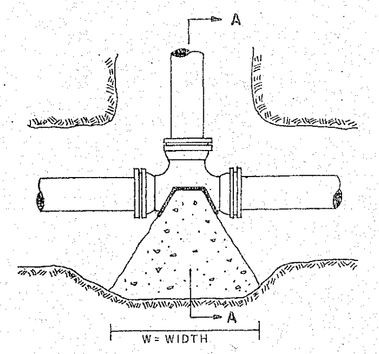
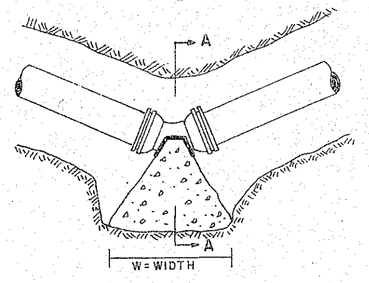
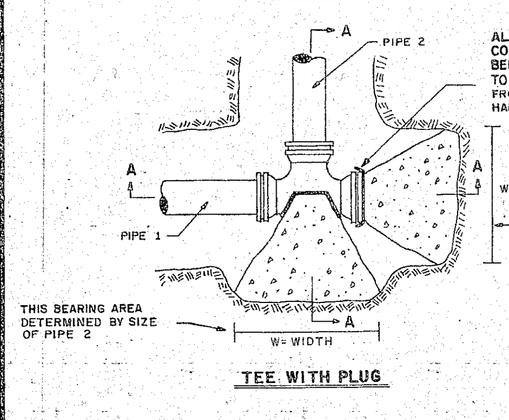


TEE

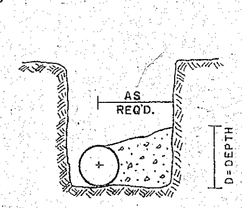


BEND



ALL FITTINGS MUST BE COVERED WITH POLYETHYLENE BEFORE POURING THRUST BLOCK TO PREVENT CONCRETE FROM BONDING TO PLUG AND HARDWARE.

TEE WITH PLUG



SECTION A-A

TABLE 1

SAFE BEARING LOADS OF SOILS & MULTIPLICATION FACTORS FOR MODIFICATION OF THRUST BLK. AREAS

SOIL	SAFE BEARING LOAD (LBS./SQ. FT.)	FACTOR
MUCK	0	0
SOFT CLAY	1000	2.00
SAND	2000	1.00
SAND & GRAVEL	3000	0.67
SAND & GRAVEL CEMENTED WITH CLAY	4000	0.50
SHALE	10000	0.20

TABLE 2

REQUIRED BEARING AREAS & DIMENSIONS FOR CONCRETE THRUST BLOCKS

PIPE	TEE		90° (1/4) BEND		45° (1/8) BEND		22-1/2° (1/16) BEND		11-1/4° (1/32) BEND	
SIZE INCHES	AREA sq.ft	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	Dimensions D x W
2	0.4	0.5 x 1.0	0.5	0.5 x 1.0	0.3	0.5 x 1.0	0.1	0.5 x 1.0	0.1	0.5 x 1.0
3	0.8	1.0 x 1.0	1.1	1.0 x 1.5	0.6	0.5 x 1.5	0.3	0.5 x 1.0	0.2	0.5 x 1.0
4	1.4	1.0 x 1.5	2.0	1.0 x 2.0	1.1	1.0 x 1.5	0.6	0.5 x 1.5	0.3	0.5 x 1.0
6	3.2	1.5 x 2.5	4.5	2.0 x 2.5	2.4	1.5 x 2.0	1.2	1.0 x 1.5	0.6	0.5 x 1.5
8	5.7	2.0 x 3.0	8.0	2.0 x 4.0	4.3	2.0 x 2.5	2.2	1.5 x 1.5	1.1	1.0 x 1.5
10	8.8	2.5 x 3.5	12.5	3.0 x 4.5	6.8	2.0 x 3.5	3.4	1.5 x 2.5	1.7	1.0 x 2.0
12	12.7	3.5 x 3.5	18.0	4.0 x 4.5	9.7	2.5 x 4.0	5.0	2.0 x 2.5	2.5	1.5 x 2.0
14	17.3	3.5 x 5.0	24.5	4.5 x 5.5	13.3	3.5 x 4.0	6.8	2.0 x 3.5	3.4	1.5 x 2.5
16	22.6	4.5 x 5.0	32.0	5.0 x 6.5	17.3	3.5 x 4.5	8.8	2.5 x 3.5	4.4	2.0 x 2.5
18	28.6	5.0 x 6.0	40.5	5.5 x 7.0	21.9	4.0 x 5.5	11.2	3.0 x 4.0	5.6	2.0 x 3.0
20	35.3	5.5 x 6.5	50.0	6.5 x 8.0	27.0	4.5 x 6.0	13.8	3.5 x 4.0	6.9	2.0 x 3.5

NOTES:

A. FOR REQUIRED BEARING AREA AND DIMENSIONS 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 JOINTING 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 50% (TRAPEZ.) 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 CONNECTION 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.

