STANDARD CONSTRUCTION DETAILS

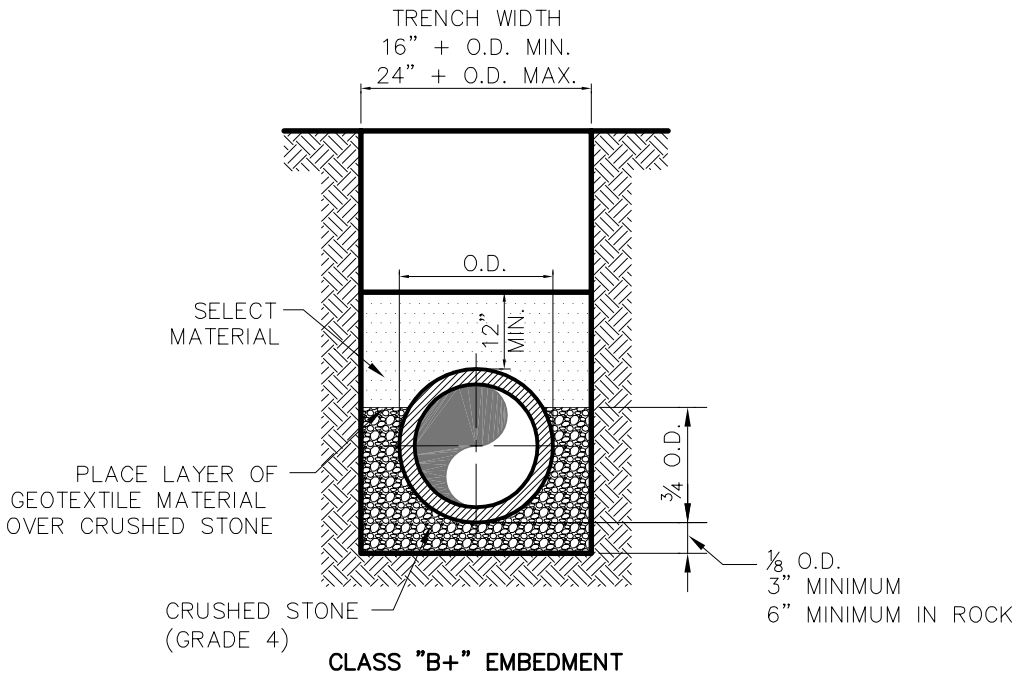
WASTEWATER

AUGUST 2010

PUBLIC WORKS DEPARTMENT

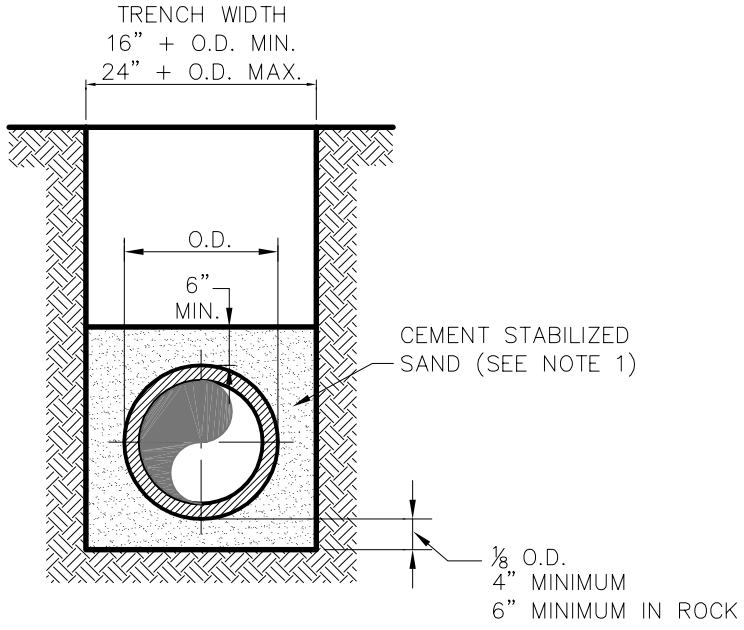
TABLE OF CONTENTS

WASTEWATER



CLASS "B+" EMBEDMENT
CRUSHED STONE SHALL BE 3/4", PASSING # 4 SIEVE

TYPICAL P.V.C. WASTEWATER MAIN EMBEDMENT

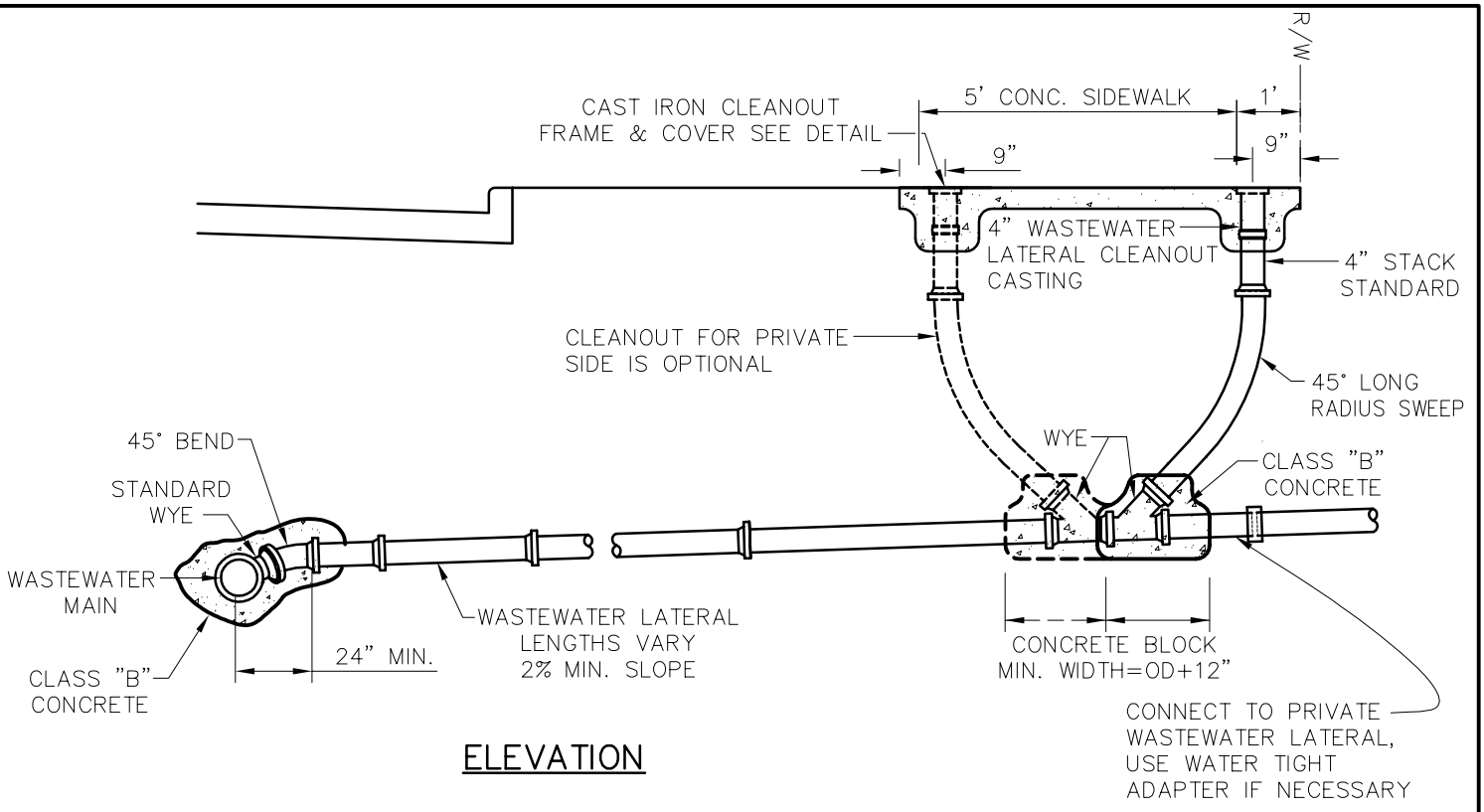


NOTE:

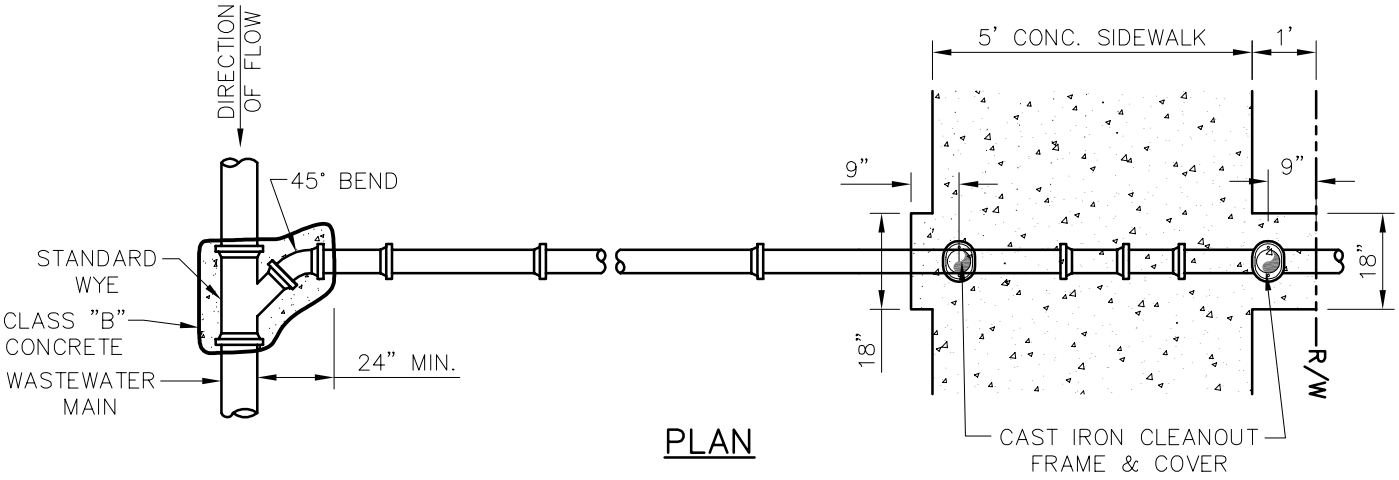
1. CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND IS REQUIRED FOR PRESSURE RATED WASTEWATER MAIN AND LATERAL BEDDING.

