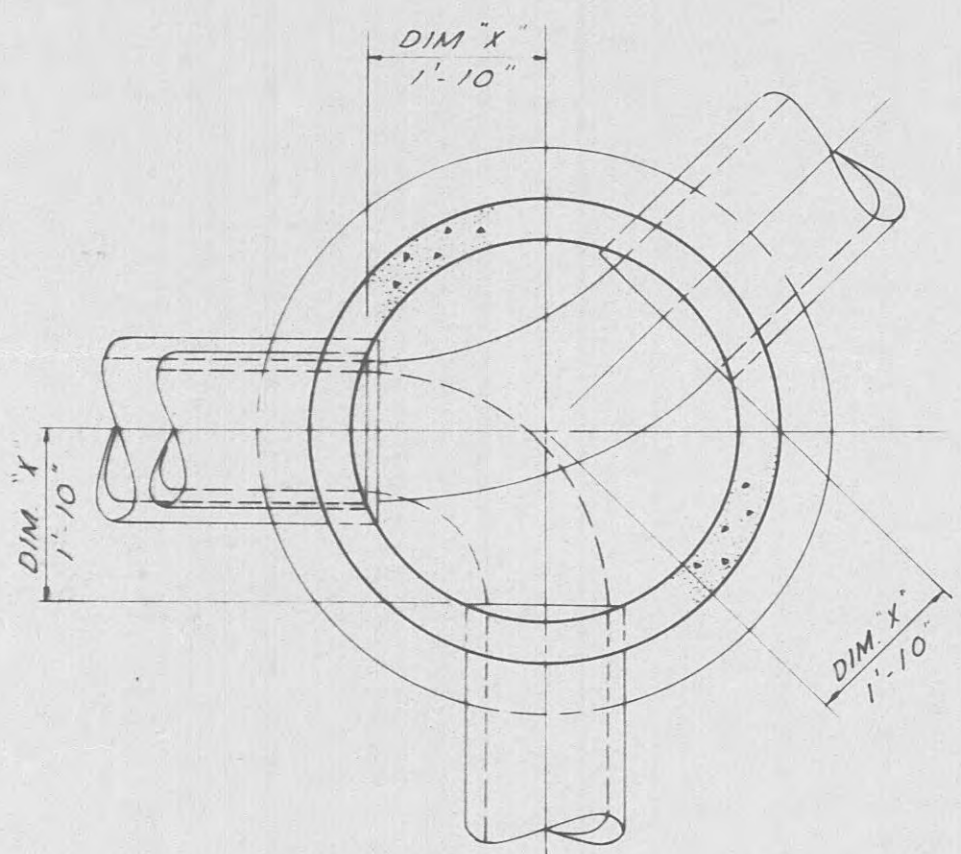


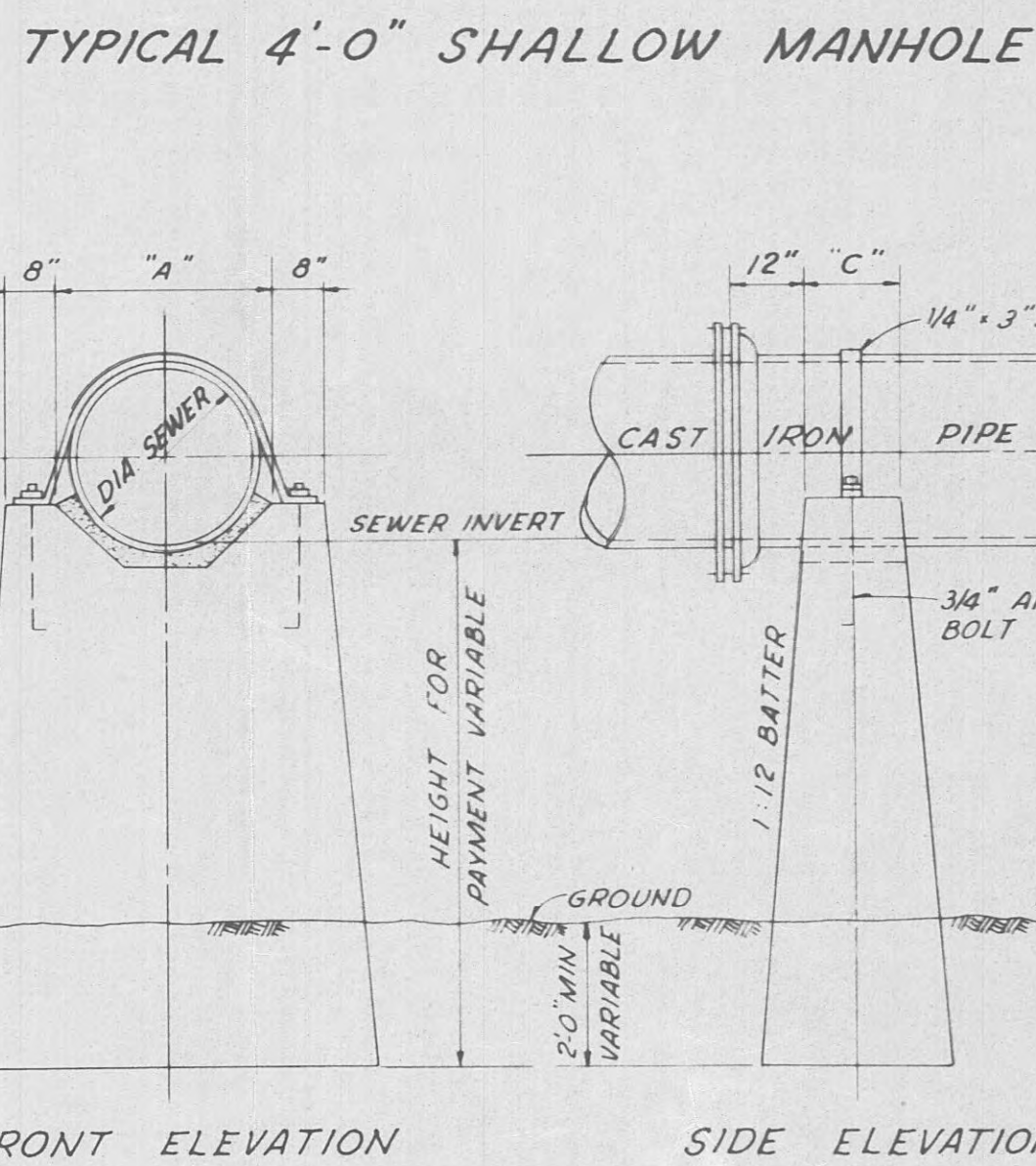
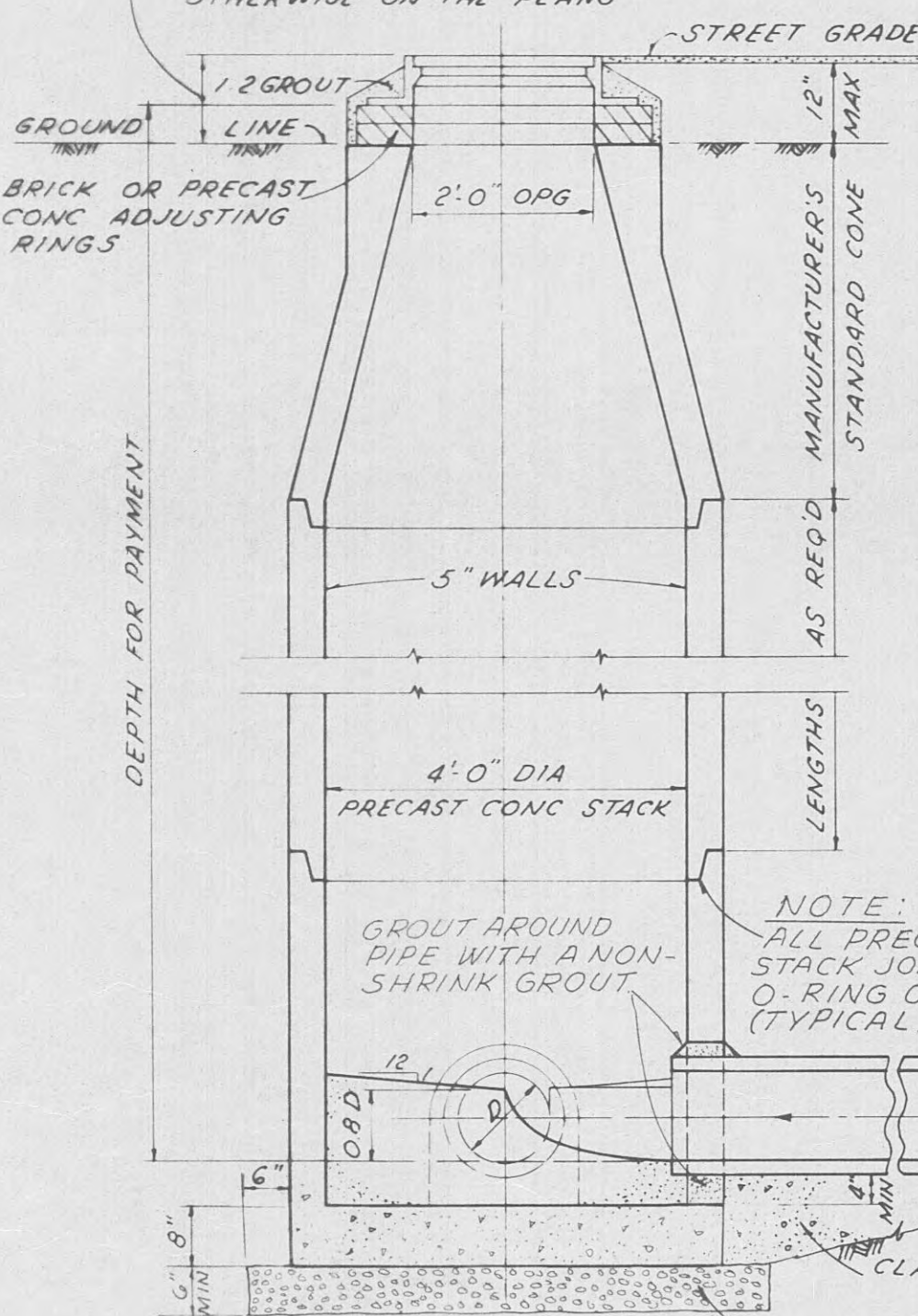
GOVERNING DIMENSIONS FOR CIRCULAR MANHOLES

PIPE SIZE	DEFLECTION	M.H. DIA.	"X"
8" & 15"	0" - 90"	4' - 0"	1' - 10"



TYPICAL INVERT PLAN
(ALL SIZES)
SCALE: 1/2"=1'-0"

NOTE:
TOP OF MANHOLE FRAME TO
EXTEND AT LEAST 10" BUT NO
MORE THAN 15" ABOVE NATURAL
GROUND, EXCEPT WHERE LOCATED
IN STREETS OR WHERE SHOWN
OTHERWISE ON THE PLANS



