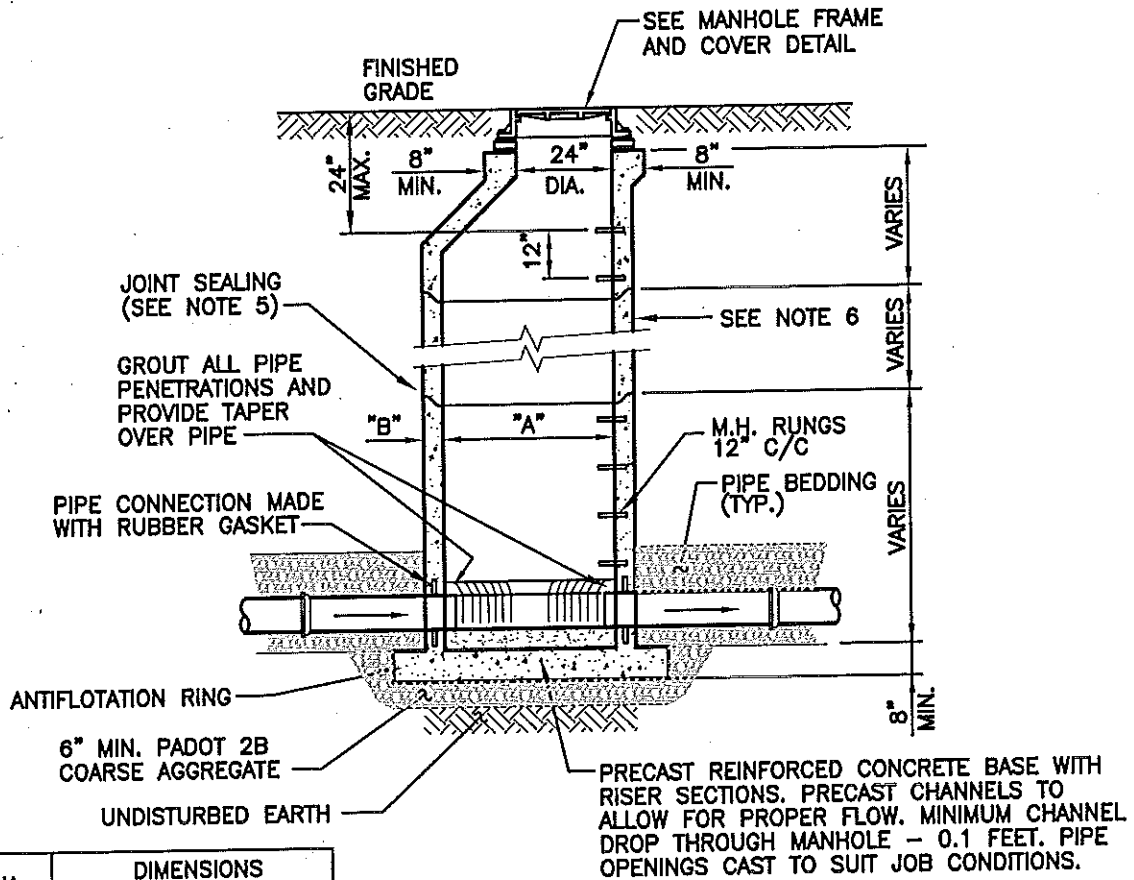


**NOTES:**

1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAXIMUM VERTICAL ADJUSTMENT 6"). SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK, NON-METALLIC GROUT.
5. PROVIDE 2 RINGS OF PREFORMED BUTYL RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) AT ALL MANHOLE JOINTS.
6. COAT INTERIOR WITH NSF APPROVED EPOXY, 20-MIL DFT & EXTERIOR WITH BITUMASTIC, 20-MIL DFT. INTERIOR COLOR: WHITE EXTERIOR COLOR: BLACK



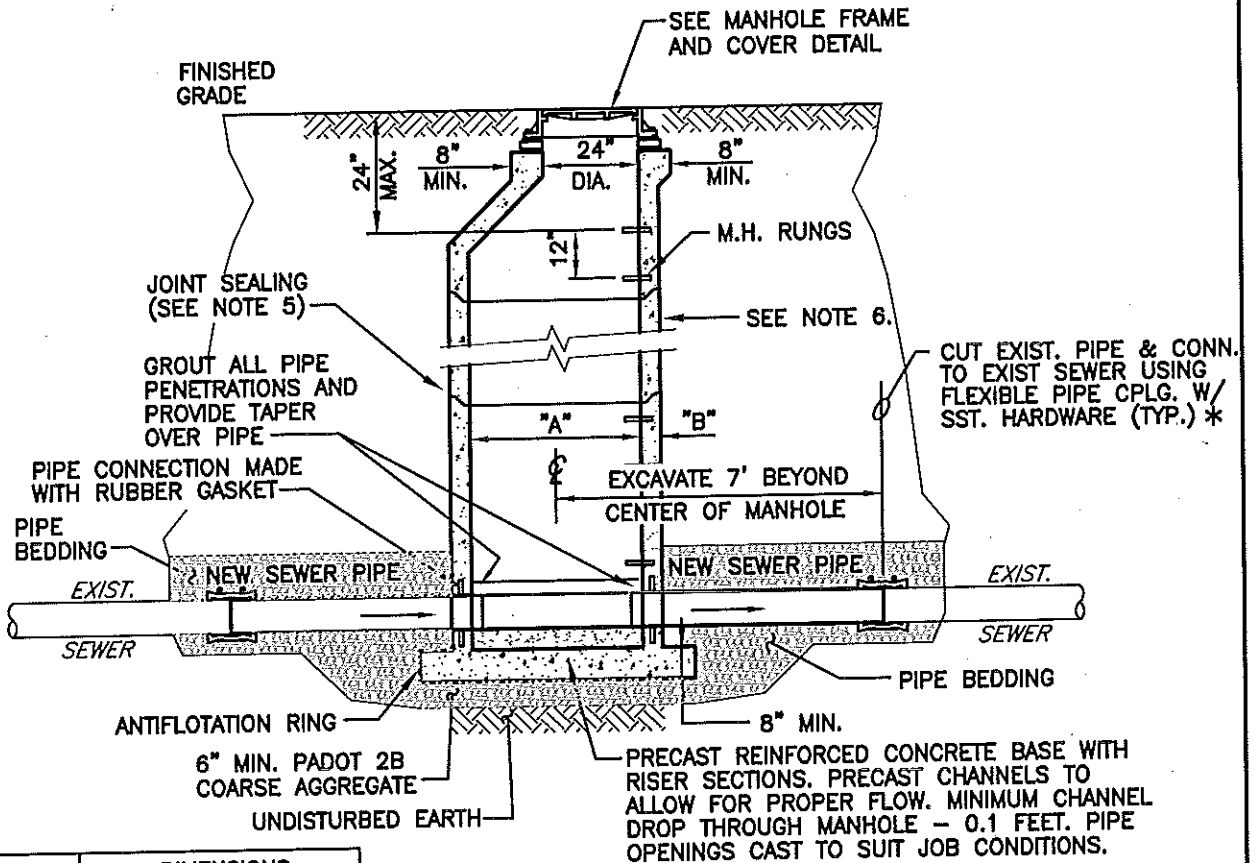
**SECTION**

PIPE DIA.	DIMENSIONS	
	"A"	"B" (MIN.)
8"-15"	4'-0"	5"
18"-21"	5'-0"	6"
24"-36"	6'-0"	7"

	<p><b>UPPER MERION TOWNSHIP</b></p> <p><b>STANDARD DETAIL - SEWER SYSTEM</b></p>	<p>ARRC</p>
		<p>Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303</p>
	<p><b>PRECAST MANHOLE</b></p>	<p>DATE: 11/7/16</p>
REVISION	DATE	DETAIL: 1

**NOTES:**


1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAXIMUM VERTICAL ADJUSTMENT 6"). SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK, NON-METALIC GROUT.
5. PROVIDE 2 RINGS OF PREFORMED BUTYL RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) AT ALL MANHOLE JOINTS.
6. COAT INTERIOR WITH NSF APPROVED EPOXY, 20-MIL DFT & EXTERIOR WITH BITUMASTIC, 20-MIL DFT. INTERIOR COLOR: WHITE EXTERIOR COLOR: BLACK
7. CONTRACTOR SHALL VERIFY O.D. OF PIPES SCHEDULED FOR REPLACEMENT PRIOR TO ORDERING OF COUPLINGS.



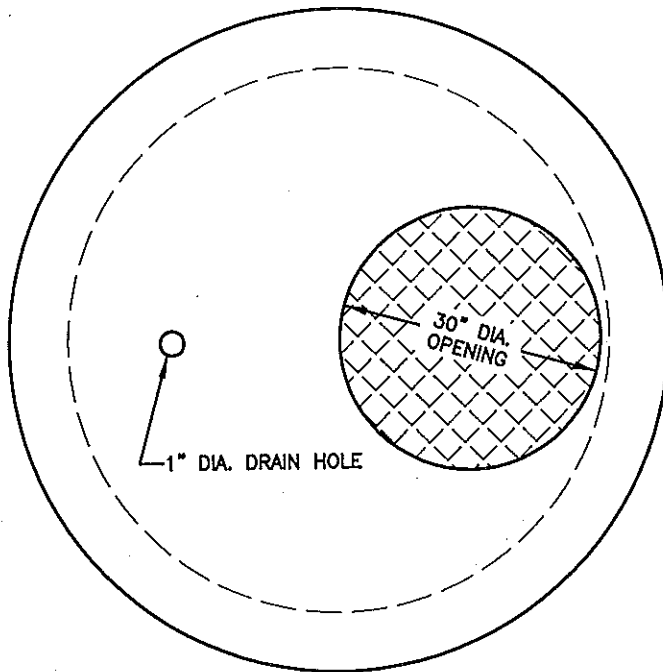
PIPE DIA.	DIMENSIONS	
	"A"	"B" (MIN.)
8"-15"	4'-0"	5"
18"-21"	5'-0"	6"
24"-36"	6'-0"	7"

**SECTION**

\* FOR SDR 35 PVC PIPE USE REPAIR COUPLING SLEEVE. ALL OTHER PIPE USE HYMAX 2000 COUPLING OR APPROVED EQUAL.

	<p><b>UPPER MERION TOWNSHIP</b></p> <p><b>STANDARD DETAIL - SEWER SYSTEM</b></p>	
	<p><b>PRECAST INSERTION MANHOLE WITHIN EXISTING SEWER RUN</b></p>	<p>Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303</p>
		<p>DATE: 11/7/16</p>
REVISION	DATE	<p>DETAIL: 1A</p>

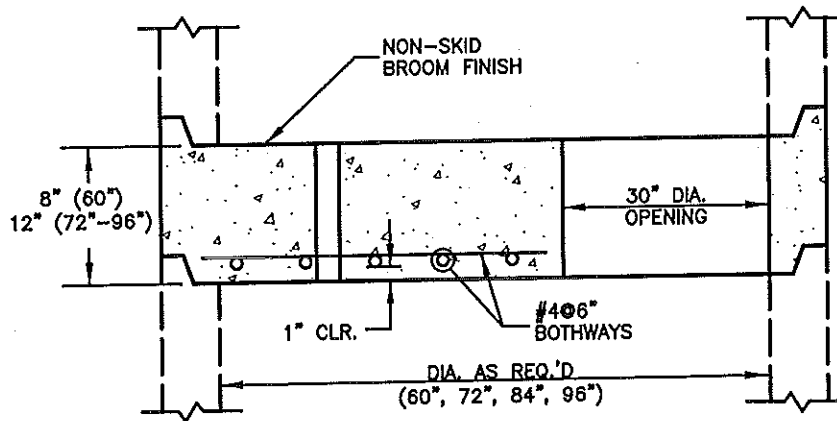





**SPECIFICATIONS:**

1. THE CONCRETE IS DESIGNED TO OBTAIN A STRENGTH OF 4,000 PSI IN 28 DAYS.
2. THE REINFORCING STEEL HAS A YIELD STRENGTH OF 60,000 PSI.
3. THE SLABS ARE DESIGNED FOR 300 LBS/SQ. FT. LIVE LOAD.

