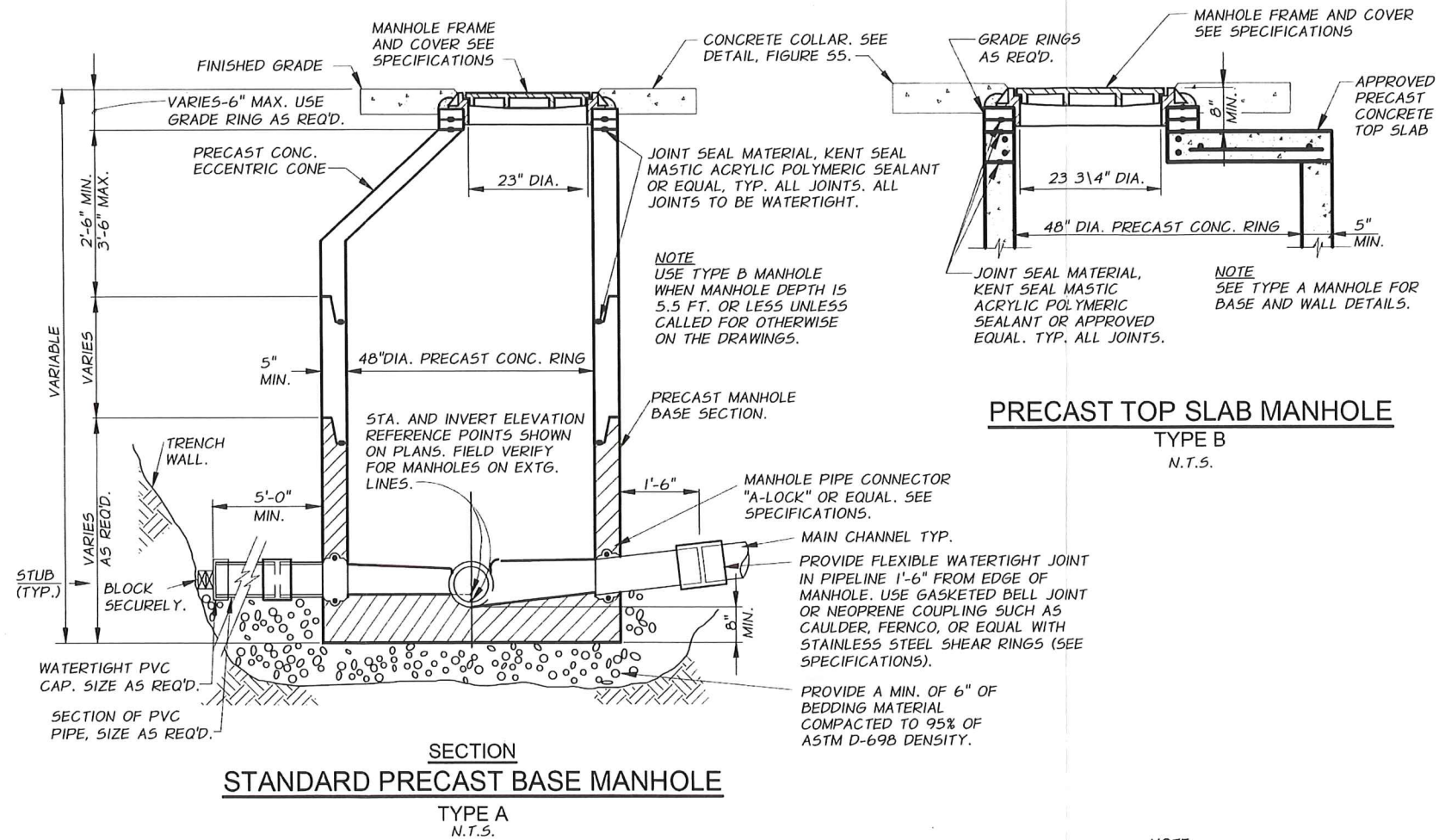


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NOTE:  
CONTRACTOR SHALL REMOVE MANHOLE STEPS AND GROUT AFTER MANHOLE TESTING IS SUCCESSFULLY COMPLETED AND ACCEPTED BY THE CITY.