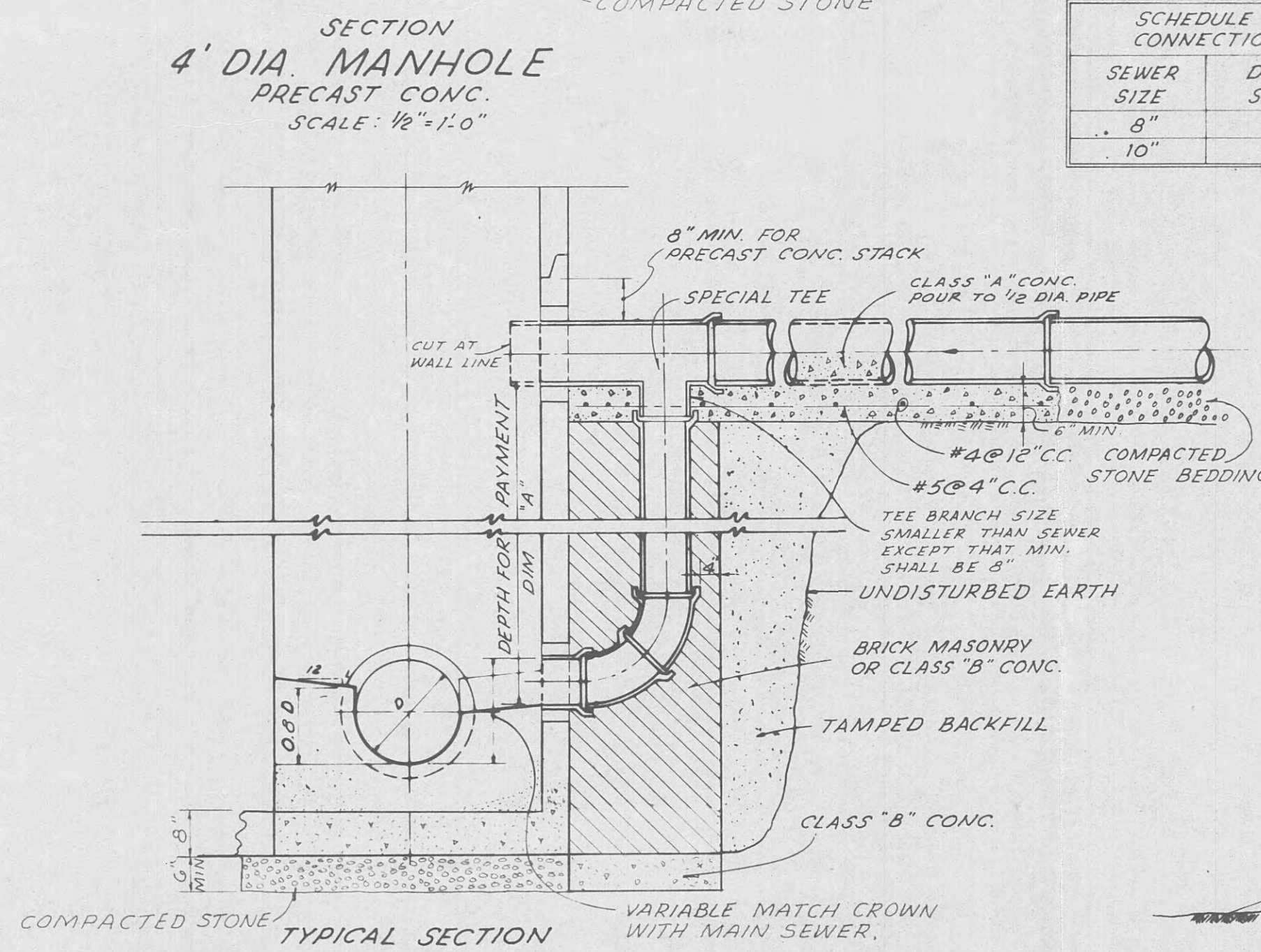
TYPICAL 4'-0" SHALLOW MANHOLE
SCALE: 1/2"=1'-0"

SCHEDULE FOR DROP CONNECTIONS DIM "A"

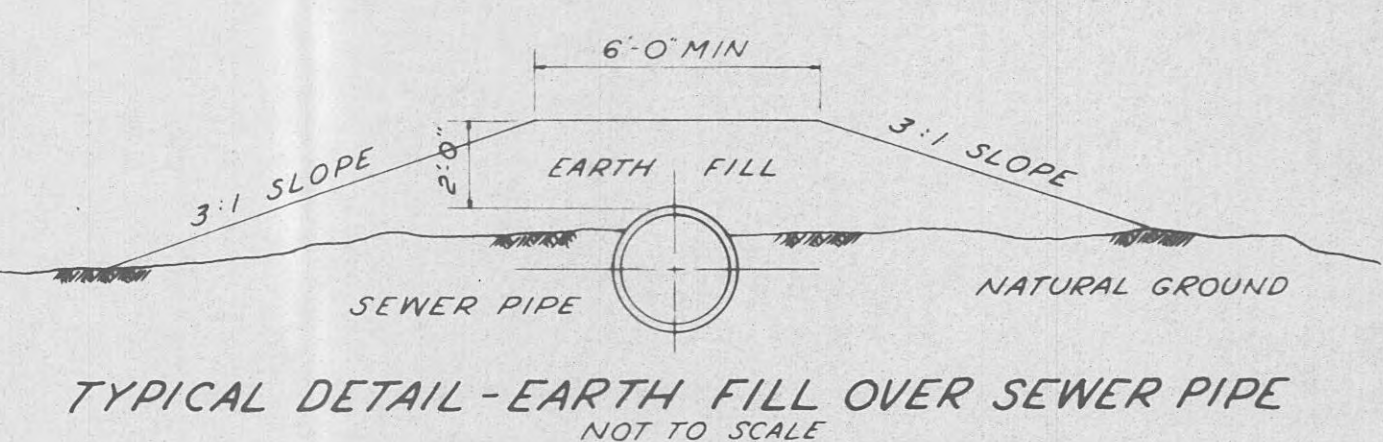
SEWER SIZE	DROP SIZE	MINIMUM INV. TO INV.
8"	8"	24"
10"	8"	24"

GOVERNING DIMENSIONS FOR CONCRETE PIERS

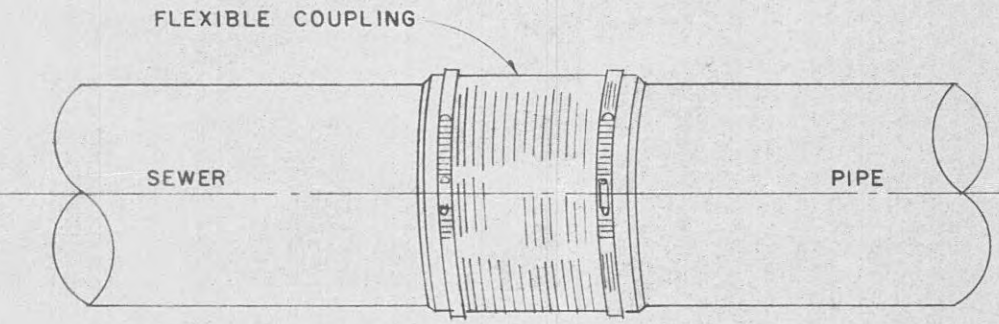
I.D. PIPE	A	B	C
8"	11 1/2"	2"	8"
10"	13 1/2"	2 1/2"	10"
12"	15 1/2"	3"	10"
15"	19"	4"	11"



TYPICAL SECTION
MANHOLE DROP CONNECTION
SCALE: 1/2"=1'-0"

