
APPENDIX A

AMITY TOWNSHIP
BERKS COUNTY, PENNSYLVANIA

APPLICATION FOR SEWER SYSTEM EXTENSION

NAME OF
DEVELOPMENT: _____

LOCATION: _____

DATE OF APPLICATION: _____

APPLICANT'S
NAME: _____

CONTACT PERSON: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

APPLICATIONS AND PERMITS:

PaDEP Permits	_____
Treatment Plant Capacity Acquired	_____
Planning Module Approval	_____
Right-of-Way Acquisition	_____

TYPE OF SYSTEM:

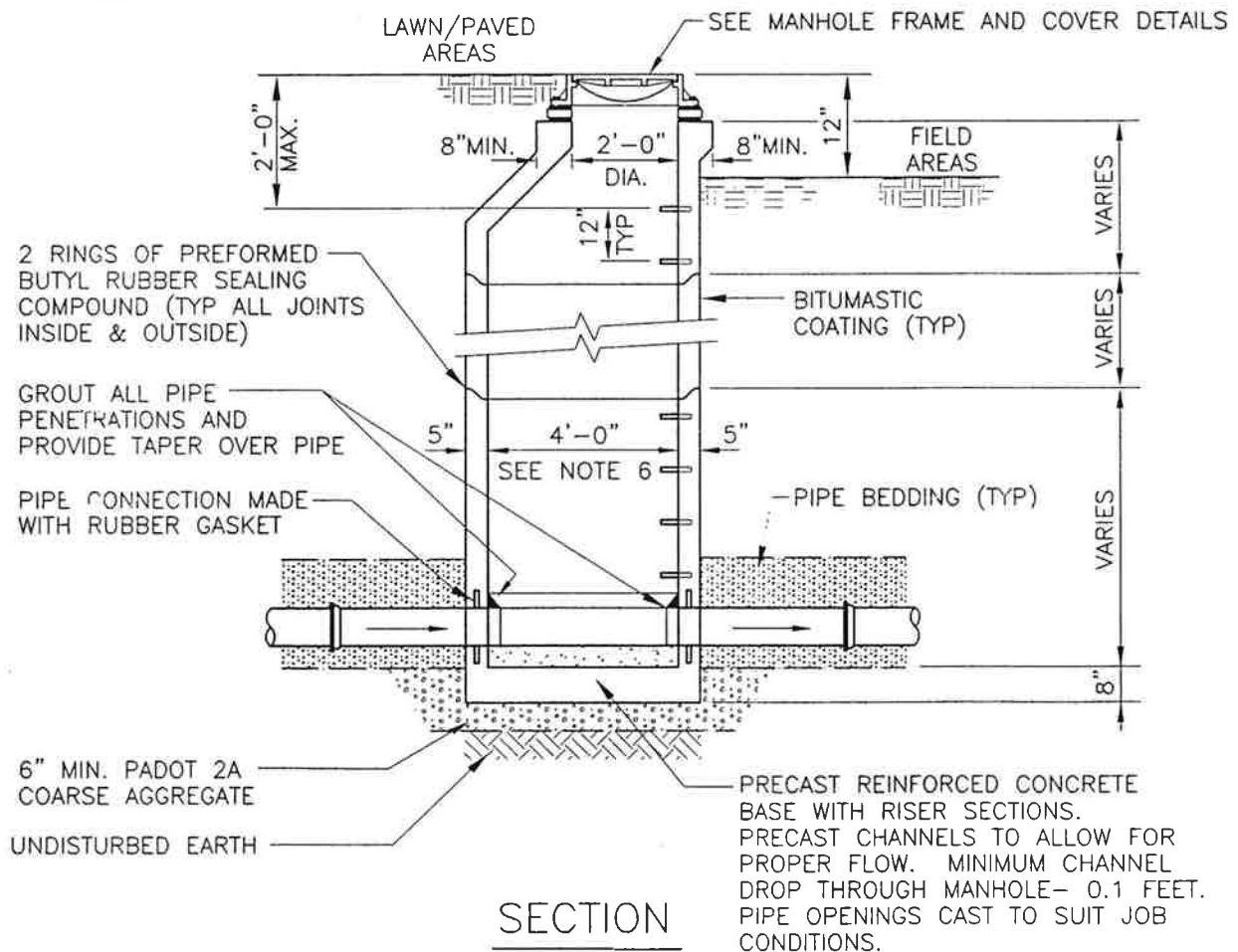
Low-Pressure Sewer System	_____
On-Lot Grinder Pump Stations	_____
Gravity Sewer System	_____
Pump Station and Force Main	_____
On-Lot Sewer System	_____

SYSTEM SPECIFICS:

Total Number of Lots/Units	_____
Total Number of EDUs	_____
Total Length and Size of Gravity Sewer System	_____
Total Length of Low-Pressure Sewer System	_____
Total Length and Size of Force Main	_____
Estimate for Improvements	_____
Estimate for Inspection and Testing Fees	_____

NOTES:

1. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6")
SEE FRAME & COVER DETAILS
2. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO
A.S.T.M. SPEC. C-478.
3. IF INCOMING INVERT EXCEEDS
OUTGOING INVERT BY GREATER THAN
OR EQUAL TO 6", SEE INSIDE SPLASH/
INSIDE DROP MANHOLE DETAILS.
4. FOR MANHOLES WHERE TOP OF
RIM TO INVERT DISTANCE IS
LESS THAN 5'-0", USE FLAT TOP
MANHOLE IN LIEU OF CONE TOP.
5. FILL ALL LIFTING HOLES WITH
NON-SHRINK GROUT.
6. LARGER DIA MANHOLE REQUIRED ON
INSIDE DROP AND INSIDE SPLASH
CONNECTION GREATER THAN 12", SEE
DETAIL 10.
7. FOR MANHOLES LOCATED WITHIN THE
100-YEAR FLOOD BOUNDARY, PROVIDE
A WATERTIGHT MANHOLE FRAME AND
COVER PER THE DETAILS.



AMITY TOWNSHIP
2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

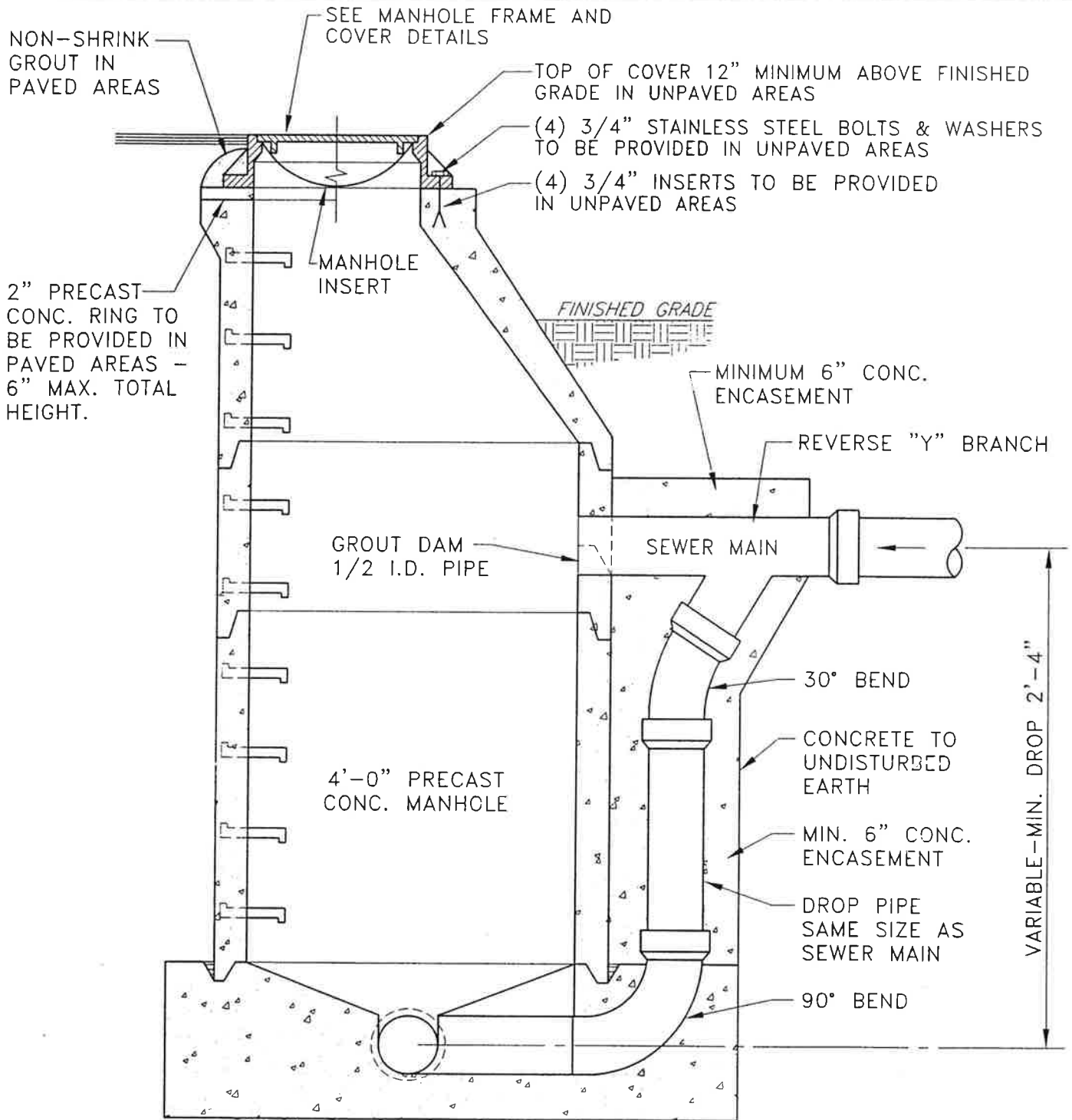
PRECAST MANHOLE DETAIL
8" THRU 24" SEWERS



400 Washington Street, Suite 602
Reading, Pennsylvania 19601
Tel 610.374.5285

DATE:
JUNE 2005

DETAIL:



TYPICAL SECTION

NOTE:
WHERE MANHOLE IS LOCATED WITHIN THE 100-YEAR FLOODWAY BOUNDARY, PROVIDE WATERTIGHT MANHOLE FRAME AND COVER PER DETAILS.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

PRECAST MANHOLE DETAIL WITH DROP CONNECTION



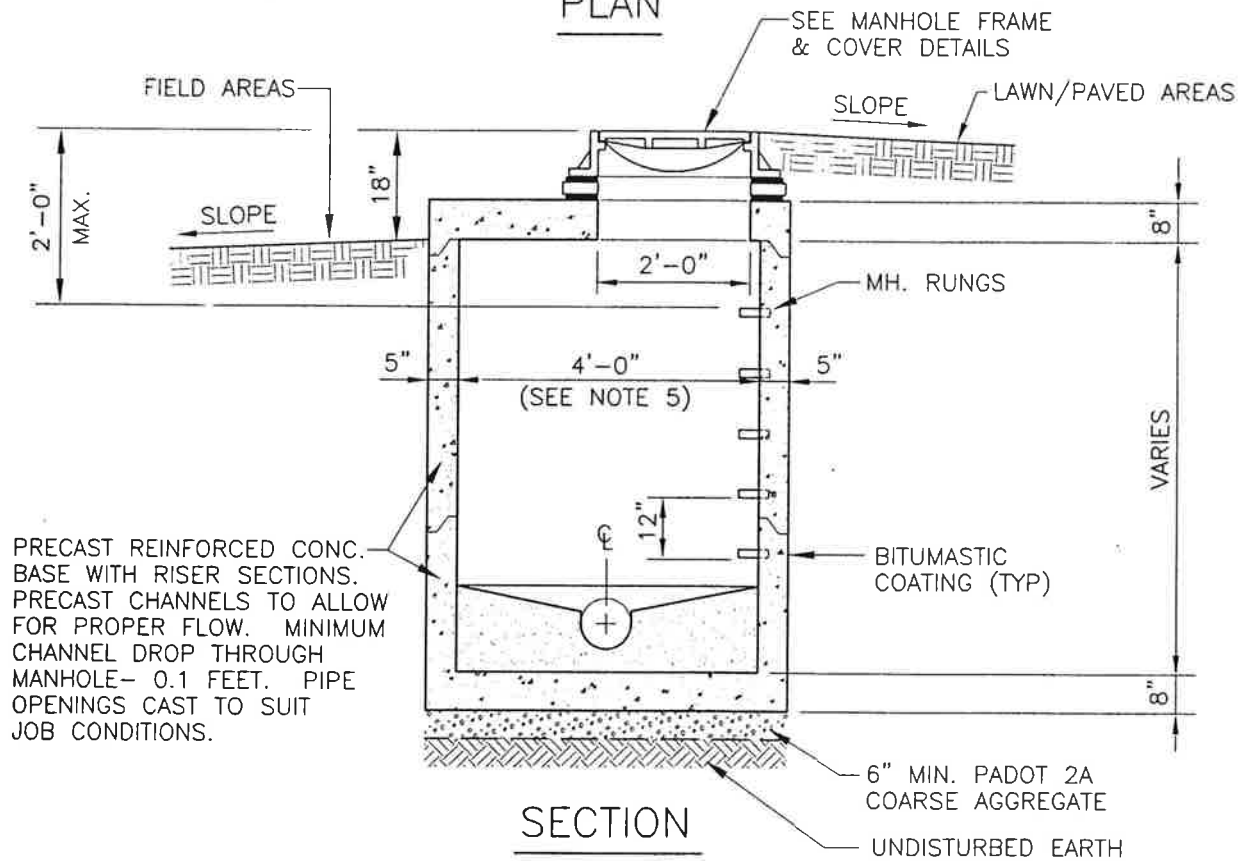
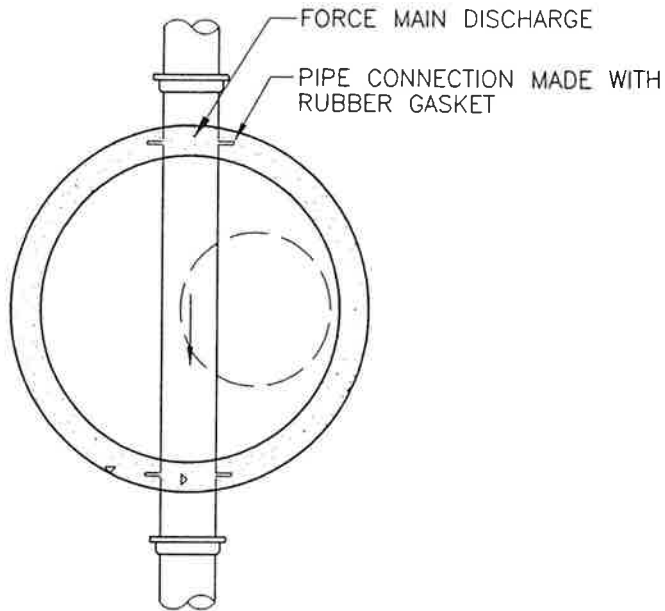
400 Washington Street, Suite 602
Reading, Pennsylvania 19601
Tel 610.374.5285

DATE: JUNE 2005

DETAIL: 2

NOTES:

1. ADJUST TO GRADE WITH CONC. GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE FRAME & COVER DETAILS.
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 GROUT.
5. INSIDE DIAMETER DETERMINED BY PIPE SIZE & CONFIGURATION IN MANHOLE. SEE DETAIL 10.
6. WHERE MANHOLE IS LOCATED WITHIN 100-YEAR FLOODWAY BOUNDARY, PROVIDE WATERTIGHT MANHOLE FRAME AND COVER PER DETAILS.



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

PRECAST MANHOLE DETAIL WITH FORCE MAIN DISCHARGE



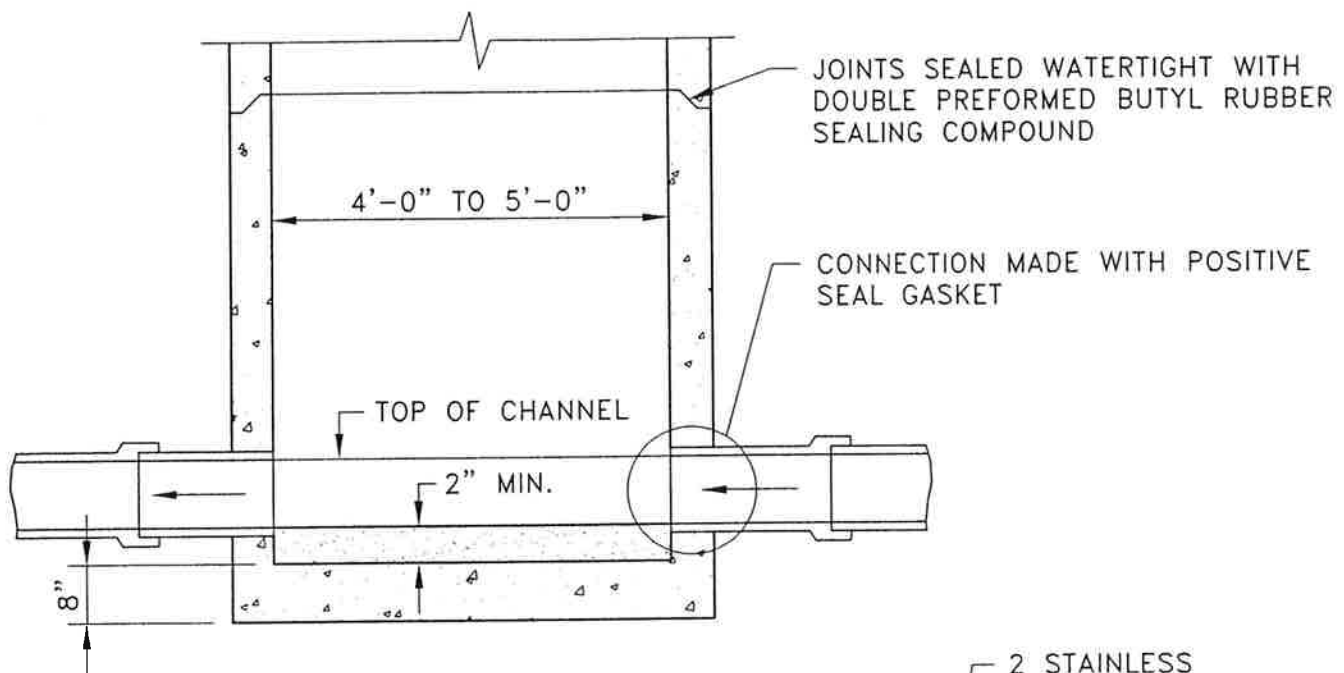
400 Washington Street, Suite 602
Reading, Pennsylvania 19601
Tel 610.374.5285

DATE:

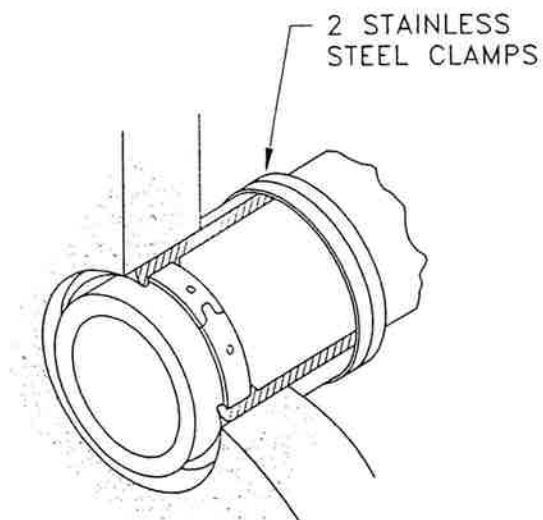
JUNE 2005

DETAIL:

3



SECTION A



EXPANDED VIEW OF
POSITIVE SEAL GASKET

SECTION B

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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MANHOLE WITH PRECAST BASE AND POSITIVE SEAL GASKET

DATE: JUNE 2005

DETAIL: 4

HEAVY DUTY CAST IRON
FRAME AND COVER SUIT-
ABLE FOR HS25 LOADING

2" RAISED LETTER
(TYP)

CONCEALED PICK HOLE
(2 REQD)

(4) 7/8"Ø BOLT HOLES

**SANITARY
SEWER**

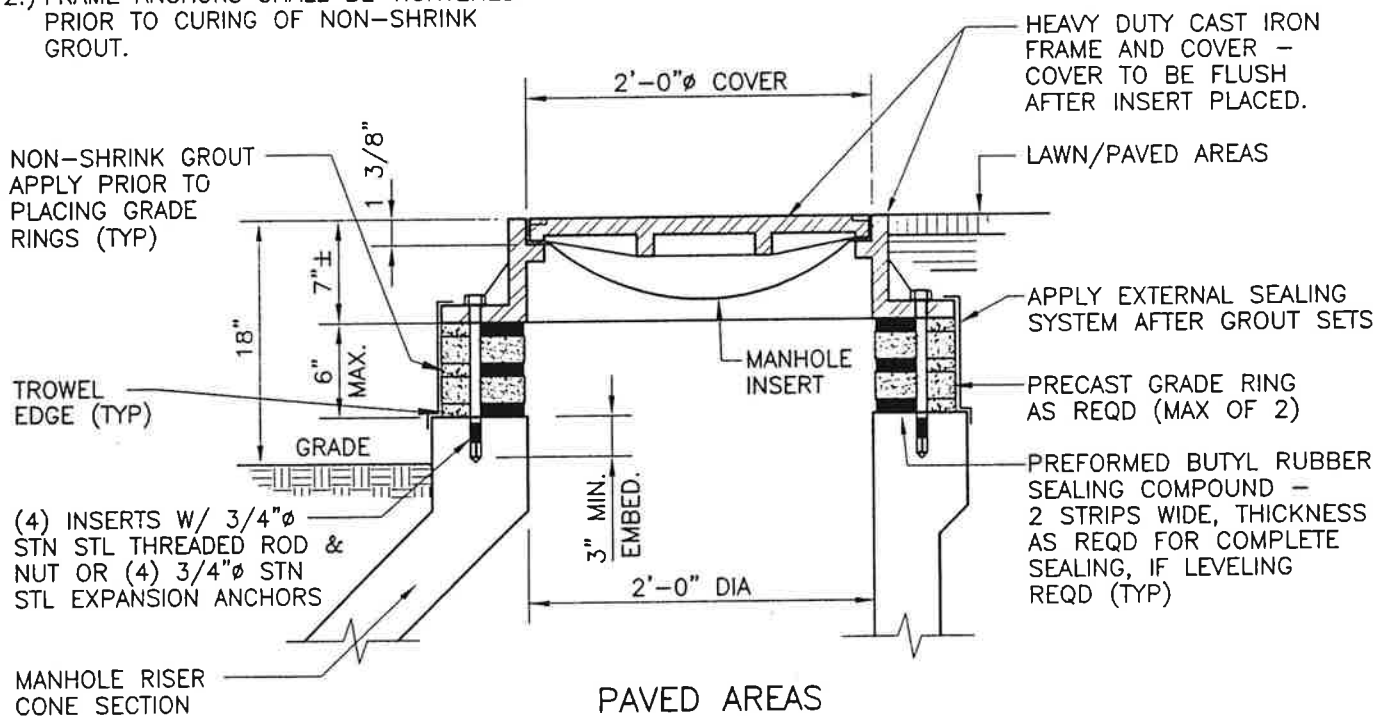
GUSSETS (MIN 6 REQD)

NOTES:

1.) 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.

2.) FRAME ANCHORS SHALL BE TIGHTENED
PRIOR TO CURING OF NON-SHRINK
GROUT.