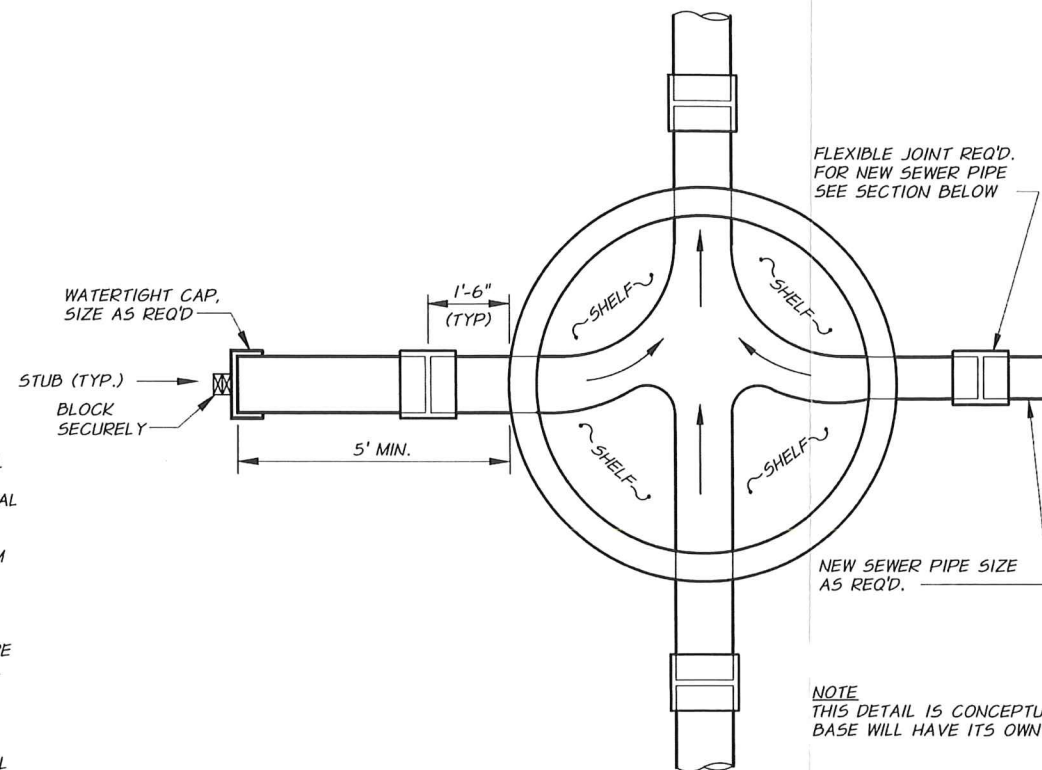
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ORIGINAL DEVELOPMENT	MARCH 2021



