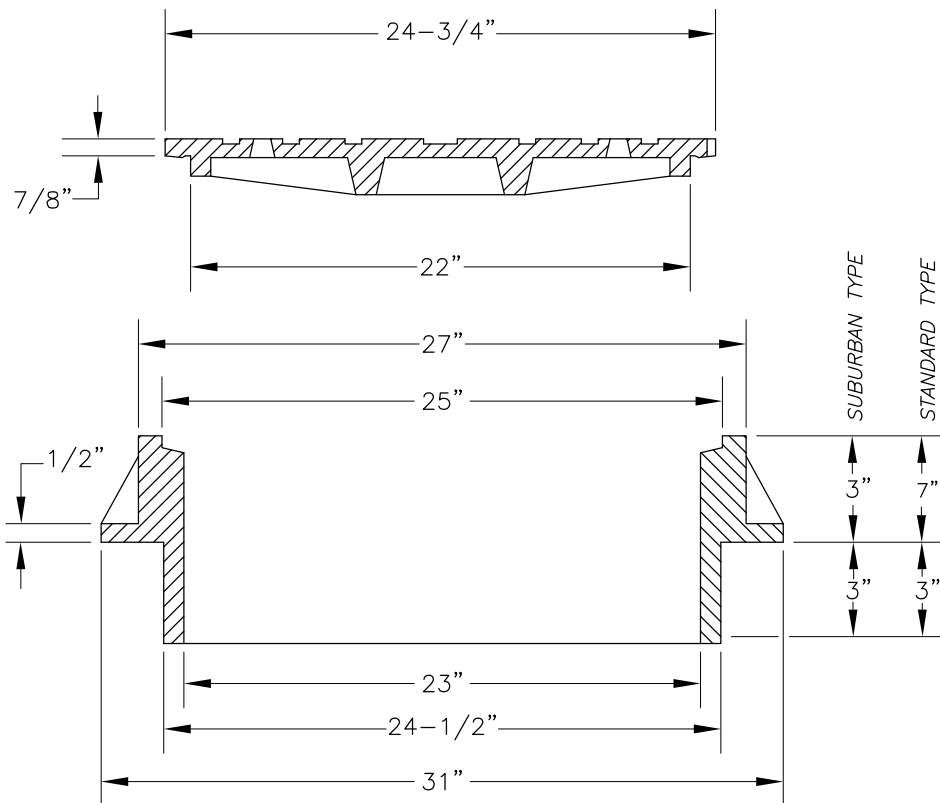


SANITARY



STORM



NOTES:

1. USE SUBURBAN TYPE ONLY IN NON-TRAFFIC AREAS.
2. COVER & FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
3. COVER & FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
4. NOTCH LID FOR LIFTING HOOK.



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Public Works Department
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Manhole Frame & Cover Detail