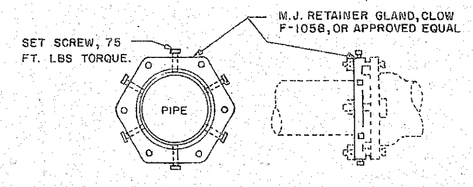
TYPICAL CONCRETE THRUST BLOCK DETAILS

NUMBER OF TIE RODS REQUIRED.

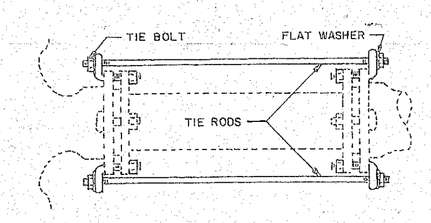
PIPE SIZE INCHES	MINIMUM NO. OF 5/4" RODS
2	2 ①
3	2 ①
4	2
6	2
8	2
10	2
12	2
14	4
16	4
18	6
20	6

NOTES

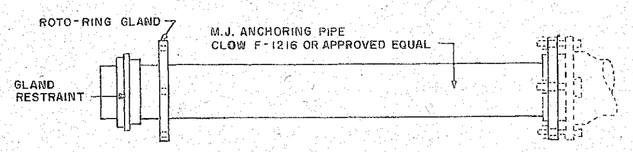
① APPLIES TO 5/8" RODS AS WELL.



