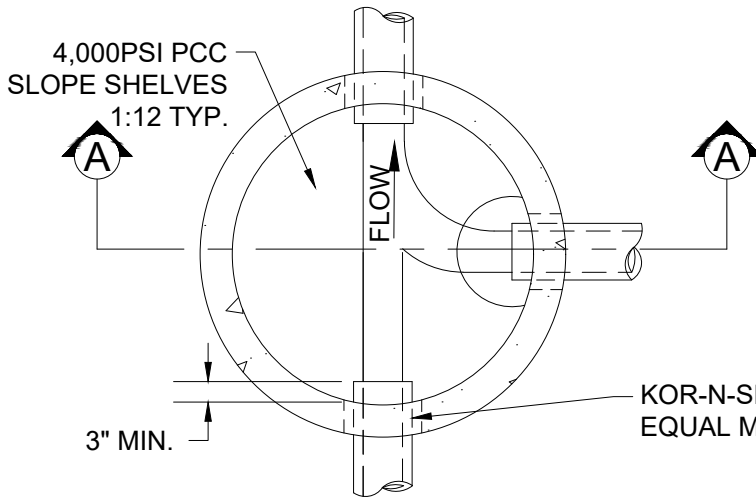


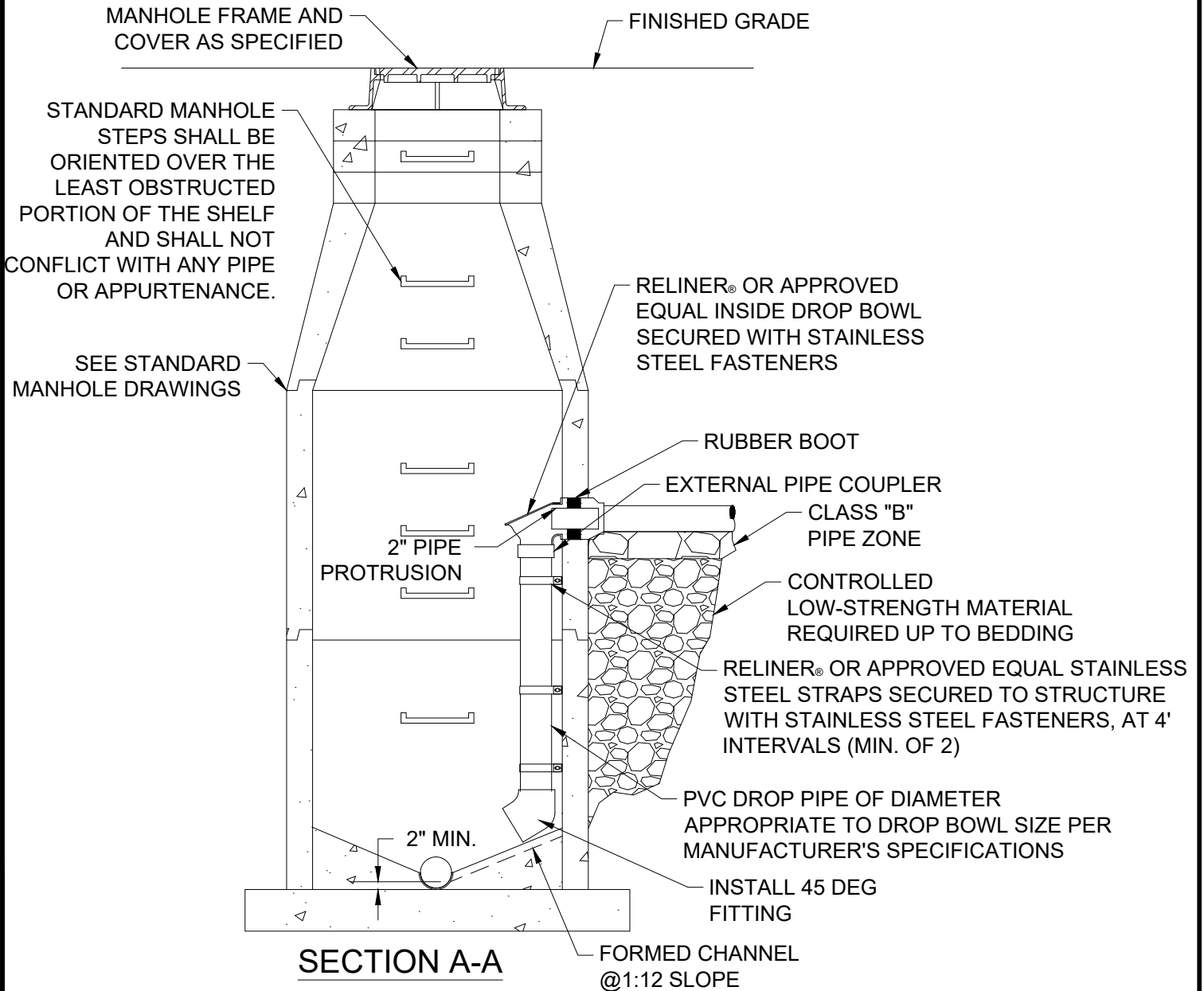
FILENAME: y:\inter-departmental\development engineering projects\public works standards\2.0 pws revision copy\details\cad - all\300\_wastewater\301.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dolloowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)



**PLAN**

**NOTES:**

1. FOR A 48" DIA. MANHOLE THE MAXIMUM INCOMING PIPE DIAMETER IS 15". A LARGER DIAMETER INCOMING PIPE WILL REQUIRE A SPECIAL DESIGN.



**SECTION A-A**

FORMED CHANNEL @1:12 SLOPE

**CITY OF GRESHAM**

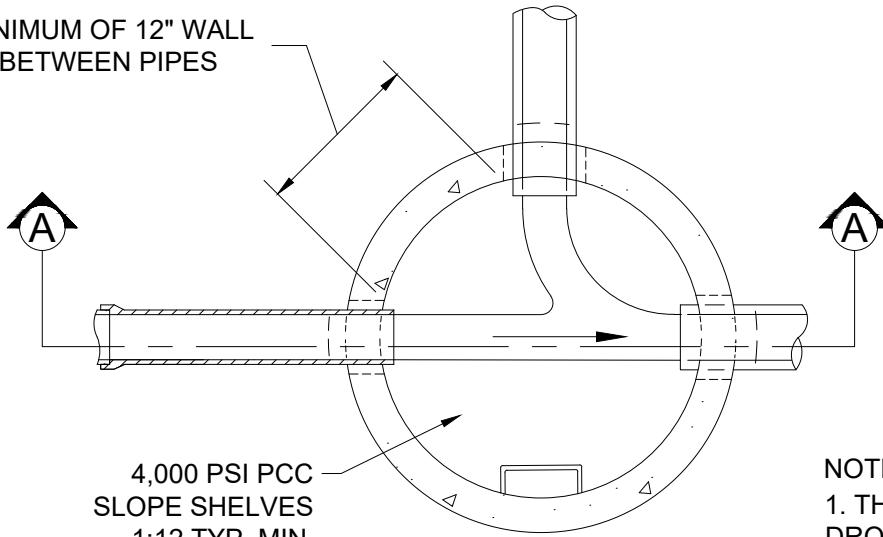
**STANDARD INSIDE DROP MANHOLE**

PWS VERSION: JULY 2026

DRAWN	AAD
REV. DATE	NOV 2025
APPR.	
DETAIL NO.	301

FILENAME: y:\inter-departmental\development engineering projects\public works standards\2.0 pws revision copy\details\cad - all\300\_wastewater\302.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)