Date Adopt. 11/01/12

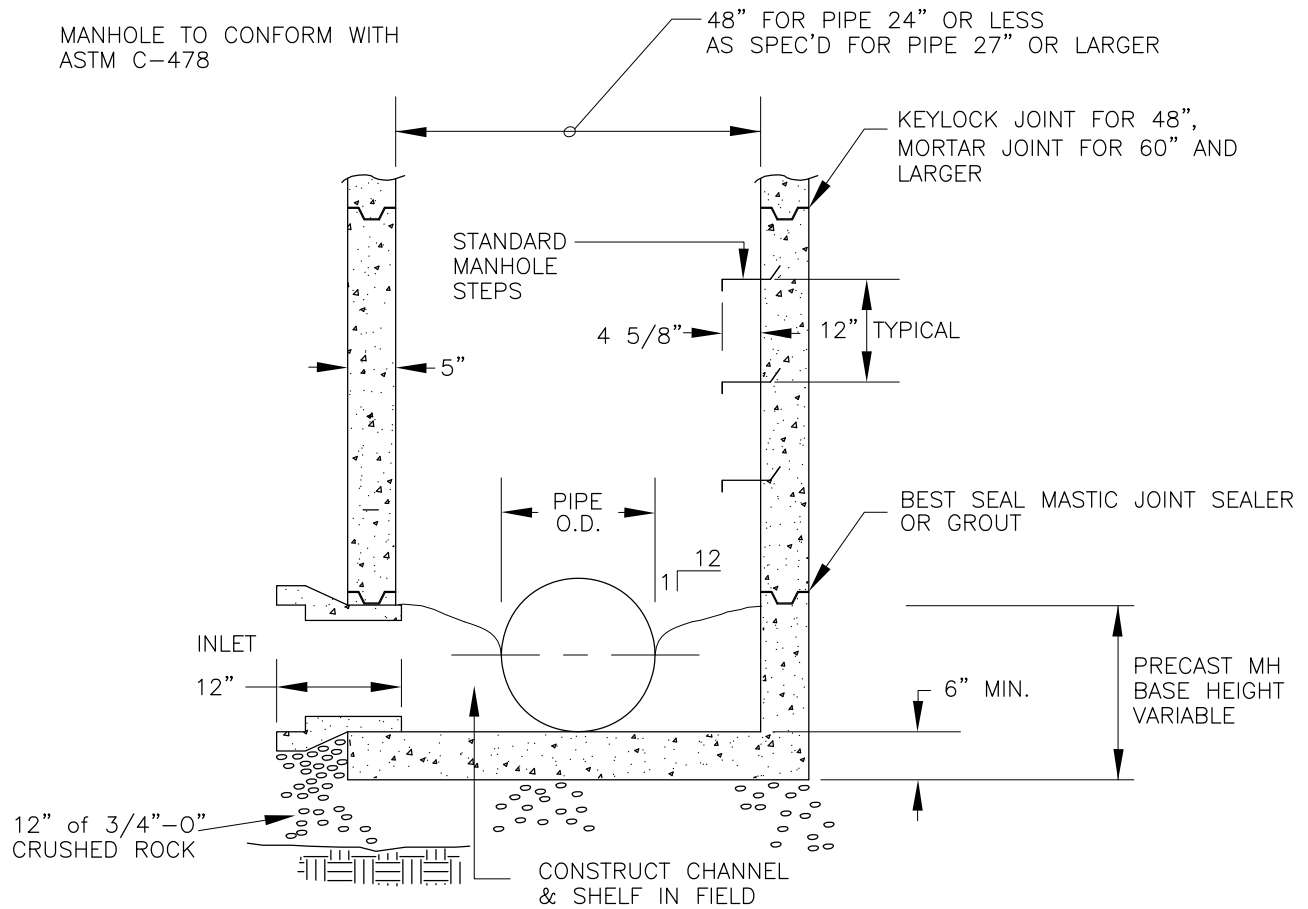
Date Rev. ----

DWG. NO.

Dwg. Name: S-1 Manhole Frame & Cover.dwg

S-1

MANHOLE TO CONFORM WITH
ASTM C-478



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Public Works Department
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Precast Manhole Base Detail

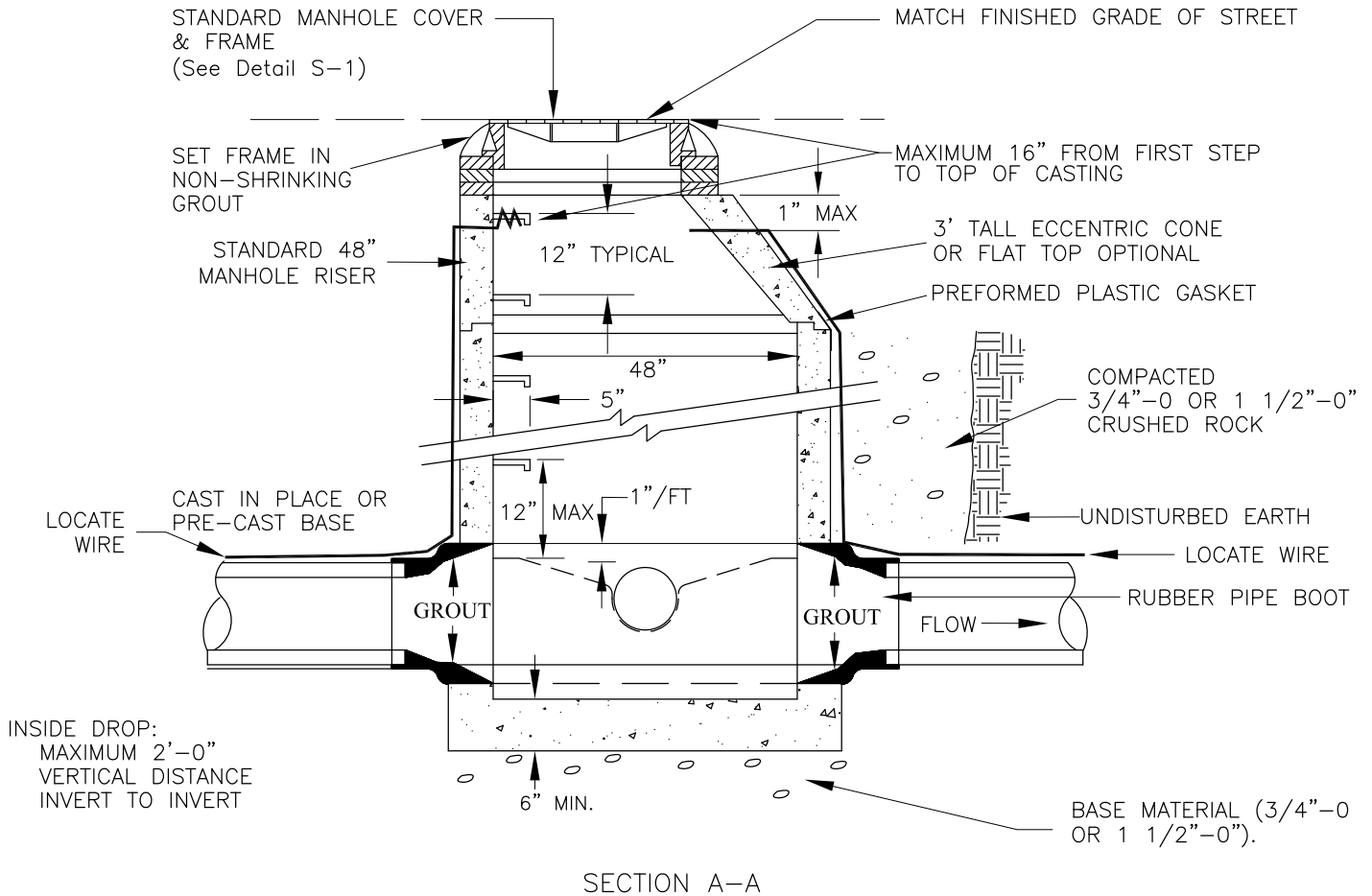
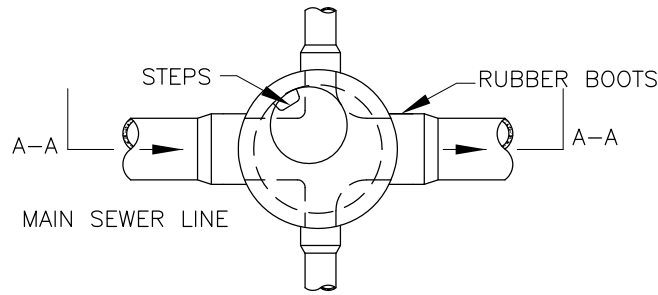
Date Adopt. 11/01/12