RETAINER GLAND

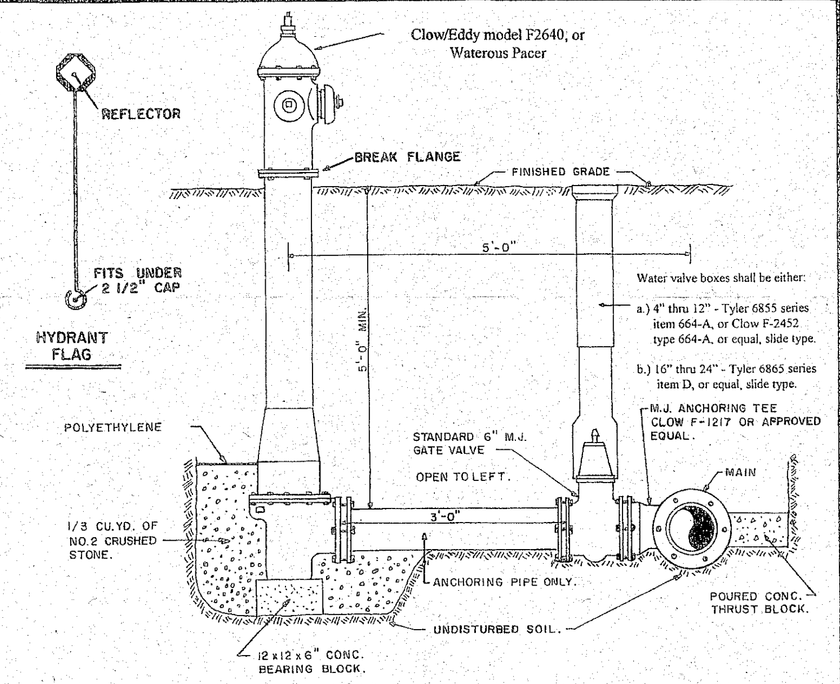


TIE RODS



ANCHORING PIPE

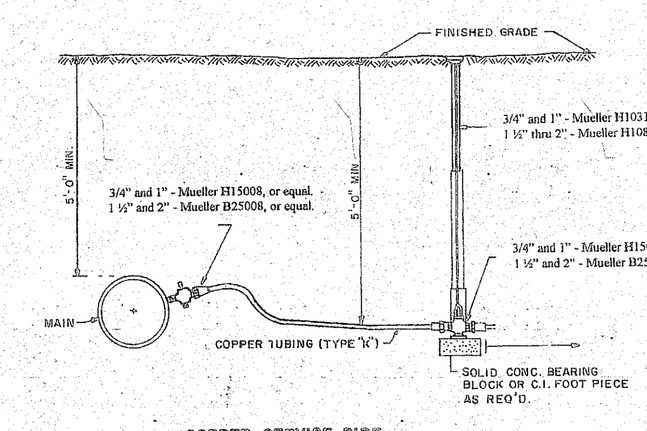
THRUST RESTRAINT OPTIONS



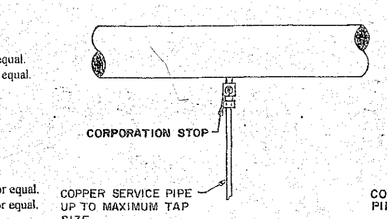
TYPICAL HYDRANT INSTALLATION

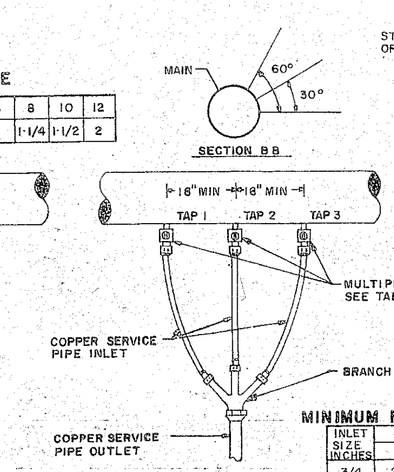
MAXIMUM TAP SIZE

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



COPPER SERVICE PIPE
FOR SERVICES 2" DIAMETER OR LESS



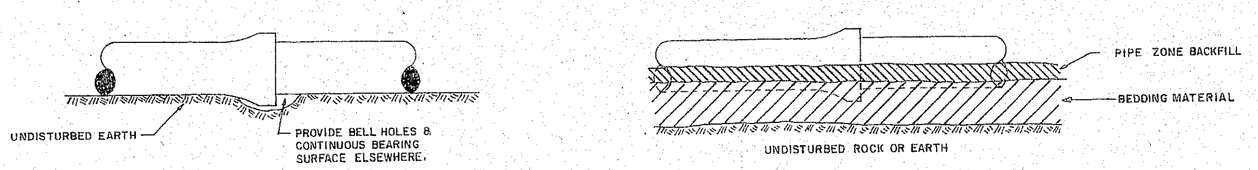


MINIMUM NO. OF BRANCH INLETS

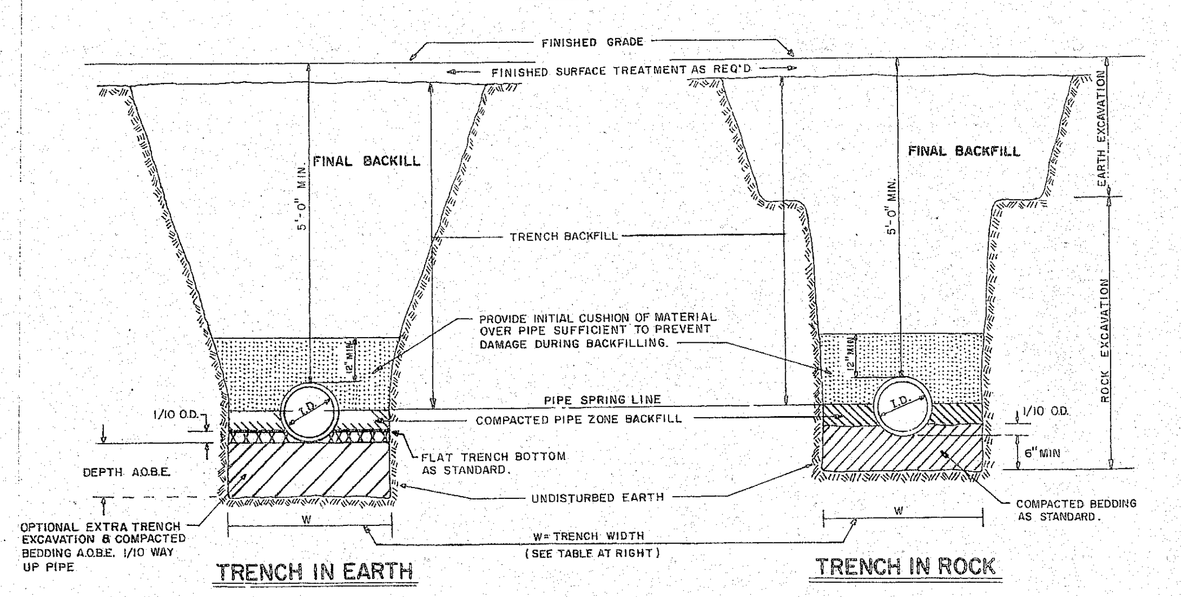
INLET SIZE INCHES	OUTLET SIZE INCHES			
	1	1-1/4	1-1/2	2
3/4	2	2	3	—
1	—	2	2 or 3	3

