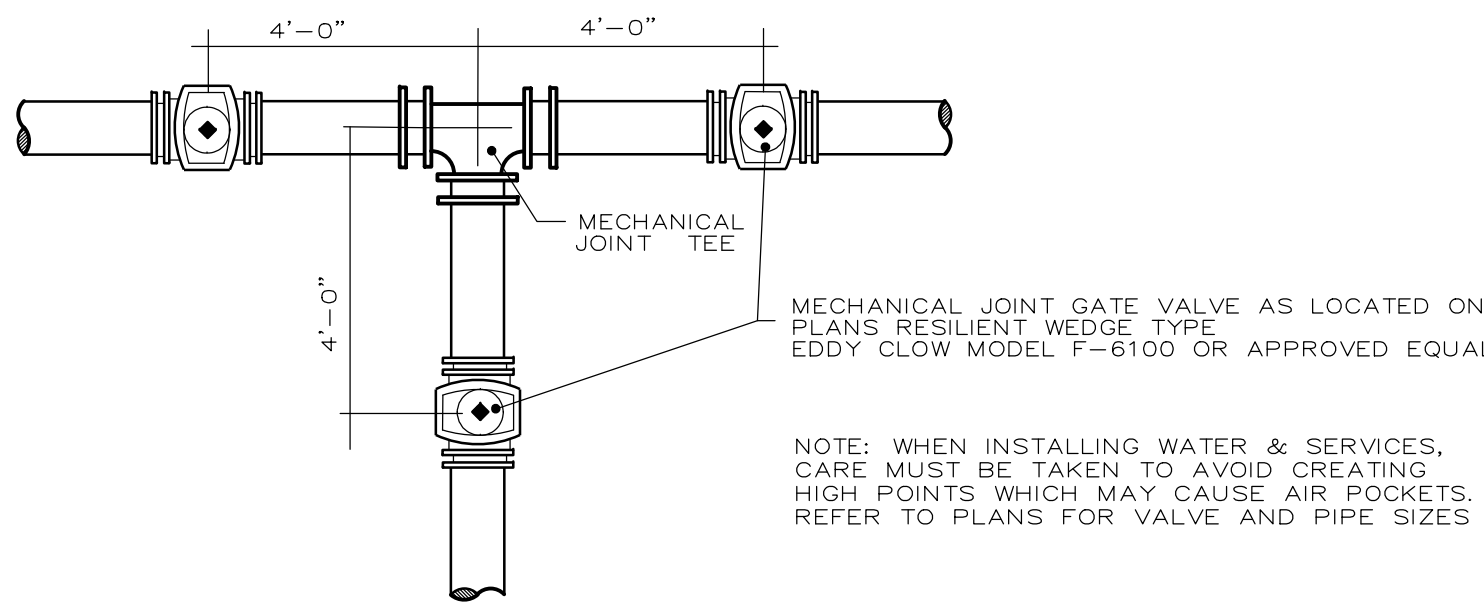
7



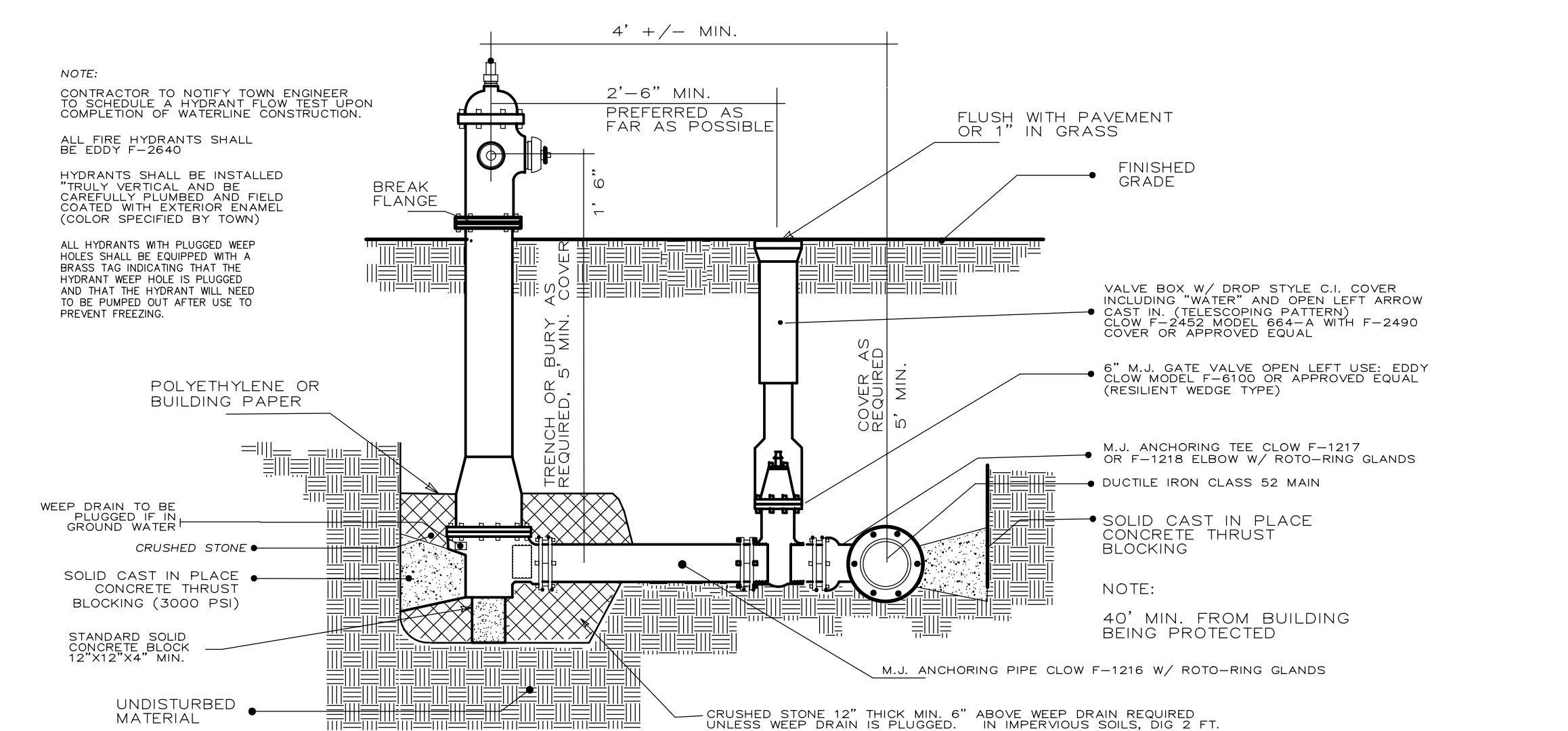
1 TYPICAL WATER SERVICE CONNECTION DETAIL
PE 4710 WATER SERVICE PIPE (IPS-ASTM D3035)
NOT TO SCALE