Date Rev. 11/15/12

DWG. NO.

Dwg. Name: S-2 Precast Manhole Base.dwg

S-2



NOTES:

1. THIS TYPE OF MANHOLE SHALL BE USED ONLY FOR PIPE SIZE OF 24" OR LESS.
2. GROUT INSIDE AND OUTSIDE AT PENETRATION IF NO BOOT, GROUT INSIDE IF THERE IS A BOOT, GROUT INSIDE WHERE SECTIONS COME TOGETHER AND PICK HOLES.
3. LOCATE WIRE SHALL BE 14 GAGE GREEN, DRILL NO MORE THAN 1" BELOW FRAME, LEAVE ENOUGH WIRE TO GET TO TOP, GROUT HOLES.
4. CONSTRUCT CHANNEL AND SHELF IN FIELD.
5. FLAT TOP MANHOLE SLABS SHALL HAVE A 25" OPENING, OFFSET TO ONE SIDE.



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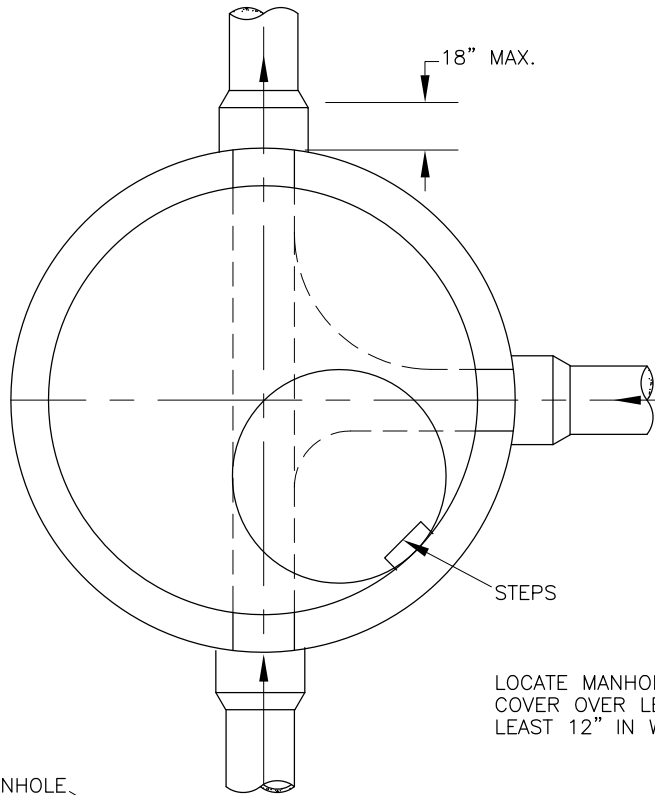
Standard Manhole Detail

Date Adopt. 11/01/12 **Date Rev.** 11/15/12

Dwg. Name: S-3 Standard Manhole.dwg

DWG. NO.

