

NOTE:
MARKER SHALL BE INSTALLED UPON REQUEST OF MUNICIPAL AUTHORITY OR
LATERAL SHOULD BE BACKFILLED PRIOR TO CONNECTION TO BUILDING SEWER.

STANDARD LATERAL DETAIL

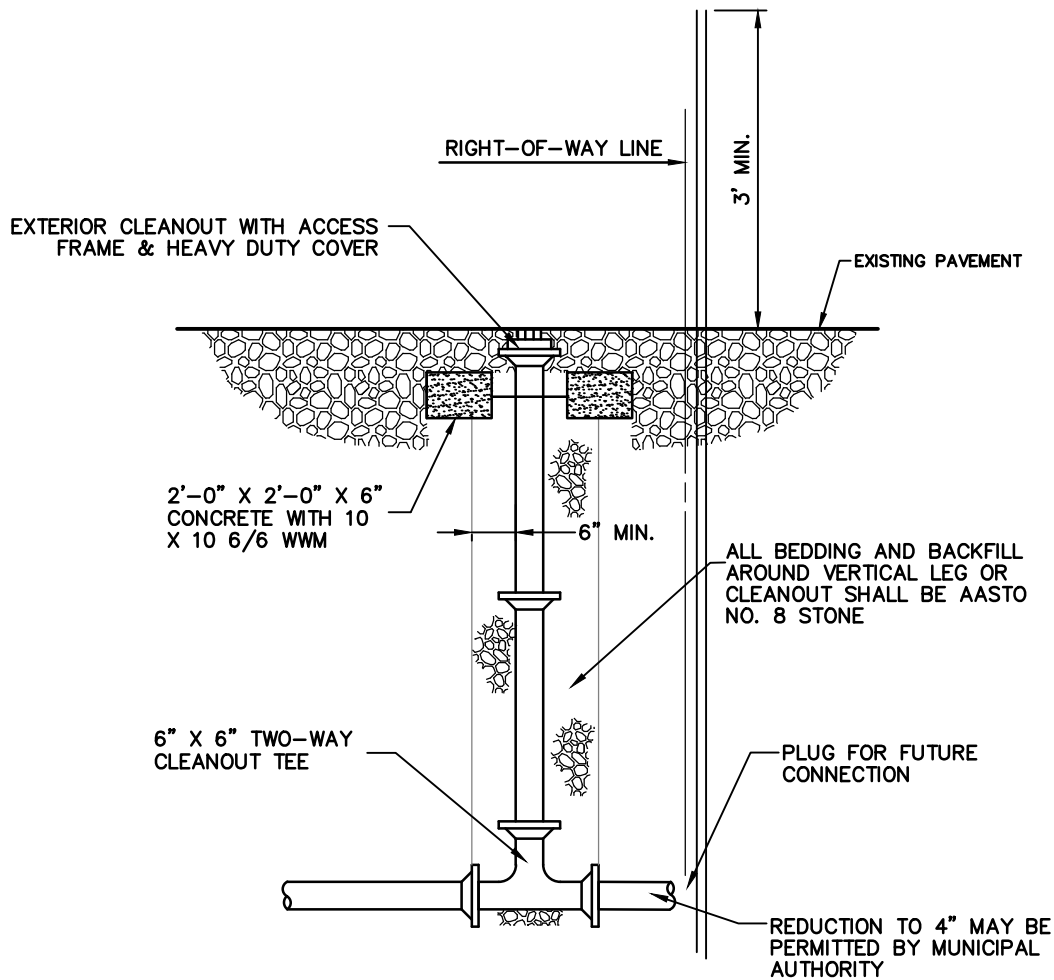
NOT TO SCALE

PROJECT #: 003207.0430	
DATE: SEPTEMBER 2025	
SCALE: NOT TO SCALE	
PM: JLS	
SHEET:	
DT-2	2

STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP
MUNICIPAL AUTHORITY
LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



HERBERT, ROWLAND & GRUBIC, INC.
776 BULL RUN CROSSING
SUITE 200
LEWISBURG, PA 17837
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NOTES:

1. PERMANENTLY NOTE DEPTH OF LATERAL ON THE LATERAL MARKER.
2. CLEAN OUT SHALL BE PLACED EVERY 100 LINEAR FEET, MAXIMUM OR AT ANY CHANGE IN DIRECTION
3. MARKER SHALL BE INSTALLED UPON REQUEST OF MUNICIPAL AUTHORITY OR LATERAL SHOULD BE BACKFILLED PRIOR TO CONNECTION TO BUILDING SEWER.

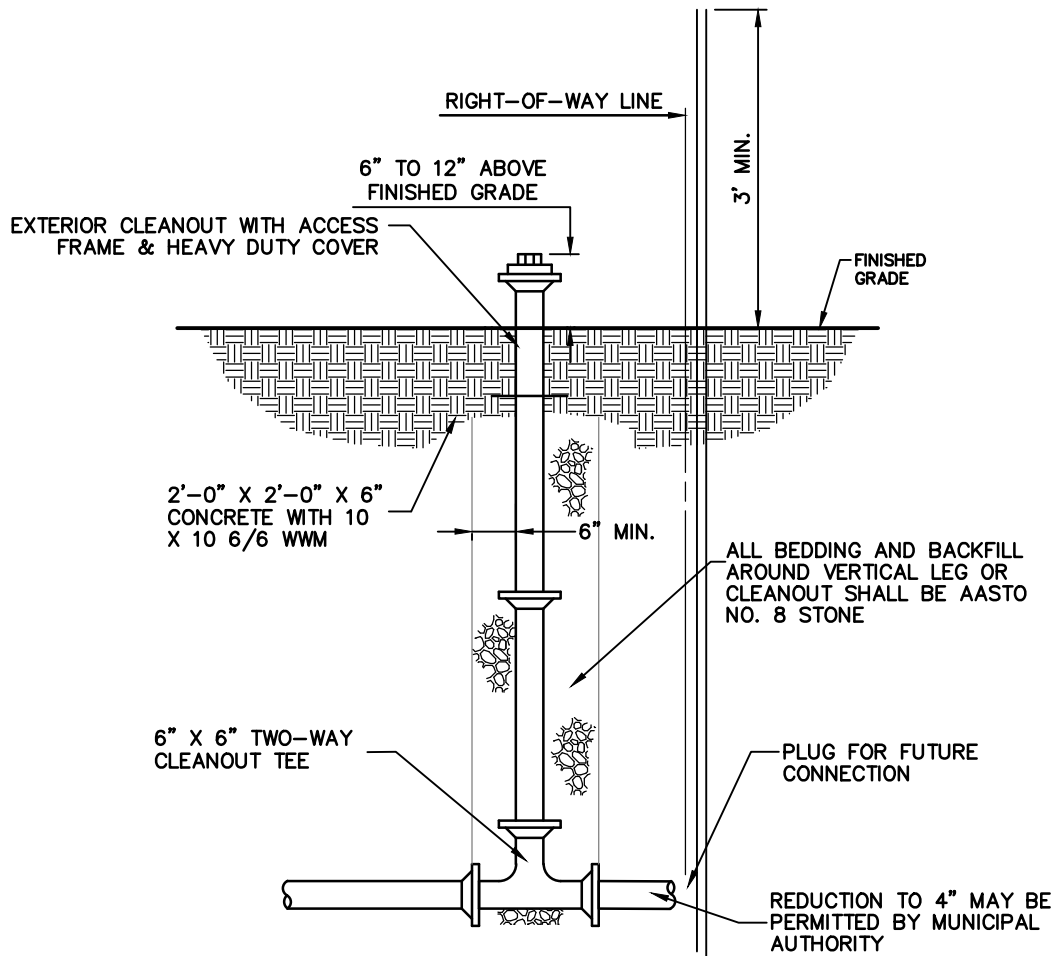
PAVED CLEANOUT DETAIL

NOT TO SCALE

PROJECT #: 003207.0430	
DATE: SEPTEMBER 2025	
SCALE: NOT TO SCALE	
PM: JLS	
SHEET:	
DT-3	3

STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANOT TOWNSHIP
MUNICIPAL AUTHORITY
 LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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NOTES:

1. PERMANENTLY NOTE DEPTH OF LATERAL ON THE LATERAL MARKER.
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GRASS CLEANOUT DETAIL
NOT TO SCALE