CITY OF  
**BOARDMAN, OREGON**  
STANDARD DRAWING  
SANITARY SEWER  
**STANDARD PRECAST MANHOLE**

FIGURE  
**S1**

- MANHOLE CONSTRUCTION NOTES**
1. ALL MANHOLES SHALL BE PRECAST MANHOLE UNITS UNLESS OTHERWISE APPROVED.
  2. ANY GAPS, HOLES, ROUGH SPOTS, ETC., IN THE CHANNELS SHALL BE FILLED OR REPAIRED IN THE FIELD.
  3. THE MANHOLES SHALL BE SET 0 TO 6 INCHES BELOW FINISH GRADE AND THEN ADJUSTED TO GRADE WITH GRADE RINGS AS REQUIRED.
  4. CONE SECTION SHALL BE ECCENTRIC WITH THE MANHOLE ACCESS ORIENTED ABOVE DOWNSTREAM SIDE.
  5. SHOULD THE CITY DETERMINE THE NATIVE MATERIAL IS UNSUITABLE FOUNDATION, ADDITIONAL MATERIAL SHALL BE INSTALLED AS OUTLINED IN THE TECHNICAL SPECIFICATIONS.
  6. FLOW CHANNEL IN MANHOLE SHALL DROP A MINIMUM OF 0.1 FEET FROM INLET TO OUTLET.
  7. IN MANUFACTURING THE MANHOLES, THE CONTRACTOR IS ADVISED TO REVIEW THE DETAILS ON THIS SHEET WHICH SHOW THE SEWER PIPE SLOPE CALCULATED TO THE CENTERLINE OF THE MANHOLE.
  8. ALL MANHOLE CHANNELS SHALL BE CONSTRUCTED IN THE MANHOLE BASE U-SHAPE FORM. ALL SHELVES SHALL BE FINISHED IN A WORKMAN-LIKE MANNER AND SHALL SLOPE TO DRAIN INTO CHANNEL AT 1:12 MAXIMUM SLOPE.



PLAN  
MANHOLE BASE  
N.T.S.

FLEXIBLE JOINT REQ'D.  
FOR NEW SEWER PIPE  
SEE SECTION BELOW

NEW SEWER PIPE SIZE  
AS REQ'D.

NOTE  
THIS DETAIL IS CONCEPTUAL ONLY. EACH  
BASE WILL HAVE ITS OWN UNIQUE LAYOUT.

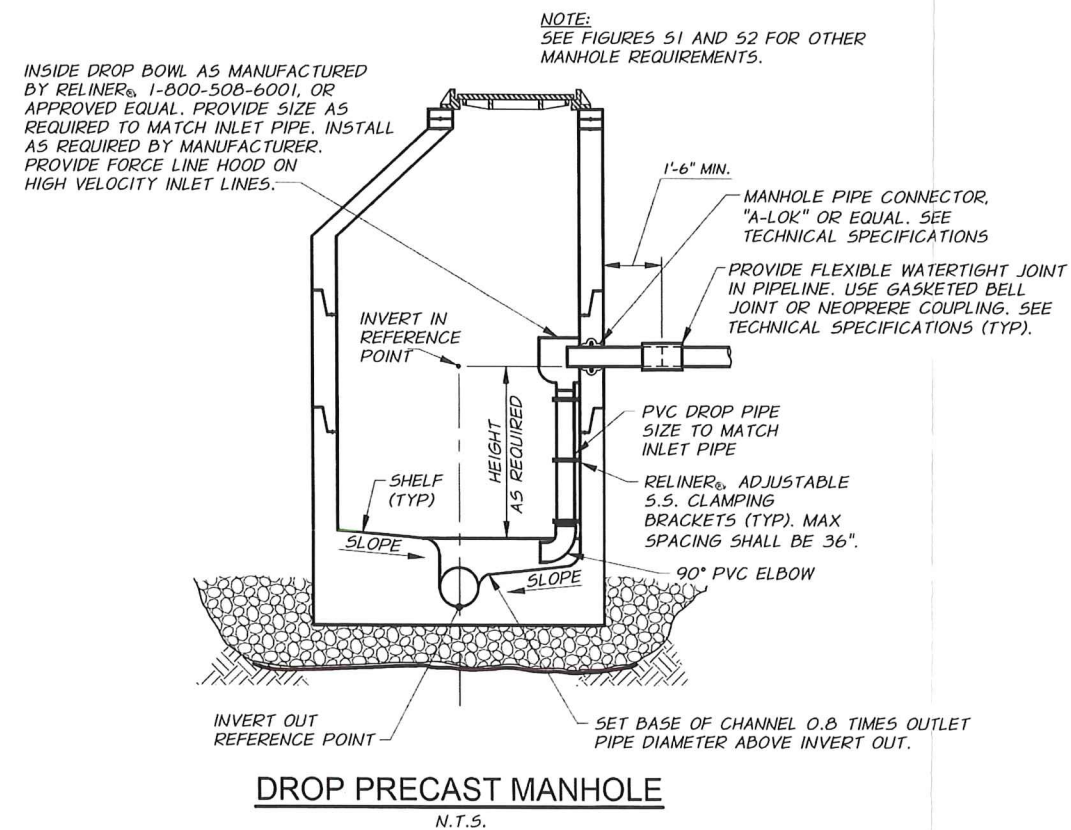
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SANITARY SEWER  
MANHOLE BASE/  
CONSTRUCTION NOTES