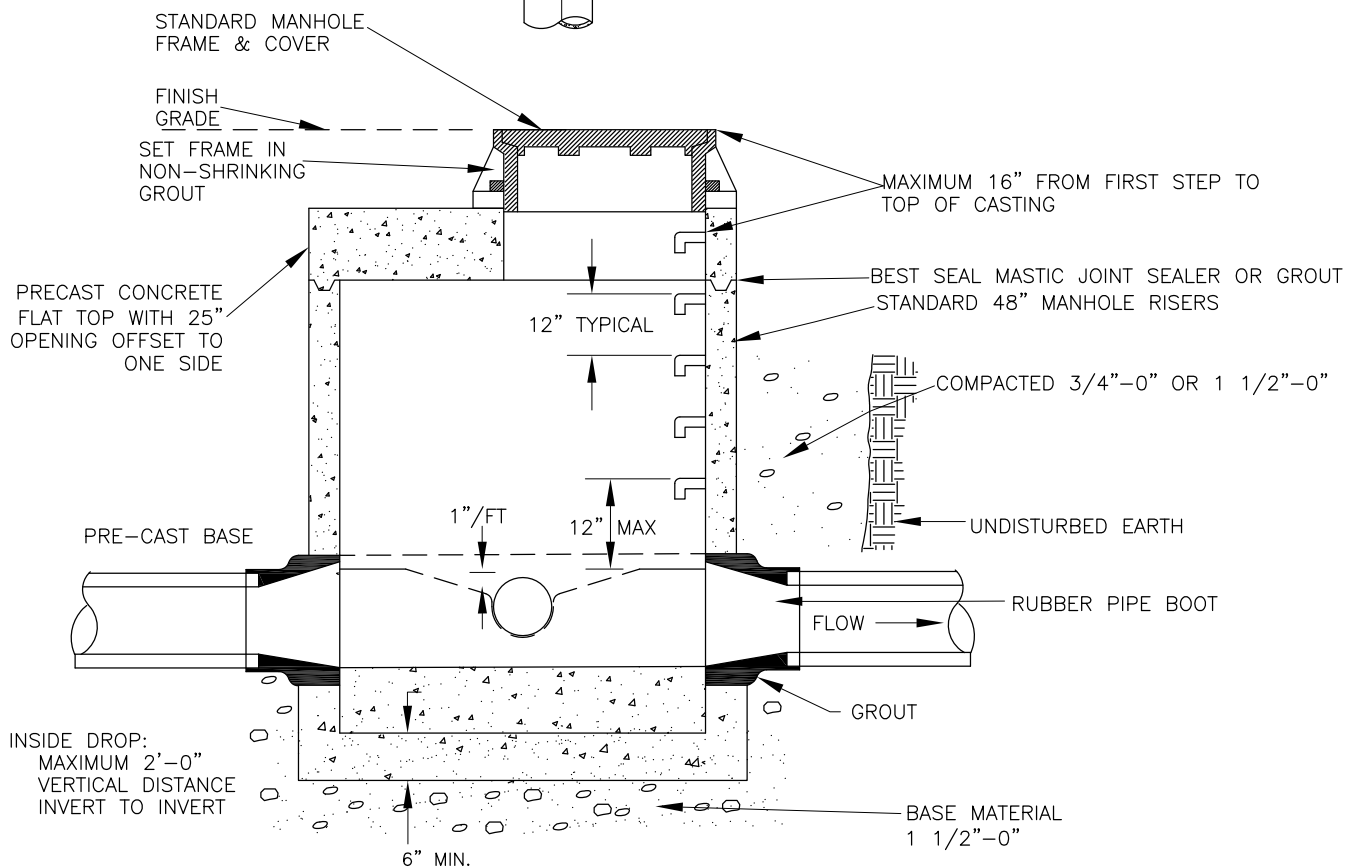
S-3



MAKE SURFACE OF GROUT FILLET SMOOTH & FORM GROOVED INVERT TO DIRECTION OF FLOW

NOTE: INLETS/OUTLETS AS REQUIRED.

LOCATE MANHOLE FRAME & COVER OVER LEDGE OF AT LEAST 12" IN WIDTH.



INSIDE DROP: MAXIMUM 2'-0" VERTICAL DISTANCE INVERT TO INVERT

6" MIN.