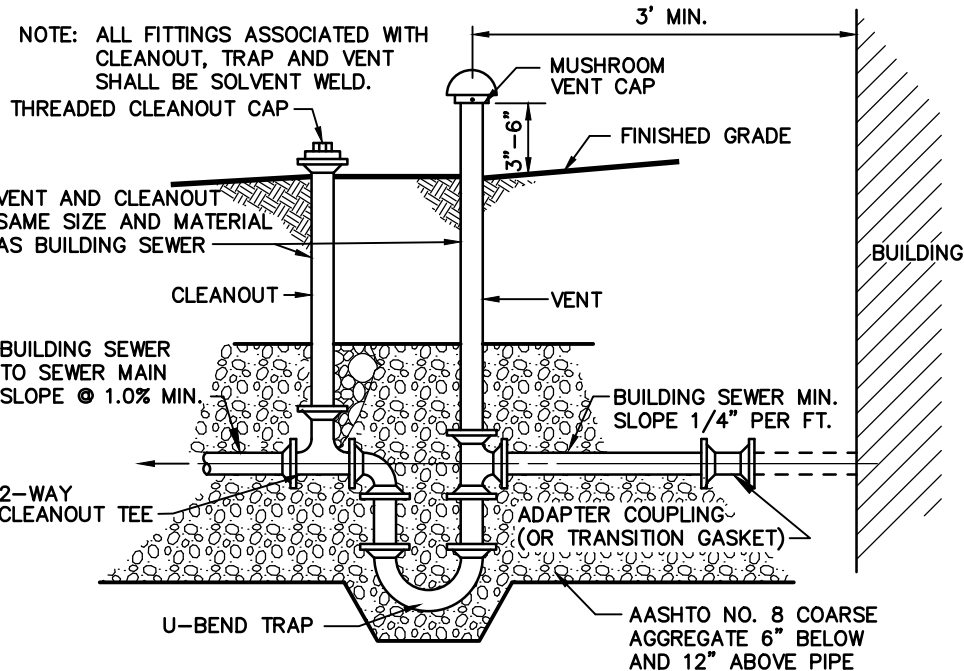
PROJECT #: 003207.0430	
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PM: JLS	
SHEET:	
DT-4	4

**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP**

LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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NOTES:

1. CLEANOUTS PLACED EVERY 100 FEET BETWEEN THE TAPPED IN VENT AND THE CONNECTION ON THE ROADWAY.

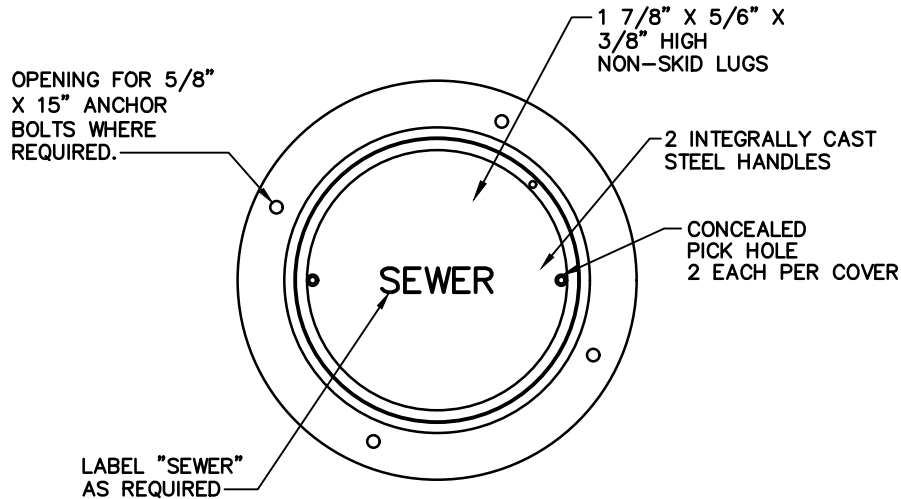
TRAP AND VENT DETAIL

NOT TO SCALE

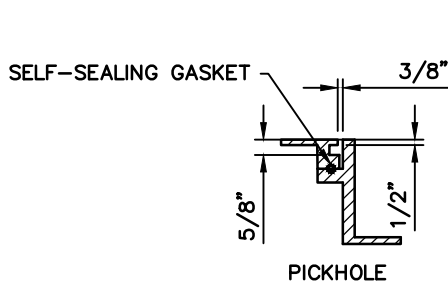
PROJECT #:	003207.0430
DATE:	SEPTEMBER 2025
SCALE:	NOT TO SCALE
PM:	JLS
SHEET:	DT-5
	5

STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANOT TOWNSHIP
MUNICIPAL AUTHORITY
LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

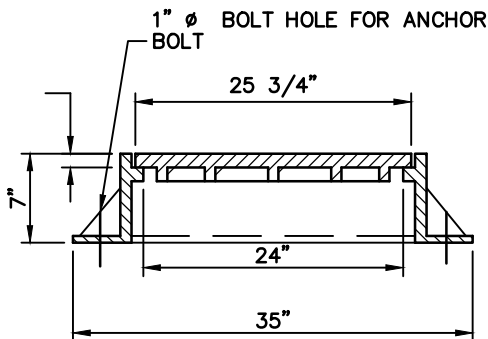
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PLAN



SECTION BB



SECTION CC

NOTES:

1. 1" STAINLESS STEEL ANCHOIR BOLTS REQUIRED.
2. COVERS TO HAVE SELF-SEALING GASKETS.

STANDARD MANHOLE FRAME AND COVER

NOT TO SCALE

PROJECT #: 003207.0430	
DATE: SEPTEMBER 2025	
SCALE: NOT TO SCALE	
PM: JLS	
SHEET:	
DT-6	6

**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANAY TOWNSHIP
MUNICIPAL AUTHORITY**

LOWER MAHANAY TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

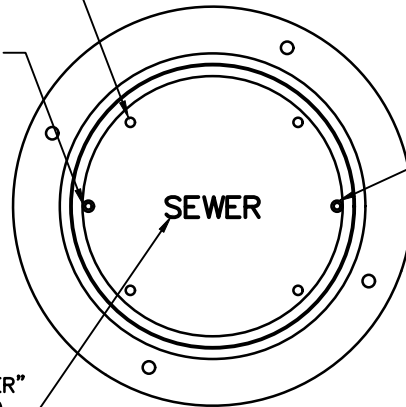


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4 - 5/8"Ø BOLT HOLES
WITH 1/2"Ø COVER BOLTS

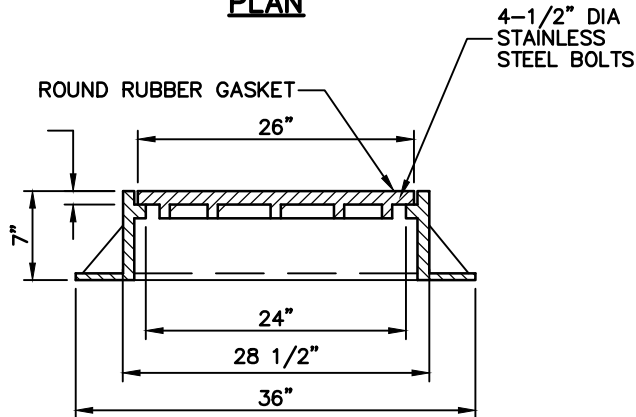
PICK HOLE TYPE "F"

LABEL "SEWER"
AS REQUIRED



PICK HOLE TYPE "F"

PLAN



SECTION

NOTES:

