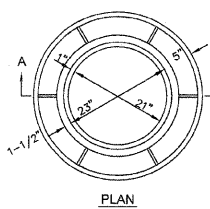
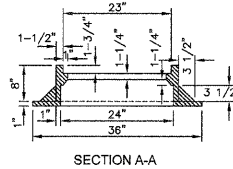


CITY OF EVANSTON
STANDARD DETAILS OF TYPE 1 FRAME AND LID

NEENAH TYPE R1712 OR EQUAL
WEIGHT 390 LBS.



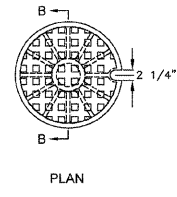
PLAN



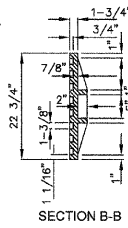
SECTION A-A

FRAME

CLOSED LID
WEIGHT 150 LBS.

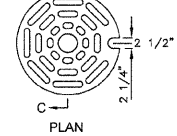


PLAN

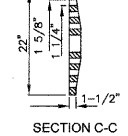


SECTION B-B

OPEN LID
WEIGHT 116 LBS.



PLAN

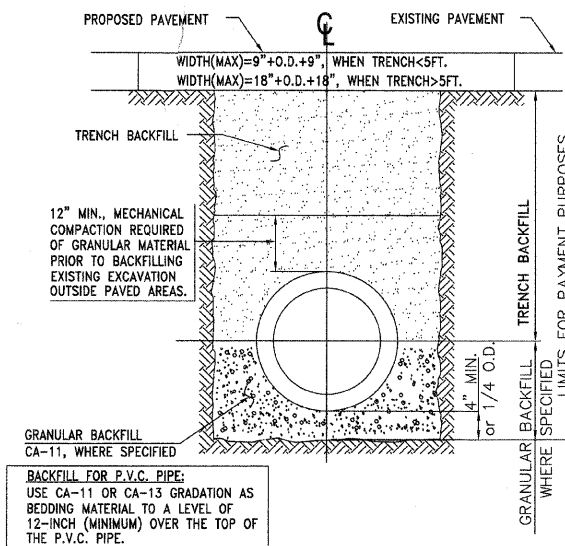


SECTION C-C

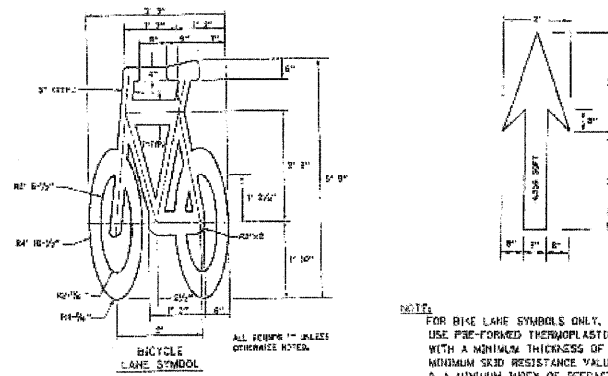
NOTE: THE DIAMETER OF THE LID SHALL BE SUCH AS TO FIT THE FRAME WITHOUT WEDGING

LID

TYPICAL DETAIL FOR
TRENCH & GRANULAR BACKFILL MATERIALS

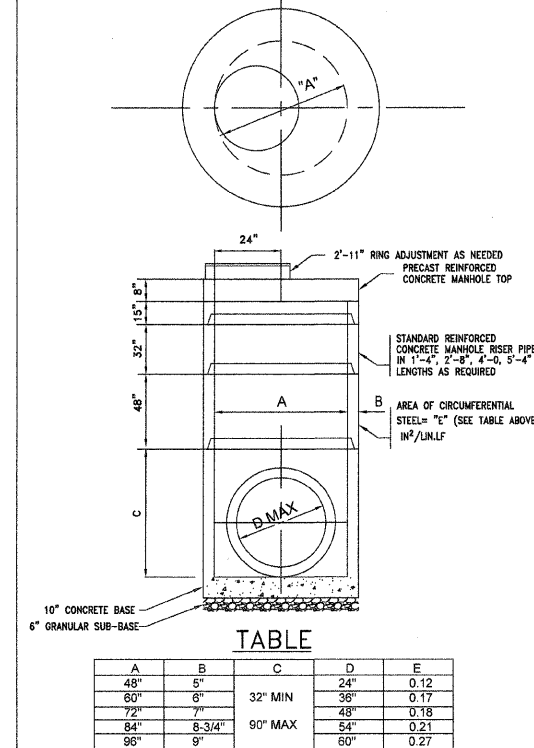


BACKFILL FOR P.V.C. PIPE:
USE CA-11 OR CA-13 GRADATION AS BEDDING MATERIAL TO A LEVEL OF 12-INCH (MINIMUM) OVER THE TOP OF THE P.V.C. PIPE.



