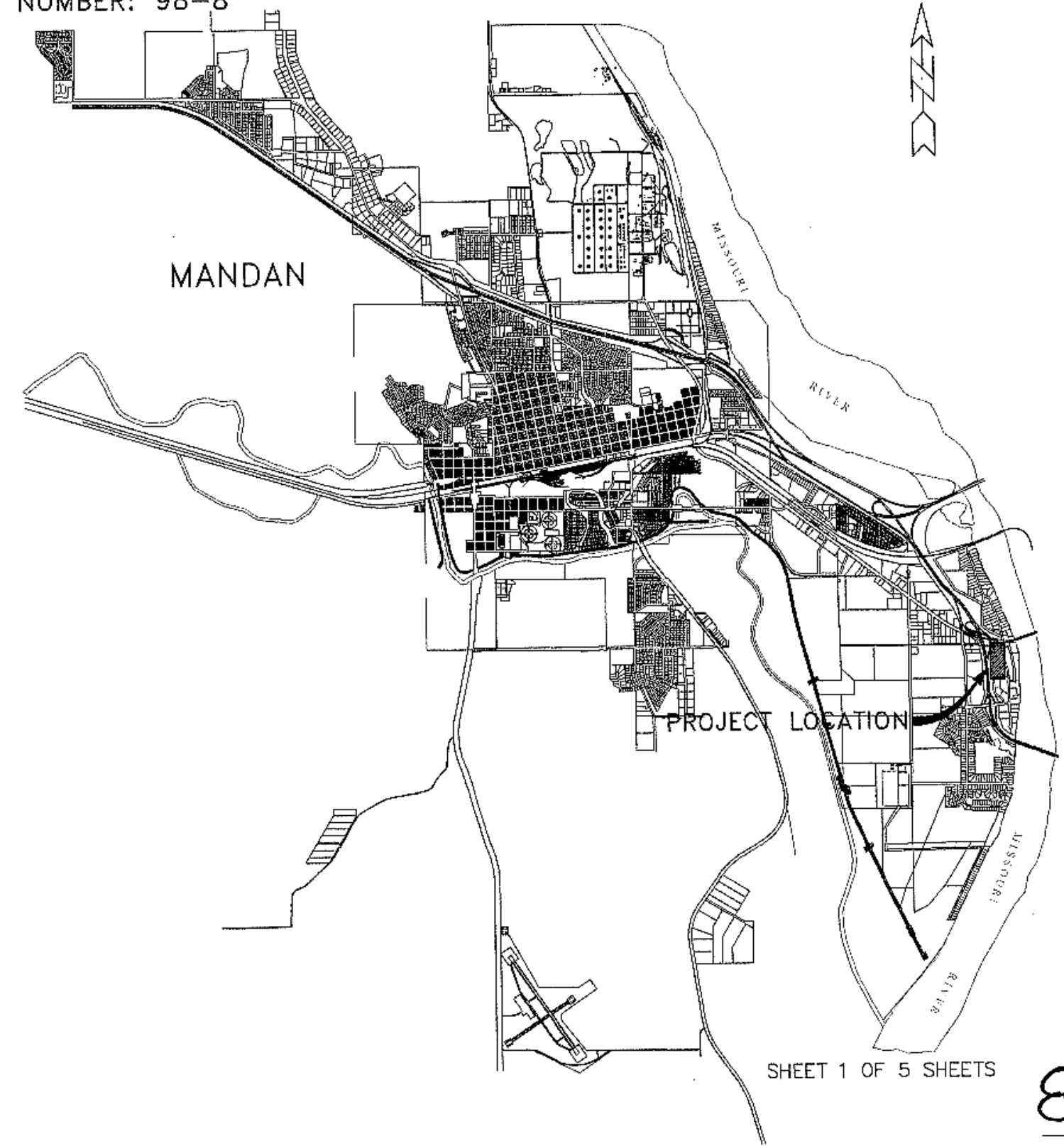


AS BUILT WATER IMPROVEMENT PLANS RICKER'S SECOND SUBDIVISION MANDAN, NORTH DAKOTA

CITY PROJECT NUMBER: 98-8

INDEX OF DRAWINGS

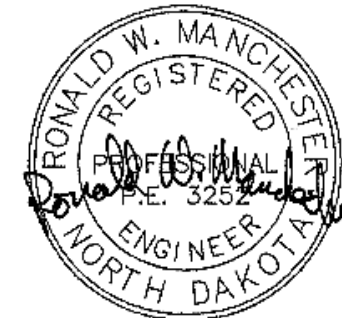
SHEET NO.	TITLE
1	TITLE SHEET
2	PROJECT LAYOUT PLAN
3	PLAN & PROFILE - MCKENZIE DR & MARINA RD
4	PLAN & PROFILE - MARINA ROAD
5	DETAIL SHEET