**PLAN VIEW**  
NO SCALE

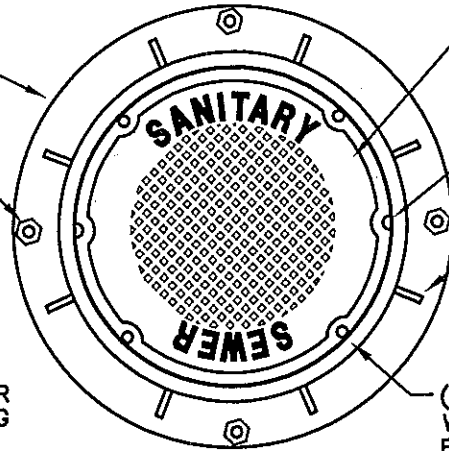


**SAFETY PLATFORM DETAIL**  
NO SCALE

		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	 Suite 100, 649 North Lewis Road Limerick, PA 19468-1234 Tel 610.495.0303 Fax 610.495.5855		
				<b>SAFETY PLATFORM FOR DEEP MANHOLES</b>	DATE: 11/7/16
					DETAIL: 1C
REVISION	DATE				

HEAVY DUTY GRAY IRON (CL35B)  
FRAME AND COVER SUITABLE  
FOR AASHTO HS25 LOADING  
(1040A COVER)

(4) 1"Ø BOLT HOLES  
ON 33" DIA. BOLT CIRCLE



2" RAISED LETTER  
FLUSH W/ LID SURFACE

EPIC PICK HOLE  
(2 REQUIRED)

GUSSETS (MINIMUM  
6 REQUIRED)

(4) 1/2"-13 HEX HEAD SST. BOLTS  
W/ WASHERS ON A 29 3/8" DIA.  
BOLT CIRCLE  
(WATERTIGHT OPTION ONLY)

NOTES:

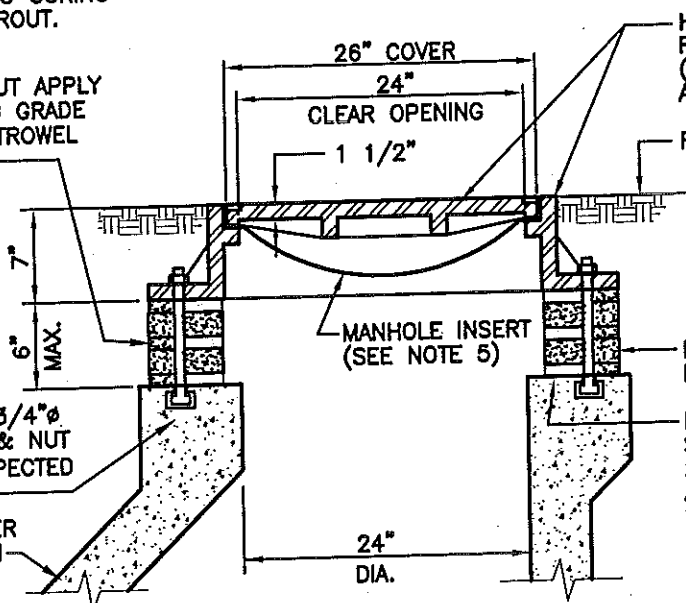
- ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.
- FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.

PLAN-COVER PATTERN

NON-SHRINK GROUT APPLY  
PRIOR TO PLACING GRADE  
RINGS & FRAME, TROWEL  
EDGE (TYP.)

(4) BOLT SLOTS W/ 3/4"Ø  
SST. THREADED ROD & NUT  
(BOLTS MUST BE INSPECTED  
PRIOR TO PARING)

MANHOLE RISER  
CONE SECTION



HEAVY DUTY CAST IRON  
FRAME AND COVER  
(COVER TO BE FLUSH  
AFTER INSERT PLACED)

FINISHED GRADE

PRECAST GRADE RING AS  
REQ'D (MAX. OF 2)

PREFORMED BUTYL RUBBER  
SEALING COMPOUND,  
2 STRIPS WIDE, THICKNESS  
AS REQ'D. FOR COMPLETE  
SEALING, IF LEVELING  
REQ'D. (TYP.)

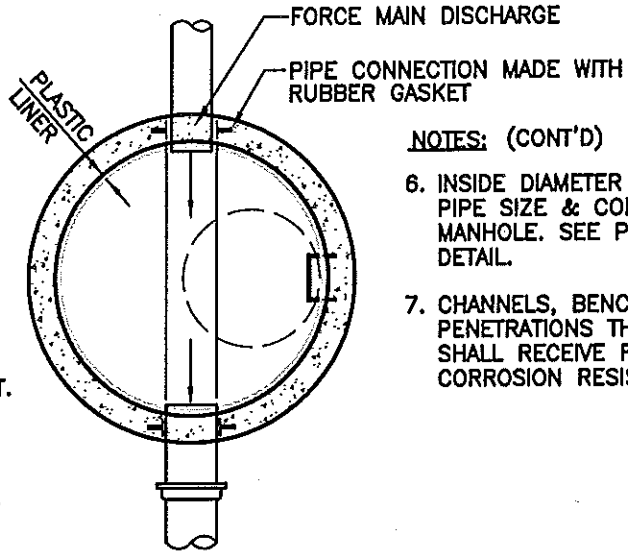
NOTES:

- STANDARD MH FRAME (1045) & COVER (1045AGS) SHALL BE AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC. (EJ GROUP)
- WATERTIGHT FRAME (1045ZPT) & COVER (1040APT) SHALL BE AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC. (EJ GROUP)
- MANHOLE INSERT NOT REQUIRED FOR WATERTIGHT MH. FRAME & COVER.
- FRAME & COVER SHALL BE DESIGNED FOR AASHTO HS-25 LOADING.
- MANHOLE INSERTS REQ'D. FOR ALL STANDARD FRAMES & COVERS. FRAME SHALL BE SPECIALLY MACHINED TO ACCOMODATE INSERT SO THAT TOP OF COVER IS EVEN WITH TOP OF FRAME WHEN INSERT IS INSTALLED.

		<b>UPPER MERION TOWNSHIP</b>		<b>ARRC</b> Suite 100, 849 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
		<b>STANDARD DETAIL - SEWER SYSTEM</b>		
		<b>STANDARD MANHOLE FRAME &amp; COVER</b>		DATE: 8/01/17
REVISION	DATE			DETAIL: 2

**NOTES:**

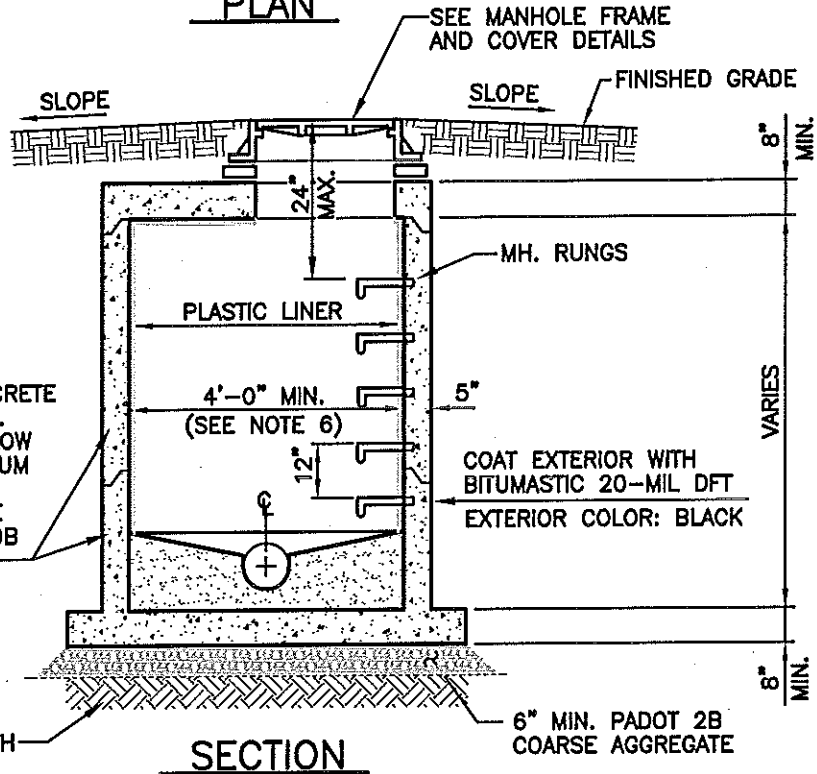
1. ADJUST TO GRADE WITH CONC. GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE FRAME & COVER DETAIL.
2. MECHANICALLY VIBRATED PRECAST CONC. SHALL CONFORM TO A.S.T.M. C-478.
3. SEAL ALL JOINTS INSIDE & OUTSIDE WITH PREFORMED BUTYL RUBBER SEALING COMPOUND.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK, NON-METALLIC GROUT.
5. THERMO PLASTIC INTERIOR LINER AS SPECIFIED, TO PROVIDE CONTINUOUS, IMPERMEABLE LINING TO SHIELD PRECAST CONC. AGAINST DETERIORATION CAUSED BY CORROSIVE ATMOSPHERE.



**NOTES: (CONT'D)**


6. INSIDE DIAMETER DETERMINED BY PIPE SIZE & CONFIGURATION IN MANHOLE. SEE PRECAST MANHOLE DETAIL.
7. CHANNELS, BENCH AND ALL PENETRATIONS THROUGH LINER SHALL RECEIVE FACTORY APPLIED CORROSION RESISTANT COATING.

**PLAN**

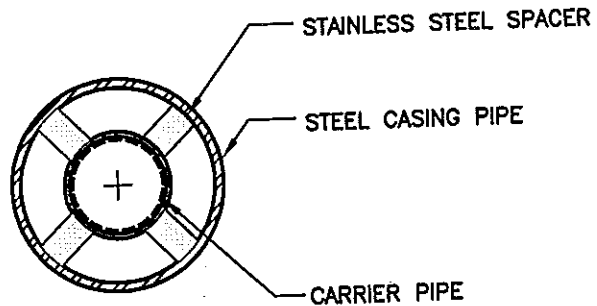


PRECAST REINFORCED CONCRETE BASE WITH RISER SECTIONS. PRECAST CHANNELS TO ALLOW FOR PROPER FLOW. MINIMUM CHANNEL DROP THROUGH MANHOLE - 0.1 FEET. PIPE OPENINGS CAST TO SUIT JOB CONDITIONS.

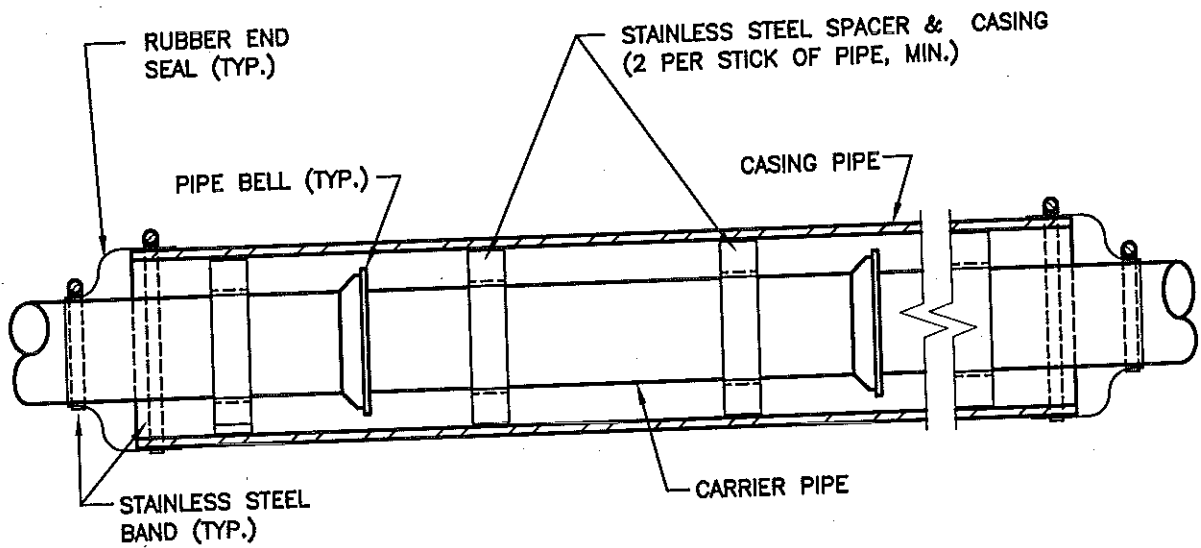
**SECTION**

		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	  Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		