MINIMUM OF 12" WALL  
BETWEEN PIPES

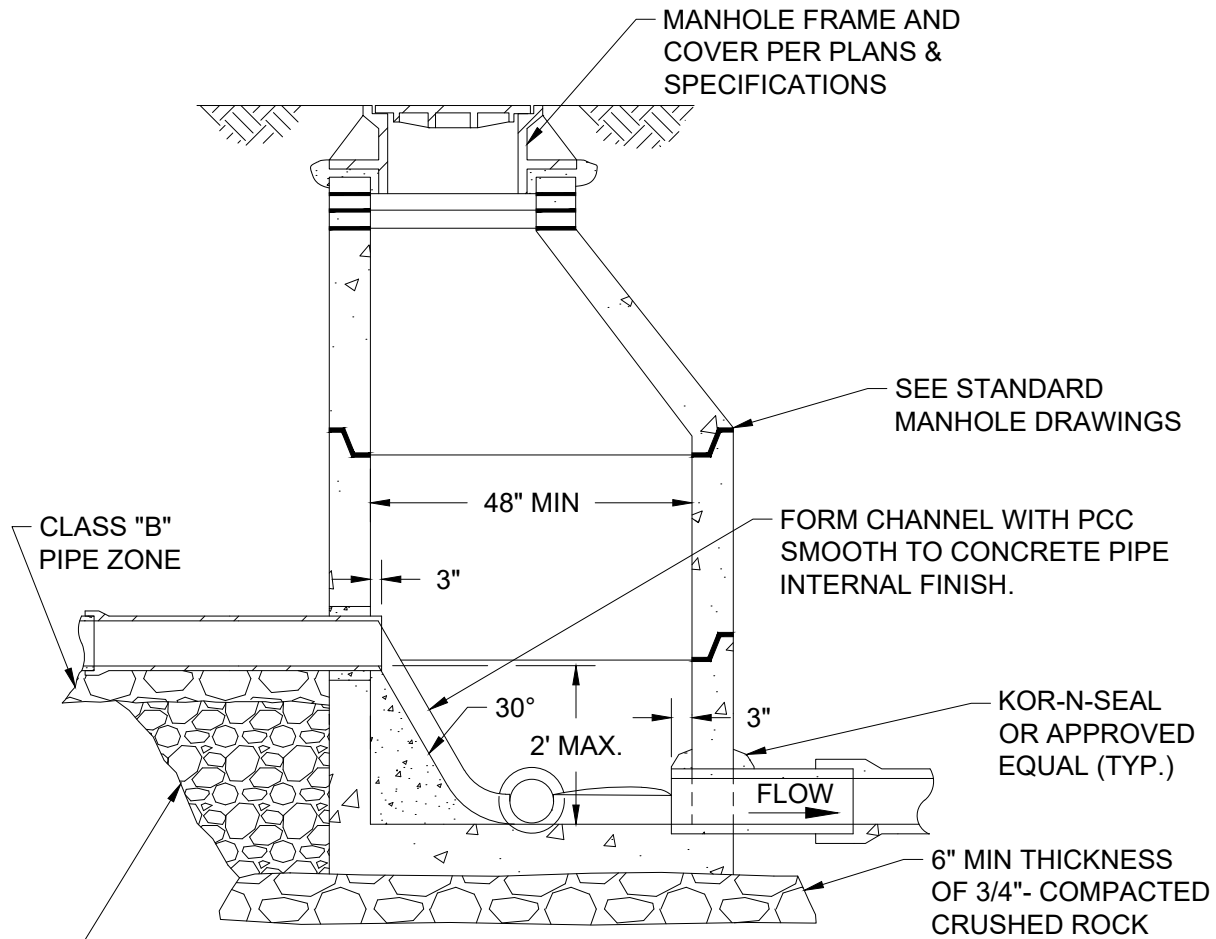


4,000 PSI PCC  
SLOPE SHELVES  
1:12 TYP. MIN.

NOTES:

1. THIS DESIGN TO BE USED FOR ALL  
DROPS 2 FEET AND LESS.

**PARTIAL TOP VIEW**



CLASS "B"  
PIPE ZONE

MANHOLE FRAME AND  
COVER PER PLANS &  
SPECIFICATIONS

SEE STANDARD  
MANHOLE DRAWINGS

FORM CHANNEL WITH PCC  
SMOOTH TO CONCRETE PIPE  
INTERNAL FINISH.

KOR-N-SEAL  
OR APPROVED  
EQUAL (TYP.)

6" MIN THICKNESS  
OF 3/4"- COMPACTED  
CRUSHED ROCK

**SECTION A-A**

IMPORTED SELECT (CRUSHED AGGREGATE)  
BACKFILL COMPACTED TO 95% M.D.D. PER ASTM  
D1557, OR C.D.F. AS REQUIRED.

**CITY OF  
GRESHAM**

**SHALLOW INSIDE DROP MANHOLE**

PWS VERSION: JULY 2026

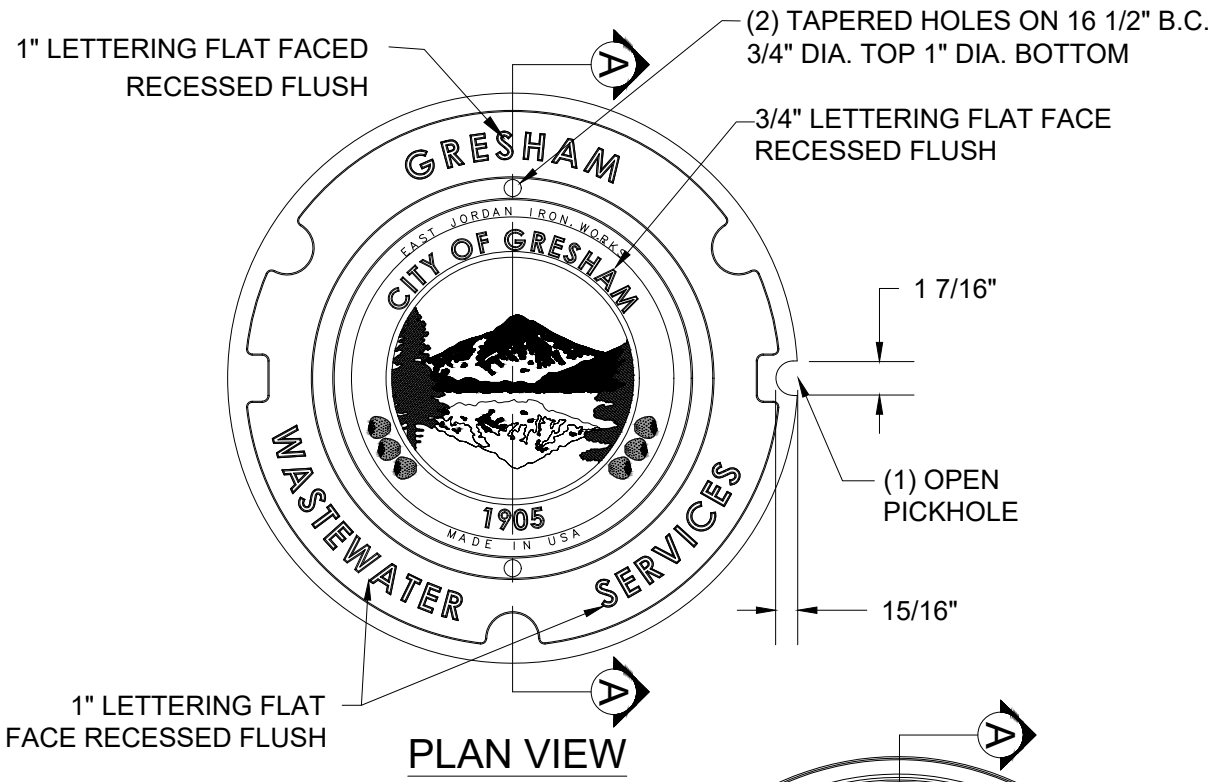
DRAWN AAD

REV. DATE NOV 2025

APPR.