COVER PATTERN



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

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DATE:

JUNE 2005

DETAIL:

5

**STANDARD MANHOLE FRAME & COVER
WITH GRADE RINGS DETAIL**

HEAVY DUTY CAST IRON
FRAME AND COVER,
WATERTIGHT, SUITABLE
FOR HS25 LOADING

2" RAISED LETTER
(TYP)

CONCEALED PICK HOLE
(2 REQD)

(4) 7/8"Ø BOLT HOLES

**SANITARY
SEWER**

GUSSETS (MIN 6 REQD)

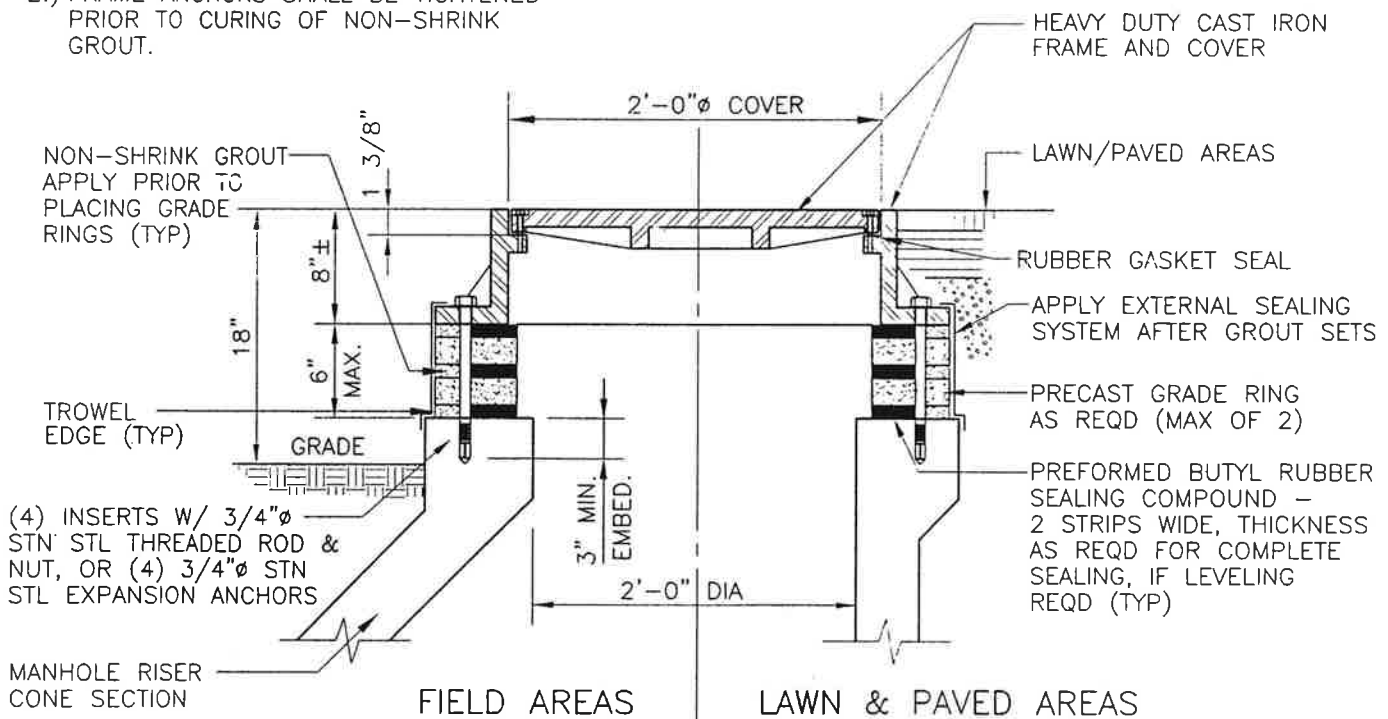
1/2" STAINLESS STEEL CAP
SCREW WITH WASHER AND
RUBBER GASKET (4 REQ'D.)

NOTES:

1.) 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.

COVER PATTERN

2.) FRAME ANCHORS SHALL BE TIGHTENED
PRIOR TO CURING OF NON-SHRINK
GROUT.



NOTE: PROVIDE WATERTIGHT MANHOLE FRAME & COVER IN SWALES, GUTTERS,
FLOOD PRONE AREAS & ALL AREAS OUTSIDE OF ROADWAYS.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

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**WATERTIGHT MANHOLE FRAME & COVER
WITH GRADE RINGS DETAIL**

DATE: JUNE 2005

DETAIL: 7



- 2.) FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.



WATERTIGHT MANHOLE FRAME & COVER WITHOUT GRADE RINGS DETAIL

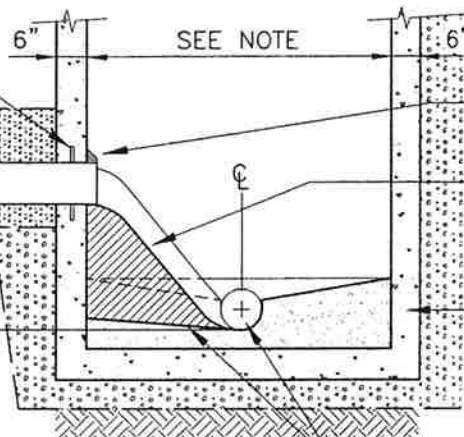
8

PIPE CONNECTION MADE
WITH RUBBER GASKET

PIPE BEDDING
(TYP)

SEWER

INSIDE SPLASH
WHEN GREATER THAN
OR EQUAL TO 6" BUT
LESS THAN OR EQUAL
TO 2'-0"



NOTE:
MANHOLE DIAMETER SHALL BE 4'
WHEN SPLASH IS 6" TO 1'-0" AND
5' WHEN SPLASH IS 1'-0" TO
2'-0".

GROUT ALL PIPE PENETRATIONS
AND PROVIDE TAPER OVER PIPE

SPLASH CHANNEL FORMED
INTO PRECAST CHANNEL
WITH NON-SHRINK GROUT

PRECAST REINFORCED CONCRETE
BASE WITH RISER SECTIONS.
SEE PRECAST MANHOLE DETAILS.

PRECAST CHANNELS TO ALLOW
FOR PROPER FLOW.
SEE PRECAST CHANNEL DETAILS.

SECTION INSIDE SPLASH

PIPE CONNECTION MADE
WITH RUBBER GASKET

FLEXIBLE PIPE COUPLING

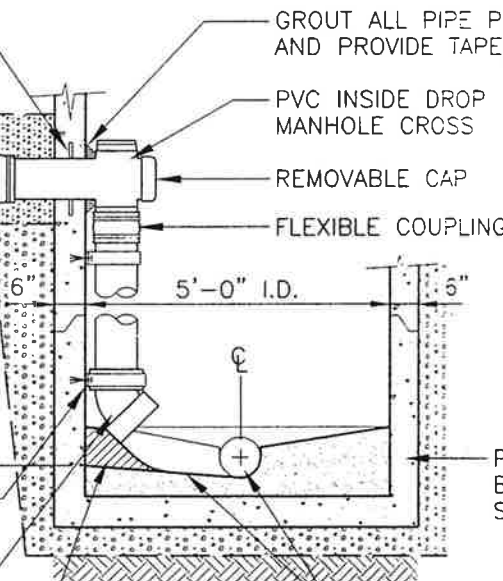
SEWER

INSIDE DROP
WHEN GREATER
THAN 2'-0"

2" WIDE x 1/16" THK
STN STL STRAPS & STN
STL ANCHORS W/ MAX
EMBEDMENT OF 3" AT 18"
MAX SPACINGS (TYP) -
ALSO PROVIDE STRAP
SPECIFICALLY FOR
45° BEND

45° PVC ELBOW

SPLASH CHANNEL FORMED
INTO PRECAST CHANNEL
WITH NON-SHRINK GROUT



GROUT ALL PIPE PENETRATIONS
AND PROVIDE TAPER OVER PIPE

PVC INSIDE DROP
MANHOLE CROSS

REMOVABLE CAP

FLEXIBLE COUPLING

PRECAST REINFORCED CONCRETE
BASE WITH RISER SECTIONS.
SEE PRECAST MANHOLE DETAILS.

PRECAST CHANNELS TO ALLOW
FOR PROPER FLOW.
SEE PRECAST CHANNEL DETAILS.

SECTION INSIDE DROP

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

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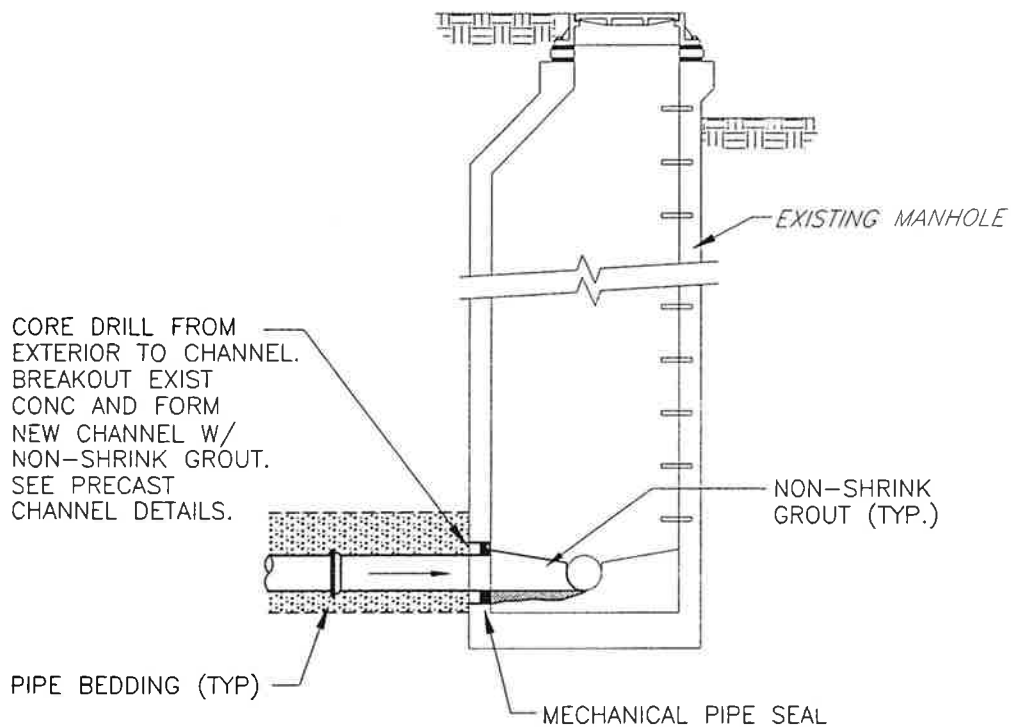
INSIDE SPLASH/INSIDE DROP (8"-10")
MANHOLE DETAILS

DATE:

JUNE 2005

DETAIL:

10



SECTION

NOTE: CROWN ELEVATION OF NEW PIPE SHALL MATCH OR BE HIGHER THAN CROWN ELEVATION OF EXISTING OUTGOING PIPE.

AMITY TOWNSHIP
2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

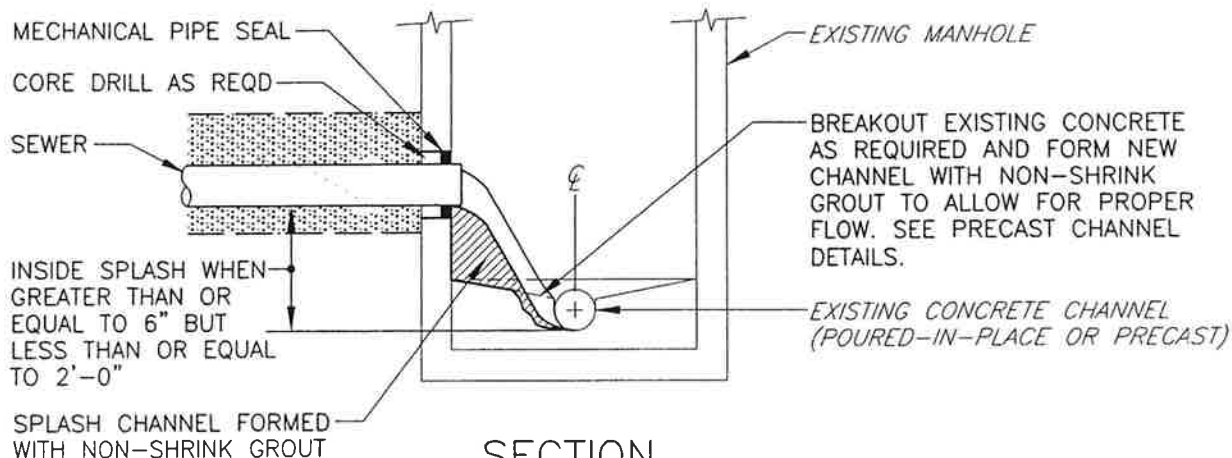
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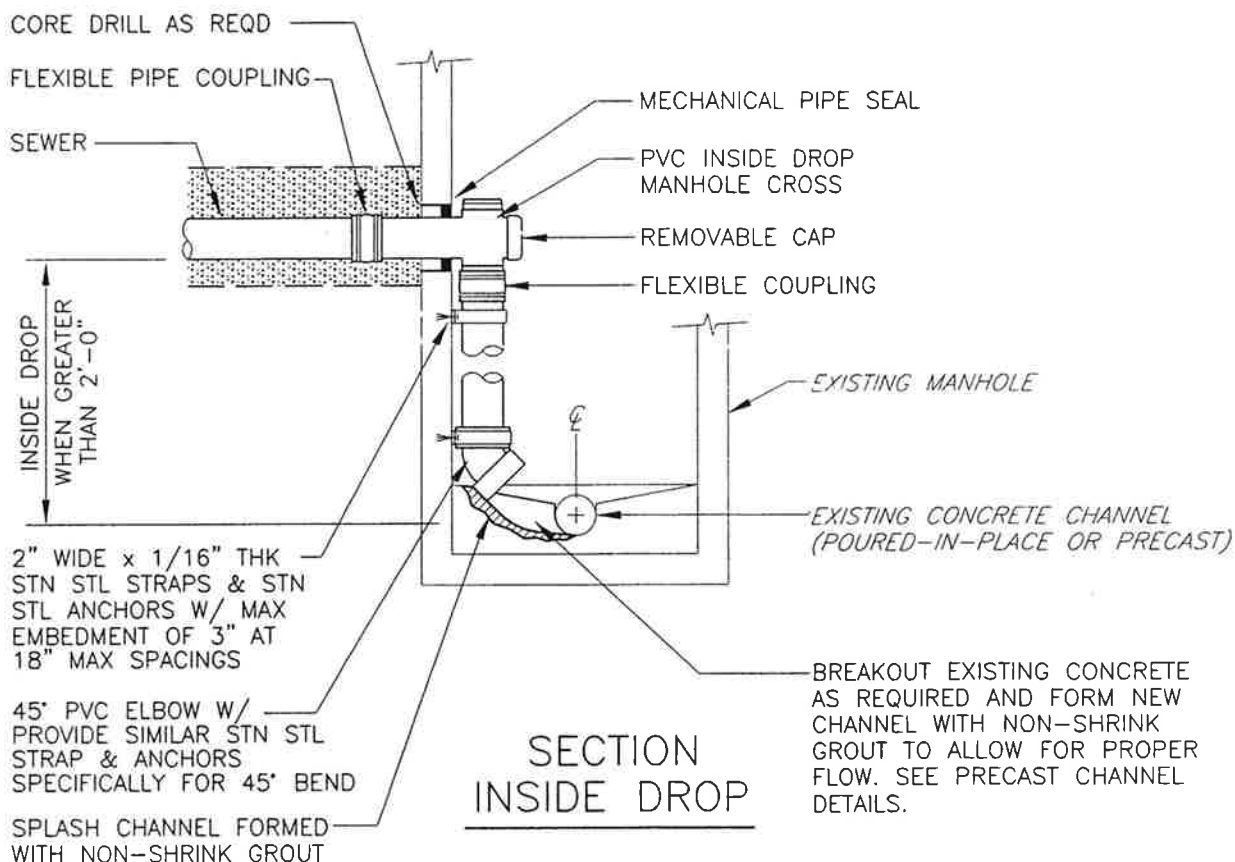
GRAVITY SEWER CONNECTION
TO EXISTING MANHOLE DETAIL

DATE: JUNE 2005

DETAIL: 11



SECTION
INSIDE SPLASH



SECTION
INSIDE DROP

(*) BY SPECIAL EXCEPTION ONLY, IN 4 FT DIA MANHOLES

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

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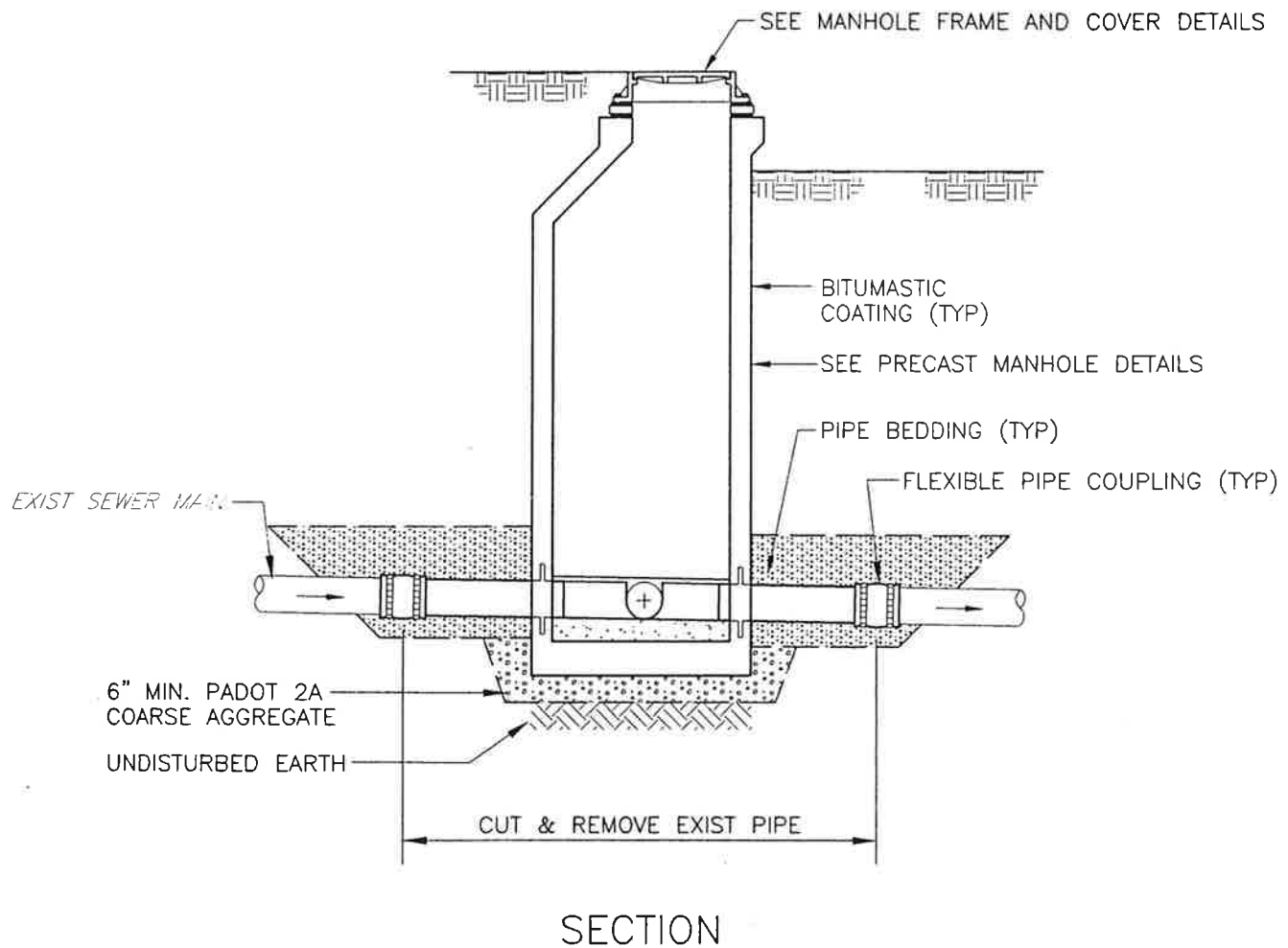
INSIDE SPLASH/DROP 8"-10" CONNECTION
TO EXISTING MH (BY SPECIAL EXCEPTION*)

DATE: JUNE 2005

DETAIL: 12

NOTES:

1. INSTALL MANHOLE ON EXISTING SEWER MAIN AS FOLLOWS:
 - A. BYPASS FLOW
 - B. CUT EXISTING PIPE
 - C. INSTALL MANHOLE W/ PRECAST BASE, AS SHOWN ON DETAIL.
2. DOGHOUSE MANHOLES MAY BE USED ONLY BY SPECIAL EXCEPTION FROM THE AUTHORITY.



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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**NEW MANHOLE
ON EXISTING MAIN DETAIL**

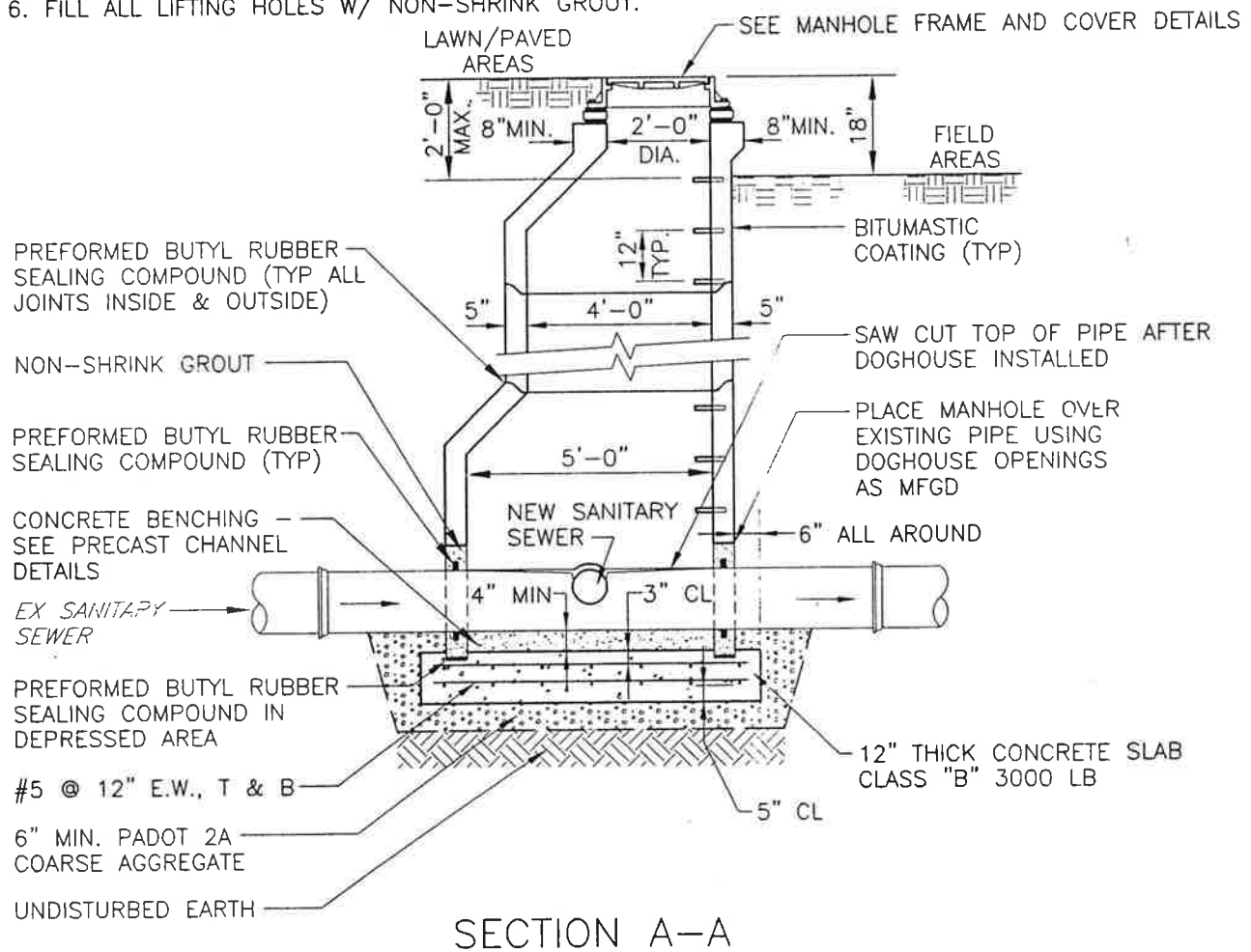
DATE:

JUNE 2005

DETAIL:

13

1. INSTALL MANHOLES ON EXISTING LINES BY BYPASSING FLOW, CUTTING PIPE & INSTALLING MANHOLE WITH PRECAST BASE. DOGHOUSE MANHOLES, AS SHOWN IN THIS DETAIL, MAY BE USED ONLY BY SPECIAL EXCEPTION FROM THE AUTHORITY.
2. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE MANHOLE FRAME & COVER DETAILS.
3. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
4. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/INSIDE DROP MANHOLE DETAILS.
5. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
6. FILL ALL LIFTING HOLES W/ NON-SHRINK GROUT.