FIGURE  
S2

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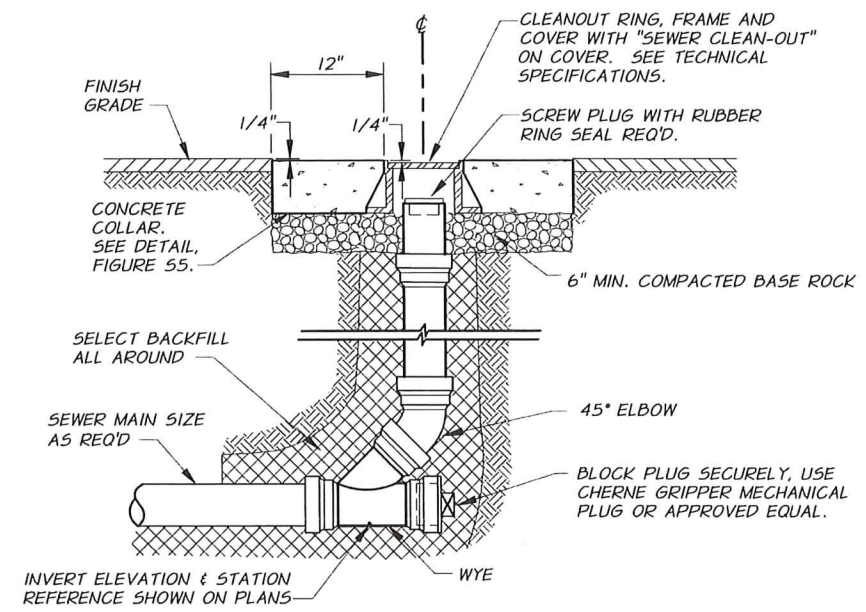
REVISION	DATE
ORIGINAL DEVELOPMENT	MARCH 2021



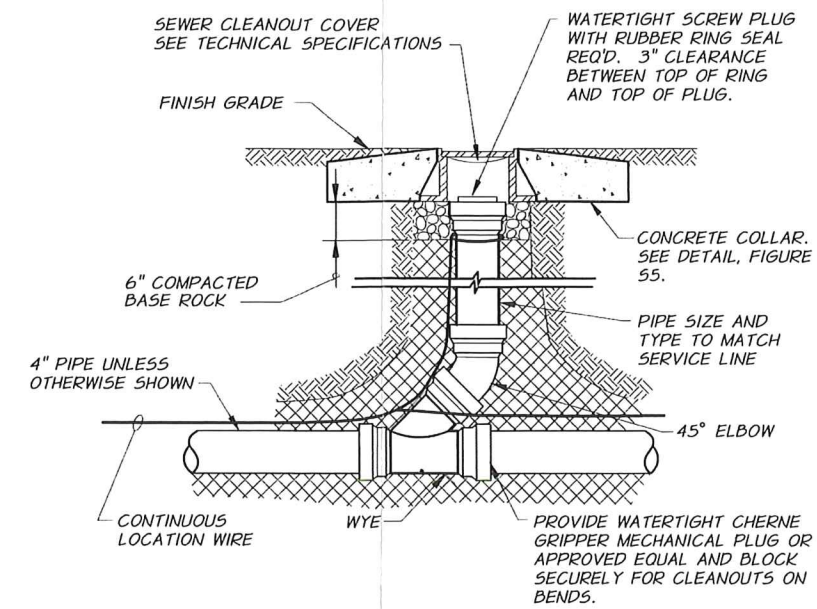
CITY OF  
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STANDARD DRAWING  
SANITARY SEWER  
**DROP PRECAST MANHOLE**