1. STAINLESS STEEL ANCHOR BOLTS REQUIRED
2. COVERS TO HAVE SELF-SEALING GASKETS.

WATERTIGHT MANHOLE FRAME AND COVER

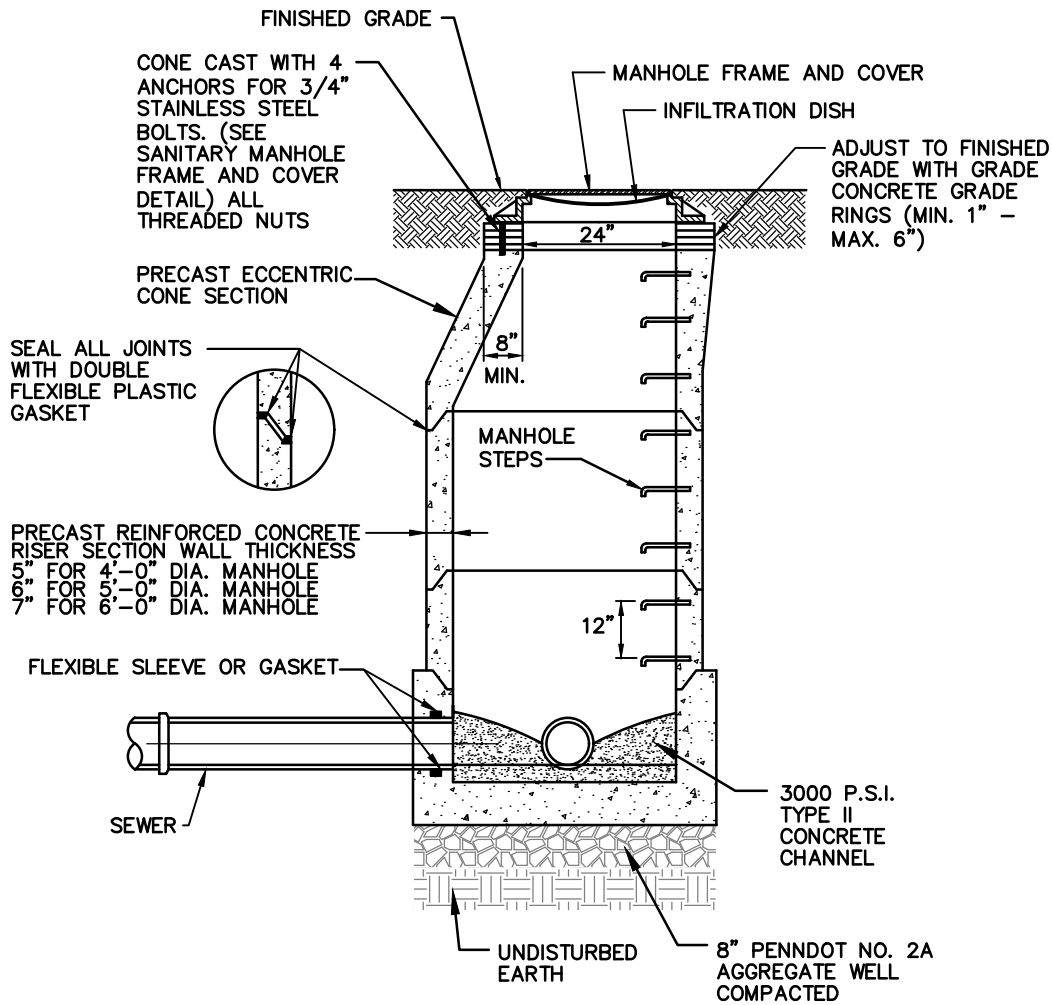
NOT TO SCALE

PROJECT #:	003207.0430
DATE:	SEPTEMBER 2025
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PM:	JLS
SHEET:	DT-7
	7

STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANOT TOWNSHIP
MUNICIPAL AUTHORITY
LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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SECTION PRECAST SANITARY SEWER MANHOLE DETAIL

NOT TO SCALE

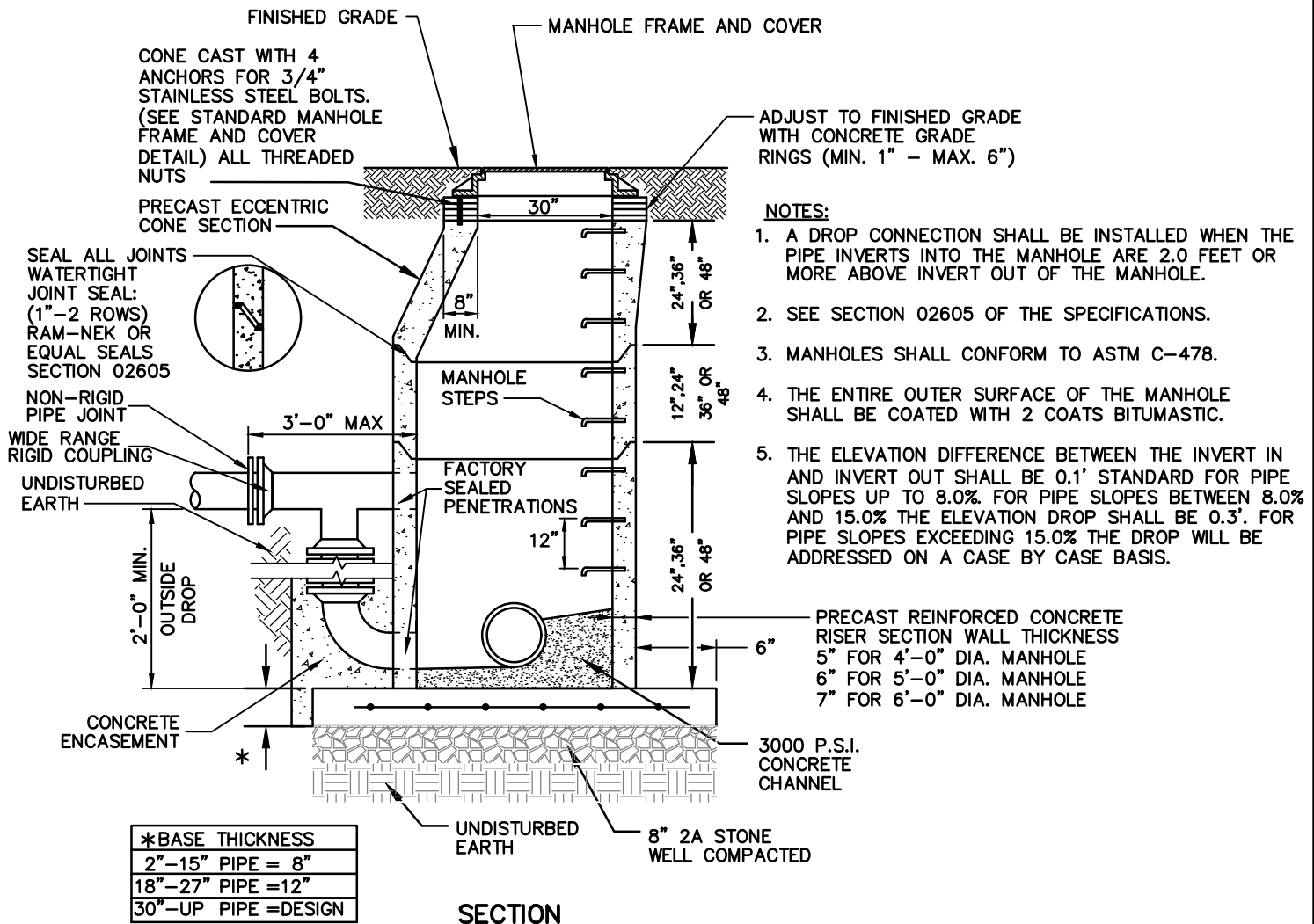
NOTES:

1. FOR MANHOLES IN PAVED AREAS, INSTALL FRAME AND COVERS 1/8" BELOW FINAL PAVEMENT GRADE.
2. THE ENTIRE OUTER SURFACE OF THE MANHOLE SHALL BE COATED WITH 2 COATS COAL TAR EPOXY.
3. 100% COMPACTION OF MANHOLE BACKFILL REQUIRED.

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STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANOT TOWNSHIP
MUNICIPAL AUTHORITY
LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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SECTION

SANITARY SEWER DROP MANHOLE DETAIL

NOT TO SCALE

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DATE:	SEPTEMBER 2025
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PM:	JLS
SHEET:	DT-9
	9

STANDARD CONSTRUCTION DETAILS

FOR

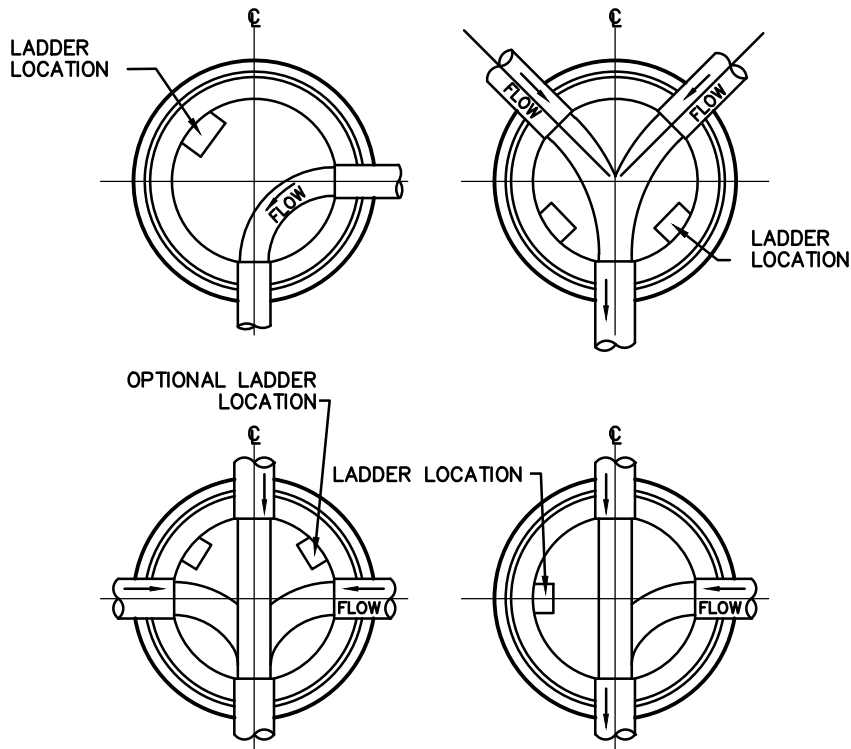
LOWER MAHANAY TOWNSHIP

MUNICIPAL AUTHORITY

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NOTES:
ALL BENCHES SHALL SLOPE @ 1" PER
FOOT TOWARD FLOW CHANNEL.