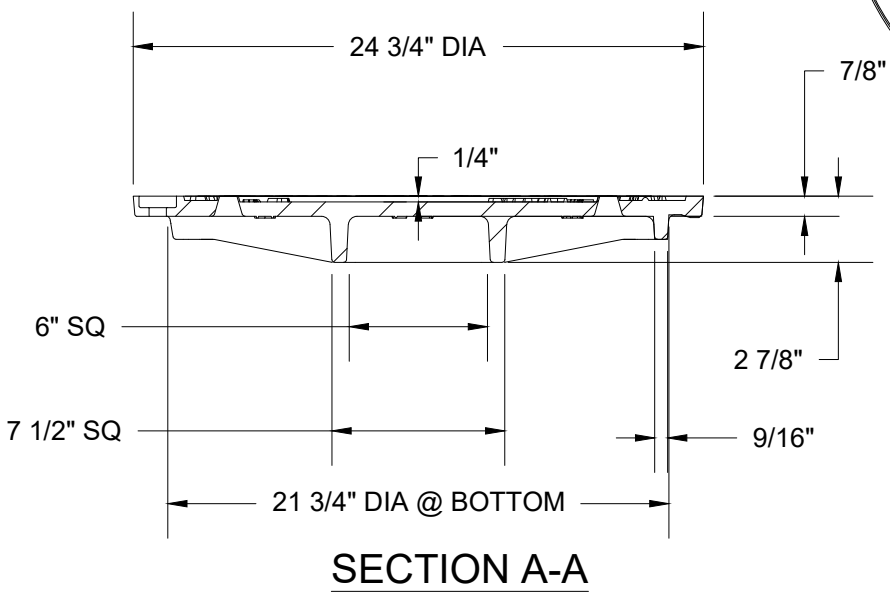
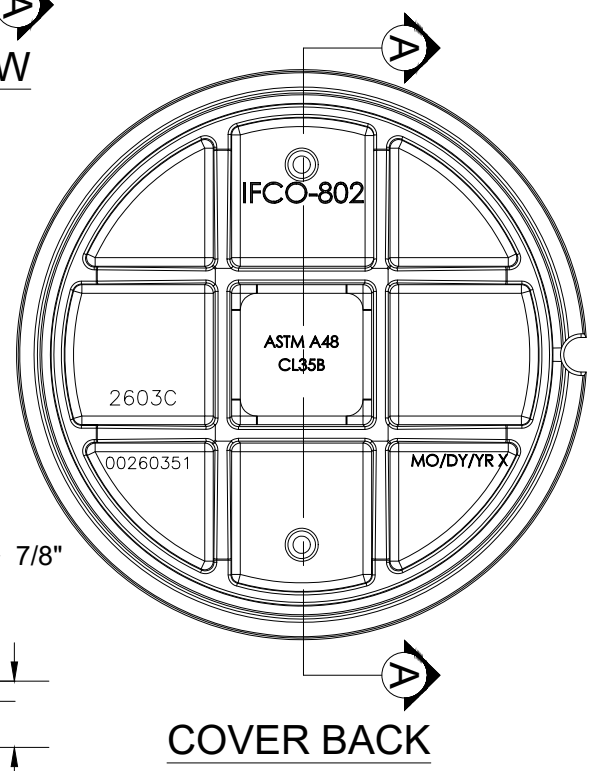
DETAIL NO. 302

FILENAME: y:\inter-departmental\development engineering projects\public works standards\20 pws revision copy\details\cad - all\300\_wastewater\303.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)



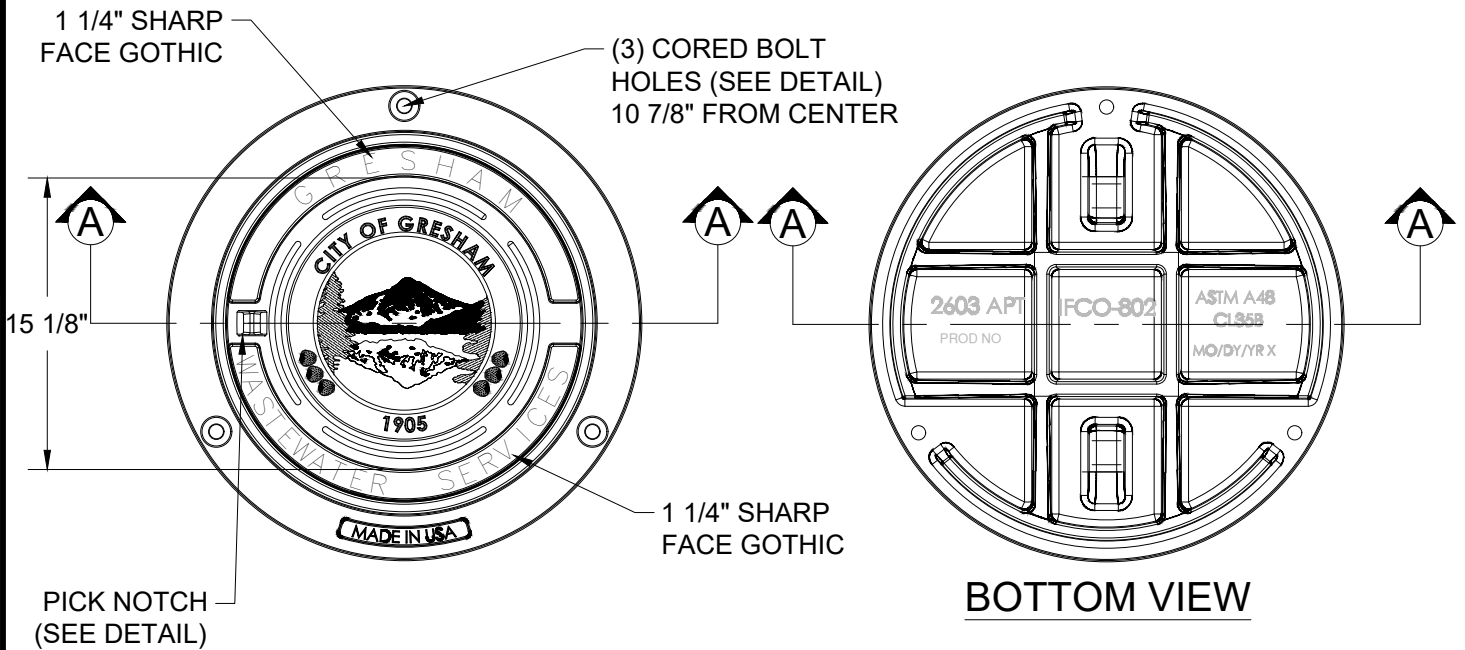
**NOTES:**

1. ALL MANHOLES LOCATED IN-ROAD PAVEMENT SHALL USE THE STANDARD MANHOLE COVER AS PRODUCED BY: EJ, OR EQUAL
2. MATERIAL SHALL BE GREY IRON, ASTM A-48, CLASS 35-B. APPROXIMATE WT. = 134 lbs.