FIGURE  
**S3**





**GRAVITY SEWER MAIN LINE CLEANOUT**  
N.T.S.



**SEWER SERVICE LINE CLEANOUT**  
N.T.S.

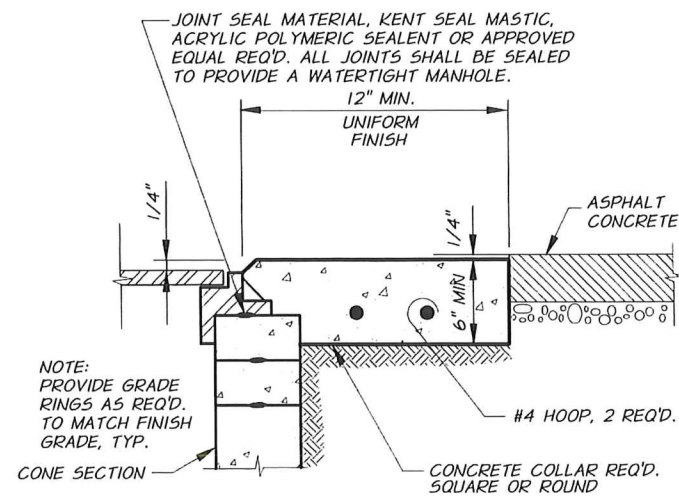
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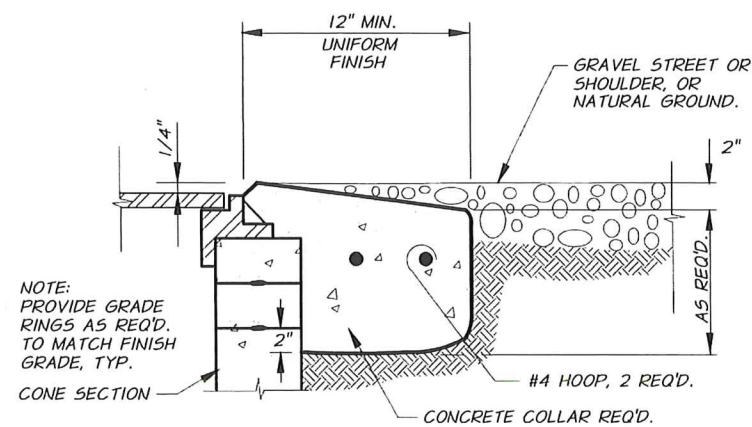


