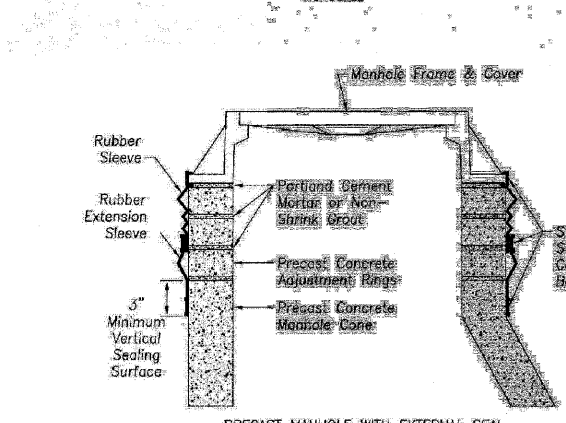
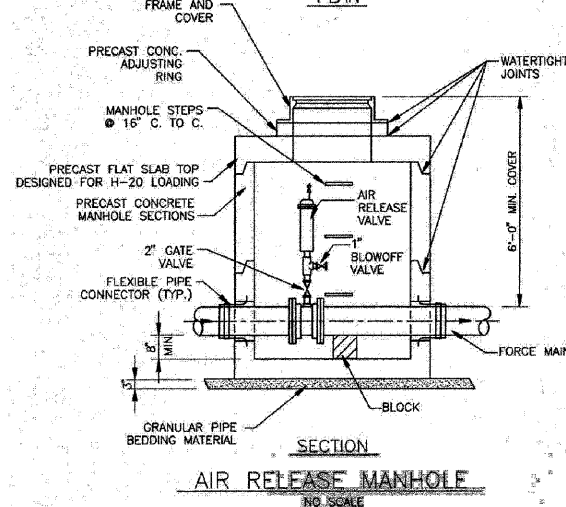
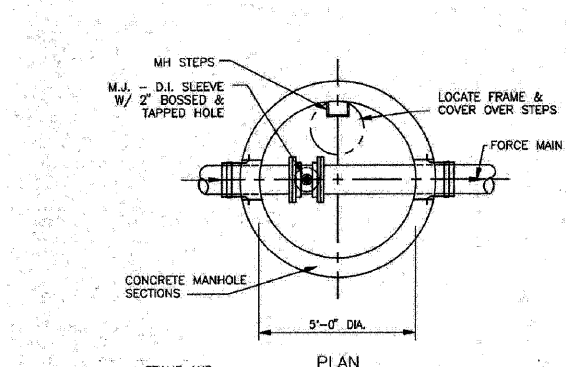


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		McHENRY	502	207

STA. 9+35.22 TO STA.142+08.53  
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT  
 (105X & 106) WRS-2

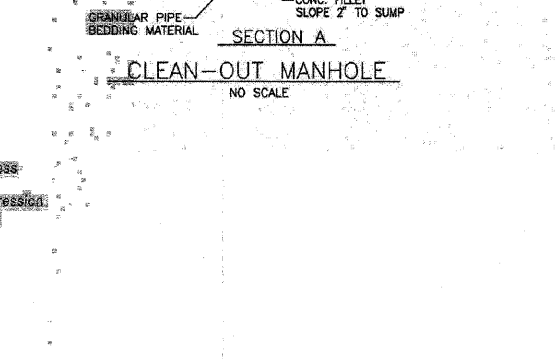
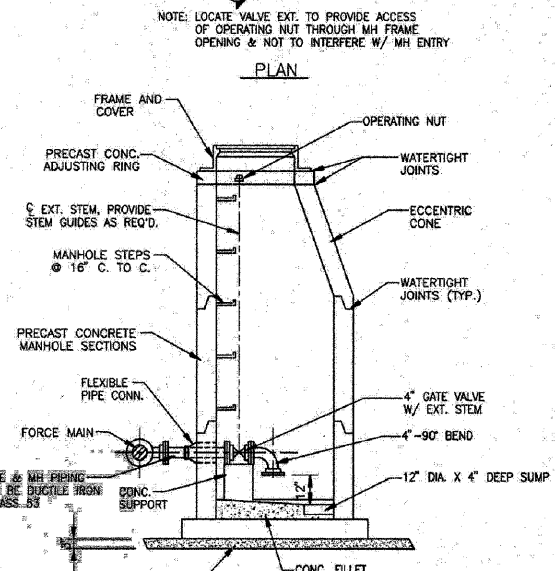
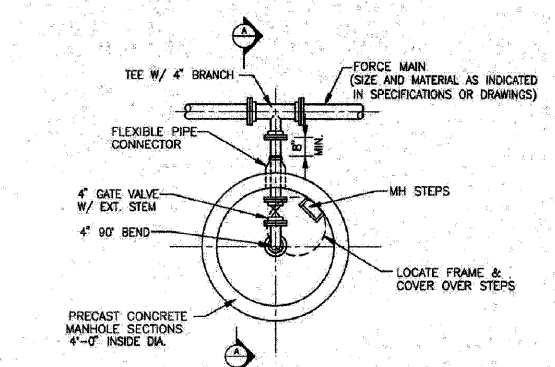


