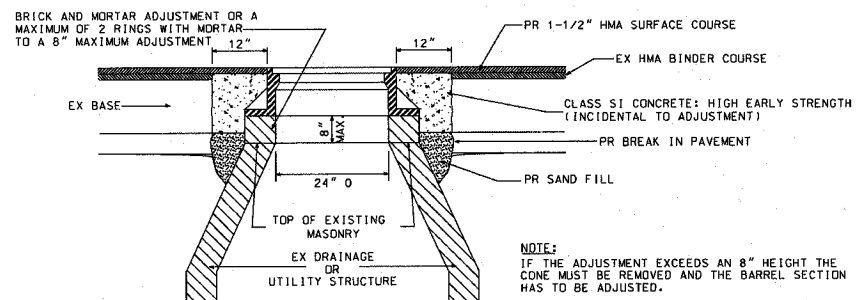


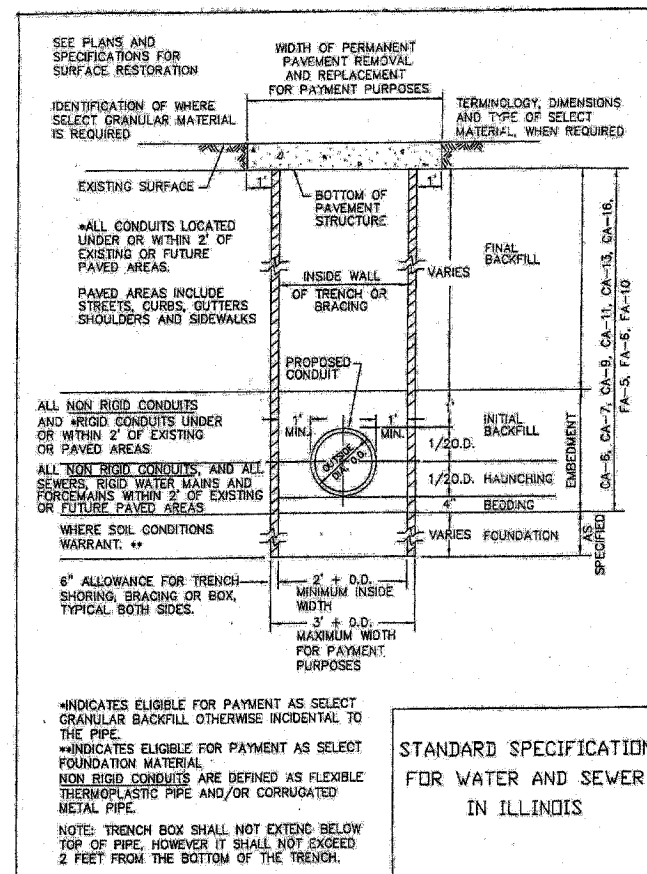
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3509	00-00173-00-FF	COOK	246	182A
STA.	TO STA.			
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

PLOT DATE = 7/12/2007
 PLOT SCALE = 50:ASBRI / IN.
 USER NAME = b.jochman



DETAIL OF TYPE I FRAME ADJUSTMENT

NOTE:
IF THE ADJUSTMENT EXCEEDS AN 8" HEIGHT THE CONE MUST BE REMOVED AND THE BARREL SECTION HAS TO BE ADJUSTED.

