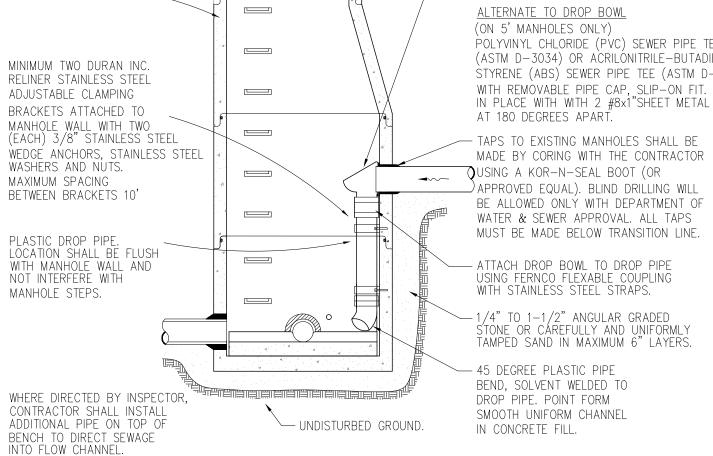
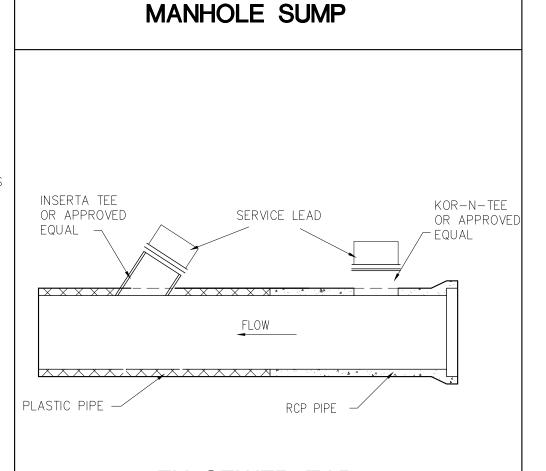


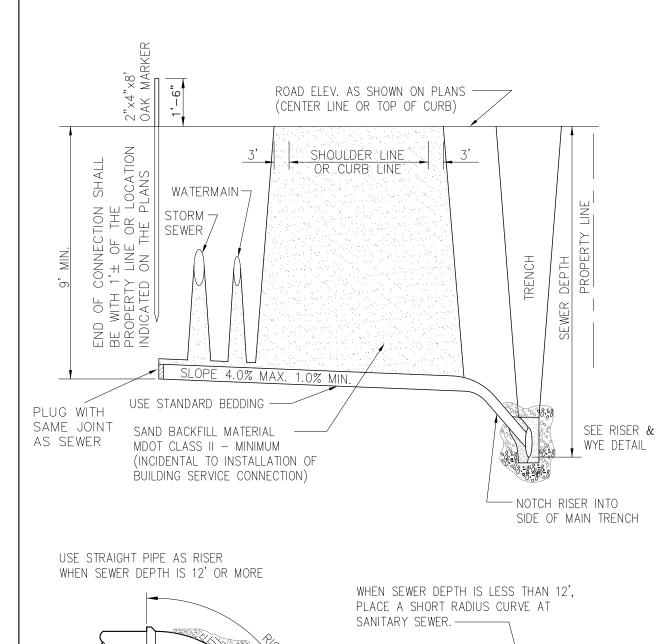
CONSTRUCTED WITH WYES AT CONNECTION TO MAIN UNLESS OTHERWISE DIRECTED BY CLEAN-OUT PLUG— ___ CAST IRON COVER THE TOWNSHIP'S DPW. EJIW #1565 OR APPROVED EQUAL 2. ALL SEWERS SHALL BE CONSTRUCTED WITH 9 FEET MINIMUM COVER AT THE FINISHED GRADE 3. CLEANOUTS SHALL BE PROVIDED AT ALL BENDS AND EVERY 100 FEET OF PIPE - CONCRETE PAD 4. NO GROUND WATER, STORM WATER, 8" × 2' × 2' CONSTRUCTION WATER, DOWNSPOUT DRAINAGE, WEEP TILE DRAINAGE SHALL BE ALLOWED TO ENTER ANY SANITARY SEWER (CLEAN-OUT PIPE DIAMETER 5. DISSIMILAR TYPES AND SIZES OF PIPES SHALL MATCH MAIN PIPE DIAMETER) SHALL BE JOINED USING AN APPROVED 45° BEND -ADAPTOR PER THE CURRENT STATE PLUMBING CODE. _21AA AGGREGATE PLACED 6. A CLEAN-OUT (FOR INSPECTION AGAINST UNDISTURBED GROUND PURPOSES) SHALL BE INSTALLED ON ALL 8" LEADS TO INDUSTRIAL BUILDINGS.

