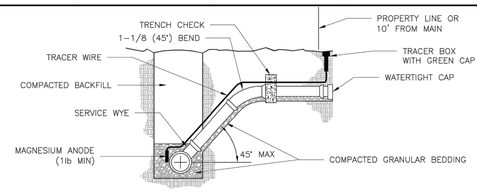
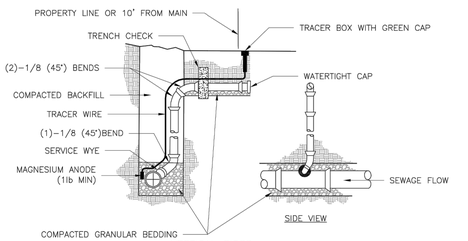


STANDARD INSTALLATION
NOT TO SCALE



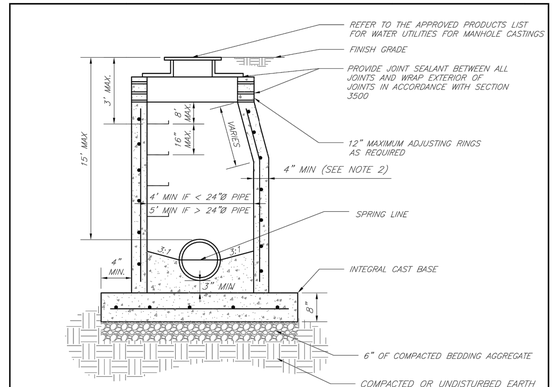
VERTICAL RISER
NOT TO SCALE

NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
4. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
6. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
7. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
9. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

BUILDING SEWER STUB AND RISER

Date: 04/17 | Drawn By: MJF | Checked By: DL | SAN-1



NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

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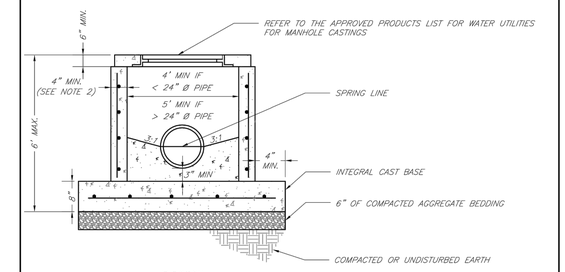
STANDARD PRECAST MANHOLE – SANITARY SEWER

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: SAN-2 | Rev: 1/14 | Rev:



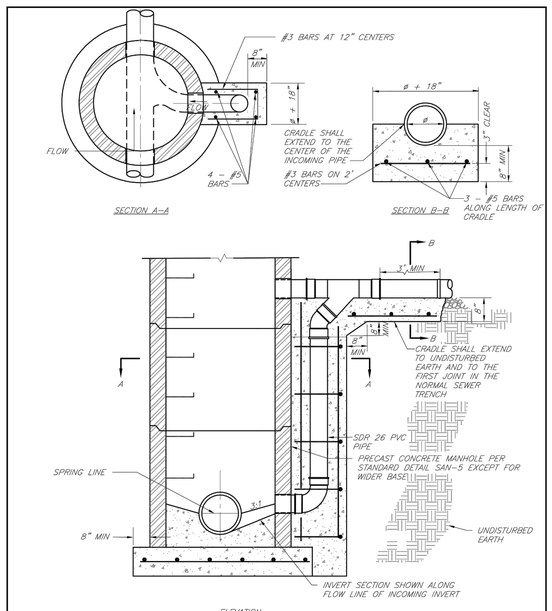
ELEVATION

NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER SHALL BE USED.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THEN 14 MILS OF BITUMINOUS COATING.
4. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
5. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE GASKET MODELS.
6. PROVIDE STEPS AS SHOWN ON THE APPROVED PRODUCTS LIST FOR MANHOLE DEPTHS GREATER THAN 4'.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SHALLOW PRECAST MANHOLE – SANITARY SEWER

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: SAN-3 | Rev: 1/14 | Rev:



ELEVATION

NOTE:
REFER TO DRAWING SAN-2 FOR MANHOLE DETAILS NOT SHOWN.