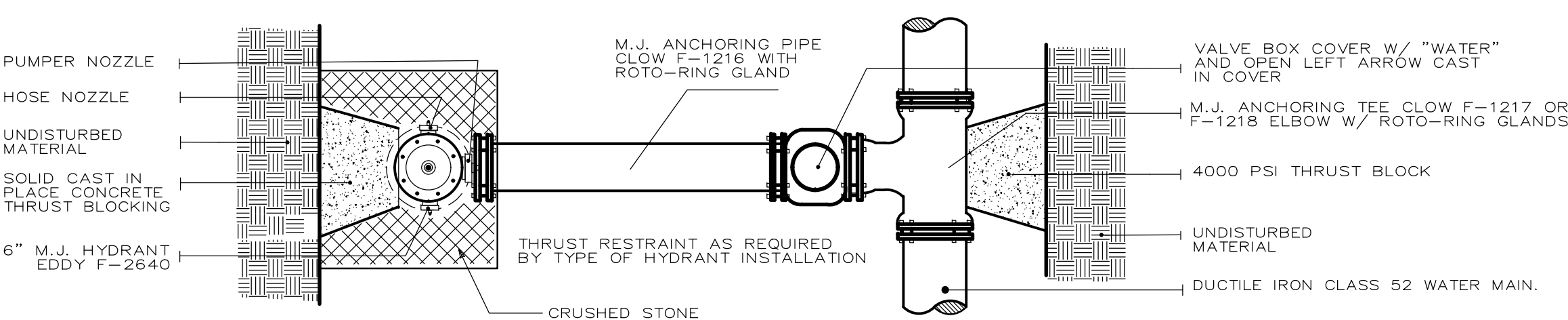
2 TAPPING SADDLE VALVE
NOT TO SCALE



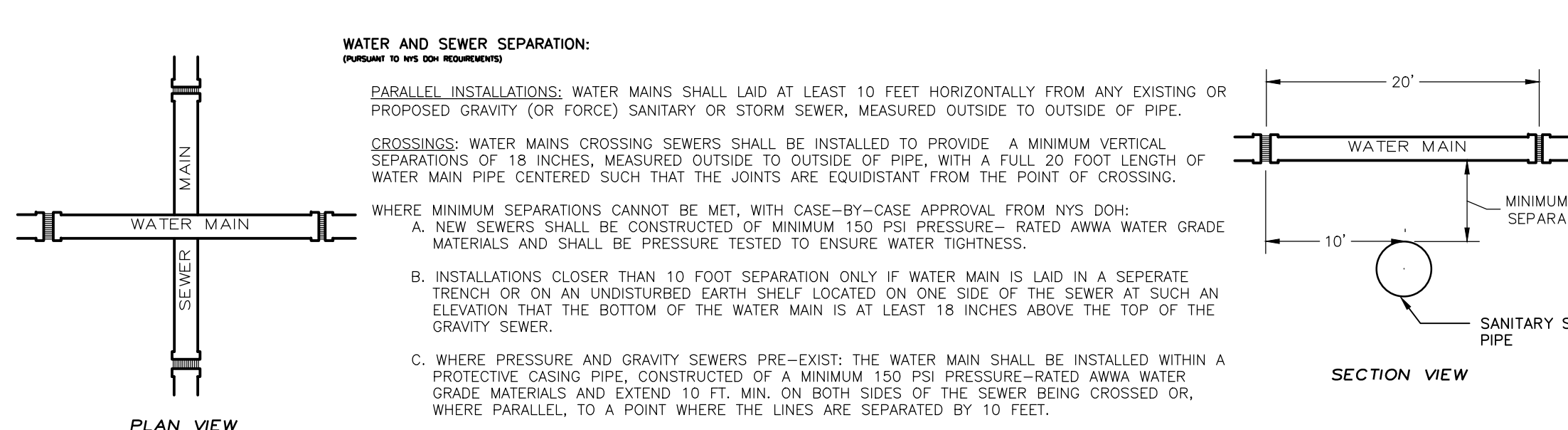
4 TYPICAL JUNCTION LAYOUT
NOT TO SCALE



5 TYPICAL HYDRANT INSTALLATION
NOT TO SCALE

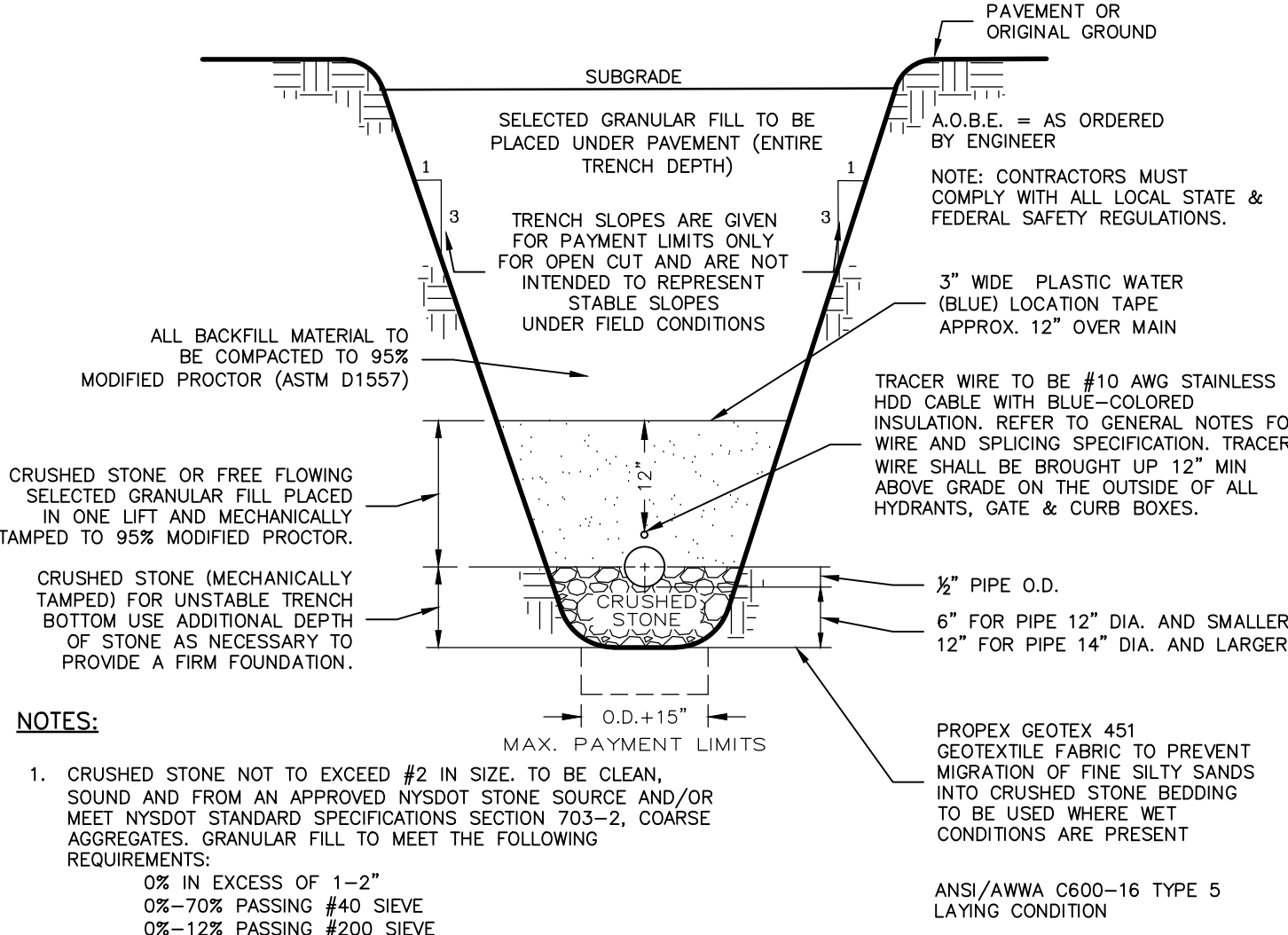


5 TYPICAL HYDRANT INSTALLATION
NOT TO SCALE



7 METER PIT
BY FORD METER BOX OR APPROVED EQUAL
NOT TO SCALE

7 METER PIT
BY FORD METER BOX OR APPROVED EQUAL
NOT TO SCALE



6 WATER TRENCH DETAIL
NOT TO SCALE

| REQUIRED AREAS (SQ. FT.) FOR THRUST BLOCKS | | | | | |
|--|-------|----------|----------|--------------|--------------|
| PIPE SIZE (INCHES) | TEE | 90° BEND | 45° BEND | 22-1/2° BEND | 11-1/4° BEND |
| 4 | 2.0 | 2.8 | 1.5 | 0.8 | 0.4 |
| 6 | 4.2 | 5.9 | 3.2 | 1.6 | 0.8 |
| 8 | 7.2 | 10.1 | 5.5 | 2.8 | 1.4 |
| 10 | 10.9 | 15.4 | 8.3 | 4.2 | 2.1 |
| 12 | 15.4 | 21.8 | 11.8 | 6.0 | 3.0 |
| 14 | 20.6 | 29.1 | 15.8 | 8.0 | 4.0 |