SECTION



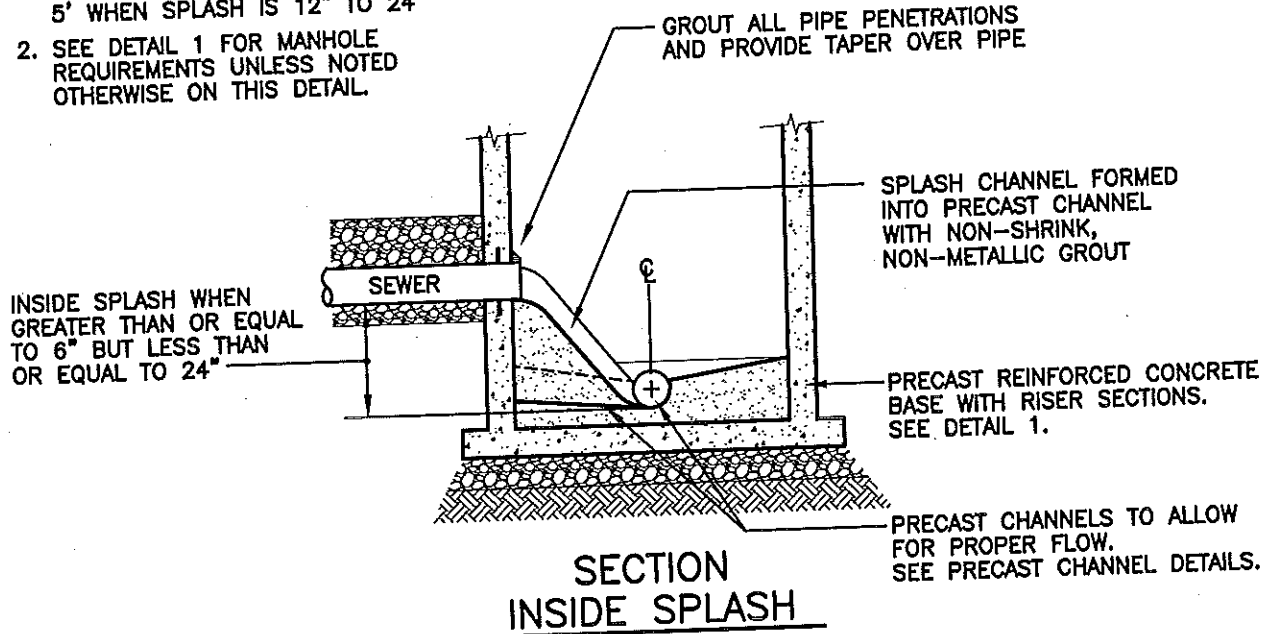
ELEVATION


		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	 Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		



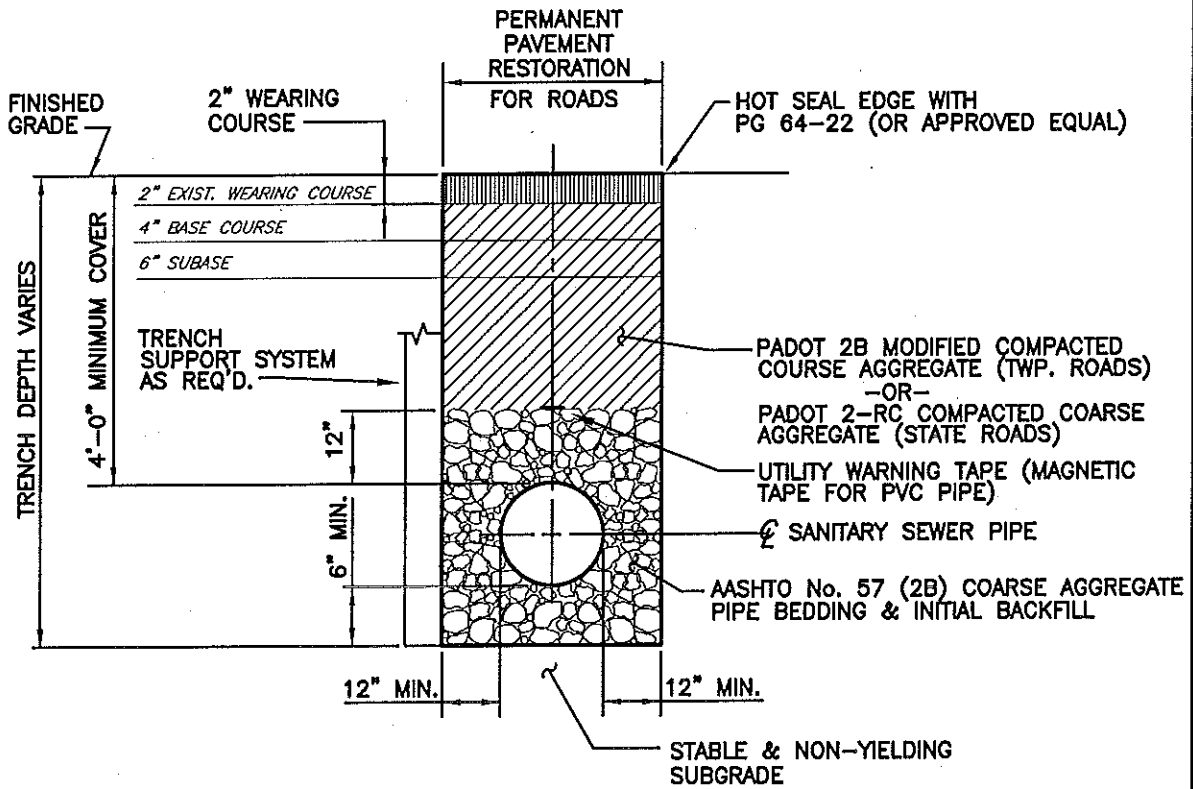
**NOTES:**

1. MANHOLE DIAMETER SHALL BE 4' WHEN SPLASH IS 6" TO 12" AND 5' WHEN SPLASH IS 12" TO 24"
2. SEE DETAIL 1 FOR MANHOLE REQUIREMENTS UNLESS NOTED OTHERWISE ON THIS DETAIL.




		<b>UPPER MERION TOWNSHIP</b> <b>STANDARD DETAIL - SEWER SYSTEM</b>	 Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		

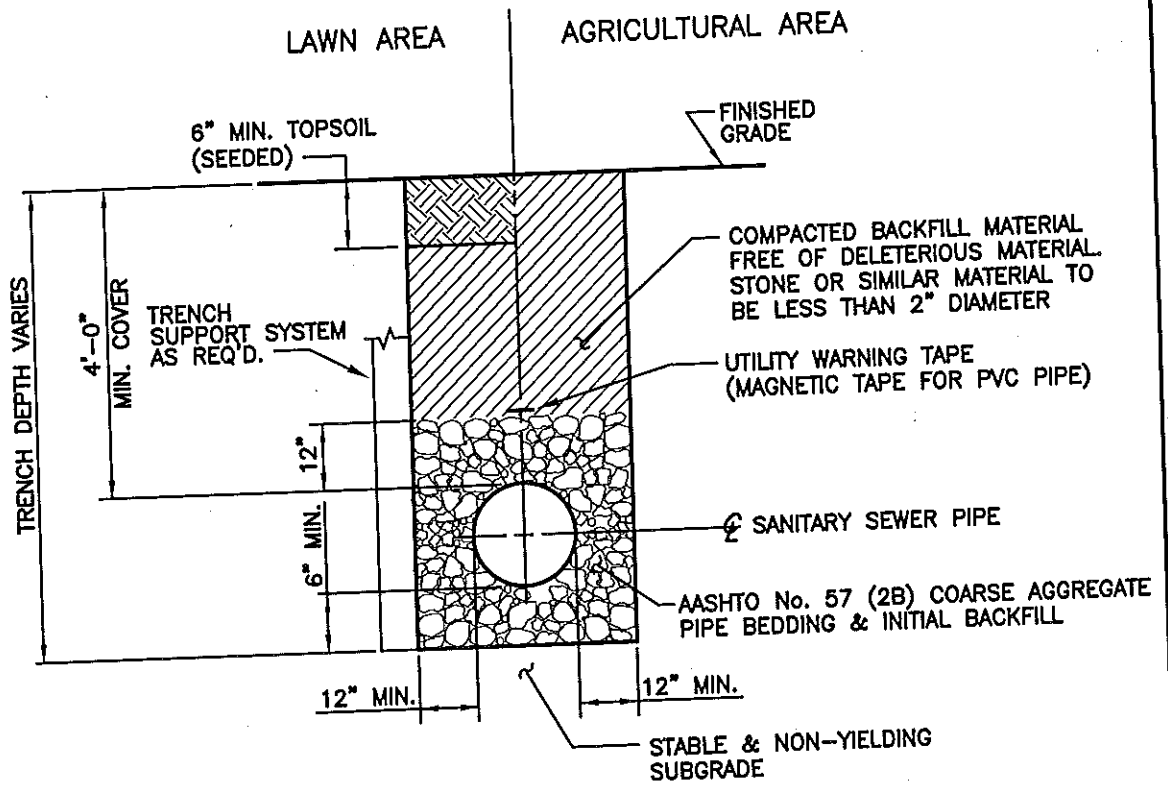




**NOTES:**

1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
3. FOR STATE ROADS, ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE. DESIGN & CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.

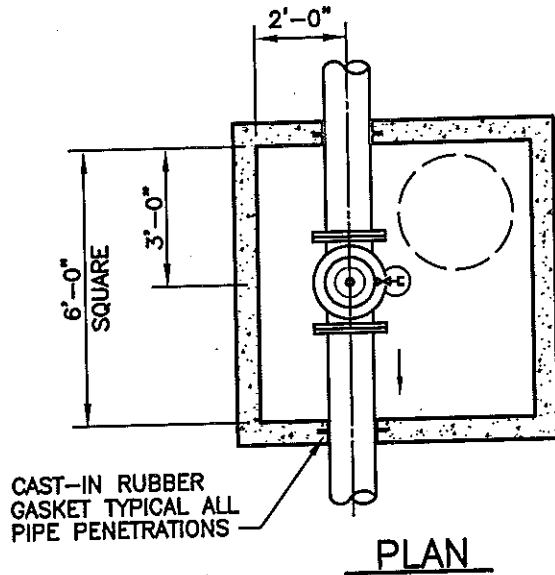
		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	 Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		



**NOTES:**

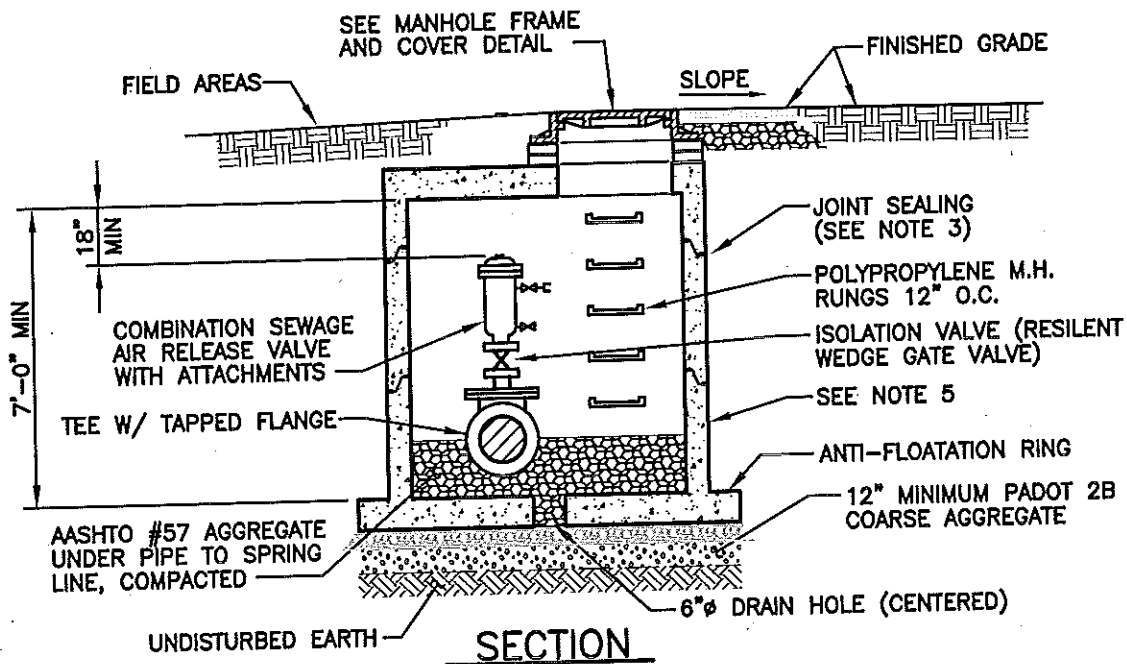
1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
3. IF EDGE OF TRENCH IS 3' OR LESS FROM EDGE OF PAVING OF A STATE ROAD, RESTORATION ABOVE TOP OF INITIAL BACKFILL SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.

