

BEARING AREA (SQ. FT.)

PIPE SIZE	TEE/PLUG	90°	45°	21 1/2°	11 1/4°
6	4	2	1	1	1
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	15	12	7	5	3
18	18	15	9	5	4
24	40	30	15	10	5

NOTES:
 ALL BLOCKING SHALL BE POURED CLASS SI CONCRETE AGAINST UNDISTURBED EARTH.
 ALL BENDS OR ELBOWS GREATER THAN 11 1/4° SHALL HAVE THRUST BLOCKING. FORM AS TO NOT COVER BOLTS.
 IN LIEU OF THRUST BLOCKING "MEGALUG" (EBAA) JOINT RESTRAINTS OR APPROVED EQUAL CAN BE USED AS APPROVED BY THE ENGINEER.

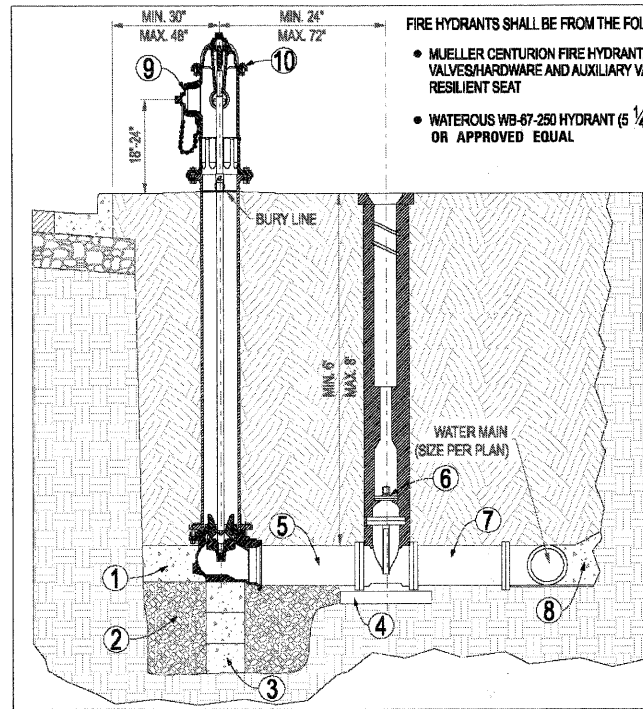
Approved: City Engineer

 Victor C. Ramirez, P.E.
 Director of Engineering and Building

Drawing Name
THRUST BLOCK INSTALLATION

Drawing Number
UW-03
 Date: 4/15/2007
 Drawn: EM
 Checked: JN

 CRYSTAL LAKE ILLINOIS Engineering Division



FIRE HYDRANTS SHALL BE FROM THE FOLLOWING LIST, AS APPROVED BY THE CITY:

- MUELLER CENTURION FIRE HYDRANT, OPT-094 (5 1/4" BARREL) WITH MUELLER VALVES/HARDWARE AND AUXILIARY VALVE 6" GATE VALVE NO. 2360-23-9020 MODIFIED WEDGE RESILIENT SEAT
- WATERLOUS WB-67-250 HYDRANT (5 1/4" PACER) WITH SERIES 2800-1 RESILIENT WEDGE GATE VALVE OR APPROVED EQUAL

- 1 PROVIDE CLASS SI CONCRETE BASE AND BLOCKING AGAINST UNDISTURBED EARTH
 - 2 DRAIN SUMP TO BE 3/4 CUBIC YARD OF 3/4" WASHED STONE
 - 3 CONCRETE SUPPORT
 - 4 CONCRETE BLOCK OR BRICK SUPPORT
 - 5 PIPE AS REQUIRED TO MAINTAIN 24" SEPARATION AS SHOWN (DIRECT MECHANICAL JOINT CONNECTION IF APPROVED BY CITY)
 - 6 RUBBER VALVE BOX STABILIZER
 - 7 USE "CORTEN" STEEL TIE RODS BETWEEN AUXILIARY VALVE AND WATER MAIN (STAINLESS STEEL MAY BE REQUIRED BY THE CITY ENGINEER). ANY DISTANCE GREATER THAN 30" SHALL BE RODDED TO MEGA-LUG FLANGE. NO COUPLINGS ARE PERMITTED IN RODS.
 - 8 CONCRETE BLOCKING CAST IN PLACE 3000 P.S.I.
 - 9 4 1/2" PORT TO FACE PAVEMENT OR AS DIRECTED BY ENGINEER
 - 10 ALL NEWLY INSTALLED HYDRANTS MUST BE TOP COATED WITH RUST-OLEUM FIRE HYDRANT ENAMEL (COLOR = FIRE HYDRANT RED)
 - 11 MIN. 48" BETWEEN HYDRANT AND ANY VERTICAL OBSTRUCTIONS.
 - 12 MIN. 72" BETWEEN HYDRANT AND ANY LANDSCAPING WITH A MATURE HEIGHT GREATER THAN 12".
 - 13 ALL VALVE AND HYDRANT HARDWARE MUST BE STAINLESS STEEL INCLUDING NUTS, BOLTS, AND WASHERS.
- * OR APPROVED EQUAL

Approved: City Engineer

 Victor C. Ramirez, P.E.
 Director of Engineering and Building

Drawing Name
FIRE HYDRANT

Drawing Number
UW-06
 Date: 11/2/2007
 Drawn: EM
 Checked: JN

 CRYSTAL LAKE ILLINOIS Engineering Division