SINGLE & MULTIPLE TAPS

TYPICAL SERVICE CONNECTIONS



ELEVATIONS



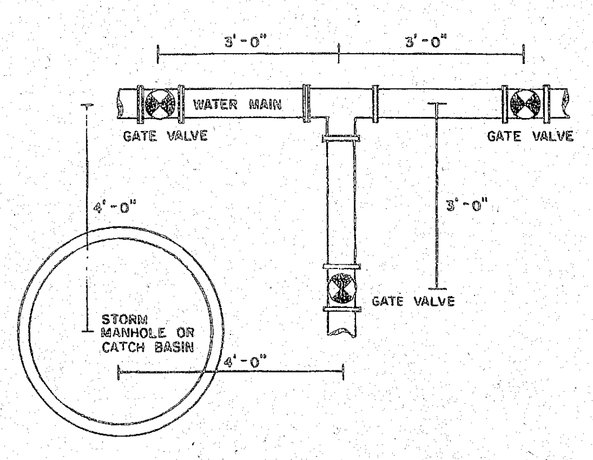
TRENCH IN EARTH

TRENCH IN ROCK

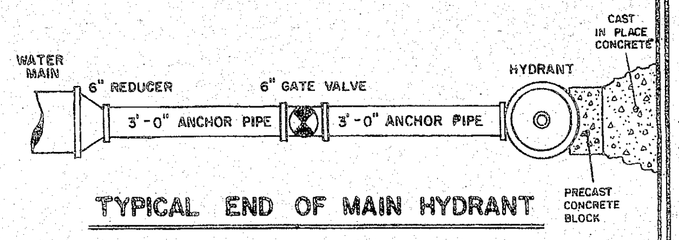
TYPICAL TRENCH DETAILS

TRENCH WIDTH

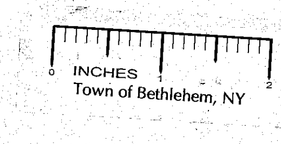
PIPE SIZE - I.D. (INCHES)	MIN. SUGGESTED TRENCH WIDTH FOR AMPLE WORKING SPACE (O.D. BELL + 24")	MAX. TRENCH WIDTH ALLOWED = I.D. PLUS 24" AT "1-D" OF PIPE.
I.D.	W min.	W max.
2	18	26
3	18	27
4	18	28
6	21	30
8	24	32
10	26	34
12	28	36
14	30	38
16	32	40
18	35	42
20	37	44



TYPICAL SPACING



TYPICAL END OF MAIN HYDRANT



PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK
This plat APPROVED subject to such conditions as are stated in Building Project Approval (B/P/A)
No. BPA-26 Dated 3-7-06.
Chairman
Title Chairman
Date 7/13/06

OBTAIN STANDARD SPECIFICATIONS

REVISIONS		
DATE	BY	DESCRIPTION
7/82	C.W.	ORIGINAL
7/91	TWR	NEW NOTES, ANCHOR PIPE, TAPS
5/98	TR	HYDRANTS, CORP AND CURB STOP

WATER DISTRIBUTION DETAILS

TOWN OF BETHLEHEM
DEPARTMENT OF PUBLIC WORKS
445 DELAWARE AVE. DELMAR N.Y. 12054

SCALE: NONE
DRAWN BY: C. WICKHAM, JR.
APPROVED BY: B.H. SECOR
DATE:
SHEET 2 OF 5

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Project

Beverwyck
A Subsidiary of Albany Damien Society and The Daily A Member of Northeast Health
Setting the Standard in Retirement Living

PHASE IV COTTAGES

Slingerlands, New York

Consultants

Civil:
Brett Steenburgh, P.E. P.L.L.C.
2832 Rosendale Road, Niskayuna, NY 12309
Phone: (518) 365-0675 Fax: (518) 831-9431

Landscape Architect:
Miller Associates
169 Haviland Road, Queensbury, NY 12804
Phone: (518) 792-4958 Fax: (518) 792-2511

Owner

Beechwood Inc.
2212 Burdett Avenue, Troy, NY 12180

Revisions

REVISED 01-29-06
REVISED 02-22-06
REVISED 02-23-06
REVISED 03-01-06
REVISED 03-24-06
REVISED 04-24-06
REVISED 05-21-06

STATE OF NEW YORK · STEENBURGH · 073455 · LICENSED PROFESSIONAL ENGINEER

Title

BETHLEHEM STD. DETAILS

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Drawing Number

C-112

Date: AUGUST 5, 2004