		<p><b>UPPER MERION TOWNSHIP</b></p> <p><b>STANDARD DETAIL - SEWER SYSTEM</b></p>	<p><b>ARRG</b></p> <p>Suite 100, 649 North Lewis Road  Limerick, Pennsylvania 19468  Tel 610.495.0303</p>
		<p><b>TRENCH RESTORATION - LAWN/AGRICULTURAL AREAS</b></p>	<p>DATE: 12/16/16</p> <p>DETAIL: 6B</p>
REVISION	DATE		




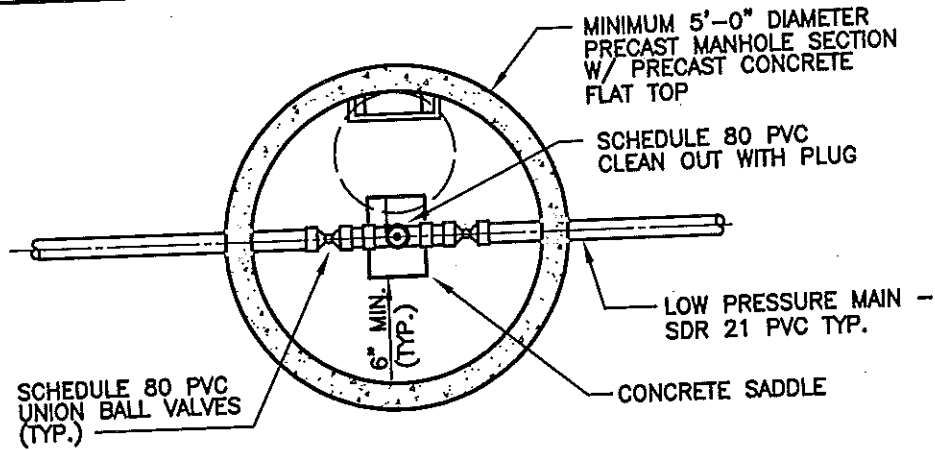
**NOTES:**

1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAXIMUM VERTICAL ADJUSTMENT 6"). SEE FRAME & COVER DETAIL.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. PROVIDE 2 RINGS OF PREFORMED BUTYL RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) AT ALL MANHOLE JOINTS.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK, NON-METALLIC GROUT.
5. COAT INTERIOR WITH NSF APPROVED EPOXY, 20-MIL DFT & EXTERIOR W/ BITUMASTIC, 20-MIL DFT  
 INTERIOR COLOR: WHITE  
 EXTERIOR COLOR: BLACK

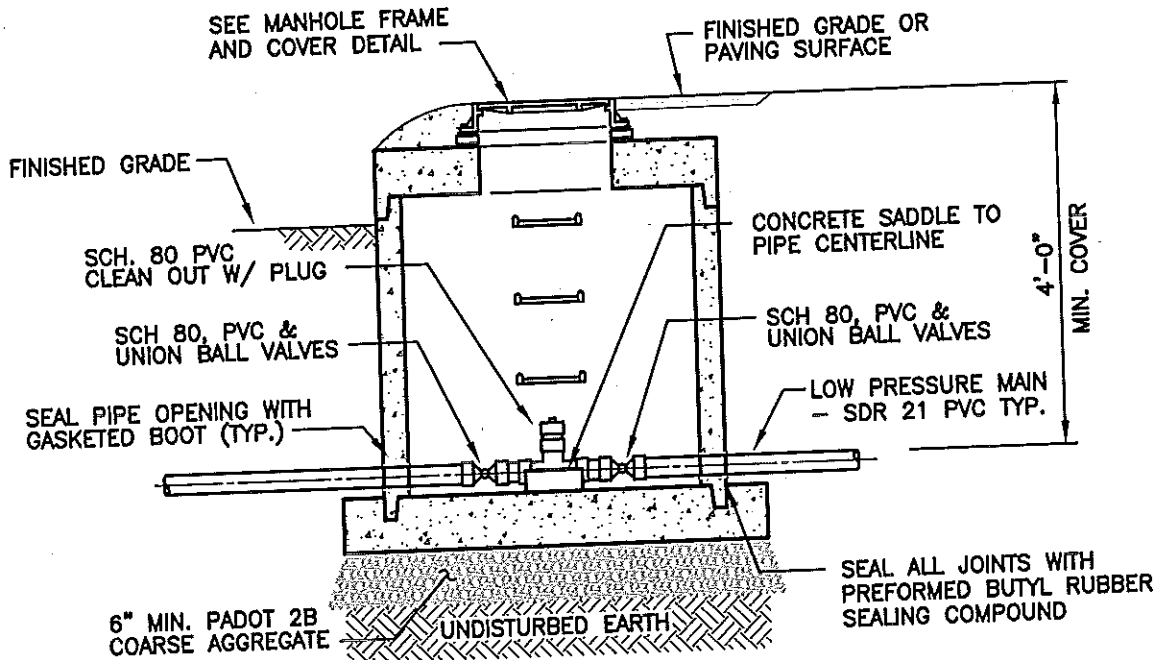


**SPECIAL NOTE:** DEPTH OF MAIN MUST BE INCREASED FROM THE 4'-0" STANDARD TO ALLOW FOR INSTALLATION OF THE AIR RELEASE VALVE WITH 18 INCH MINIMUM CLEARANCE. THE PIPE SHALL BE CONTINUOUSLY RISING WITH THE AIR RELEASE VALVE AT THE HIGHEST ELEVATION POINT IN THE PIPING.

		<b>UPPER MERION TOWNSHIP</b> <b>STANDARD DETAIL - SEWER SYSTEM</b>	 Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		DETAIL: 7



**PLAN**



**SECTION**

**NOTES:**

1. ALL PIPE AND FITTINGS BETWEEN VALVES SHALL BE SCHEDULE 80 PVC.
2. COAT INTERIOR WITH NSF APPROVED EPOXY, 20-MIL DFT INTERIOR COLOR: WHITE.
3. COAT EXTERIOR WITH BITUMASTIC 20-MIL DFT EXTERIOR COLOR: BLACK.

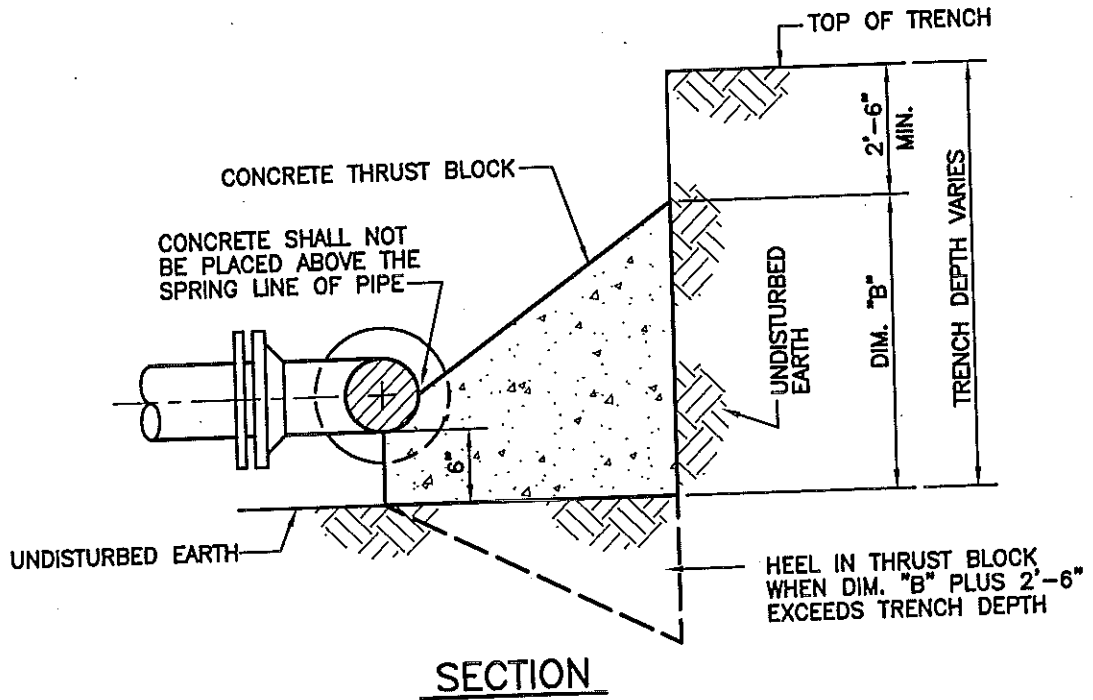
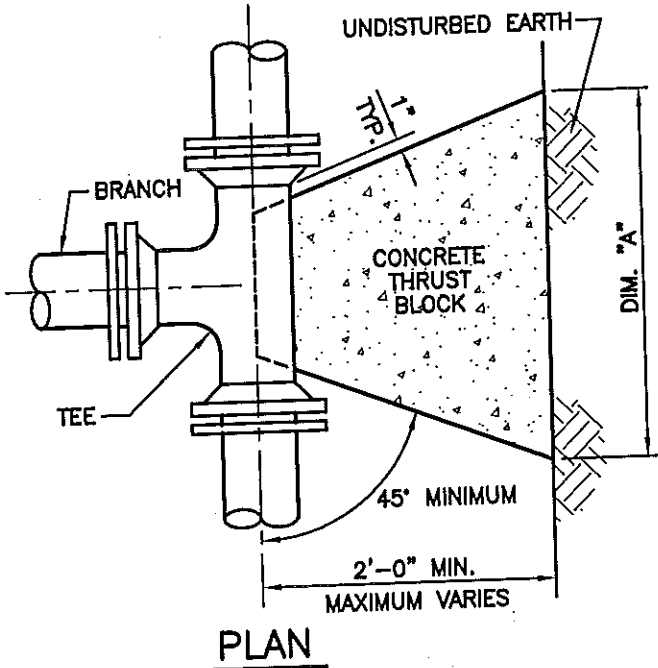
		<b>UPPER MERION TOWNSHIP</b>		<b>ARRC</b>  Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
		<b>STANDARD DETAIL - SEWER SYSTEM</b>		
		<b>LOW PRESSURE FORCE MAIN VALVE &amp; CLEANOUT MANHOLE</b>		DATE: 11/7/16
REVISION	DATE			DETAIL: 8



THRUST BLOCK DIMENSION SCHEDULE - ELBOWS(*)				
DIM.	BRANCH SIZE			
	1 1/2" - 4"	6"	8"	12"
A	36"	42"	60"	96"
B	18"	24"	30"	42"

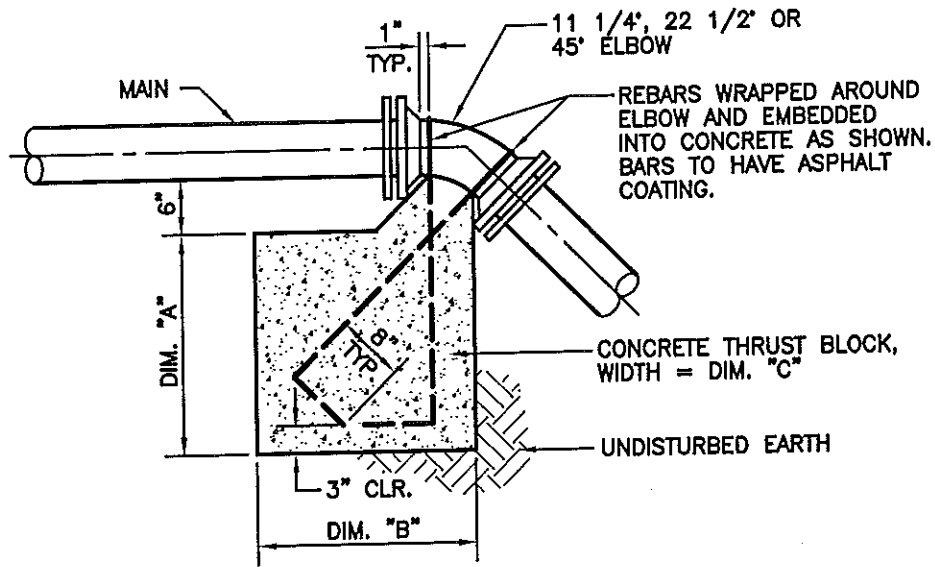
(\*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED THRUST BLOCK SIZES.