P.V.C. WASTEWATER MAIN CEMENT STABILIZED SAND EMBEDMENT

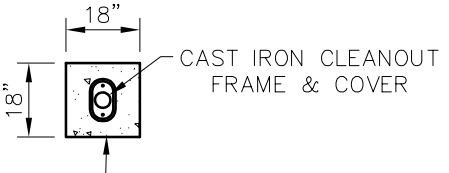
Addison! PUBLIC WORKS DEPARTMENT	P.V.C. WASTEWATER MAIN EMBEDMENT	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD–WW01



ELEVATION



PLAN



NOTES:

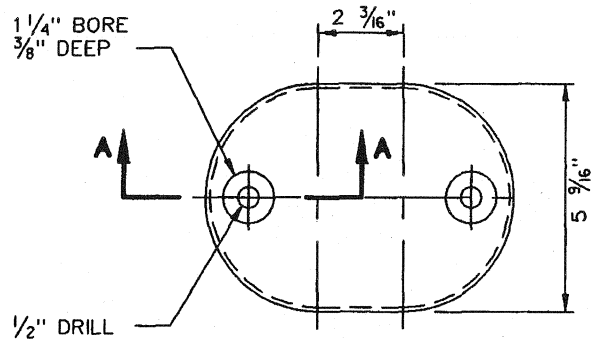
1. WASTEWATER LATERALS ARE TO BE CONSTRUCTED TO CLEAR EXISTING AND PROPOSED FACILITIES, SUCH AS STORM DRAIN MAINS, RETAINING WALLS, OTHER UTILITIES, ETC.
2. THE WASTEWATER LATERAL SHALL HAVE MINIMUM COVER OF 4'–0" BELOW THE PROPOSED CURB GRADE AT THE PROPERTY LINE, DETERMINED FROM PAVING GRADE, OR AS REQUIRED TO MAINTAIN A MINIMUM OF 2.0% GRADE, OR AS DIRECTED BY THE OWNER.

Addison!
PUBLIC WORKS DEPARTMENT

TWO–WAY CLEANOUT NEW CONSTRUCTION

STANDARD CONSTRUCTION DETAILS
WASTEWATER

DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD–WW02



COVER
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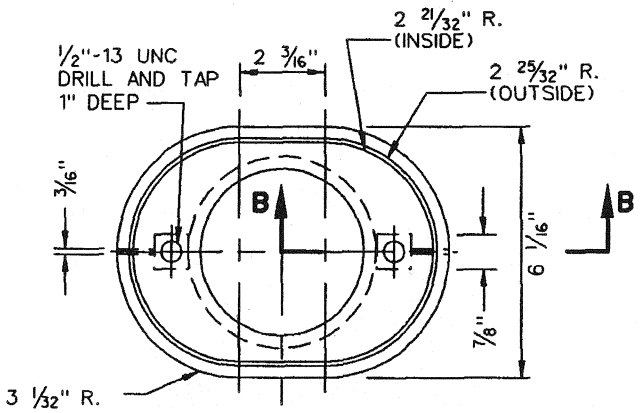

CLEANOUT FRAME TOP
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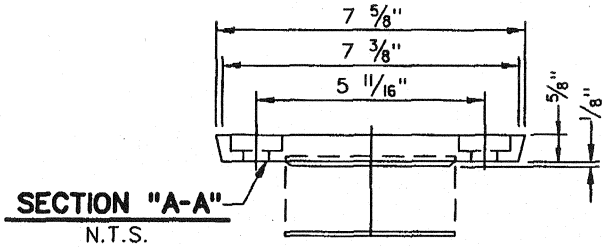

SECTION "A-A"
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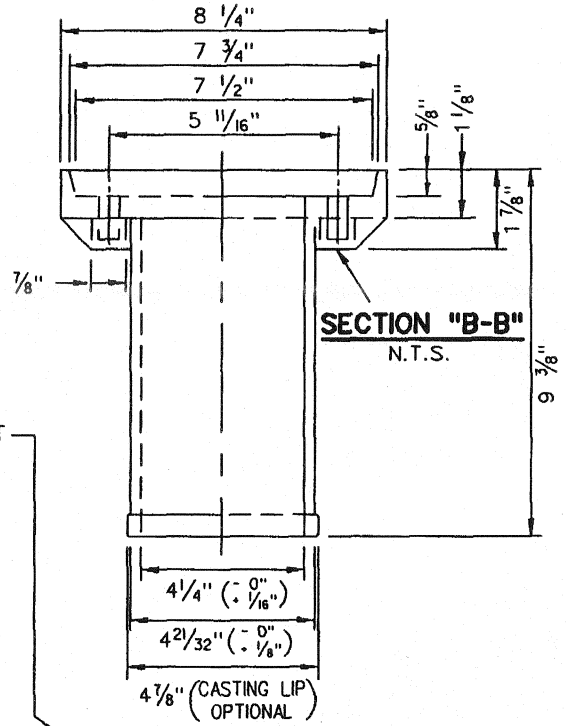

SECTION "B-B"
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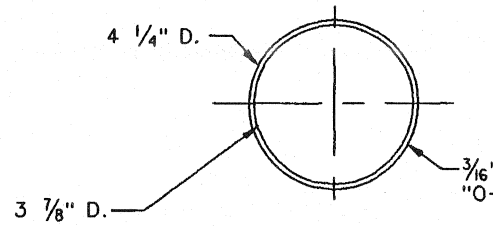
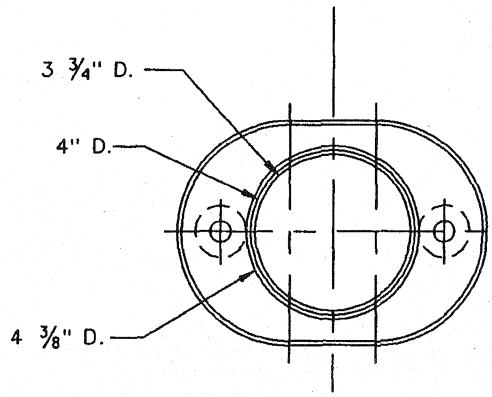
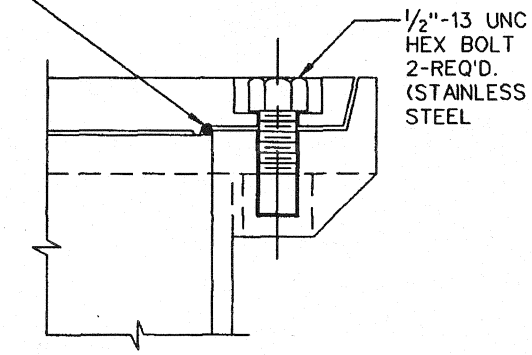




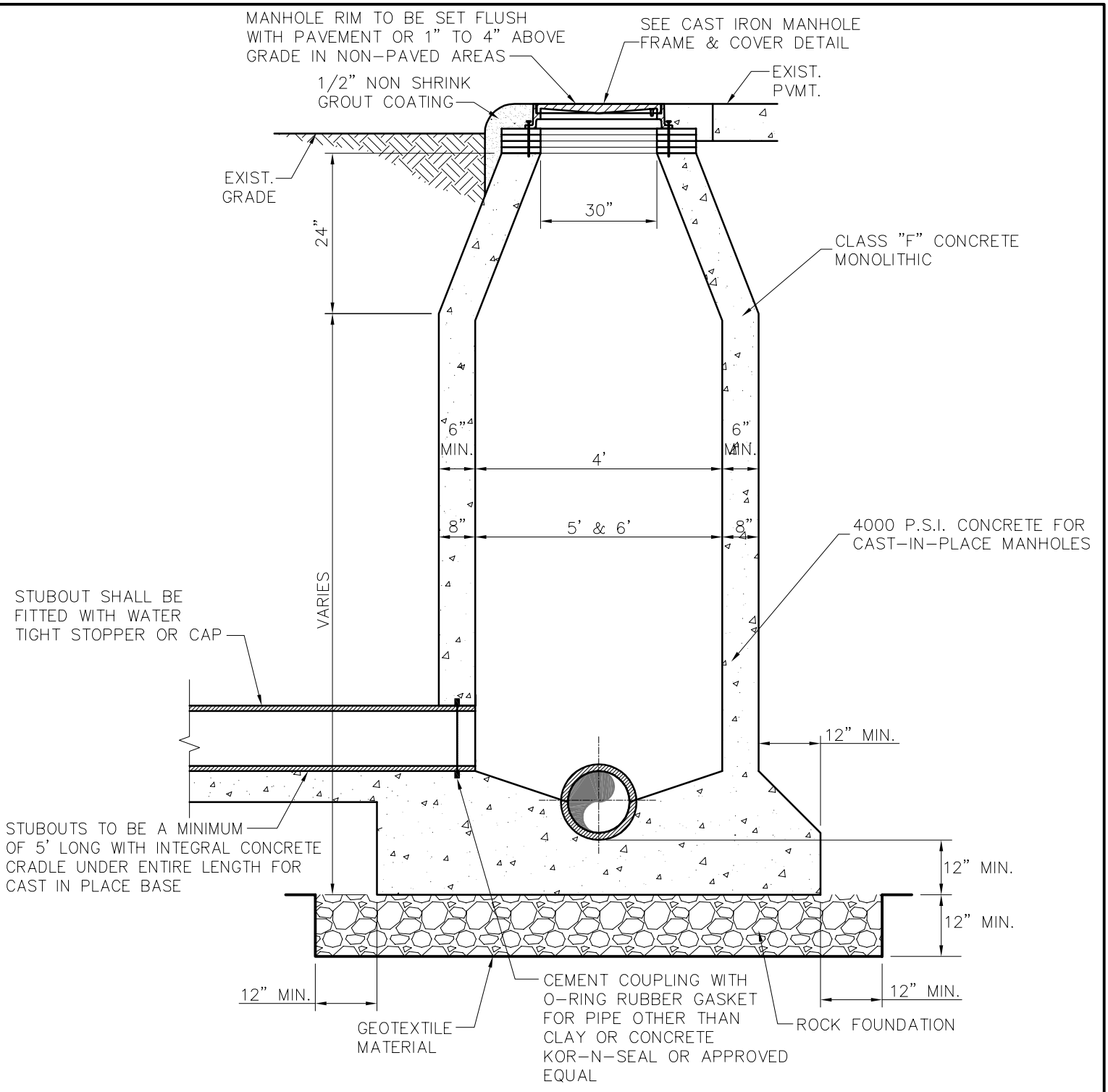
CLEANOUT FRAME BOTTOM
N.T.S.



