

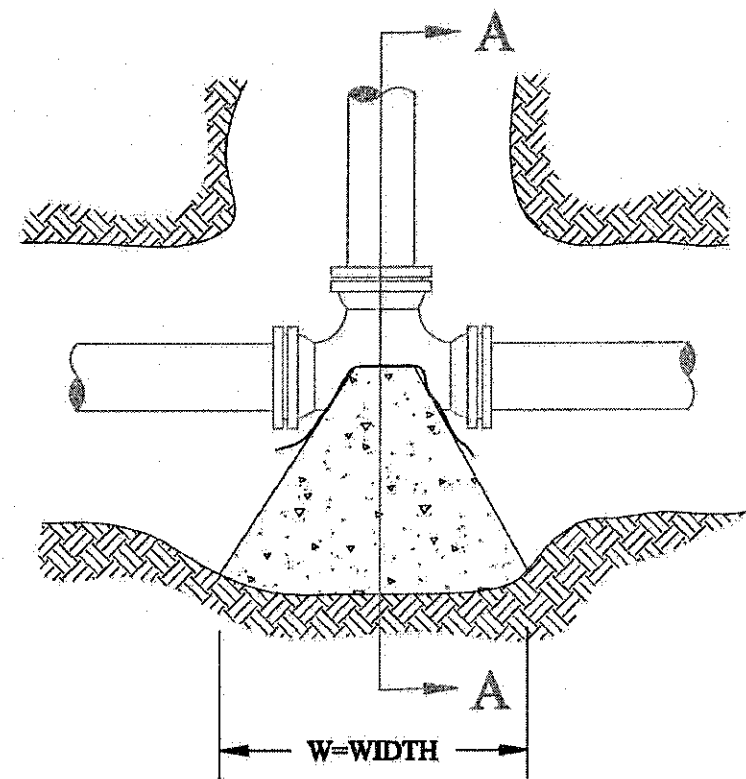


TABLE 1
SAFE BEARING LOADS OF SOILS & MULTIPLICATION FACTORS
FOR MODIFICATION OF THRUST BLOCK AREAS

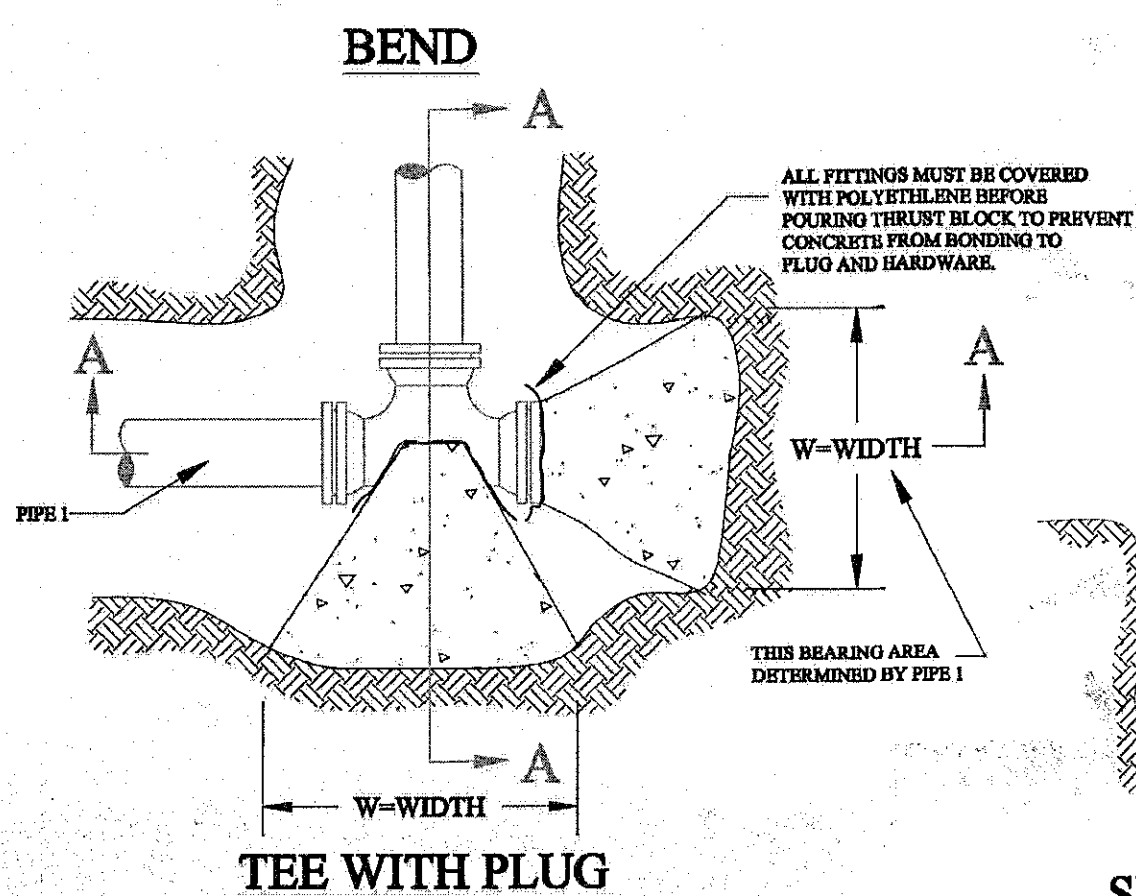
SOIL	SAFE BEARING LOAD (LBS./SQ. FT.)	FACTOR
MUCK	0	0
SOFT CLAY	1000	2.0
SAND	2000	1.0
SAND AND GRAVEL	3000	0.67
SAND AND GRAVEL CEMENTED WITH CLAY	4000	0.50
SHALE	10000	0.20