NOTE: FOR BIKE LANE SYMBOLS ONLY, USE PRE-FORMED THERMOPLASTIC WITH A MINIMUM THICKNESS OF 30 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.

STANDARD MANHOLE
WITH FLAT TOP



A	B	C	D	E
48"	5"	32" MIN	24"	0.12
60"	6"	90" MAX	36"	0.17
72"	7"		48"	0.18
84"	8-3/4"		54"	0.21
96"	9"		60"	0.27

NOTE: All inlet and outlet pipes of sanitary sewer manholes and other underground structures (and in combined sewer areas, also all combined storm sewer manholes, catch basins, inlets, and underground detention storage structures) shall be joined with watertight flexible rubber connections, conforming to A.S.T.M. C-443 and C-923 with stainless steel band.

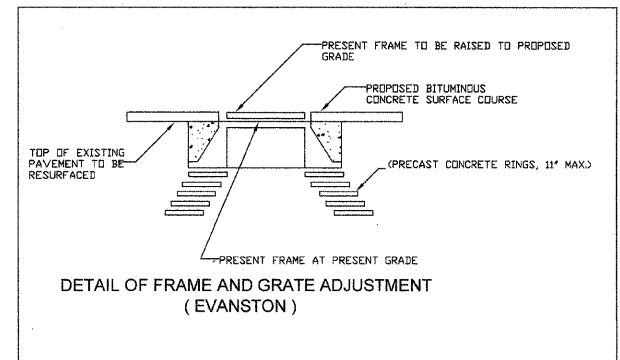
PIPE MATERIAL SPECIFICATION

WHERE POLYVINYL CHLORIDE PIPE (P.V.C.) IS CALLED FOR ON THE CONTRACT PLANS, IT SHALL BE SDR 26 IN CONFORMANCE WITH:
6" TO 15" PIPE ASTM D-3034
18" OR LARGER PIPE ASTM F-679

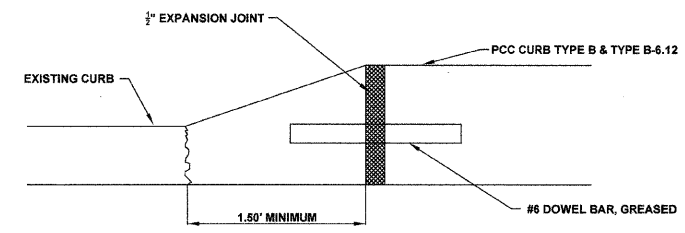
WHERE DUCTILE IRON PIPE (D.I.P.) IS CALLED FOR ON THE CONTRACT PLANS, IT SHALL BE:
FOR SEWER: CLASS 50 IN CONFORMANCE WITH:
ANSI A-21.51 PIPE
ANSI A-21.11 JOINT

FOR WATER: CLASS 52 IN CONFORMANCE WITH:
Mechanical Joints, AWWA C-143
Push-On Joints, AWWA C-153

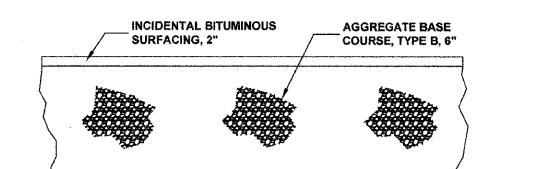
WHERE EXTRA STRENGTH CLAY PIPE (E.S.V.C.P.) IS CALLED FOR ON THE CONTRACT PLANS, IT SHALL BE IN CONFORMANCE WITH:
ASTM C-700 PIPE
ASTM C-425 JOINT



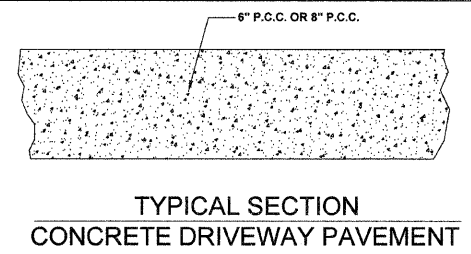
DETAIL OF FRAME AND GRATE ADJUSTMENT (EVANSTON)