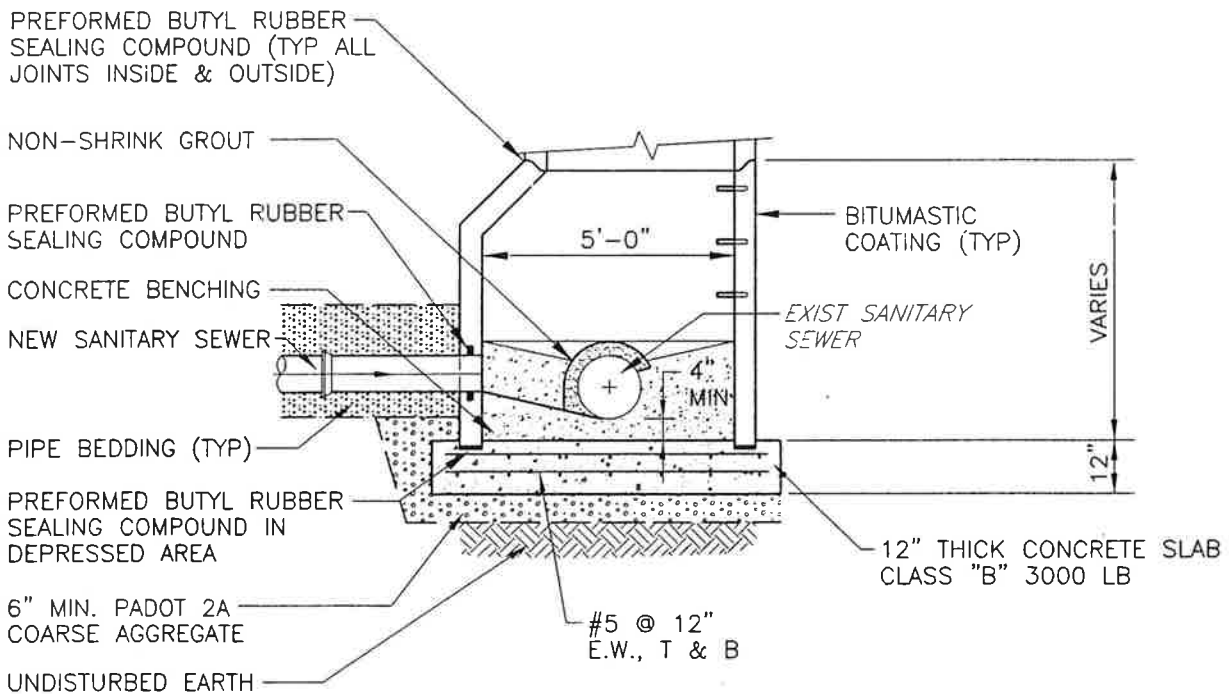
AMITY TOWNSHIP



PRECAST DOGHOUSE MANHOLE DETAIL (BY SPECIAL EXCEPTION ONLY)

NOTES:

1. INSTALL MANHOLES ON EXISTING LINES BY BYPASSING FLOW, CUTTING PIPE & INSTALLING MANHOLE WITH PRECAST BASE. DOGHOUSE MANHOLES, AS SHOWN IN THIS DETAIL, MAY BE USED ONLY BY SPECIAL EXCEPTION FROM THE AUTHORITY.
2. ADJUST TO GRADE WITH CONC GRADE RINGS (MAX. VERT. ADJUST. 6"). SEE MANHOLE FRAME & COVER DETAILS.
3. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-478.
4. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/INSIDE DROP MANHOLE DETAILS.
5. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
6. FILL ALL LIFTING HOLES W/ NON-SHRINK GROUT.



SECTION B-B

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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Tel 610.374.5285

**PRECAST DOGHOUSE BOTTOM DETAIL
(BY SPECIAL EXCEPTION ONLY)**

DATE:

JUNE 2005

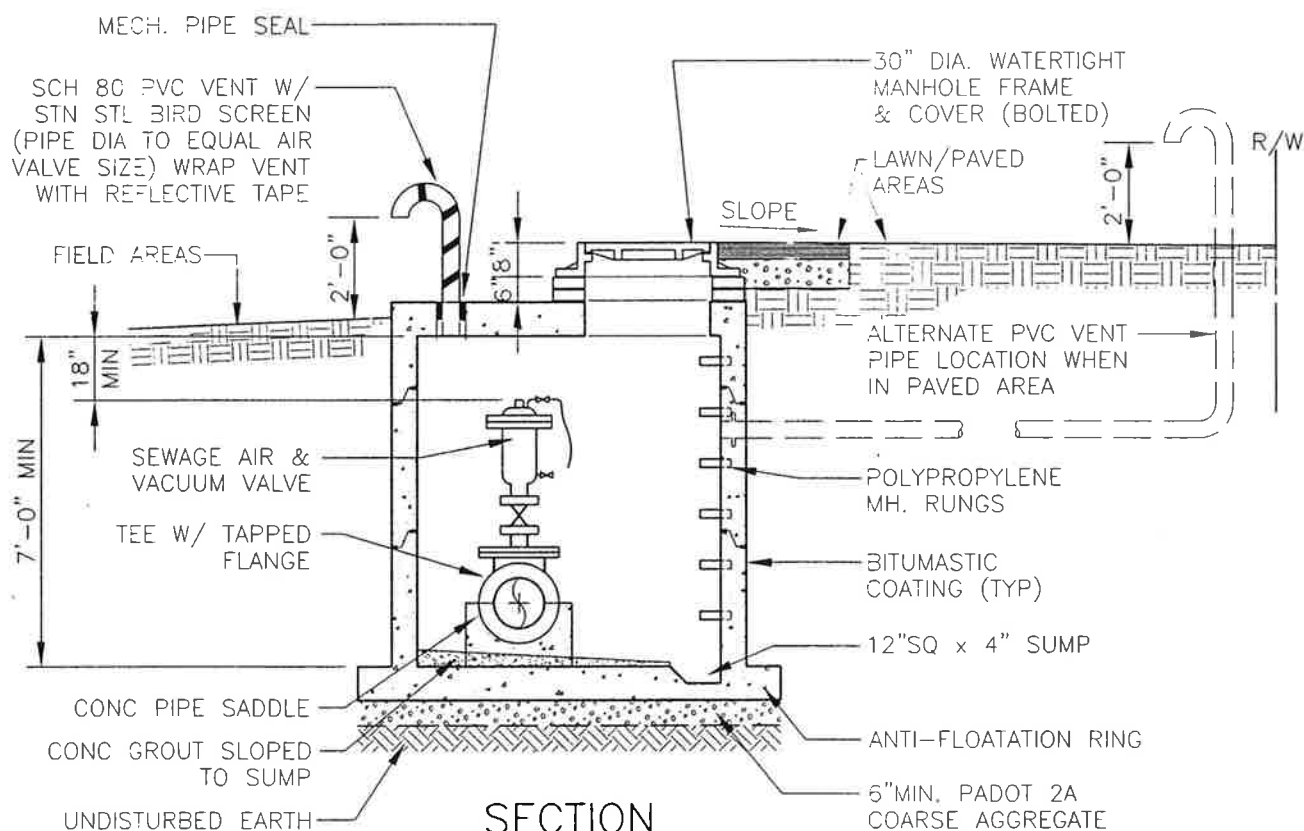
DETAIL:

14B



NOTES:

1. ADJUST TO GRADE WITH CONC. GRADE RINGS (MAX. VERT. ADJUST. 6").
SEE FRAME & COVER DETAILS.
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 GROUT.
5. ALL EXPOSED INTERIOR CONC SURFACES (I.E. FLOOR, SUMP, SADDLE) TO RECEIVE CORROSION RESISTANT EPOXY COATING.
6. WHERE VALVE VAULT IS LOCATED WITHIN THE 100-YEAR FLOOD BOUNDARY, THE TOP OF THE CONCRETE SLAB SHOULD BE A MINIMUM OF 6" ABOVE FLOODWAY.



SECTION

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

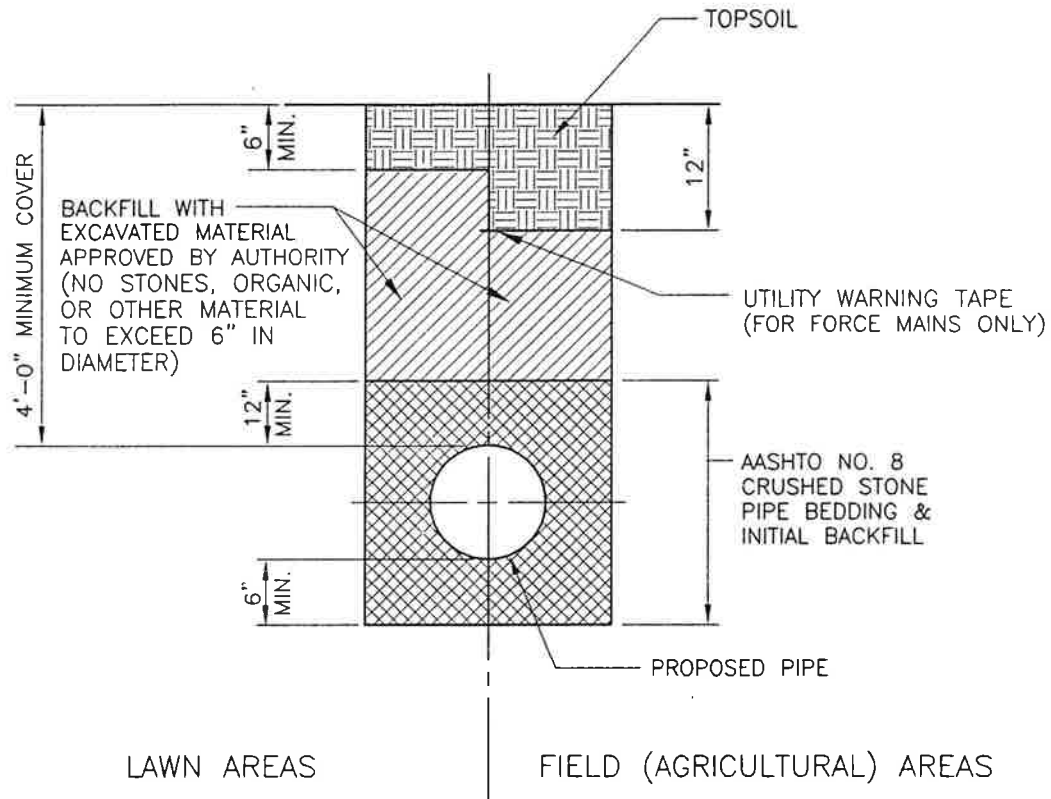
AIR VALVE VAULT DETAIL (FORCE MAIN ONLY)



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DATE: JUNE 2005

DETAIL: 15



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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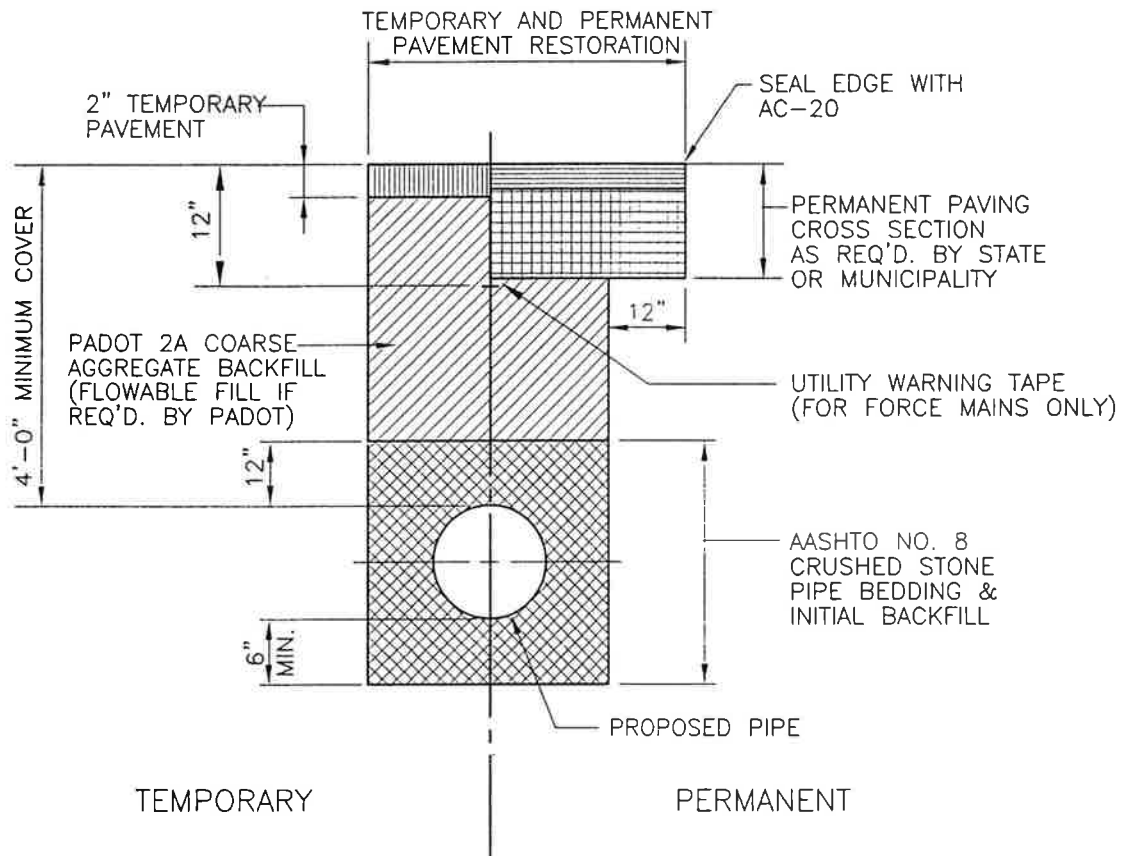
TRENCH RESTORATION LAWN/FIELD AREAS

DATE:

JUNE 2005

DETAIL:

16



(TYPICAL FOR STATE HIGHWAYS, BOROUGH & TOWNSHIP ROADS, SHOULDERS & DRIVEWAYS)

NOTE:

ALL WORK ON STATE ROADS IS TO BE PERFORMED IN ACCORDANCE WITH PADOT PUBLICATION 408.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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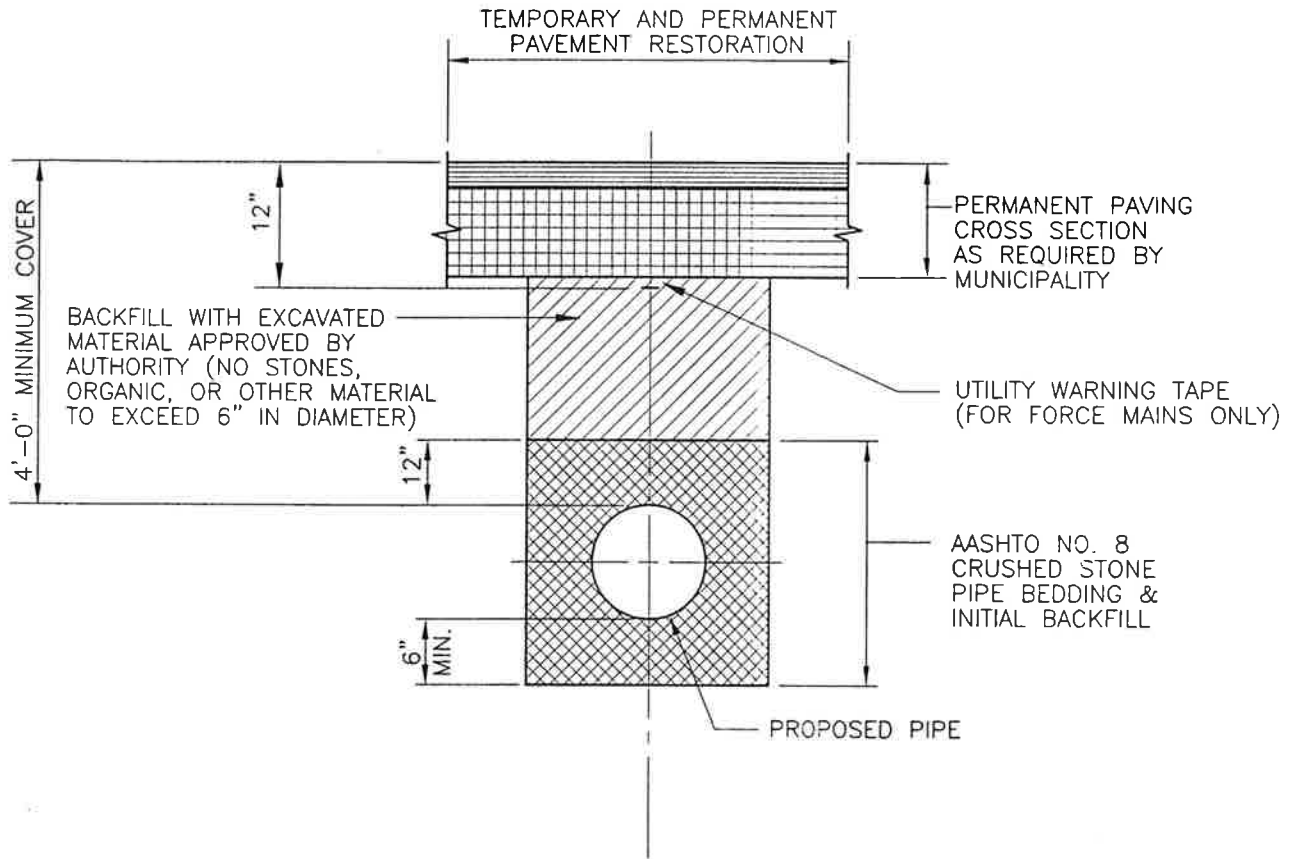
**TRENCH RESTORATION
EXISTING PAVED AREAS**

DATE:

JUNE 2005

DETAIL:

17



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

TRENCH RESTORATION NEW ROADWAYS



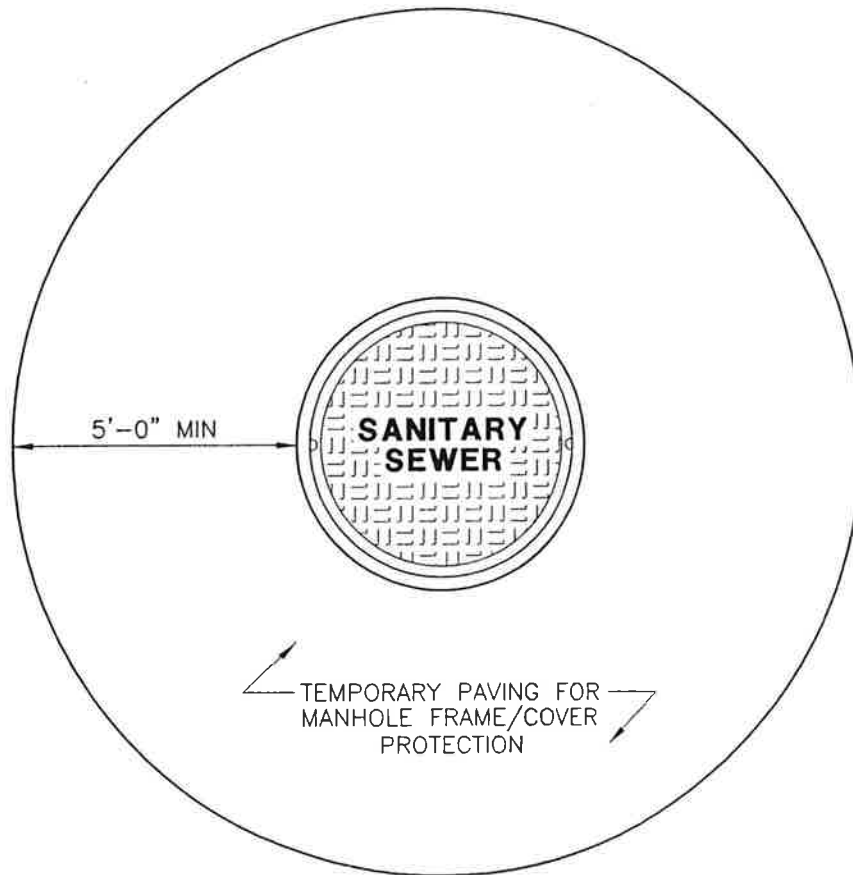
400 Washington Street, Suite 602
Reading, Pennsylvania 19601
Tel 610.374.5285

DATE:

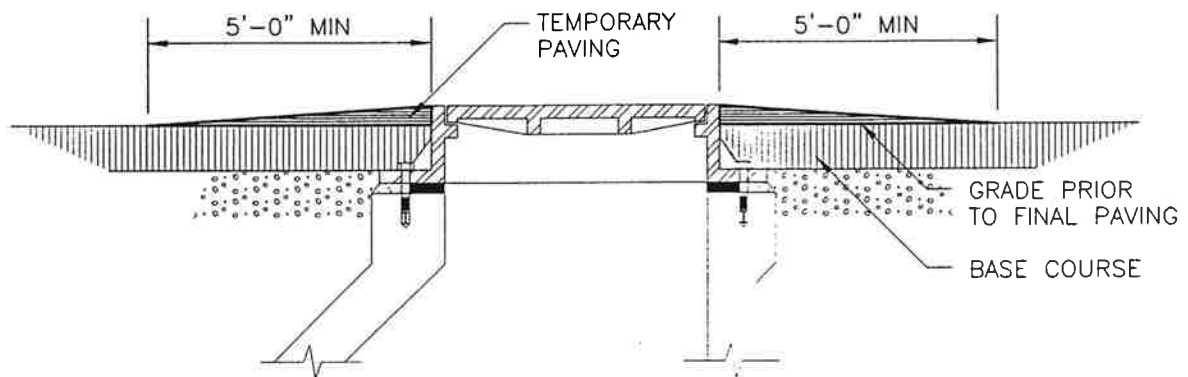
JUNE 2005

DETAIL:

18



PLAN



SECTION

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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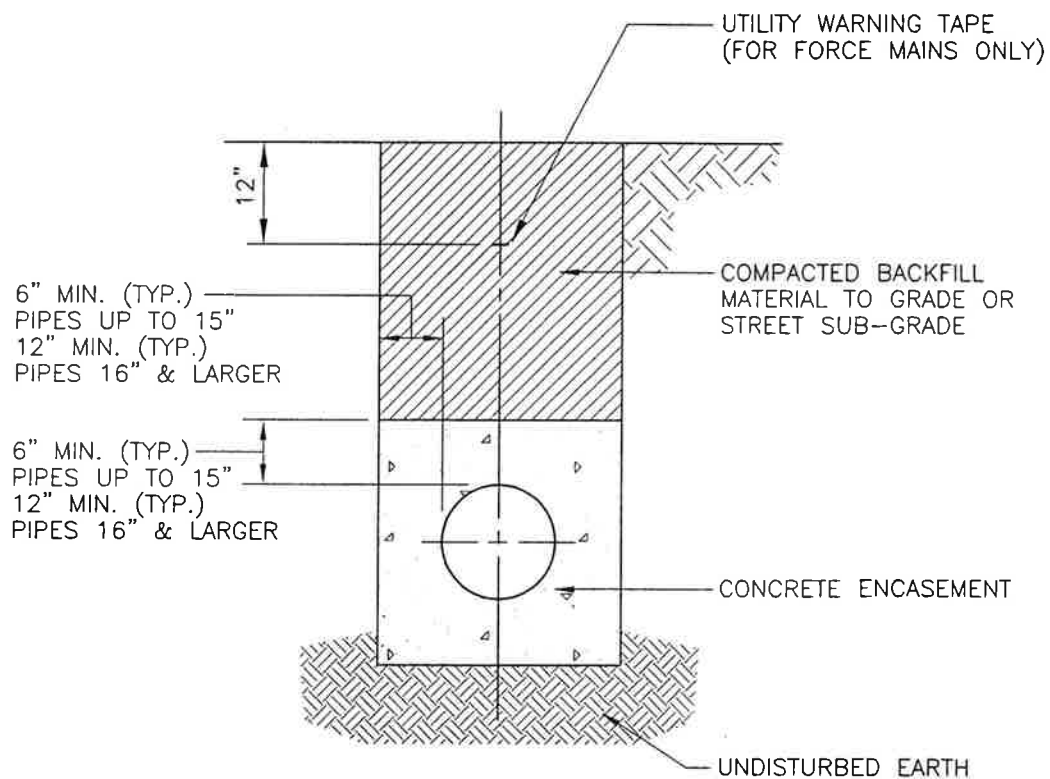
MANHOLE FRAME & COVER PROTECTION
DETAIL PRIOR TO FINAL PAVING

DATE:

JUNE 2002

DETAIL:

19



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

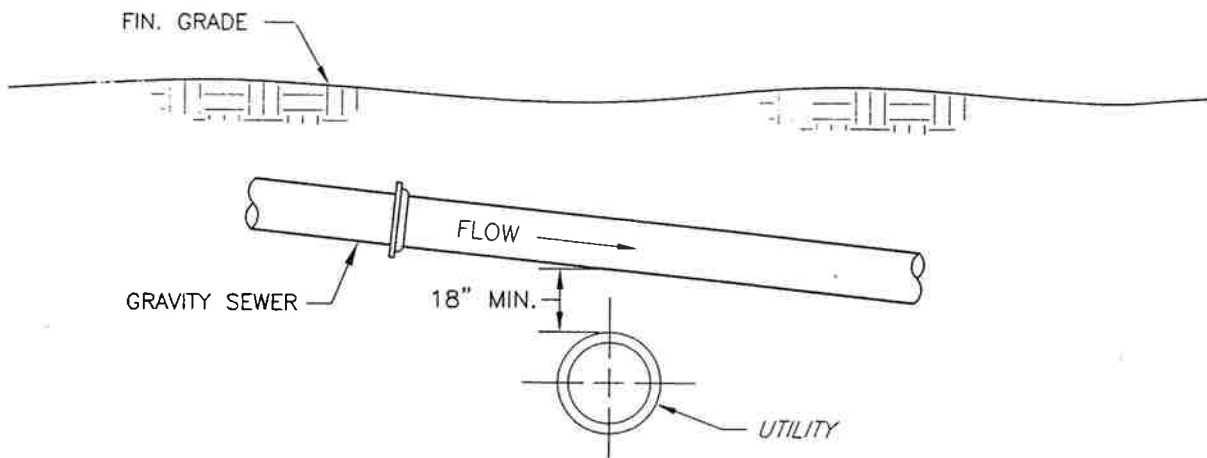
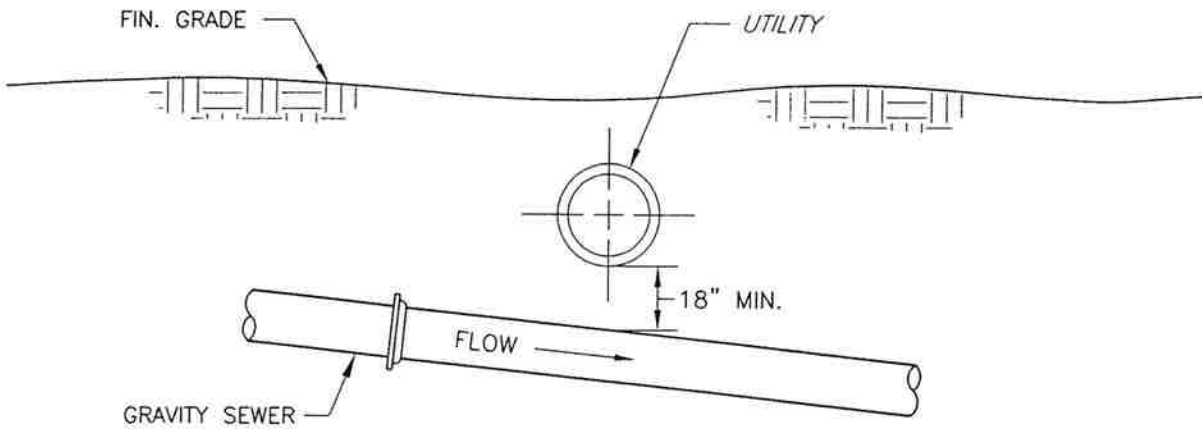