| 16 | 26.8 | 37.9 | 20.5 | 10.4 | 5.2 |
| 18 | 33.6 | 47.5 | 25.7 | 13.1 | 6.6 |
| 20 | 41.2 | 58.2 | 31.5 | 16.1 | 8.1 |
| 24 | 58.8 | 83.1 | 45.0 | 22.9 | 11.5 |
| 30 | 90.5 | 128.0 | 69.2 | 35.3 | 17.7 |
| 36 | 125.6 | 183.3 | 99.1 | 50.5 | 25.4 |

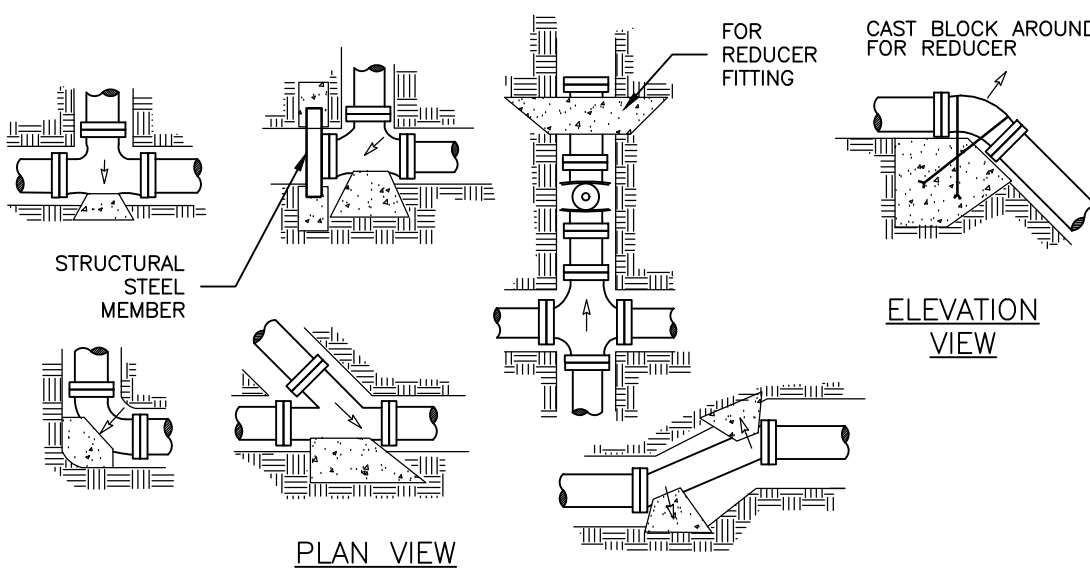
* = FACTOR SAFETY OF 1.5
SOIL BEARING OF 3,000 PSI
225 DESIGN PRESSURE

THRUST BLOCK NOTES:

- VALUES FOR TEE APPLY TO TEES, END PLUGS, CAPS, AND TAPPING SLEEVES.
- 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.
- REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 3,000 POUNDS PER SQ. FT. IF OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED BY THE WATER SUPERINTENDENT.
- IN MUCK, PEAT OR RECENTLY PLACED FILL ALL THRUSTS SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STRENGTH TO RESIST THE THRUSTS. ALL AS REQUIRED BY THE WATER SUPERINTENDENT.