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Flat Top Manhole Detail

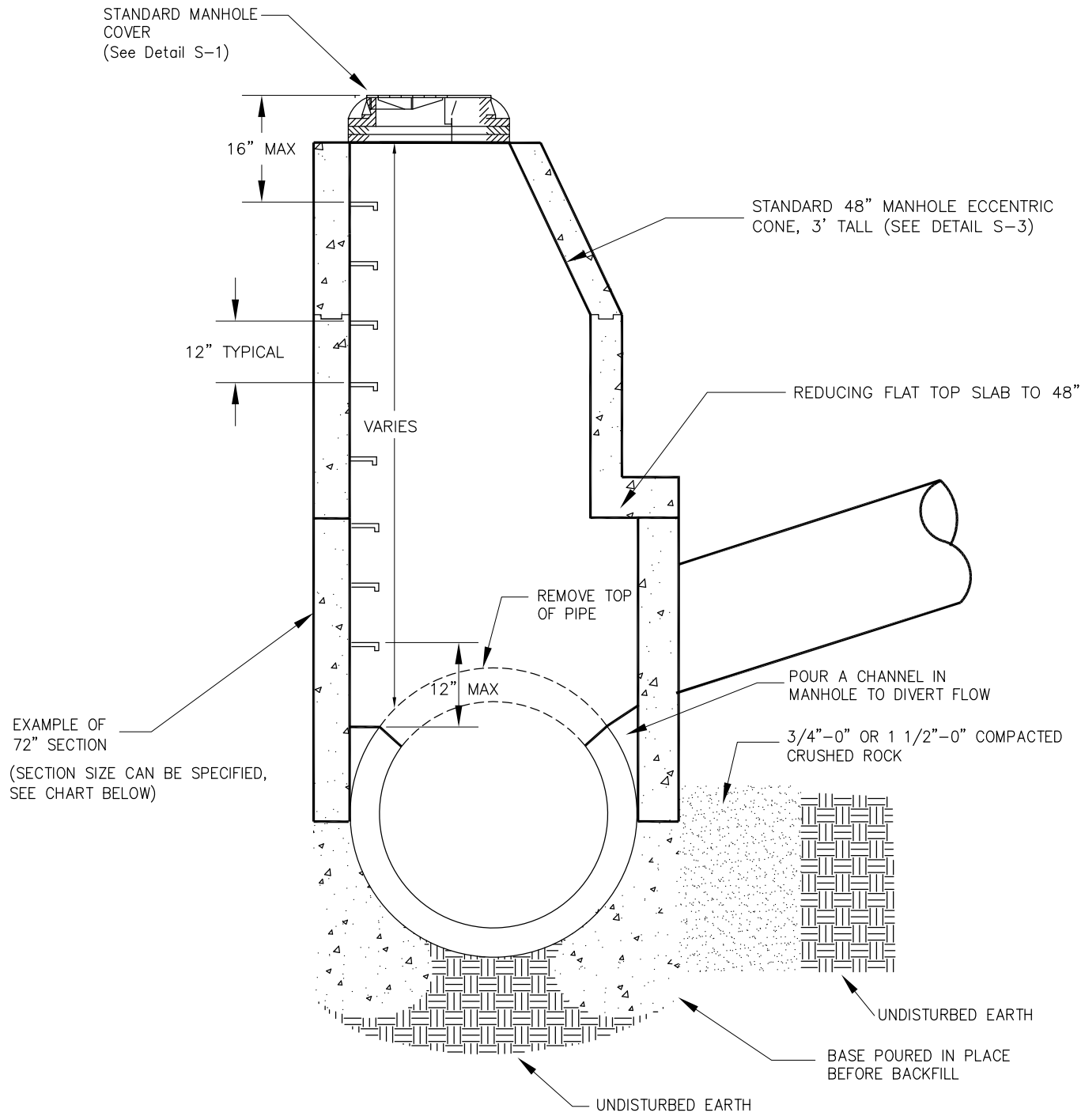
Date Adopt. 11/01/12

Date Rev. 11/15/12

DWG. NO.

Dwg. Name: S-4 Flat Top Manhole.dwg

S-4



Manhole Sizing	Manhole Sizing
36" Hole in a 48" Manhole	60" Hole in a 72" Manhole
42" Hole in a 54" Manhole	72" Hole in a 84" Manhole
48" Hole in a 60" Manhole	84" Hole in a 96" Manhole

Largest diameter hole that a 90° will fit	
2-28" holes in 48" Manhole	2-36" holes in 60" Manhole
2-32" holes in 54" Manhole	2-42" holes in 72" Manhole



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Manhole Over Existing Sewer Detail