LEE'S SUMMIT
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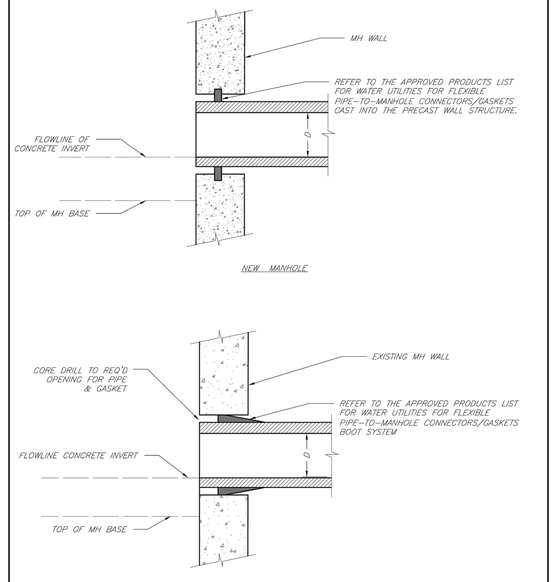
DROP SANITARY SEWER MANHOLE

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: SAN-4 | Rev: 1/14 | Rev:



LEE'S SUMMIT
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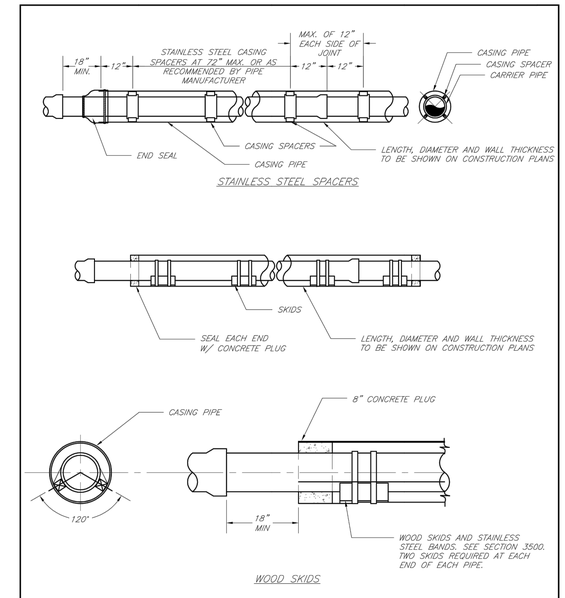
MANHOLE WALL CONNECTIONS

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: SAN-5 | Rev: 1/14 | Rev:



NOTE:
IF WOOD SKIDS ARE USED, ANNULAR SPACE BETWEEN CASING PIPE AND CARRIER PIPE SHALL BE FILLED WITH SAND.

LEE'S SUMMIT
MISSOURI
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CASING PIPE DETAIL

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: SAN-6 | Rev: 1/14 | Rev:

REVISION

THE SEAL(S) AND SIGNATURE(S) APPLY ONLY TO THE DOCUMENT TO WHICH THEY ARE AFFIXED, AND DO NOT EXTEND TO ANY ATTACHMENTS NOT PREPARED BY THE ENGINEER. ALL PLANS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ENGINEERING OR SURVEYING PROJECT.

ENGINEER'S SEAL
STATE OF MISSOURI
BRIAN L. GLENN
NUMBER PE-2010011667
12-27-2018
PROFESSIONAL ENGINEER

BRIAN L GLENN
MO PE -2010011667
PHOENIX ENGINEERING & SURVEYING, LLC

PHOENIX ENGINEERING & SURVEYING, LLC
3855 S. NORTHERN BLVD.
INDEPENDENCE, MO 64052
(816) 743-9000 FAX: (816) 743-9700
ENGINEERING CERTIFICATE NO: MO E-2000151302-D KS: E-853
SURVEYING CERTIFICATE NO: MO LS-2000151303-D KS: LS-138

WHISPERING WOODS - 1ST PLAT
LOTS 1 THRU 33
LEE'S SUMMIT, JACKSON COUNTY, MO
SANITARY SEWER PLANS
DETAILS

DESIGNED: BLC
DRAWN: JRT
SCALE: NOTED
DATE: 09-01-2017
JOB NO.: 04078
SHEET: 9 OF 10

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DATE PLOTTED: 2/27/2018 7:42 PM ; LAST SAVE DATE: 2/27/2018 7:41 PM

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