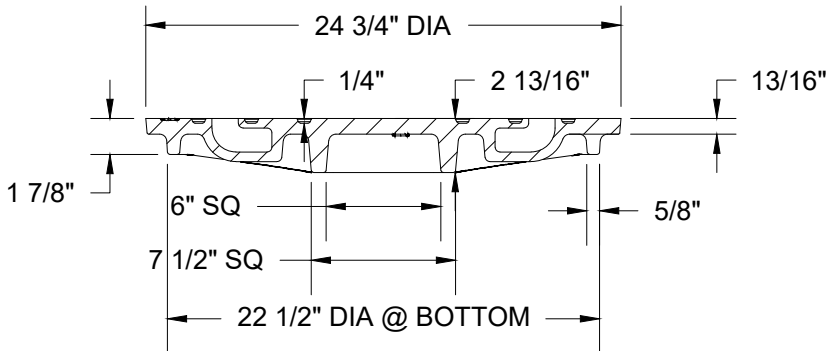
	<p><b>STANDARD WASTEWATER MANHOLE COVER</b></p>	<p>DRAWN AAD</p>
		<p>REV. DATE NOV 2025</p>
		<p>APPR.</p>
		<p>DETAIL NO. 303</p>
<p>PWS VERSION: JULY 2026</p>		

FILENAME: y:\inter-departmental\development engineering projects\public works standards\20 pws revision copy\details\cad - all\300\_wastewater\304.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)

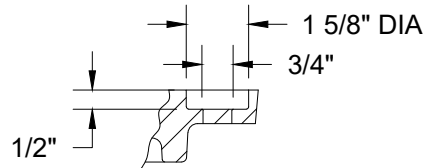


**PLAN**

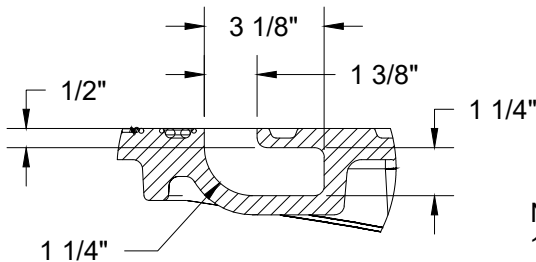
**BOTTOM VIEW**



**SECTION A-A**



**BOLT HOLE**



**PICK NOTCH**

**NOTES:**

- MATERIAL SHALL BE GRAY IRON, ASTM A-48, CLASS 35-B. APPROXIMATE WT. = 134 LBS.  
MANHOLE COVER AS PRODUCED BY: EJ OR EQUAL

**CITY OF GRESHAM**

**WASTEWATER TAMPERPROOF AND WATERTIGHT MANHOLE COVER**

PWS VERSION: JULY 2026

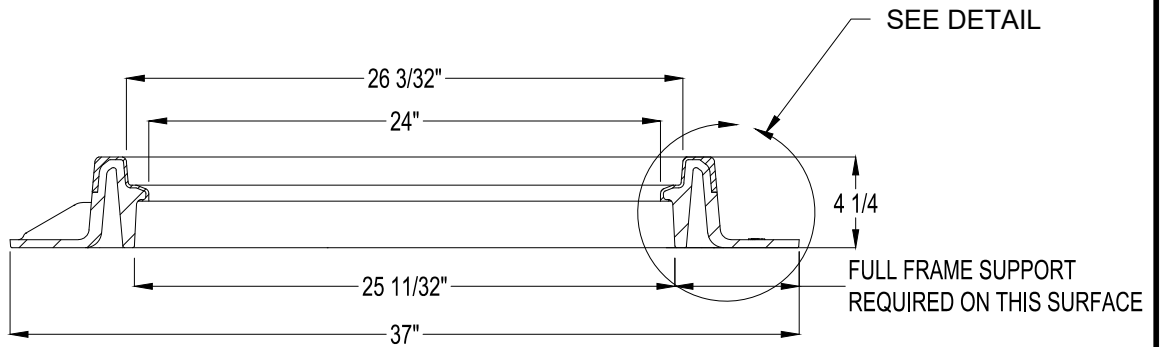
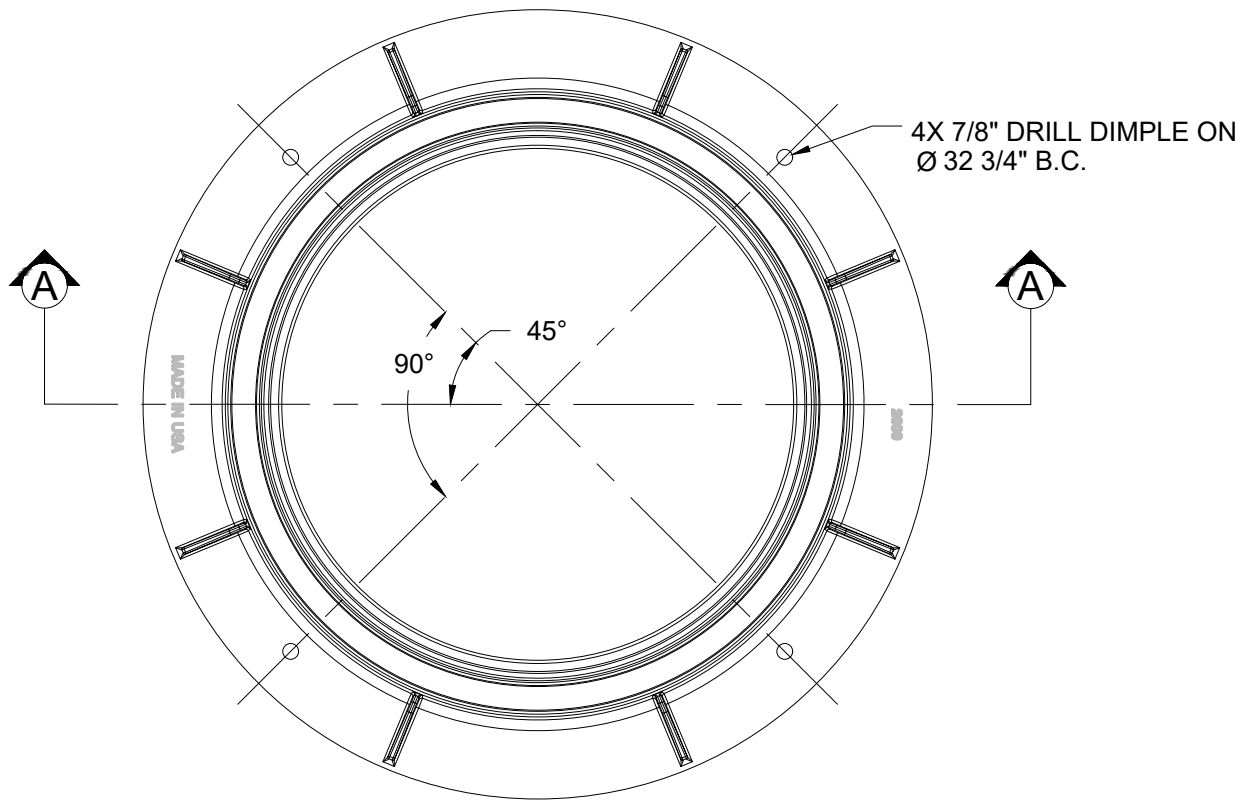
DRAWN AAD

REV. DATE NOV 2025

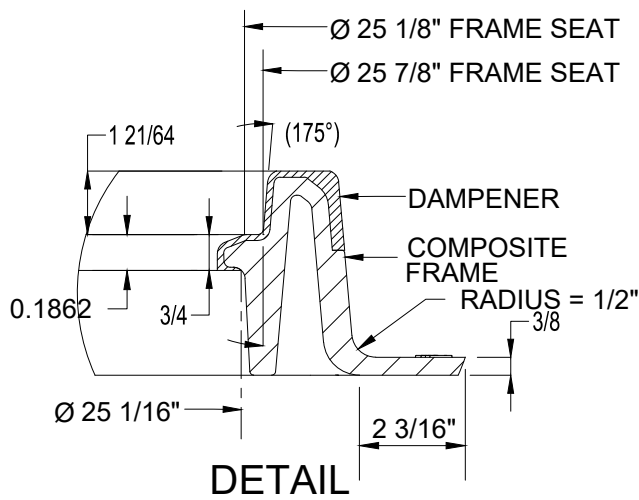
APPR.