**CITY OF  
BOARDMAN, OREGON  
STANDARD DRAWING  
SANITARY SEWER  
SEWER CLEANOUTS**

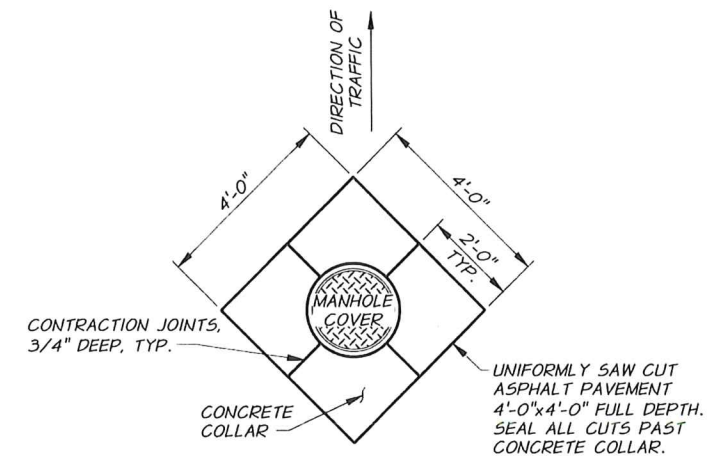
**FIGURE  
S4**



**MANHOLE AND CLEANOUT  
CONCRETE COLLAR DETAIL**  
ASPHALT PAVEMENT  
N.T.S.



**MANHOLE AND CLEANOUT  
CONCRETE COLLAR DETAIL**  
GRAVEL STREETS OR NATURAL GROUND  
N.T.S.



**MANHOLE  
CONCRETE COLLAR DETAIL**  
PLAN  
N.T.S.

**REQUIREMENTS FOR CONCRETE COLLARS**

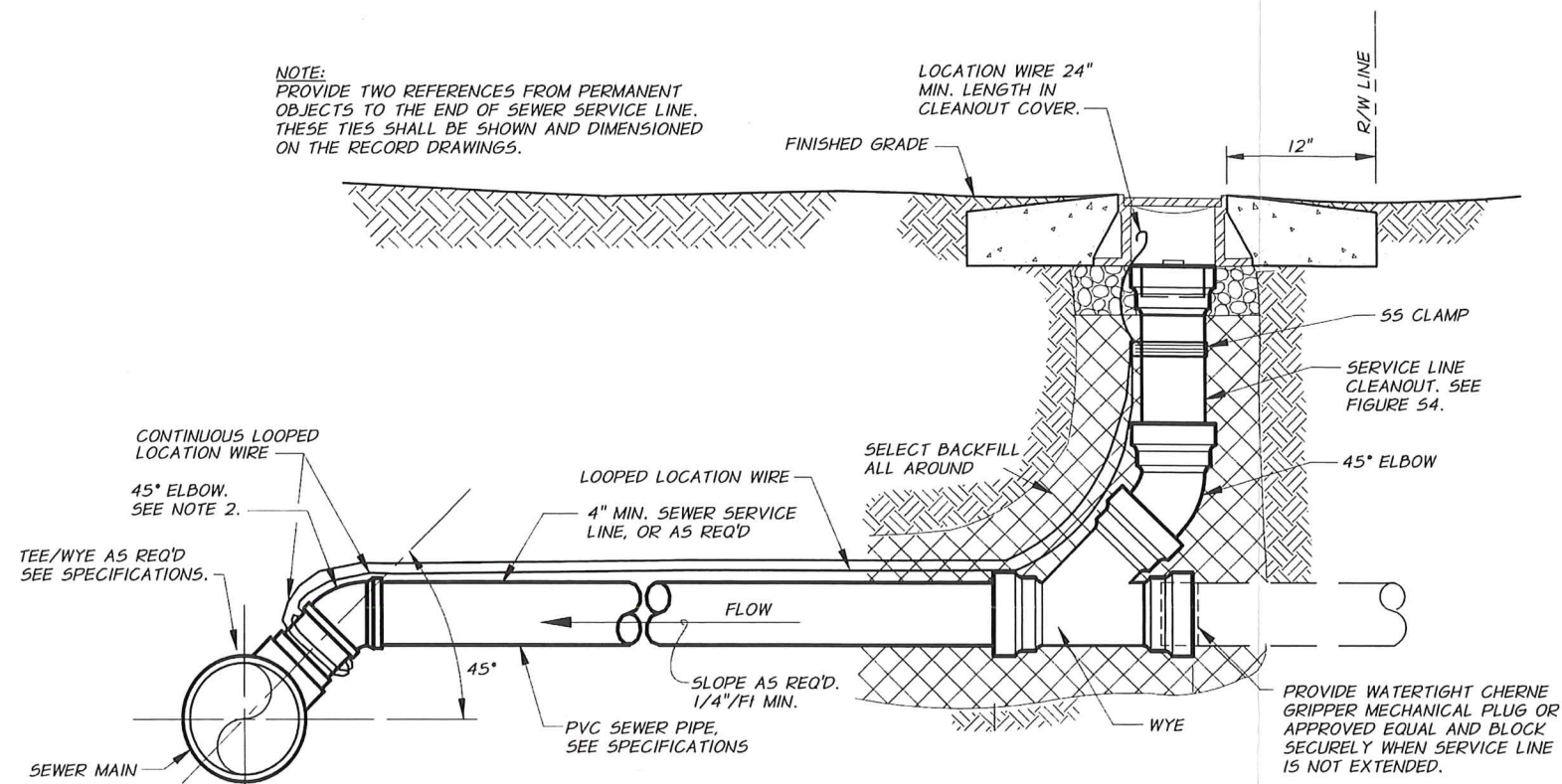
1. CONCRETE: 3/4", 7 SACK, 4000 PSI @ 28 DAYS, 2" TO 4" SLUMP, 4-7% AIR.
2. COLLAR TO BE FORMED AND BE UNIFORMLY ROUND.
3. SMOOTH BROOMED FINISH REQUIRED.
4. APPLY CONCRETE CURING COMPOUND.
5. PROTECT FROM TRAFFIC FOR 4 DAYS MINIMUM.