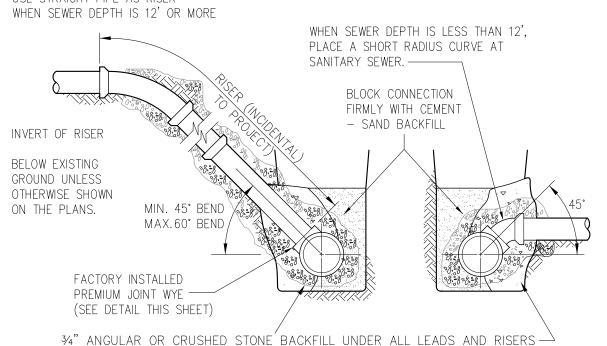
INSIDE DROP BOWL DURAN OR APPROVED EQ ATTACHED TO MANHOLE WALL WITH 4 3/8" STAINLESS STEEL WEDGE ANCHORS, STAINLESS STEEL WASHERS AND NUTS. SEE STANDARD MANHOLE DRAWING FOR OTHER BETWEEN DROP BOWL AND MANHOLE MANHOLE DETAILS. WALL PLACE (PRESS SEAL GASKET CO. EASY STIK ALL WEATHER TROWELABLE TRANSITION SECTION. BUTYL, BK-0069-1). ALTERNATE TO DROP BOWL (ON 5' MANHOLES ONLY) POLYVINYL CHLORIDE (PVC) SEWER PIPE TEE



INTERIOR DROP ASSEMBLY

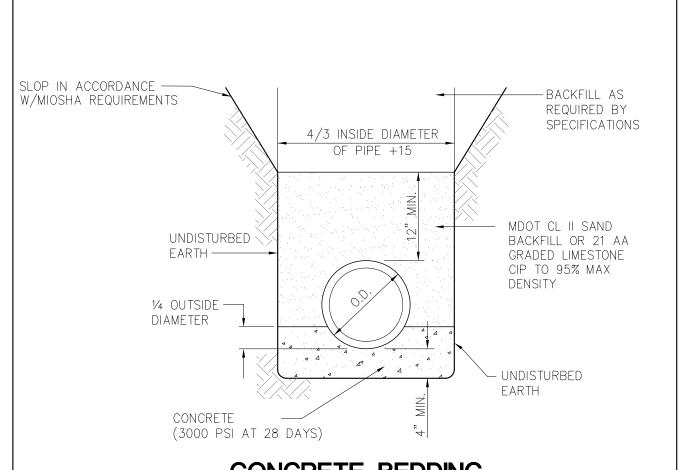




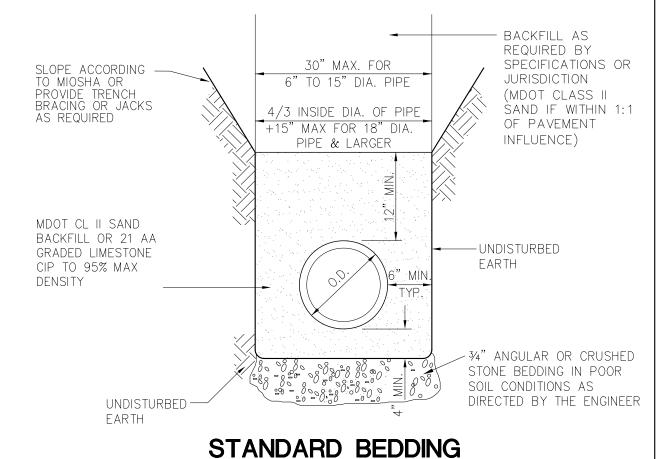


SANITARY BUILDING SERVICE CONNECTION

RISER & WYE DETAIL



CONCRETE BEDDING



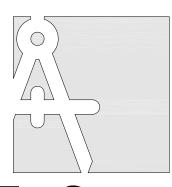
1. THE CONTRACTOR SHALL SHALL NOTIFY LENOX TOWNSHIP, AND ALL AGENCIES HAVING JURISDICTION (GLWA, MDOT, MCDR, MCOPW), THREE WORKING DAYS PRIOR TO CONSTRUCTION.

GENERAL SANITARY SEWER NOTES

2. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE OWNER, IN WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY

REPRESENTATIVE WILL BE PRESENT.