ASSEMBLY VIEW
N.T.S.

1. THE WORDS "WASTEWATER LATERAL CLEANOUT" SHALL BE CAST INTO TOP OF COVER.
2. MATERIALS TO BE CAST IRON.

Addison! PUBLIC WORKS DEPARTMENT	CAST IRON CLEANOUT FRAME & COVER	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD-WW03



NOTES:

1. IF FALSE MANHOLE BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED, AND REMOVED PER WASTEWATER MANHOLE FALSE BOTTOM STD. DETAIL.
2. WHERE MANHOLE'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'x5' CONCRETE PAD CLASS 'A' CONCRETE, 4" THICK
3. ALL MANHOLES SHALL PASS VACUUM TEST AS PER NCTCOG SPECIFICATIONS

CAST-IN-PLACE NOTES:

1. KEYWAYS REQUIRED FOR ALL CONSTRUCTION JOINTS.
2. P.V.C. WATER STOP REQUIRED FOR ALL JOINTS IN LOWER 4'-0" OF MANHOLES
3. CONCRETE SHALL BE 4000 P.S.I.

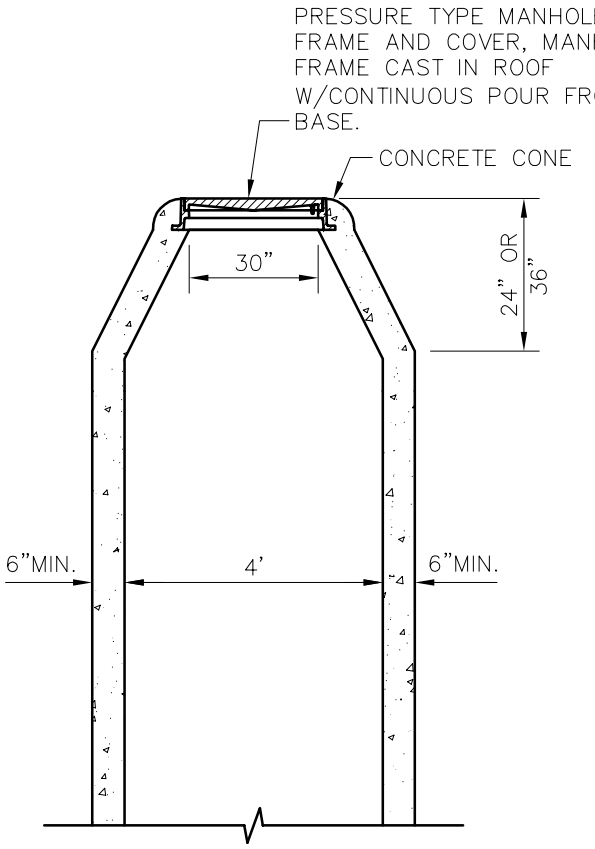
Addison!

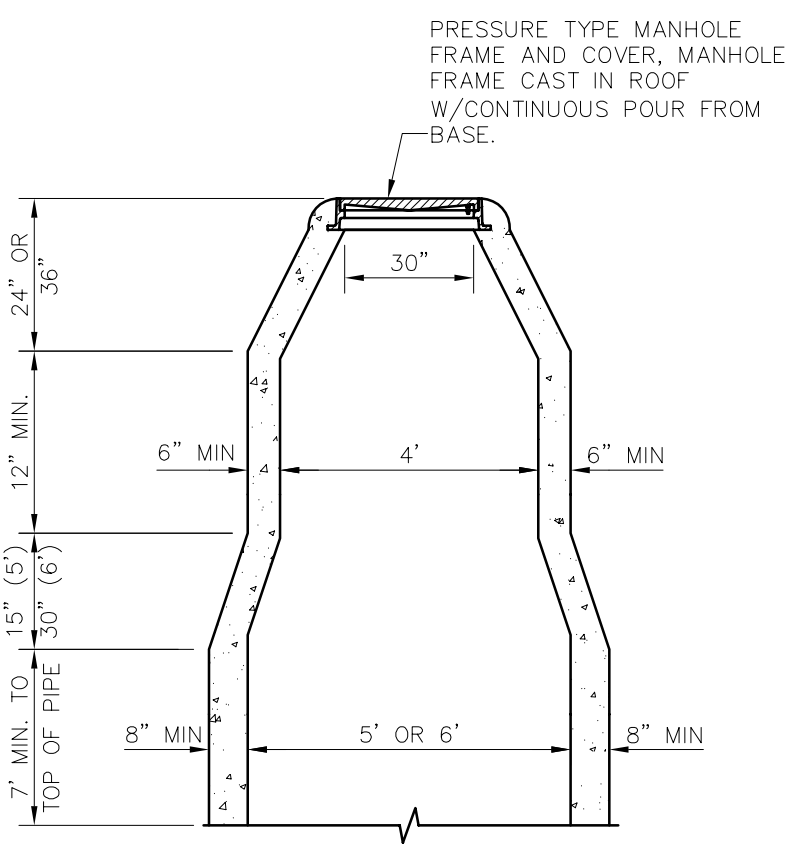
PUBLIC WORKS DEPARTMENT

CAST-IN-PLACE MANHOLE

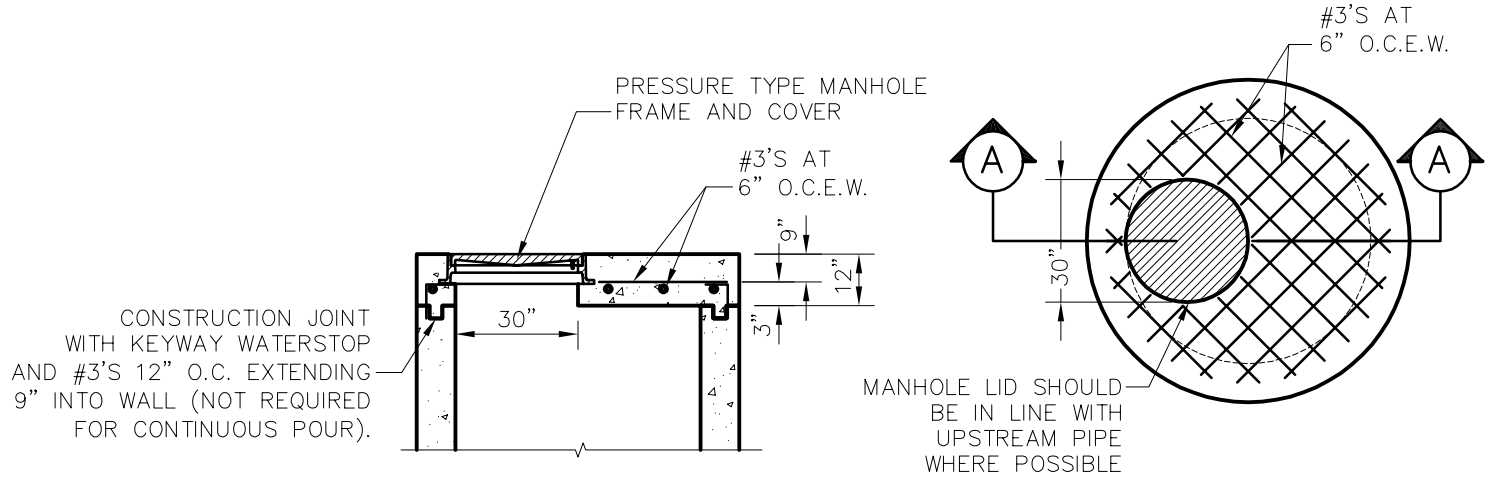
STANDARD CONSTRUCTION DETAILS
WASTEWATER

DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD-WW04





TRANSITION DETAIL FOR 5' AND 6'



SECTION A–A

ROOF OPTIONS

NOTES:

1. IF FALSE MANHOLE BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED, AND REMOVED PER WASTEWATER MANHOLE FALSE BOTTOM STD. DETAIL.
2. WHERE MANHOLE'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'x5' CONCRETE PAD CLASS 'A' CONCRETE, 4" THICK
3. ALL MANHOLES SHALL PASS VACUUM TEST PER NCTCOG SPECIFICATIONS
4. LID SHALL BE GASKETED, BOLT–DOWN TYPE WITH STAINLESS STEEL BOLTS.
5. SEALED MANHOLE SHALL BE EPOXY COATED TO PREVENT INTERNAL CORROSION. EPOXY COATING SHALL BE RAVEN 405, OR APPROVED EQUAL AND SHALL BE A MINIMUM 200 MILS THICKNESS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