- The rubber sleeve is available in heights of 9" (standard) and 6" (narrow).
- See the chimney height table below for seal and extension combinations needed to span from the frame to the top of the cone on manholes with various chimney heights. Frame offsets or diameter differentials will reduce these span heights.
- The top of the cone shall have a minimum of 3" high vertical sealing surface that is smooth and free of any form offsets or excessive honeycomb.

**CHIMNEY HEIGHT TABLE**

COMBINATIONS OF SEALS AND EXTENSIONS	TO SPAN HEIGHTS OF:
Narrow 8" Only	0" to 3"
Standard 9" Only	Over 3" - 6.5"
Standard Seal + Extension	Over 6.5" - 13.5"
Standard Seal + Multi Extensions	Over 13.5"

Add 7" of coverage for each additional extension.

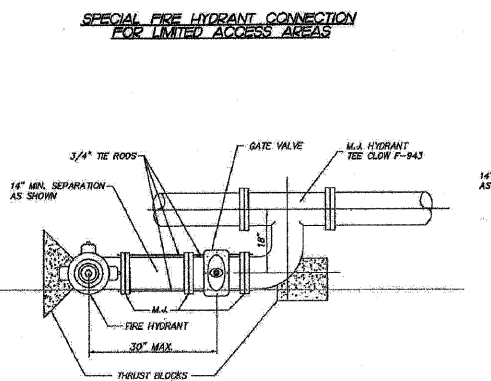


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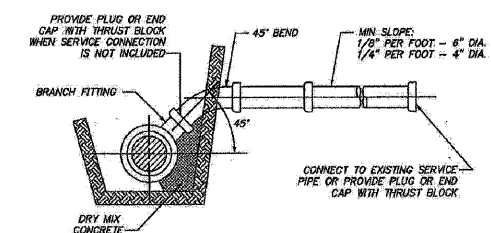
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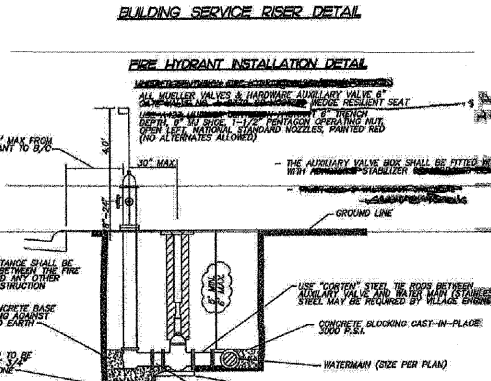
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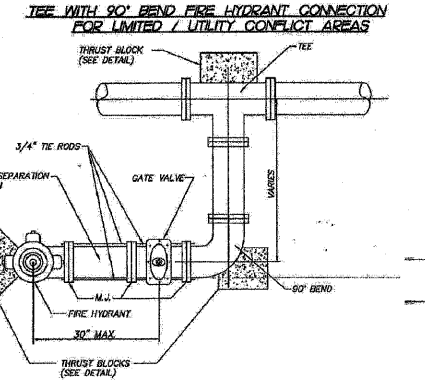
- NOTES:**
- CONTRACTOR WILL SUPPLY HYDRANTS WITH AUXILIARY VALVES AND MECHANICAL JOINT CONNECTIONS WITH PLAIN END CAST IRON PIPE BETWEEN HYDRANT AND VALVE.
  - THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR FIRE HYDRANT ASSEMBLY OR FIRE HYDRANT ASSEMBLY RELOCATION WHICH PRICE SHALL INCLUDE PROVIDING AND INSTALLING THE HYDRANT, THE VALVE AND VALVE BOX, THE CONNECTION PIPES, BACKFILL MATERIAL, AND THRUST BLOCK AS DETAILED.
  - EXISTING FIRE HYDRANT RELOCATION SHALL BE IN ACCORDANCE WITH SECTION 084 OF THE I.D.O.T. STANDARD SPECIFICATIONS.
  - WHEN A 4' MINIMUM DISTANCE BETWEEN HYDRANT AND WATER MAIN CANNOT BE OBTAINED THE HYDRANT SHALL BE INSTALLED AND/OR RELOCATED PER THE SPECIAL FIRE HYDRANT DETAIL SHOWN. THE COST OF ANY ADDITIONAL MATERIALS OR LABOR SHALL BE CONSIDERED INCIDENTAL TO THE COST OF HYDRANT INSTALLATION AND/OR RELOCATION.