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CONCRETE ENCASEMENT DETAIL

DATE: JUNE 2005

DETAIL: 20



NOTE: MAINTAIN SLOPE OF PROPOSED SEWER AT ALL CROSSINGS.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

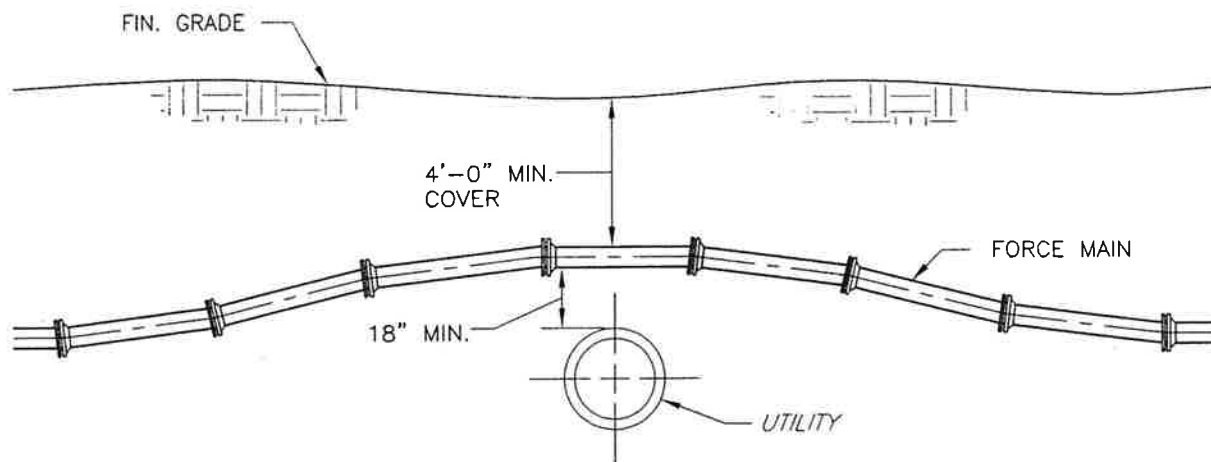
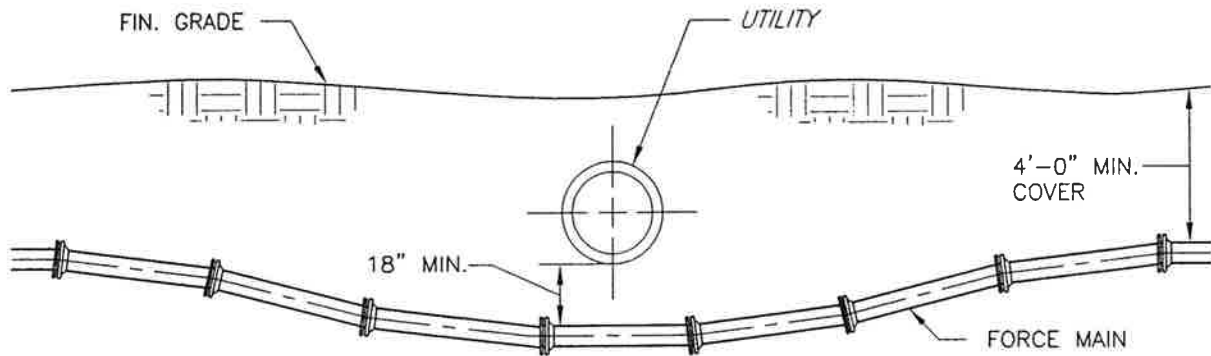
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GRAVITY SEWER CROSSING UTILITIES DETAIL

DATE:
JUNE 2005

DETAIL:
21



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

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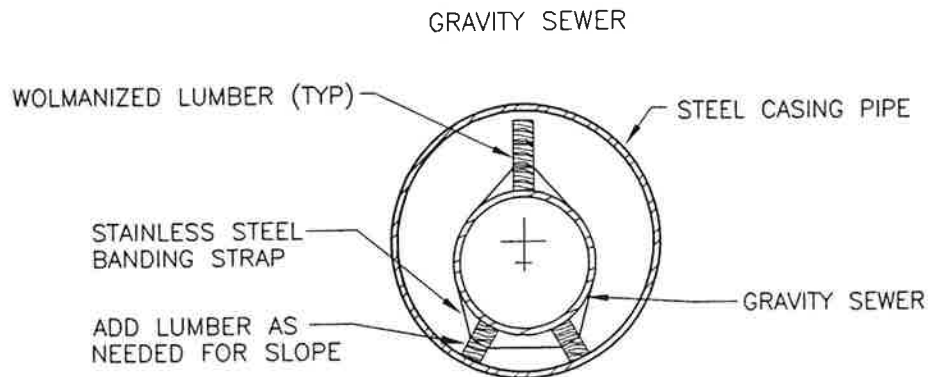
400 Washington Street, Suite 602
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FORCE MAIN CROSSING UTILITY DETAIL
(USING DEFLECTING JOINTS)

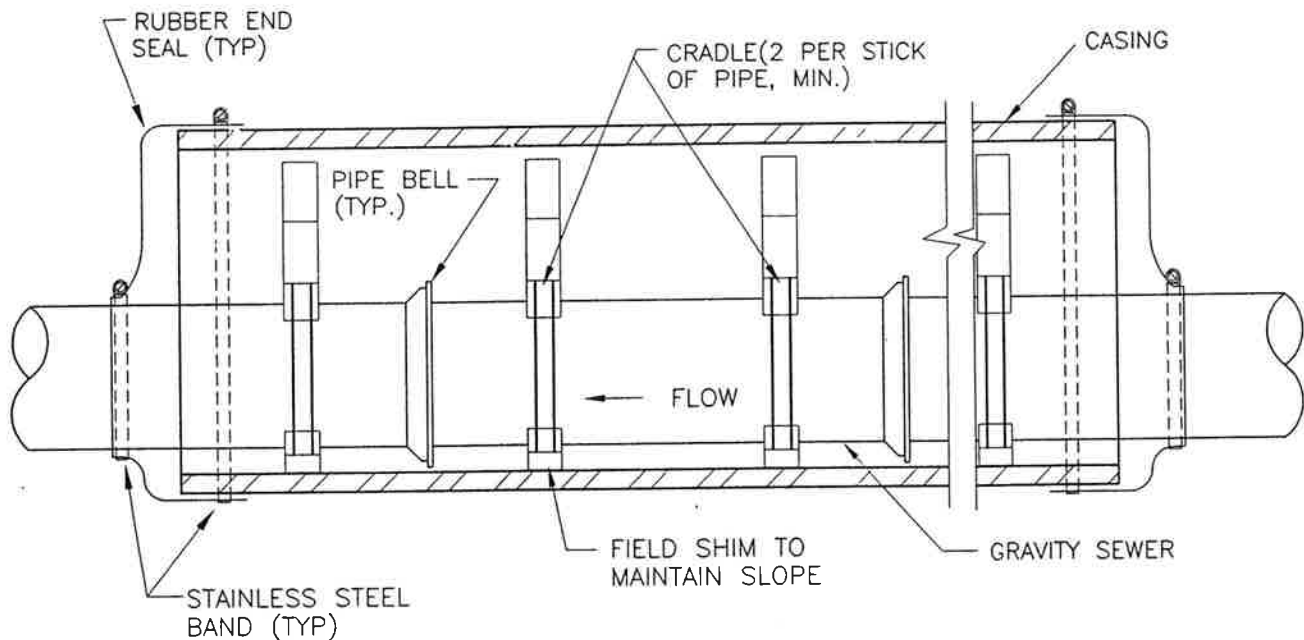
DATE: JUNE 2005

DETAIL: 22

NOTE:
FILL VOID BETWEEN CARRIER PIPE
AND CASING WITH CLEAN NATURAL
SAND, OR 1/4" STONE CHIPS



SECTION



ELEVATION

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

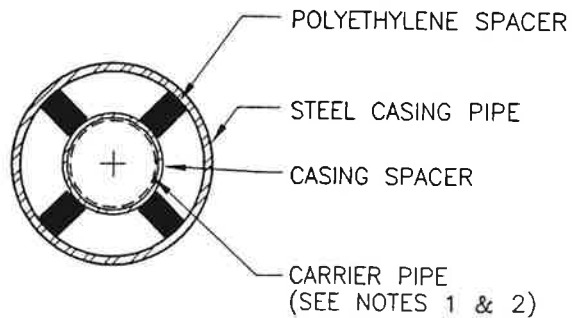


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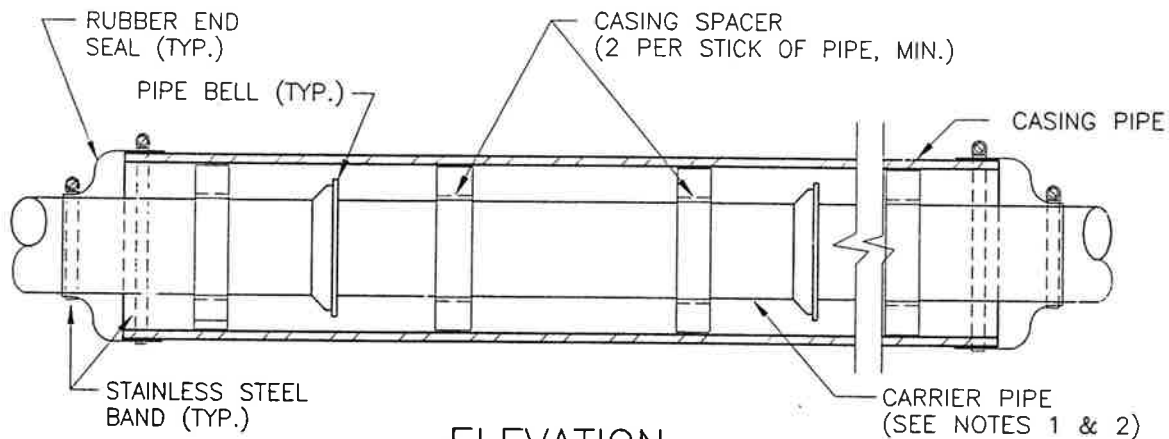
CASING CRADLE DETAIL — GRAVITY SEWER
INSTALLATION VIA BORING/JACKING

DATE: JUNE 2005

DETAIL: 23



SECTION



ELEVATION

NOTES:

- 1) FORCE MAIN PIPE SHALL BE RESTRAINED JOINT PIPE.
- 2) GRAVITY SEWER PERMITTED ONLY WHEN INSTALLATION IS BY OPEN CUT. OTHERWISE, SEE GRAVITY SEWER INSTALLATION VIA BORING/JACKING DETAIL.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

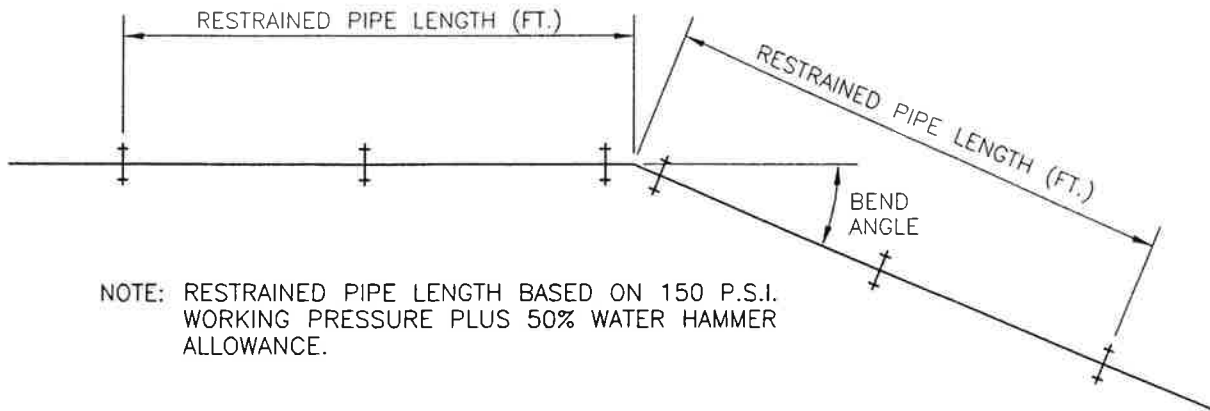


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**CASING CRADLE DETAIL
(OPEN CUT OR FORCE MAIN)**

DATE: JUNE 2005

DETAIL: 24



HORIZONTAL RESTRAINED PIPE LENGTH SCHEDULE (DUCTILE IRON PIPE)				
PIPE DIAMETER	HORIZONTAL ELBOW DEFLECTION ANGLE			
	90°	45°	22 1/2°	11 1/4°
4"	19'	8'	4'	2'
6"	27'	11'	7'	3'
8"	35'	14'	8'	4'
10"	42'	17'	8'	5'
12"	49'	20'	10'	5'

* ADD 12% TO LENGTH IF PIPE IS POLYETHYLENE ENCASED.

VERTICAL RESTRAINED PIPE LENGTH SCHEDULE (DUCTILE IRON PIPE)			
PIPE DIAMETER	VERTICAL ELBOW DEFLECTION ANGLE		
	45°	22 1/2°	11 1/4°
4"	20'	10'	5'
6"	28'	14'	7'
8"	37'	18'	9'
10"	44'	21'	11'
12"	52'	25'	12'

* ADD 12% TO LENGTH IF PIPE IS POLYETHYLENE ENCASED.

NOTE: FOR PIPE SIZES GREATER THAN 12", SUBMIT ENGINEERING CALCULATIONS TO VERIFY PROPOSED RESTRAINED PIPE LENGTHS.

AMITY TOWNSHIP
2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

ARRO
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Reading, Pennsylvania 19601
Tel 610.374.5285

**RESTRAINED PIPE LENGTH SCHEDULE
(DUCTILE IRON PIPE)**

DATE: JUNE 2005

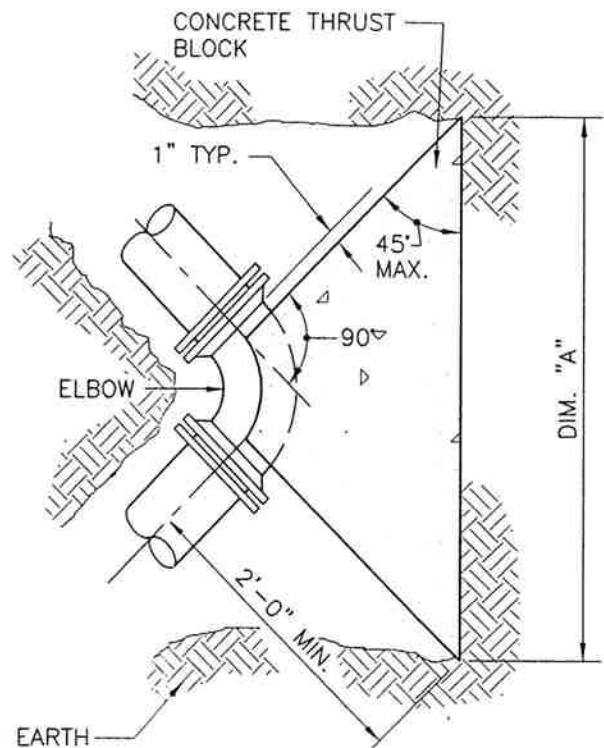
DETAIL: 25

THRUST BLOCK DIMENSION SCHEDULE – ELBOWS(*) (DUCTILE IRON PIPE)					
PIPE DIAM.	DIM.	ELBOW DEFLECTION ANGLE			
		11 1/4°	22 1/2°	45°	90°
4"	A	12"	18"	24"	24"
	B	12"	12"	12"	18"
6"	A	18"	24"	30"	42"
	B	12"	18"	24"	30"
8"	A	24"	24"	42"	60"
	B	12"	24"	30"	36"
12"	A	30"	42"	54"	90"
	B	24"	30"	36"	48"

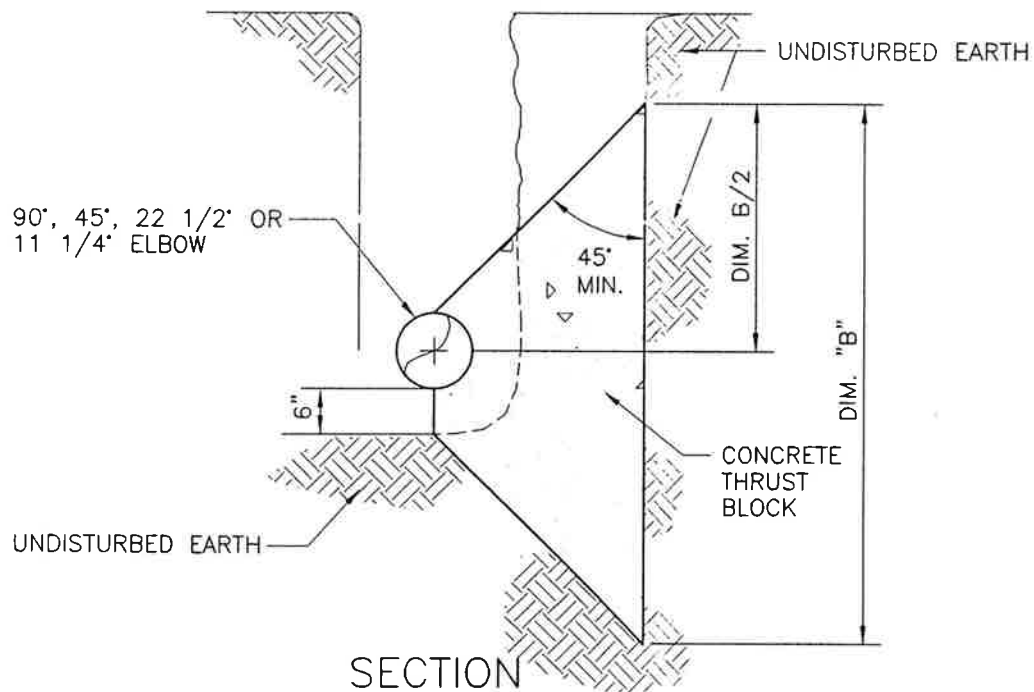
(*) THRUST BLOCK DESIGN BASED ON THE MINIMUM SOIL HORIZONTAL BEARING STRENGTH OF 3000 PSF AND 150 PSI WORKING PRESSURE PLUS 50% WATER HAMMER ALLOWANCE.

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

UNDISTURBED EARTH



PLAN



SECTION

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

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Reading, Pennsylvania 19601
Tel 610.374.5285

HORIZONTAL & VERTICAL UP RESTRAINT
THRUST BLOCKING DETAIL – ELBOWS (DIP)

DATE:
JUNE 2005

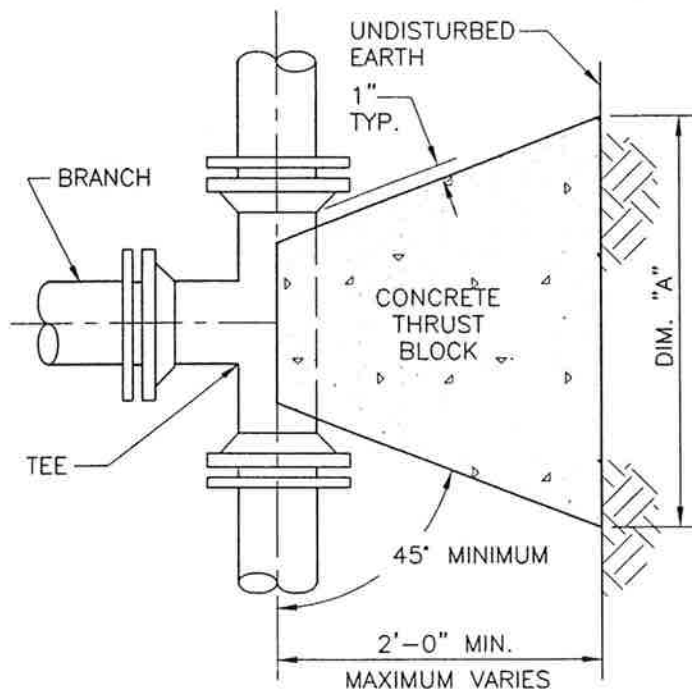
DETAIL:
26

THRUST BLOCK DIMENSION SCHEDULE - ELBOWS(*)
(DUCTILE IRON PIPE)

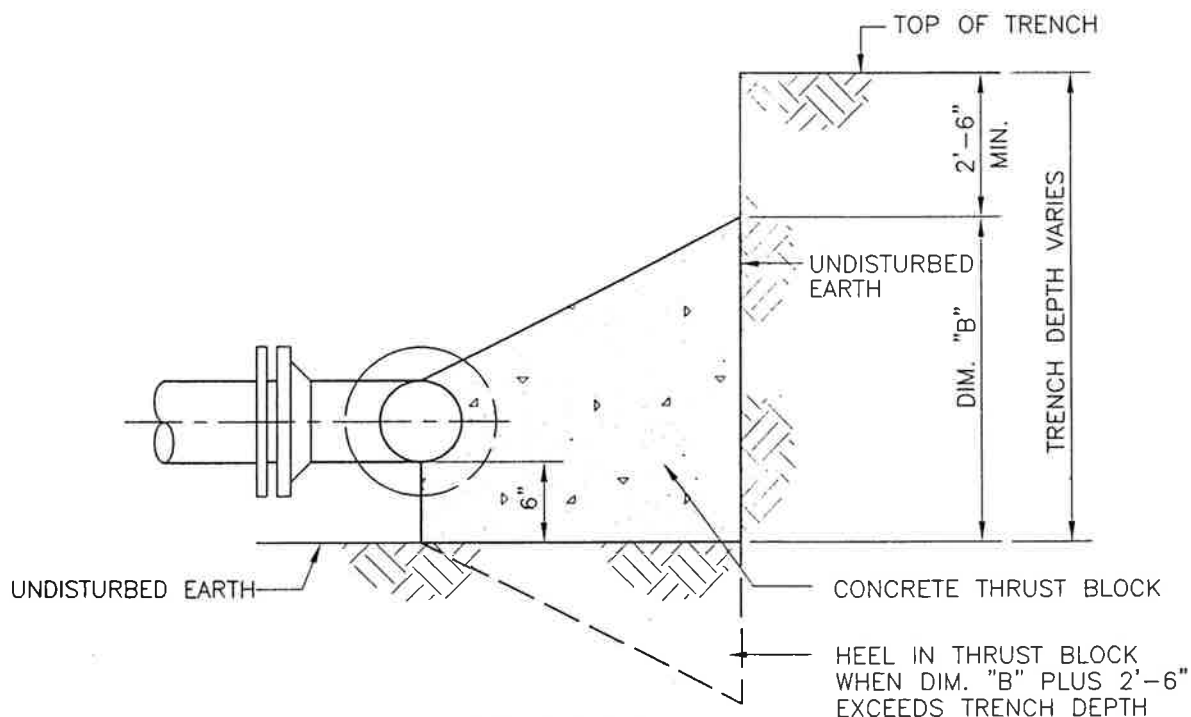
DIM.	BRANCH SIZE			
	4"	6"	8"	12"
A	36"	42"	60"	96"
B	18"	24"	30"	42"

(*) 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.