- ALL THRUST BLOCKS SHALL BE CAST-IN-PLACE CONCRETE, 4,000 PSI PORTLAND CEMENT TYPE A MIX.

| THRUST REACTIONS - R(LB) PER 100PSI INTERNAL PRESSURE | | | | | |
|---|---------|----------|----------|--------------|--------------|
| PIPE SIZE (INCHES) | TEE | 90° BEND | 45° BEND | 22-1/2° BEND | 11-1/4° BEND |
| 4 | 1,810 | 2,559 | 1,385 | 708 | 355 |
| 6 | 3,739 | 5,288 | 2,862 | 1,459 | 733 |
| 8 | 6,433 | 9,097 | 4,923 | 2,510 | 1,261 |
| 10 | 9,677 | 13,685 | 7,406 | 3,776 | 1,897 |
| 12 | 13,685 | 19,353 | 10,474 | 5,340 | 2,683 |
| 14 | 18,385 | 26,001 | 14,072 | 7,174 | 3,604 |
| 16 | 23,779 | 33,628 | 18,199 | 9,278 | 4,661 |
| 18 | 29,865 | 42,235 | 22,858 | 11,653 | 5,865 |
| 20 | 36,644 | 51,822 | 28,046 | 14,398 | 7,183 |
| 24 | 52,279 | 73,934 | 40,013 | 20,398 | 10,249 |
| 30 | 80,425 | 113,738 | 61,554 | 31,380 | 15,766 |
| 36 | 115,209 | 162,931 | 88,177 | 44,952 | 22,585 |