APPROVED: _____ DATE: _____
 THOMAS LITTLE, R.P.E. CITY ENGINEER, MANDAN, NORTH DAKOTA

PREPARED BY:
 TOMAN ENGINEERING

DATE: _____
 RONALD MANCHESTER R.P.E. 3252

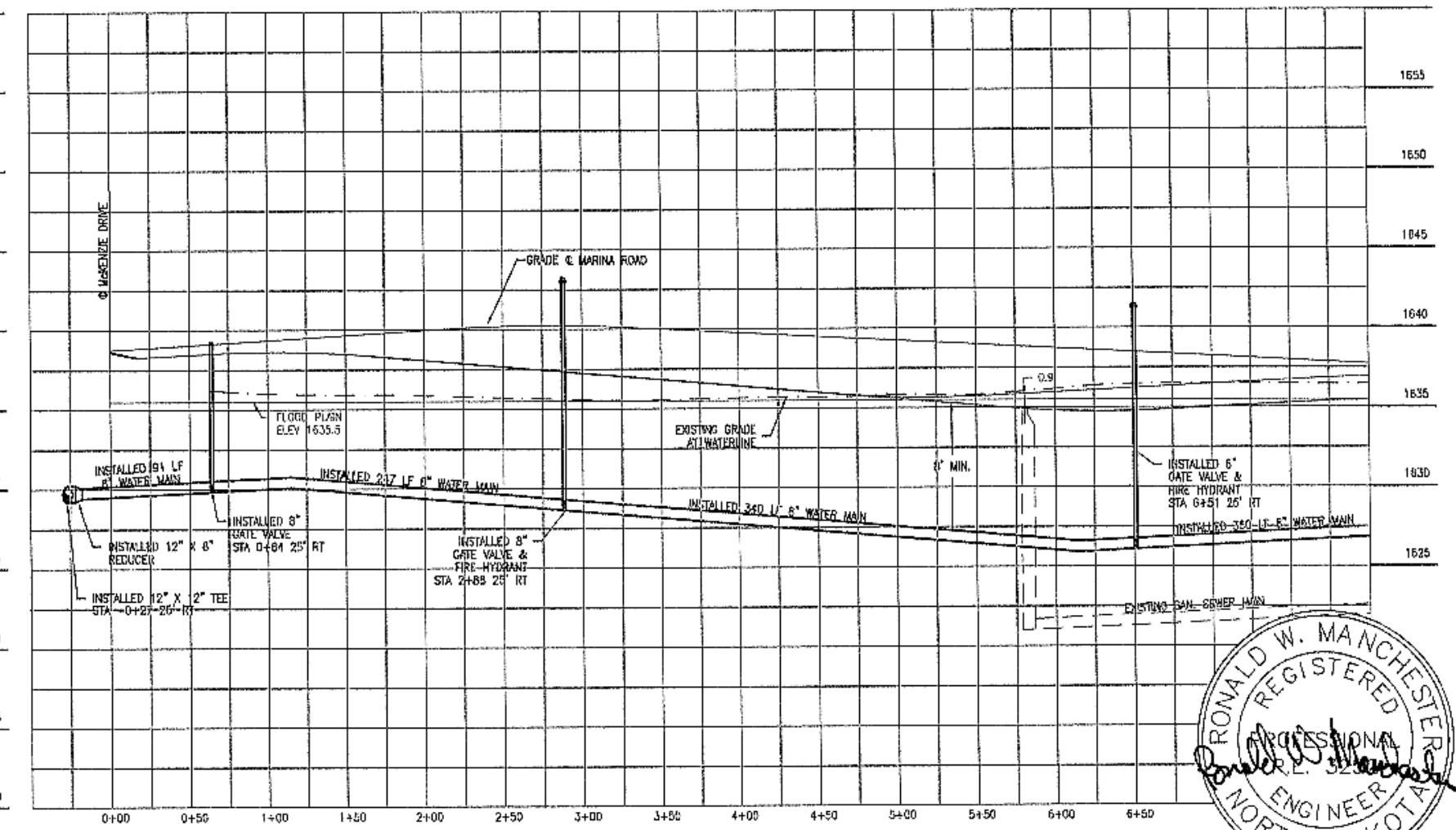
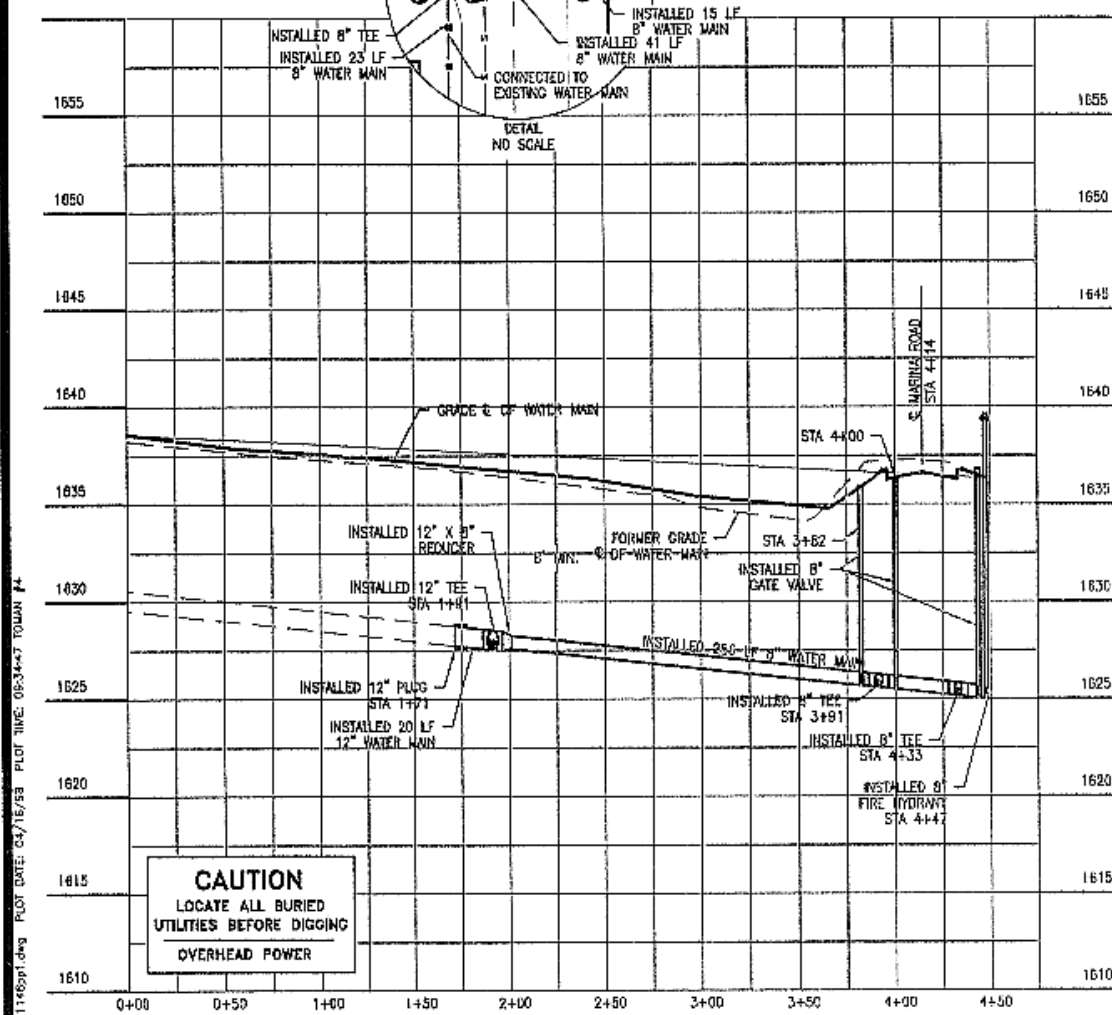
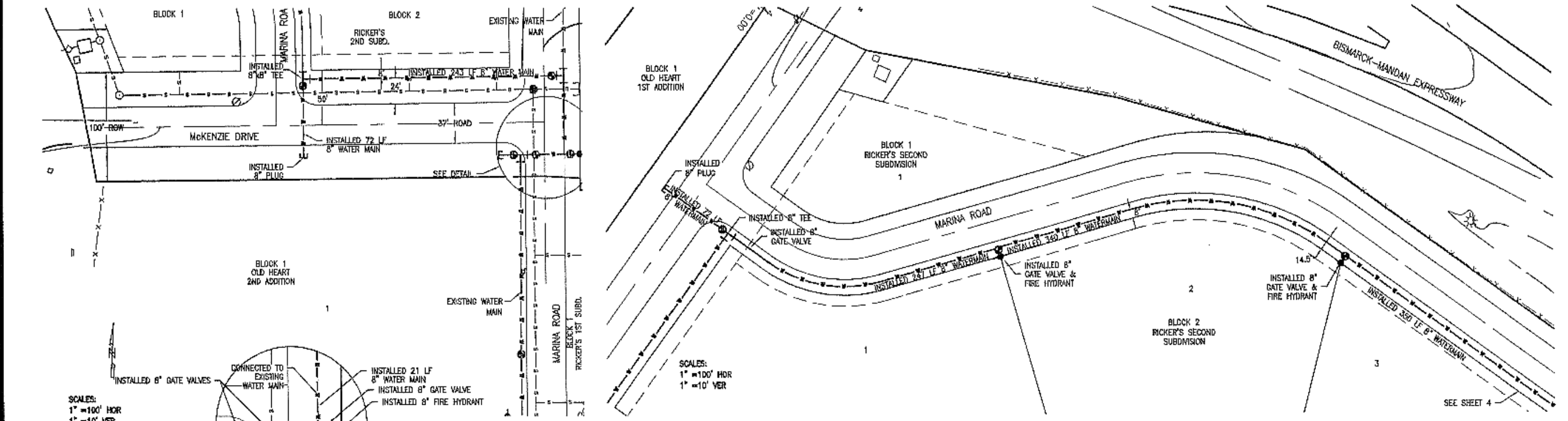