		<b>UPPER MERION TOWNSHIP</b>		<b>ARRC</b> Suite 100, 649 North Lewis Road Umerick, Pennsylvania 19468 Tel. 610.495.0303
		<b>STANDARD DETAIL - SEWER SYSTEM</b>		
		<b>HORIZONTAL RESTRAINT THRUST BLOCK-TEES</b>		DATE: 12/16/16
REVISION	DATE			DETAIL: 10






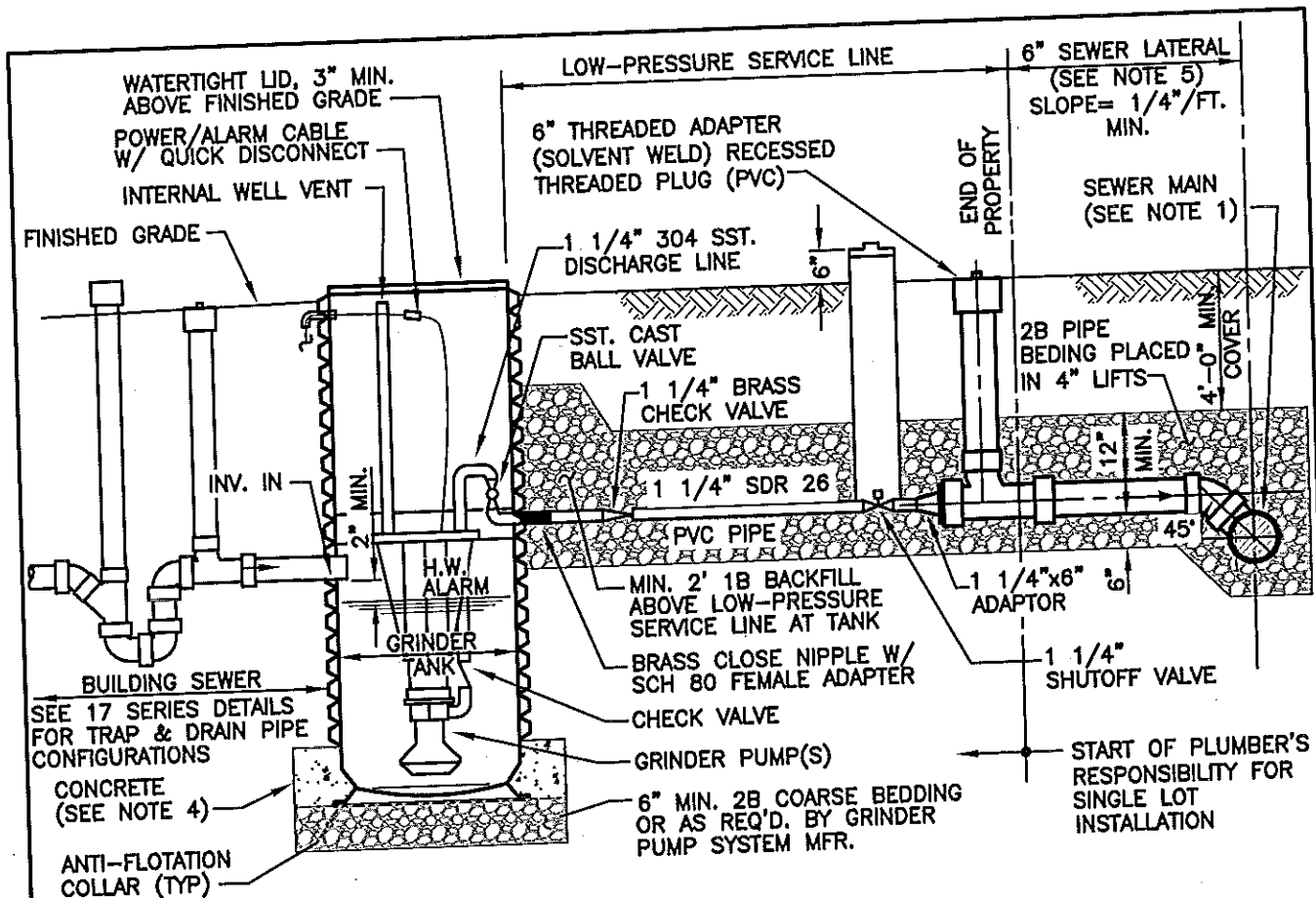
**SECTION**

THRUST BLOCK DIMENSION SCHEDULE - VERTICAL ELBOWS(*) (DUCTILE IRON PIPE)									
DIM.	1 1/2" - 6"	8"	12"	1 1/2" - 6"	8"	12"	1 1/2" - 6"	8"	12"
	11 1/4"	11 1/4"	11 1/4"	22 1/2"	22 1/2"	22 1/2"	45"	45"	45"
A	12"	18"	36"	18"	36"	54"	36"	48"	54"
B	18"	24"	36"	24"	36"	48"	36"	48"	54"
C	18"	24"	24"	24"	24"	30"	24"	30"	48"
REBAR	#4	#4	#6	#4	#4	#6	#4	#4	#6

(\*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.


FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED THRUST BLOCK SIZES.

		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	  Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303		
				<b>VERTICAL DOWN RESTRAINT THRUST BLOCK-ELBOWS</b>	
					DATE: 11/7/16
					DETAIL: 11
REVISION	DATE				

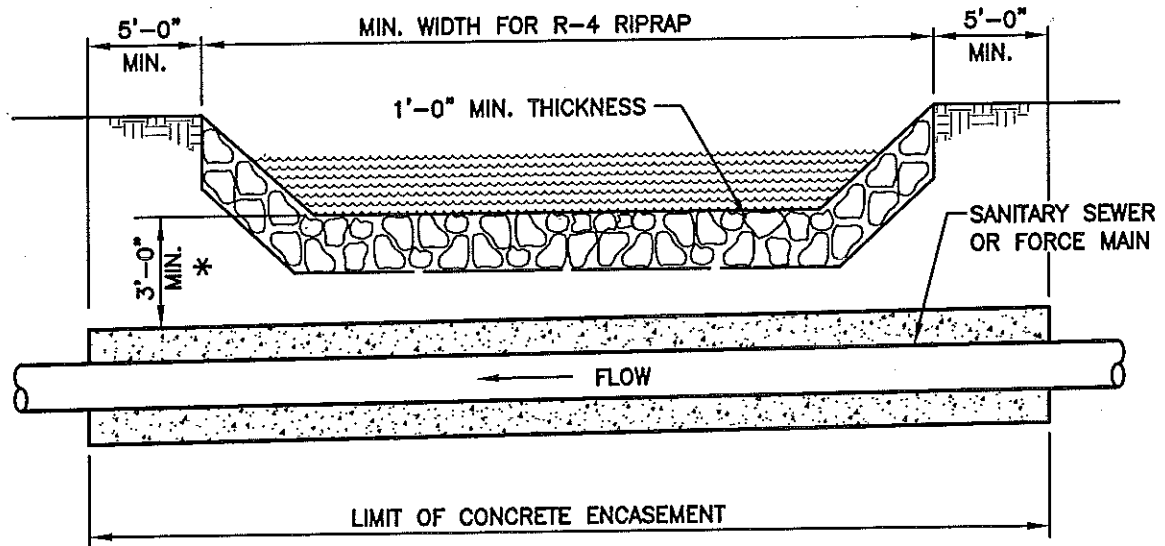
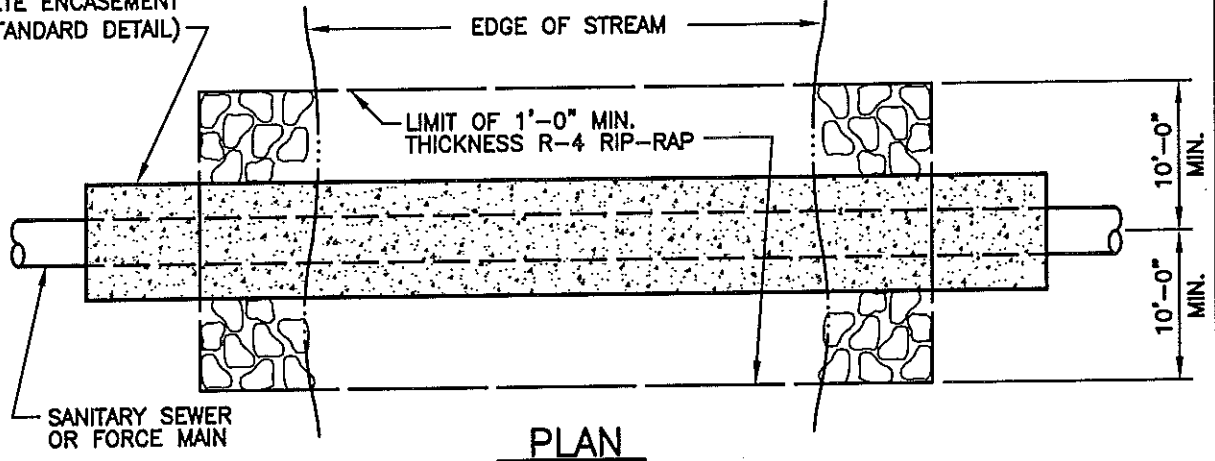


**NOTES:**

1. ALL CONNECTIONS ARE SUBJECT TO ENGINEERS APPROVAL. CONNECTIONS TO HIGH-PRESSURE FORCE MAINS SHALL NOT BE PERMITTED.
2. FOR PUBLIC LOW-PRESSURE SYSTEM INSTALLATION, CONTRACTOR'S RESPONSIBILITY ENDS AT THE PUBLIC RIGHT-OF-WAY LINE.
3. METALLIC DETECTION TAPE SHALL BE PLACED ABOVE LOW-PRESSURE SERVICE LINE AND LATERAL MAX. 2' BELOW FINISHED GRADE.
4. CONCRETE ANCHOR AS REQUIRED BY GRINDER PUMP SYSTEM MFR.
5. WHEN INSTALLED PRIOR TO BUILDING SEWER THE LATERAL SHALL BE INSTALLED TO THE EDGE OF PUBLIC RIGHT-OF-WAY AS A MINIMUM, OR TO SUCH POINT, AS REQUIRED, TO CLEAR THE STREET SIDEWALKS AND UNDERGROUND UTILITIES.

		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	  Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		


CONCRETE ENCASEMENT  
(SEE STANDARD DETAIL)

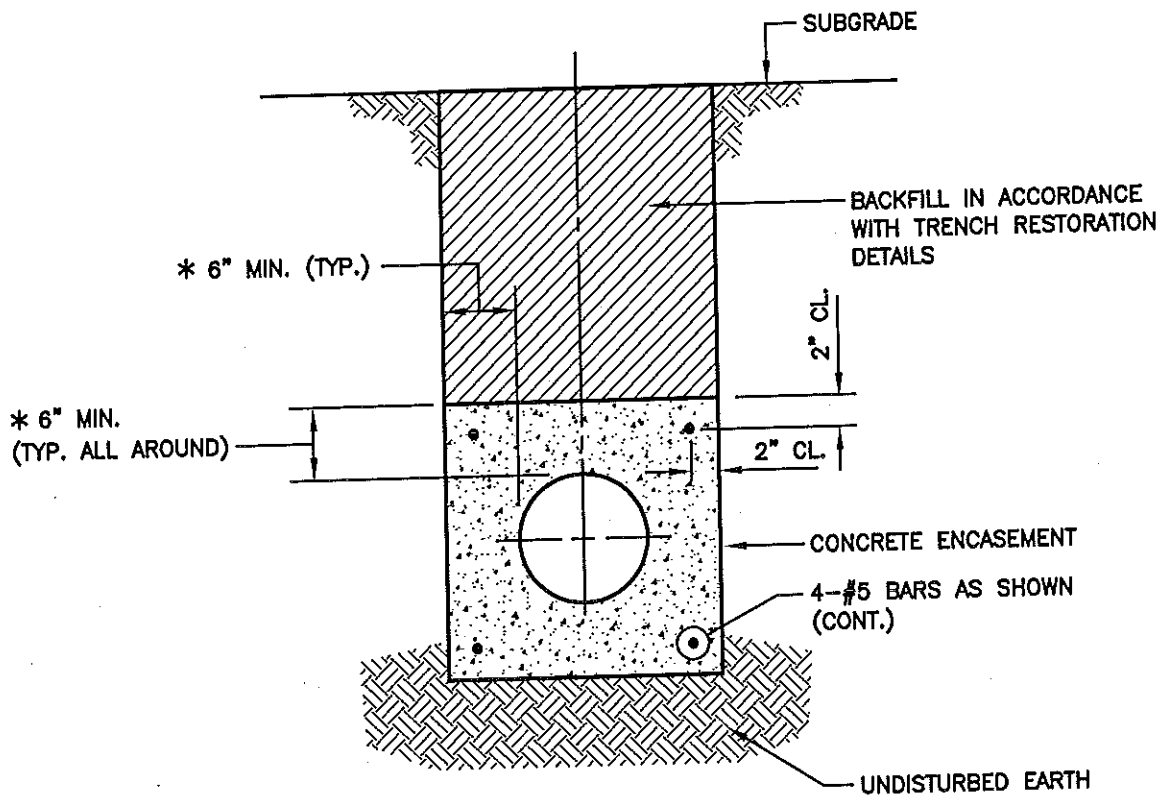


**NOTES:**


ALL STREAM CROSSINGS SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE CHESTER COUNTY CONSERVATION DISTRICT, AND/OR PENNSYLVANIA DEPT. OF ENVIRONMENTAL PROTECTION.

\* 1'-0" MIN. IN ROCK.

		<b>UPPER MERION TOWNSHIP</b>	
		<b>TYPICAL STREAM CROSSING</b>	DATE: 11/9/16
			DETAIL: 13
REVISION	DATE		



\* 6" MINIMUM THICKNESS FOR PIPES UP TO 24 INCHES IN DIAMETER.  
 9" MINIMUM THICKNESS FOR PIPES 24 INCHES IN DIAMETER AND GREATER.

