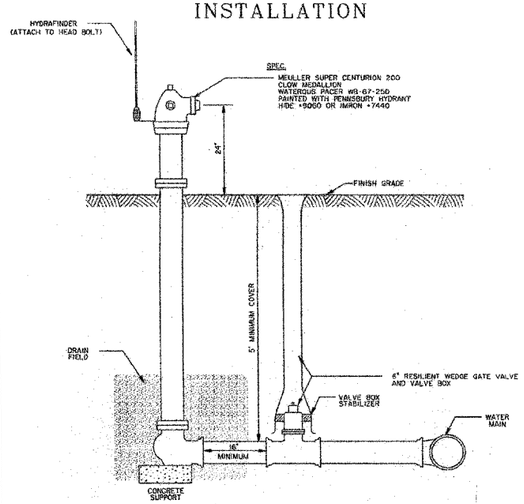
F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHT. NO.
336	CONTRACT NO. 83782	KANE	268	16
SPECIAL DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

STD. DRW. NO.
DATE : 1-11-01

TYPICAL HYDRANT INSTALLATION



NOTES:

1.) THE NOZZELS SHALL NOT BE CLOSER THAN 2 FEET FROM BACK OF CURB OR SIDEWALK.

2.) ALL JOINTS FROM THE HYDRANT TO THE MAIN SHALL BE RESTRAINED WITH MEGA-LUG OR UNI-FLANGE RESTRAINING DEVICE OR APPROVED EQUAL IN ACCORDANCE WITH THE CITY CODE OR TIE THE AUXILIARY VALVE TO THE TEE AND THE HYDRANT TO THE AUXILIARY VALVE WITH MINIMUM ¾" STAINLESS STEEL RODS, NUTS AND WASHERS

3.) ALL BELOW GRADE FACTORY INSTALLED BOLTS SHALL BE STAINLESS STEEL, GRADE 304

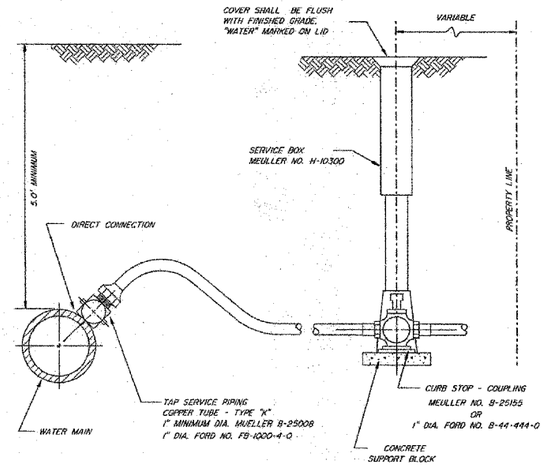
4.) HYDRANTS MAY ONLY HAVE ONE (1) EXTENSION KIT.

CITY OF ST. CHARLES

FILE: IDTL\HYDRANTS.DTL

STD. DRW. NO. 16.44.070.H
DATE : 03-09-1999

SERVICE TAP AND CONNECTION



NOTES:

1.) EVERY WATER SERVICE LINE FROM THE CORPORATION TO THE CURB STOP SHALL BE INSPECTED BY THE WATER DIVISION FOREMAN OR HIS DESIGNEE. ALL INSPECTIONS SHALL BE OPEN TRENCH. CONTRACTORS REQUESTING SERVICE LINE INSPECTIONS SHALL CONTACT THE WATER DIVISION 48 HOURS PRIOR TO REQUESTED INSPECTION TIME.

CITY OF ST. CHARLES

FILE: IDTL\WATER\SERVTAP.DTL

STD. DRW. NO. 16.44.070.04
DATE : 04-21-1999

WATER MAIN RESTRAINT

Minimum Restrained Lenghts (in feet) back from both sides of fitting

Fitting type/nominal size		4"	6"	8"	10"	12"	16"
90 Degree Bend		17	25	32	38	45	59
45 Degree Bend		7	10	13	16	19	24
22.5 Degree Bend		3	5	6	8	9	12
11.25 Degree Bend		2	2	3	4	4	6
Dead End		39	55	73	87	103	134
Top Side Vertical Offset * (45 Degree)		16	23	30	36	43	55
Bottom Side Vertical Offset * (45 Degree)		4	6	8	10	11	15
Tee Run X Branch **	6" by	1	17				
Tee Run X Branch **	8" by	1	5	34			
Tee Run X Branch **	10" by	1	1	24	49		
Tee Run X Branch **	12" by	1	1	15	41	65	
Tee Run X Branch **	16" by	1	1	1	26	52	95
Reducer ***	6" by	28					
Reducer ***	8" by	52	30				
Reducer ***	10" by	71	54	29			
Reducer ***	12" by	90	75	55	51		
Reducer ***	16" by	123	113	97	94	54	

* Vertical offset with MINIMUM 10' of solid pipe between upper and lower bend.

** Tee with MINIMUM 10' solid pipe on both sides of run. Number indicates length of branch to be restrained.

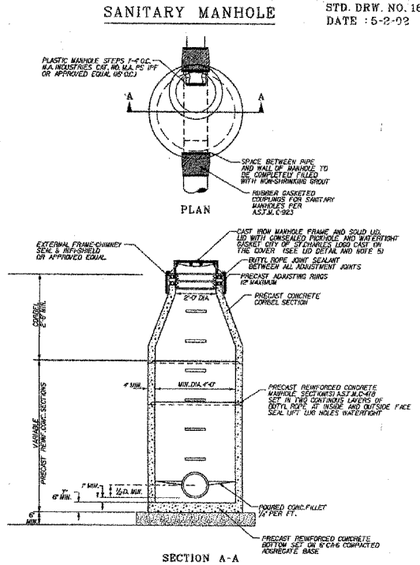
*** Length back from Large End of Reducer.