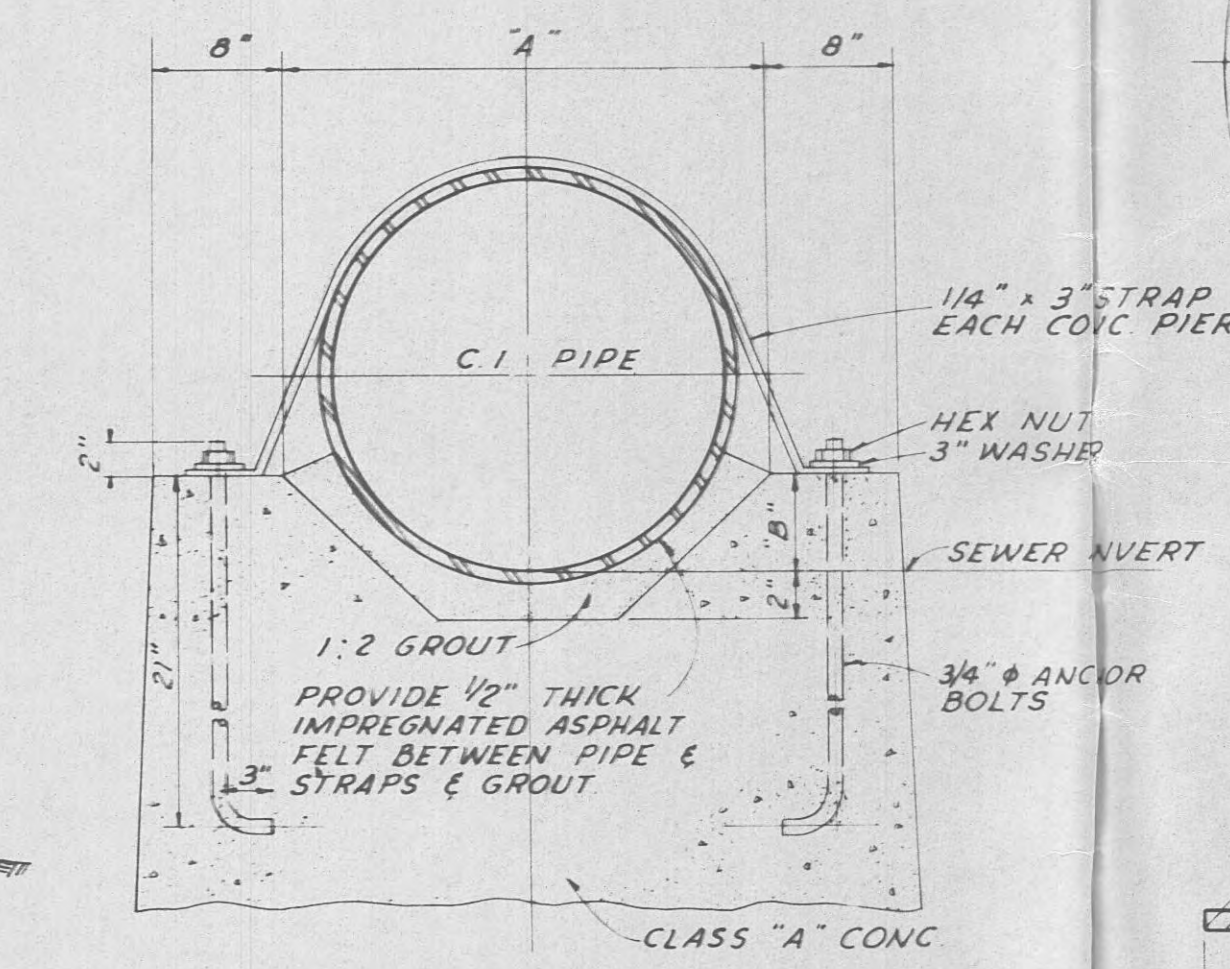


TYPICAL DETAIL - EARTH FILL OVER SEWER PIPE
NOT TO SCALE



TYPICAL DETAIL - FLEXIBLE COUPLING
FOR JOINTING SEWER PIPE

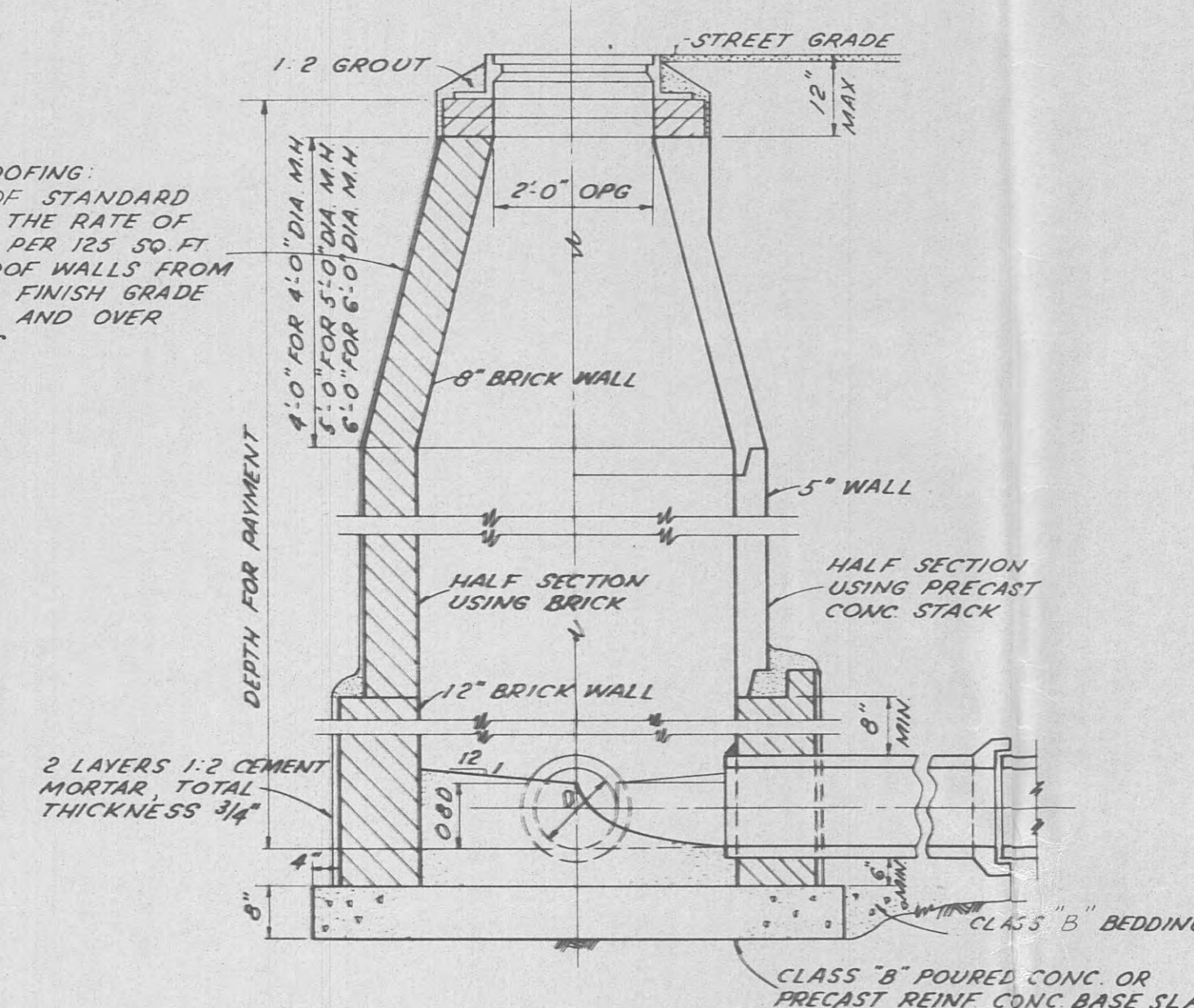
NOTE:
(1) CONTRACTOR TO USE COUPLING AS RECOMMENDED
BY MFG. IN JOINTING UNLIKE TYPES OF PIPE.
(2) FLEXIBLE COUPLING - PIPE SIZES 6" THRU. 24"



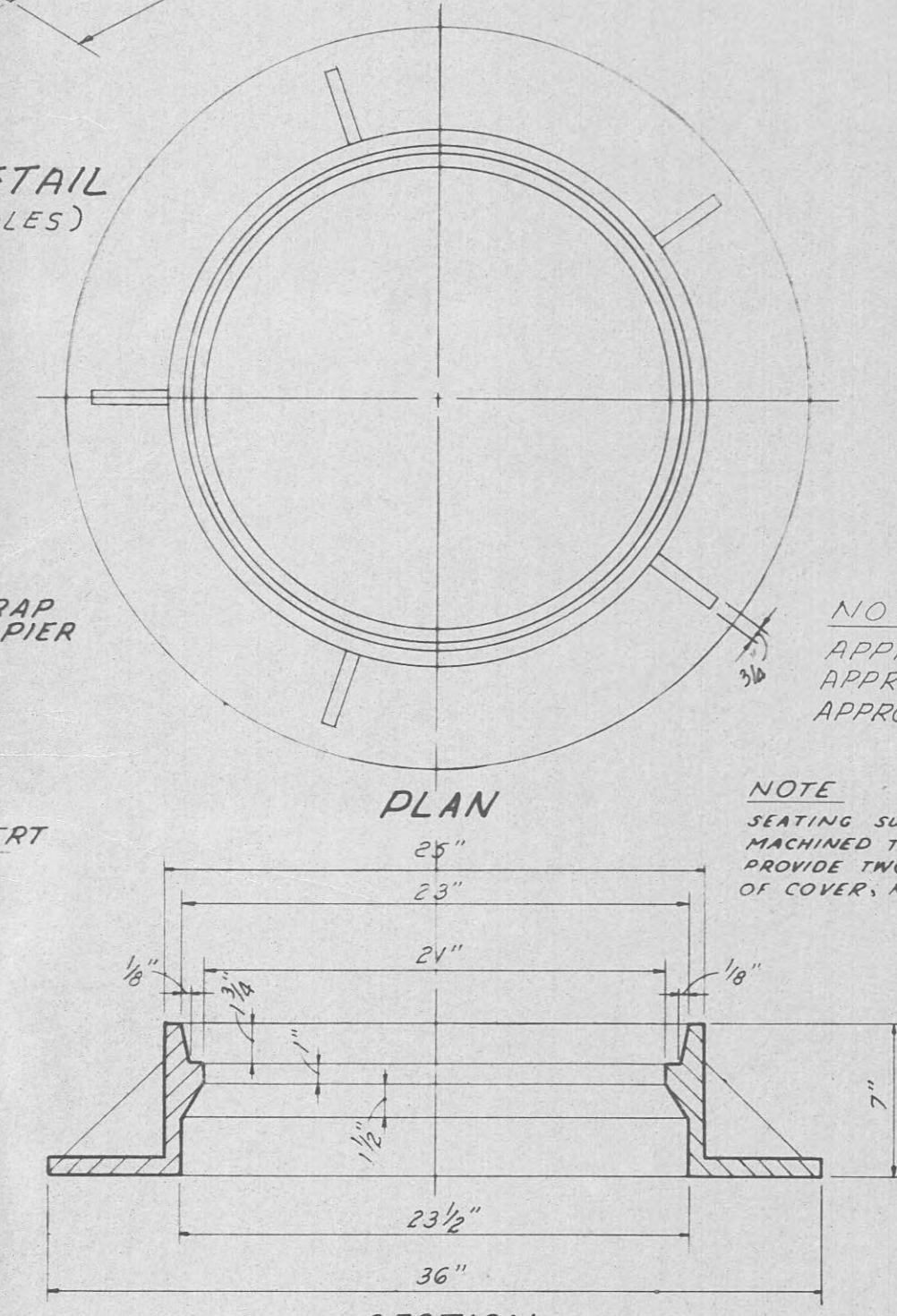
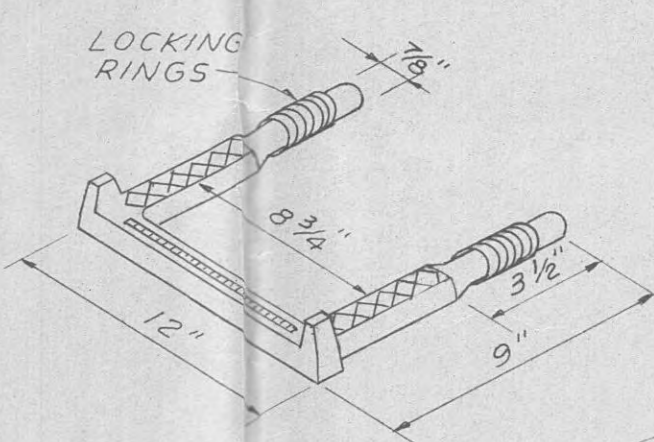
ENLARGED SECTION
SCALE: 1"=1'-0"

MANHOLE STEP DETAIL
(FOR BRICK MANHOLES)

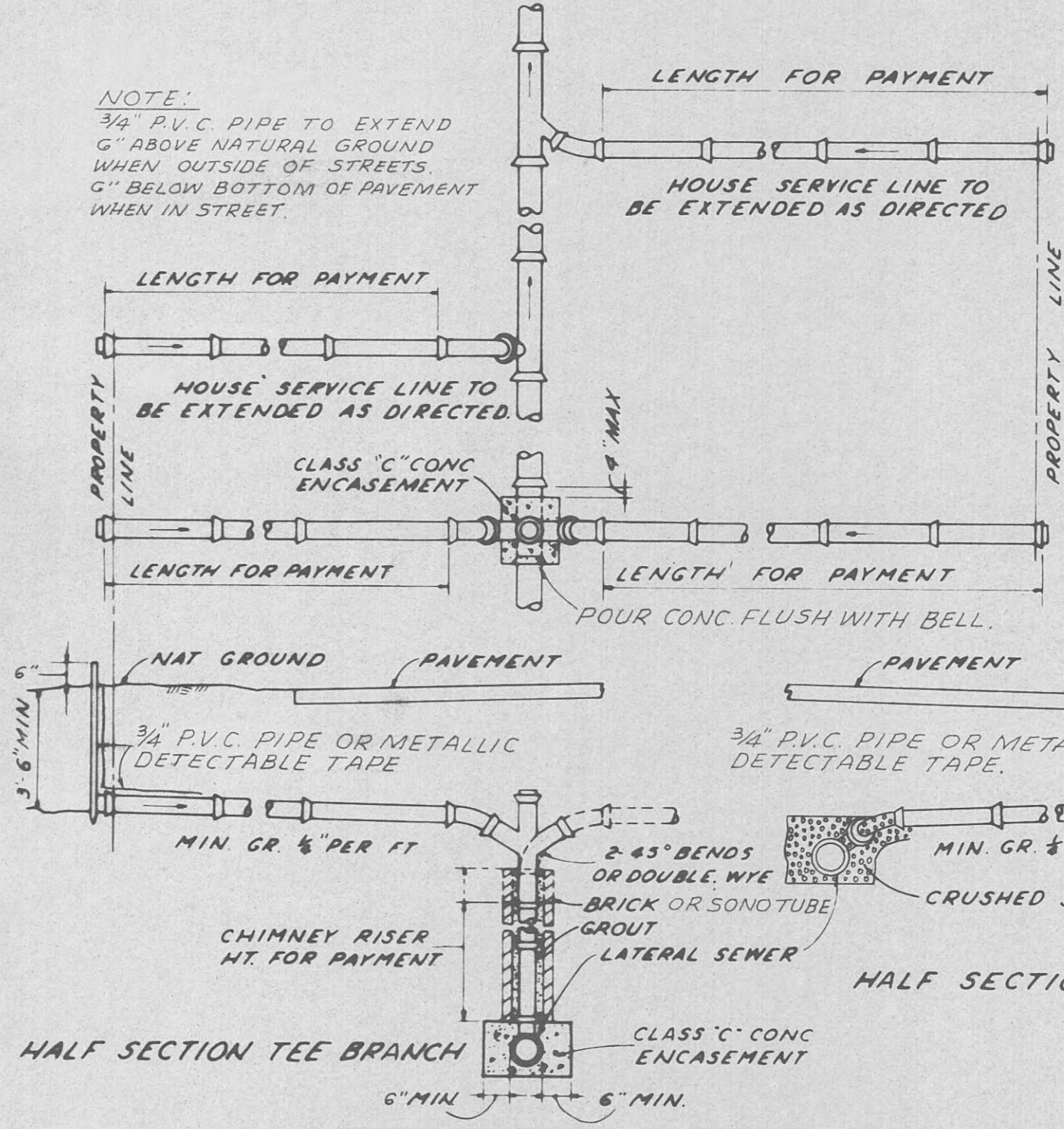
MANHOLE STEP DETAIL
(FOR PRECAST MANHOLES)