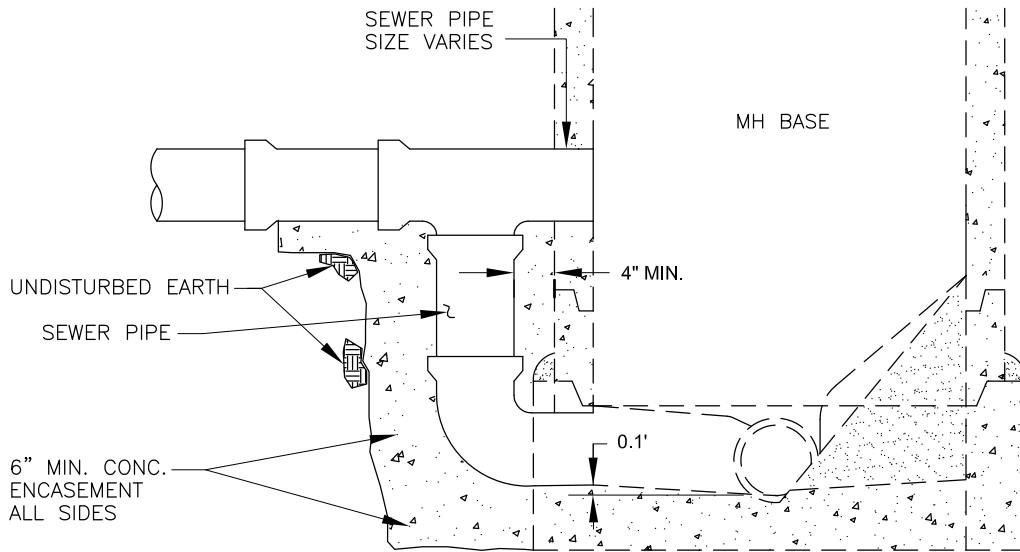
Date Adopt. 11/01/12

Date Rev. 11/15/12

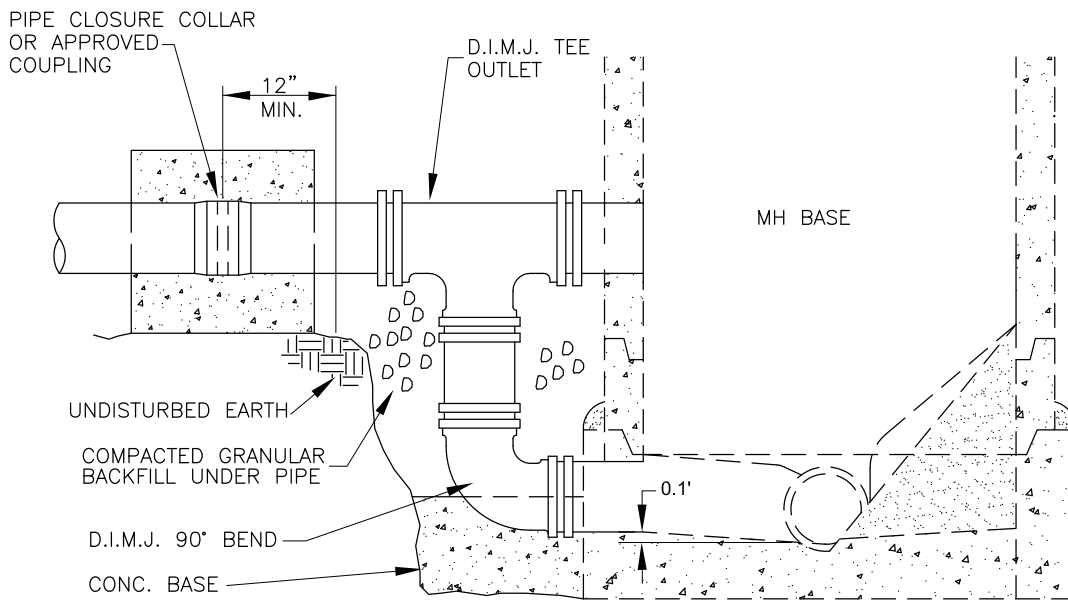
DWG. NO.

Dwg. Name: S-5 Manhole Over Existing Sewer.dwg

S-5



CONCRETE OR P.V.C. PIPE DROP



DUCTILE IRON PIPE DROP



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Outside Drop Connection Detail

