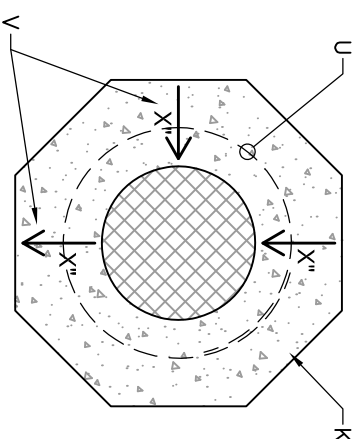
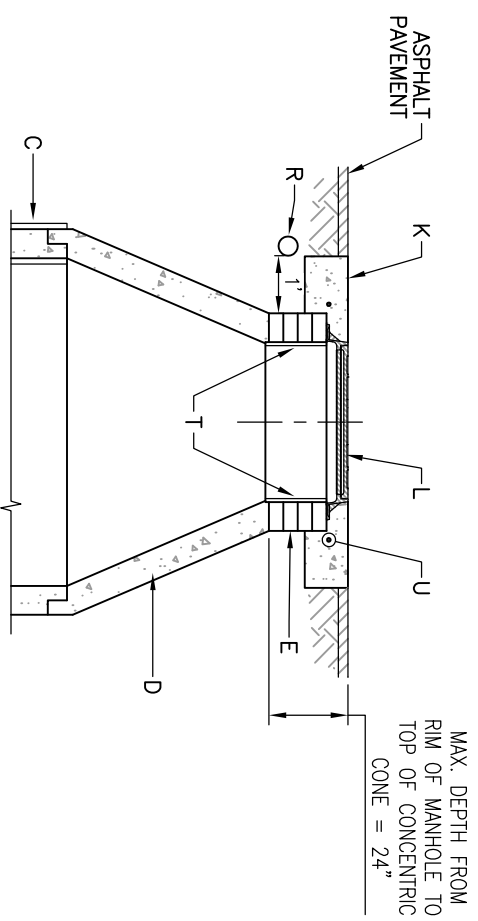


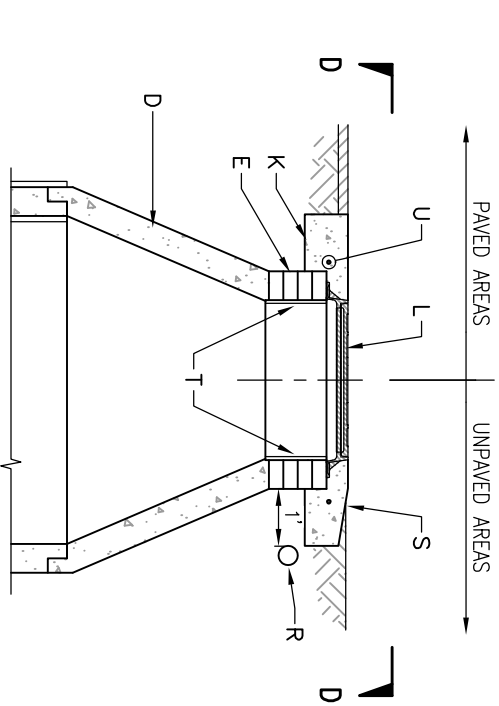
PLAN AT C-C



PLAN AT D-D



CROSS SECTION A-A



CROSS SECTION B-B

- GENERAL NOTES**
1. USE TYPE "E" MANHOLE FOR DEPTHS OF ≥6' MEASURED FROM INVERT TO RIM.
 2. CONTRACTOR HAS OPTION TO CONSTRUCT TYPE "C" MANHOLE IN LIEU OF TYPE "E" MANHOLE FOR DEPTHS ≥6'.
 3. MANHOLES >18' IN DEPTH SHALL BE CONSTRUCTED OF PRECAST CONCRETE SECTIONS ONLY.
 4. DESIGN APPLIES TO 4' TO 6' I.D. MANHOLES.
 5. COMPACT ALL BACKFILL AROUND MANHOLE TO 95% (ASTM).
 6. USE NON-SHRINK GROUT FOR JOINTS, FILLETS AND PIPE PENETRATIONS.
 7. APPLY WATERPROOFING COATING TO EXTERIOR OF MANHOLE IN AREAS WHERE GROUNDWATER IS PRESENT.
 8. AN INTERIOR COATING, WITH A WATER AUTHORITY APPROVED EPOXY RESIN-TYPE MATERIAL, SHALL BE APPLIED TO MANHOLES ON MAINS LARGER THAN 24" IN DIAMETER.
 9. POSITION MANHOLE OPENING OVER THE CENTER OF MANHOLE.

CONSTRUCTION NOTES

- A. CONCRETE PIPE SUPPORTS SHALL EXTEND OUTSIDE OF MANHOLE TO BELL OF FIRST JOINT AND SHALL GRADE PIPE TO SPRING LINE. NOT APPLICABLE FOR FLEXIBLE PIPE.
- B. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRINGLINE OF PIPE.
- C. MANHOLE MAY BE CONSTRUCTED OF CONCRETE BLOCK, POURED CONCRETE, OR PRECAST REINFORCED CONCRETE. IF PRECAST CONCRETE IS USED, USE MASTIC GASKETS AND APPLY NON-SHRINK GROUT TO EXTERIOR AND INTERIOR OF EXPANSION JOINTS. IF BLOCK IS USED, APPLY 1/2" THICK MORTAR COATING TO EXTERIOR AND INTERIOR OF MANHOLE.
- D. PRECAST REINFORCED CONCRETE CONCENTRIC CONE. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
- E. USE MAX. 4 COURSES GRADE MS BRICK ON UNPAVED STREET FOR FUTURE ADJUSTMENT OF MANHOLE FRAME TO PAVEMENT GRADE.
- F. CONCRETE BASE TO BE POURED IN PLACE USING NO. 4 BARS AT 6" O.C. EA. WAY FOR MANHOLE DEPTH OF ≥16'. NO. 4 BARS AT 12" O.C. EA. WAY FOR MANHOLE DEPTH OF <16'.
- H. INVERT ELEVATION OF STUB OR LATERAL AS SHOWN ON PLANS.
- J. 6" GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.
- K. OCTAGONAL CONCRETE PAD, SEE STANDARD DWG. 2461 FOR REFERENCE.
- L. MANHOLE FRAME AND COVER, SEE DRAWING 2109. INSTALL A 24" COVER FOR SEWER LINE ≤24", AND A 32" COVER FOR SEWER LINE >24".
- M. CONCRETE, SEE SPECIFICATION SECTION 101.
- N. SLOPE 1" PER FT. FROM PIPE CROWN.
- P. SHELF TO BE 9" WIDE MIN.
- Q. APPROVED WATERSTOP TO BE COMPATIBLE WITH TYPE OF PIPE.
- R. ELECTRONIC MARKER DEVICE (EMD). SEE STANDARD SPECIFICATION SECTION 170.
- S. CONCRETE COLLAR IN UNPAVED AREAS, SEE STANDARD DRAWING 2461.
- T. APPLY 1/2" THICK MORTAR COATING TO INTERIOR OF OPENING.
- U. #4 REBAR PER STANDARD DRAWING 2461.
- V. TOP OF CONCRETE COLLAR SHALL BE STAMPED WITH LINE SIZE AND FLOW DIRECTION ARROWS. MINIMUM LETTER SIZE SHALL BE 3" IN HEIGHT.

REVISIONS	WATER AUTHORITY
JAN. 2013	SANITARY SEWER MANHOLE TYPE "E"
DWG. 2102	OCT. 2017