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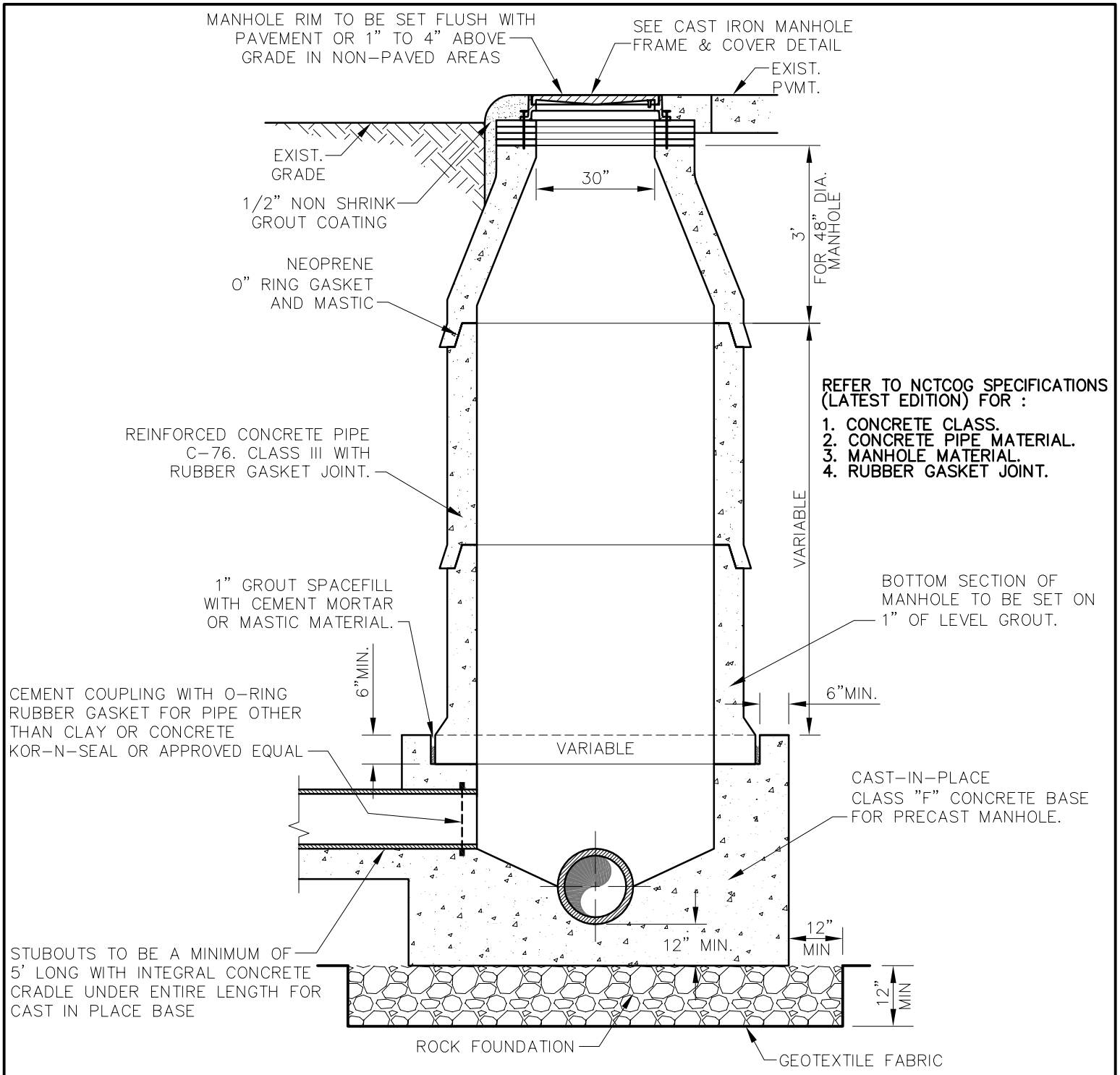
PUBLIC WORKS DEPARTMENT

SEALED TYPE 'S' CAST–IN–PLACE MANHOLE

STANDARD CONSTRUCTION DETAILS
WASTEWATER

DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD–WW05



REFER TO NCTCOG SPECIFICATIONS (LATEST EDITION) FOR :

1. CONCRETE CLASS.
2. CONCRETE PIPE MATERIAL.
3. MANHOLE MATERIAL.
4. RUBBER GASKET JOINT.

NOTES:

1. IF FALSE MANHOLE BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED, AND REMOVED PER WASTEWATER MANHOLE FALSE BOTTOM STD. DETAIL.
2. WHERE MANHOLE'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'x5' CONCRETE PAD CLASS 'A' CONCRETE, 4" THICK
3. ALL MANHOLES SHALL PASS VACUUM TEST AS PER NCTCOG SPECIFICATIONS

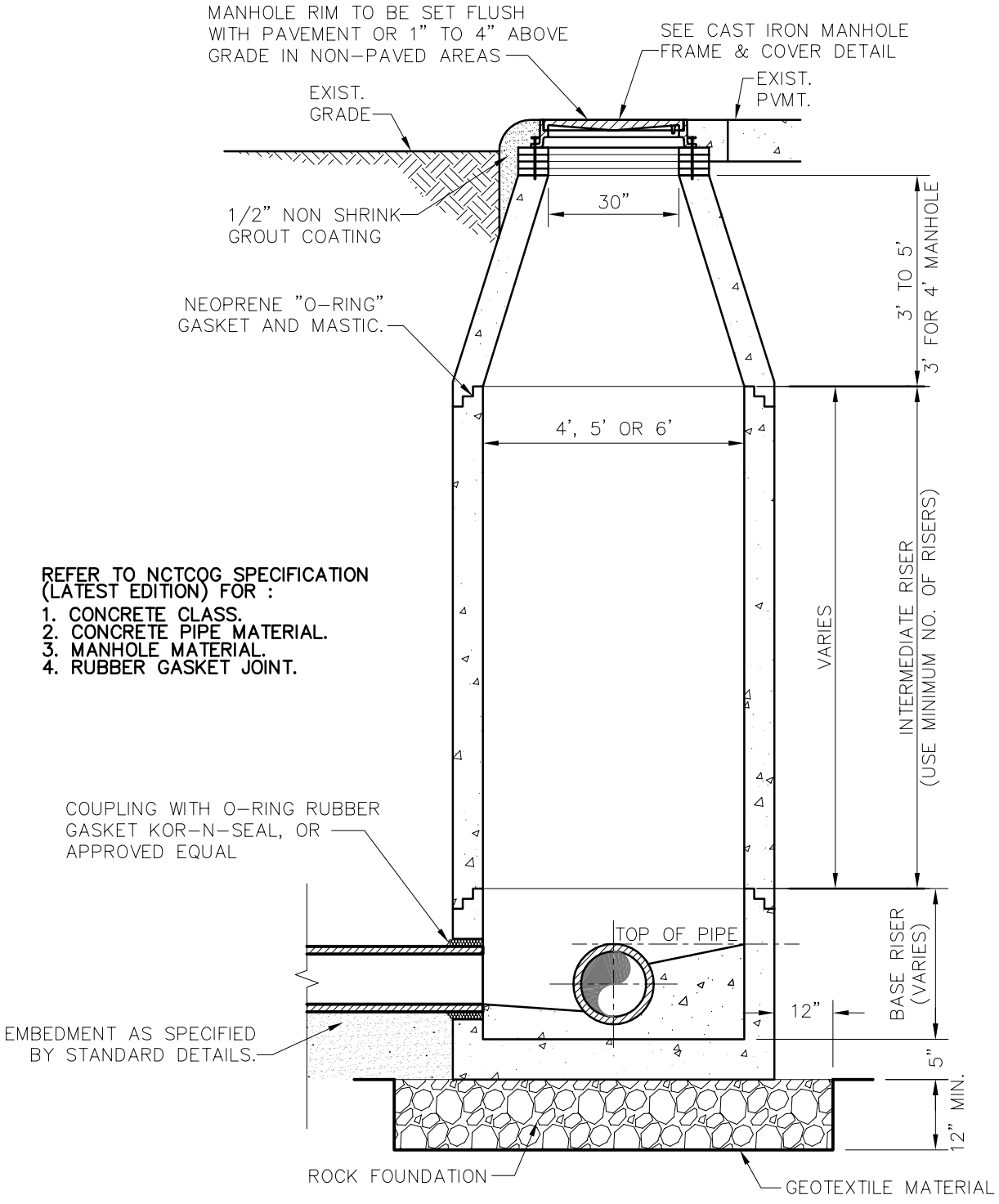
Addison!

PUBLIC WORKS DEPARTMENT

PRECAST CONCRETE PIPE MANHOLE ALTERNATE "A"

STANDARD CONSTRUCTION DETAILS
WASTEWATER

DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD-WW06



REFER TO NCTCOG SPECIFICATION (LATEST EDITION) FOR :

1. CONCRETE CLASS.
2. CONCRETE PIPE MATERIAL.
3. MANHOLE MATERIAL.
4. RUBBER GASKET JOINT.

NOTES:

1. IF FALSE MANHOLE BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED, AND REMOVED PER WASTEWATER MANHOLE FALSE BOTTOM STD. DETAIL.
2. WHERE MANHOLE'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'x5' CONCRETE PAD CLASS 'A' CONCRETE, 4" THICK
3. ALL MANHOLES SHALL PASS VACUUM TEST AS PER NCTCOG SPECIFICATIONS

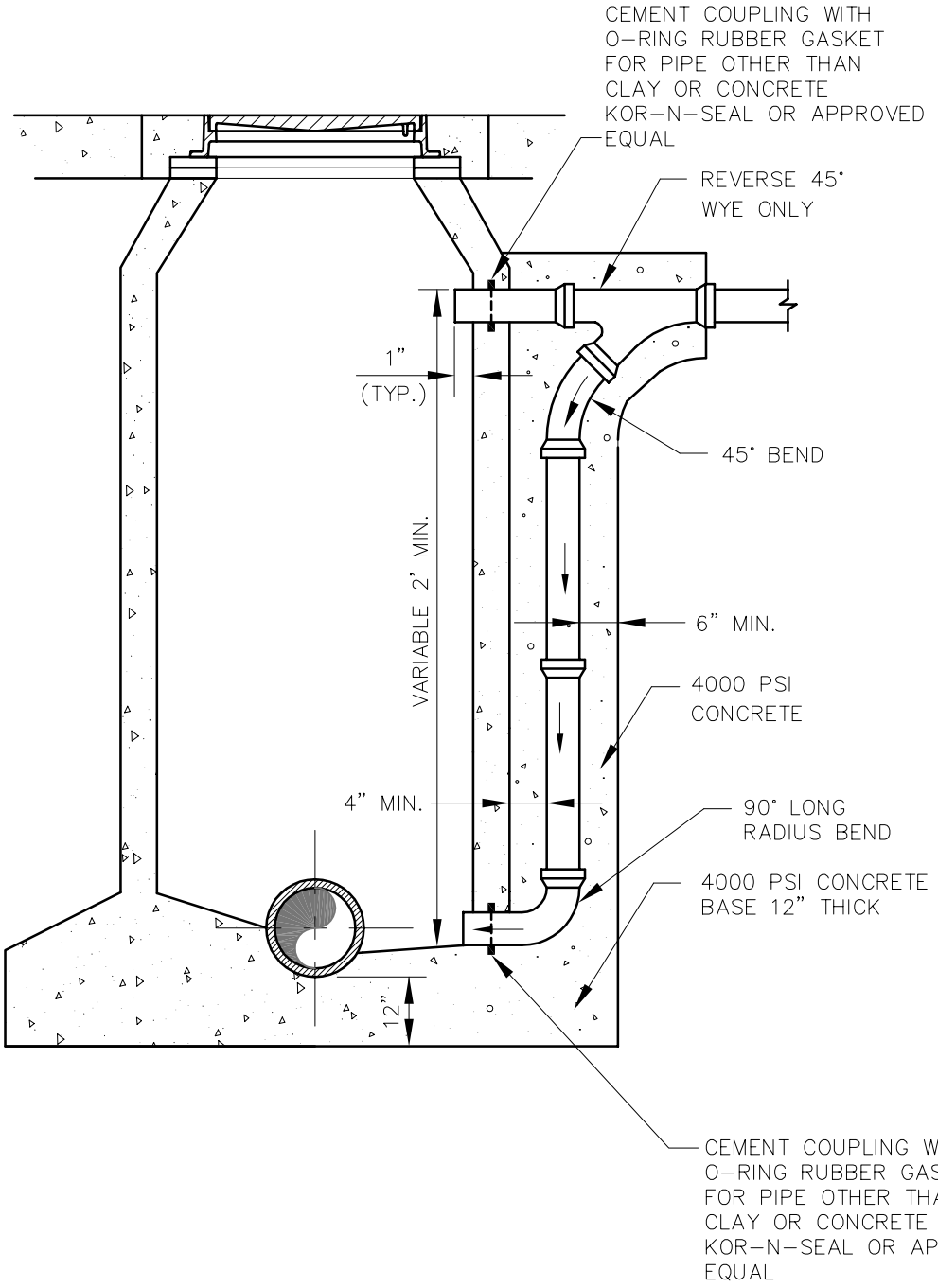
Addison!