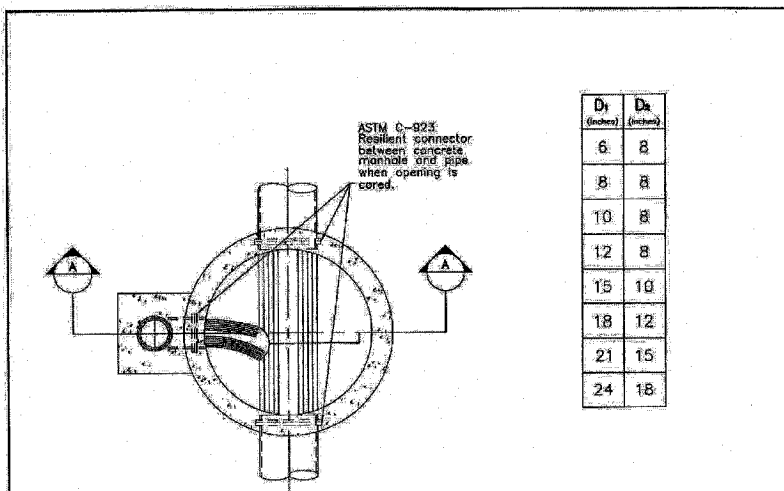


STANDARD SPECIFICATION FOR WATER AND SEWER IN ILLINOIS

DIV.V/STANDARD DRAWING NO.1

TRENCH DETAIL

DIV. V
PAGE: 126



Section C-C

Notes:

D2 shall be no smaller than two (2) nominal diameters less than D1, but not less than 8".

Details and material for drop manhole shall be same as for standard manhole except for lateral sewer connection as shown.

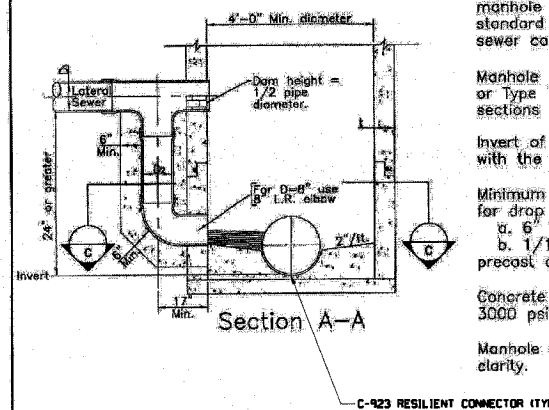
Manhole to be cast-in-place concrete or Type "A" w/ precast concrete sections and bottom (as shown).

Invert of elbow to be placed even with the level of the bench.

Minimum wall thickness "t" for for drop manholes:
 a. 6" for cast-in-place concrete;
 b. 1/12 manhole diameter for precast concrete.

Concrete for encasement shall be 3000 psi @ 28 days, minimum.

Manhole steps are omitted for clarity.



Section A-A

Standard Drop Manhole

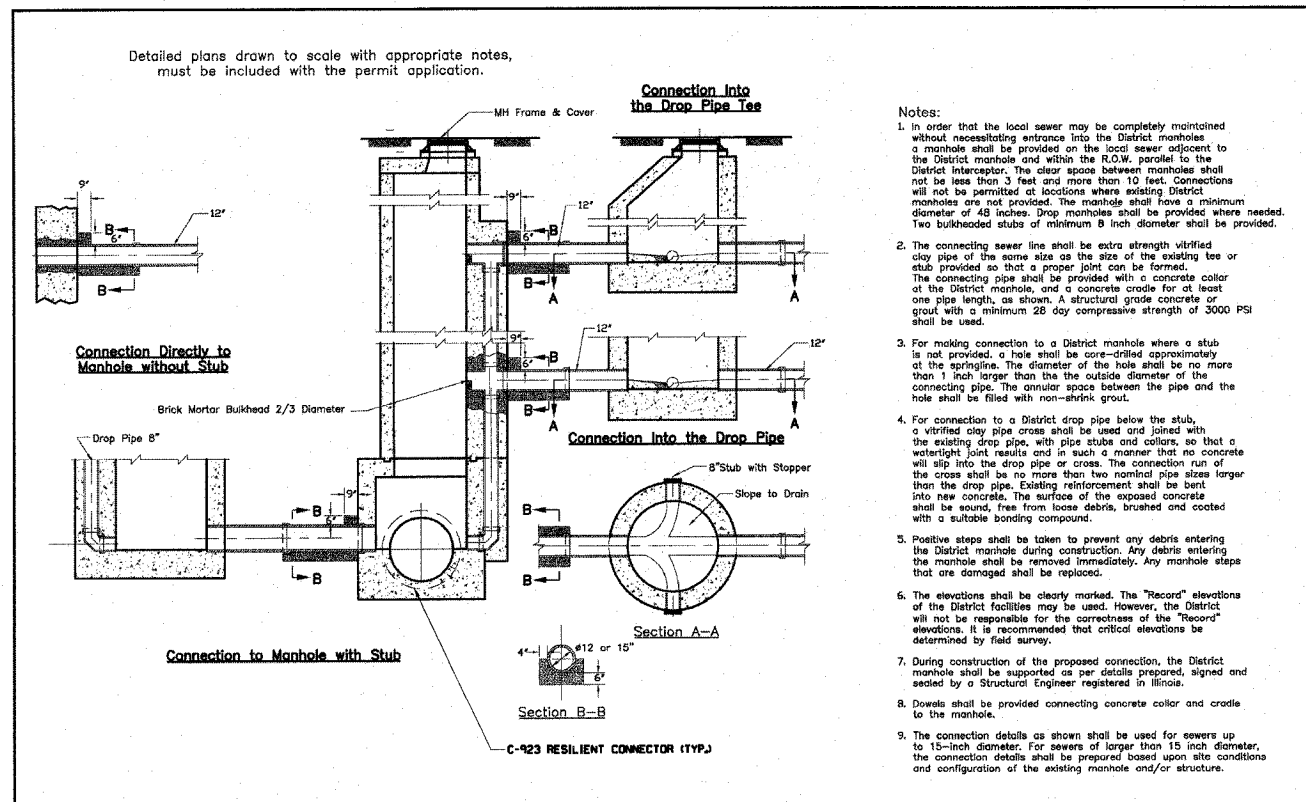
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO ENGINEERING DEPARTMENT 10-02 Local Sewer Systems HRES00