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CITY OF  
BOARDMAN, OREGON  
STANDARD DRAWING  
SANITARY SEWER  
**MANHOLE AND CLEANOUT  
CONCRETE COLLAR DETAILS**

**FIGURE  
S5**



**NOTES**

1. SERVICE LINE IS NOT NECESSARILY AT 90° TO SEWER MAIN. PROVIDE FITTINGS AS REQUIRED TO INSTALL SERVICE.
2. DEPTH OF SEWER MAIN MAY NOT ACCOMMODATE TEE/WYE 45° ANGLE ORIENTATION. CONTRACTOR SHALL HAVE ALTERNATE ALIGNMENT APPROVED BY CITY.

**SEWER SERVICE LINE**

N.T.S.

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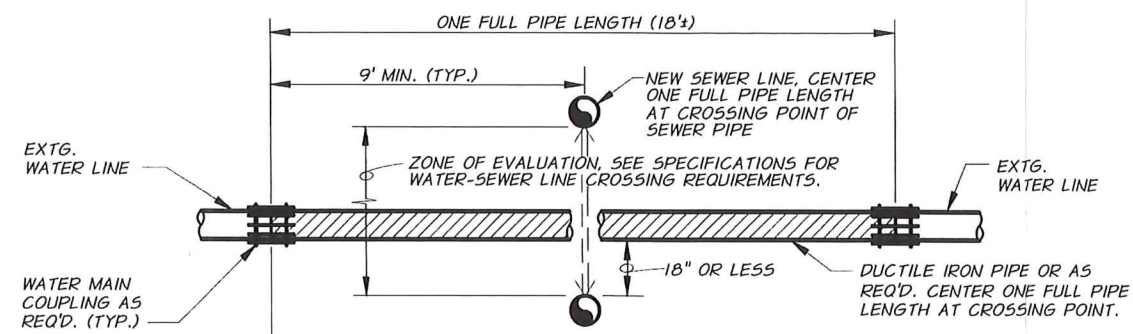
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CITY OF  
BOARDMAN, OREGON  
STANDARD DRAWING  
SANITARY SEWER  
**SEWER SERVICE LINE**

FIGURE  
**S6**





**NOTE**  
ALL BACK FILL IN AREA OF WATER-SEWER CROSSING TO A DEPTH 12" ABOVE THE TOP OF THE HIGHEST PIPE SHALL BE 3/4"-0 BASE ROCK COMPACTED TO 95% OF ASTM D-698 LABORATORY DENSITY

**WATER-SEWER CROSSING**  
(NEW SEWER LINE CONSTRUCTION)

N.T.S.

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CITY OF  
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STANDARD DRAWING  
SANITARY SEWER  
**WATER-SEWER CROSSING**

FIGURE  
**S7**