PLAN



SECTION

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



400 Washington Street, Suite 602
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DATE:

JUNE 2002

DETAIL:

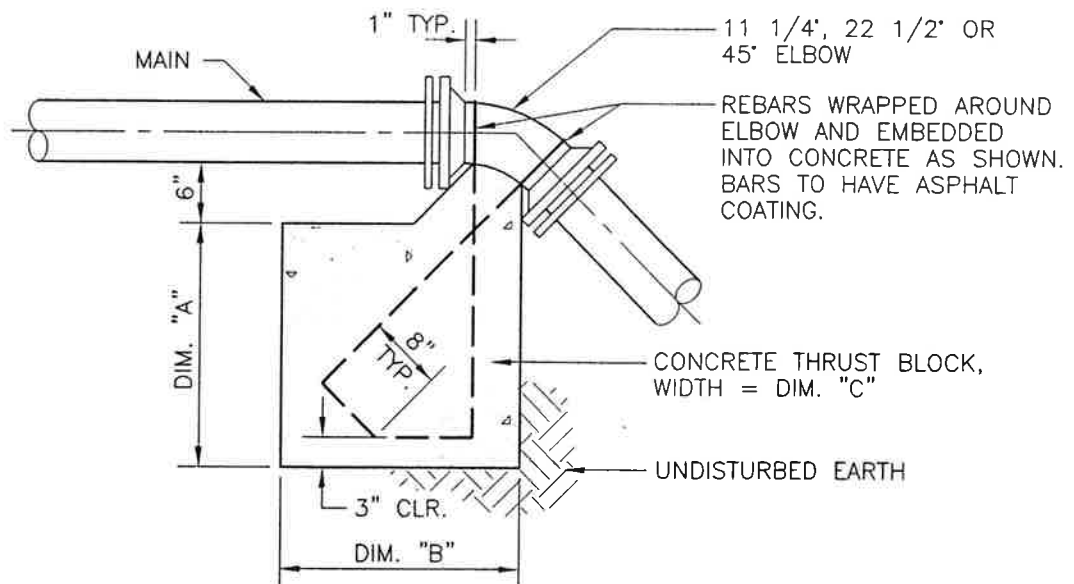
27

HORIZONTAL RESTRAINT
THRUST BLOCKING DETAIL - TEES (DIP)

THRUST BLOCK DIMENSION SCHEDULE – VERTICAL ELBOWS(*) (DUCTILE IRON PIPE)									
DIM.	6"-11 1/4"	8"-11 1/4"	12"-11 1/4"	6"-22 1/2"	8"-22 1/2"	12"-22 1/2"	6"-45°	8"-45°	12"-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.



SECTION

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2004 WEAVERTOWN ROAD
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STANDARD DETAIL - SEWER SYSTEM

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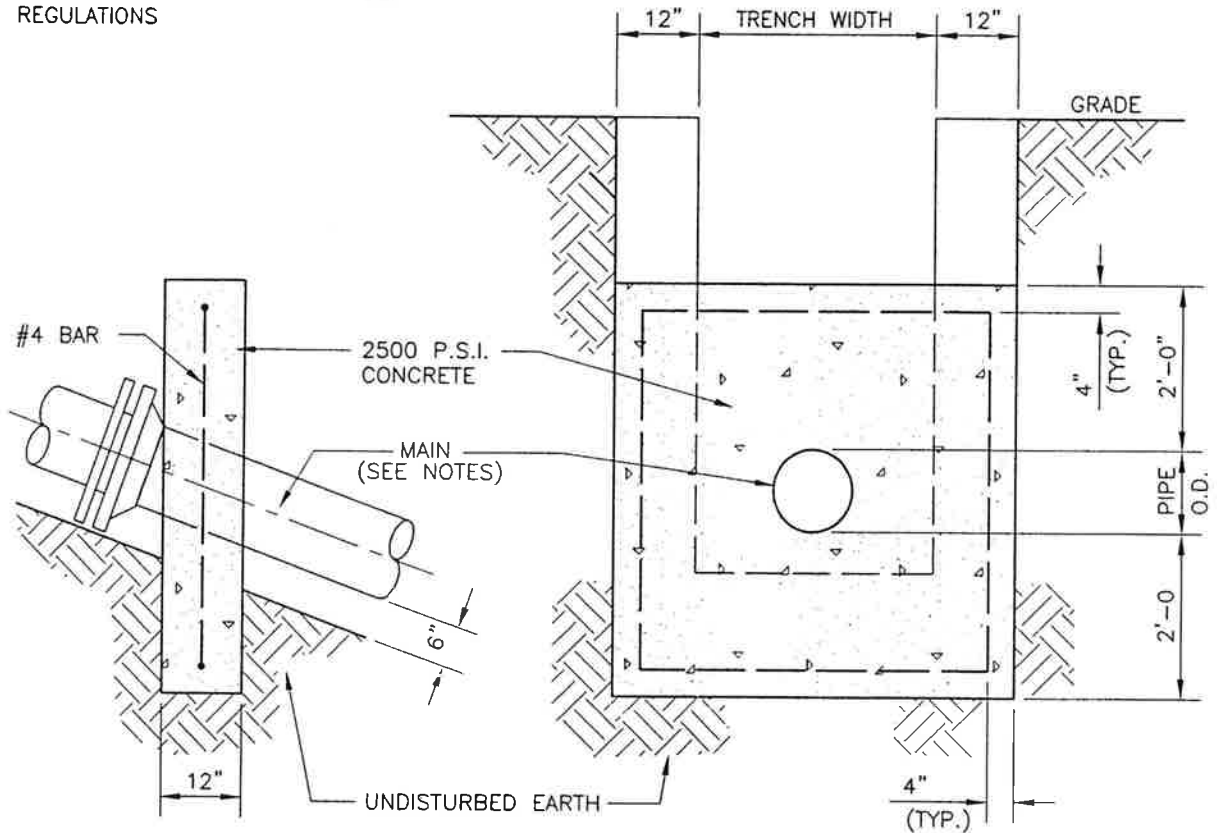
**VERTICAL DOWN RESTRAINT
THRUST BLOCKING DETAIL – ELBOWS (DIP)**

DATE:
JUNE 2005

DETAIL:
28

NOTES:

- 1) USE DUCTILE IRON PIPE AT ANCHOR LOCATIONS OR WRAP PVC PIPE WITH 1/2" THICK NEOPRENE AT ANCHOR
- 2) CENTERLINE TO CENTERLINE SPACINGS OF ANCHORS SHALL MEET PA DEP REGULATIONS



SIDE ELEVATION

FRONT ELEVATION

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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

CONCRETE ANCHOR DETAIL



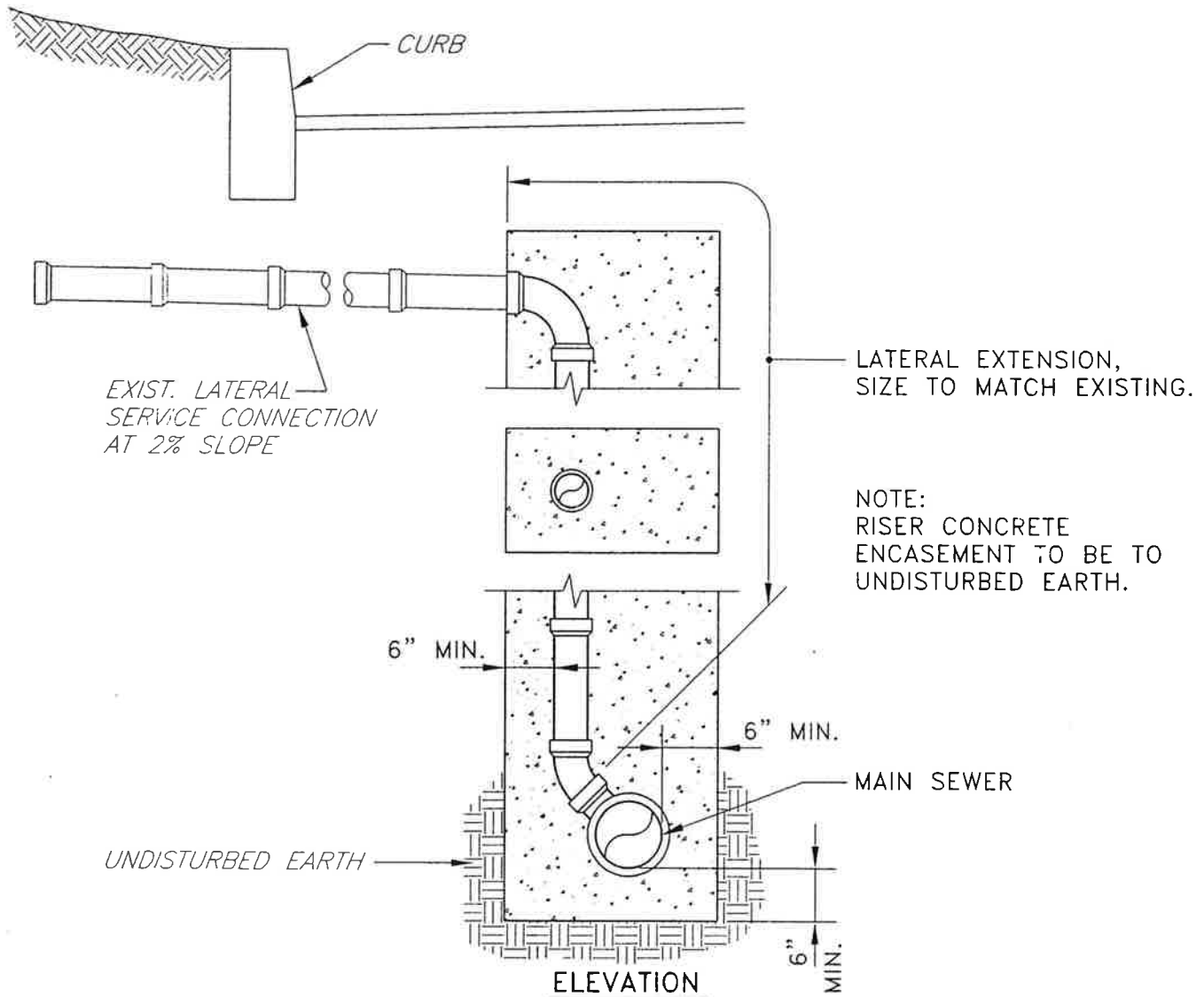
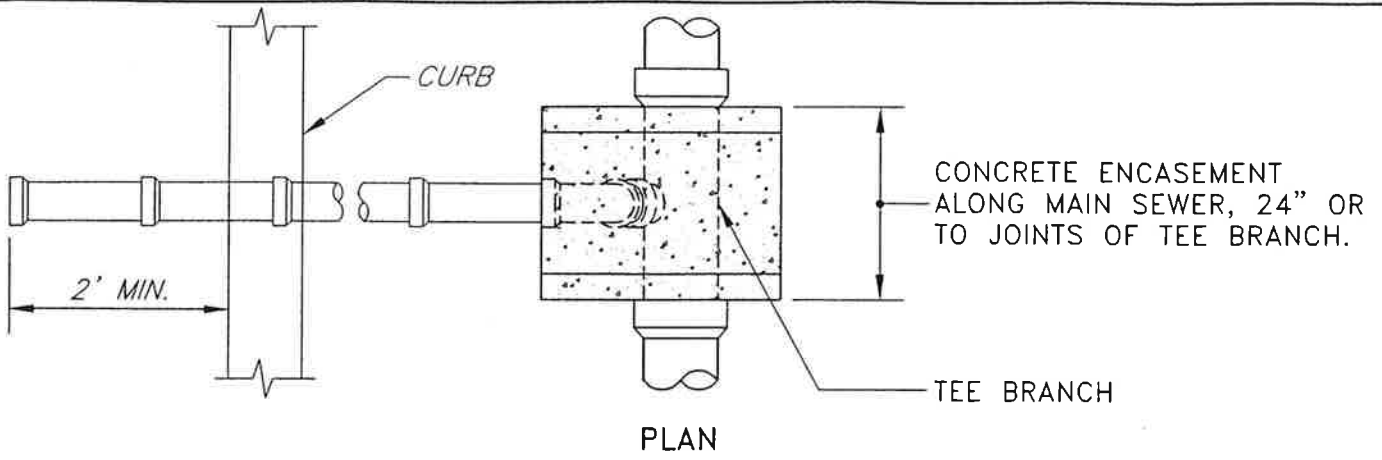
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DATE:

JUNE 2005

DETAIL:

29



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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

EXISTING LATERAL EXTENSION

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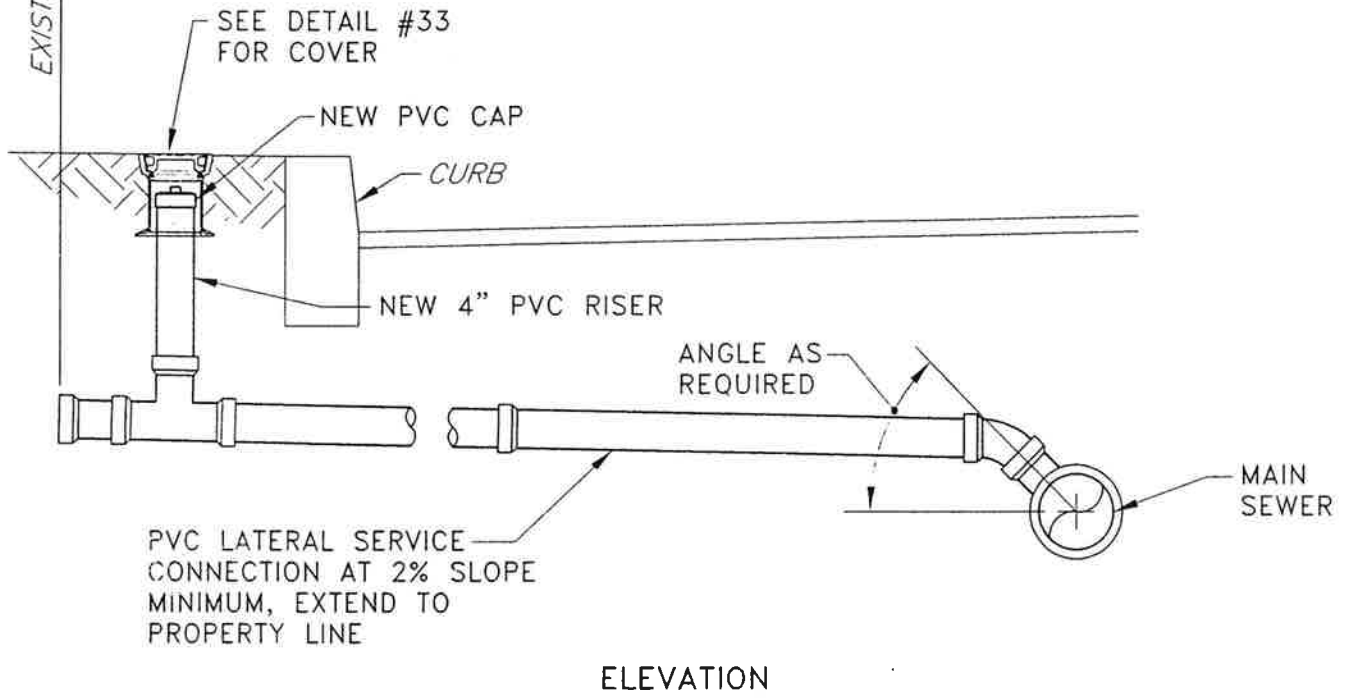
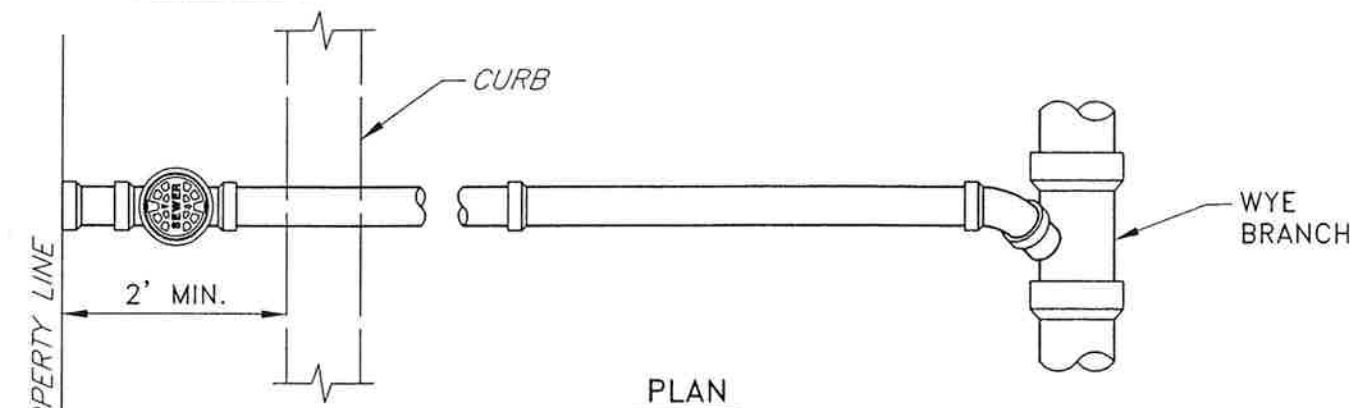
400 Washington Street, Suite 602
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DATE:

JUNE 2005

DETAIL:

30



NOTES:

- 1) REPAIRS - LATERAL SIZE TO MATCH EXISTING HOUSE LATERAL.
- 2) NEW CONSTRUCTION - 6" SERVICE LATERALS.
- 3) PROVIDE CLEANOUTS EVERY 70' ON LATERALS.
- 4) CONTRACTOR TO PROVIDE TREATED 2x4 OR MARKING TAPE TO GRADE TO LOCATE END OF LATERALS.

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STANDARD DETAIL - SEWER SYSTEM

LATERAL DETAIL

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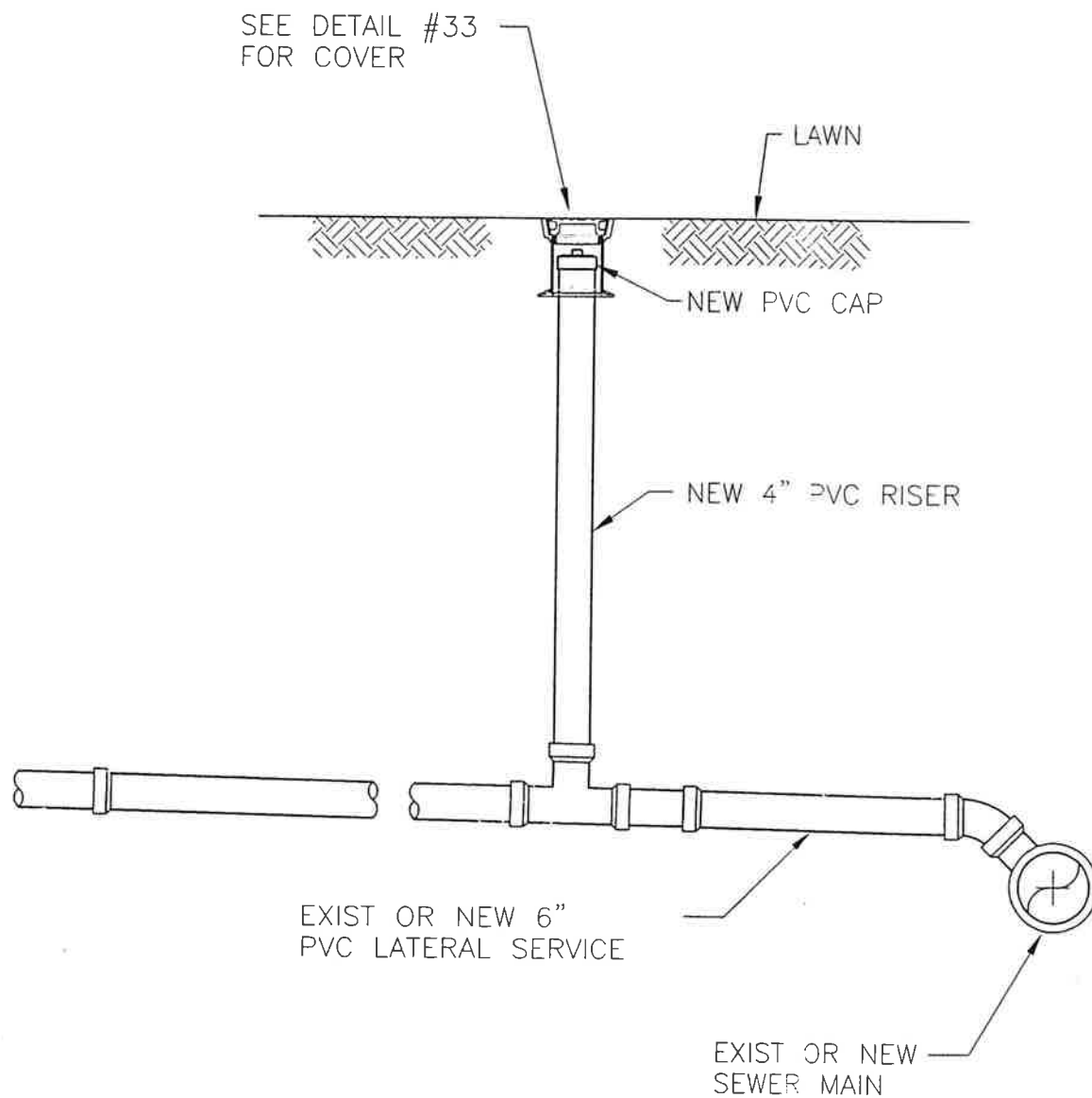
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DATE:

JUNE 2005

DETAIL:

31



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2004 WEAVERTOWN ROAD
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STANDARD DETAIL - SEWER SYSTEM

INSPECTION / TEST TEE



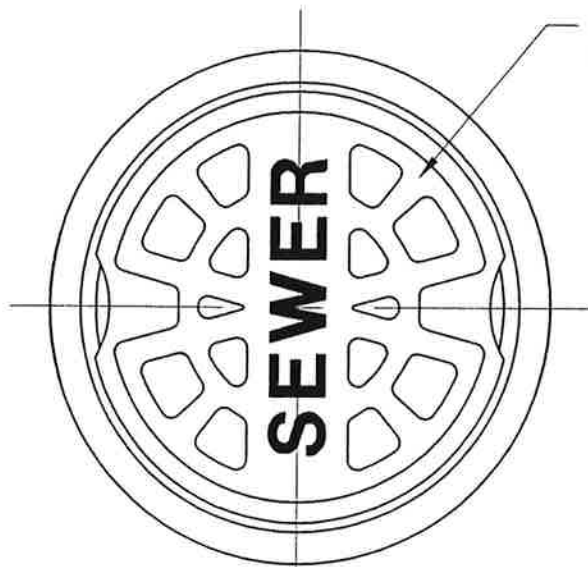
400 Washington Street, Suite 602
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Tel 610.374.5285

DATE:

JUNE 2005

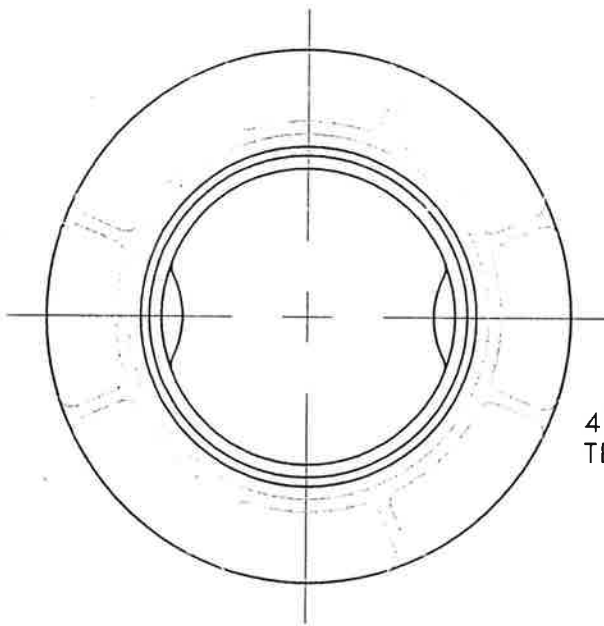
DETAIL:

32



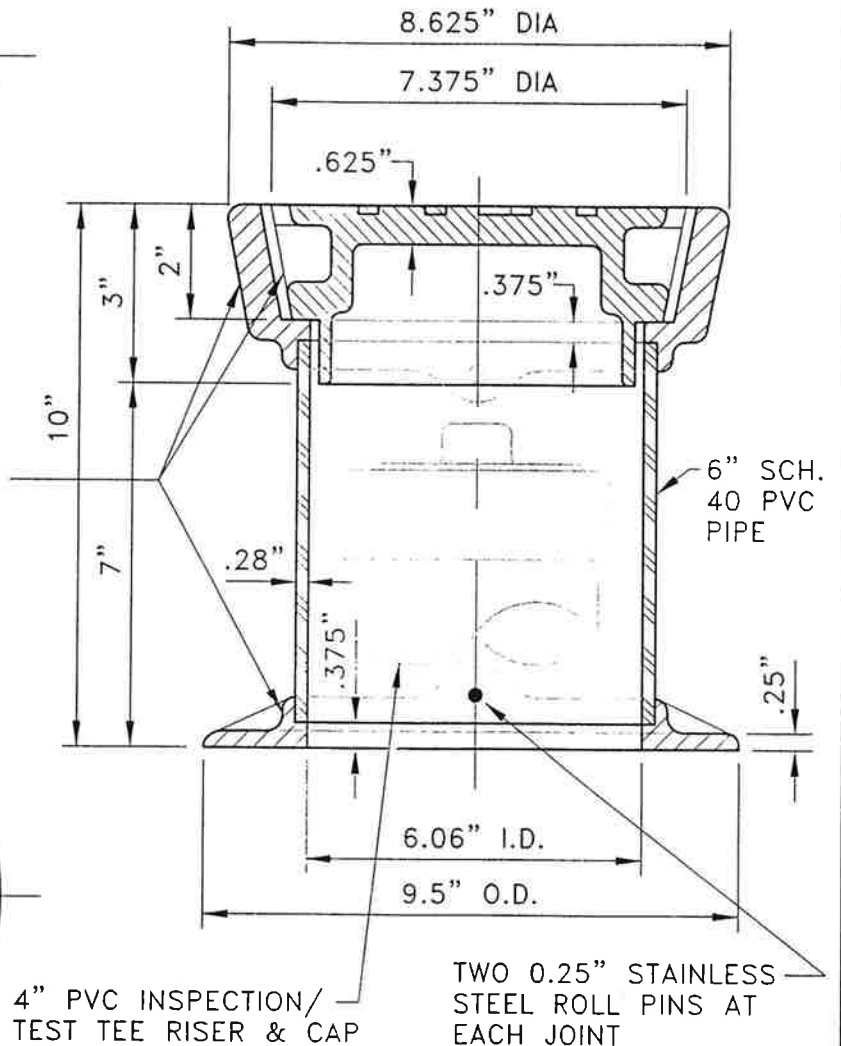
TOP VIEW

ASTM A-48 CLASS 25
CAST IRON ASPHALT
PAINT COATED



BOTTOM VIEW

COVER W/RISER BY
GENECO, PART NO. CC4.