PUBLIC WORKS DEPARTMENT

PRECAST CONCRETE PIPE MANHOLE ALTERNATE "B"

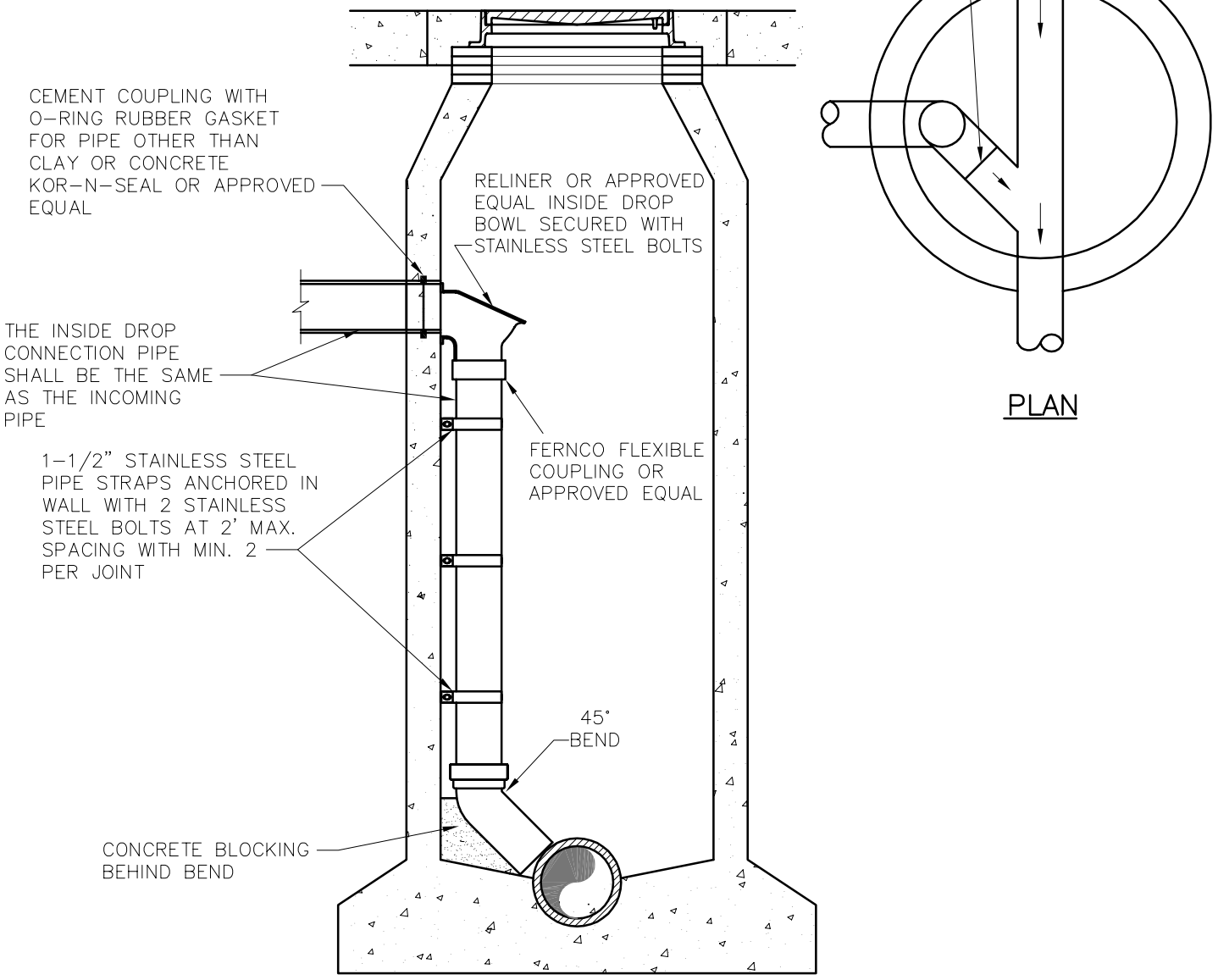
STANDARD CONSTRUCTION DETAILS
WASTEWATER

DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD-WW07



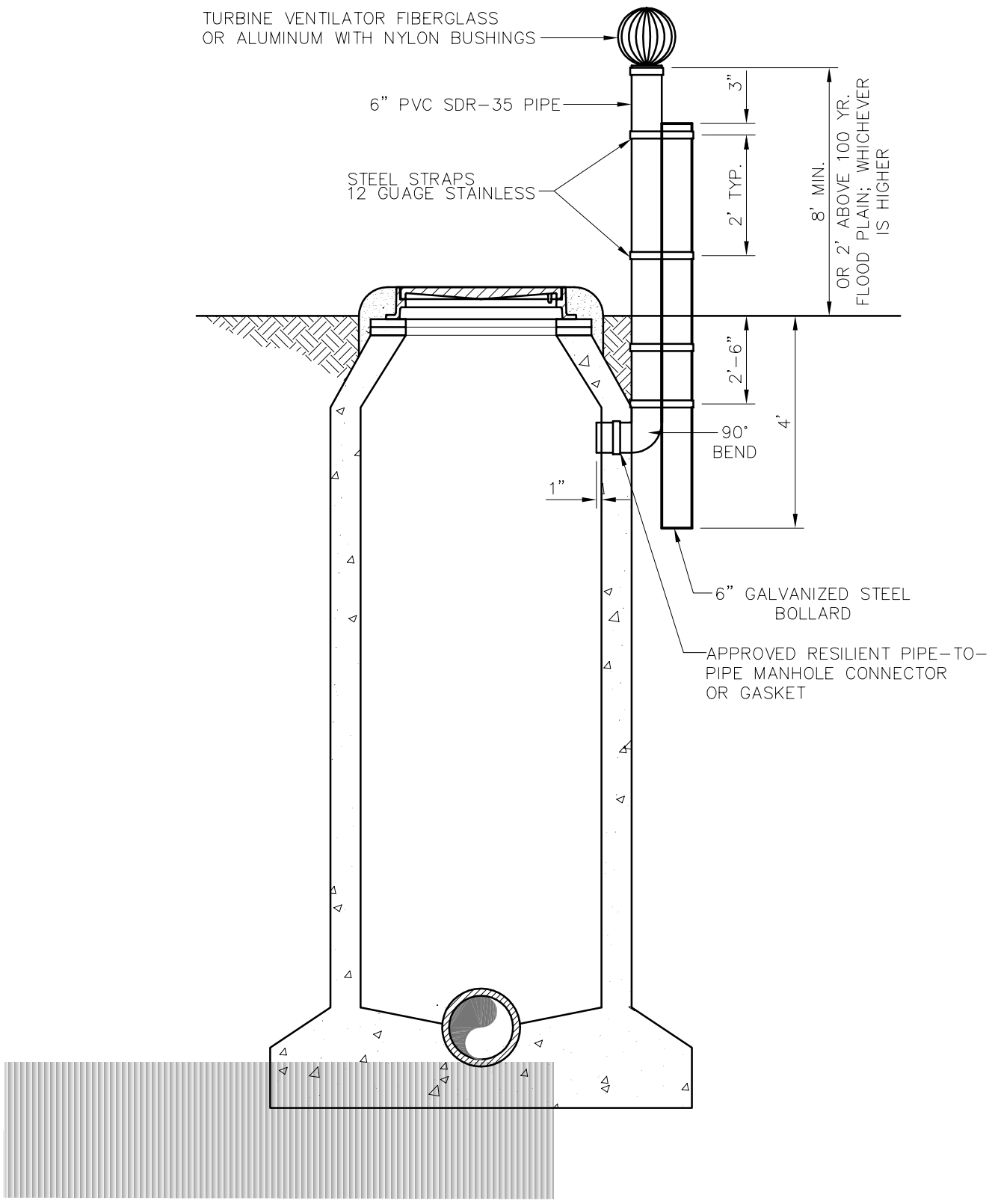
EXTERNAL DROP MANHOLE CONNECTION

Addison! PUBLIC WORKS DEPARTMENT	EXTERNAL DROP MANHOLE CONNECTION	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD-WW08



INTERIOR DROP MANHOLE CONNECTION

Addison! PUBLIC WORKS DEPARTMENT	INTERIOR DROP MANHOLE CONNECTION	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD-WW09



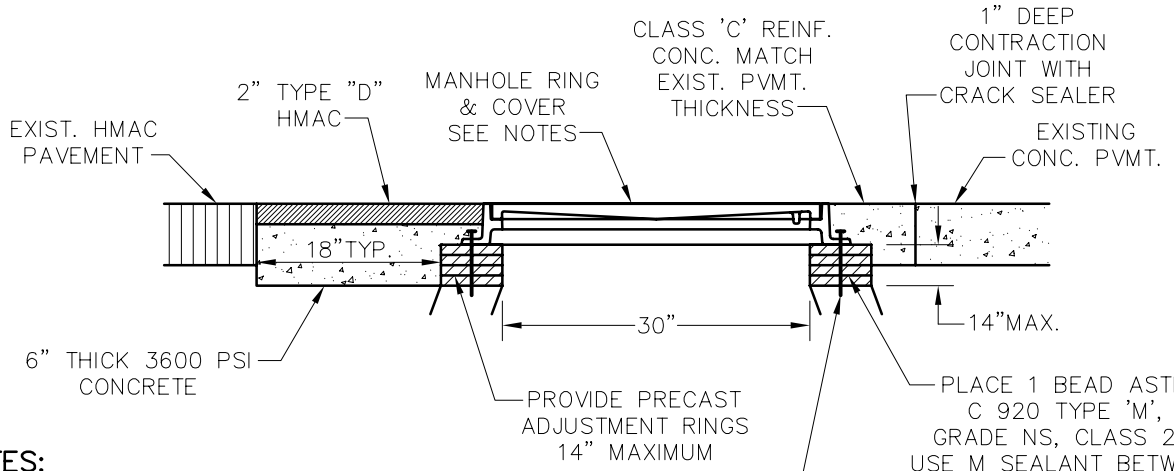
Addison!