- 3. PRIOR TO CONSTRUCTION OF ANY SANITARY SEWERS WHICH ARE TO BE CONNECTED TO THE MUNICIPAL SEWER SYSTEM, THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF A PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF THE WASTEWATER DISPOSAL SYSTEM OF THE MUNICIPALITY.
- ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, MCDR, MDOT, AND/OR MCOPW AS REQUIRED.
- 5. ALL MANHOLES SHALL BE PRECAST CONCRETE (ASTM C478 & C443).
- 6. ALL REINFORCED CONCRETE SEWER PIPE SHALL CONFORM TO THE ASTM SPECIFICATIONS C76 WITH CLASS DESIGNATION ON PLANS.
- 7. SEWER MAIN PIPE: MIN 8" TO 15" PVC SDR26 (PS115) PIPE (ASTM D3034) WITH GASKET JOINTS (ASTM D3212) OR, IF ALLOWED, PVC COMPOSITE (TRUSS) PIPE (ASTM D2680) WITH GASKET JOINTS (ASTM D3212); GREATER THAN 15" REINFORCED CONCRETE ASTM C76 CLASS 4 WITH PREMIUM RUBBER O-RINGS OR PROFILE GASKET JOINTS (ASTM C443).
- ALL SANITARY SEWER BEDDING SHALL BE STANDARD BEDDING UNLESS OTHERWISE SHOWN ON THE PLANS.
- 9. SEWER SERVICE PIPE: MIN DIA 6-INCH PVC SDR 26 (ASTM D2241), PVC SDR 23.5 (ASTM D3034), OR PVC SCHD 40 (ASTM D1785) W/ GLUED JOINTS. MIN PIPE SLOPE SHALL BE 1% OR 1/8" PER 1 FOOT (4% OR 1/2" PER 1 FOOT MAX). FOR 8-INCH AND GREATER DIA SEWERS, USE PVC SDR 26 PIPE W/ GLUED JOINTS. MIN PIPE SLOPE SHALL BE 0.8% OR 1/10" PER 1 FOOT (3% OR 3/8" PER 1 FOOT MAX).
- 10. ALL SANITARY SEWER WYE OPENINGS SHALL CONTAIN FACTORY INSTALLED PREMIUM JOINTS.
- 11. NO GROUND WATER, STORM WATER, CONSTRUCTION WATER, DOWNSPOUT DRAINAGE, WEEP TILE DRAINAGE SHALL BE ALLOWED TO ENTER ANY SANITARY SEWER INSTALLATION.
- 12. NO SEWER INSTALLATION OR PORTION THEREOF SHALL HAVE INFILTRATION EXCEEDING 100 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER TWENTY FOUR (24) HOUR PERIOD.
- 13. AS PART OF THE FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE FOR TELEVISION INSPECTION OF THE SANITARY SEWER LINES IN ACCORDANCE WITH THE CURRENT DETAILED SPECIFICATIONS OF THE MUNICIPALITY.
- 14. AT ALL CONNECTIONS TO AN EXISTING SANITARY SEWER, OR EXTENSION THERETO, A TEMPORARY WATERTIGHT BULKHEAD WITH A CAPPED ONE (1) INCH DIAMETER PIPE TO PERMIT MEASURING INFILTRATION SHALL BE PROVIDED. A TEMPORARY 12 INCH DEEP MANHOLE SUMP SHALL ALSO BE PROVIDED IN THE FIRST MANHOLE ABOVE THE CONNECTION OR AT A LOCATION AS DIRECTED BY THE MUNICIPALITY AND/OR AS INDICATED ON THE PLANS, WHICH WILL BE FILLED IN TO FORM SMOOTH AND UNIFORM CONCRETE FLOW CHANNELS AFTER THE SUCCESSFUL COMPLETION OF ANY INFILTRATION - EXFILTRATION TESTS, AT WHICH TIME THE TEMPORARY WATERTIGHT BULKHEAD SHALL BE REMOVED.
- 15. WHEREVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES AT 4" CENTER TO CENTER AROUND THE PERIPHERY OF THE OPENING, TO CREATE A PLANE OF WEAKNESS JOINT, BEFORE BREAKING OUT SECTION. NON-SHRINK GROUT SHALL BE USED TO SEAL THE OPENING AND A CONCRETE COLLAR 12" THICK SHALL BE POURED AROUND THE PIPE AND SHALL BE EXTENDED TO THE FIRST JOINT
- 16. STRUCTURE STEPS SHALL BE M.A. IND. POLYPROPYLENE PLASTIC WITH #3 DEFORMED BAR (DETAIL PSI) SPACED 16" OC FROM 24" ABOVE FLOOR TO 18" BELOW TOP OF COVER. IF THE STRUCTURE WALL IS PRECAST THE STEPS SHALL BE FACTORY INSTALLED.
- 17. AIR TEST SHALL, AT MINIMUM, BE PERFORMED ACCORDING TO ASTM C924 FOR CONCRETE AND ASTM F1417 FOR PLASTIC PIPE.
- 18. ALL EXCAVATION UNDER OR WITHIN A 1 ON 1 INFLUENCE OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II - MINIMUM).



TRI-COUNTY **Engineering Consultant**

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CLIENT NAME LENOX TOWNSHIP MACOMB COUNTY



Know what's below. Call before you dig.