| THRUST BLOCK DIMENSIONS ON VERTICAL TRENCH WALL ORIGINAL GROUND (FEET) | | | | | |
|--|----------|----------|-----------|----------|--------------|
| PIPE SIZE (INCHES) | TEE | 90° BEND | 45° BEND | BEND | 11-1/4° BEND |
| 4 | 1.0X2.0 | 1.0X2.8 | 0.75X2.0 | 0.8X1.0 | 0.4X1.0 |
| 6 | 1.5X2.8 | 1.5X4.0 | 1.0X3.2 | 1.0X1.6 | 0.8X1.0 |
| 8 | 2.0X3.6 | 2.0X5.1 | 1.4X3.9 | 1.4X2.0 | 1.0X1.4 |
| 10 | 2.5X4.4 | 2.5X6.2 | 1.7X4.9 | 1.75X2.4 | 1.25X1.7 |
| 12 | 3.0X5.2 | 3.0X7.3 | 2.0X5.8 | 2.0X3.0 | 1.5X2.0 |
| 14 | 3.5X5.9 | 3.5X8.3 | 2.5X6.3 | 2.5X3.2 | 1.75X2.3 |
| 16 | 4.0X6.7 | 4.0X9.5 | 2.7X7.6 | 2.75X3.8 | 2.0X2.6 |
| 18 | 4.5X7.5 | 4.5X10.6 | 3.0X8.6 | 3.0X4.4 | 2.2X3.0 |
| 20 | 5.0X8.25 | 5.0X11.7 | 3.4X9.3 | 3.4X4.75 | 2.5X3.25 |
| 24 | 6.0X9.8 | 6.0X13.9 | 4.0X11.25 | 4.0X5.75 | 2.8X4.1 |
| 30 | 7.5X12.1 | 7.5X17.1 | 5.0X13.8 | 5.0X7.1 | 3.0X5.9 |
| 36 | 9.0X14.4 | 9.0X20.4 | 6.0X16.5 | 6.0X8.4 | 3.5X7.7 |



3 THRUST BLOCKS
NOT TO SCALE

TOWN OF GLENVIEW TECHNICAL SPECIFICATIONS FOR WATER WORKS MATERIALS

NOTE: ALL REFERENCE TO STANDARD ANSI, AWWA OR ASTM SPECIFICATIONS SHALL BE THE LATEST EDITION

1. DUCTILE IRON PIPE AND FITTINGS:

- ALL PIPE FOR WATER MAINS SHALL BE DUCTILE IRON PIPE FURNISHED 18 OR 20 FOOT NOMINAL LAYING LENGTHS.
- ALL DUCTILE IRON PIPE SHALL BE CENTRICALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS WITH INS/AWWA C150. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE RATING OF 350 POUNDS PER SQUARE INCH (ANSI/AWWA C111/A21.11). THE PIPE MANUFACTURER SHALL FURNISH THE REQUIRED JOINT ACCESSORIES COMPLETING THE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL PIPE SHALL HAVE PUSH-ON JOINTS IN COMPLETE CONFORMANCE WITH ANSI/AWWA C111/A21.11. THE PIPE MANUFACTURER SHALL FURNISH THE REQUIRED RUBBER JOINT GASKETS AND JOINT LUBRICANT TOGETHER WITH FOUR (4) SILICON BRONZE WEDGES WITH EACH LENGTH OF PIPE.
- ALL PIPE FITTINGS SHALL BE DUCTILE IRON AND SHALL BE SHORT BODY IN COMPLETE CONFORMANCE WITH ANSI/AWWA C150. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE RATING OF 350 POUNDS PER SQUARE INCH (ANSI/AWWA C111/A21.11). THE PIPE MANUFACTURER SHALL FURNISH THE REQUIRED JOINT ACCESSORIES COMPLETING THE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL DUCTILE IRON PIPE AND DUCTILE IRON FITTINGS SHALL BE COATED WITH AN EPOXY AND PAINT SEAL COATING IN CONFORMANCE WITH ANSI/AWWA C104/A21.4. THE THICKNESS OF THE LIVING SEAL SHALL BE TWICE THE STANDARD AND SHALL BE NOT LESS THAN 1/8-INCH THICK FOR ALL PIPES.