PUBLIC WORKS DEPARTMENT

VENTED MANHOLE

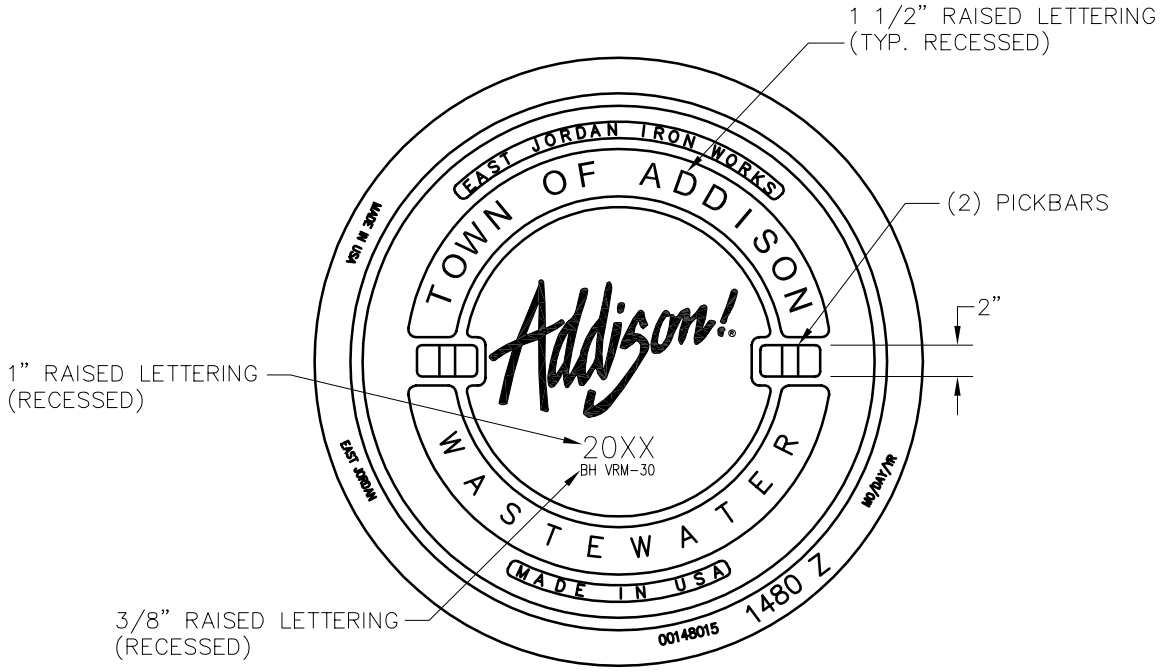
STANDARD CONSTRUCTION DETAILS
WASTEWATER

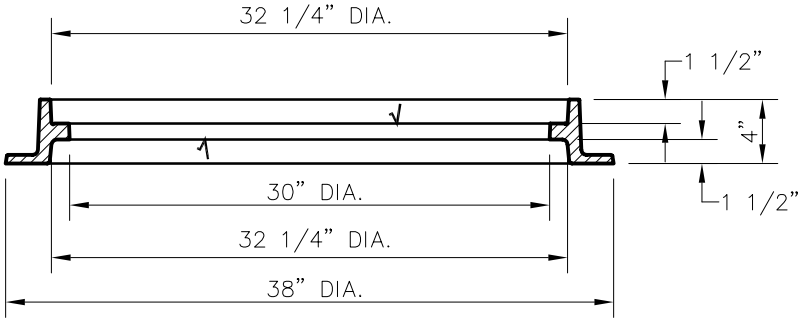
DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD-WW10

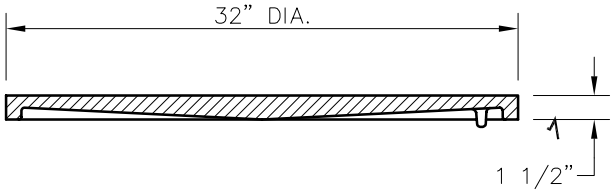


NOTES:

1. THERE SHALL BE SMOOTH TRANSITION BETWEEN THE FRAME GRADE RING, OR THE GRADE RING AND THE CONE.
2. CONCRETE EXTENSION RINGS MAY BE PRECAST OR CAST–IN–PLACE. BRICK EXTENSION RINGS WILL NOT BE ALLOWED.
3. STANDARD EXTENSIONS SHALL BE 2", 3", 4", 6", AND 12". EXTENSIONS SHALL BE SIZED TO MINIMIZE THE NUMBER REQUIRED TO RAISE THE MANHOLE. NO MORE THAN A TOTAL OF 14" OF EXTENSION WILL BE ALLOWED ON ANY MANHOLE.

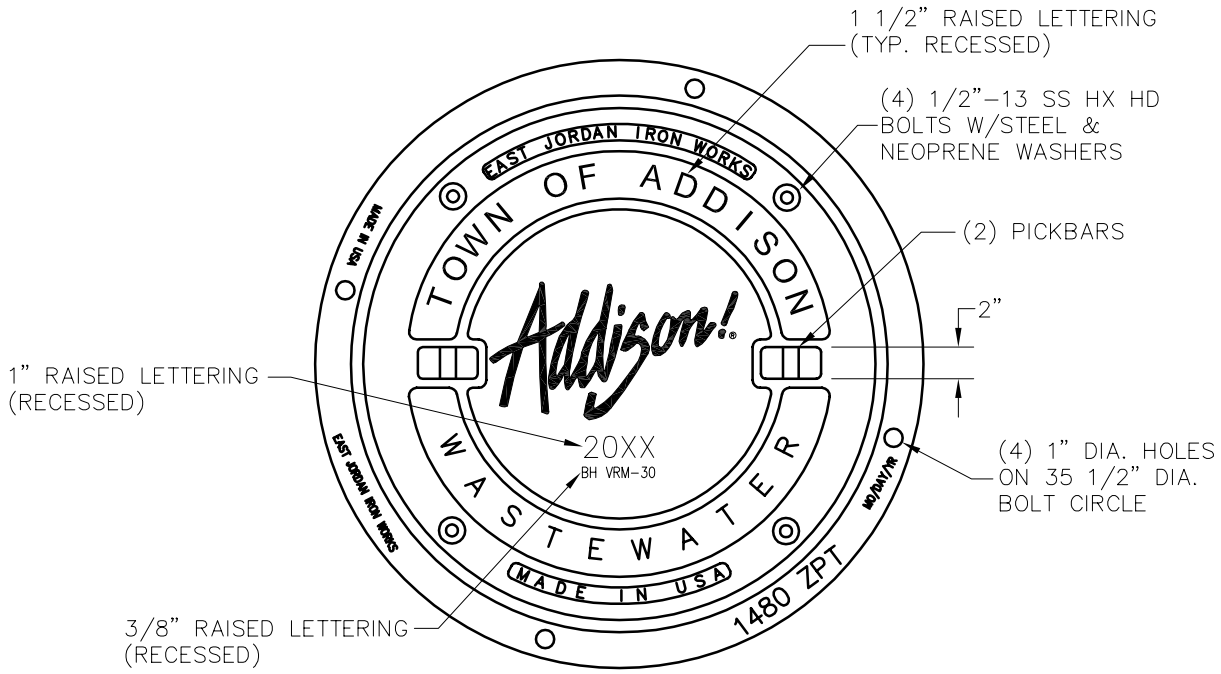


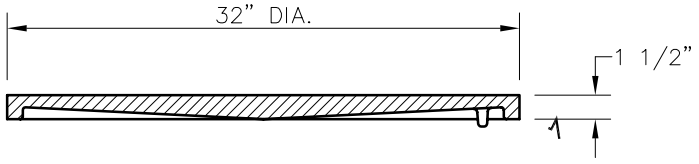


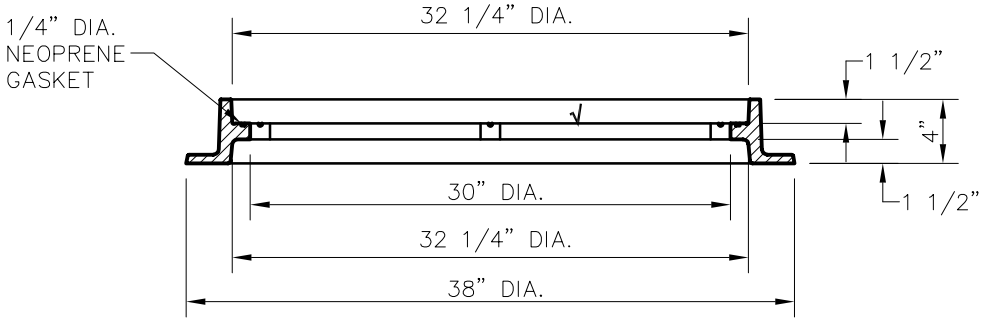


√ DESIGNATES MACHINE SURFACE

Addison! PUBLIC WORKS DEPARTMENT	CAST IRON MANHOLE FRAME AND COVER	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD–WW11