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
MWRDGC DETAILS

DATE 7/13/07
DRAWN BY LTO
CHECKED BY BJL

NOT TO SCALE



- Notes:
- In order that the local sewer may be completely maintained without necessitating entrance into the District manholes a manhole shall be provided on the local sewer adjacent to the District manhole and within the R.O.W. parallel to the District Interceptor. The clear space between manholes shall not be less than 3 feet and more than 10 feet. Connections will not be permitted at locations where existing District manholes are not provided. The manhole shall have a minimum diameter of 48 inches. Drop manholes shall be provided where needed. Two bulkheaded stubs of minimum 8 inch diameter shall be provided.
 - The connecting sewer line shall be extra strength vitrified clay pipe of the same size as the size of the existing tee or stub provided so that a proper joint can be formed. The connecting pipe shall be provided with a concrete collar of the District manhole, and a concrete cradle for at least one pipe length, as shown. A structural grade concrete or grout with a minimum 28 day compressive strength of 3000 PSI shall be used.
 - For making connection to a District manhole where a stub is not provided, a hole shall be core-drilled approximately at the springline. The diameter of the hole shall be no more than 1 inch larger than the outside diameter of the connecting pipe. The annular space between the pipe and the hole shall be filled with non-shrink grout.
 - For connection to a District drop pipe below the stub, a vitrified clay pipe cross shall be used and joined with the existing drop pipe, with pipe stubs and collars, so that a watertight joint results and in such a manner that no concrete will slip into the drop pipe or cross. The connection run of the cross shall be no more than two nominal pipe sizes larger than the drop pipe. Existing reinforcement shall be bent into new concrete. The surface of the exposed concrete shall be sound, free from loose debris, brushed and coated with a suitable bonding compound.
 - Positive steps shall be taken to prevent any debris entering the District manhole during construction. Any debris entering the manhole shall be removed immediately. Any manhole steps that are damaged shall be replaced.
 - The elevations shall be clearly marked. The "Record" elevations of the District facilities may be used. However, the District will not be responsible for the correctness of the "Record" elevations. It is recommended that critical elevations be determined by field survey.
 - During construction of the proposed connection, the District manhole shall be supported as per details prepared, signed and sealed by a Structural Engineer registered in Illinois.
 - Dowels shall be provided connecting concrete collar and cradle to the manhole.
 - The connection details as shown shall be used for sewers up to 15-inch diameter. For sewers of larger than 15 inch diameter, the connection details shall be prepared based upon site conditions and configuration of the existing manhole and/or structure.

Methods of Connecting to MWRD Manholes

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO ENGINEERING DEPARTMENT 02-01 LOCAL SEWERS LL