		<b>UPPER MERION TOWNSHIP</b>  <b>STANDARD DETAIL - SEWER SYSTEM</b>	 Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE		DETAIL: 14



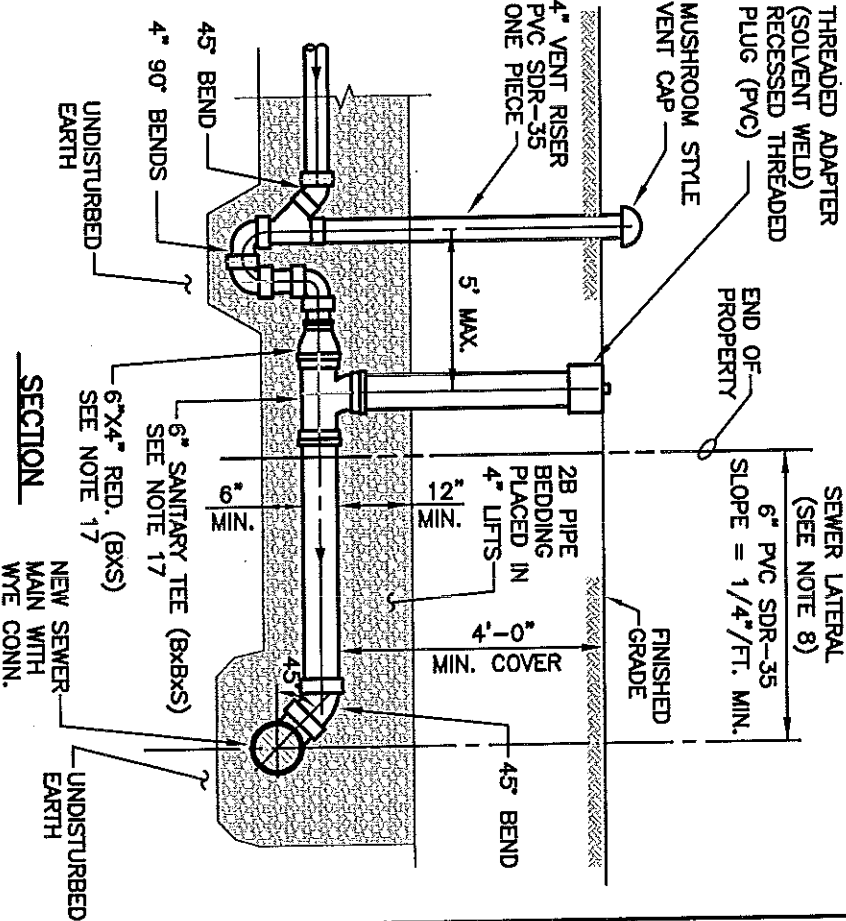
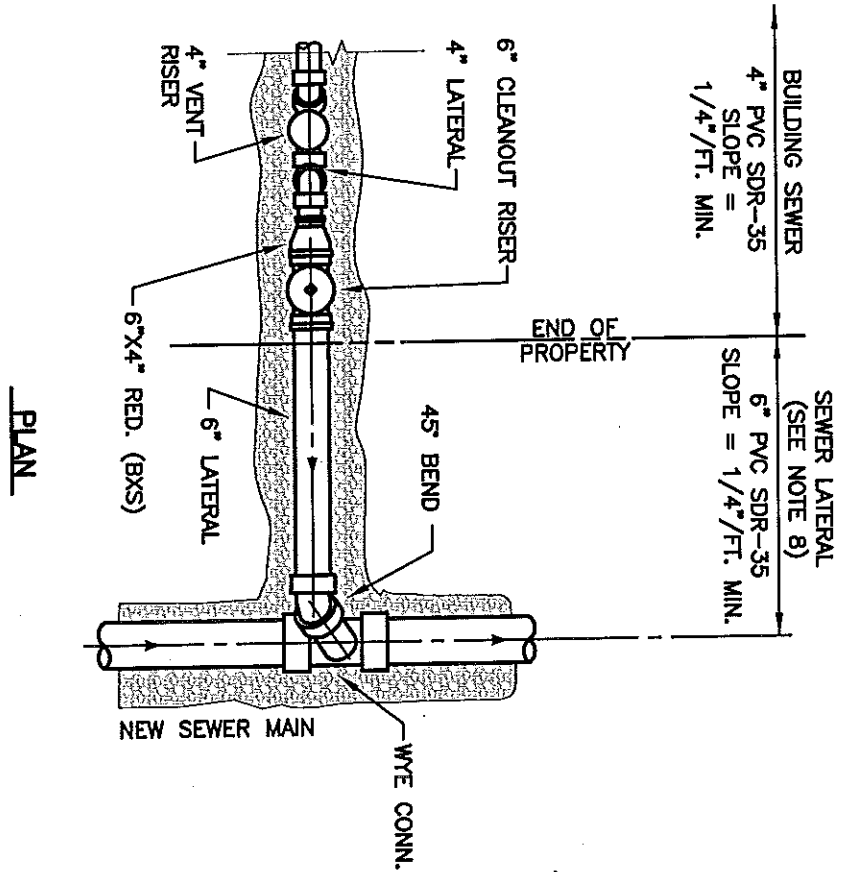












FOR NOTES  
SEE DETAIL 17H

REVISION	DATE

**UPPER MERION  
TOWNSHIP  
STANDARD DETAIL - SEWER SYSTEM**

**NEW LATERAL  
AND SEWER MAIN**

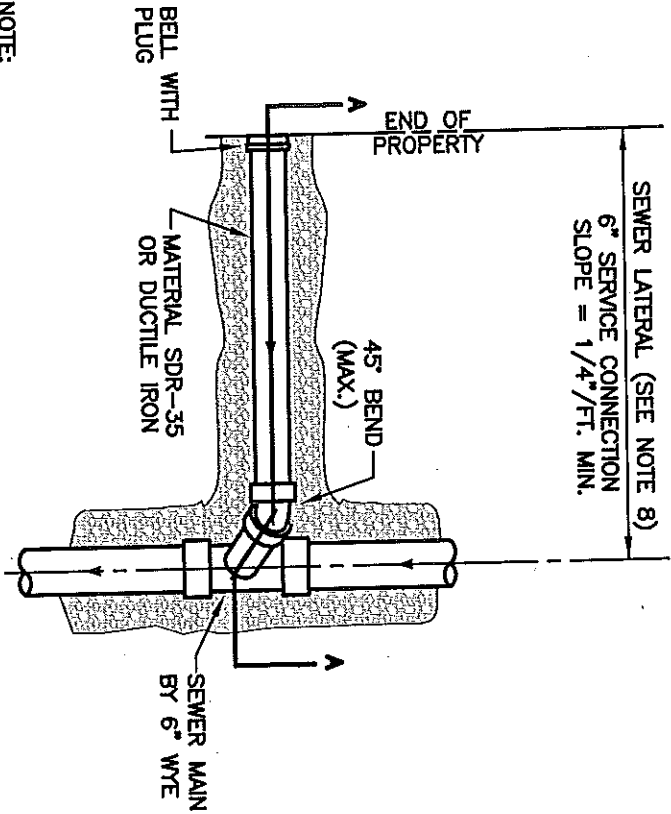
DATE: 8/01/17

DETAIL: 17D

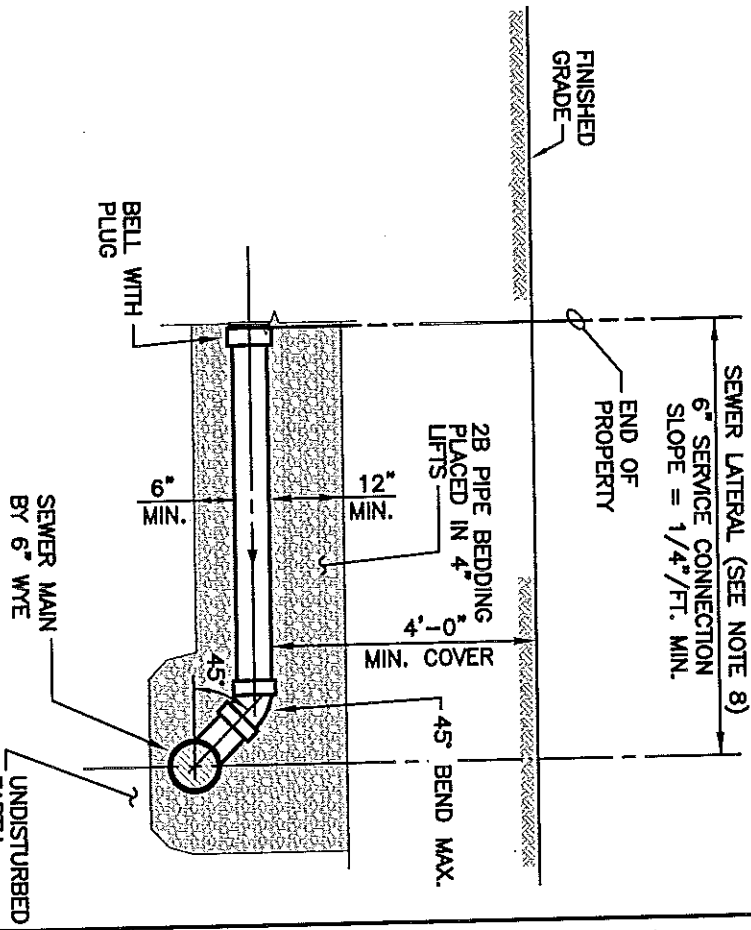
Suite 100, 649 North Lewis Road  
Limerick, Pennsylvania 19468  
Tel 610.495.0303



NOTE:  
NORMALLY FULL PIPE LENGTH REQUIRED  
UNLESS OTHERWISE DIRECTED.



PLAN



SECTION A-A STANDARD


FOR NOTES  
SEE DETAIL 17H

REVISION	DATE

**UPPER MERION  
TOWNSHIP**

**STANDARD DETAIL - SEWER SYSTEM**

**TYPICAL  
LATERAL CONNECTION**



**ARRC**

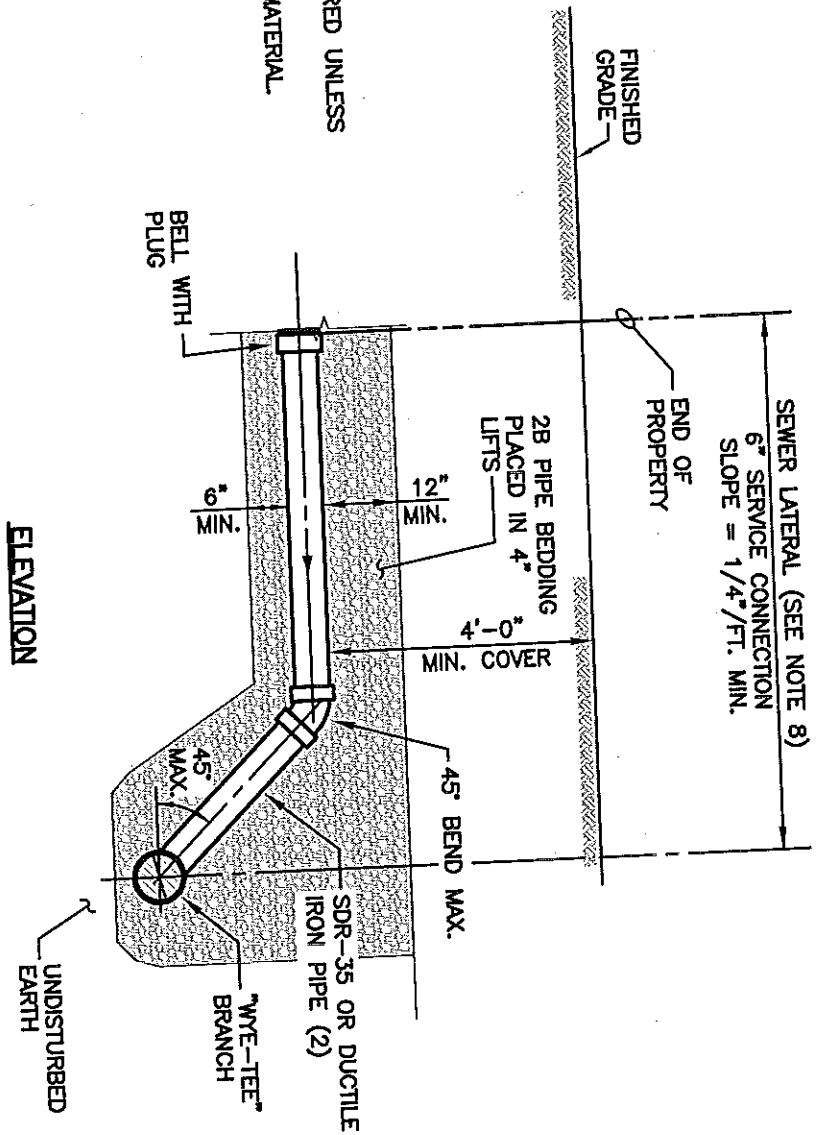
Site: 100, 649 North Lewis Road  
Limerick, Pennsylvania 19468  
Tel: 610.495.0303