DETAIL NO. 304

FILENAME: y:\inter-departmental\development engineering projects\public works standards\20 pws revision copy\details\cad - all\300\_wastewater\305.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)



**SECTION A-A**



**NOTES:**

1. MATERIAL TO BE EJ 2600 DUROSTREET COM260210, LOAD RATING H25 (50,00 LBS), OR EQUAL ESTIMATED WEIGHT 42 LBS.
2. TO BE USED ONLY WHEN PAIRED WITH COMPOSITE MANHOLE COVER STD DETAIL 306

**CITY OF GRESHAM**

**OFF-ROAD ELEVATED MANHOLE FRAME**

PWS VERSION: JULY 2026

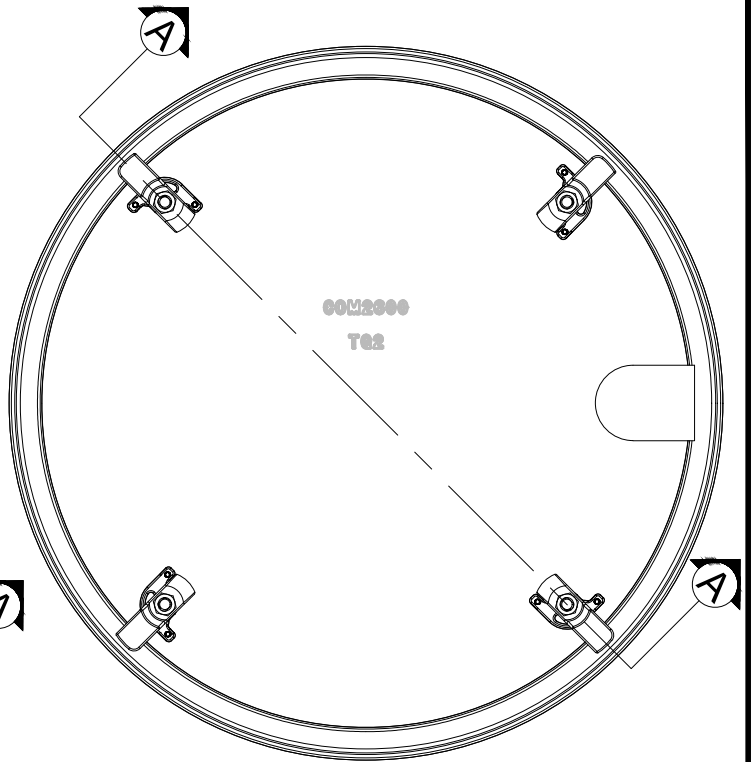
DRAWN	AAD
REV. DATE	NOV 2025
APPR.	
DETAIL NO.	305

FILENAME: y:\inter-departmental\development engineering projects\public works standards\20 pws revision copy\details\cad - all\300\_wastewater\306.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)

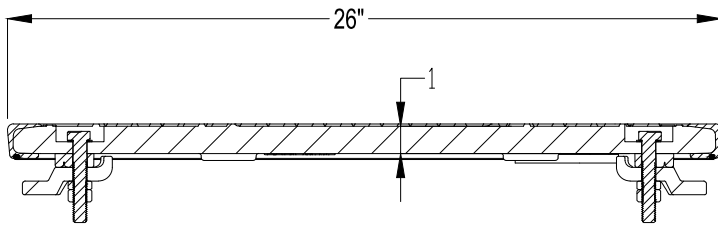


1/4 TURN PENTA HEAD LATCH (SEE DETAIL)

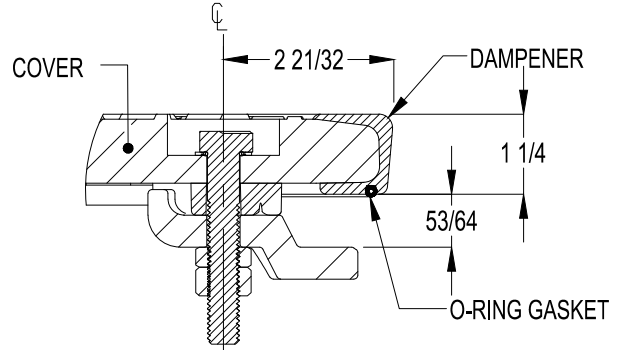
PLAN



BOTTOM



SECTION A-A



PENTA HEAD DETAIL

NOTES:

1. MATERIAL TO BE EJ 2600 DUROSTREET COM260041, LOAD RATING H25 (50,00 LBS), ESTIMATED WEIGHT 39 LBS, OR EQUAL
2. TO BE USED ONLY WHEN PAIRED WITH COMPOSITE MANHOLE FRAME STD DETAIL 305