TABLE 2
REQUIRED BEARING AREAS & DIMENSIONS FOR
CONCRETE THRUST BLOCKS

PIPE SIZE INCHES	TEE AREA sq. ft.	90° (1/4) BEND		45° (1/8) BEND		22 1/2° (1/16) BEND		11-14 1/2° BEND	
		Dimensions D x W	AREA sq. ft.	Dimensions D x W	AREA sq. ft.	Dimensions D x W	AREA sq. ft.	Dimensions D x W	AREA sq. ft.
2	0.4	0.5x1.0	0.3	0.5x1.0	0.3	0.5x1.0	0.2	0.5x1.0	
3	0.8	1.0x1.0	1.1	0.6x1.5	0.6	0.5x1.0	0.3	0.5x1.0	
4	1.4	1.0x1.5	2.0	1.0x2.0	1.1	1.0x1.5	0.6	0.5x1.0	
6	3.2	1.5x2.5	4.5	2.0x2.5	2.4	1.5x2.0	1.1	1.0x1.5	
8	5.7	2.0x3.0	8.0	2.0x4.0	4.3	2.0x2.5	2.4	1.5x2.0	
10	8.8	2.5x3.5	12.5	3.0x4.5	6.8	2.0x3.5	3.4	1.5x2.5	
12	12.7	3.5x5.5	18.0	4.0x5.5	9.7	2.5x4.0	5.7	3.0x4.5	
14	17.3	3.5x5.0	24.5	4.5x5.5	13.3	3.5x4.0	8.0	3.4x5.2	
16	22.6	4.5x5.0	32.0	5.0x5.5	17.3	3.5x4.5	10.4	4.0x5.2	
18	28.6	5.0x6.0	40.5	5.5x7.0	21.9	4.0x5.5	12.7	4.5x5.5	
20	35.3	5.5x6.5	50.0	6.5x8.0	27.0	4.5x6.0	15.9	5.0x6.5	