IOR TO CONSTRUCTION, ALL EXISTIN TILITIES LOCATION AND DEPTH WITHIN THE PROJECT AREA SHALL BE FIELD /ERIFIED. CALL MISS DIG SYSTEM 3 ORKING DAYS PRIOR TO CONSTRUCT

RAWING ARE APPROXIMATE AND MAY COORDING TO AVAILABLE RECORD OF LITY COMPANIES, PUBLIC AGENCIES OTHER SOURCES AND THUS MAY ID LOCATIONS AND NO GUARANTE VEN TO COMPLETENESS OR ACCURAC

FORMATION CONTAINED HEREIN ARE T TO BE USED OR REPRODUCED I-COUNTY ENGINEERING CONSULTA

ROJECT NAME:

LENOX TOWNSHIP SANITARY SEWER STANDARD DETAILS

PROJECT LOCATION: SEC , TO4N, R13E

> MACOMB COUNTY Drawn By: TCEC Checked By: LEDPW

Approved By: LENOX

LENOX TOWNSHIP

REVISIONS: 10. 02/10/2 06/18/93 11/15/01 11. 01/02/24 11/07/03 12. 01/13/25 08/30/06 06/19/08 07/01/08

10/01/18

10/26/18

02/07/19



CALE VERIFICATION:

BAR IS ONE-INCH
DJUST SCALES ACCORDINGLY IF

CALE: NONE

RAWING NO: LenoxStdSAN

Sheet

- MATCH TOP OF PIPES - STAINLESS STEEL BAND. - MANHOLE BOOT ∠ MANHOLE BOOT — ¾" ANGULAR OR CRUSHED STONE BACKFILL └─ ¾" ANGULAR OR CRUSHED STONE BACKFILL EXTERIOR DROP ASSEMBLY (ONLY WITH SPECIAL APPROVAL)

MASONRY

PLUG

FORM CHANNEL

TO OBTAIN A

SITION FROM

SMOOTH TRAN-

INVERT TO INVERT -

FLEXIBLE MANHOLE JOINT

-MANHOLE BOO

DROP PIPE SHALL

ER4-67ES, DROP

ONE SIZE SMALLER

PIPE SHALL BE

THAN MAIN LINE

WITH A 10" MIN.

BE C14XM OR

NOTES:

1. ALL SEWER LEADS SHALL BE

TYPICAL CLEAN-OUT DETAIL

(ASTM D-3034) OR ACRILONITRILE-BUTADIENE-STYRENE (ABS) SEWER PIPE TEE (ASTM D-2680) WITH REMOVABLE PIPE CAP, SLIP-ON FIT. SECURE IN PLACE WITH WITH 2 #8x1"SHEET METAL SCREWS

BOOT FORM A SMOOTH AND UNIFORM CONCRETE FLOW CHANNEL AS IN A STANDARD MANHOLE BOTTOM. BOOT ✓ STAINLESS STEEL BAND SEE SANITARY MANHOLE DETAIL THIS SHEET FOR OTHER MANHOLE DETAILS. MANHOLE ∠ BOOT STAINLESS STEEL BAND ─SLOPE 1:12

1. BOLTED WATERPROOF COVER EQUAL TO EAST

2. FOUR (4) CADMIUM COATED 5/8" THREADED

3. FOUR (4) ¾"x2"x1/16" NEOPREME FLAT

4. RUBBER "O" RING $^{21}/_{32}$ " DIA. I.D. IS 36".

6. GRADE RING. PROVIDE 6" MIN.-18" MAX.

5. FOUR (4) %" THREADED INSERTS CAST AS

7. COVERS EQUIPPED WITH 1/2" STAINLESS STEEL

TAPS IN COVERS & BOLTS PROVIDED BY

CAP SCREWS COUNTERSUNK FLUSH WITH COVER.

MANUFACTURER & SHALL NOT BE FIELD TAPPED

REQUIREMENTS OR APPROVED EQUAL IN PAVEMENT

STAINLESS STEEL BAND

- 3/4"-11/4" GAP TO BE

JOINT FLEXIBILITY.

PROVIDED TO MAINTAIN

CONCRETE FLOW CHANNEL

(TO BE FILLED IN AFTER

COMPLETION OF ACCEPTANCE

- STAINLESS STEEL BAND

8. EXTERNAL "WRAPID SEAL" PER MANUFACTORER'S

MANHOLE FRAME & COVER

(4) AS SHOWN.

WASHERS

SHOWN.

MANHOLE

ADJUSTMENT

OR FLOOD AREAS.

JORDAN 1040 WITH PRESSURE TIGHT COVER

WITH 1" ANCHOR BASE FLANGE HOLES, FOUR

STUDS, 3/4"x2"x1/16" FLAT WASHERS & NUTS.

EX SEWER TAP