TOMAN ENGINEERING COMPANY
 CONSULTING CIVIL ENGINEERS
 905 2ND ST. N.W. • MANDAN, NORTH DAKOTA 58034 • 701-833-8433

SHEET 1 OF 5 SHEETS

8

AS BUILT WATER IMPROVEMENT PLANS McKENZIE DRIVE & MARINA ROAD



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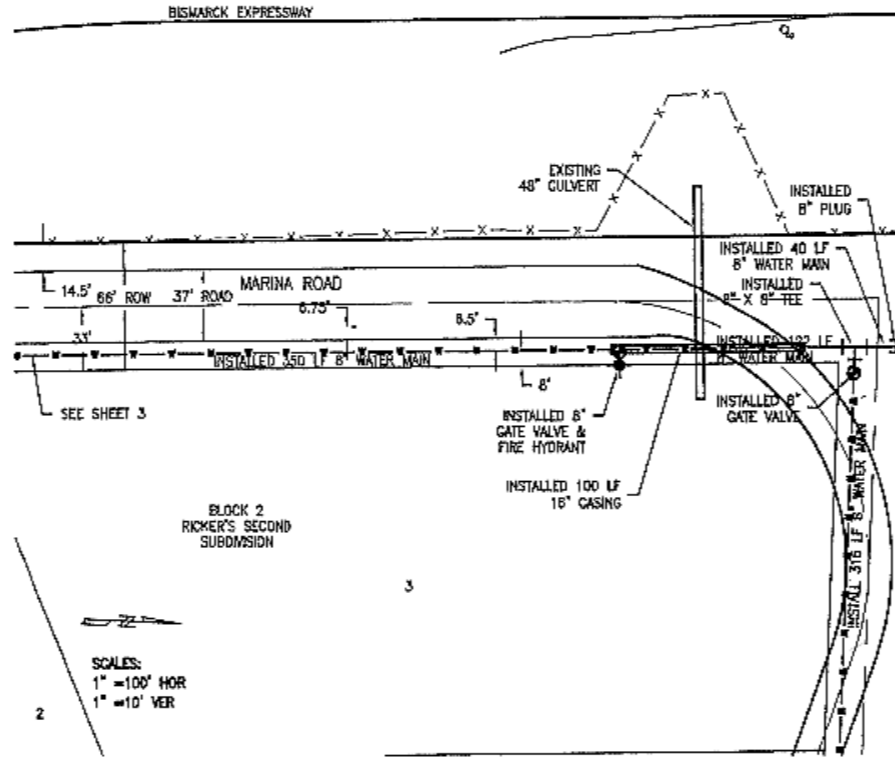
TOMAN ENGINEERING COMPANY
 CONSULTING CIVIL & ENVIRONMENTAL ENGINEERS
 908 2ND ST. N.E. (701) 643-4492
 1146

PROJECT:
 AS BUILT PLAN & PROFILES
 McKENZIE DRIVE & MARINA ROAD
 CITY PROJECT NO. 98-8

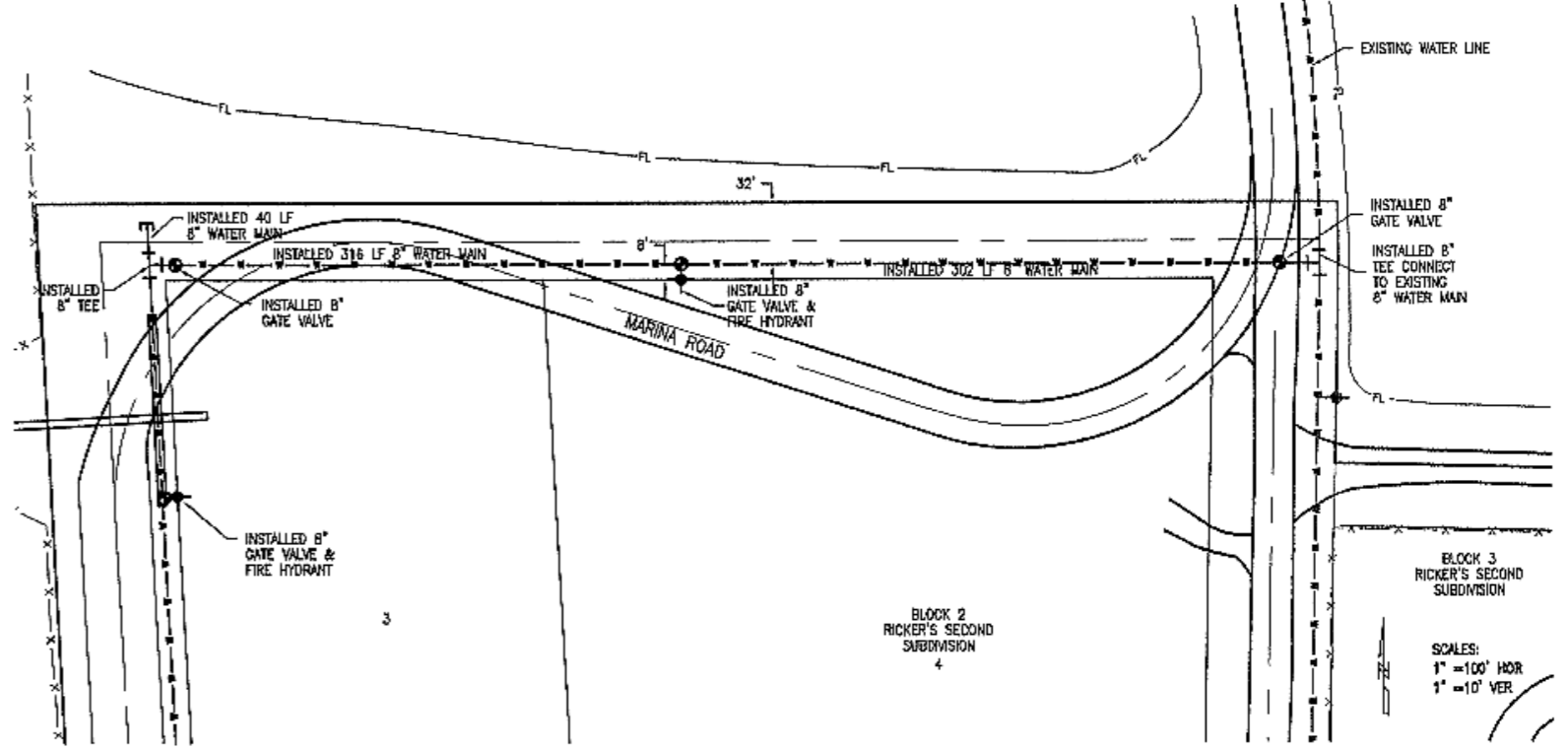
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 OF 5 SHEETS