DATE: 8/01/17

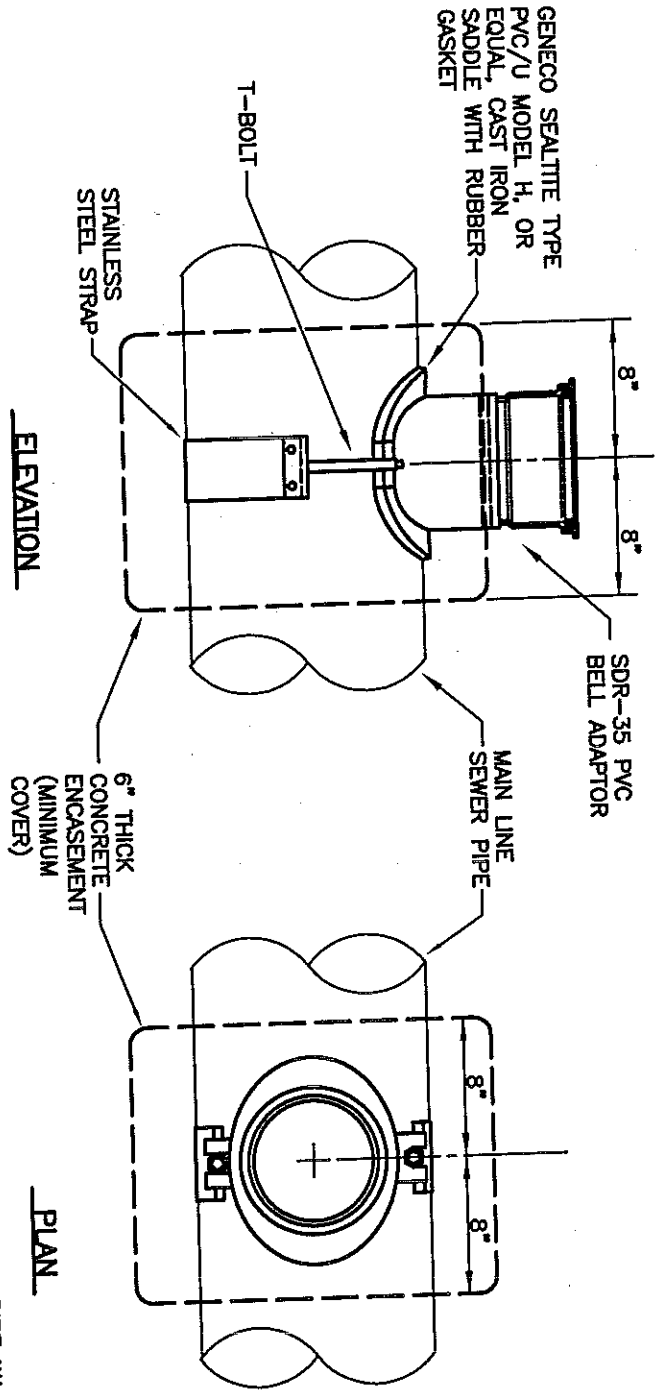
DETAIL: 17E

- NOTE:  
 1. NORMALLY FULL PIPE LENGTH REQUIRED UNLESS OTHERWISE DIRECTED.  
 2. DEPTH MAY REQUIRE DUCTILE IRON MATERIAL.

FOR NOTES  
SEE DETAIL 17H




<p>UPPER MERION TOWNSHIP</p> <p>STANDARD DETAIL - SEWER SYSTEM</p>		
<p>TYPICAL DEEP SEWER LATERAL CONNECTION</p>		<p>DATE: 8/01/17</p>
<p>REVISION</p>	<p>DATE</p>	<p>DETAIL: 17F</p>



NOTE:  
 NORMALLY, THE PIPE SEGMENT SHALL BE REMOVED  
 AND A NEW 'WYE' FITTING AND APPROPRIATE FITTINGS  
 SHALL BE INSTALLED.

OPENING IN SEWER PIPE WALL TO BE  
 MECHANICALLY CORED IN ACCORDANCE  
 WITH THE MANUFACTURERS  
 RECOMMENDATIONS


		<b>UPPER MERION                  TOWNSHIP</b>	<b>STANDARD DETAIL - SEWER SYSTEM</b>	 ARRCO Consulting, Inc. Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
REVISION	DATE			

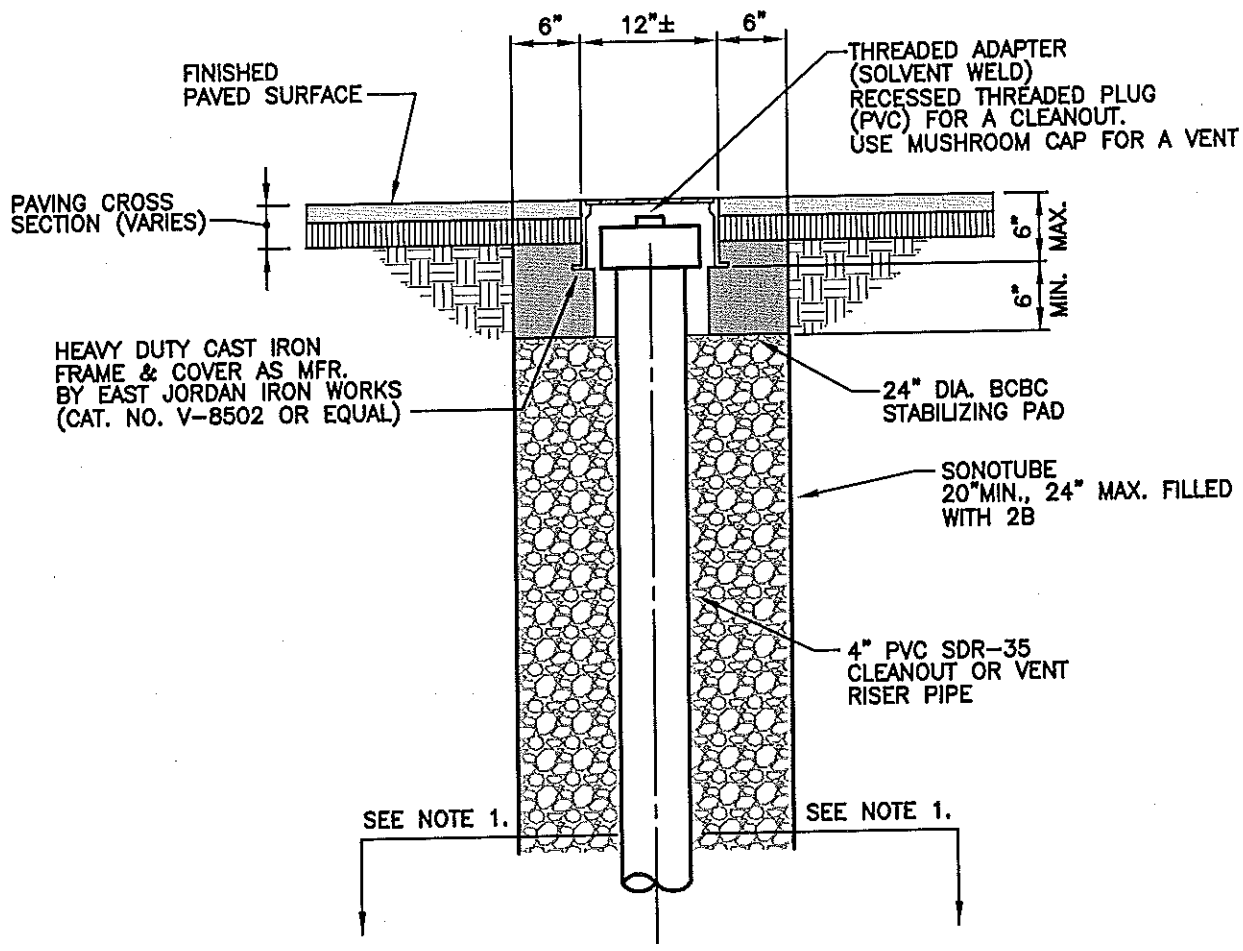
NOTES:

1. BUILDING SEWER SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL PLUMBING CODE.
2. BUILDING SEWER (4") IS MINIMUM. LARGER PIPE MAY BE USED IF REQUIRED & CONSISTENT WITH LOCAL PLUMBING CODE.
3. ALL LATERALS SHALL BE PLUGGED AS INDICATED WHEN INSTALLED PRIOR TO BUILDING SEWER.
4. ACCORDING TO FIELD CONDITIONS, VERTICAL RISER (SEE STANDARD DETAIL) MAY BE UTILIZED WHEN AUTHORIZED BY THE TOWNSHIP AND/OR ENGINEER.
5. TO CONDUCT TESTING OF BUILDING SEWER, INSTALL EXPANDABLE TEST PLUGS AT LOCATIONS SHOWN. AT COMPLETION OF SUCCESSFUL TESTING, REMOVE PLUGS.
6. NO BUILDING SEWER VENT CAPS SHALL BE INSTALLED WITHIN A 100-YR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.
7. NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS, UNLESS SPECIFICALLY APPROVED BY THE TOWNSHIP.
8. WHEN INSTALLED PRIOR TO BUILDING SEWER THE LATERAL SHALL BE INSTALLED TO THE END OF PROPERTY AS A MINIMUM, OR TO SUCH A POINT, AS REQUIRED TO CLEAR STREET SIDEWALKS & UNDERGROUND UTILITIES.
9. FOR NEW SEWER MAINS AND LATERALS INSTALLED PRIOR TO BUILDING SEWER, INSTALL & TEST LATERAL CONCURRENTLY WITH MAIN.
10. FOR CONNECTION TO EXISTING SEWER MAINS, CONCURRENTLY TEST BUILDING SEWER & LATERAL UP TO CLEANOUT.
11. REFER TO SECTION 6 OF TECHNICAL SPECIFICATIONS FOR COMPLETE MATERIAL, INSTALLATION & TESTING REQUIREMENTS.
12. TEST PRESSURE: REFER TO SECTION 5.3.C. FOR COMPLETE AIR TEST REQUIREMENTS.
13. *(Left Blank Intentionally)*
14. CLEANOUTS SHALL BE INSTALLED AT MAXIMUM FIFTY (50) FOOT INTERVALS, UNLESS 6" DIAMETER BUILDING SEWER PIPE IS UTILIZED, IN WHICH CASE THE CLEANOUTS SHALL BE INSTALLED AT MAXIMUM ONE HUNDRED (100) FOOT INTERVALS. A CLEANOUT SHALL BE INSTALLED AT EACH CHANGE IN HORIZONTAL DIRECTION.
15. THE TOWNSHIP ENGINEER MAY APPROVE MINOR DEVIATION(S) FROM THE REQUIREMENT(S) OF THE 17-SERIES DETAILS ON A CASE-BY-CASE BASIS (E.G. DEPTH OF COVER OVER BUILDING SEWER, TRAP LOCATION, ETC.) UPON BEING FURNISHED SUFFICIENT JUSTIFICATION THAT SAID REQUIREMENT(S) CANNOT BE MET DUE TO ACTUAL FIELD CONDITIONS.
16. NEW BUILDING SEWERS & LATERALS SHALL BE CONNECTED TO EXISTING MAINS VIA CUT-IN WYES. THE CUT-IN WYE SHALL BE CONNECTED TO THE EXISTING MAIN ON BOTH SIDES WITH MECHANICAL COUPLINGS, AS APPROVED BY THE TOWNSHIP ENGINEER.
17. THE CONNECTION TO THE EXISTING LATERAL MAY ALTERNATIVELY BE MADE WITH A 6x4 REDUCER (BxS) FOLLOWED BY A 4" TEST TEE (BxBxS) WITH 4" CLEAN OUT RISER. TEST TEE TO BE INSTALLED ONLY IF CLEANOUT DOES NOT EXIST WITHIN 5 FEET OF R/W OR EASEMENT LINE.

NOTE:  
USE THE ABOVE NOTES WITH DETAILS 17A, 17B, 17C & 17D


DWG. NAME 1096204sd17\_ABCDEF6GH

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SECTION

NOTE:  
1. SEE BUILDING SEWER DETAILS.

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PROVIDE 120V, 60Hz, SINGLE PHASE  
ELECTRIC POWER FOR OPERATING FLOW  
METER SAMPLER, LIGHTS, & VENTILATION  
EQUIPMENT, ETC.

4' SQ. MIN. CAST-IN-PLACE  
ACCESS DOOR W/ A RATING OF  
300 LBS. PER SQUARE FOOT L.L.  
HALLIDAY PRODUCTS ACCESS  
HATCH MODEL W2S4848 OR  
APPROVED EQUAL.

ACCESS NOTE:  
ACCESS OPENING MAY BE  
EXPANDED TO 6'x5' IF 7'  
VERT. CL. CAN NOT BE  
MAINTAINED UPON APPROVAL  
OF TOWNSHIP ENGINEER.  
HOWEVER, IF A 6'x5' ACCESS  
OPENING IS PROPOSED, THE  
4" S.S. VENT AND 4" DIP  
WITH FLANGE SHALL BE  
RELOCATED AND APPROVED  
BY THE TOWNSHIP ENGINEER.