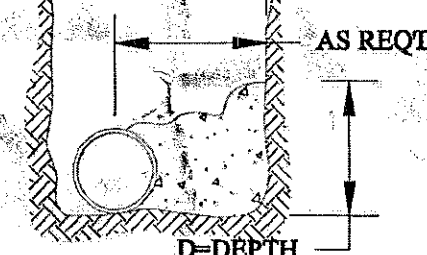
NOTES

- A) FOR REQUIRED BEARING AREA AND DIMENSION D&W SEE TABLE 2
VALUES OF D&W OTHER THAN THOSE SHOWN IN THE TABLE,
MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO
OR LARGER THAN THAT REQUIRED.
- B) ALL THRUST BLOCKS SHALL BE 3000 P.S.I. POURED CONCRETE.
- C) CONCRETE NOT TO OVERLAP ANY JOINT.
- D) CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH
REMOVING OR INSTALLING ANY OF THE HARDWARE.
- E) VALUES FOR TEE, ALSO APPLY TO END PLUGS, CAPS AND TAPPING SLEEVES.
- F) REQUIRED BEARING AREA ARE DUE TO THRUSTS CAUSED BY 150
P.S.I. WORKING PRESSURE PLUS 30% (75 P.S.I.) SURGE ALLOWANCE
RESULTING IN 225 P.S.I. TOTAL INTERNAL PRESSURE, NOMINAL PIPE
DIAMETER USED.
- G) REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING
CAPACITY OF 2000 LBS. PER SQ. FT. FOR SAND. DUE TO OTHER
SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED
BY THE ENGINEER BY MULTIPLYING THE AREA GIVEN IN TABLE 1
FOR THE APPROPRIATE PIPE SIZE AND FITTING BY THE LISTED
CORRECTION FACTORS.
- H) IN MUCK, PEAT OR RECENTLY PLACED FILL, ALL THRUSTS SHALL BE
RESISTED BY PILES OR THE RODS TO SOLID FOUNDATIONS, OR BY
REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH
BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS,
ALL A.O.B.E.