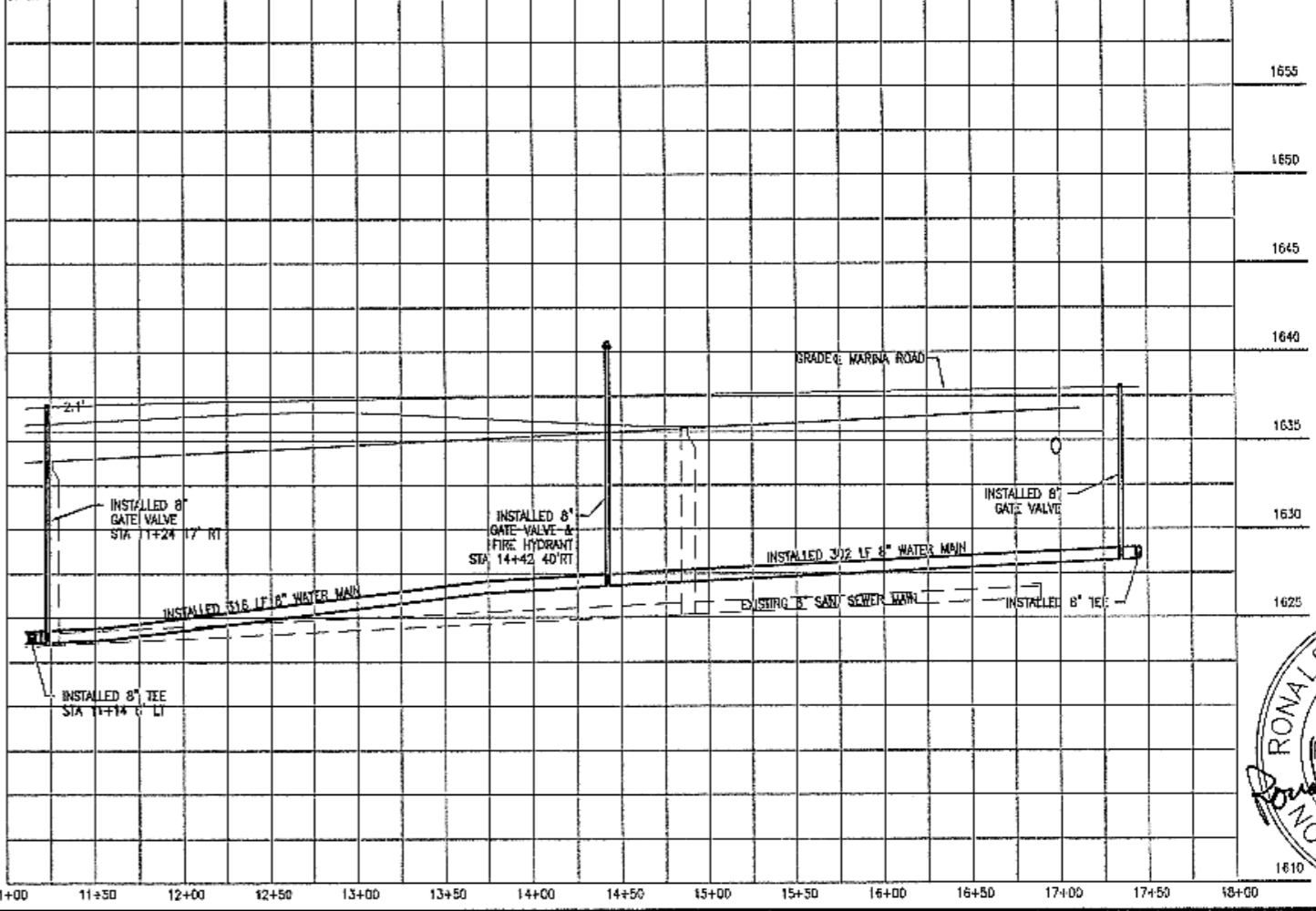
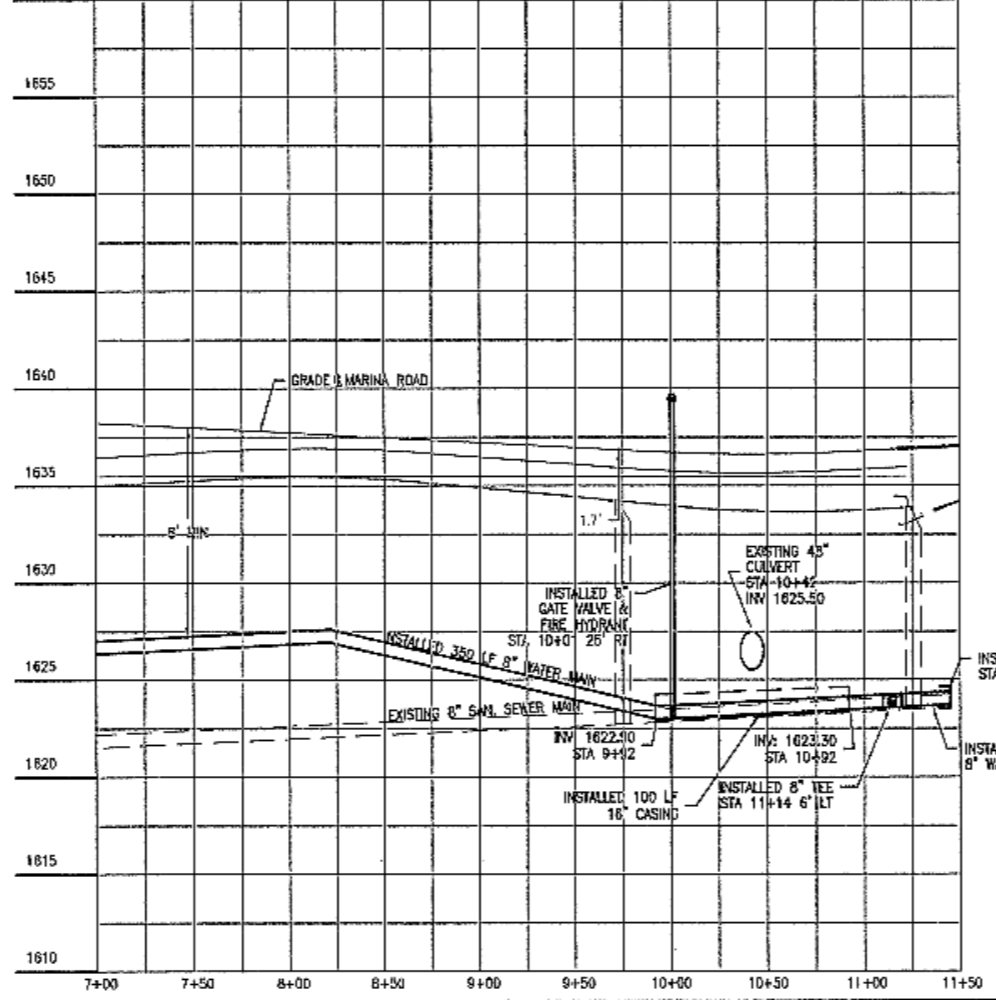
AS-BUILT WATER IMPROVEMENT PLANS MARINA ROAD