PRECAST CONC.  
VAULT

A  
19C

GFI DUPLEX  
OUTLET

4" MIN. S.S. VENT  
W/ SCREEN

4" DIP W/  
FLANGE

FLOW

4'-0" GATE  
FACING PUBLIC  
RIGHT-OF-WAY

FACILITY TO BE LOCATED  
AS CLOSE TO PUBLIC  
RIGHT-OF-WAY AS PRACTICAL

R/W

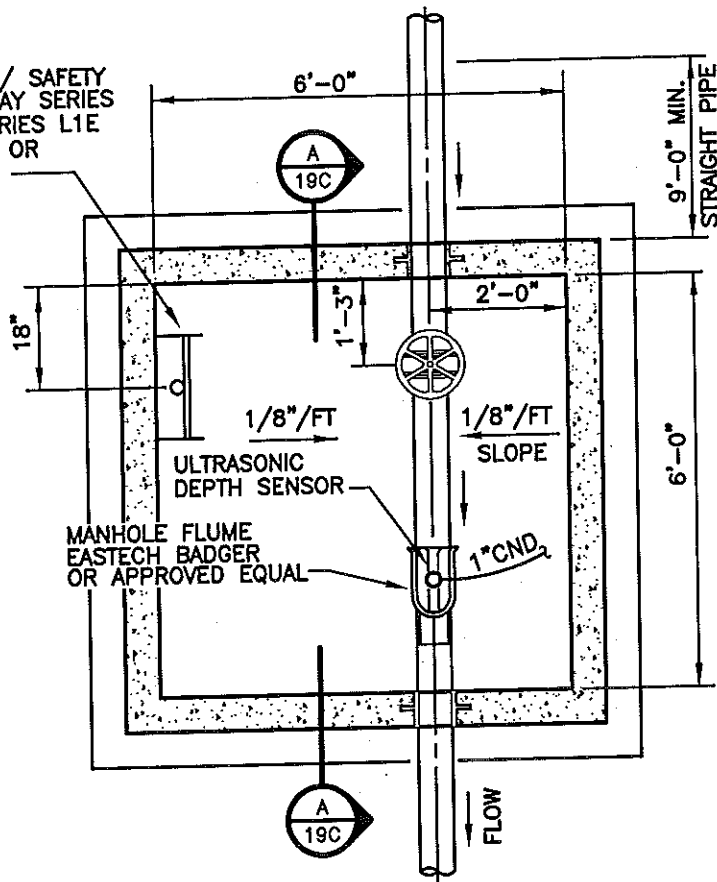
PROVIDE A 6'-0" CHAIN LINK FENCE WITH 4'-0" MIN. WIDE LOCKABLE GATE.  
THE FENCE SHALL BE TOPPED WITH BARBED WIRE FACING OUTWARDS. THE  
GATE SHALL FACE TOWARDS THE RIGHT-OF-WAY. AN ADDITIONAL GATE MAY BE  
PROVIDED FOR ACCESS BY THE PERMITTEE FROM THEIR PROPERTY.

SITE PLAN

		<p><b>UPPER MERION TOWNSHIP</b></p> <p><b>STANDARD DETAIL - SEWER SYSTEM</b></p>	<p><b>ARRO</b></p> <p>Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303</p>
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ACCESS LADDER W/ SAFETY  
EXTENSION (HALLIDAY SERIES  
L1B LADDER & SERIES L1E  
SAFETY EXTENSION OR  
APPROVED EQUAL)

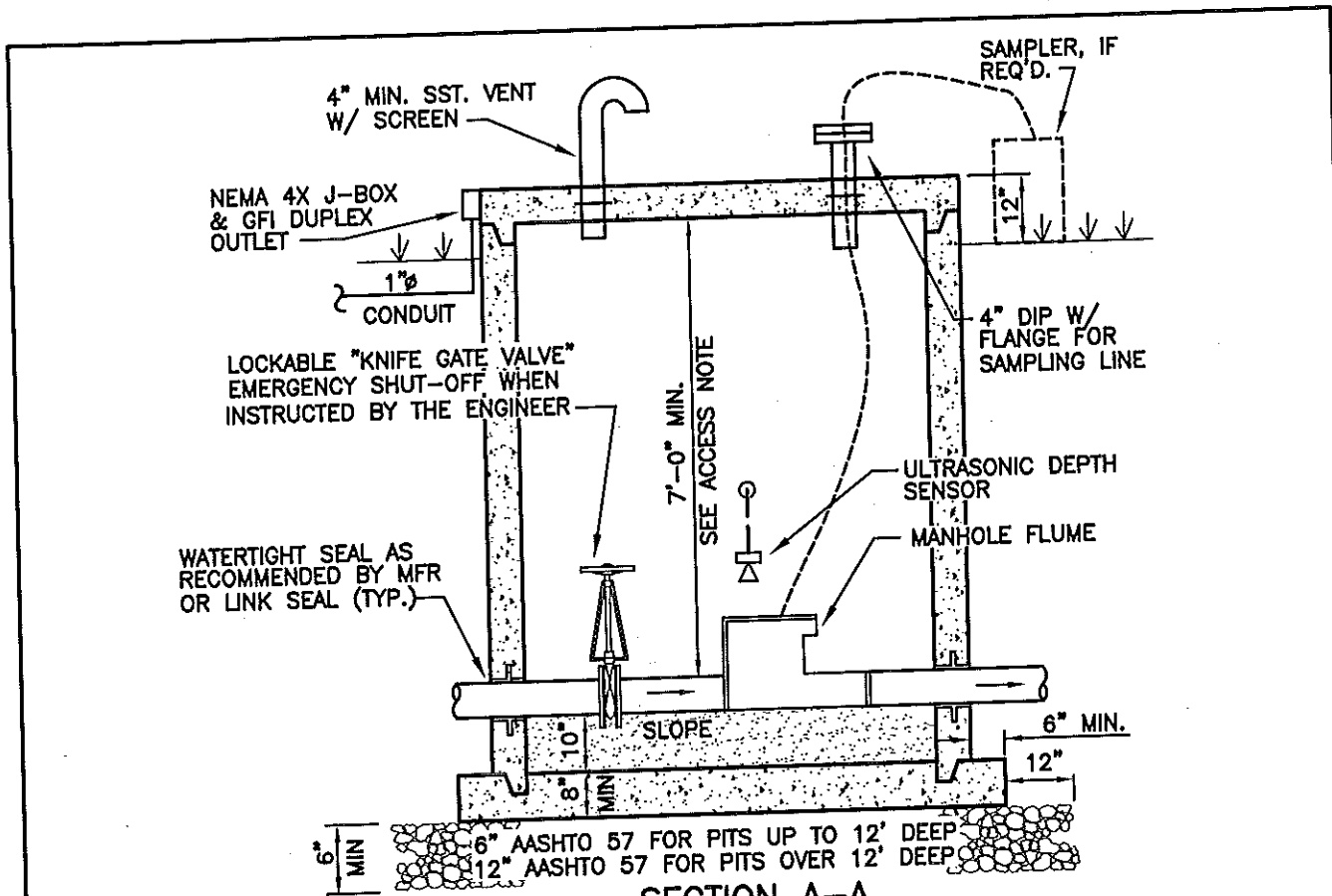


SECTIONAL PLAN

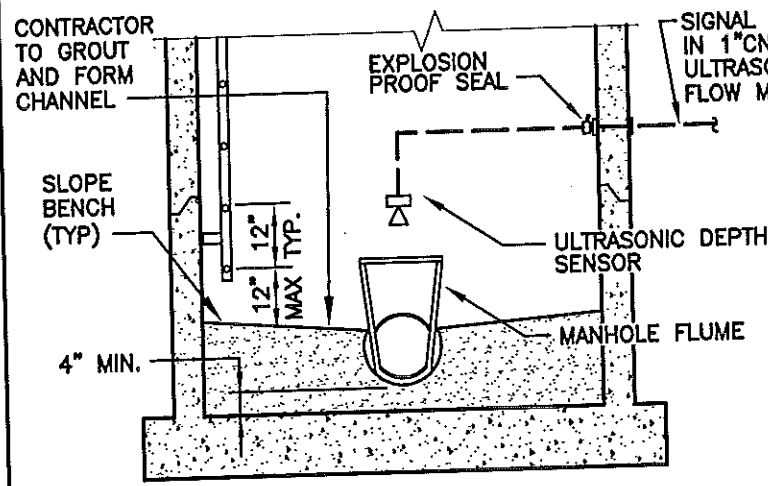
NOTES:

1. THE METERING/SAMPLING FACILITY SHALL BE DESIGNED TO CONFORM TO THE LATEST PA DEP REGULATIONS, GUIDELINES & APPROPRIATE CODES.
2. THE TOWNSHIP ENGINEER SHALL REVIEW & APPROVE THE PROPOSED DESIGN OF THE METERING/SAMPLING FACILITY PRIOR TO CONSTRUCTION.
3. PRECAST CONCRETE VAULT SHALL CONFORM TO SECTION 11.6.A.5 UNLESS OTHERWISE SPECIFIED. THE INTERIOR & EXTERIOR SHALL BE COATED AS PER SECTION 11.6.B.

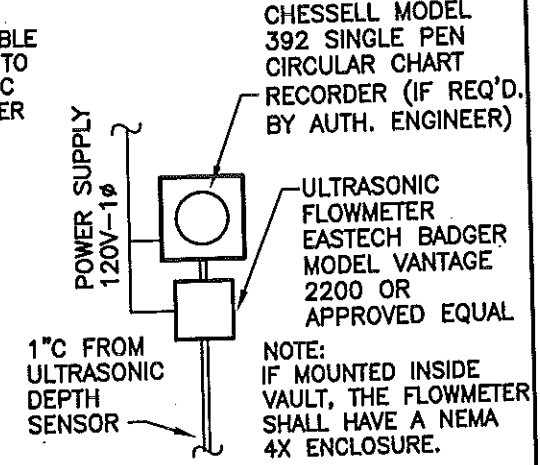
		<b>UPPER MERION TOWNSHIP</b>	
		<b>METERING/SAMPLING FACILITY SECTIONAL PLAN</b>	DATE: 11/9/16
REVISION	DATE		DETAIL: 19B



**SECTION A-A**



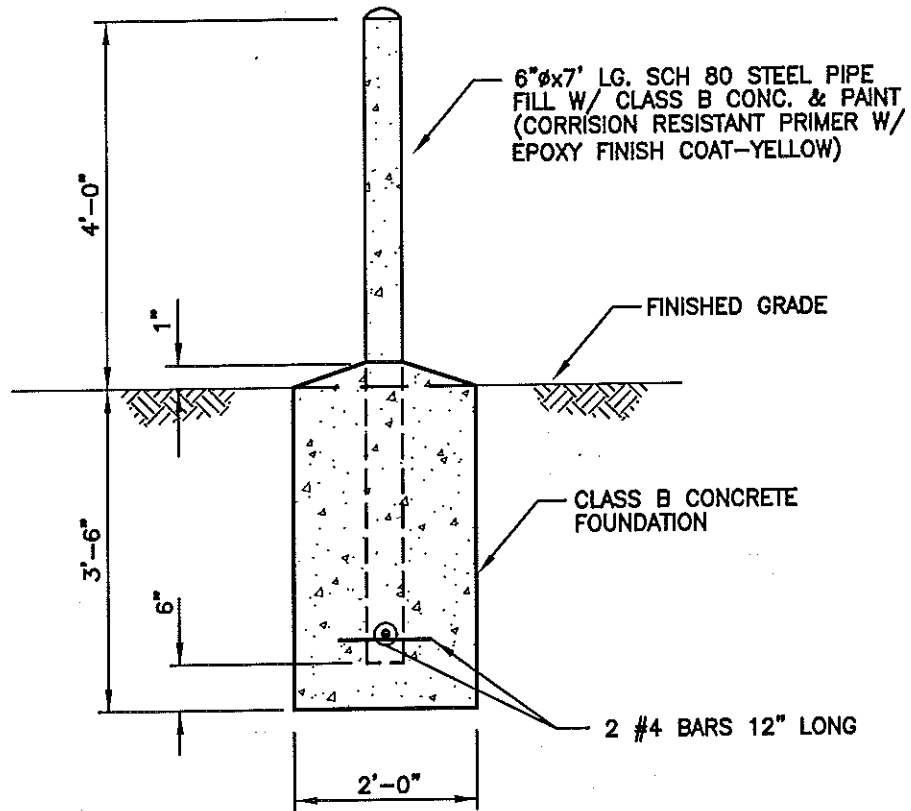
**SECTION**




**FLOW METER ELEVATION**

		<b>UPPER MERION TOWNSHIP</b>		<b>ARRG</b>
		<b>STANDARD DETAIL - SEWER SYSTEM</b>		
		<b>METERING/SAMPLING FACILITY SECTIONS</b>		DATE: 11/9/16
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NOTE:  
PLACE AS SHOWN ON DWGS.

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