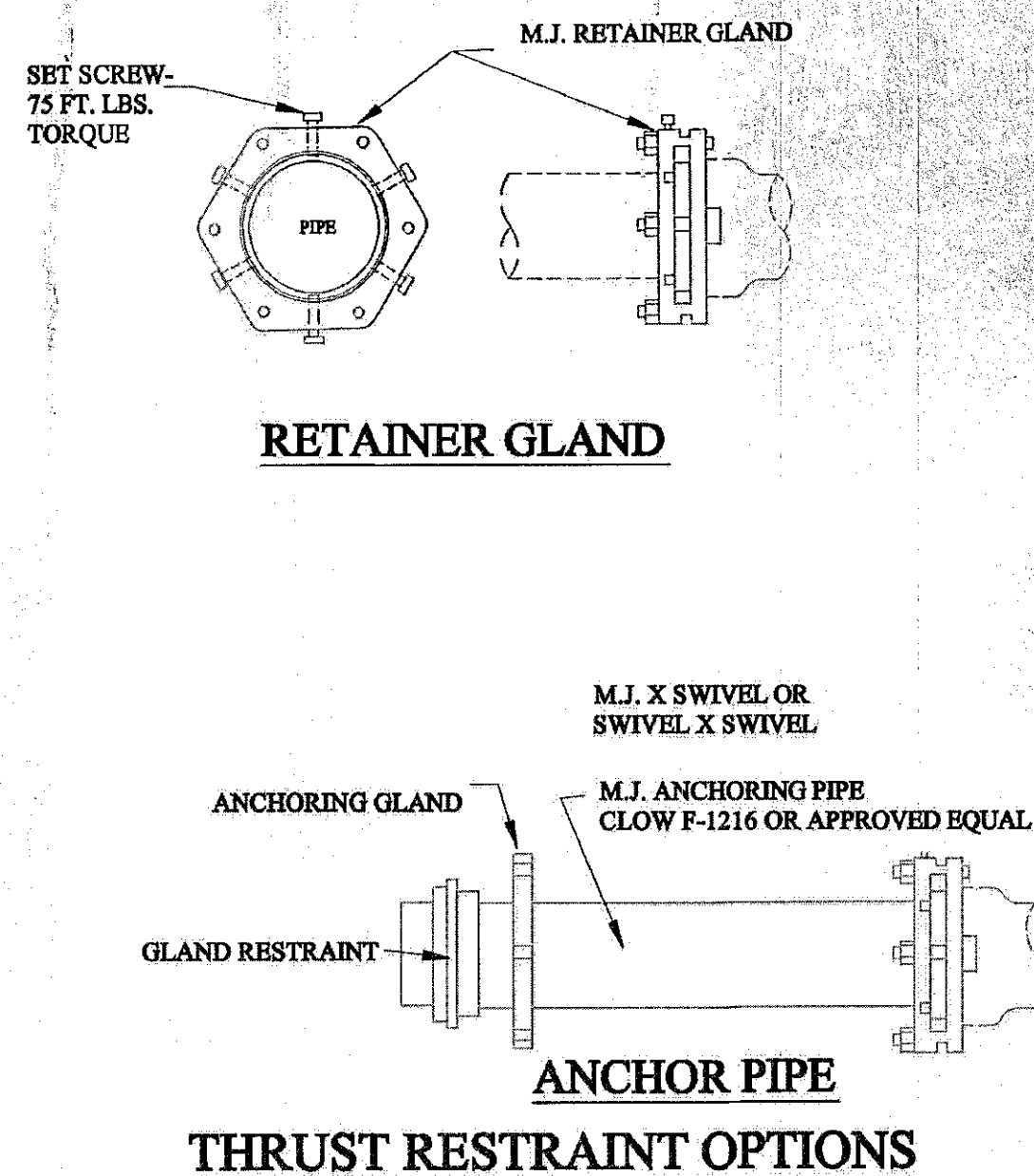


TYPICAL POURED IN PLACE CONCRETE
THRUST BLOCK DETAILS

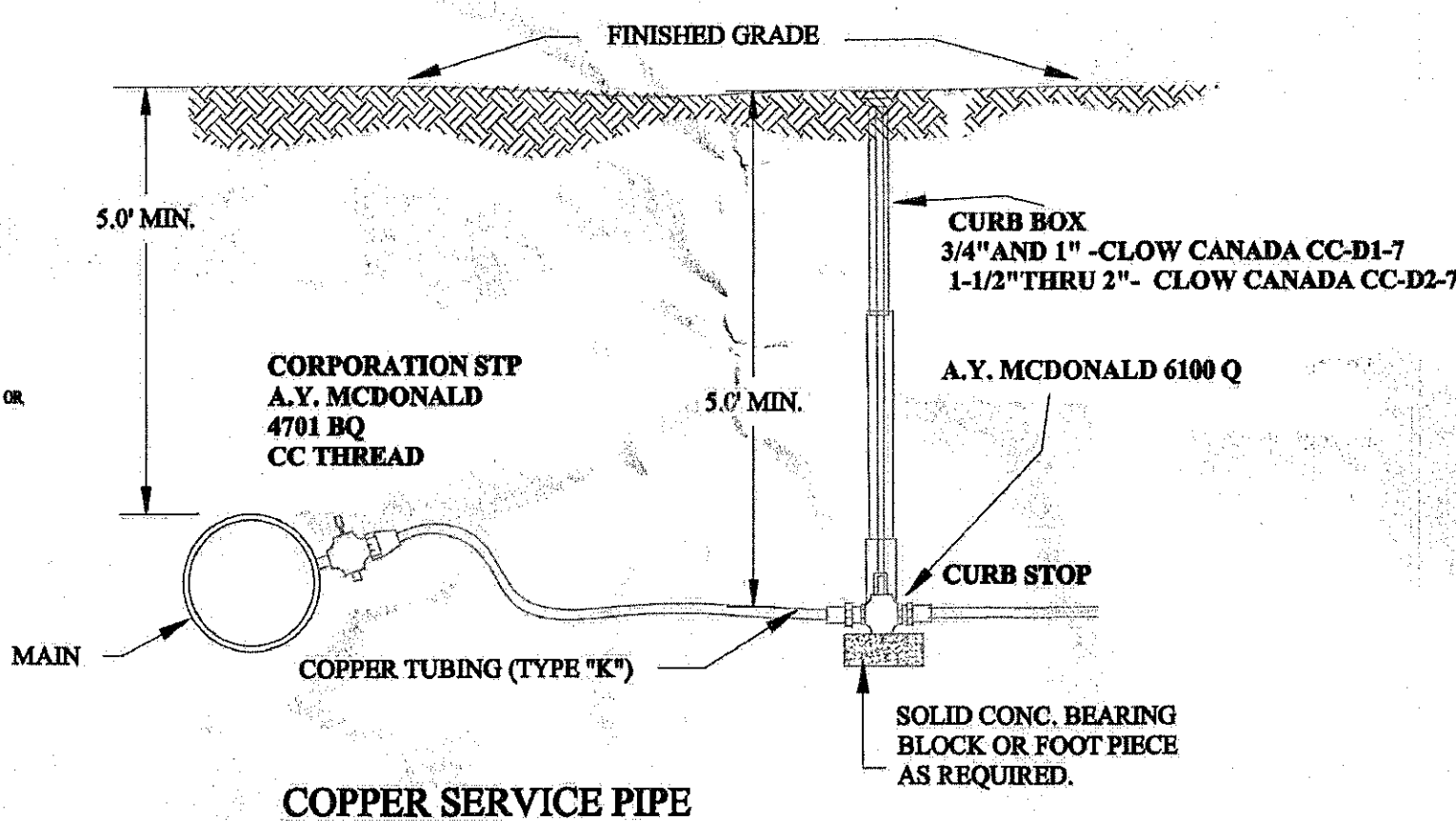