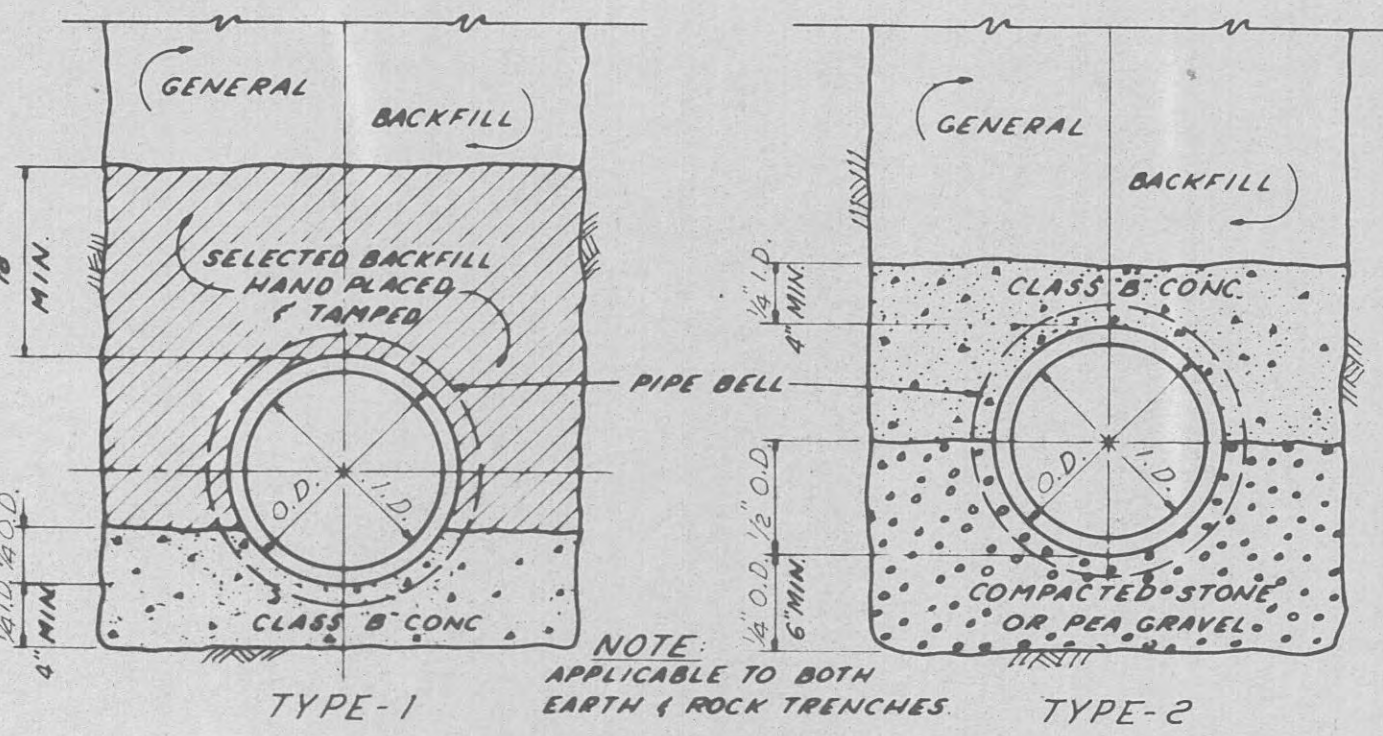
SECTION
4', 5' OR 6' DIA. MANHOLE
(ALTERNATE CONSTRUCTION)
SCALE: 1/2"=1'-0"



SECTION
STANDARD
C.I. MANHOLE FRAME
NOT TO SCALE

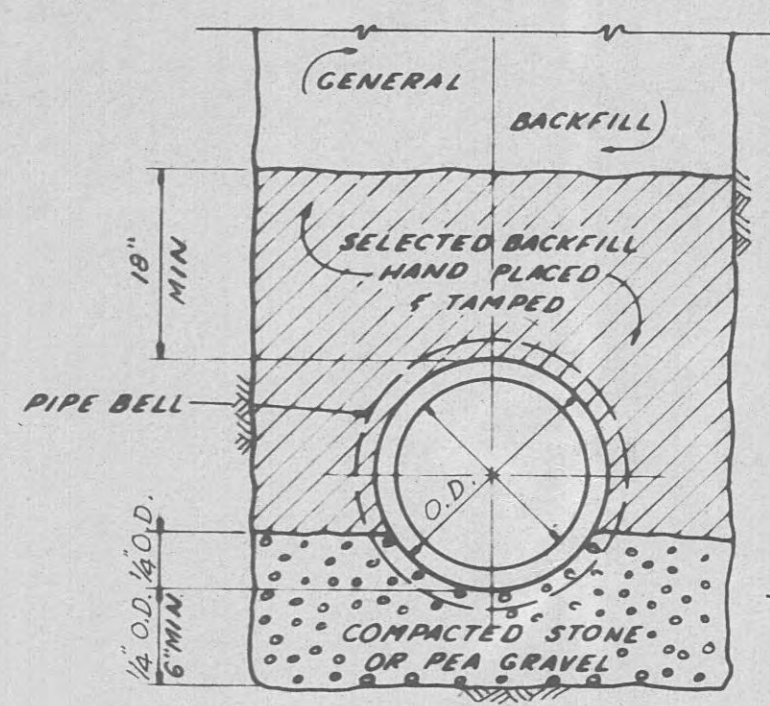


TYPICAL DETAILS OF SANITARY HOUSE SERVICE LINE
NOT TO SCALE

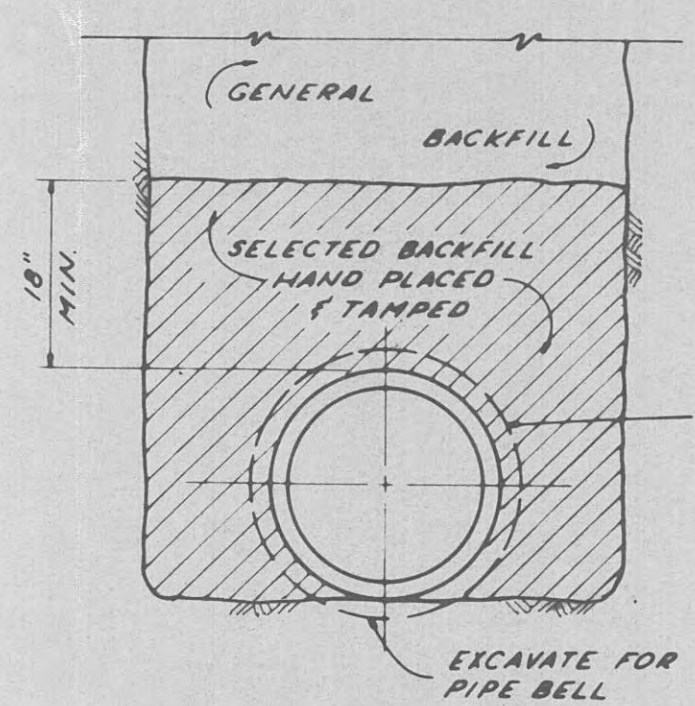


CLASS 'A' BEDDING
USE EITHER TYPE

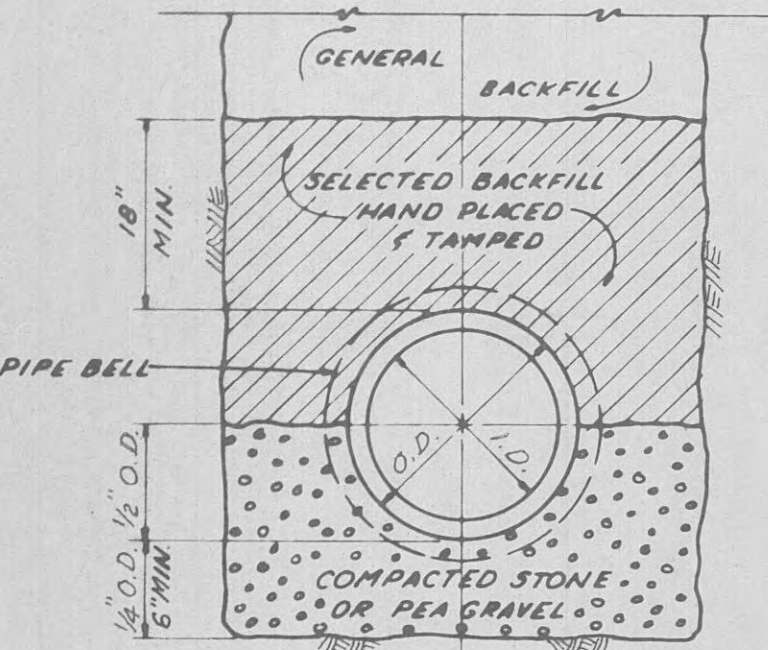
NOTE:
BC = BREADTH OF CONDUIT.