MANHOLE TROUGH DETAILS

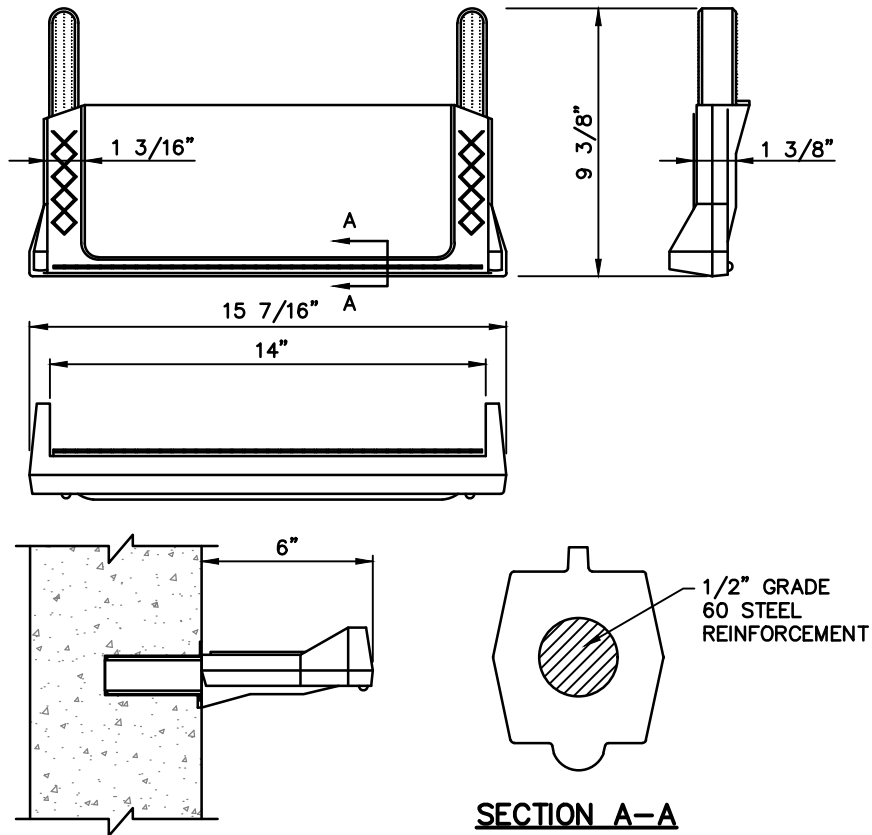
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PM:	JLS
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DT-10	10

STANDARD CONSTRUCTION DETAILS
FOR
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MUNICIPAL AUTHORITY
LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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COPOLYMER POLYPROPYLENE PLASTIC MANHOLE STEP

NOT TO SCALE

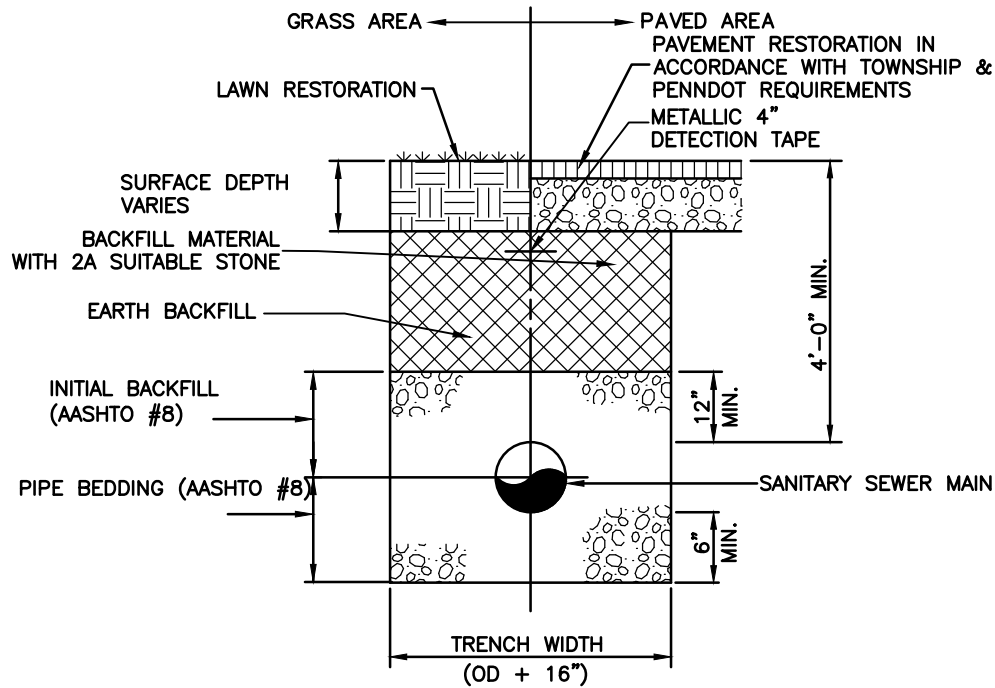
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DATE: SEPTEMBER 2025	
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DT-11	11

**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP
MUNICIPAL AUTHORITY**

LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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TYPICAL METHOD OF BEDDING & BACKFILLING SANITARY MAINS

NOT TO SCALE

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PM:	JLS
SHEET:	
DT-12	12

STANDARD CONSTRUCTION DETAILS

FOR

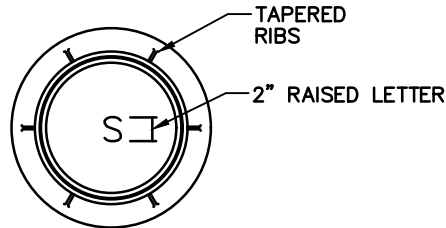
LOWER MAHANOT TOWNSHIP

MUNICIPAL AUTHORITY

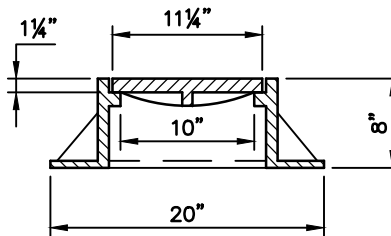
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PLAN



SECTION

NOTES:

1. LABEL COVER "S" OR "SEWER"

STANDARD CLEANOUT FRAME AND COVER

NOT TO SCALE

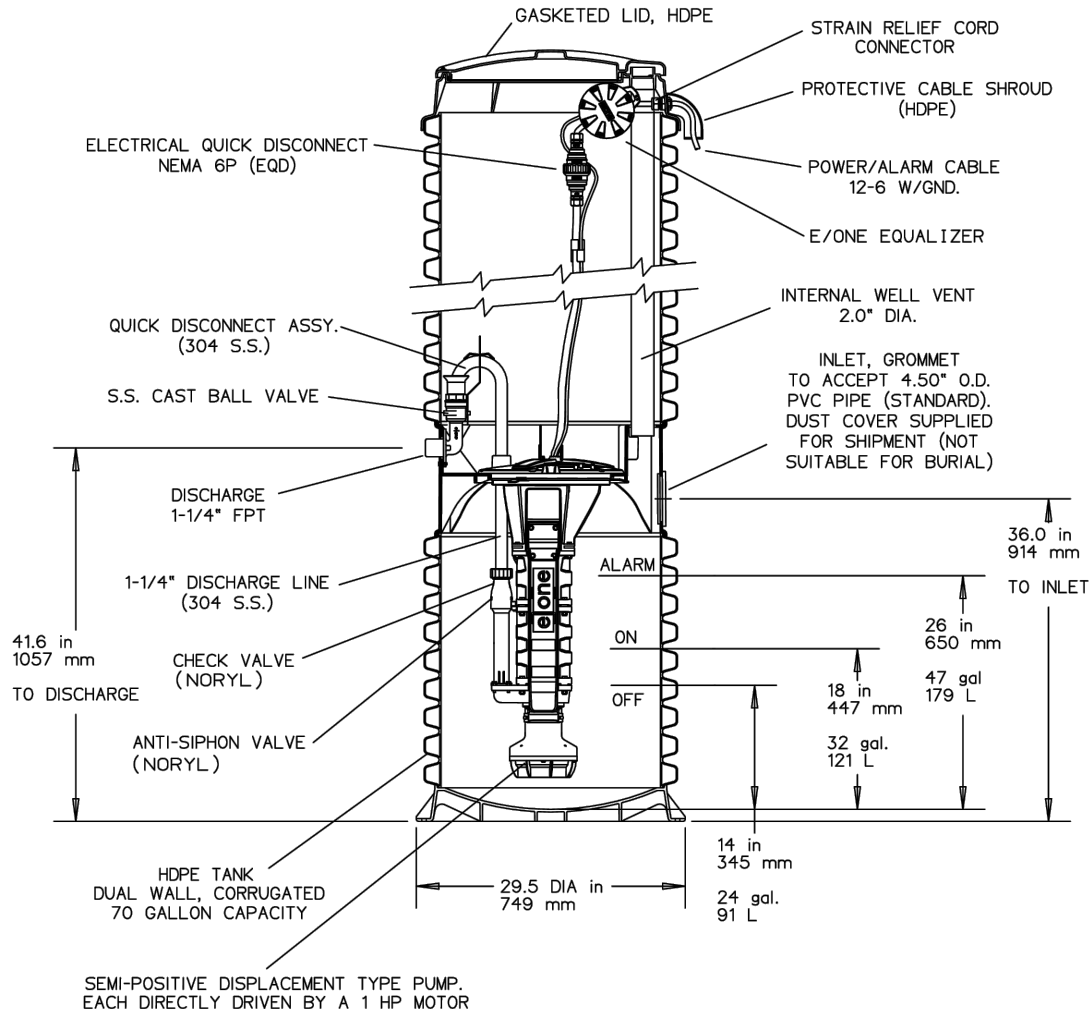
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DT-13	13