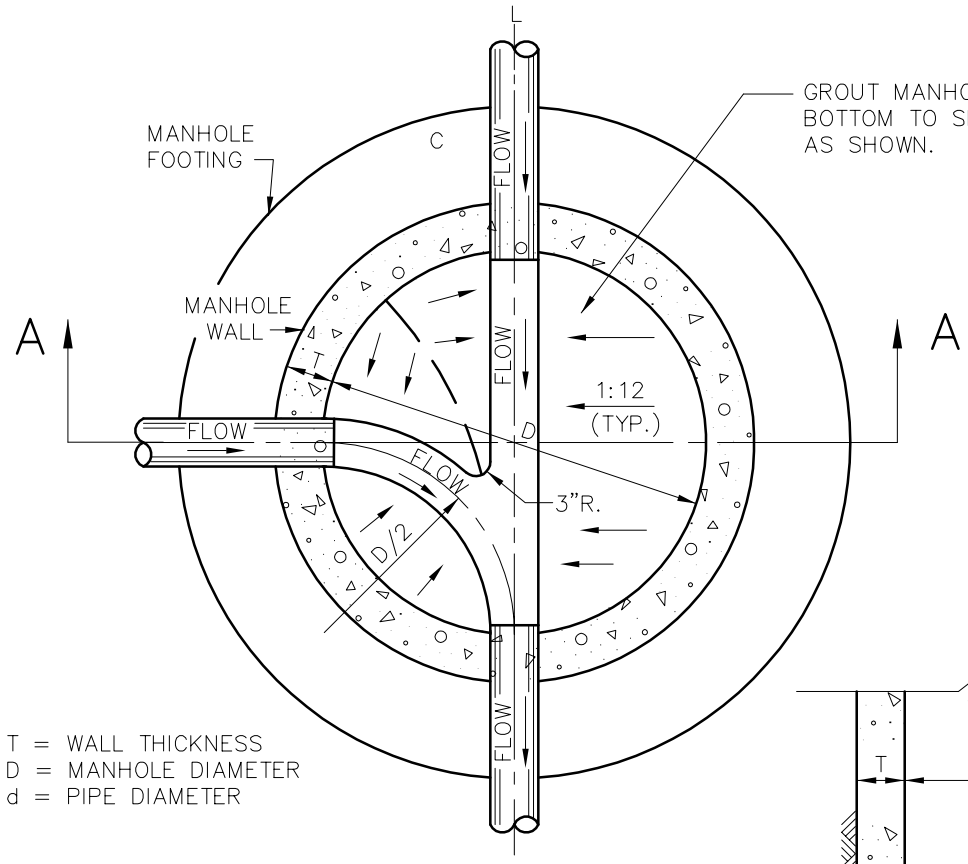




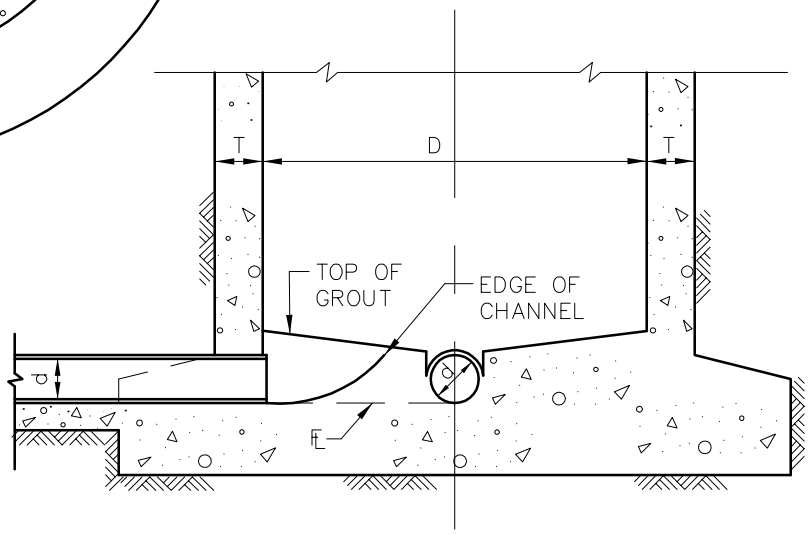


√ DESIGNATES MACHINE SURFACE

Addison! PUBLIC WORKS DEPARTMENT	PRESSURE TYPE MANHOLE FRAME AND COVER	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD–WW12

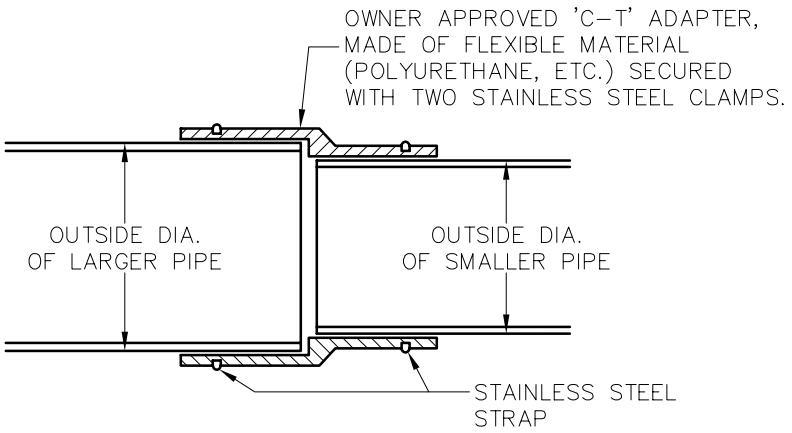


PLAN
N.T.S.



SECTION A–A
N.T.S.

WASTEWATER MANHOLE LINE INTERSECTION



'C–T' PIPE ADAPTER

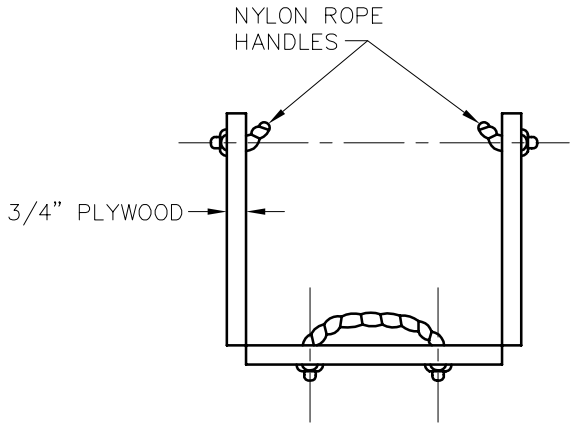
Addison! PUBLIC WORKS DEPARTMENT	WASTEWATER MANHOLE LINE INTERSECTION & 'C–T' PIPE ADAPTER	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD–WW13

INSTALLATION

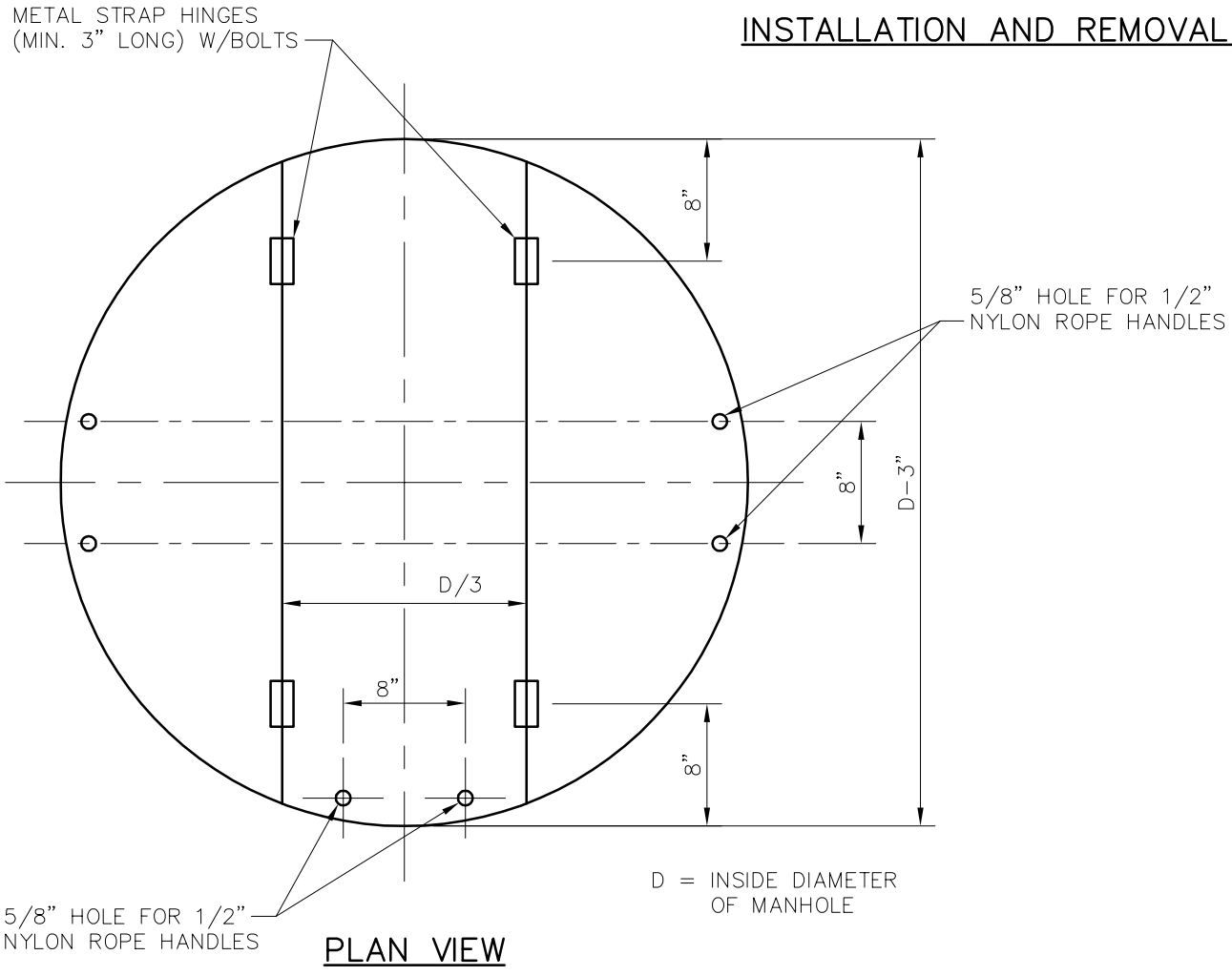
FALSE MANHOLE BOTTOM SHALL BE FURNISHED AND INSTALLED IN ALL MANHOLES CONSTRUCTED IN ADVANCE OF PAVING. THESE FALSE MANHOLE BOTTOMS WILL BE INSTALLED AT A TIME DIRECTED BY THE ENGINEER BUT WILL USUALLY BE AFTER ALL WORK IS COMPLETED ON THE WASTEWATER SYSTEM INCLUDING THE AIR TEST, BUT PRIOR TO THE FINAL INSPECTION.