**CITY OF  
GRESHAM**

**OFF-ROAD ELEVATED WATERTIGHT MANHOLE  
COVER**

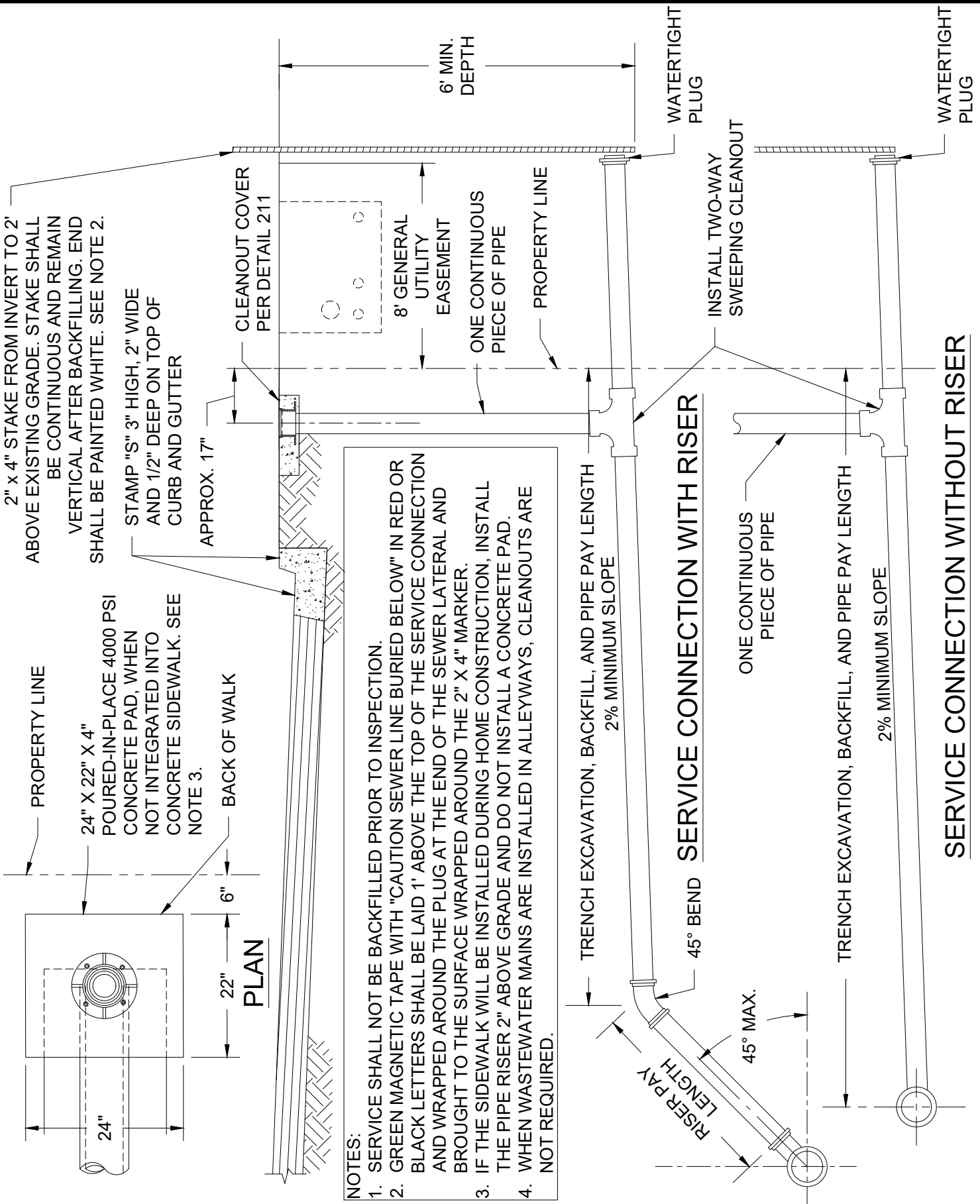
PWS VERSION: JULY 2026

DRAWN AAD

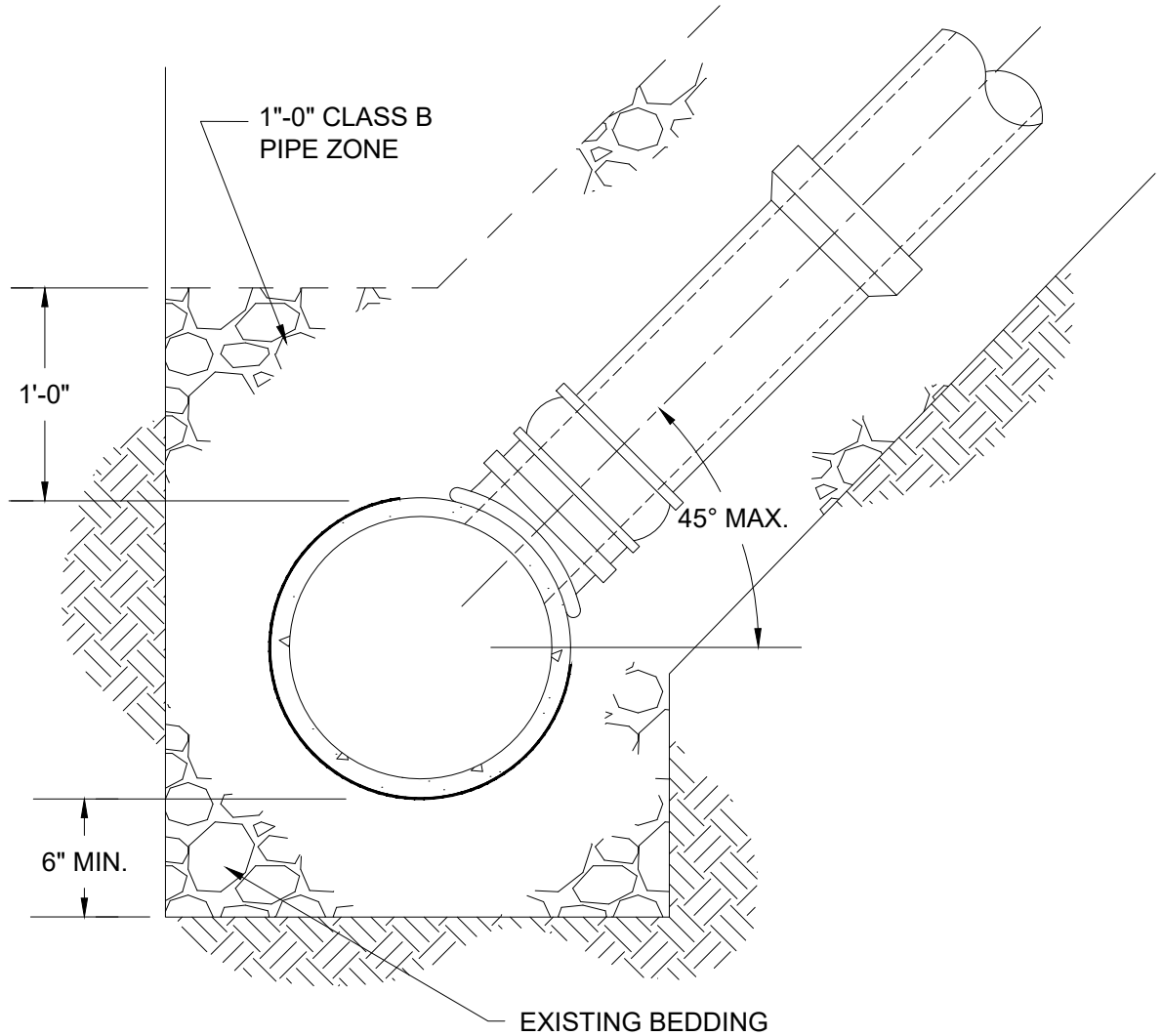
REV. DATE JULY 2026

APPR.

DETAIL NO. 306



FILENAME: y:\inter-departmental\development engineering projects\public works standards\2.0 pws revision copy\details\cad - all\300\_wastewater\308.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)



**NOTES:**

1. THE TAP SHALL NOT BE MADE EXCEPT IN THE PRESENCE OF A CITY INSPECTOR; NOR SHALL ANY CONNECTION BE MADE WITHOUT CITY APPROVAL.
2. A "SEALTITE SADDLE" OR "INSERT-A-TEE" (OR APPROVED EQUAL) TYPE CONNECTION SHALL BE USED AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. FUSION SADDLES WILL BE USED FOR HDPE PIPE CONNECTIONS.
3. THE HOLE MADE IN MAIN SHALL BE CORED.
4. CENTERLINE OF TAP TO BE ABOVE SPRINGLINE.
5. 4" MAXIMUM HOLE FOR 8" MAIN UNLESS OTHERWISE APPROVED BY THE ENGINEER.