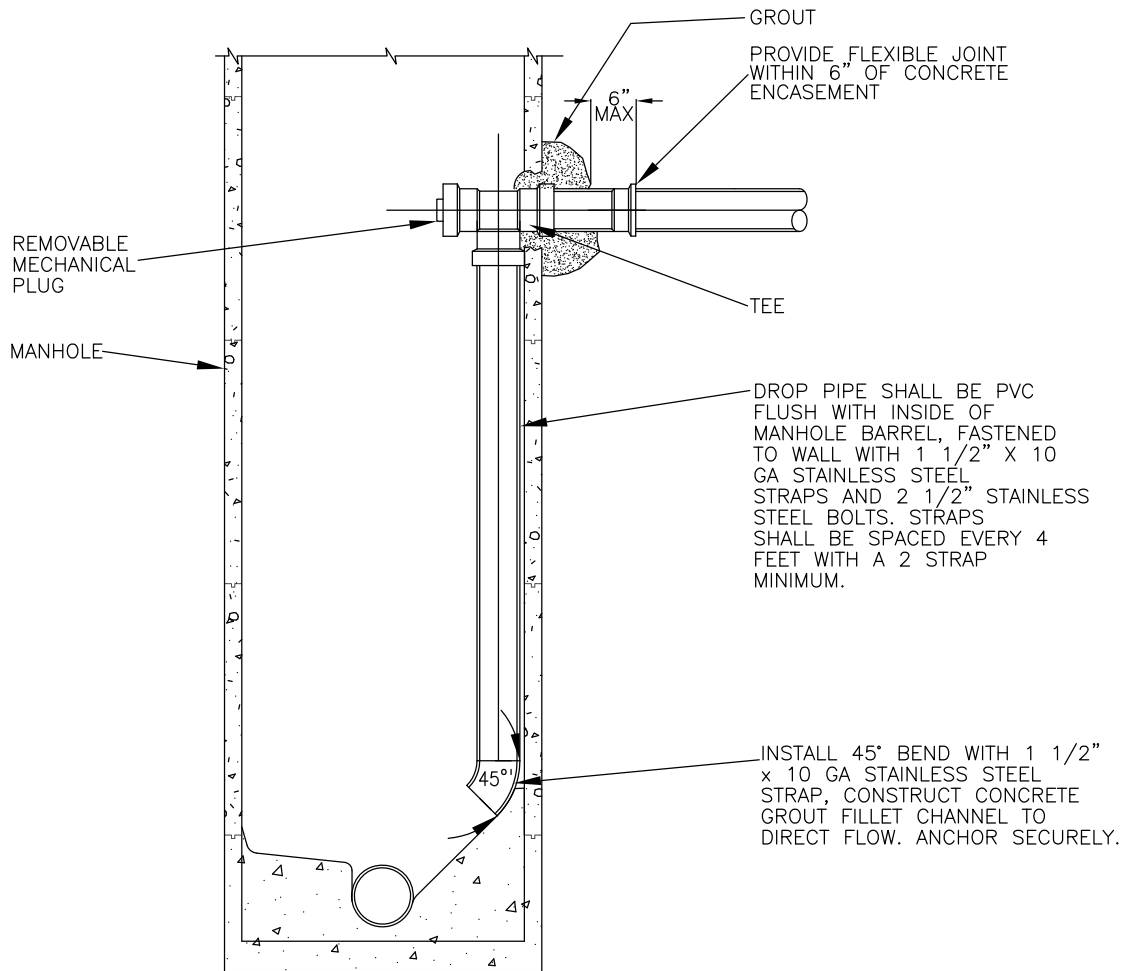
Date Adopt. 11/01/12

Date Rev. ----

DWG. NO.

Dwg. Name: S-6 Outside Drop Manhole.dwg

S-6



NOTE:

1. ONLY ONE INSIDE DROP CONNECTION ALLOWED PER MANHOLE.
2. MINIMUM MANHOLE DIAMETER WITH DROP CONNECTION SHALL BE 48 INCHES.
3. MAXIMUM DROP PIPE DIAMETER SHALL BE 8 INCHES.
4. NOT RECOMMENDED FOR NEW CONSTRUCTION.



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Inside Drop Connection Detail

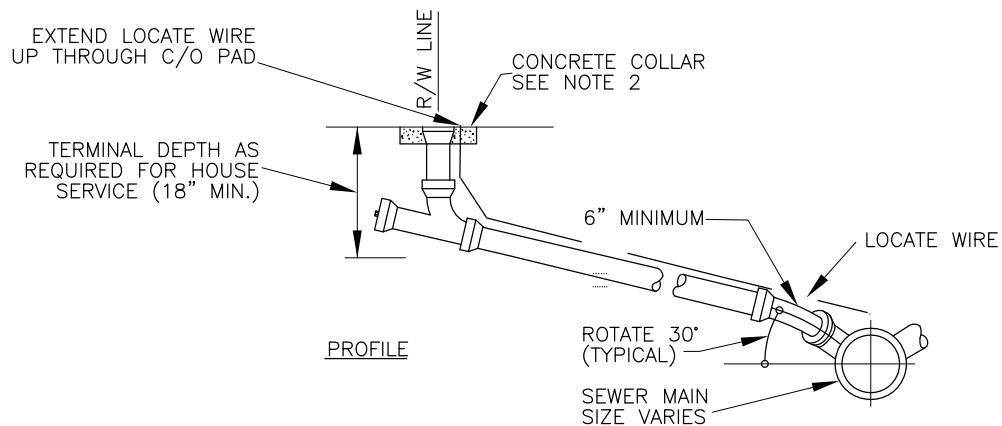
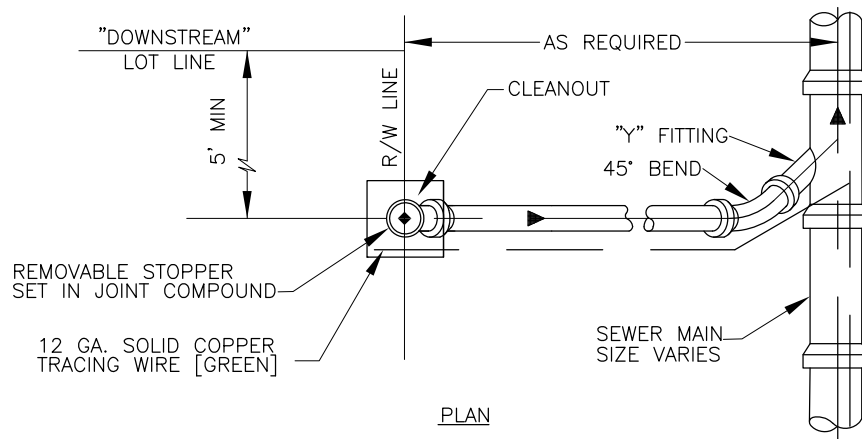
Date Adopt. 11/01/12

Date Rev. ----

DWG. NO.

Dwg. Name: S-7 Inside Drop Manhole.dwg

S-7



NOTES:

1. SERVICE CONNECTION DETAILS ARE BASED ON PVC PIPE AND FITTINGS, MODIFY FOR OTHER APPROVED TYPES OF PIPE.
2. SEWER CLEAN-OUTS NOT IN PAVEMENT SHALL HAVE CONCRETE COLLAR 18"x18"x4" AROUND THEIR TOPS AND MUST BE INSTALLED AND ADJUSTED TO FINISHED GRADE AT THE RIGHT-OF-WAY/PROPERTY LINE.
3. ALL PVC TO CLAY SERVICE CONNECTIONS UNDER LOAD BEARING SURFACES SHALL USE DFW NON-SHEAR FERNCO TYPE CONNECTORS OR APPROVED EQUAL.
4. 90° FITTINGS ARE PROHIBITED. MINIMUM 6" PIPE DIA. SPOOL BETWEEN 45° FITTINGS.