**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP
MUNICIPAL AUTHORITY**

LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTION
FOR DETAILS

ON-SITE EONE SIMPLEX GRINDER PUMP

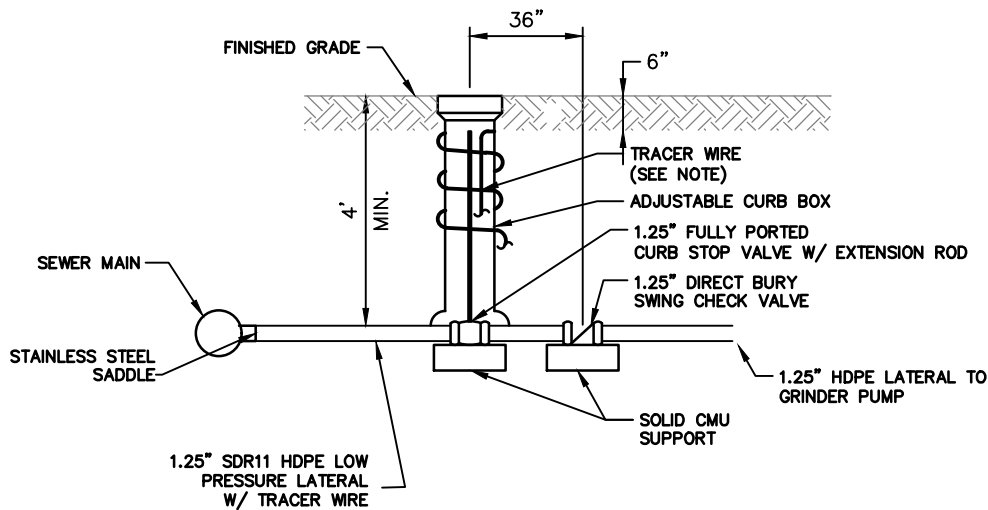
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PROJECT #:	003207.0430
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STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP
MUNICIPAL AUTHORITY
LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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NOTES:

1. TRACER WIRE SHALL BE LOOSELY AFFIXED TO EACH LATERAL UTILIZING ZIP TIES (OR SIMILAR METHODS) AND BROUGHT TO THE SURFACE AT THE CURB STOP VALVE BOX. CONTRACTOR TO PROVIDE A MINIMUM 36" LENGTH EXCESS AT TERMINAL END TO FACILITATE LOCATER CONNECTIONS. CONTRACTOR SHALL PROVIDE HOLE FOR TRACER WIRE TO ENTER VALVE BOX.
2. ALL LOW PRESSURE LATERAL CONNECTIONS CROSSING PENNDOT OR TOWNSHIP ROADWAYS SHALL BE INSTALLED WITH TRENCHLESS METHODS.

**LOW PRESSURE LATERAL CONNECTION
TO A GRAVITY SEWER**

NOT TO SCALE

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STANDARD CONSTRUCTION DETAILS

FOR

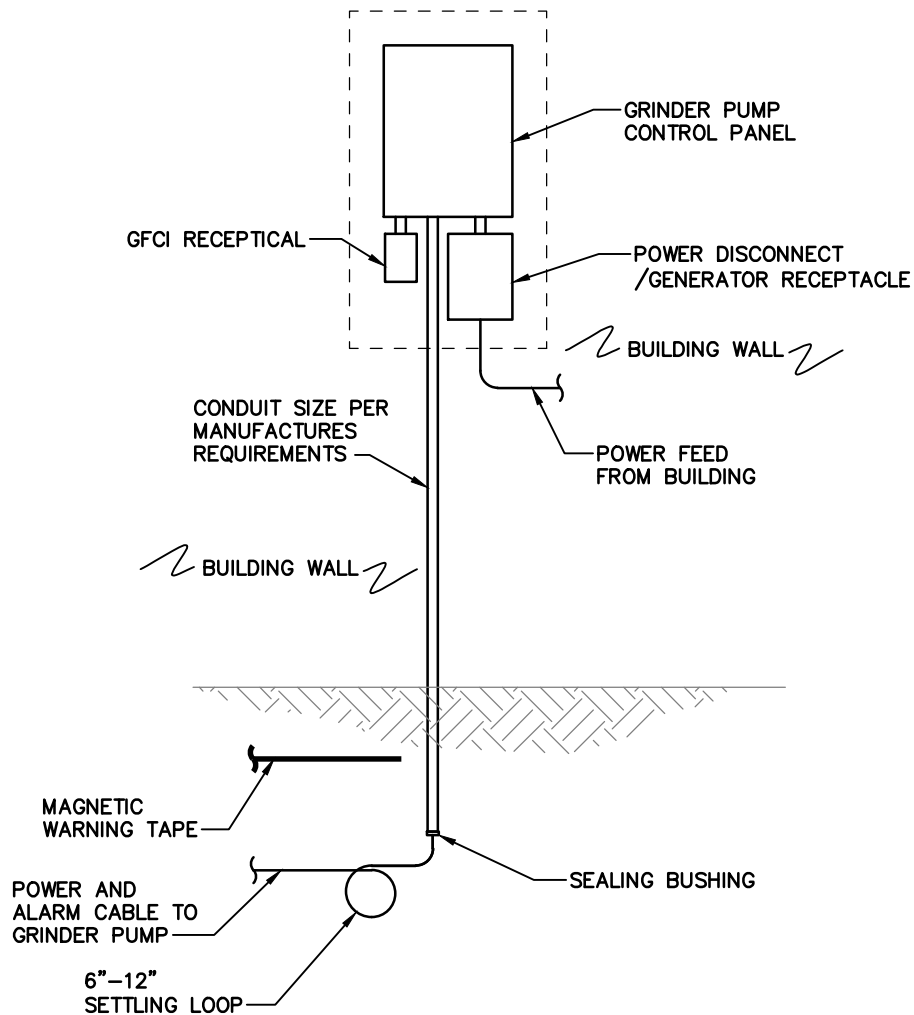
LOWER MAHANAY TOWNSHIP

MUNICIPAL AUTHORITY

LOWER MAHANAY TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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NOTES:
 CONTROL PANELS SHALL BE EONE T260 SERIES, OR EQUIVALENT,
 FROM THE MANUFACTURER WITH SENTRY®; THE FOLLOWING OPTIONS
INCLUDED: INDICATOR LIGHT, AUDIBLE ALARM, HOUR METER,
 GENERATOR RECEPTACLE WITH AUTO TRANSFER, AND AUTO DIALER.
 A GFCI RECEPTACLE SHALL BE INSTALLED BESIDE THE CONTROL
 PANEL.

ON-SITE GRINDER PUMP CONTROL PANEL

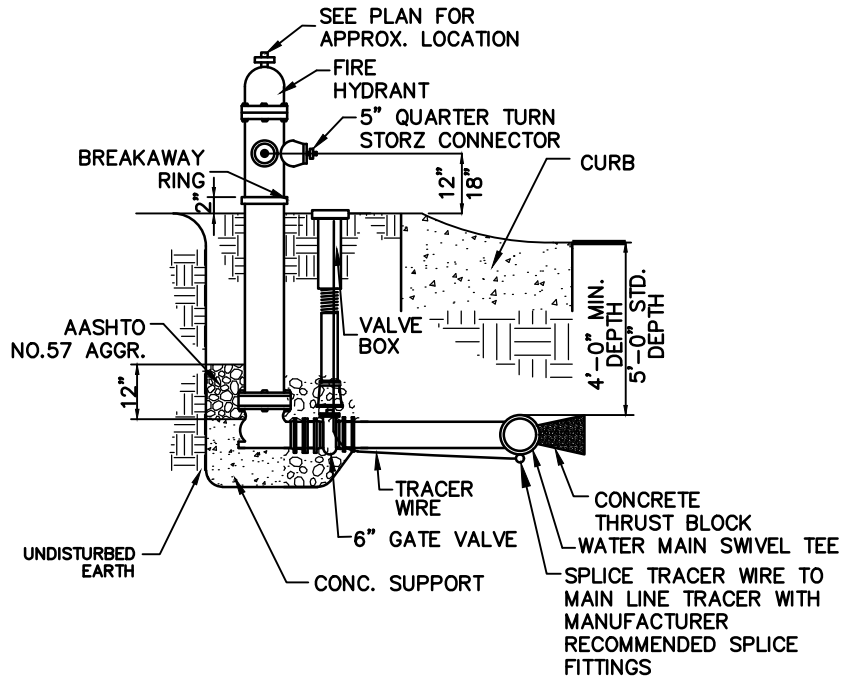
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PROJECT #:	003207.0430
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STANDARD CONSTRUCTION DETAILS
FOR
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MUNICIPAL AUTHORITY
 LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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NOTES:

1. DRAIN HOLE IN HYDRANT MUST NOT BE OBSTRUCTED W/ CONCRETE.
2. TRACER WIRE SHALL BE LOOSELY AFFIXED TO WATER MAIN UTILIZING ZIP TIES (OR SIMILAR METHODS) AND BROUGHT TO THE SURFACE AT THE GATE VALVE BOX OR CURB STOP BOX. CONTRACTOR TO PROVIDE A MINIMUM TWELVE-INCH LENGTH EXCESS AT EACH TERMINAL END TO FACILITATE LOCATOR CONNECTIONS.