SECTION A-A



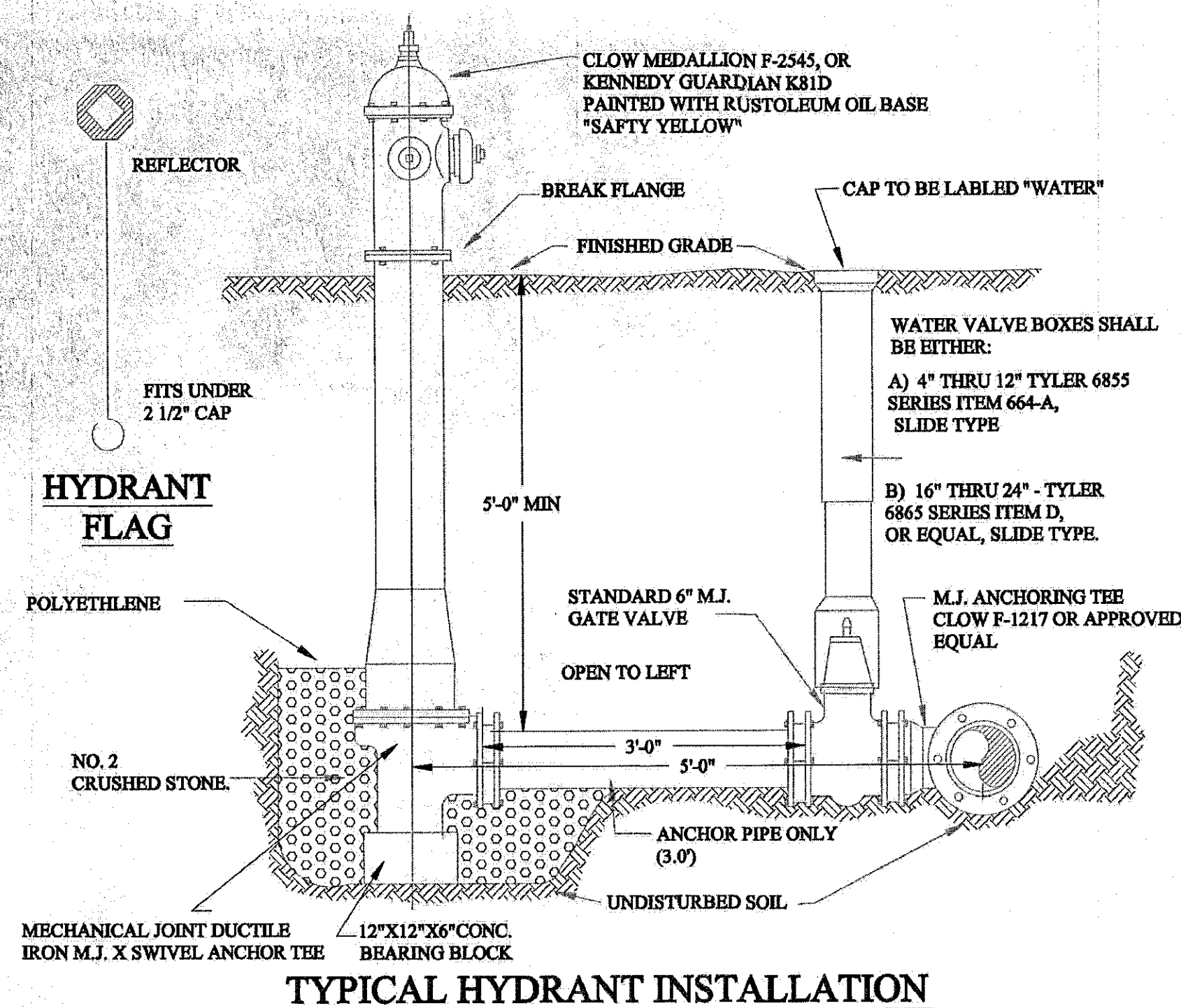
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VALUES OF D&W OTHER THAN THOSE SHOWN IN THE TABLE,
MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO OR
LARGER THAN THAT REQUIRED.