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Typical Sewer Connection Detail

Date Adopt. 11/01/12

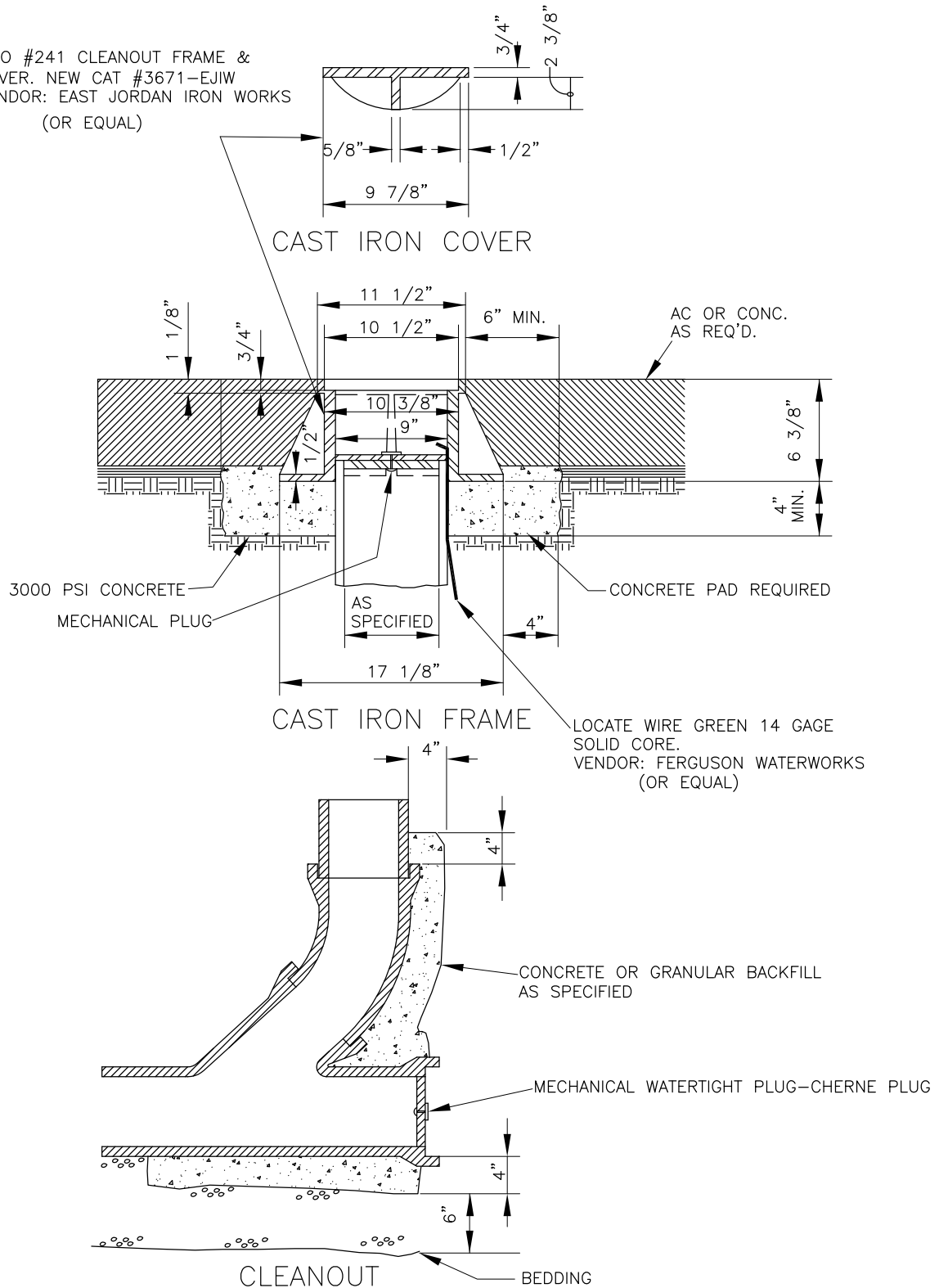
Date Rev. 11/15/12

DWG. NO.

Dwg. Name: S-8 Typical Sewer Connection.dwg

S-8

IFCO #241 CLEANOUT FRAME &
COVER. NEW CAT #3671-EJIW
VENDOR: EAST JORDAN IRON WORKS
(OR EQUAL)



NOTES:
ALL CLEANOUT MATERIAL TO
BE SAME AS CARRIER PIPE



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Clean Out Detail

Date Adopt. 11/01/12 Date Rev. ----

Dwg. Name: S-9 Clean Out.dwg

DWG. NO.

S-9