FIRE HYDRANT SETTING DETAIL

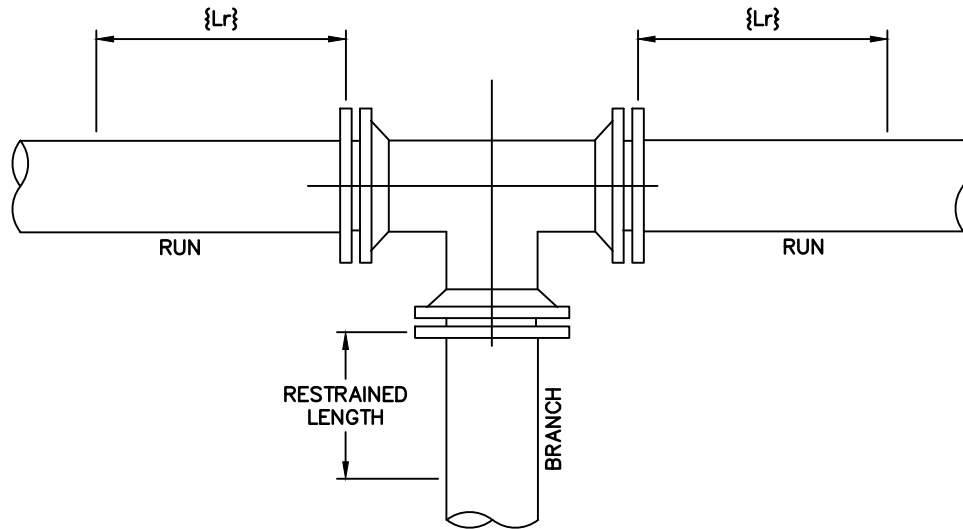
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DT-17	17

STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP
MUNICIPAL AUTHORITY
 LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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TEE SIZE	MINIMUM ATTACHED LENGTH OF PIPE (Lr)										
	0'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'
	MINIMUM LENGTH OF RESTRAINED BRANCH										
6"x6"	31'	23'	15'	8'	1'	1'	1'	1'	1'	1'	1'
8"x6"	31'	21'	10'	1'	1'	1'	1'	1'	1'	1'	1'
10"x6"	31'	18'	5'	1'	1'	1'	1'	1'	1'	1'	1'
10"x8"	41'	31'	21'	11'	1'	1'	1'	1'	1'	1'	1'
12"x6"	31'	15'	1'	1'	1'	1'	1'	1'	1'	1'	1'

* THE MINIMUM ATTACHED LENGTH OF PIPE (L_r) TO EXTEND IN EACH DIRECTION ALONG THE RUN OF THE TEE SHALL BE A SOLID PIPE WITHOUT JOINTS, FITTINGS, ETC.

TEES

LENGTH OF RESTRAINED JOINTS

NOT TO SCALE

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SHEET:	
DT-18	18

STANDARD CONSTRUCTION DETAILS

FOR

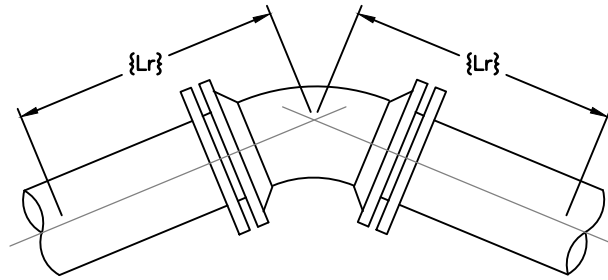
LOWER MAHANoy TOWNSHIP

MUNICIPAL AUTHORITY

LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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PIPE SIZES	MINIMUM RESTRAINED LENGTH OF PIPE (Lr) TO EXTEND IN BOTH DIRECTIONS			
	BEND SIZES			
	11.25°	22.5°	45°	90°*
6"	2'	4'	8'	19'
8"	3'	5'	10'	25'
10"	3'	6'	13'	30'
12"	4'	7'	15'	34'
14"	4'	8'	17'	39'
16"	5'	9'	18'	44'
18"	5'	10'	20'	48'
20"	6'	11'	22'	53'
24"	6'	12'	26'	61'

* ONLY ALLOWED UNDER THE DIRECTION OF THE OWNER AND ENGINEER.

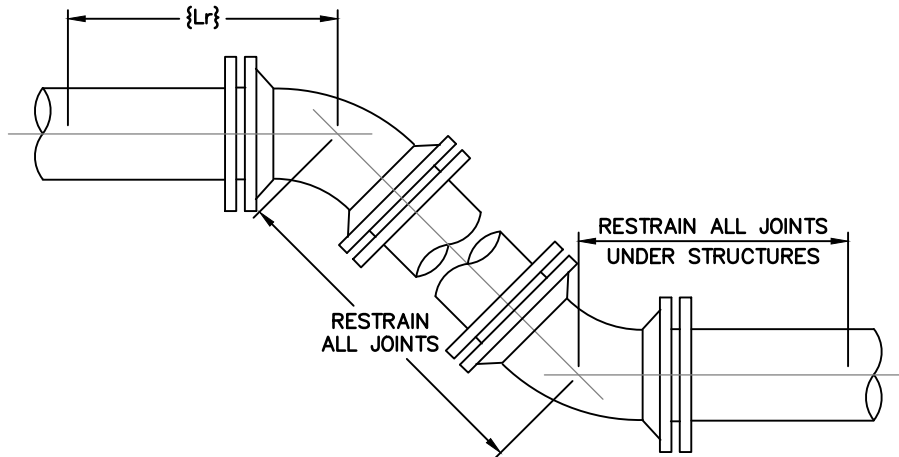
HORIZONTAL BENDS
LENGTH OF RESTRAINED JOINTS
 NOT TO SCALE

PROJECT #:	003207.0430
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PM:	JLS
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DT-19	19

STANDARD CONSTRUCTION DETAILS
FOR
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MUNICIPAL AUTHORITY
 LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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NOT TO SCALE



PIPE SIZES	MINIMUM RESTRAINED LENGTH OF PIPE (Lr) TO BE RESTRAINED ON BOTH SIDES OF THE VERTICAL OFFSET			
	BEND SIZES			
	11.25°	22.5°	45°	90°
6"	9'	18'	39'	*
8"	12'	24'	50'	*
10"	14'	29'	60'	*
12"	17'	34'	72'	*
14"	19'	39'	82'	*
16"	22'	44'	92'	*
18"	24'	49'	102'	*
20"	26'	54'	112'	*
24"	31'	63'	131'	*

* NOT ALLOWED

VERTICAL OFFSET LENGTH OF RESTRAINED JOINTS

NOT TO SCALE

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PM:	JLS
SHEET:	
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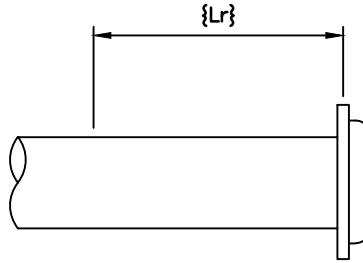
**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANOT TOWNSHIP
MUNICIPAL AUTHORITY**

LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

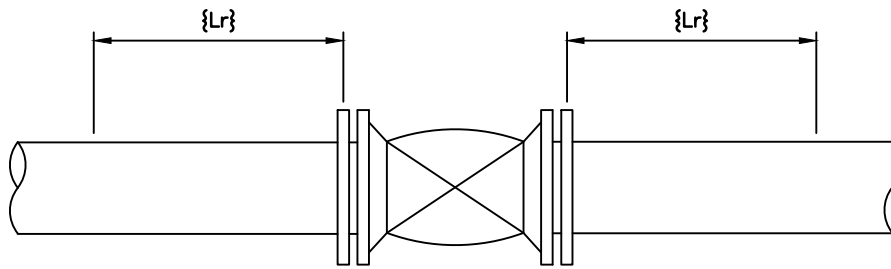
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FILE PATH & NAME: P:\0032\003207_0430\CSD\DETAILS\LOWER MAHANOT DETAIL SET.dwg LAYOUT: RESTRAINED JOINTS - VERTICAL OFFSET LAST PLOTTED: 11/19/2025 4:26 PM BY: BTOWNSEND



CAP OR PLUG (DEAD END)