CLASS 'C' BEDDING

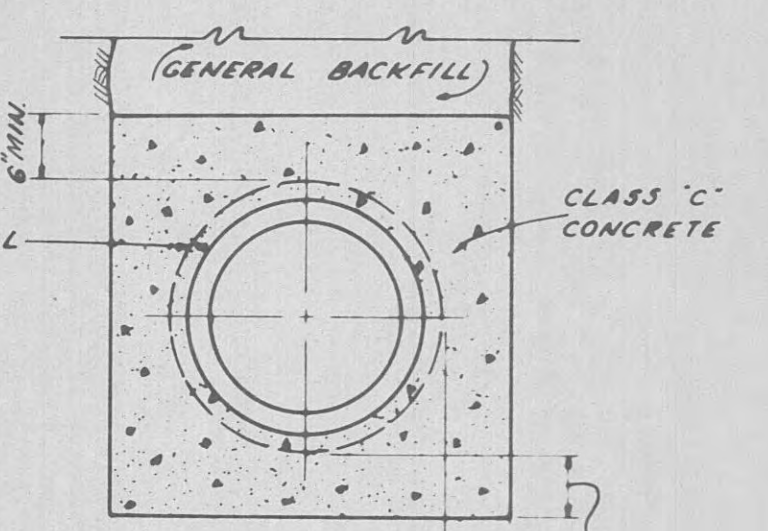


CLASS 'D' BEDDING

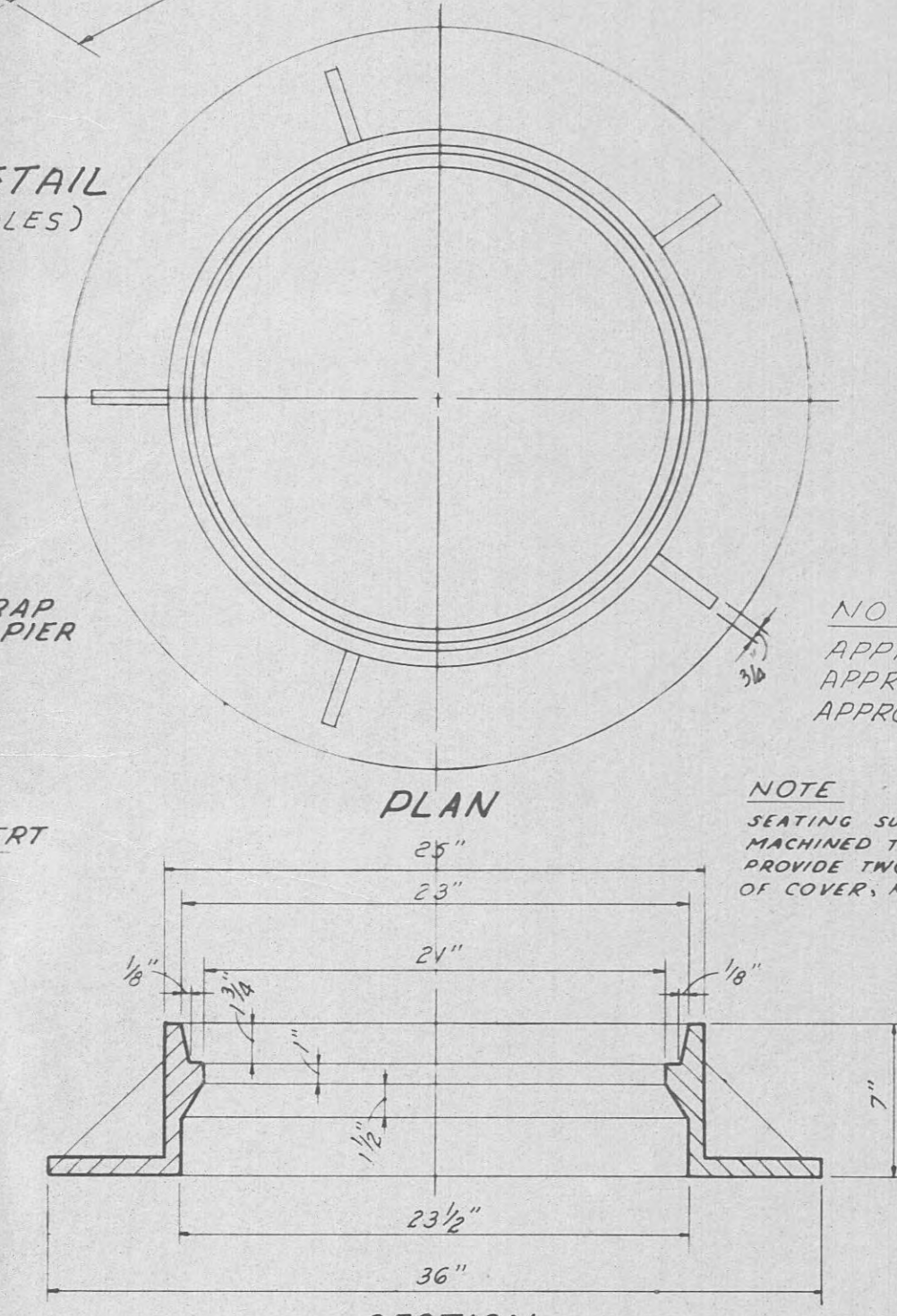


CLASS 'B' BEDDING

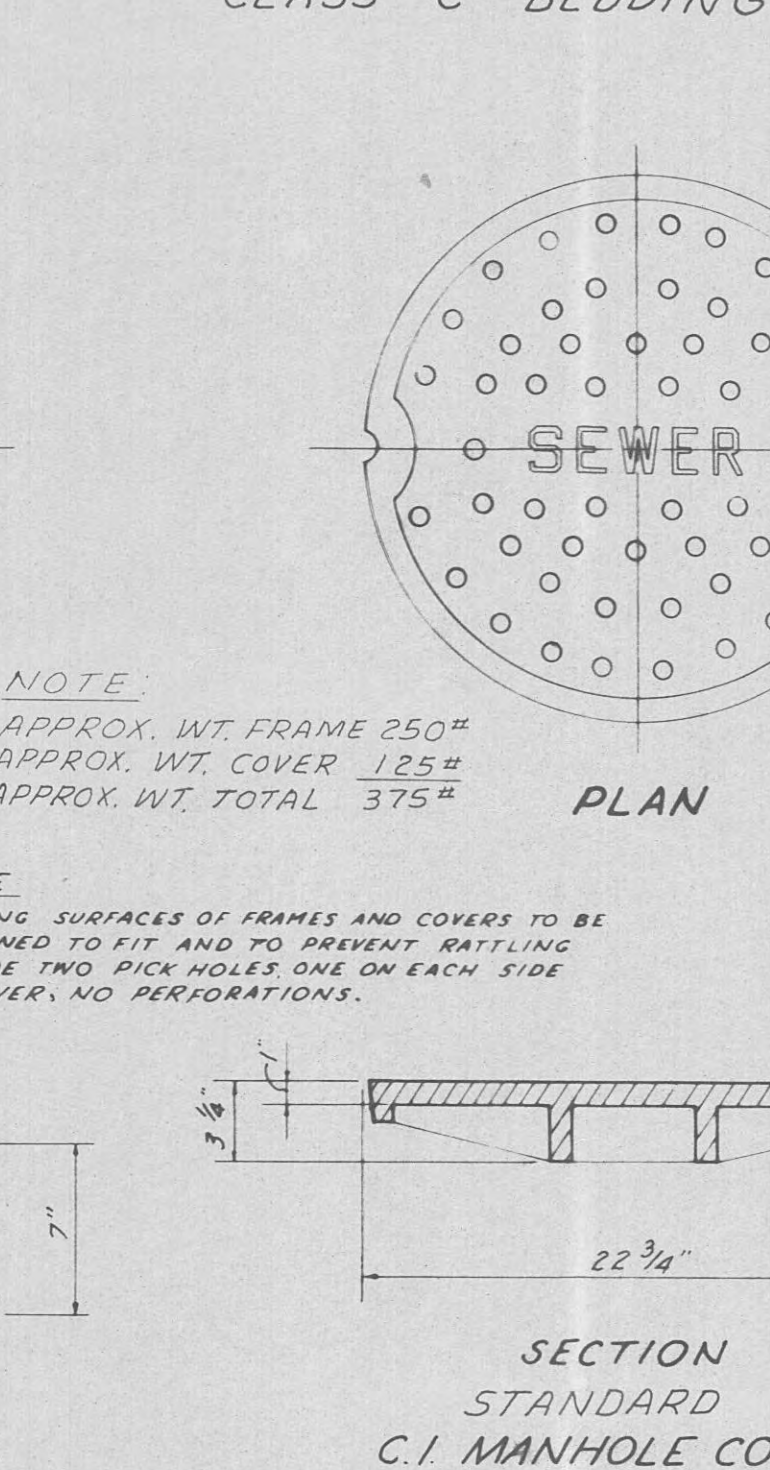
NOTE:
COMPACTED CRUSHED STONE OR PEA GRAVEL
SHALL BE 85-100% PASSING 3" SIEVE
95-100% RETAINED ON NO. 4 SIEVE