**CITY OF  
GRESHAM**

**TAP IN EXISTING MAIN FOR SANITARY  
SEWER LATERAL**

PWS VERSION: JULY 2026

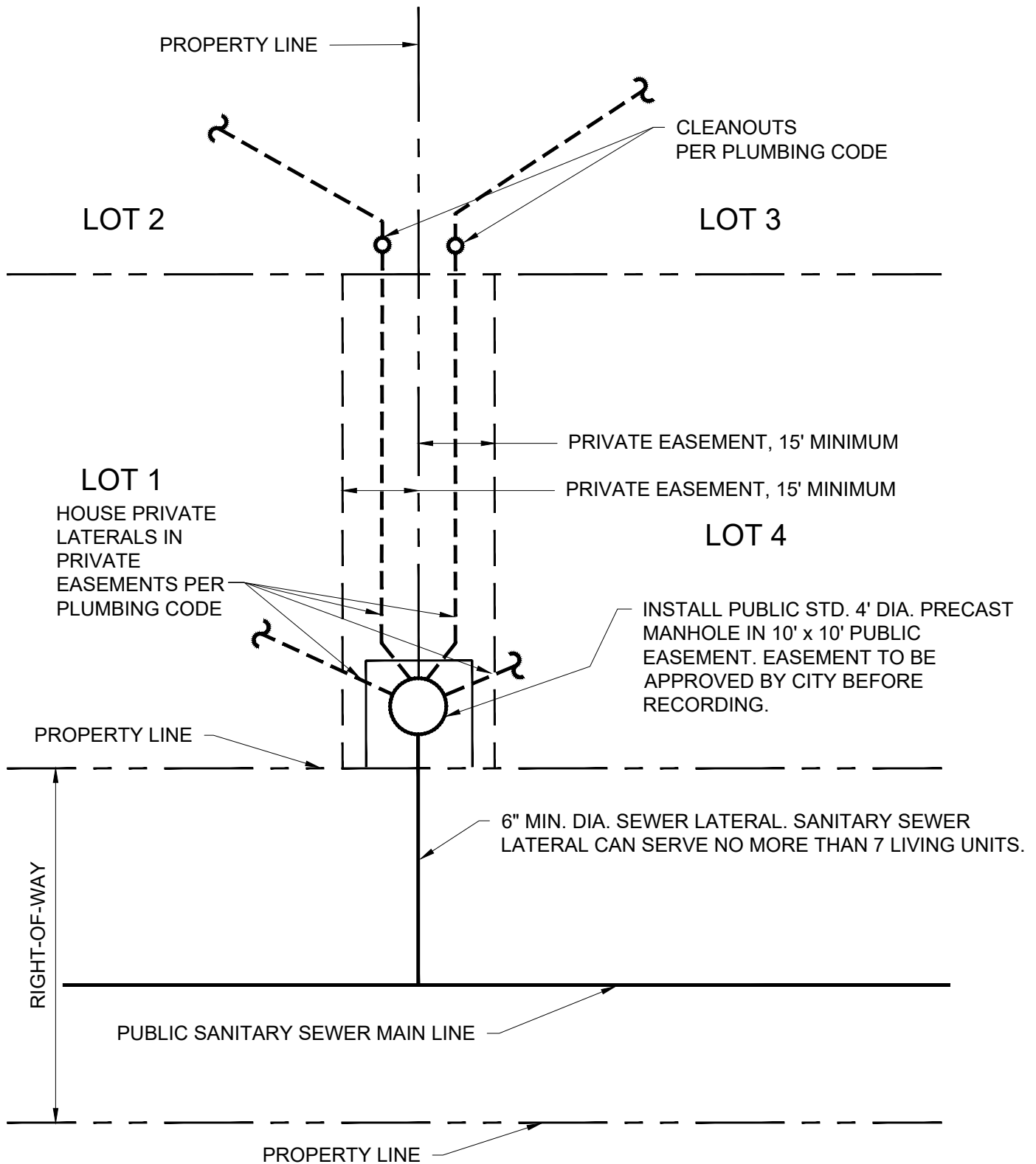
DRAWN **KCK**

REV. **JAN 2019**  
DATE

APPR.

DETAIL NO. **308**

FILENAME: y:\inter-departmental\development engineering projects\public works standards\2.0 pws revision copy\details\cad - all\300\_wastewater\309.dwg, Plotted 4/20/2026 11:45 AM, By: Anthony Dollowitch, ANSI FULL BLEED A (8.50 X 11.00 INCHES)



**NOTES:**

1. CONNECTION PLAN FOR 4 LOT COMMON LATERAL (3 LOTS SIMILAR).
2. EASEMENTS TO BE RECORDED & A COPY THEREOF SUBMITTED TO CITY PRIOR TO CONSTRUCTION.
3. PRIVATE EASMENT ARRANGMENT SHOWN TO BE USED ONLY WHEN SEWER IN PUBLIC ROAD RIGHT-OF-WAY CANNOT BE USED AS DETERMINED BY THE ENGINEER