SCALES:
1" = 100' HOR
1" = 10' VER



SCALES:
1" = 100' HOR
1" = 10' VER



CAUTION
LOCATE ALL BURIED
UTILITIES BEFORE DIGGING
OVERHEAD POWER



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TOMAN ENGINEERING COMPANY
CONSULTING CIVIL & ENVIRONMENTAL ENGINEERS
508 2ND ST. N.E. (701) 663-6483



PROJECT:
PLAN & PROFILES
MARINA ROAD
CITY PROJECT NO. 98-8 AS-BUILT

TITLE: RICKER'S SECOND ADDITION

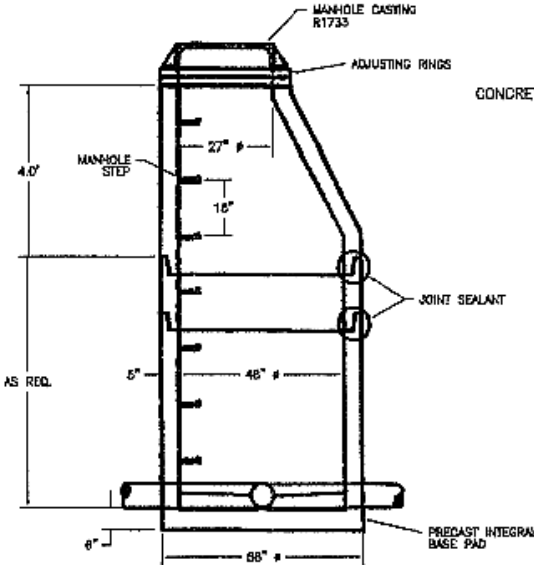
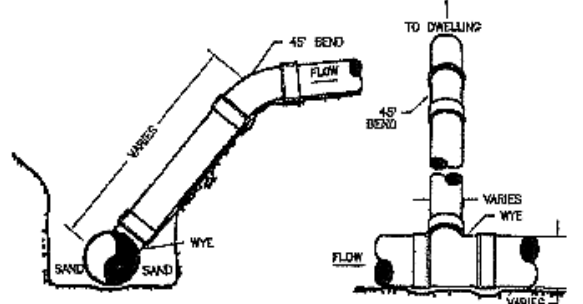
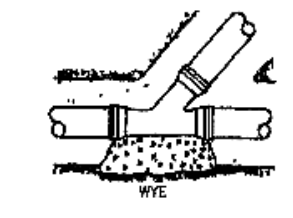
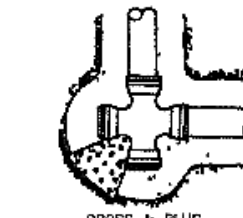
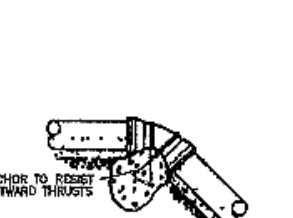
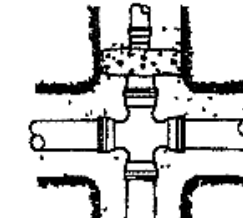
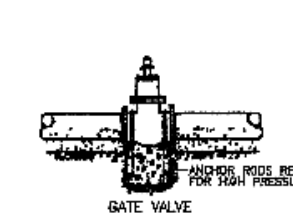
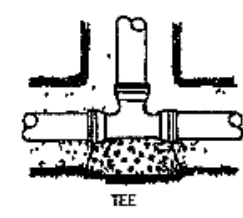
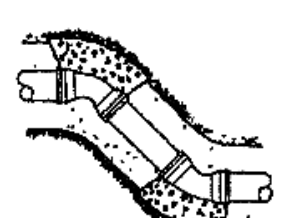
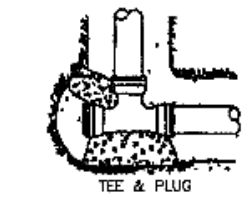
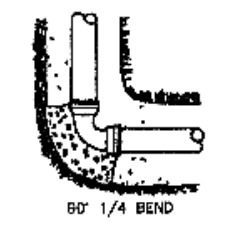
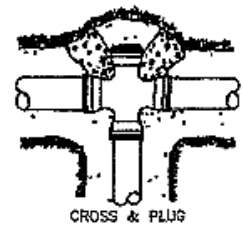
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2	4/7/05	JF	REVISED PROFILE
3			
4			

SHEET NUMBER
4
OF 5 SHEETS

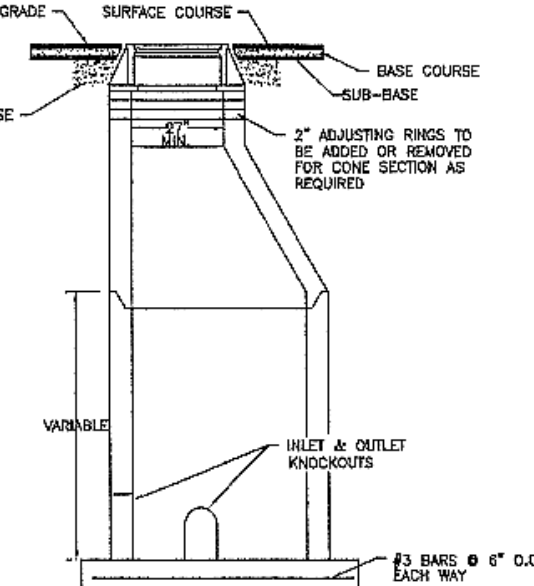
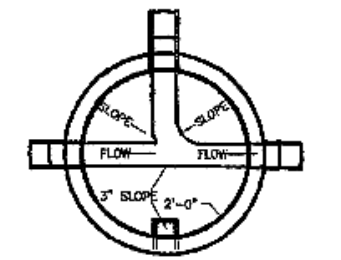
AS BUILT DETAIL SHEET

NO SCALE

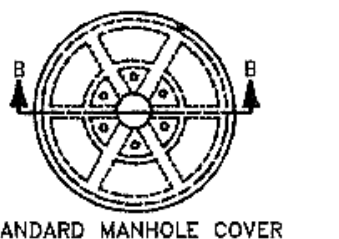
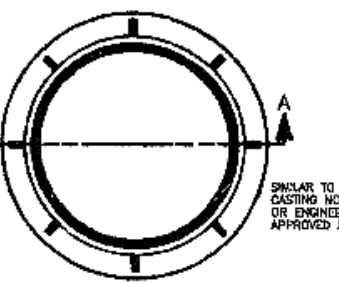
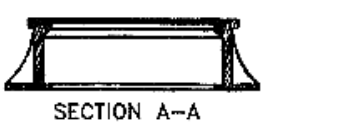
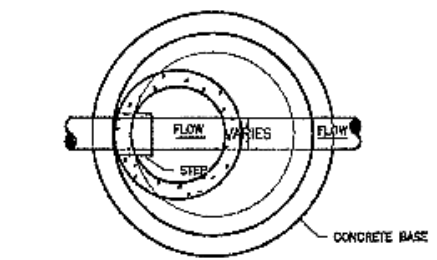
THRUST BLOCK DETAILS