CITY OF ST. CHARLES

FILE: IDTL\WATERRESTRAINT.DTL

SANITARY MANHOLE

STD. DRW. NO. 16.44.060.J
DATE : 5-2-02



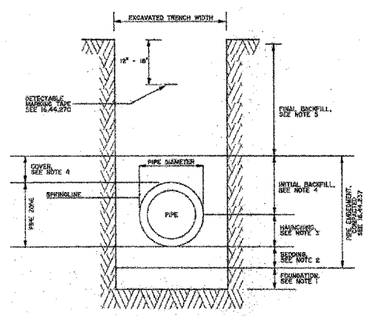
SECTION A-A

1. PYROXIDE CAA-CONTRITED OR CA7 AGGREGATE BACKFILL AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
2. CONCRETE FILLETS SHALL BE MADE WITH ADDITIONAL MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RINGS (TOP OF STRUCTURE)
3. INSTALL MANHOLE IN ACCORDANCE WITH ASTM C891.
4. MORTAR SHALL NOT BE USED TO DRESS UP INTERIOR JOINTS.
5. NEENAH FOUNDRY C.O.C.T. # R-1712-B-LE, JORDAN IRON WORKS CO.C.T. #JS-3 (EXTRA HEAVY DUTY-TOUGH OR APPROVED EQUAL IN PAVED AREAS IN OTHER AREAS USE #JS-1 (HEAVY DUTY) OR APPROVED EQUAL IN PAVED AREAS IN NON-PAVED AREAS SET FRAME IN BUTYL ROPE.
6. WHEN MANHOLE IS 6'-0" OR LESS, T = 6" WHEN MANHOLE DEPTH IS OVER 10'-T = 12"

CITY OF ST. CHARLES

FILE: IDTL\SANITARY\SANMH.DTL

SANITARY SEWER TRENCH CROSS-SECTION



NOTES:

1.) FOUNDATION IS REQUIRED WHEN DEEMED NECESSARY BY THE ENGINEER.

2.) BEDDING SHALL CONFIRM TO IDOT GRADATION CA-7 OR CA-11 IN ACCORDANCE WITH ASTM 2321 CLASS I. THICKNESS SHALL BE EQUAL TO ¼ OF PIPE DIAMETER BUT SHALL NOT BE LESS THAN 4" IN EARTH EXCAVATION AND 6" IN ROCK EXCAVATION. COMPACTED.

3.) HAUNCHING SHALL BE IDOT CA-7 OR CA-11 IN ACCORDANCE WITH ASTM 2321 CLASS I, COMPACTED.

4.) INITIAL BACKFILL SHALL BE IDOT CA-6 OR CA-11 IN ACCORDANCE WITH ASTM 2321 CLASS I COMPACTED TO A MINIMUM COVER OF 12".

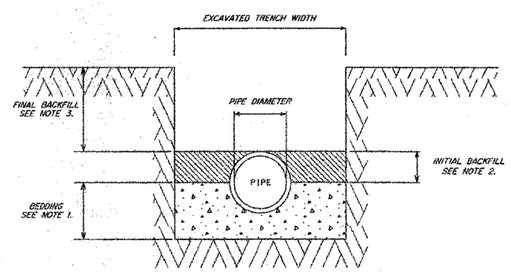
5.) FINAL BACKFILL UNDER HARDSURFACED AREAS SHALL BE IDOT FA-2 (AG-LIME IS NOT PERMITTED) COMPACTED IN 8"-9" LIFTS TO 95% MODIFIED PROCTOR DENSITY PER ASTM D-1557.

CITY OF ST. CHARLES

FILE: IDTL\SANITARY\TRENCH.DTL

WATER MAIN TRENCH CROSS-SECTION

(TYPE FIVE LAYING CONDITION PER ANSI/AWWA C600 / A21.50 SECTION 3.3.7)



NOTES:

1.) BEDDING SHALL CONSIST OF COMPACTED GRANNULAR MATERIAL FA-2 FROM A MINIMUM 4 INCHES BELOW THE PIPE TO THE CENTERLINE OF THE PIPE. BEDDING SHALL BE COMPACTED TO A MINIMUM OF 90% OF MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D-2049.

2.) INITIAL BACKFILL SHALL BE COMPACTED GRANNULAR MATERIAL (CA-6 OR FA-6) WHEN THE PIPE TRENCH LIES UNDER OR WITHIN TWO FEET OF A CURB OR HARDSURFACED AREA. SELECT EXCAVATED MATERIAL MAY BE USED WHEN THE PIPE TRENCH IS NOT UNDER OR WITHIN TWO FEET OF A CURB OR HARDSURFACED AREA. INITIAL BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 90% OF MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D-2049.

3.) FINAL BACKFILL UNDER HARDSURFACED AREAS OF WHERE THE TRENCH LIES WITHIN TWO FEET OF CURB OR HARDSURFACED AREA SHALL BE IDOT FA-2 (AG-LIME IS NOT PERMITTED) COMPACTED. MINIMUM DEPTH OF FIVE (5) FEET.

CITY OF ST. CHARLES

FILE: IDTL\WATER\TRENCH.DTL