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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

COVER FOR INSPECTION / TEST
TEE IN TRAFFIC AREA

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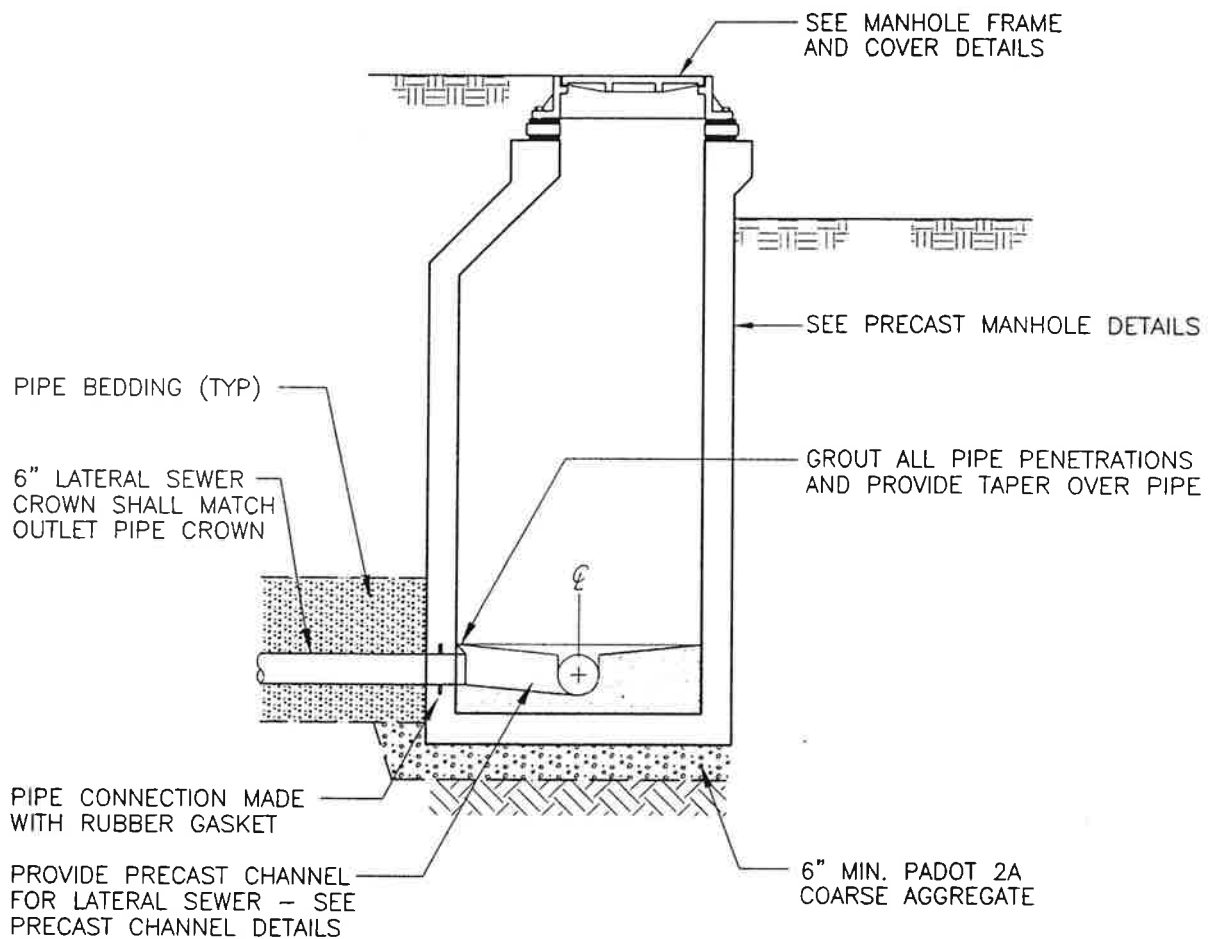
400 Washington Street, Suite 602
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DATE:

JUNE 2005

DETAIL:

33



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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

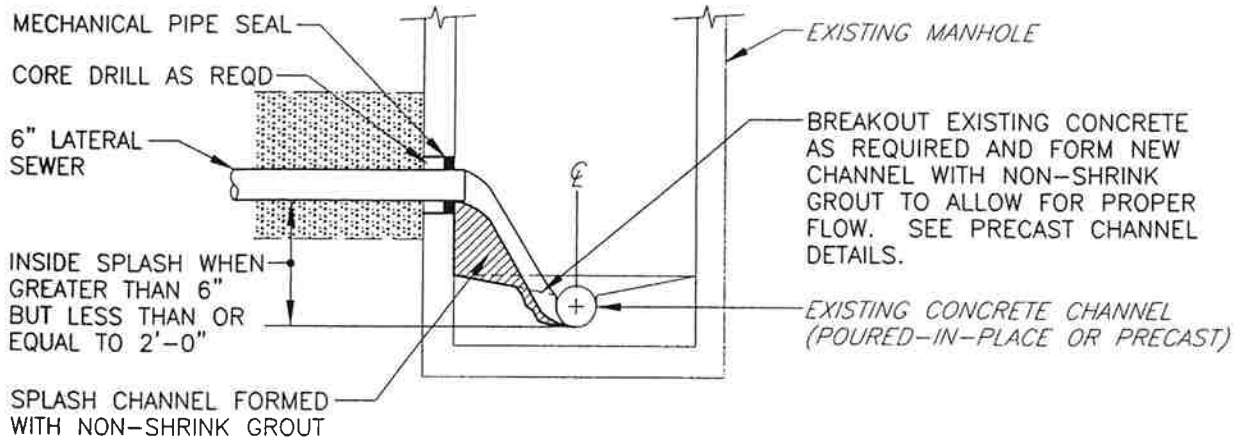


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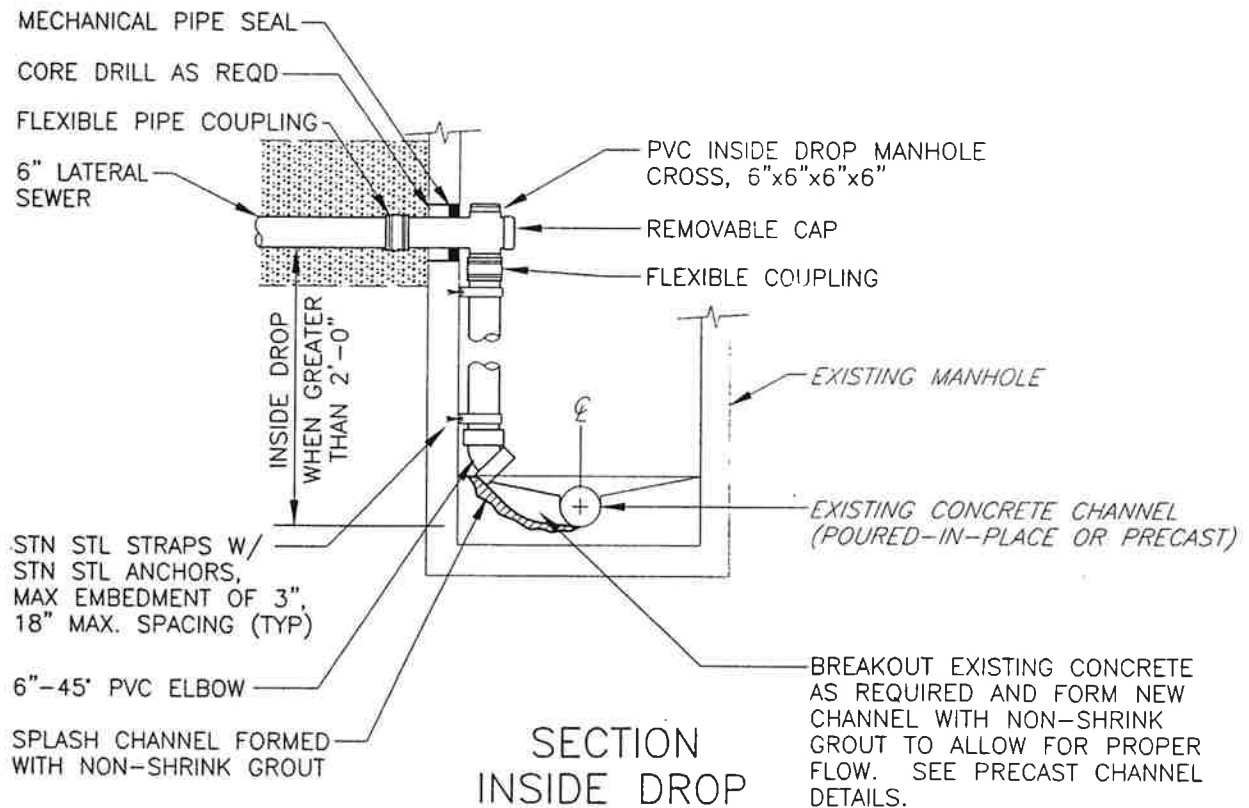
6" LATERAL INTO NEW MANHOLE
(BY SPECIAL EXCEPTION ONLY)

DATE: JUNE 2005

DETAIL: 34



SECTION INSIDE SPLASH



SECTION INSIDE DROP

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
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STANDARD DETAIL - SEWER SYSTEM



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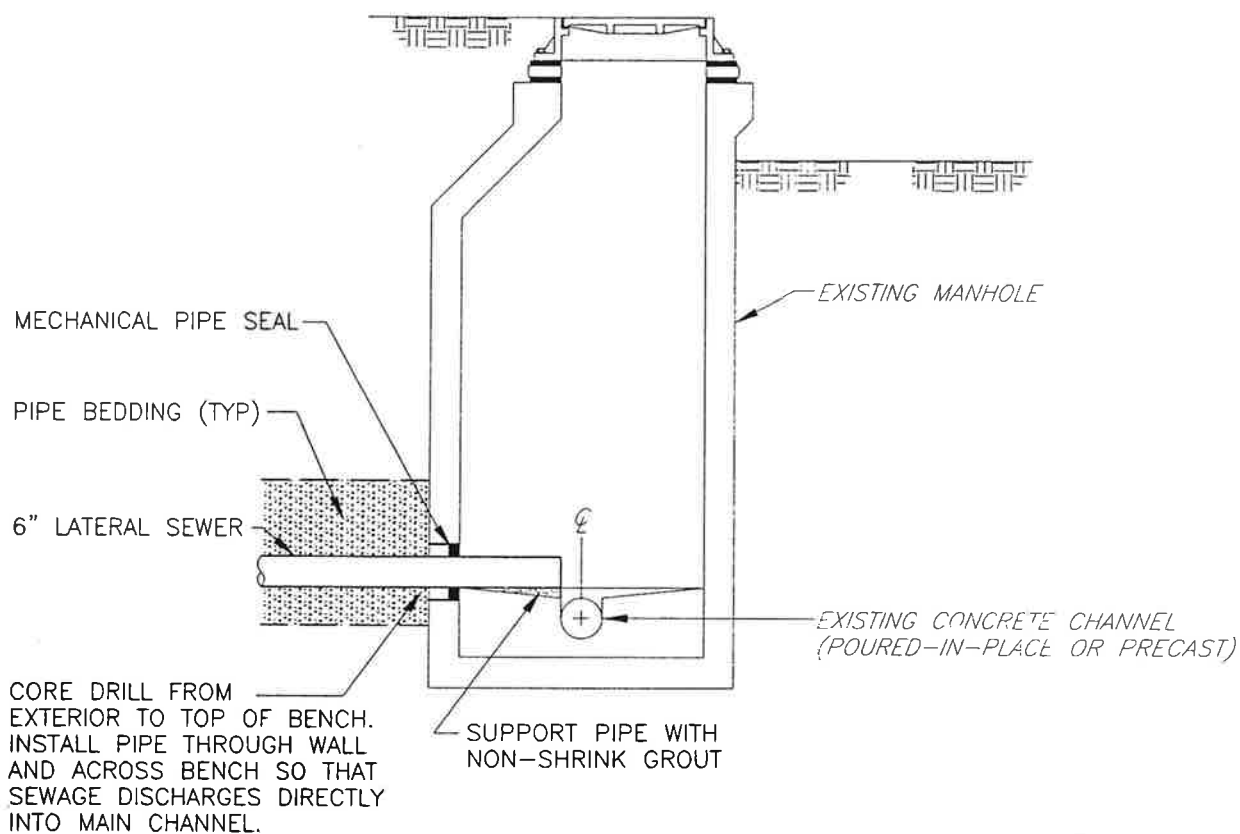
DATE:

JUNE 2005

DETAIL:

35

INSIDE SPLASH/DROP - 6" LATERAL INTO
EXIST. MH (BY SPECIAL EXCEPTION ONLY)



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2004 WEAVERTOWN ROAD
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STANDARD DETAIL - SEWER SYSTEM

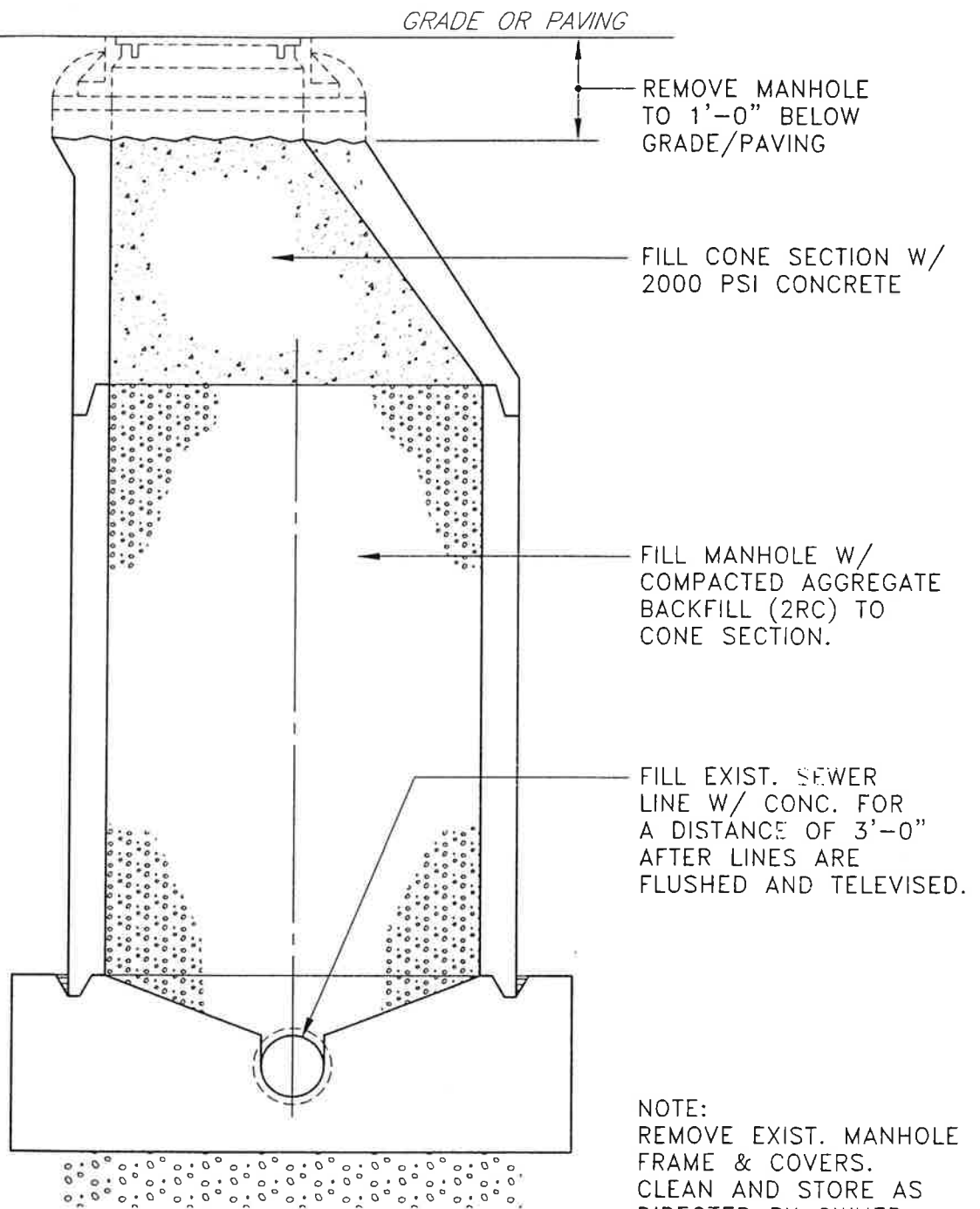


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6" LATERAL INTO EXISTING MANHOLE
(BY SPECIAL EXCEPTION ONLY)

DATE:
JUNE 2005

DETAIL:
36



NOTE:
REMOVE EXIST. MANHOLE
FRAME & COVERS.
CLEAN AND STORE AS
DIRECTED BY OWNER.

AMITY TOWNSHIP
2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

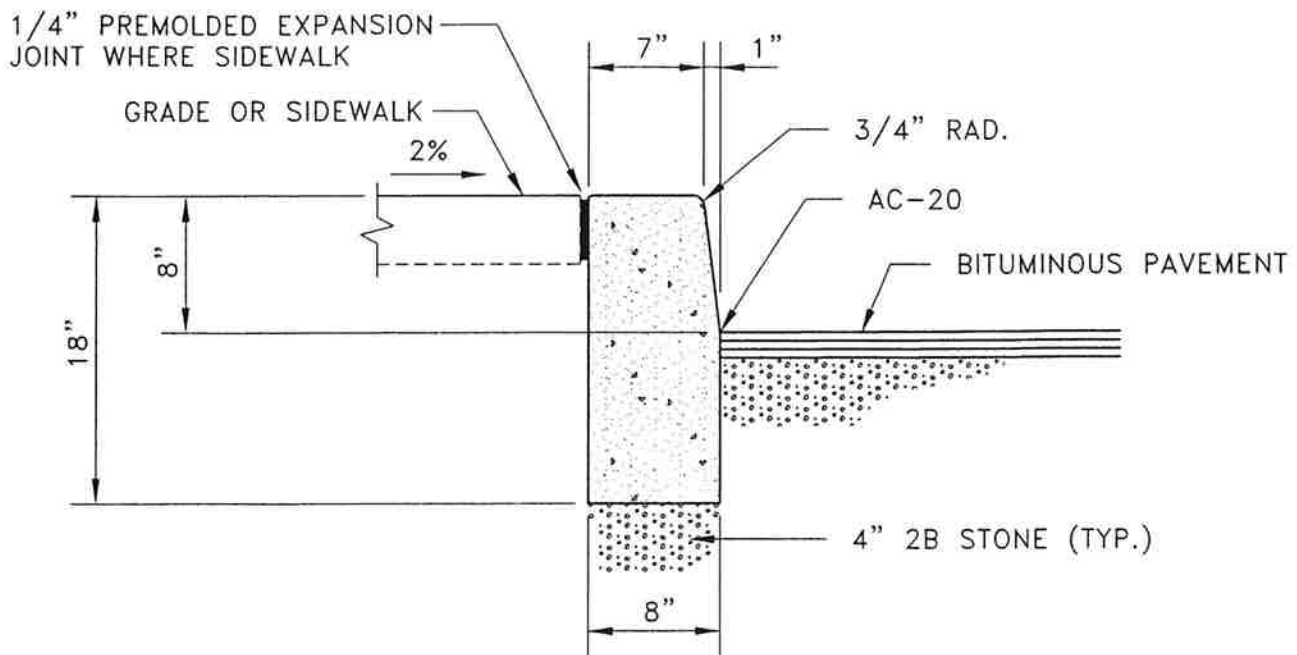
MANHOLE ABANDONMENT DETAIL

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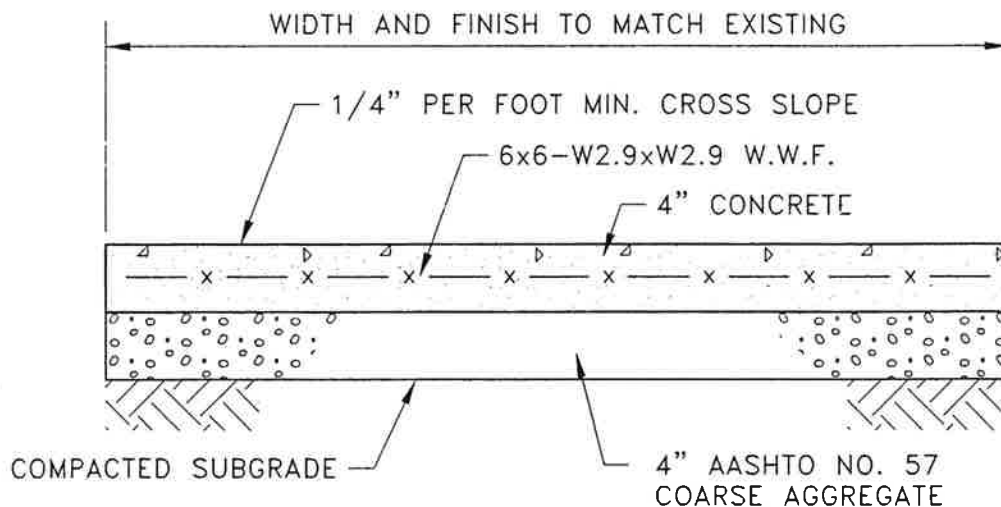
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DATE:
JUNE 2005

DETAIL:
37



STANDARD STRAIGHT CURB DETAIL



NOTE: PROVIDE 1/2" TOOLED CONTRACTION JOINTS AT MAXIMUM 4'-0" SPACING.
 PROVIDE 1/2" EXPANSION JOINTS AT MAXIMUM 20'-0" SPACING.