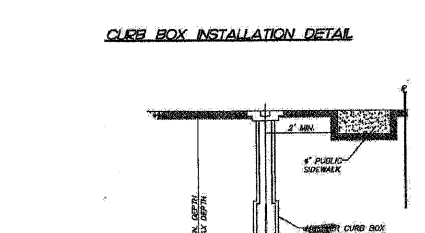
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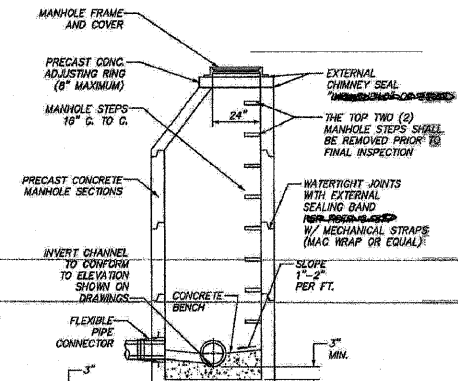
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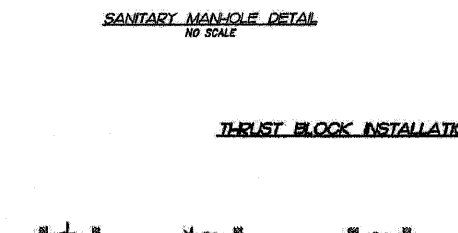
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- NOTES:**
- NO CORROSION RESISTANT SERVICE OPENINGS OR CURB BOXES MAY BE LOCATED UNDER PAVED AREAS EXCEPT UNDER SEWERMAJES OR WITHIN A FEET OF ANY PAVED SURFACE.
  - ALL BRICK HAWK HARDWARE SHALL BE BRICKS.
  - SEWER TO BE CONTINUOUS WITHOUT SINKS FROM CORPORATION STOP TO CURB STOP.
  - MULTIPLE TIPS INTO MAN SHALL BE NO GREATER THAN 2' APART.
  - TRITION FROM MAN TO BACK OF SEWERMAJ TO BE COMPACTED TRENCH BACKFILL.



- NOTES:**
- USE ECCENTRIC CONES UNLESS OTHERWISE INDICATED ON THE DRAWING. FLAT SLAB TOPS PERMITTED ONLY FOR MANHOLES TOO SHALLOW FOR CONES.
  - USE 4'-0" DIAMETER FOR SEWER SIZES 8" THRU 21", 5'-0" DIAMETER FOR SEWER SIZES 24" THRU 33", UNLESS OTHERWISE NOTED.
  - USE OUTSIDE DROP WHEN ANY ENTERING SEWER INVERT DIFFERS BY 2'-0" OR MORE FROM INVERT OF MANHOLE.



PIPE SIZE	BEARING AREA (SQ. FT.)				
	TEE/PLUG	90°	45°	22-1/2°	11-1/4°
8	6	4	3	1	1
10	7	5	3	2	1
12	8	6	4	3	2
14	12	9	6	4	3
16	10	12	7	5	3
18	10	15	8	6	4
24	10	30	15	10	5

ALL BLOCKING SHALL BE POURED CONCRETE AGAINST UNDISTURBED EARTH.  
 ALL BENDS OR ELBOWS GREATER THAN 11-1/4° SHALL HAVE THRUST BLOCKING.

**REVISIONS**

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**ILLINOIS ROUTE 47**  
**DETAIL SHEET**

SCALE: VERT. NO SCALE  
 HORIZ. DATE: 8/5/2009

DRAWN BY: E.D.  
 CHECKED BY: Z.M.

**Stanley Consultants INC.**  
 8501 West Higgins Road, Suite 130, Chicago, Illinois 60633-2801  
 www.stanleygrp.com  
 Illinois Tira Registration No. 04-00533  
 (773) 683-9624

10/27/2009

PLOT DATE = Wednesday, October 14, 2009  
 FILE NAME = S:\11-CADD\11-wt\1207\_pump\_mh.dwg  
 PLOT SCALE = 1:200  
 USER NAME = j3076