TYPICAL SECTION FOR CURB TRANSITION

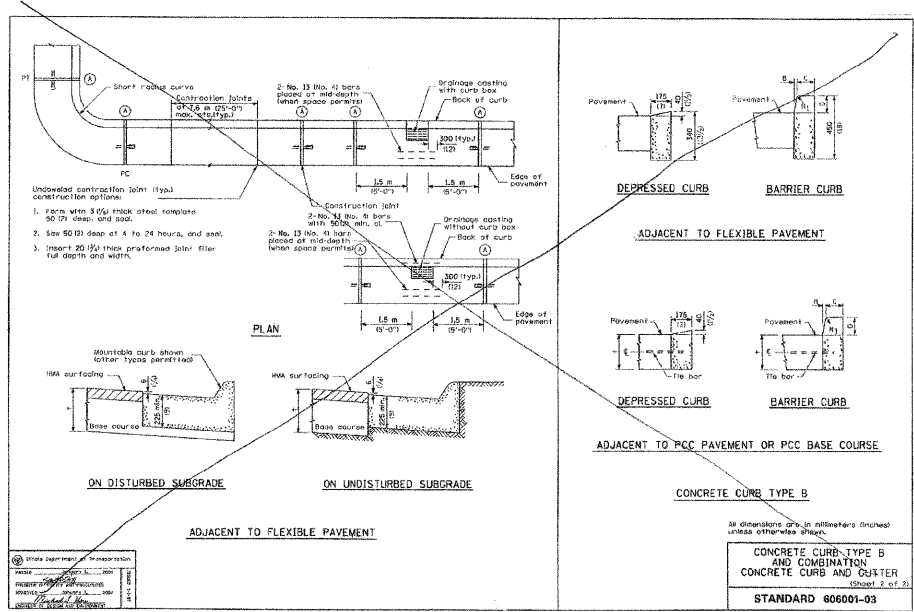


TYPICAL SECTION BITUMINOUS DRIVEWAY PAVEMENT



TYPICAL SECTION CONCRETE DRIVEWAY PAVEMENT

TYPICAL BIKE LANE SYMBOLS AND ARROW



M.W.R.D. TYPICAL GENERAL NOTES

- The MWRD Local Sewer Systems Section Field Office must be notified at least two (2) working days prior to the commencement of work (call 708-588-4053).
- Elevation datum is CGD = 579.88
Conversion equation: 0.00 = 579.70
- All floor drains shall discharge to the sanitary sewer system.
- All downspouts and footing drains shall discharge to the storm sewer system. (For City of Evanston Requirements: discharge to grade)
- All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to:
Pipe Material Spec. Joint Spec. Pipe Material Spec. Joint Spec.
Unlined Clay Pipe C-425 ABS Composite/Term Pipe D-2680
VCP (No-Bell) C-700 8" 15' min. VSD25 ABS D-3580
Sewer Colbar C-425 D-1784
Concrete Pipe C-443 P.V.C. (Grande Sewer Pipe) D-3212 or D-2855
ACP C-428 D-3034 C-443 9" 15' min. VSD25
RCP C-443 D-1869 C-443 18" 27" dia. F/d=46 D-3212 or D-2855
ABS D-2751 SDR 26.250 D-2751 F-679 C-564
C-564 DIP A-21.51 A-21.11
- (Note: The District has approved less common pipe materials on a qualified basis in addition to those above. Please contact the District in considering using pipe not listed above.)
- All sanitary sewer construction, and also storm sewer construction in combined sewer areas, requires stone bedding with stone 1/2" to 1" in size, with minimum thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than four (4) inches nor more than eight (8) inches. Material shall be CA-11 or CA-13 and shall be extended at least 12" above the top of the pipe when using P.V.C.
- "Band Seal" or similar flexible-type couplings shall be used in the connection of sewer pipe of dissimilar materials. (For City of Evanston Requirements: "Band Seal" Flexible couplings are manufactured by Mission Rubber Company or equal shall be used for connections of new pipe to existing pipe, and where dissimilar pipe and joint materials are encountered. Couplings shall be a minimum of 8-inches long for connections through 6-inch pipe and a minimum of 12-inches long for connections on larger pipes. (These are special order items).)
- When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
1. Circular saw-cut of sewer main by proper tools ("Shower-Tap" machine or similar) and proper installation of hub-wye saddle or hub-wye saddle.
2. Remove an entire section of pipe (breaking only the top one bell) and replace with a wye or tee branch section.
3. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "Band Seal" or similar couplings to hold it firmly in place.
- Whenever a sanitary/combined sewer crosses under a water main, the minimum vertical distance from the top of the sewer to the bottom of the water main shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and water mains shall be maintained unless the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with the water main located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. If either the vertical or horizontal distances described above can not be maintained, or the sewer crosses above the water main, the sewer shall be constructed to water main standards.
- All existing septic systems shall be abandoned. Abandoned Tanks shall be filled with granular material or removed.
- All sanitary manholes, (and storm manholes in combined sewer areas), shall have a minimum inside diameter of 48 inches, and shall be cast in place or pre-cast reinforced concrete.
- All abandoned sewers require a 2' long non-slip-rank concrete mortar plug.
- All inlet and outlet pipes of sanitary sewer manholes and other underground structures (and in combined sewer areas, also all combined storm sewer manholes, catch basins, inlets, and underground detention storage structures) shall be joined with watertight flexible rubber connections, conforming to A.S.T.M. C-443 and C-923 with stainless steel band.

BEDDING PAYMENT SCHEDULE

PIPE SIZE (INCH I. D.)	UNIT RATE PER LIN. FT. (TONS)
8	0.19
10	0.22
12	0.22
15	0.33
18	0.41
21	0.48
24	0.57