SIDEWALK DETAIL

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
 DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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CURB AND SIDEWALK DETAILS

DATE:

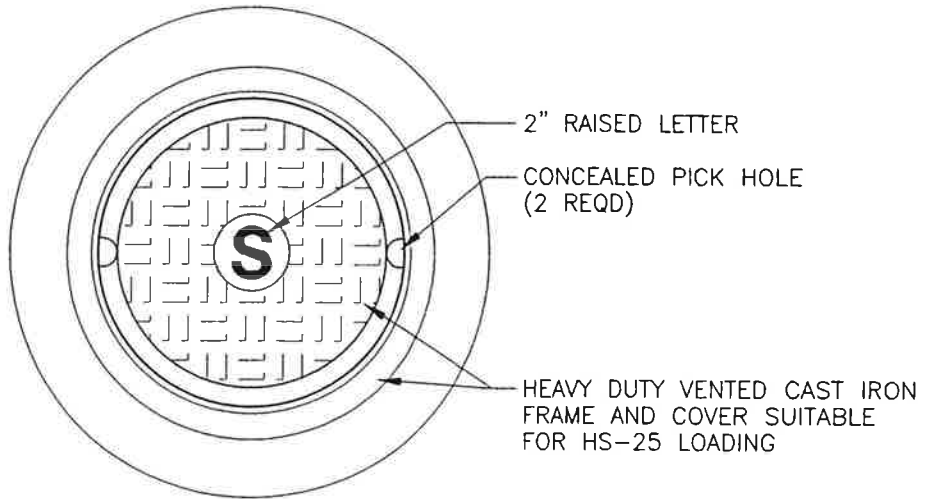
JUNE 2005

DETAIL:

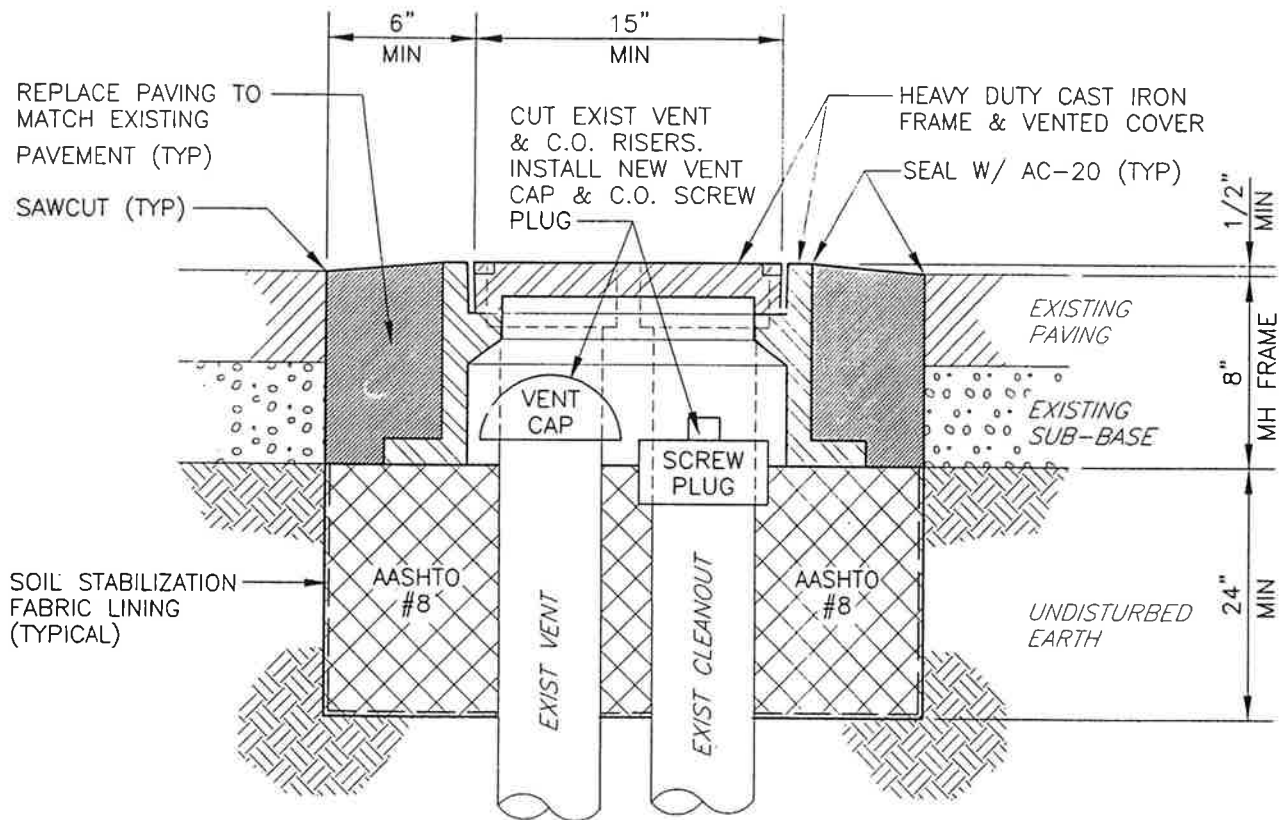
38

NOTES:

1. THIS DETAIL PERTAINS ONLY TO EXISTING VENTS & CLEANOUTS.
2. VENT CAP SHOULD MATCH EXISTING VENT MATERIAL.
3. EACH DRAIN WILL BE TESTED FOR DRAINAGE.



COVER PATTERN



SECTION

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

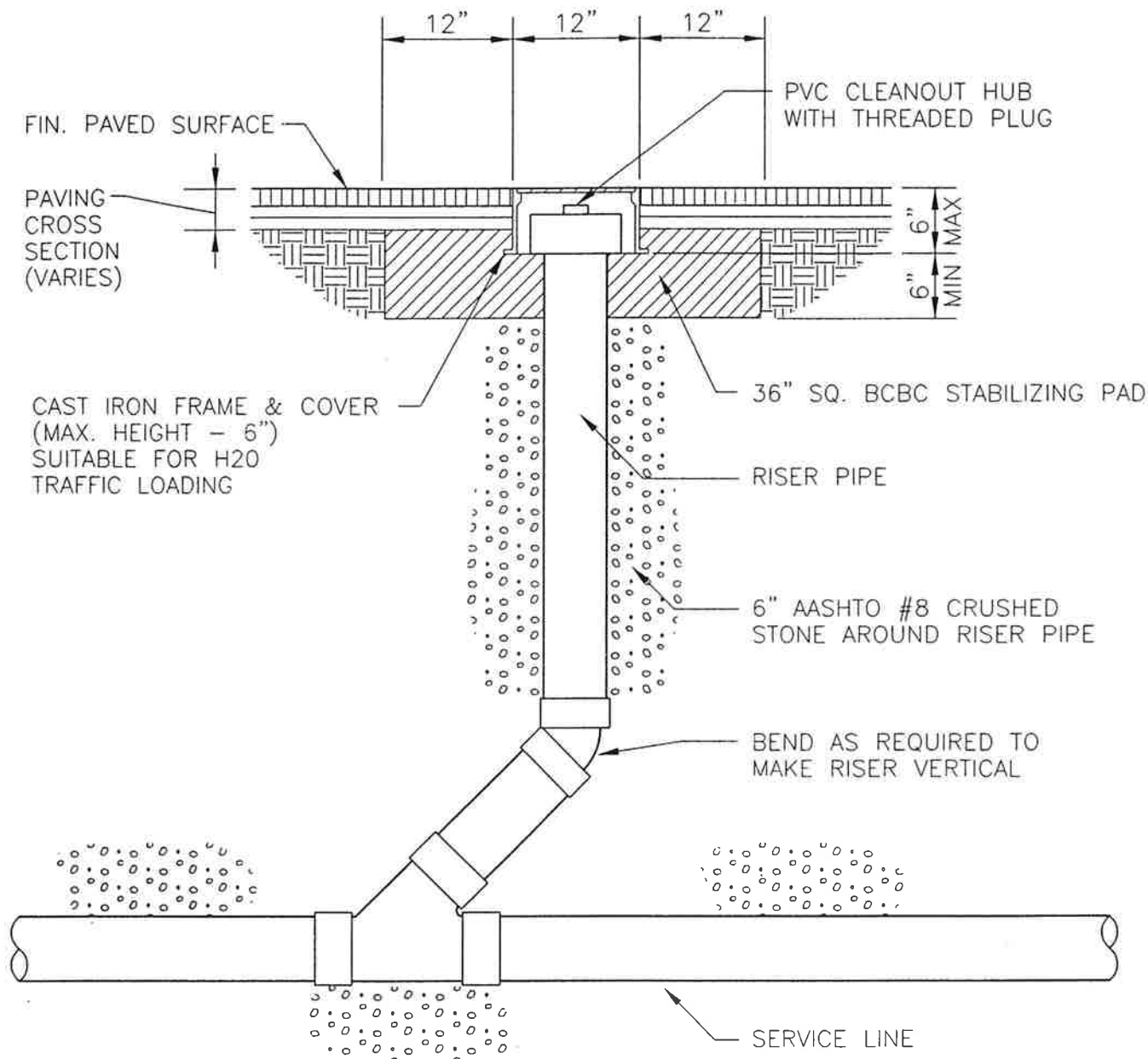


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EXISTING VENTS AND CLEANOUTS
IN PAVED AREAS DETAIL

DATE:
JUNE 2005

DETAIL:
39



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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

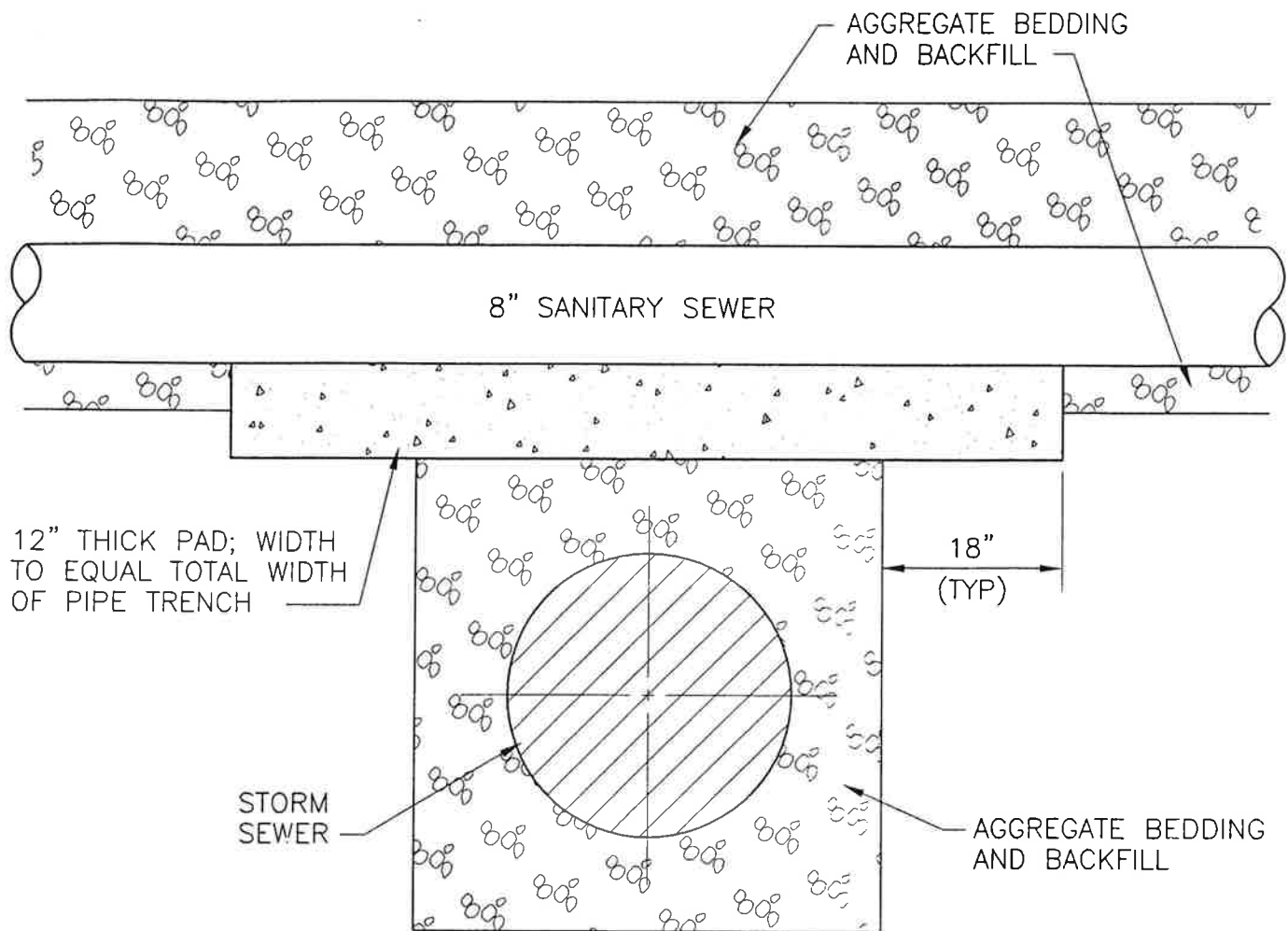
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NEW CLEANOUT IN PAVED AREAS DETAIL
(BY SPECIAL EXCEPTION ONLY)

DATE:
JUNE 2005

DETAIL:
40



NOTE:
 DETAIL IS SIMILAR FOR AREAS
 WHERE STORM SEWER CROSSES
 OVER SANITARY SEWER.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
 DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

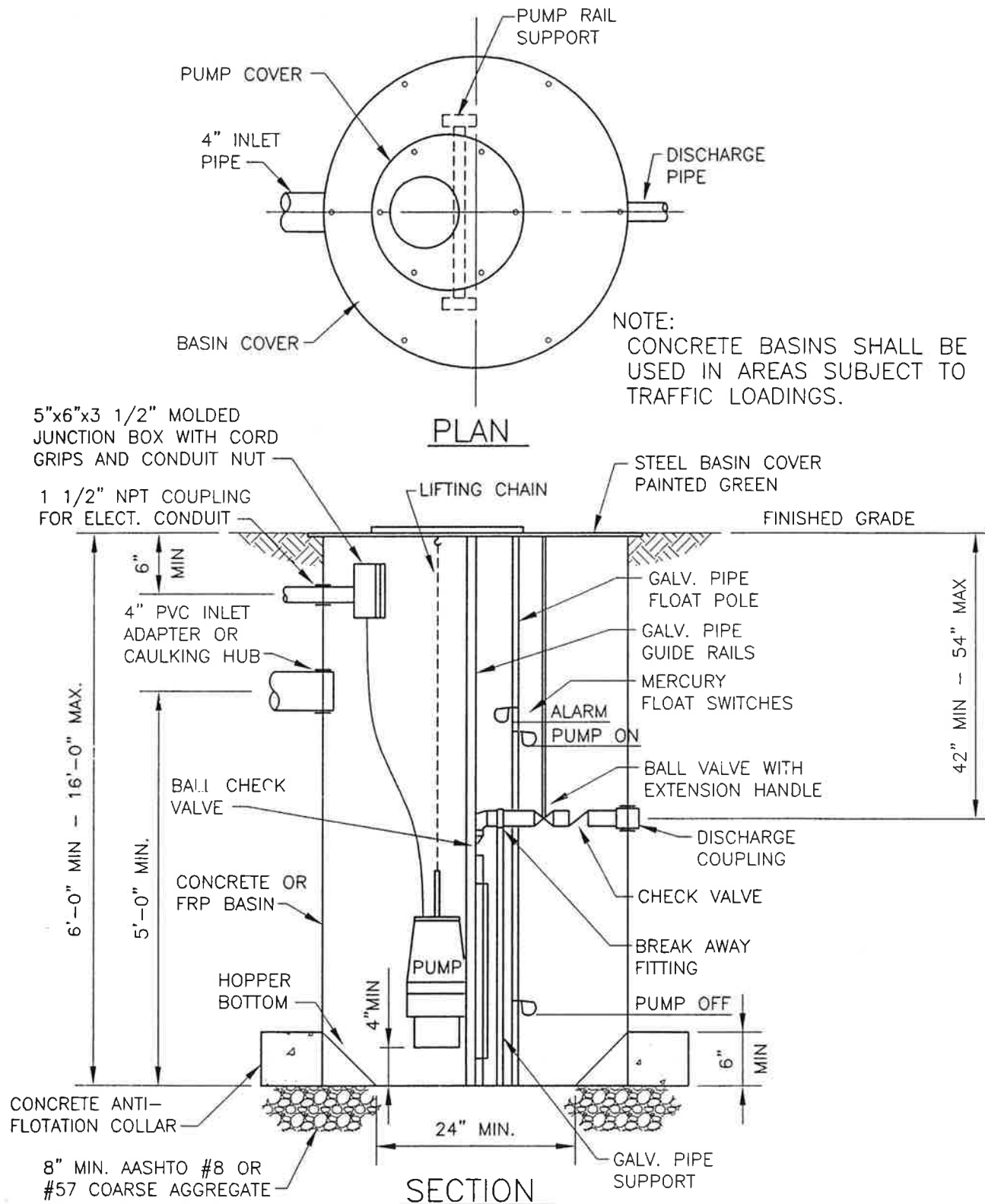
PIPELINE CROSSING DETAIL (STORM SEWER)



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DATE:
 FEBRUARY 2005

DETAIL:
 41



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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

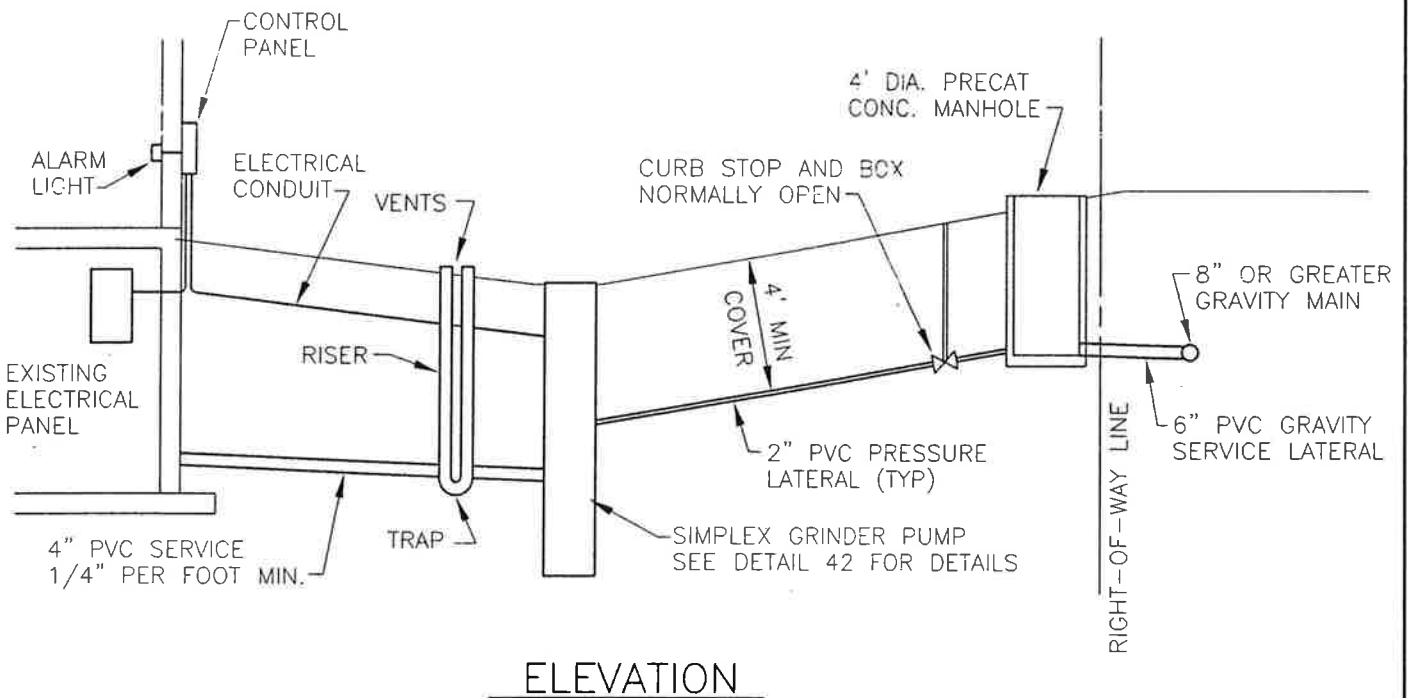
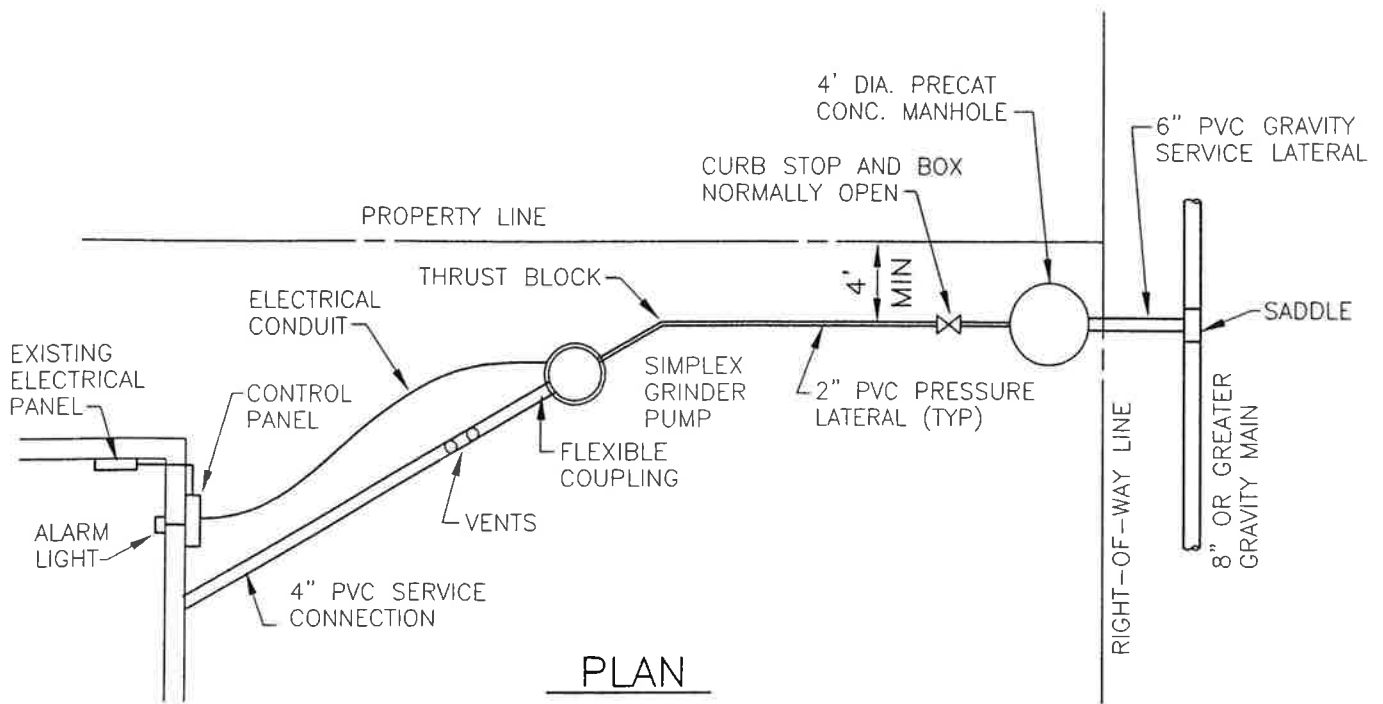
SIMPLEX GRINDER PUMP DETAIL