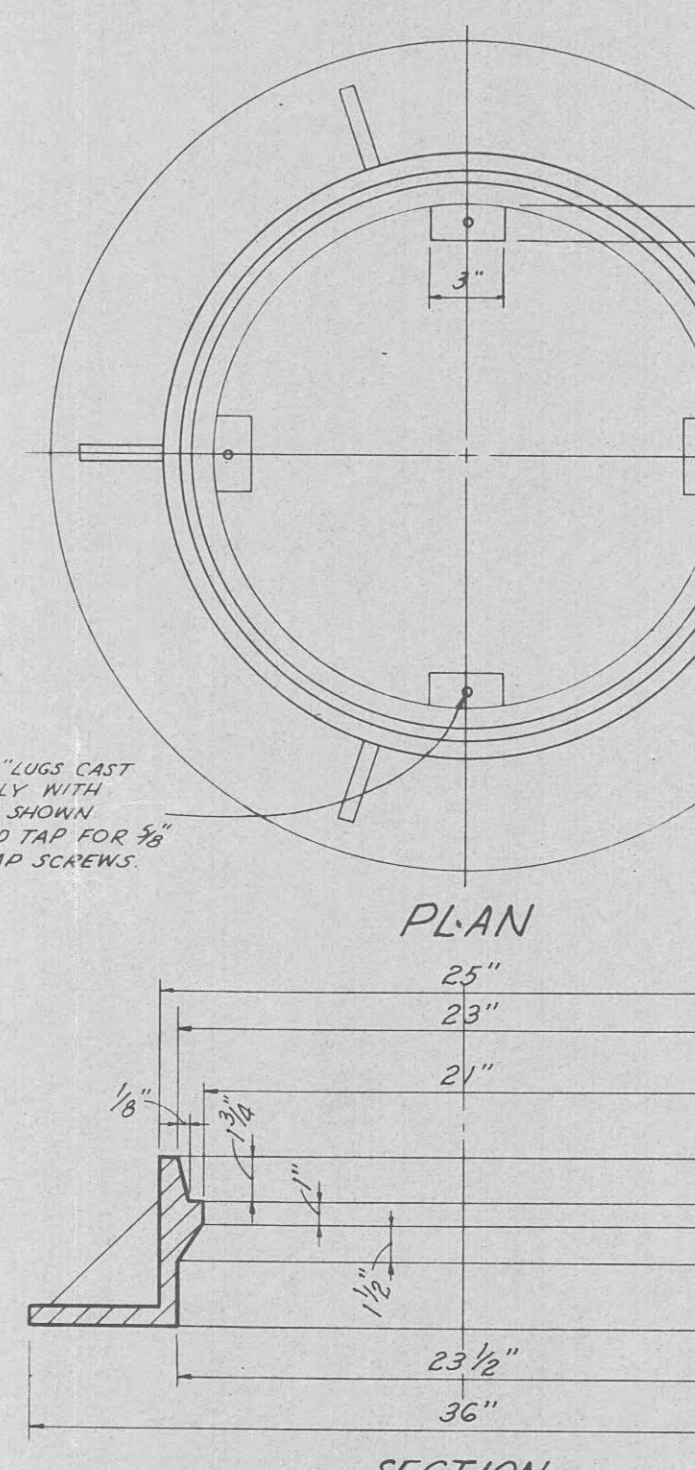
CONCRETE ENCASUREMENT



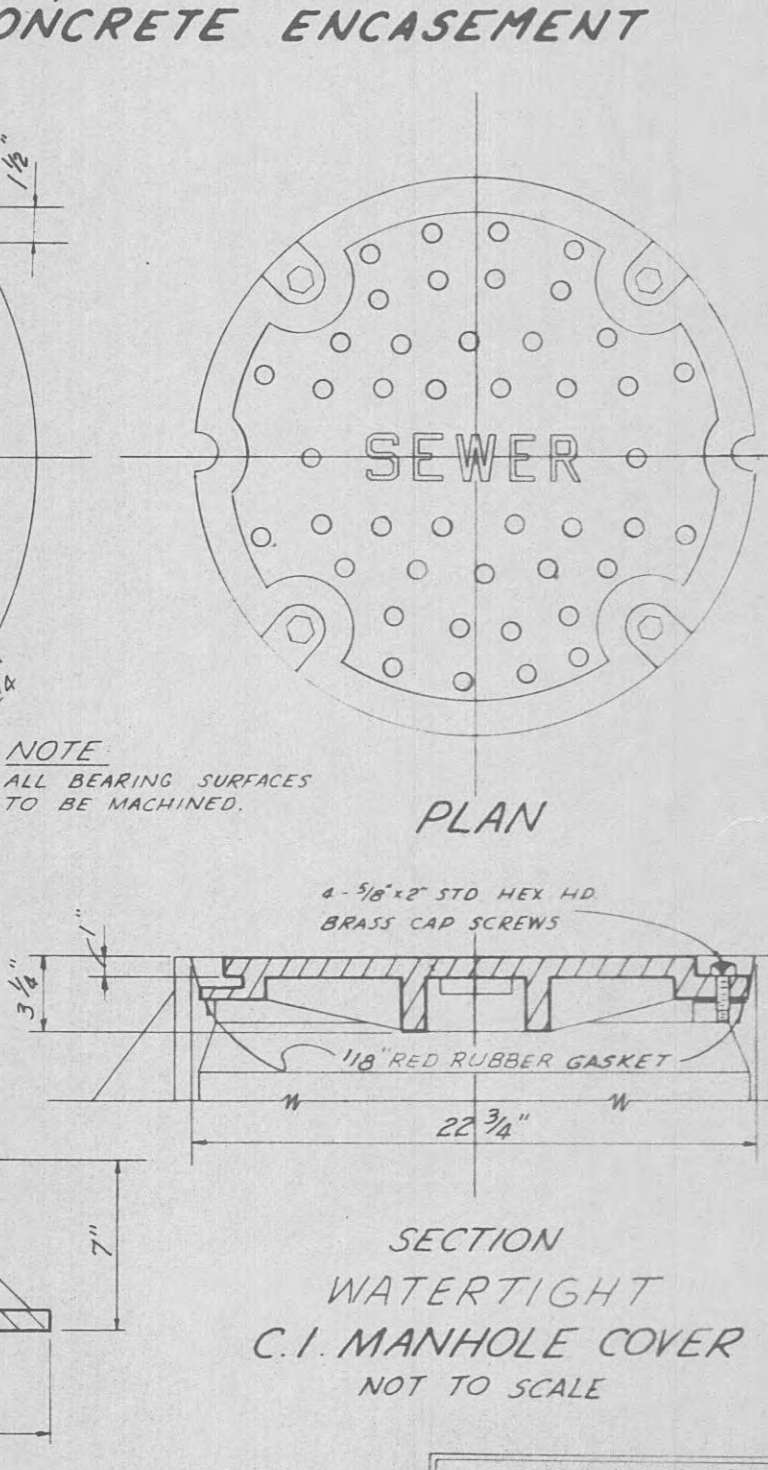
SECTION
STANDARD
C.I. MANHOLE FRAME
NOT TO SCALE



SECTION
STANDARD
C.I. MANHOLE FRAME
NOT TO SCALE



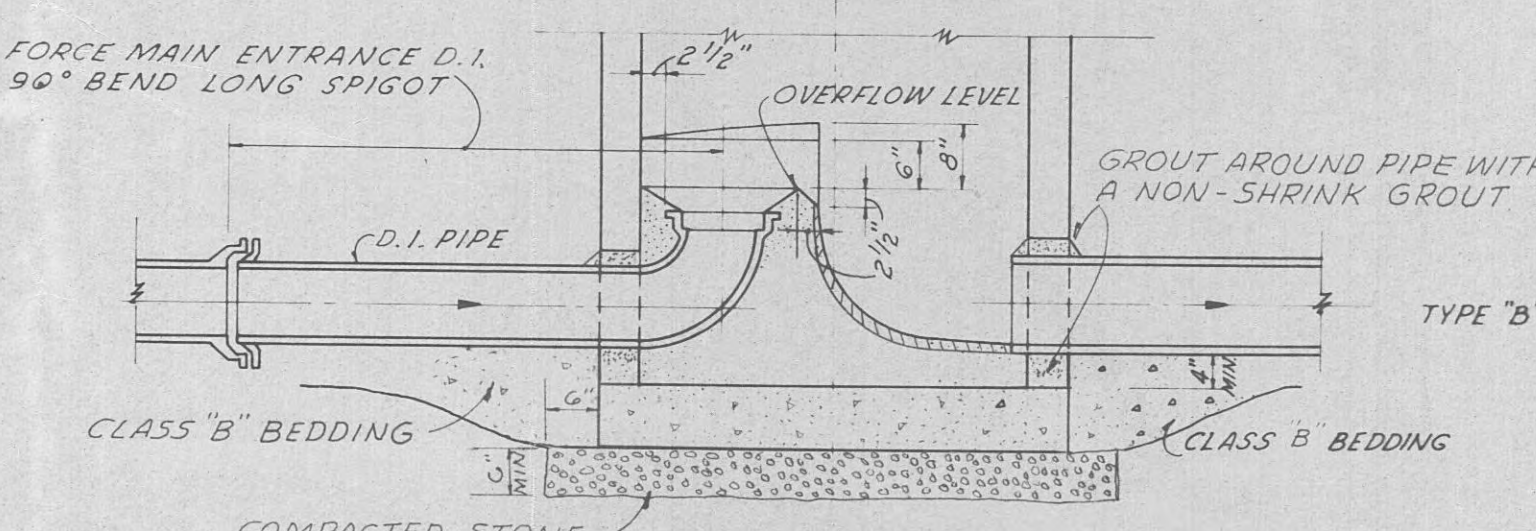
SECTION
WATERTIGHT
C.I. MANHOLE FRAME
NOT TO SCALE



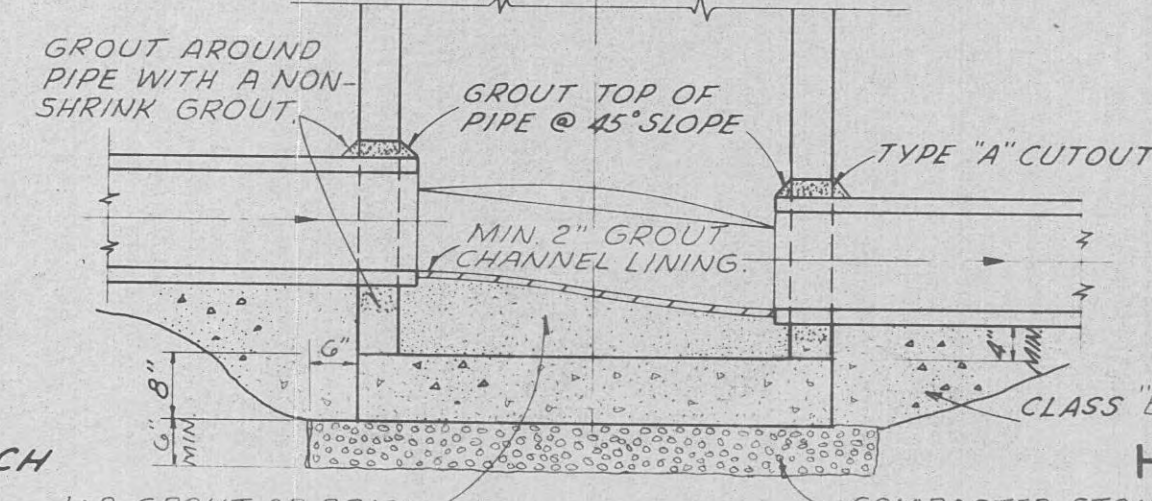
SECTION
WATERTIGHT
C.I. MANHOLE FRAME
NOT TO SCALE

CUTOUT SCHEDULE

PIPE SIZE	MIN. DIA.
8"	14"
10"	16"
12"	20"
15"	24"



TYPICAL FORCE MAIN CONN. TO MANHOLE
SCALE: 1/2"=1'-0"



TYPICAL
MANHOLE INVERT
(ALL SIZES)
SCALE: 1/2"=1'-0"

HUD PROJECT NO. CDBG B-78-HN-47-C
DIVISIONS THREE & FOUR

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

MISCELLANEOUS DETAILS

SCALE
AS SHOWN
DATE
NOV. 1978

WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA
GEORGIA





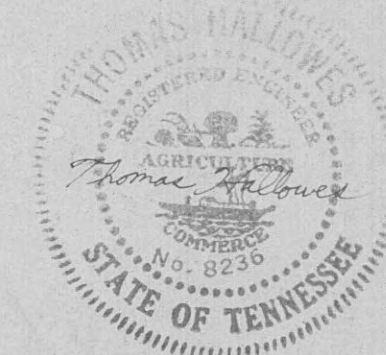
HUD PROJECT NO. CDBG B-78-HN-47
DIVISIONS ONE, TWO, THREE & F

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROV

LOCATION MAP

SCALE
1" = 800'
DATE
NOV. 1978

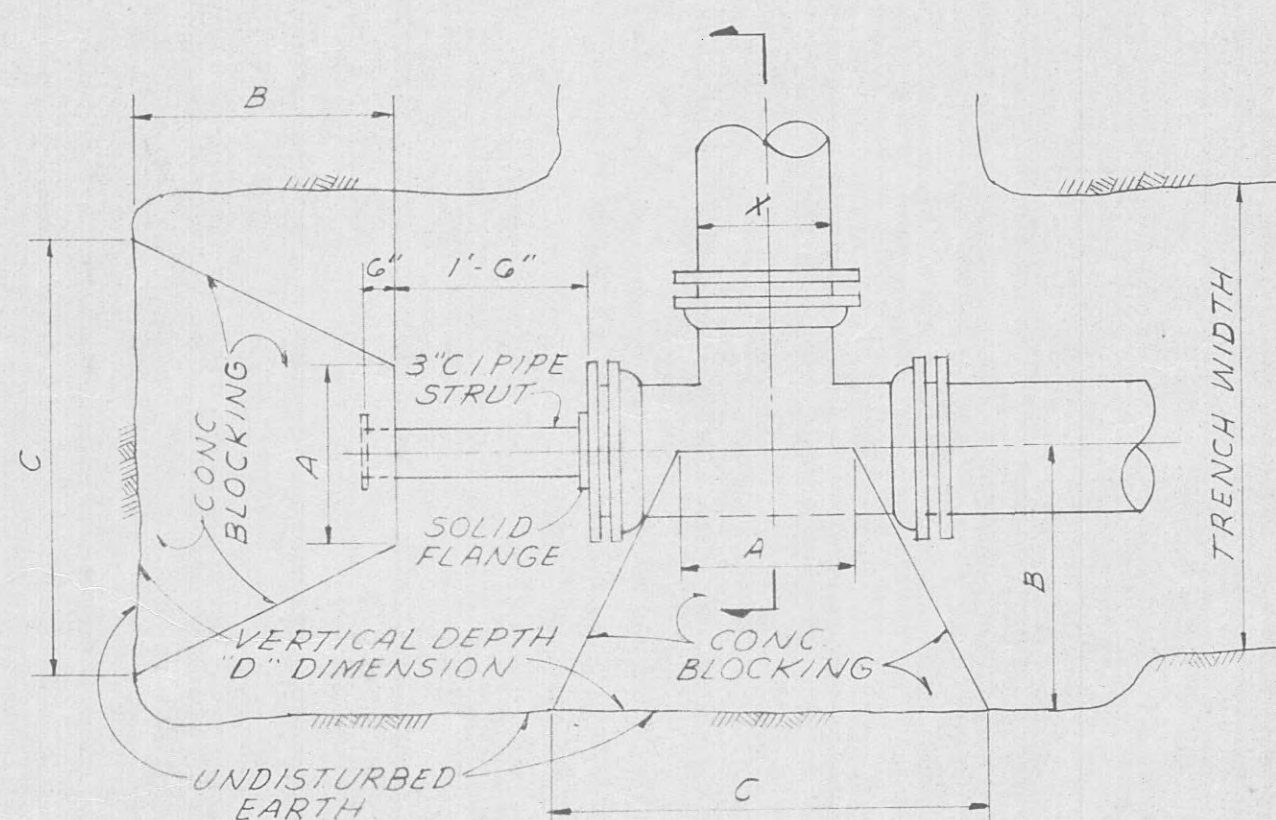
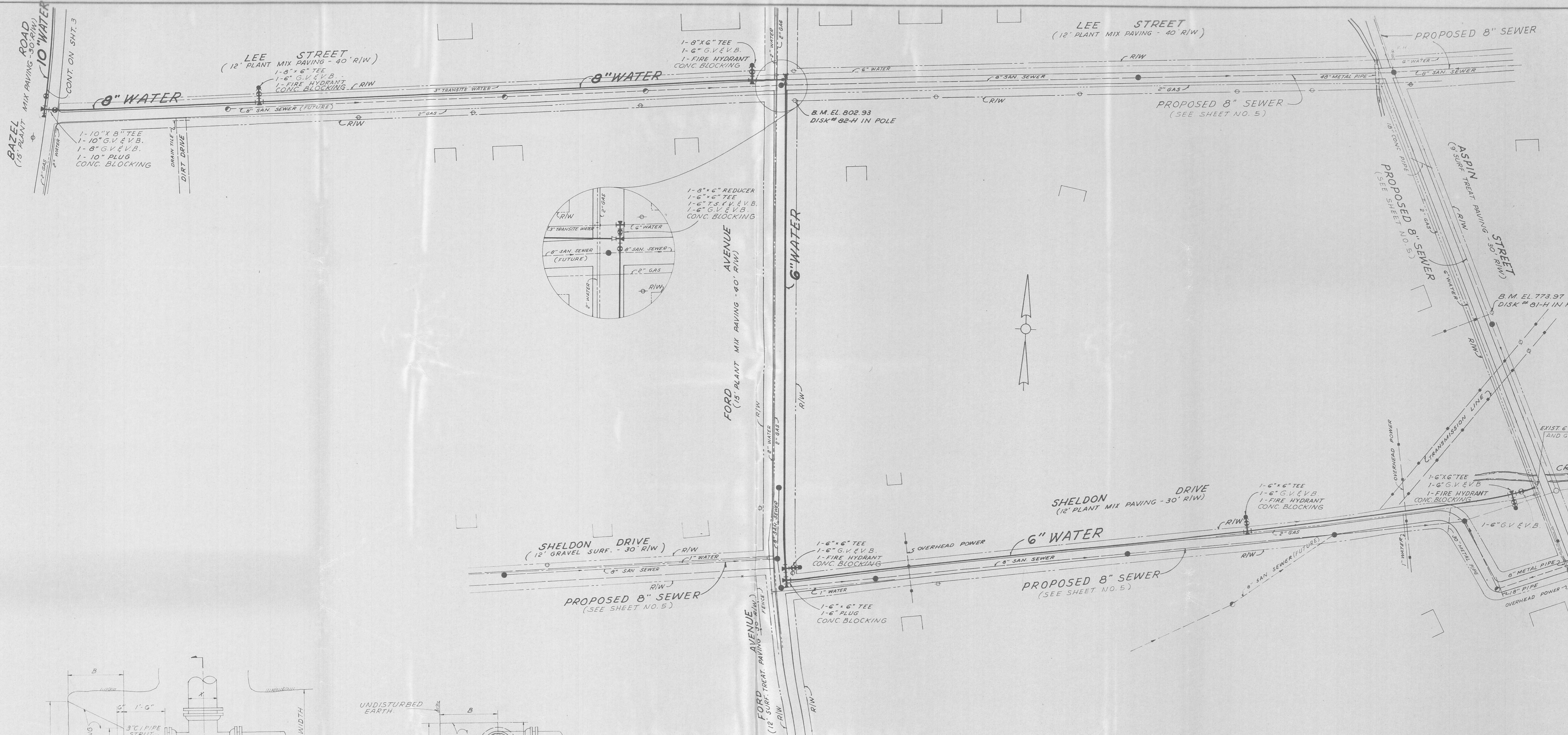
WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA GEORGIA