2. GATE VALVES AND TAPPING SLEEVES AND VALVE BOXES:

- ALL GATE VALVES SHALL BE EDDY CLOW E-8000 RESINOLITE OR APPROVED EQUAL.
- ALL GATE VALVES FOR WATER MAINS SHALL CONFORM TO ANSI/AWWA C500 AND SHALL BE SUITABLE FOR MINIMUM WORKING PRESSURE OF 300 PSI AFTER HAVING BEEN HYDROSTATICALLY TESTED TO 450 PSI AFTER MANUFACTURE. ALL VALVES SHALL BE OPEN LEFT WITH A STANDARD 2 INCH PORT. ALL VALVES SHALL BE FURNISHED WITH MECHANICAL JOINT BOLTS. COMPLETE WITH DUCTILE IRON RETAINER GLANDS CLOW F-6100. ALL T-H EARED BOLTS SHALL BE FURNISHED WITH DOUBLE O-RING PACKING.
- ALL GATE VALVES SHALL BE R/R, IRON BODY, BRONZE MOUNTED, NON-RISING STEM, AND SHALL BE FURNISHED WITH DOUBLE O-RING PACKING.
- ALL TAPPING SLEEVES SHALL BE SMITH BLAIR 665 STAINLESS STEEL FOR CAST IRON OR DUCTILE IRON PIPE. THE TAPPING VALVE SHALL BE EDDY CLOW F-205 OR APPROVED EQUAL, WITH O-RING AND SEAL (LEFT).
- ALL VALVE BOXES SHALL BE OF CAST IRON, TELESCOPE PATTERN, AT LEAST FIVE AND ONE QUARTER INCH (5-1/4") IN DIAMETER. VALVE BOXES FOR 6-INCH DIAMETER VALVES SHALL GENERALLY HAVE 4 INCH TOP SECTION AND A 36 INCH BOTTOM SECTION. BUT IN ALL CASES, ALL VALVE BOXES SHALL BE FURNISHED TO MATCH THE SPECIFIC VALVE DIMENSIONS AND TRENCH DEPTH INVOLVED (2 FEET OF COVER OVER PIPE BARREL).
- ALL VALVE BOXES SHALL BE FURNISHED WITH A CAST IRON COVER, DROP STYLE, WITH BOTH THE WORD "WATER" AND AN ARROW INDICATING THE DIRECTION OF THE VALVE OPENING (OPEN LEFT). CAST ON THE COVER IN RAISED CHARACTER. ALL VALVE BOXES SHALL BE CLOW F-2450 MODEL, 66-A WITH A F-2450 COVER OR APPROVED EQUAL.

3. FIRE HYDRANTS:

- ALL FIRE HYDRANTS SHALL BE EDDY F-2640.
- ALL FIRE HYDRANTS SHALL CONFORM TO ANSI/AWWA C500 WITH FIVE AND ONE QUARTER INCH (5-1/4") MAIN VALVE OPENING AND 3/4-INCH (3/4") MECHANICAL JOINT INLET CONNECTION. FURNISHED WITH RUBBER GASKETS AND RUBBER JOINT LUBRICANT. HYDRANTS SHALL BE SUITABLE FOR A FIVE AND ONE HALF FOOT (5-1/2") DEEP TRENCH. EACH HYDRANT SHALL HAVE TWO (2) TWO AND ONE HALF INCH (2-1/2") HOSE CONNECTIONS AND ONE (1) FOUR AND ONE HALF INCH (4-1/2") PUMPER CONNECTION. ALL WITH NATIONAL STANDARD HOSE THREADED AND WITH OUTLET NOZZLE CAPS AND CAP CHAINS. ALL HYDRANTS SHALL HAVE DOUBLE O-RING PACKING. ONLY THE BREAK FLANGE AND CAST IRON COVERING NEED TO BE REPAIRED TO THE ORIGINAL CONDITION.
- ALL FIRE HYDRANTS SHALL BE TRUE TRAFFIC TYPE WITH BREAK FLANGE CONSTRUCTION WITH A LAMINAR BREAK FLANGE LOCATED SLIGHTLY ABOVE THE GROUND LINE AND A CAST IRON BREAK COUPLING ON THE STEM AT THE SAME LOCATION, WHICH SHALL BE SO DESIGNED THAT IN CASE OF BREAKAGE, ONLY THE BREAK FLANGE AND CAST IRON COVERING NEED TO BE REPAIRED TO THE ORIGINAL CONDITION.
- ALL HYDRANTS SHALL RECEIVE A FRESH COAT OF WEATHER RESISTANT PAINT ABOVE THE GROUND LINE AFTER INSTALLATION. THE FRESH COAT MUST MEET THE TOWN OF GLENVIEW REQUIREMENTS.
- ALL HYDRANTS SHALL HAVE A BOLT ON SPRING LOADED HYDRANT MARKER WITH MINIMUM 4 FOOT LENGTH.

4. CORPORATION STOPS:

- CORPORATION STOPS SHALL BE 3/4-INCH OR 1-INCH IN DIAMETER WITH COMPRESSION CONNECTIONS AND SHALL BE MUELLER H-15000 SERIES OR APPROVED EQUAL, BY TOWN OF GLENVIEW WATER DEPARTMENT INSPECTOR.

5. CURB STOPS AND BOXES:

- CURB STOPS SHALL BE AS NOTED ON PLANS AND DETAILS.

6. SERVICE PIPE:

- AS NOTED ON PLANS AND DETAILS.

NOTE: ALL BELOW GRADE WATER MAIN FITTINGS SHALL USE "BLUE BOLTS".

WATER NOTES:

- ALL PIPE MATERIALS AND APPURTENANCES ARE SUBJECT TO APPROVAL BY THE MUNICIPAL ENGINEER. CONTRACTOR TO CONFIRM WITH MUNICIPALITY PRIOR TO ORDERING.
- ALL PIPES AND APPURTENANCES SHALL BE INSTALLED ACCORDING TO THE MUNICIPALITY'S STANDARD SPECIFICATIONS.

- THE CONTRACTOR SHALL VERIFY THE SIZE, TYPE, HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING MAIN AT THE PROPOSED CONNECTION POINTS PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS. CONFLICTS WITH OTHER UTILITIES ARE TO BE DISCOVERED, DISAPPROVED OR CONFLICTS WITH EXISTING UTILITIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

- MINIMUM WATER MAIN DEPTH OF COVER (TOP OF PIPE TO FINISH GRADE) SHALL BE 5' - 0".