TYPICAL STANDARD MANHOLE WITH INTEGRAL BASE



TYPICAL MANHOLE ELEVATION VIEW & STANDARD MANHOLE RING

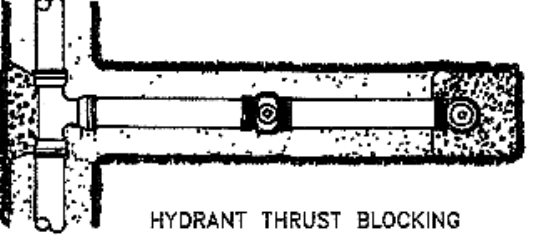
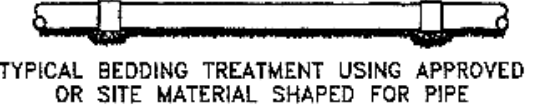
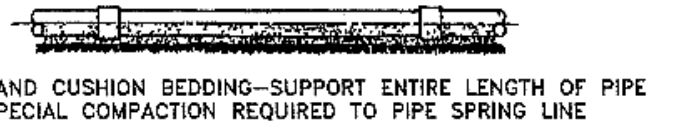


SECTION B-B

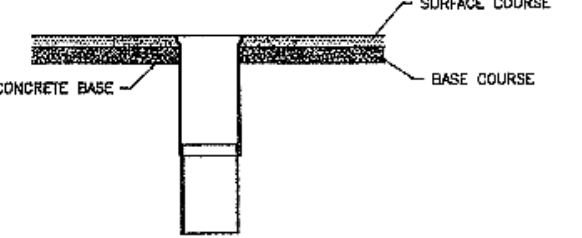
MAXIMUM SIZE OF OUTLET RECOMMENDED WITH SERVICE CLAMPS (INCHES)

NOMINAL PIPE SIZE	OUTLET SIZE SINGLE STRAP	OUTLET SIZE (CLASSES 100-100-200) COLLARS STRAP
8"	1 1/2"	1 1/2"
10"	2"	2"
12"	2 1/2"	2 1/2"
14"	3"	3"
16"	3 1/2"	3 1/2"

SADDLES FOR PVC WATERMAIN



NOTE: (1) PIPE DEFLECTIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS
(2) BEDDING REQUIREMENTS SHALL BE AS INDICATED HEREON UNLESS MODIFIED IN THE SPECIFICATIONS
(3) CONCRETE FOR THRUST BLOCKS SHALL HAVE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND MAX. SLUMP OF 5 INCHES AT TIME OF PLACEMENT.

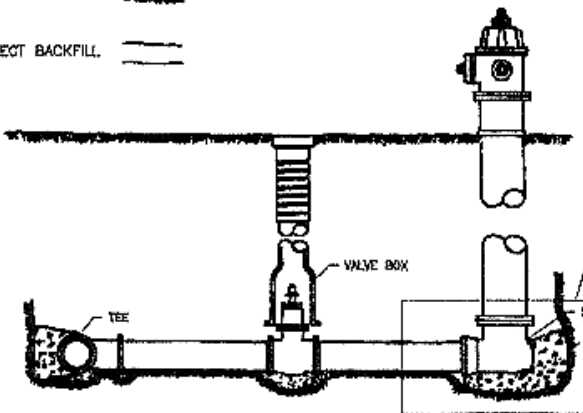


TYPICAL GATE VALVE BOX ADJUSTMENT SECTION



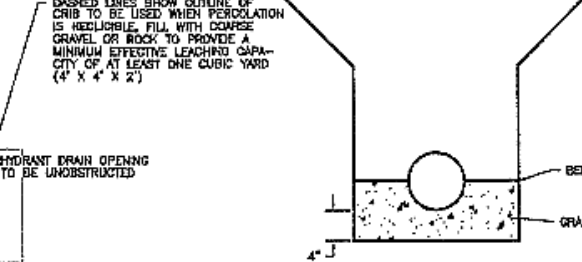
NOTE:
1. SIGNING BY OTHERS.
2. ALL CONSTRUCTION SIGNING INCIDENTAL TO PROJECT.
3. ALL EXCESS EXCAVATION MATERIAL TO BE HAULED TO THE WASTE AREA AND GRADED.
4. SALVAGE & STOCK PILE ALL GRAVEL MATERIAL FOR REPLACEMENT IN AREAS THAT MIGHT NEED STABILIZING. EXCESS MATERIAL TO BE HAULED TO THE WASTE AREA AND GRADED.

LEGEND
CONCRETE
SITE SOIL
SELECT BACKFILL



NOTE: (1) CURB STOP SHALL BE PLACED ON 4" X 8" X 2" CONCRETE BLOCK
(2) AFTER CURB STOP IS PLACED ON CONCRETE BLOCK BACKFILL AROUND CURB STOP WITH WASHED GRAVEL APPROX. 1 FT³ PER BOX

CURB STOP & DRAIN WITH BASE CURB BOX



WATERMAIN & SEWERMAIN BEDDING DETAIL