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DATE: JUNE 2005

DETAIL: 42



AMITY TOWNSHIP
 2004 WEAVERTOWN ROAD
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STANDARD DETAIL - SEWER SYSTEM

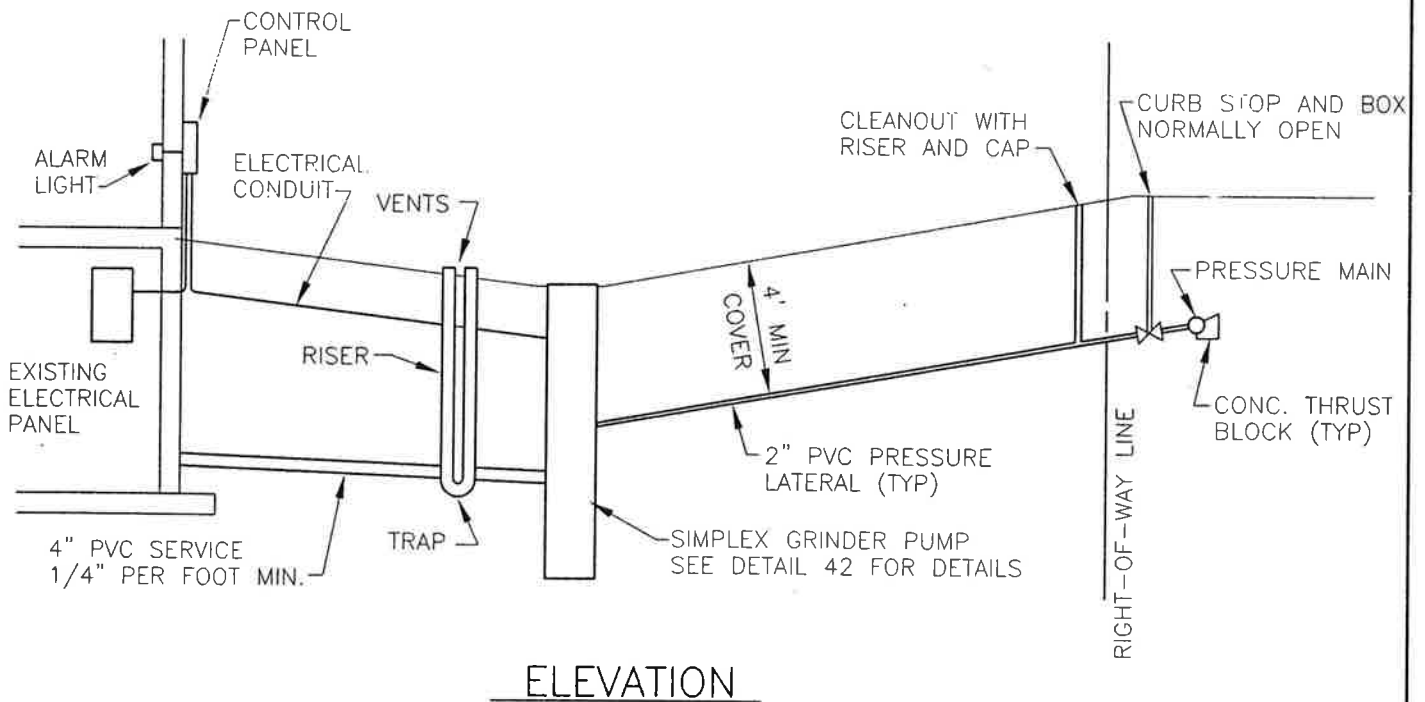
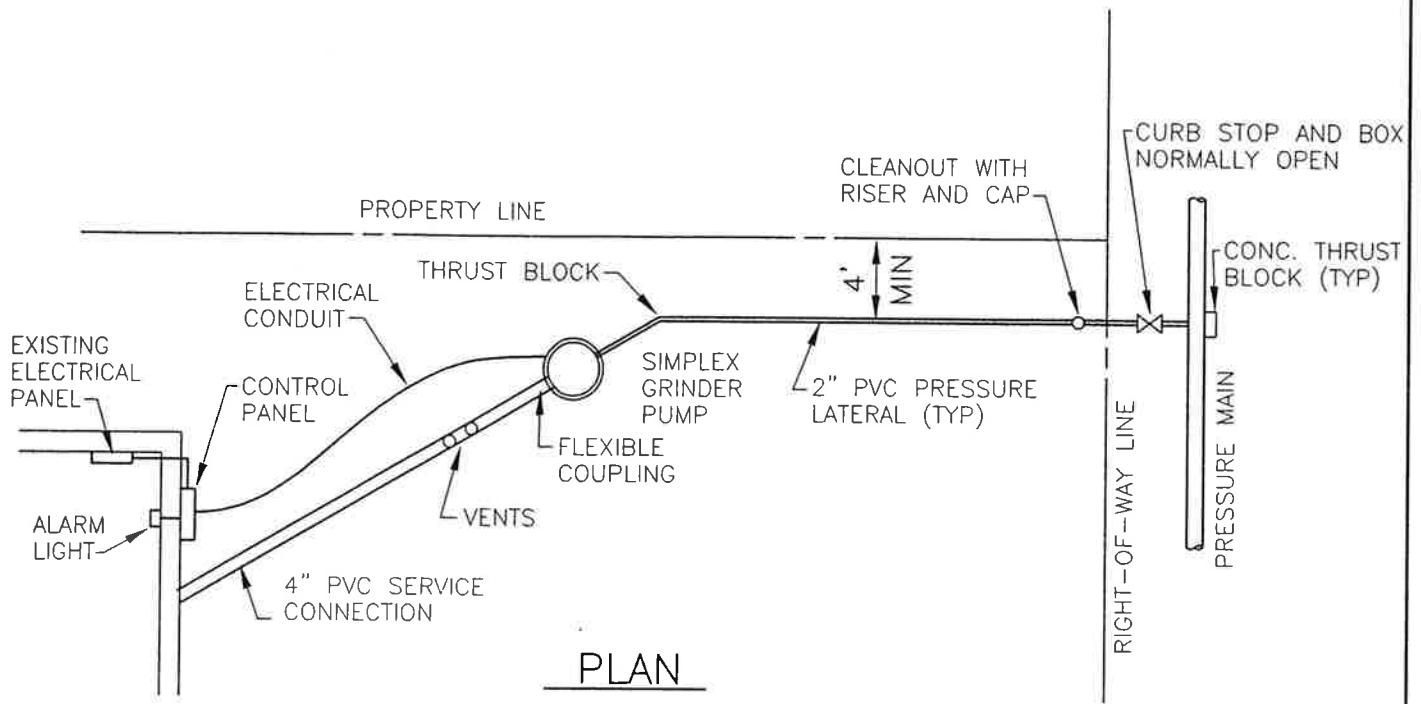
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**PRESSURE LATERAL DETAIL
 DISCHARGE TO GRAVITY MAIN**

DATE: JUNE 2005

DETAIL: 43



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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

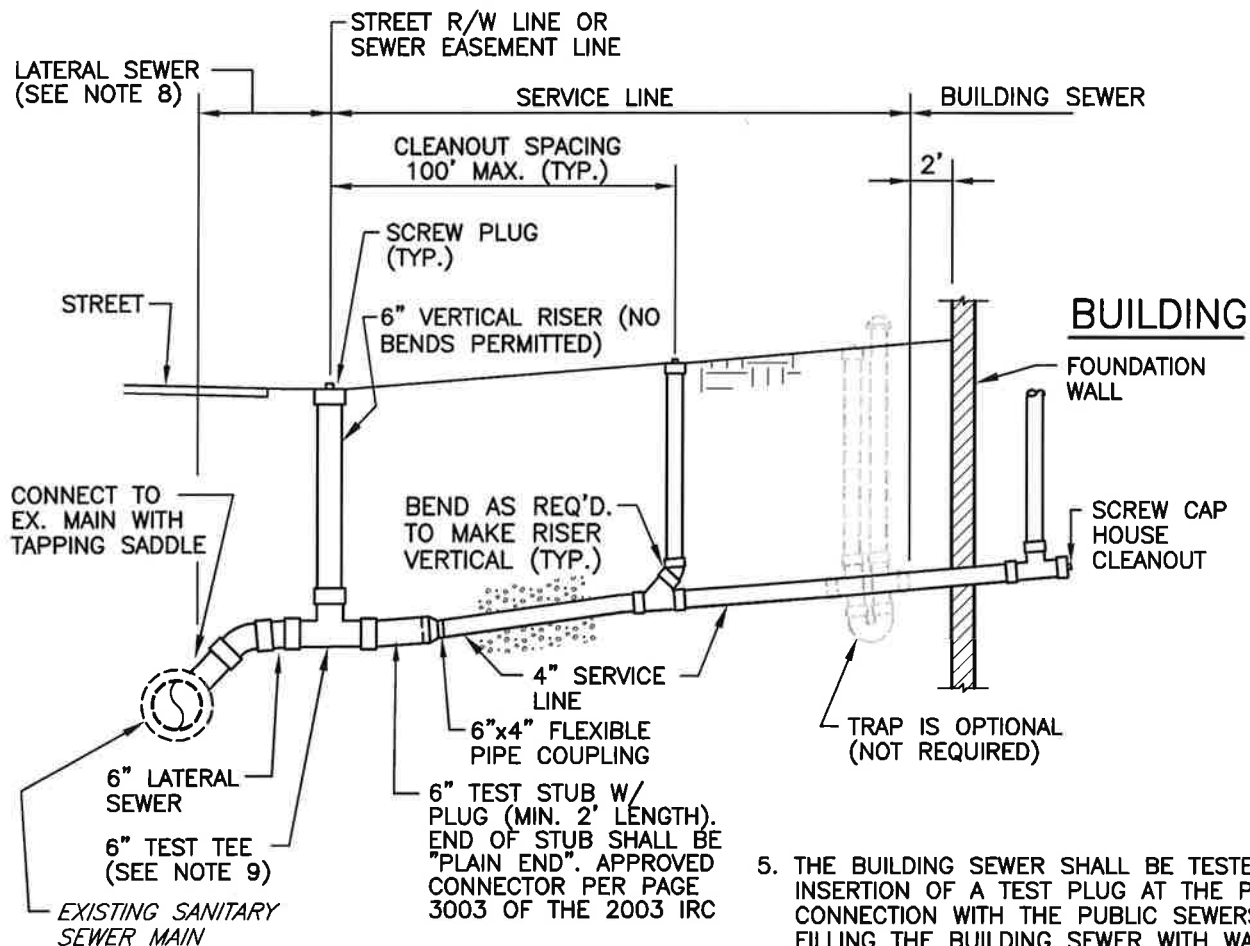
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Tel 610.374.5285

PRESSURE LATERAL DETAIL DISCHARGE TO PRESSURE MAIN

DATE:
JUNE 2005

DETAIL:
44



NOTES:

1. PROVIDE 6" OF AASHTO NO. 57 (2B) STONE BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL)
2. MINIMUM SLOPE: 1/4"/FT (2%) FOR 2 1/2"Ø AND LESS, AND NOT LESS THAN 1/8"/FT (1%) FOR DIAMETER OS 3" OR MORE
3. MINIMUM DEPTH OF COVER : 3 FOOT
4. PIPE MATERIALS FOR SERVICE LINES:
 - A. PVC SDR 35
 - B. CAST IRON
 - C. MATERIAL MUST MEET REQUIREMENTS OF TABLE 3002.2 OF THE 2003 IRC
5. THE BUILDING SEWER SHALL BE TESTED BY INSERTION OF A TEST PLUG AT THE POINT OF CONNECTION WITH THE PUBLIC SEWERS AND FILLING THE BUILDING SEWER WITH WATER, TESTING WITH NOT LESS THAN A 10 FOOT HEAD OF WATER AND BE ABLE TO MAINTAIN SUCH PRESSURE FOR 15 MINUTES. TEST MUST BE PERFORMED PRIOR TO BACKFILL.
6. NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100-YEAR 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.
8. THE LATERAL SEWER SHALL BE INSTALLED TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF-WAY AS A MINIMUM, OR TO SUCH POINT, AS REQUIRED, TO CLEAR STREET SIDEWALKS AND UNDERGROUND UTILITIES.
9. SET 6" TEST TEE AT 1% SLOPE TO PERMIT VERTICAL RISER INSTALLATION WITH NO BENDS.

AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

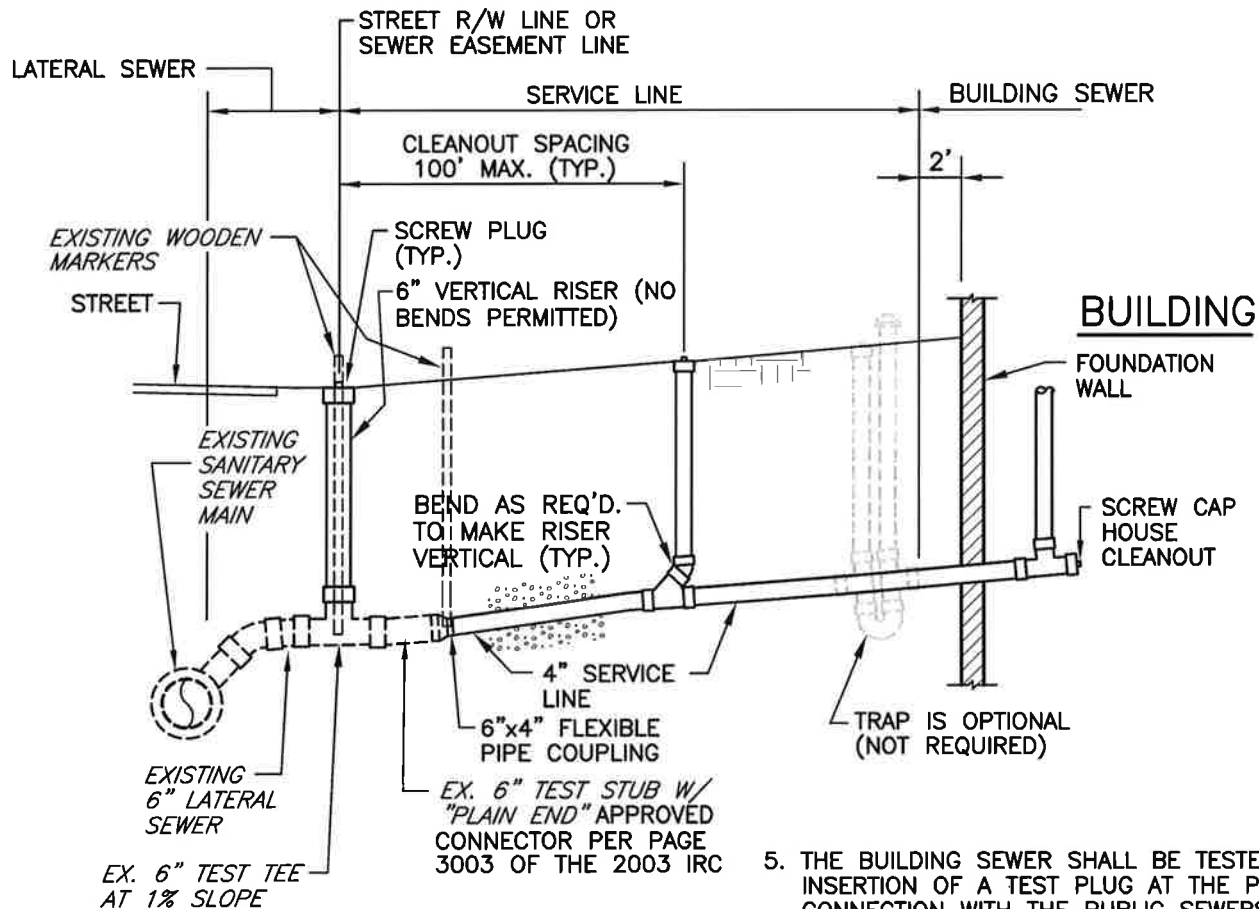


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**SERVICE LATERAL AND HOUSE SERVICE
CONNECTION TO EXISTING SEWER MAIN**

DATE:
MARCH 2010

DETAIL:
45



NOTES:

1. PROVIDE 6" OF AASHTO NO. 57 (2B) STONE BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL)
2. MINIMUM SLOPE: $1/4"/\text{FT}$ (2%) FOR 2 $1/2"$ ϕ AND LESS, AND NOT LESS THAN $1/8"/\text{FT}$ (1%) FOR DIAMETER OS 3" OR MORE
3. MINIMUM DEPTH OF COVER : 3 FOOT
4. PIPE MATERIALS FOR SERVICE LINES:
 - A. PVC SDR 35
 - B. CAST IRON
 - C. MATERIAL MUST MEET REQUIREMENTS OF TABLE 3002.2 OF THE 2003 IRC
5. THE BUILDING SEWER SHALL BE TESTED BY INSERTION OF A TEST PLUG AT THE POINT OF CONNECTION WITH THE PUBLIC SEWERS AND FILLING THE BUILDING SEWER WITH WATER, TESTING WITH NOT LESS THAN A 10 FOOT HEAD OF WATER AND BE ABLE TO MAINTAIN SUCH PRESSURE FOR 15 MINUTES. TEST MUST BE PERFORMED PRIOR TO BACKFILL.
6. NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100-YEAR 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.
8. THE LATERAL SEWER SHALL BE INSTALLED TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF-WAY AS A MINIMUM, OR TO SUCH POINT, AS REQUIRED, TO CLEAR STREET SIDEWALKS AND UNDERGROUND UTILITIES.
9. SET 6" TEST TEE AT 1% SLOPE TO PERMIT VERTICAL RISER INSTALLATION WITH NO BENDS.

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2004 WEAVERTOWN ROAD
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STANDARD DETAIL - SEWER SYSTEM

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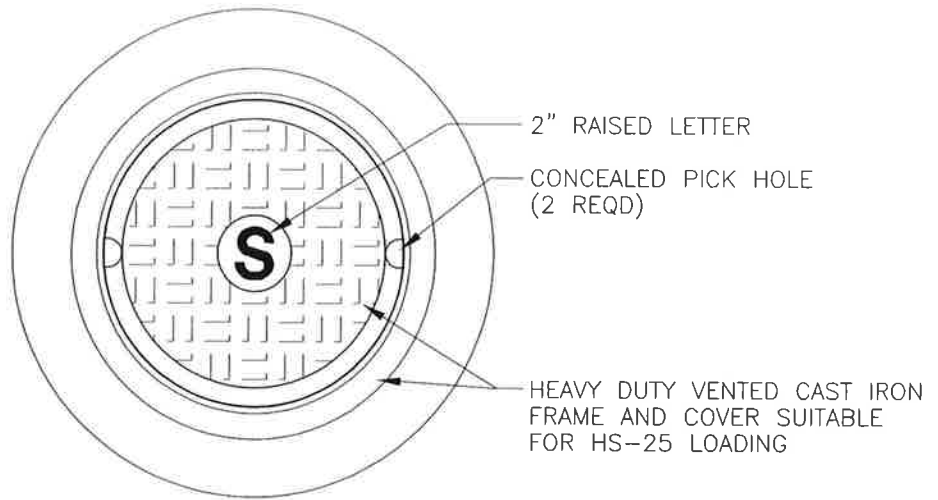
**HOUSE SERVICE CONNECTION
TO EXISTING SERVICE LATERAL**

DATE:
MARCH 2010

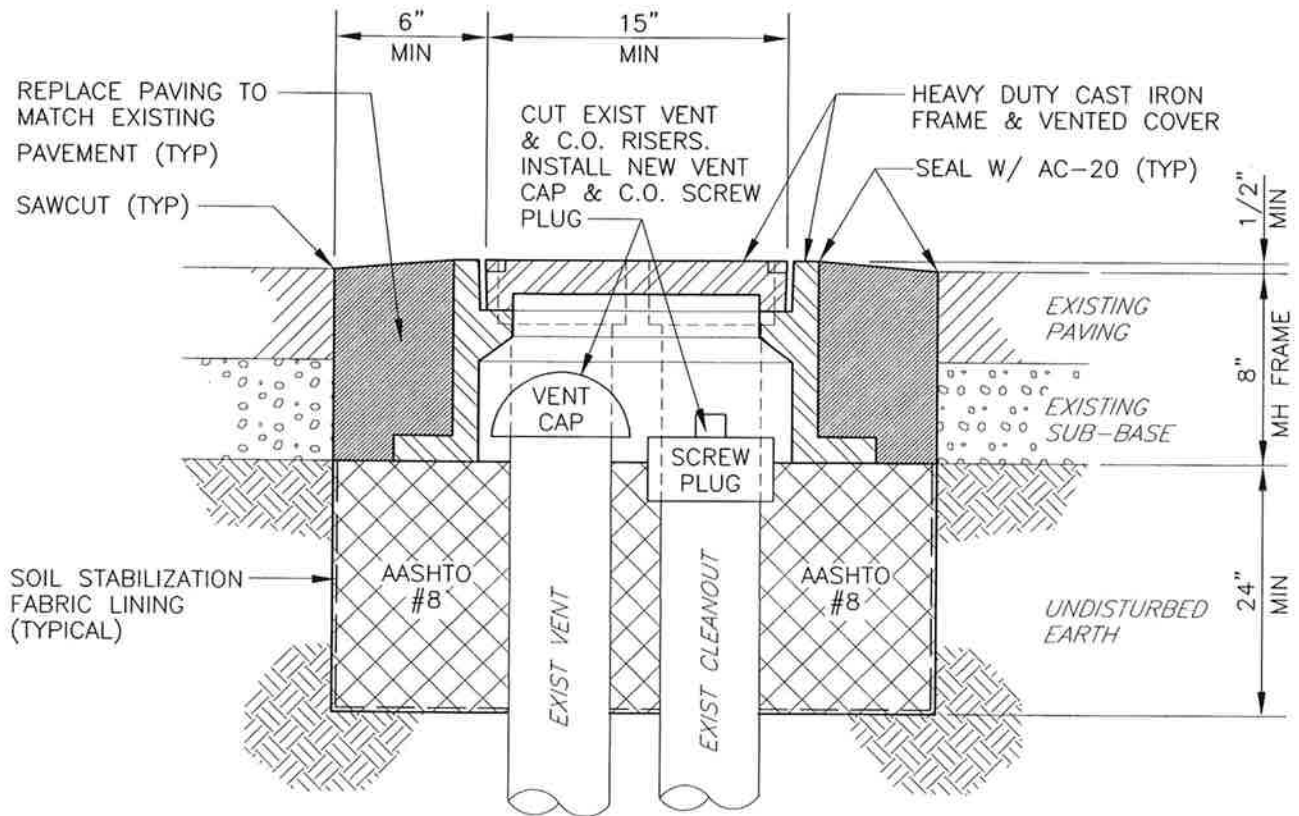
DETAIL:
46

NOTES:

1. THIS DETAIL PERTAINS ONLY TO EXISTING VENTS & CLEANOUTS.
2. VENT CAP SHOULD MATCH EXISTING VENT MATERIAL.
3. EACH DRAIN WILL BE TESTED FOR DRAINAGE.



COVER PATTERN



SECTION

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2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM



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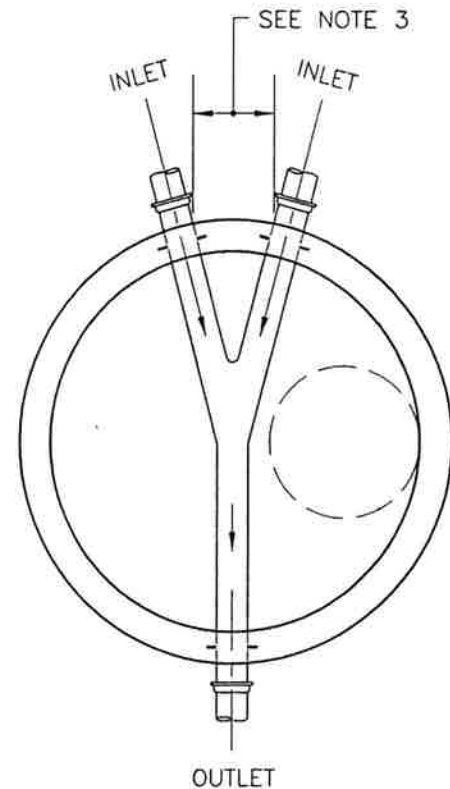
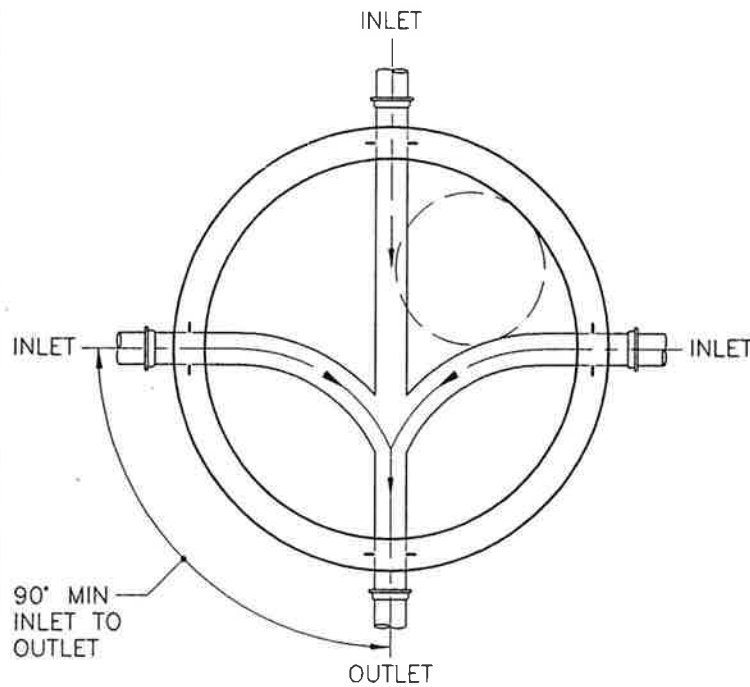
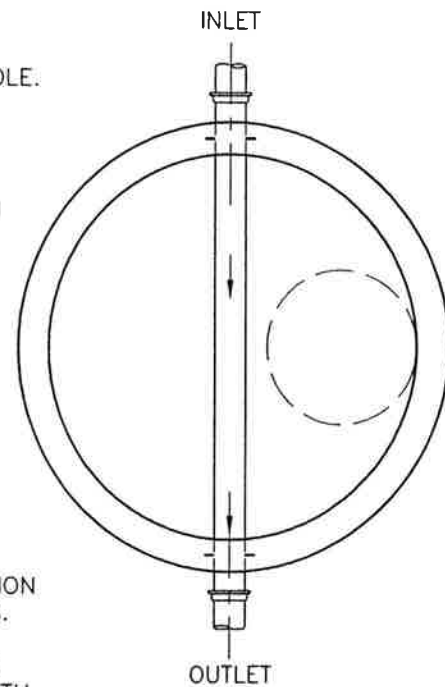
EXISTING VENT & CLEANOUT
IN PAVED AREA DETAIL

DATE:
MARCH 2006

DETAIL:
47

NOTES:

1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO MANHOLE.
2. NO LATERALS INTO MANHOLES, EXCEPT BY SPECIAL EXCEPTION FROM THE AUTHORITY.
3. MINIMUM 12" SEPARATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION
4. MINIMUM CHANNEL DROP THROUGH MANHOLE:
 STRAIGHT THROUGH — 0.1 FEET
 BEND — 0.2 FEET
5. ALL CHANNELS SHALL BE PRECAST, UNLESS OTHERWISE SPECIFICALLY NOTED OR APPROVED.
6. THESE DETAILS APPLY TO PRECAST CHANNELS IN NEW MANHOLES, AND FIELD-FORMED CHANNELS IN EXISTING MANHOLES.
7. CHANNEL BENCH AT PIPE SHALL MATCH 3/4 CROWN ELEVATION OF PIPE AND RISE 1/2" PER FOOT TO THE MANHOLE WALLS.
8. CHANNELS SHALL MATCH THE CROSS-SECTIONAL DIMENSIONS OF THE PIPES ENTERING AND EXITING THE MANHOLE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CHANGES IN PIPE SIZE.



AMITY TOWNSHIP

2004 WEAVERTOWN ROAD
DOUGLASVILLE, PA 19518

STANDARD DETAIL - SEWER SYSTEM

PRECAST CHANNEL DETAILS



400 Washington Street, Suite 602
Reading, Pennsylvania 19601
Tel 610.374.5285

DATE:

JUNE 2005

DETAIL:

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