- WATER MAINS PIPE SHALL BE:
 - DUCTILE IRON PIPE CLASS 52 AND CONFORM TO ANSI/AWWA C150/A21.50

- WATER SERVICE PIPE SHALL BE:
 - PE 4710 IPS OR 11 AWWA C901 BLUE SILEX OR STRIKE ASTM D3035 SDR-11.

- ALL FULL BELOW WATER MAIN SHALL BE MECHANICALLY COMPACTED GRANULAR MATERIAL TO MIN. 95% MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D1557).

- TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED TO PREVENT SETTLEMENT. TOP TRENCH WITH 12" MIN. APPROVED GRAVEL IN PAVED AREAS AND ALONG SIDE OF EXISTING ROAD FOR SHOULDER BASE. REPLACE DAMAGED PAVEMENTS WITH LIKE KIND AND LIKE THICKNESS.

- WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH AWWA STANDARDS: C500-10 FOR D.I.P., C500-18 OR MANUAL M2 FOR P.V.C. AND AWWA C500-15 OR MANUAL M2 FOR PE PIPE.

- ALL DUCTILE IRON PIPE AND APPURTENANCES SHALL BE CEMENT LINED IN ACCORDANCE WITH AWWA STANDARD C500-11.

- ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE ENCASED IN ACCORDANCE WITH AWWA C150 UNLESS TEST RESULTS PROVIDED BY THE CONTRACTOR INDICATE THE ABSENCE OF SEVERELY AGGRESSIVE SOILS.

- PIPE AND APPURTENANCES SHALL BE EITHER NSF OR UL APPROVED FOR USE WITH POTABLE WATER AND SHALL BEAR THEIR RESPECTIVE SEAL.

- GATE VALVES SHALL CONFORM TO AWWA C500-9. HYDRANTS SHALL CONFORM TO AWWA C500-14.

- GATE VALVES SHALL BE LOCATED AT STREET INTERSECTIONS AND AT INTERMEDIATE POINTS INDICATED ON THE PLANS.

- HYDRANTS SHALL BE USED, WHEN LAYING MAINS, SO AS TO AVOID CREATING HIGH POINTS BETWEEN HYDRANTS.

- WATER AND SEWER SEPARATION REQUIREMENTS: MINIMUM 18 INCHES VERTICAL SEPARATION IS REQUIRED BETWEEN WATER MAINS AND ANY EXISTING OR PROPOSED SANITARY AND STORM SEWER AT ALL CROSSINGS. MEASURED OUTSIDE TO OUTSIDE OF PIPES, WITH JOINTS EQUIDISTANT FROM CROSSING POINT PER WET STATE HEALTH DEPARTMENT REQUIREMENTS. PARALLEL LINES SHALL BE SEPARATED A MIN. OF 9' FEET (MEASURED O.D. TO O.D.).

- WHERE MINIMUM SEPARATIONS CANNOT BE MET, WITH CASE-BY-CASE APPROVAL FROM NYS DOH:
 - NEW SEWERS SHALL BE CONSTRUCTED OF MIN. 18 INCH AWWA WATER GRADE MATERIALS AND SHALL BE PRESSURE TESTED TO ENSURE WATER TIGHTNESS.
 - LESS THAN 10' SEPARATION ONLY IF WATER MAIN IS LAD IN A SEPARATION TRENCH OR ON AN EXISTING TRENCH. MAY CAUSE DAMAGE TO EXISTING UTILITY. THE BOTTOM OF THE WATER MAIN IS AT LEAST 18" ABOVE THE TOP OF THE GRAVITY SEWER.
 - WHERE PRESSURE AND GRAVITY SEWERS PRE-EXIST, THE WATER MAIN SHALL BE INSTALLED WITH A PROTECTIVE CASING PIPE, CONSTRUCTED OF MIN. 18 INCH AWWA WATER GRADE MATERIALS, AND EXTEND 10 FT. MIN. ON BOTH SIDES OF THE SEWER BEING CROSSED, WHERE PARALLEL, TO A POINT WHERE THE LINES ARE SEPARATED BY 10 FT.
 - WHERE A WATER MAIN AND/OR WATER WELLS PRE-EXIST AND A FORCE MAIN IS BEING CONSTRUCTED, THE FORCE MAIN SHALL BE INSTALLED WITH A PROTECTIVE CASING PIPE, CONSTRUCTED OF MIN. 18 INCH AWWA WATER GRADE MATERIALS, AND EXTEND 10 FT. MIN. ON BOTH SIDES OF THE WATER MAIN BEING CROSSED, WHERE PARALLEL, TO A POINT WHERE THE LINES ARE SEPARATED BY 10 FT., OR TO A POINT WHERE THE ENDS OF THE CASING PIPE ARE 150 FT. MIN. FROM ANY WATER WELL.

- ALL WATER PIPE SHALL HAVE 6-INCH WIDE, BLUE-COLORED PLASTIC WATER UTILITY L.D. MARKING TAPE BURIED ON TOP OF THE COMPACTED INITIAL PIPE BACKFILL, 12" MIN. ABOVE THE PIPE.