CURB BOXES SHALL BE EITHER:
A) FOR 3/4" AND 1" - CLOW CANADA CC-D1-7 CLOW
CANADA CC-D2-7
5'-6" ADJUSTABLE WITH 3/8" X 5/8" DIAMETER GRADE
304 STAINLESS STEEL ROD AND BRASS COTTER PIN.
B) FOR 1 1/2" THRU 2" - OR EQUAL, 5'-6" ADJUSTABLE
WITH 3/8" X 5/8" DIAMETER GRADE 304 STAINLESS
STEEL ROD AND BRASS COTTER PIN.

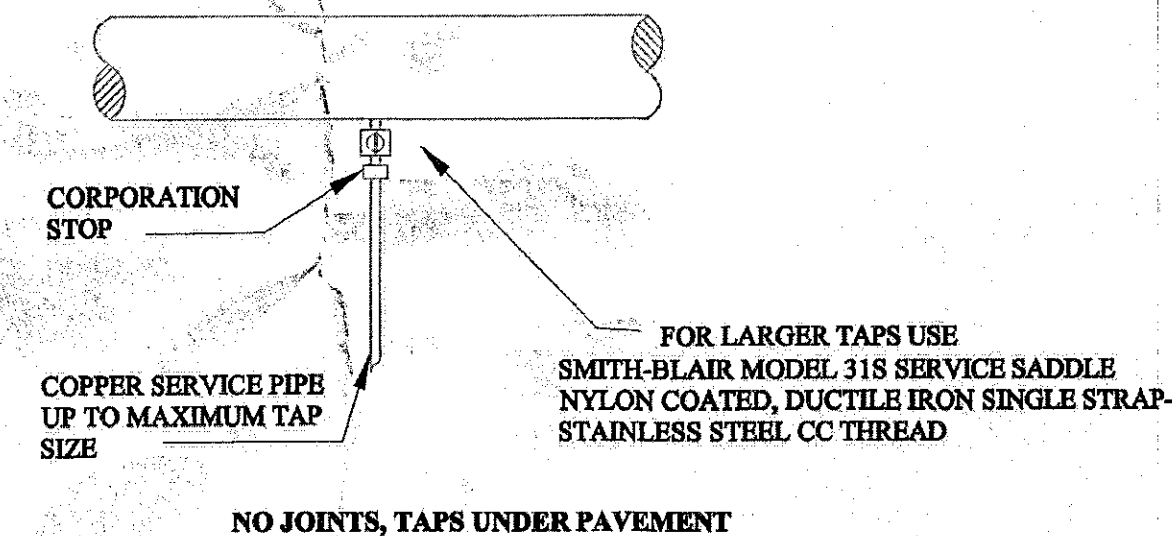


TYPICAL SERVICE CONNECTIONS

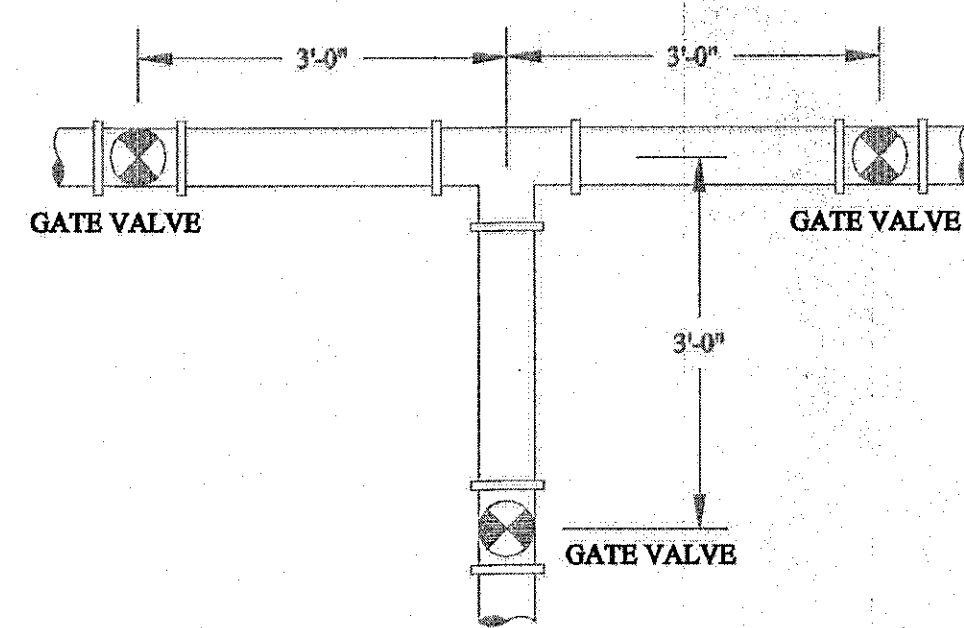


TYPICAL HYDRANT INSTALLATION

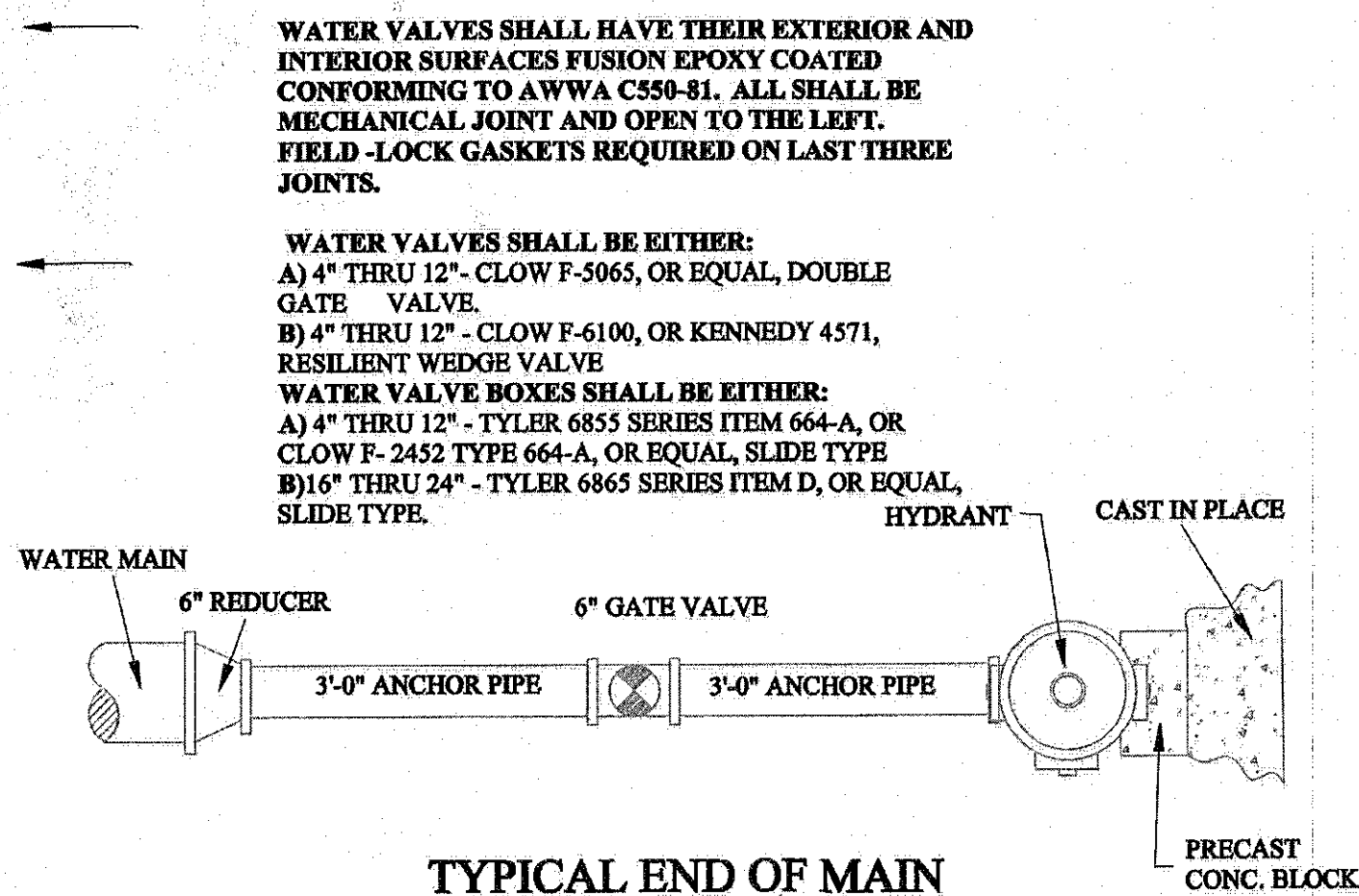
MAXIMUM TAP SIZE					
MAIN SIZE - (INCHES)	4	6	8	10	12
MAX. TAP SIZE (INCHES)	3/4	1	1-1/4	1-1/2	2



SINGLE AND MULTIPLE TAPS



TYPICAL SPACING



TYPICAL END OF MAIN
HYDRANT

TOWN OF BETHELEHEM, NEW YORK
PLANNING DEPT. ORIGINAL
- SCANNED -



OWNER/APPLICANT
Bethlehem Lutheran Church
85 Elm Avenue
Delmar, New York 12054

PLANNING BOARD APPROVAL

MOSAIC ASSOCIATES

Weston & Sampson

Weston & Sampson, P.C.
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Tel: (518) 462-4400 Fax: (518) 462-6741
www.westonsampson.com

Design Development Additions & Alterations
Site Plan Approval Documents

Bethlehem Lutheran Church
85 Elm Avenue, Delmar, New York 12054

Revision:
1. 04/01/16
2. 07/13/16
3. 12/27/16

Drawn by: DFB
Date: March 15, 2016
AFN: 1234-2

CONSTRUCTION DETAILS

SHEET
8 OF 12
SHEET C505