VALVE

PIPE SIZE	MINIMUM RESTRAINED LENGTH OF PIPE (Lr)
6"	48'
8"	62'
10"	75'
12"	88'
14"	100'
16"	113'
18"	125'
20"	136'
24"	160'

**DEAD ENDS AND VALVES
LENGTH OF RESTRAINED JOINTS**

NOT TO SCALE

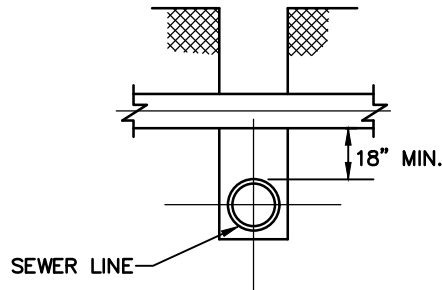
PROJECT #: 003207.0430	
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PM: JLS	
SHEET:	
DT-21	21

**STANDARD CONSTRUCTION DETAILS
FOR
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MUNICIPAL AUTHORITY**

LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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SECTION

NOTES:

1. IF JOINT ON WATER MAIN IS WITHIN LIMITS OF SANITARY SEWER TRENCH INSTALL MECHANICAL BELL JOINT CLAMP.
2. IF CLEARANCE IS LESS THAN 18", CONCRETE ENCASE SANITARY SEWER PIPE 10 FT. EACH SIDE OF WATER MAIN. TO BE PAID AT UNIT PRICE BID PER CUBIC YARD OF CONCRETE.
3. IN NO CASE SHALL THE SANITARY SEWER PIPE CONTACT ANY WATER MAIN, SERVICE LINE OR APPURTENANCE.

VERTICAL WATER MAIN CLEARANCE

NOT TO SCALE

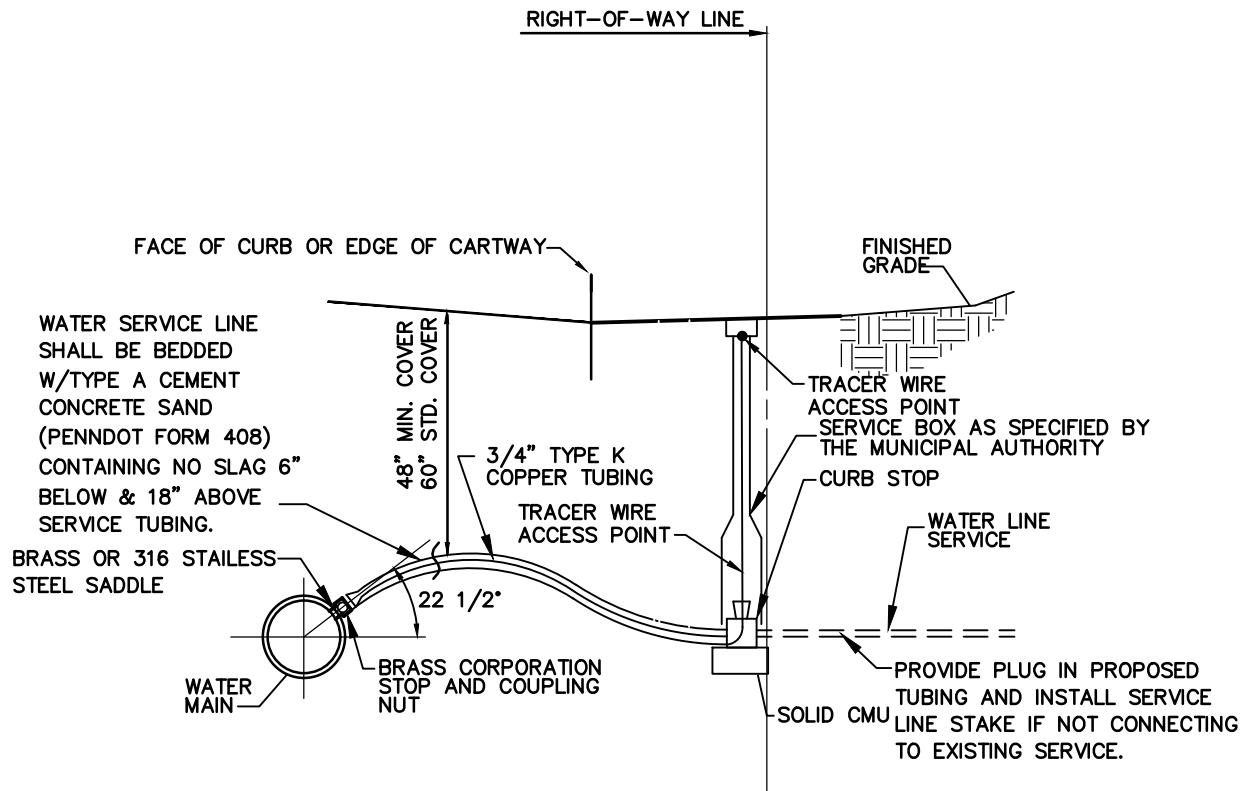
PROJECT #: 003207.0430	
DATE: SEPTEMBER 2025	
SCALE: NOT TO SCALE	
PM: JLS	
SHEET:	
DT-22	22

**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANOT TOWNSHIP
MUNICIPAL AUTHORITY**

LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA



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NOTES:

1. EXISTING CURB STOP & SERVICE BOX SHALL BE REMOVED FROM EXISTING SERVICE LINE AND PROPOSED CURB STOP & SERVICE BOX SHALL BE INSTALLED
2. THE EXISTING SERVICE LINE SHALL BE FREE OF DEFECTS PRIOR TO INSTALLING NEW CURB STOP
3. SHOULD A SERVICE LINE BE ENCOUNTERED MADE OF A MATERIAL THAT CANNOT BE COUPLED, CONTACT OWNER IMMEDIATELY.

SERVICE LINE DETAIL

NOT TO SCALE

PROJECT #:	003207.0430
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STANDARD CONSTRUCTION DETAILS

FOR

LOWER MAHANOT TOWNSHIP

MUNICIPAL AUTHORITY

LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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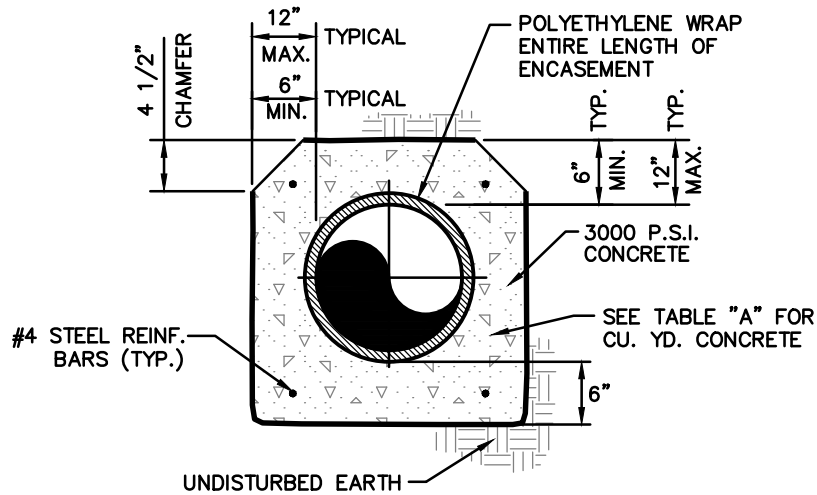
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SECTION
CONCRETE ENCASEMENT DETAIL

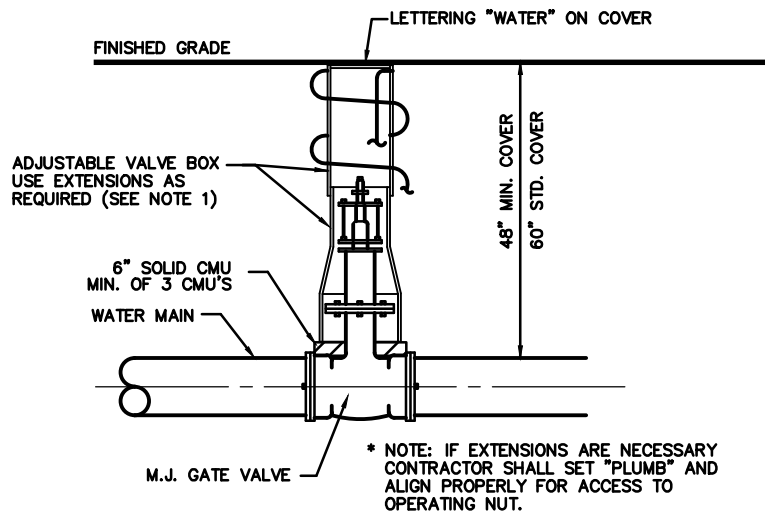
NOT TO SCALE

TABLE A	
PIPE SIZE	TOTAL CU. YRDS CONCRETE PER LIN. FT. OF PIPE
4"	0.1213
6"	0.1409
8"	0.1609
10"	0.1815
12"	0.2024
15"	0.2346
18"	0.2679
21"	0.3022
24"	0.3374
30"	0.4109

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STANDARD CONSTRUCTION DETAILS
FOR
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MUNICIPAL AUTHORITY
LOWER MAHANOT TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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NOTES:

1. IF EXTENSIONS ARE NECESSARY CONTRACTOR SHALL SET "PLUMB" AND ALIGN PROPERLY FOR ACCESS TO OPERATING NUT.
2. TRACER WIRE SHALL BE LOOSELY AFFIXED TO WATER MAIN UTILIZING ZIP TIES (OR SIMILAR METHODS) AND BROUGHT TO THE SURFACE AT THE GATE VALVE BOX OR CURB STOP BOX. CONTRACTOR TO PROVIDE A MINIMUM TWELVE-INCH LENGTH EXCESS AT EACH TERMINAL END TO FACILITATE LOCATOR CONNECTIONS.