**CITY OF  
GRESHAM**

**WASTEWATER CONNECTION, 3 OR 4 LOTS  
WITH PRIVATE EASEMENTS**

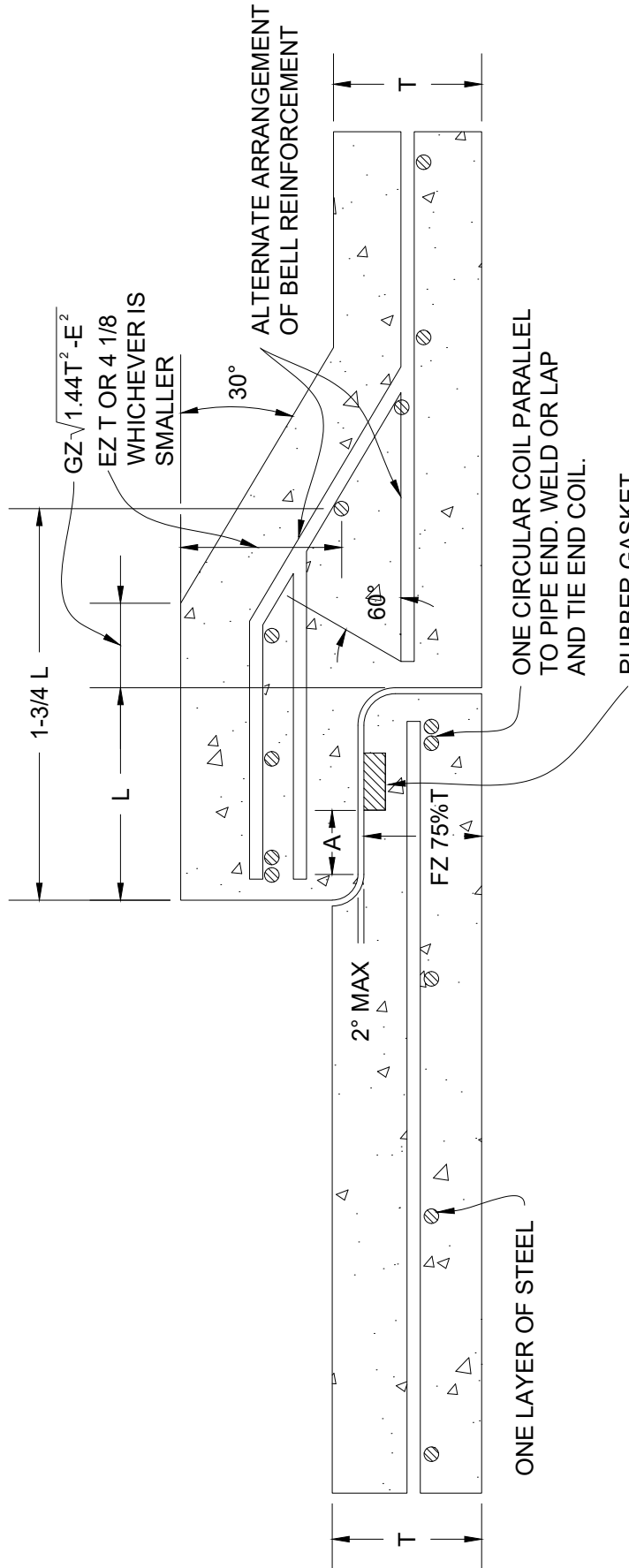
PWS VERSION: JULY 2026

DRAWN AAD

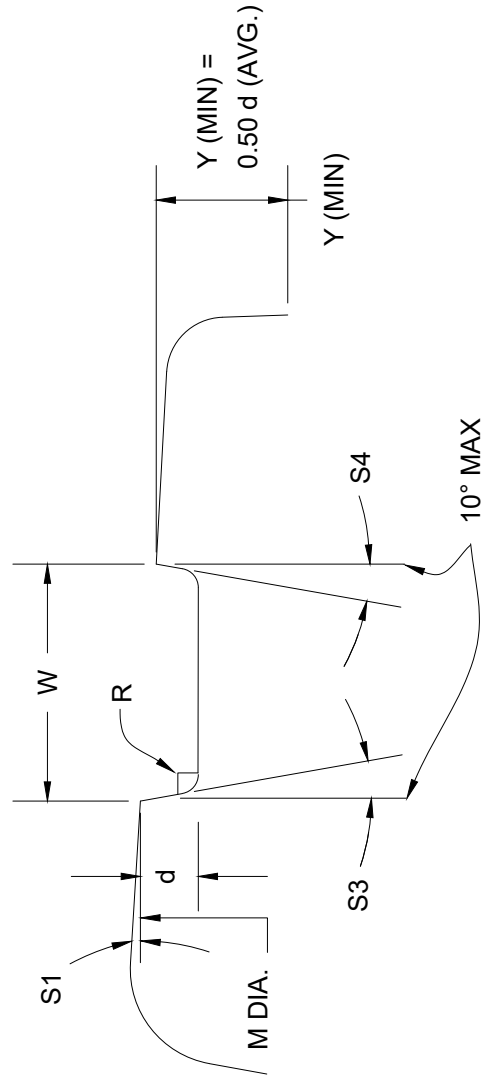
REV. DATE OCT 2025

APPR.

DETAIL NO. 309



**PLAN**



**SIGOT GROOVE DETAIL**

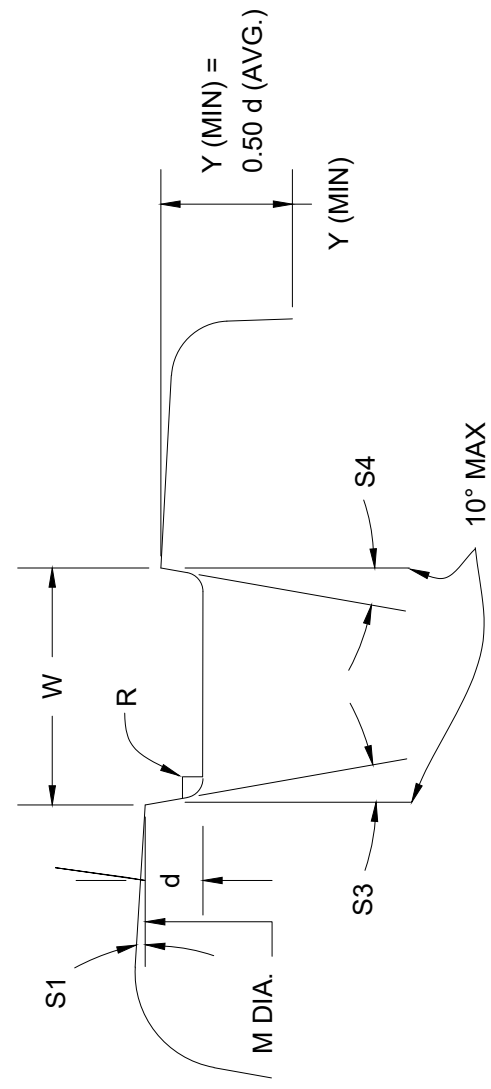
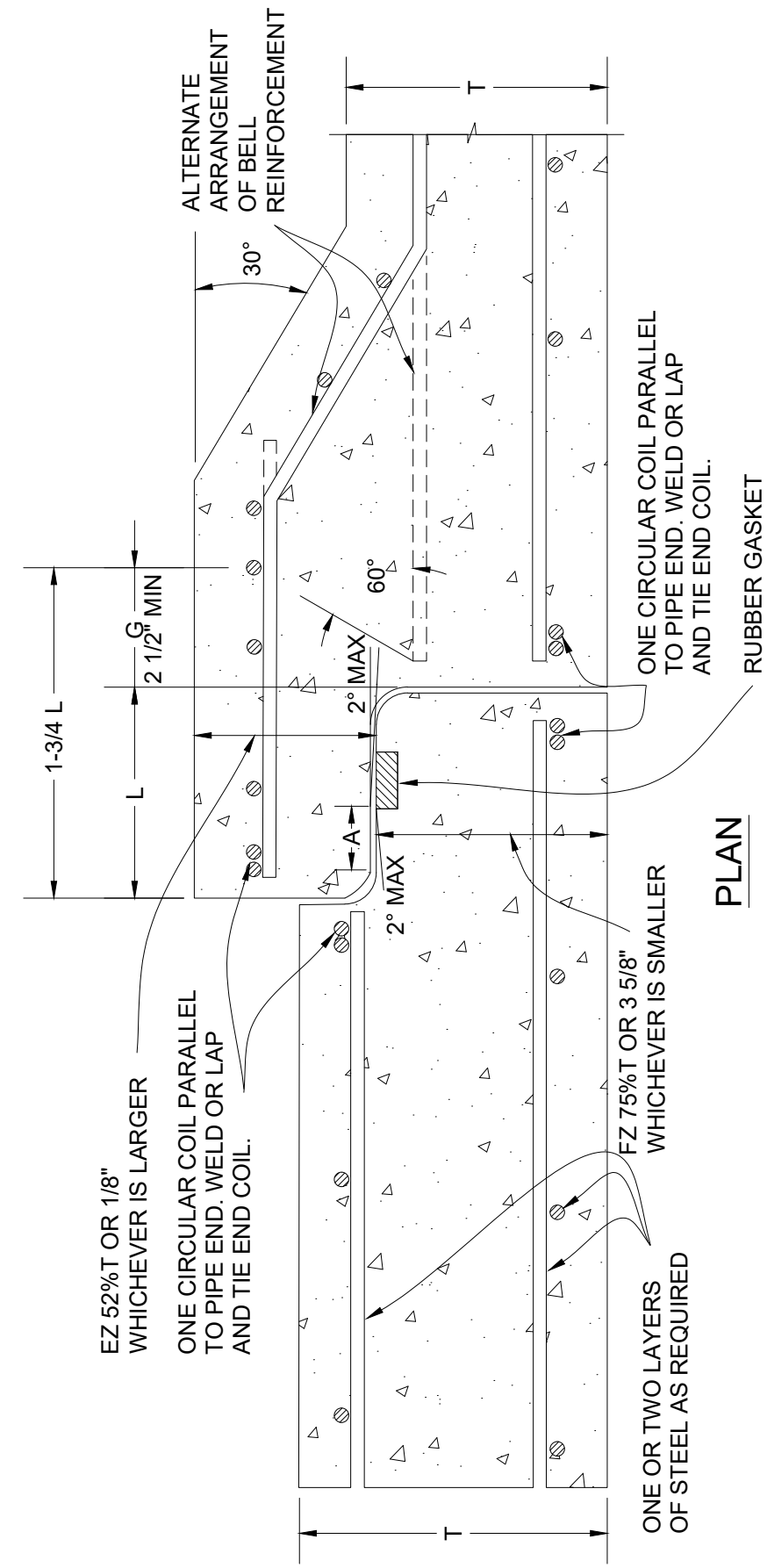
NOTE:  
SEE STANDARD DETAIL 312 FOR  
VARIABLE DIMENSIONS.



**JOINT DETAIL  
REINFORCED CONCRETE (T=LESS THAN 4 5/8")**

PWS VERSION: JULY 2026

DRAWN	KRB
REV. DATE	JAN 2019
APPR.	
DETAIL NO.	310



NOTE:  
SEE STANDARD DETAIL 312 FOR  
VARIABLE DIMENSIONS.

CITY OF  
GRESHAM

JOINT DETAIL  
REINFORCED CONCRETE (T=4 5/8" AND  
LARGER)

PWS VERSION: JULY 2026

DRAWN	KRB
REV. DATE	JAN 2019
APPR.	
DETAIL NO.	311