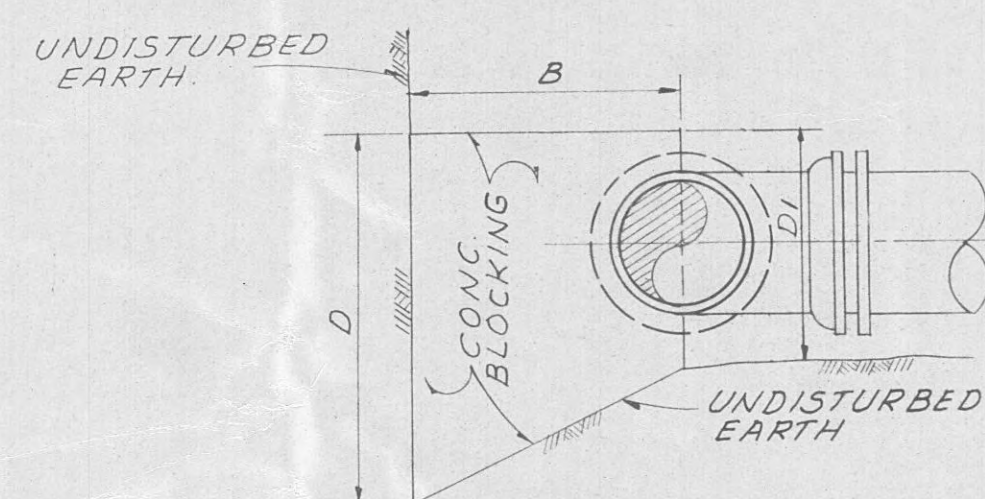
LEGEND

- ROADS
- RAILROADS
- RIVERS
- CREEKS
- APPROXIMATE CORPORATE LIMITS
- EXISTING SEWERS
- PROPOSED SEWERS
- PROPOSED WATER

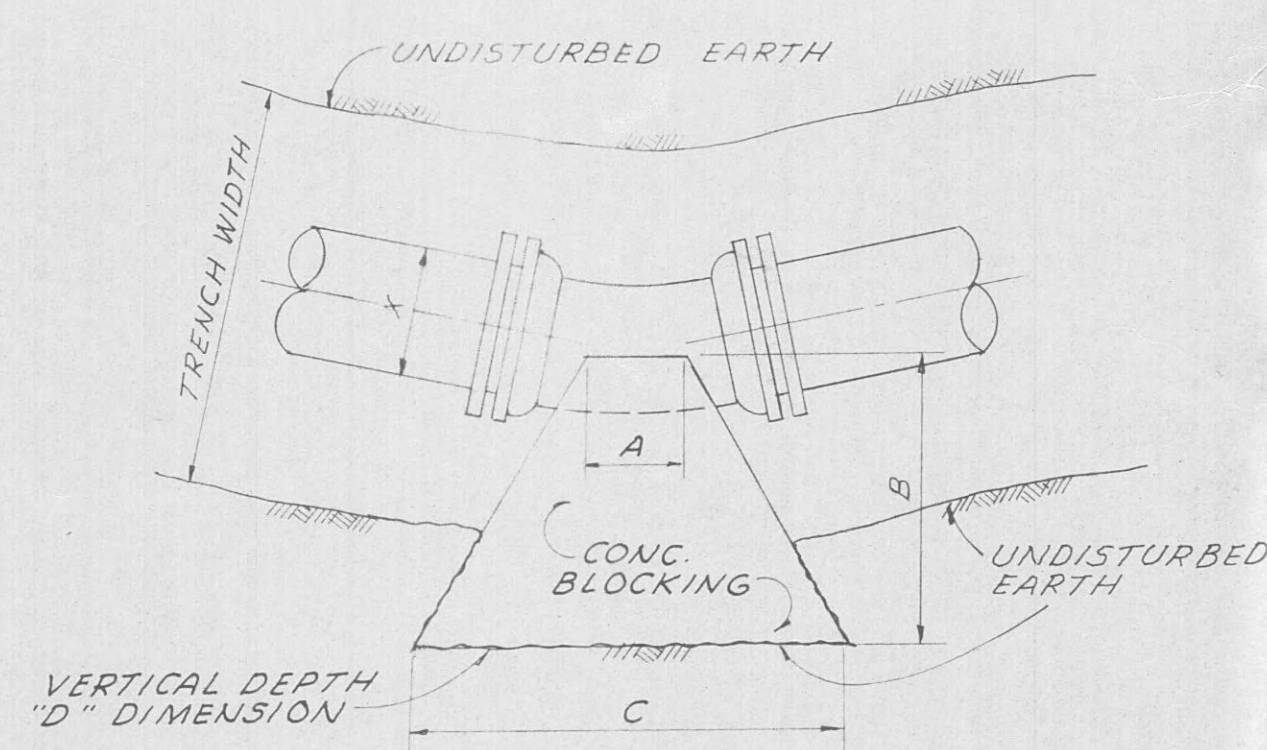
10" 8" 12"



TEES



SECTION

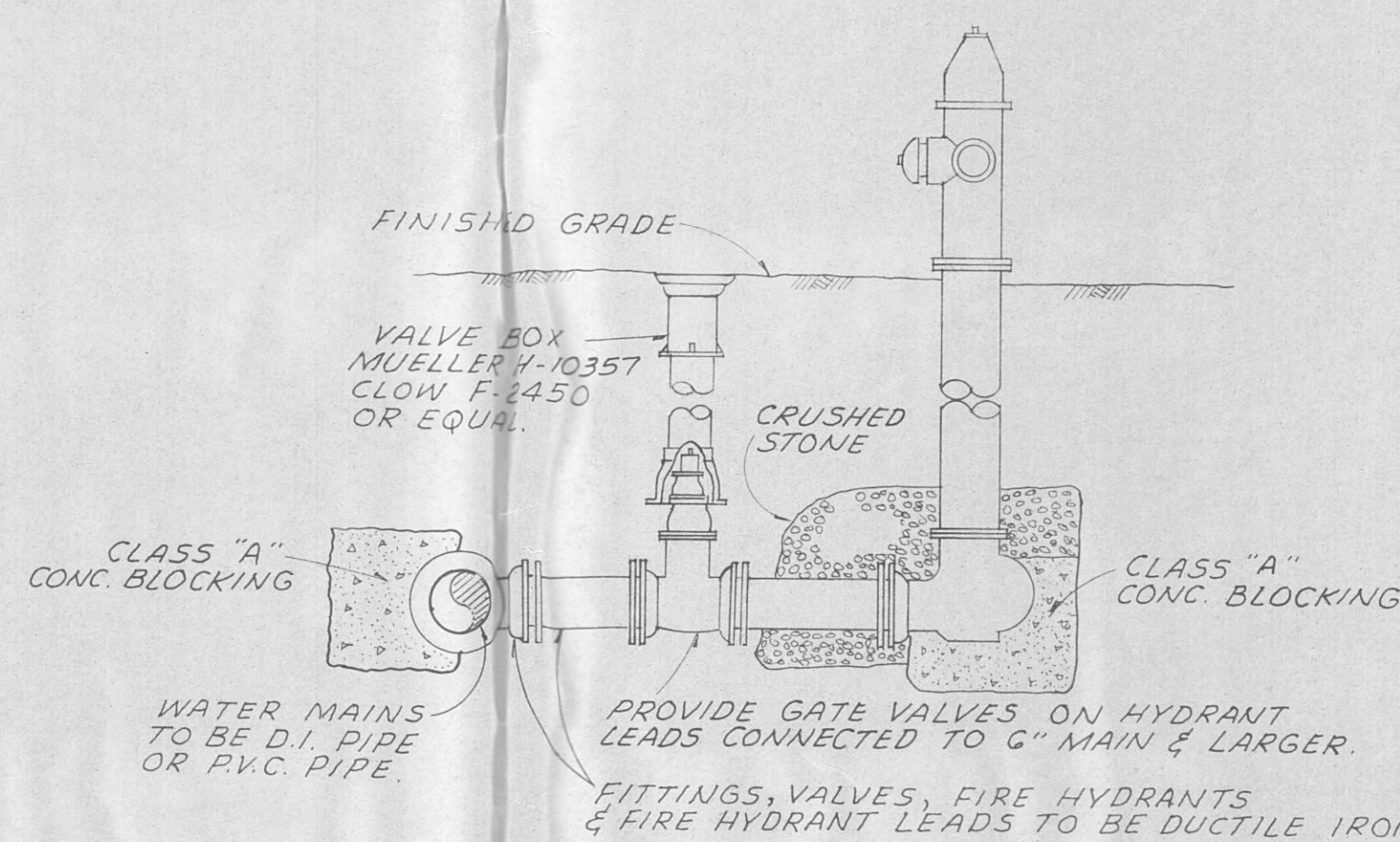


BENDS

TYPICAL BLOCKING DETAILS

N.T.S.
(DIVISIONS ONE & TWO)

CONC. BLOCKING DIMENSIONS					
X	A	B	C	D	D ₁
TEES - 10" RUN					
10"	1'-2"	1'-10"	3'-0"	2'-4"	1'-10"
8"	1'-0"	1'-6"	2'-4"	1'-10"	1'-10"
6"	0'-10"	1'-6"	2'-2"	1'-2"	0'-10"
4"	0'-8"	1'-6"	2'-0"	1'-0"	0'-10"
TEES - 8" RUN					
8"	1'-0"	1'-6"	2'-6"	1'-8"	1'-8"
6"	0'-10"	1'-6"	2'-4"	1'-0"	1'-0"
TEES - 6" RUN					
6"	0'-10"	1'-6"	2'-4"	1'-0"	1'-0"
90° BEND					
10"	1'-0"	2'-4"	3'-4"	2'-8"	1'-10"
8"	0'-10"	2'-2"	3'-0"	2'-0"	1'-8"
6"	0'-8"	1'-4"	2'-0"	1'-8"	1'-0"
45° BEND					
10"	0'-6"	2'-2"	2'-8"	1'-10"	1'-10"
8"	0'-6"	1'-6"	2'-0"	1'-8"	1'-8"
6"	0'-6"	1'-6"	2'-0"	1'-0"	1'-0"
22½° BEND					
10"	0'-6"	1'-4"	1'-6"	1'-10"	1'-10"
8"	0'-6"	1'-4"	1'-4"	1'-8"	1'-8"
6"	0'-6"	1'-0"	1'-0"	1'-0"	1'-0"
11¼° BEND					
10"	0'-6"	1'-4"	1'-4"	1'-0"	1'-0"
8"	0'-6"	1'-0"	1'-0"	1'-0"	1'-0"
6"	0'-6"	1'-0"	1'-0"	1'-0"	1'-0"
PLUG - SAME AS TEE EXCEPT THAT THE LARGER SIZE IN UNEQUAL RUNS SHALL BE USED.					
NOTE: BLOCKING DESIGNED FOR 200 P.S.I. TEST PRESSURE AND 2500 R.S.F. SOIL PRESSURE.					