GATE VALVE & VALVE BOX DETAIL

NOT TO SCALE

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DATE: SEPTEMBER 2025	
SCALE: NOT TO SCALE	
PM: JLS	
SHEET:	
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STANDARD CONSTRUCTION DETAILS

FOR

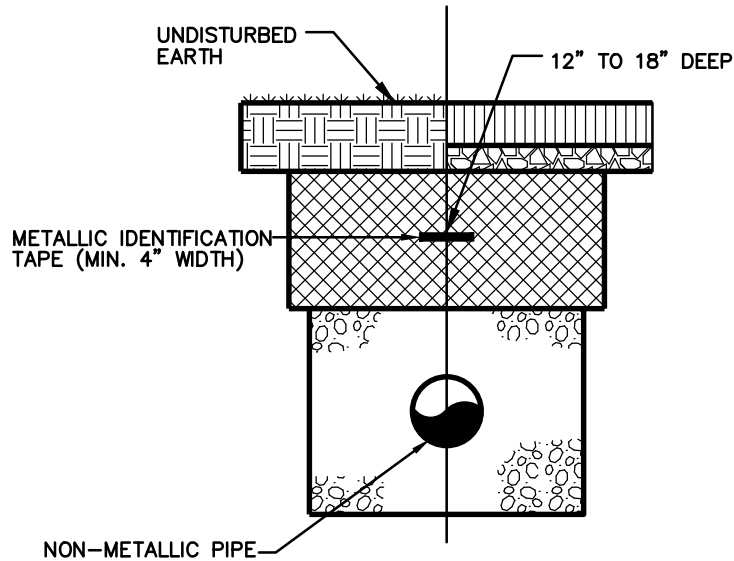
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MUNICIPAL AUTHORITY

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INSTALLATION DETAIL IDENTIFICATION TAPE
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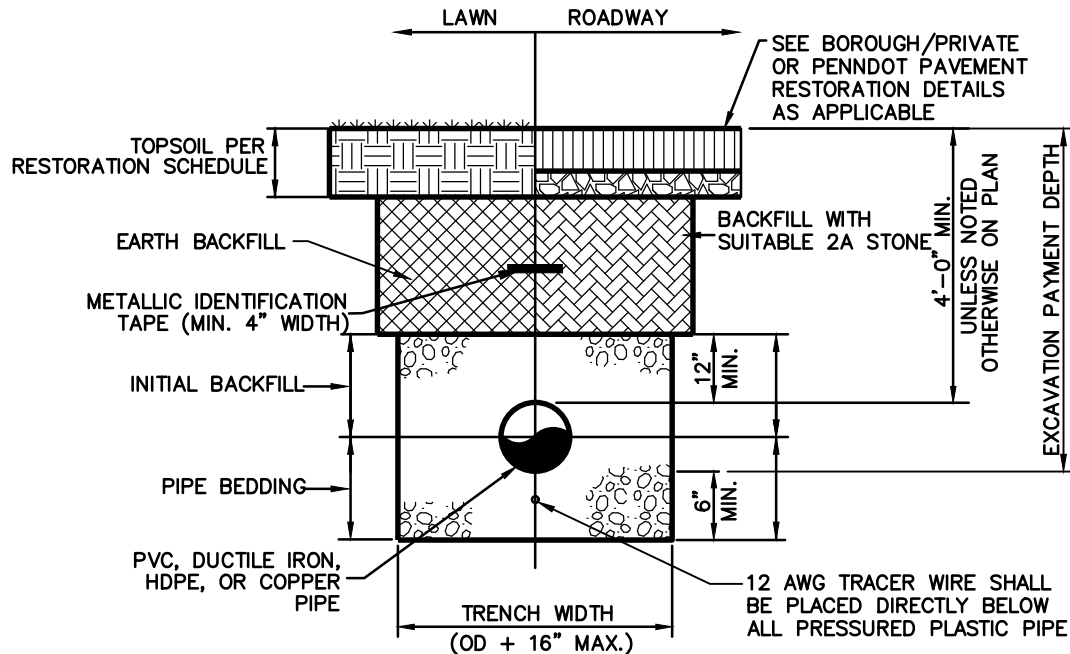
PROJECT #: 003207.0430	
DATE: SEPTEMBER 2025	
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PM: JLS	
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DT-26	26

**STANDARD CONSTRUCTION DETAILS
FOR
LOWER MAHANoy TOWNSHIP
MUNICIPAL AUTHORITY**

LOWER MAHANoy TWP, NORTHUMBERLAND COUNTY, PENNSYLVANIA

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NOTES:

1. PIPE BEDDING AND INITIAL BACK OF PVC, DUCTILE IRON, AND HPDE SHALL BE PENNDOT 1B OR AASHTO NO. 8 STONE.
2. COPPER SERVICE LINES SHALL BE BEDDED AND BACKFILLED WITH TYPE A CEMENT CONCRETE SAND. BACKFILL DEPTH SHALL BE 18 INCHES.
3. DUCTILE IRON PIPE SHALL BE POLY-WRAPPED AND TAPED.

TYPICAL METHOD OF BEDDING & BACKFILLING WATER UTILITY TRENCHES

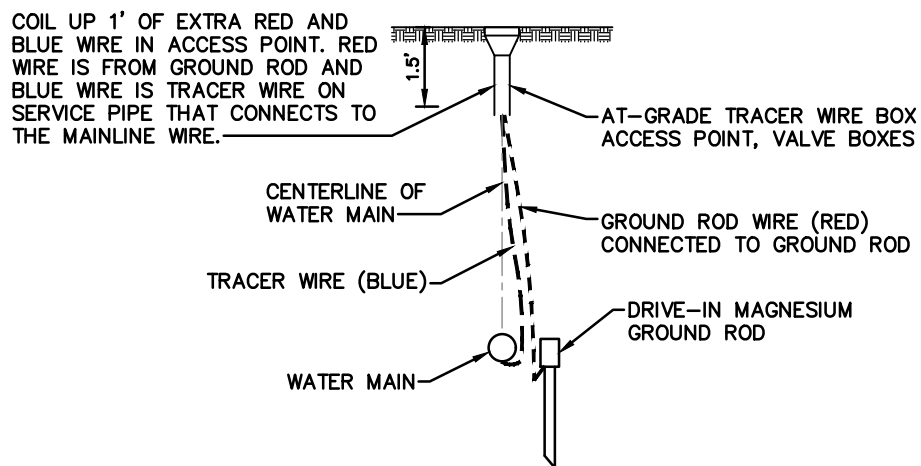
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PROJECT #:	003207.0430
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DT-27	27

STANDARD CONSTRUCTION DETAILS
FOR
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MUNICIPAL AUTHORITY
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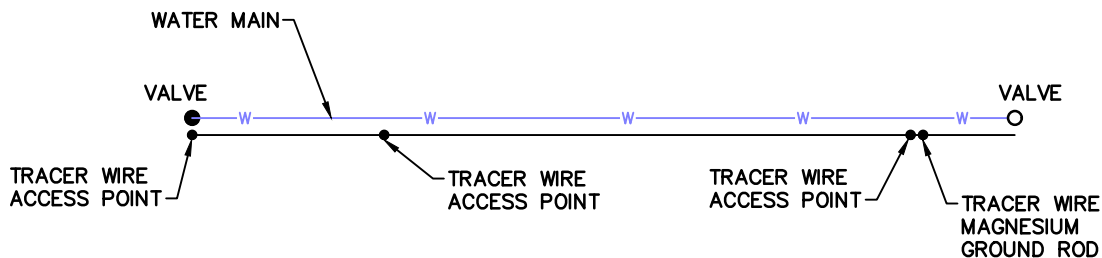
TRACER WIRE ACCESS POINT DETAIL

NOT TO SCALE

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STANDARD CONSTRUCTION DETAILS
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NOTES:

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS..
2. PROVIDE A MAGNESIUM GROUND ROD AT LOCATIONS AS REQUIRED TO BE ABLE TO LOCATE SYSTEM.

TRACER WIRE SCHEMATIC

NOT TO SCALE

PROJECT #: 003207.0430	
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STANDARD CONSTRUCTION DETAILS
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