REMOVAL

FALSE MANHOLE BOTTOM SHALL BE REMOVED AFTER THE FINAL APPURTENANCES ADJUSTMENT INSPECTION. THE PAVING CONTRACTOR AND OWNER'S REPRESENTATIVE WILL COORDINATE THE REMOVAL OF THE FALSE BOTTOMS.

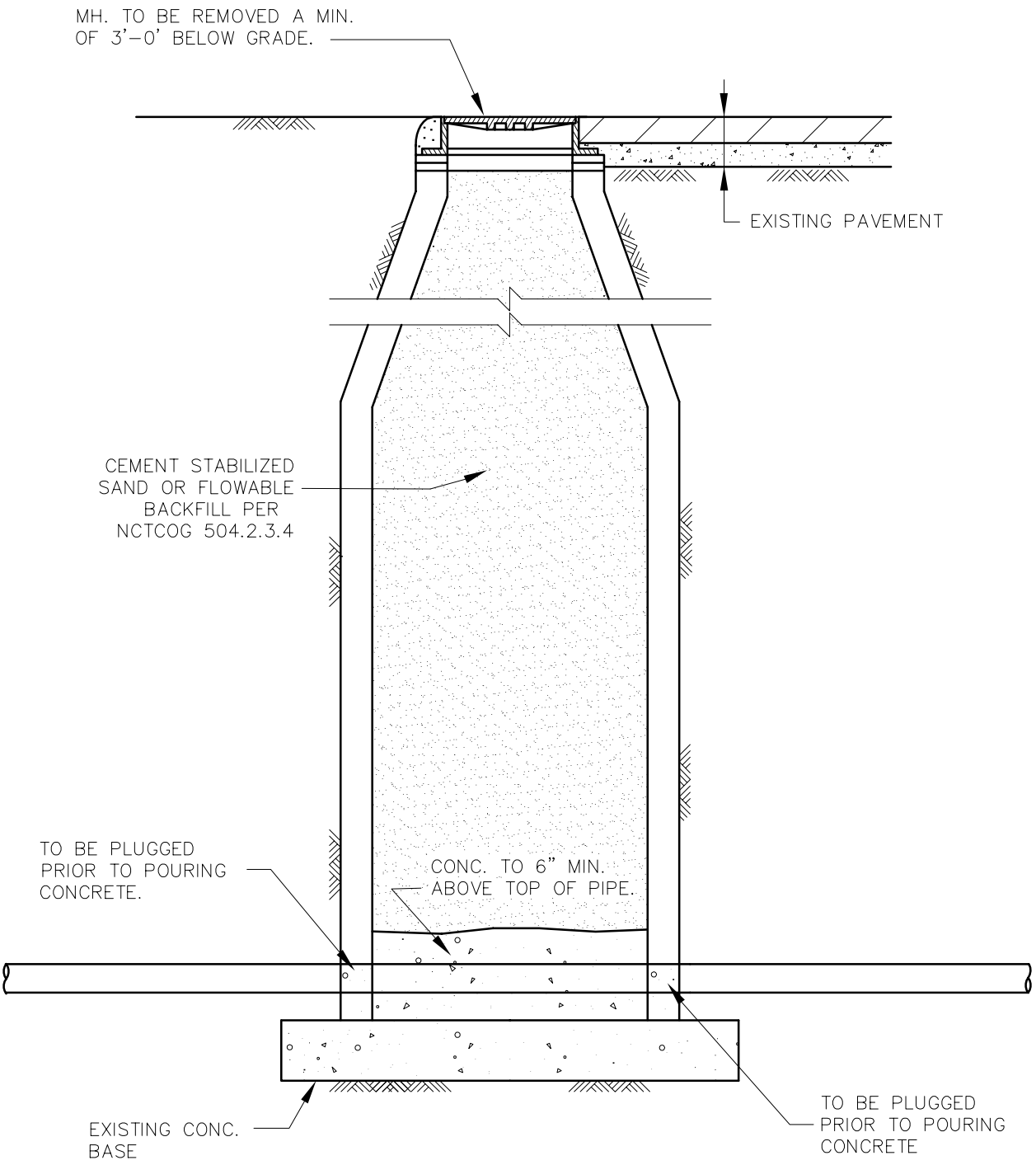


INSTALLATION AND REMOVAL POSITION



PLAN VIEW

Addison! PUBLIC WORKS DEPARTMENT	WASTEWATER MANHOLE FALSE BOTTOM	STANDARD CONSTRUCTION DETAILS WASTEWATER
		DATE: AUGUST, 2010 / REV DATE: – / SHEET : SD–WW14



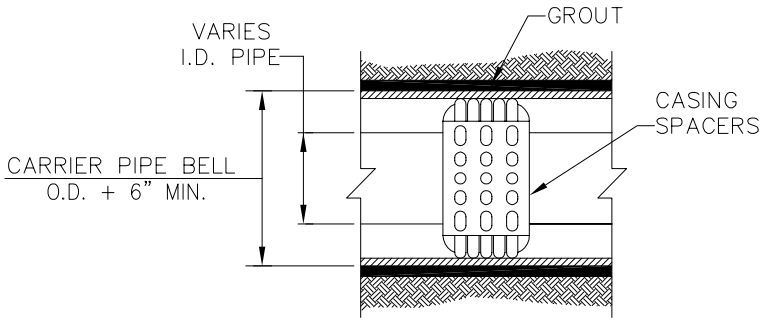
Addison!

PUBLIC WORKS DEPARTMENT

ABANDONMENT OF MANHOLE

STANDARD CONSTRUCTION DETAILS
WASTEWATER

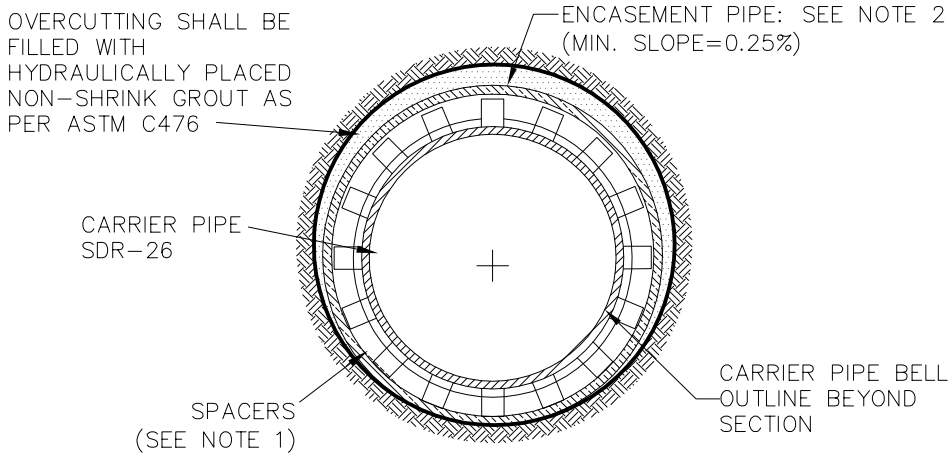
DATE:	REV DATE:	SHEET :
AUGUST, 2010	–	SD-WW15



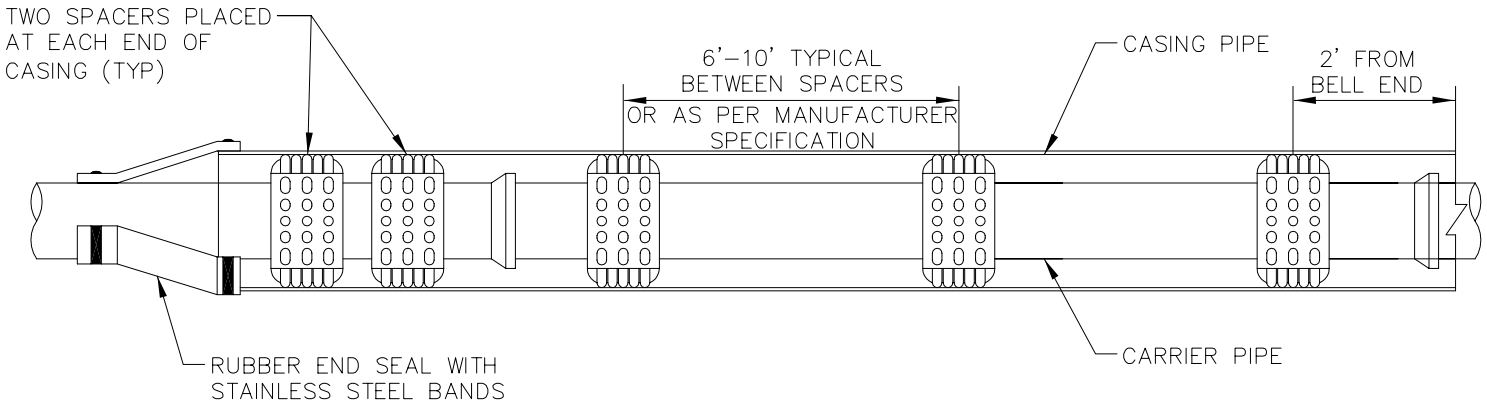
TYPICAL CASING SECTION

CARRIER PIPE SIZE (IN)	STEEL ENCASEMENT O.D. (IN)	STEEL ENCASEMENT WALL THICKNESS (IN)
6	14	1/4
8	18	1/4
12	21	1/4
18	27	3/8
21	30	3/8
24	36	3/8
27	39	1/2

FOR ALL CARRIER PIPES OVER 27": THE STEEL ENCASEMENT PIPE SHALL BE 12" LARGER THAN THE CARRIER PIPE AND THE STEEL ENCASEMENT WALL THICKNESS SHALL BE 1/2".



WASTEWATER ENCASEMENT



INSULATOR SPACING DETAIL

NOTES:

1. HIGH DENSITY POLYETHYLENE SPACERS, RACI OR EQUAL, SHALL BE USED. WHERE NO CASING PIPE IS REQUIRED OVERCUTTING AROUND UTILITY SHALL BE FILLED WITH HYDRAULICALLY PLACED NON-SHRINK GROUT AS PER ASTM C476.
2. ENCASEMENT PIPE SHALL BE HIGH DENSITY STEEL PIPE. ALL JOINTS TO BE WELDED 100%.

Addison! PUBLIC WORKS DEPARTMENT	CASING	STANDARD CONSTRUCTION DETAILS WASTEWATER		
		DATE: AUGUST, 2010	REV DATE: –	SHEET : SD-WW16