- ALL PLASTIC WATER MAIN AND WATER SERVICE TUBING SHALL BE BURIED WITH TRACER WIRE SECURED TO THE PIPE.

- WITH CORILLA TAPE. BLUE-COLORED #10 BY KRIS-TECH WIRE CO. MAIN BRANCHES AND SERVICE CONNECTIONS SHALL BE MADE WITHOUT CUTTING THE MAIN WIRE, USING JAWNY DIRECT-BURY LUGS WITH SILICONE GEL ENCAPSULATOR. SPICES AT ROLL ENDS SHALL BE MECHANICALLY AND ELECTRICALLY FASTENED BY TYPING WIRE IN A HOLE AND CONNECTING EXPOSED CONDUCTORS IN SILICONE GEL TIGHT ENCAPSULATORS. DIRECT BURIED TRACER WIRE CONNECTORS SUCH AS DOWNSIDE CONNECTORS BY COPPERHEAD INDUSTRIES, LLC. TRACER WIRE SHALL BE BROUGHT UP 12" MIN. ABOVE GRADE ON THE OUTSIDE OF ALL HYDRANTS, GATE & CURB BOXES.

- CURB BOXES ARE TO BE INSTALLED SO THAT CAPS EXTEND ABOVE FINISHED GRADE 1-INCH AND IDENTIFIED WITH PRESSURE TREATED 2 x 4 DIMENSION LUMBER MARKER. IN GRASSY AREAS, IN PAVED AREAS USE TROPICURE CURB BOX CAP WITH PENETRATIONAL PLUGS AND CAST IRON CURB BOX SLEEVE TO ALLOW ADJUSTMENT OF THE GROUND KEY LID (MUELLER H-1043X OR APPROVED EQUAL).

- THRUST BLOCKING SHALL BE CAST-IN-PLACE CONCRETE MIN. 3,000 PSI AND SHALL BE SIZED AS PER THRUST BLOCK SCHEDULE (SEE DETAIL). THE USE OF MECHANICAL RESTRAINT GLANDS WITH FITTINGS AND VALVES DO NOT ELIMINATE THE NEED FOR THRUST BLOCKS.

- ALL NEW WATER MAIN WORKS ARE TO BE HYDROSTATICALLY TESTED AT 150 PSIG MIN. (AS MEASURED AT THE LOWEST POINT) IN ACCORDANCE WITH AWWA STANDARDS: C500-19 FOR DUCTILE IRON PIPE, MANUAL M2 FOR P.V.C. AND MANUAL M2 FOR PE. RESULTS TO BE SUBMITTED TO MUNICIPAL ENGINEER. MODIFICATIONS TO EXISTING WORKS SHALL BE VISUALLY TESTED FOR LEAKS UNDER NORMAL WORKING PRESSURE PRIOR TO BACKFILL.

- ALL WATER MAIN WORKS SHALL BE DISINFECTED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH AWWA STANDARD C651-14 (SEE DISINFECTION PROCEDURE ON THIS SHEET) AND NYS DOH REQUIREMENTS. RESULTS TO BE SUBMITTED TO THE MUNICIPAL ENGINEER.

- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADHERE STRICTLY TO ALL RELEVANT FEDERAL, STATE AND NYS LABOR SAFETY STANDARDS INCLUDING, BUT NOT LIMITED TO, THOSE RELATED TO CONSTRUCTION SAFETY AND TRENCH SHORING.

- IT MAY BE NECESSARY TO "BACK" OR HOLD UTILITY COMPANIES DURING CONSTRUCTION. THIS SHOULD BE ACCOMPLISHED IN COOPERATION WITH THE LOCAL UTILITY COMPANIES DIRECTLY BY THE CONTRACTOR.

- THE INFORMATION REPRESENTED WITHIN THESE DOCUMENTS DOES NOT IMPLY ANY CONTRACT OF OBLIGATION FOR PERFORMANCE AND/OR ALL TOWN, COUNTY OR STATE REQUIREMENTS PERTAINING TO THE COURSE OF CONSTRUCTION OR PURSUANT TO OBTAINING CERTIFICATE OF OCCUPANCY. SUCH REQUIREMENTS, IF PERFORMED BY THIS OFFICE, SHALL BE ESTABLISHED BY SEPARATE CONTRACT.

- ALL GENERAL AND SPECIFIC NOTES AND DETAILS ON OTHER PLAN SHEETS THAT ARE A PART OF THESE PLANS SHALL APPLY.

- ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES SUCH AS GAS, ELECTRIC, CABLE TV, FIBER OPTICS, TELEPHONE, WATER, SANITARY AND STORM SEWERS, ETC. PRIOR TO COMMENCEMENT OF CONSTRUCTION.

- AS PER NYS INDUSTRIAL CODE 53, CONTRACTOR TO CALL DUG SAFETY AT 1-800-482-7862 TO HAVE UNDERGROUND UTILITIES LOCATED NOT LESS THAN TWO HOURS PRIOR TO ANY TRENCH WORKING DAYS PRIOR TO DIGGING, DRILLING, EXCAVATING, DRIVING POSTS, ETC.

- INDIVIDUAL WATER MAINS SHALL BE INSTALLED FOR EACH BUILDING. METERS TO BE AS PER THE WATER SYSTEMS SPECIFICATIONS.