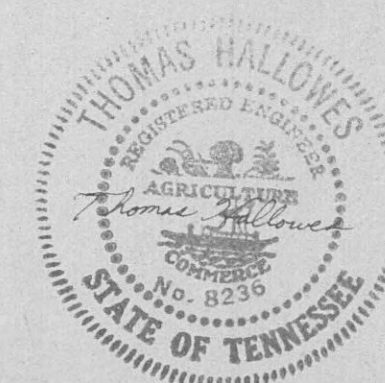
TYPICAL DETAIL OF HYDRANT INSTALLATIONS

N.T.S.
(DIVISIONS ONE & TWO)

HUD PROJECT NO. CDBG B-78-HN-47-00
DIVISION ONE

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

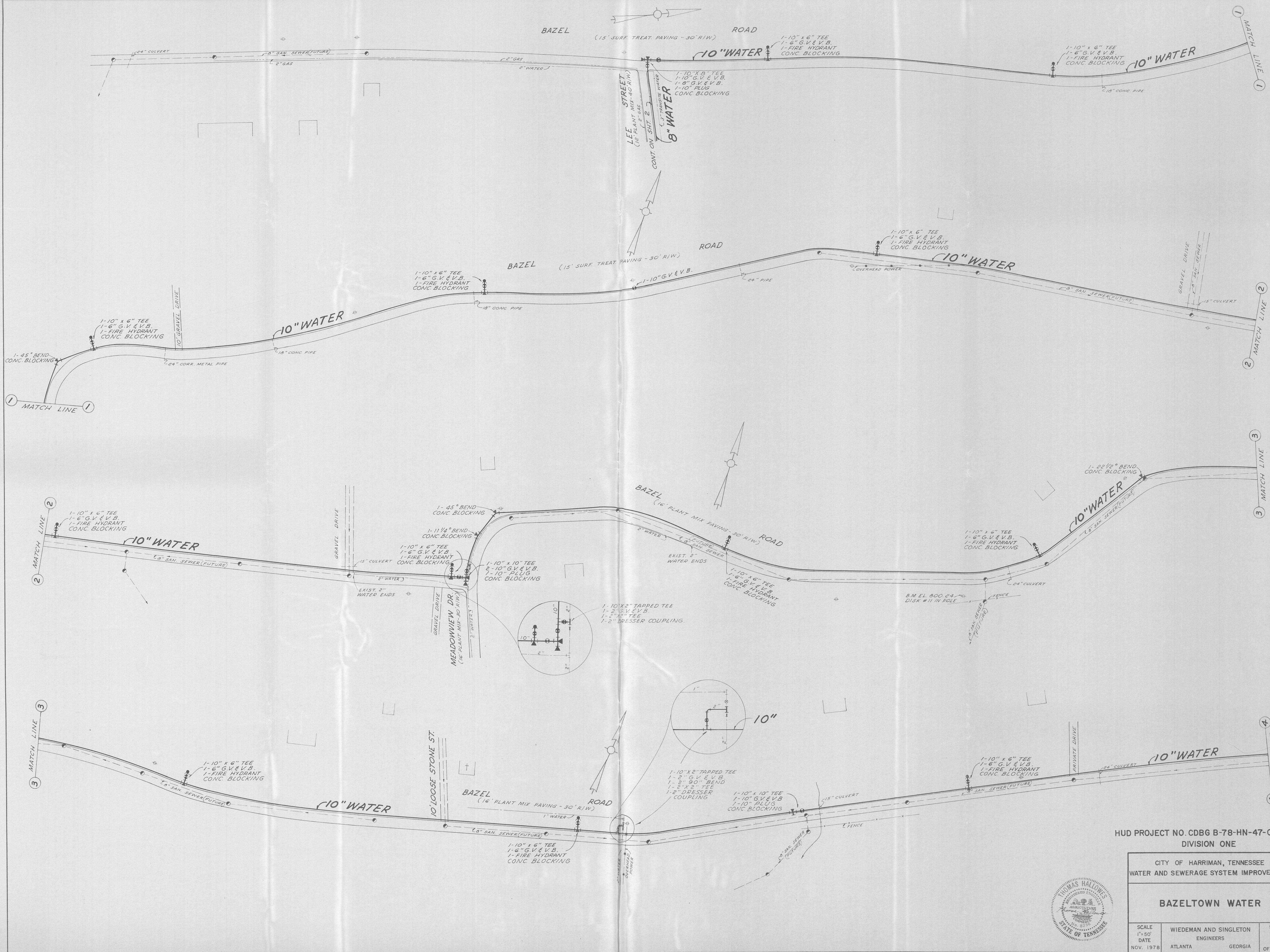
BAZELTOWN WATER



SCALE
1"=50'
DATE
NOV. 1978

WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA GEORGIA

SH
OF

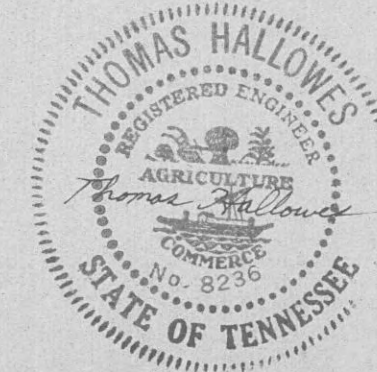


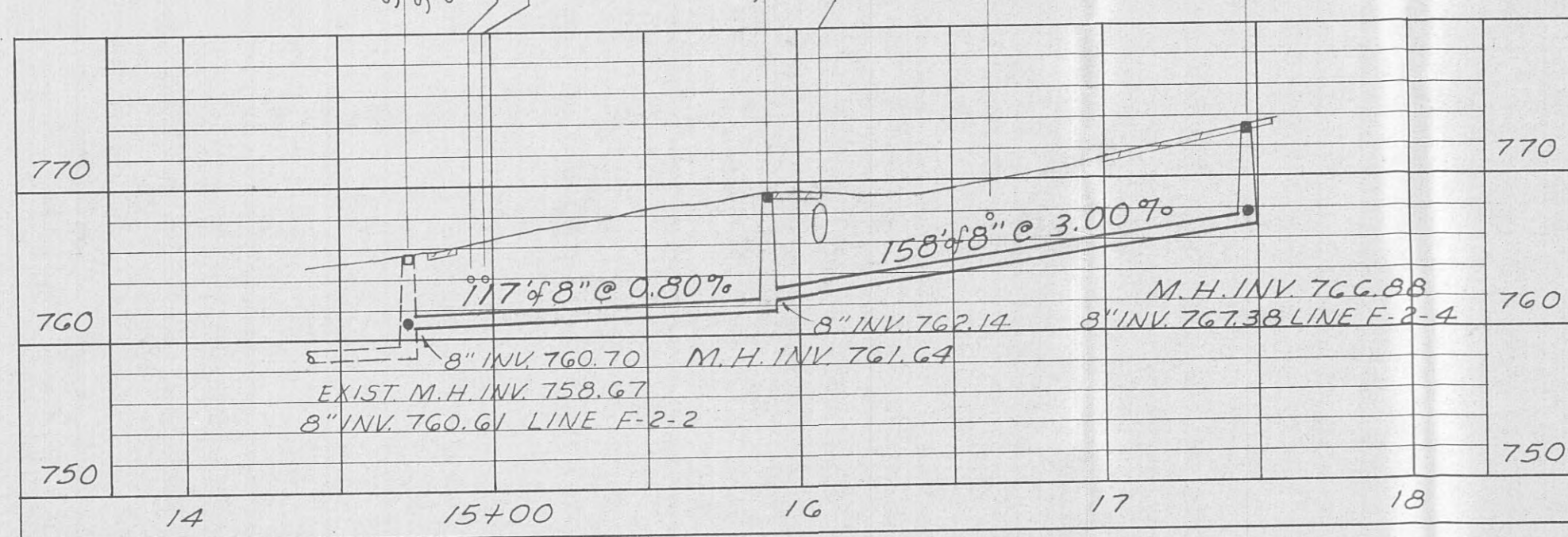
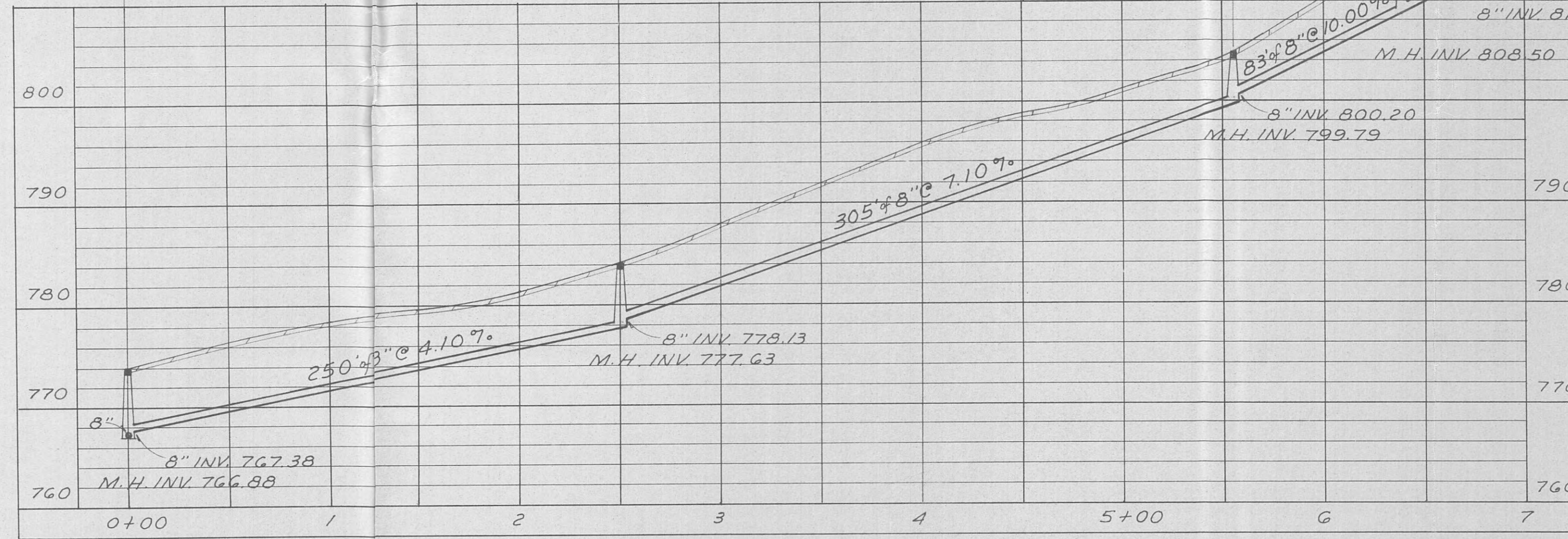
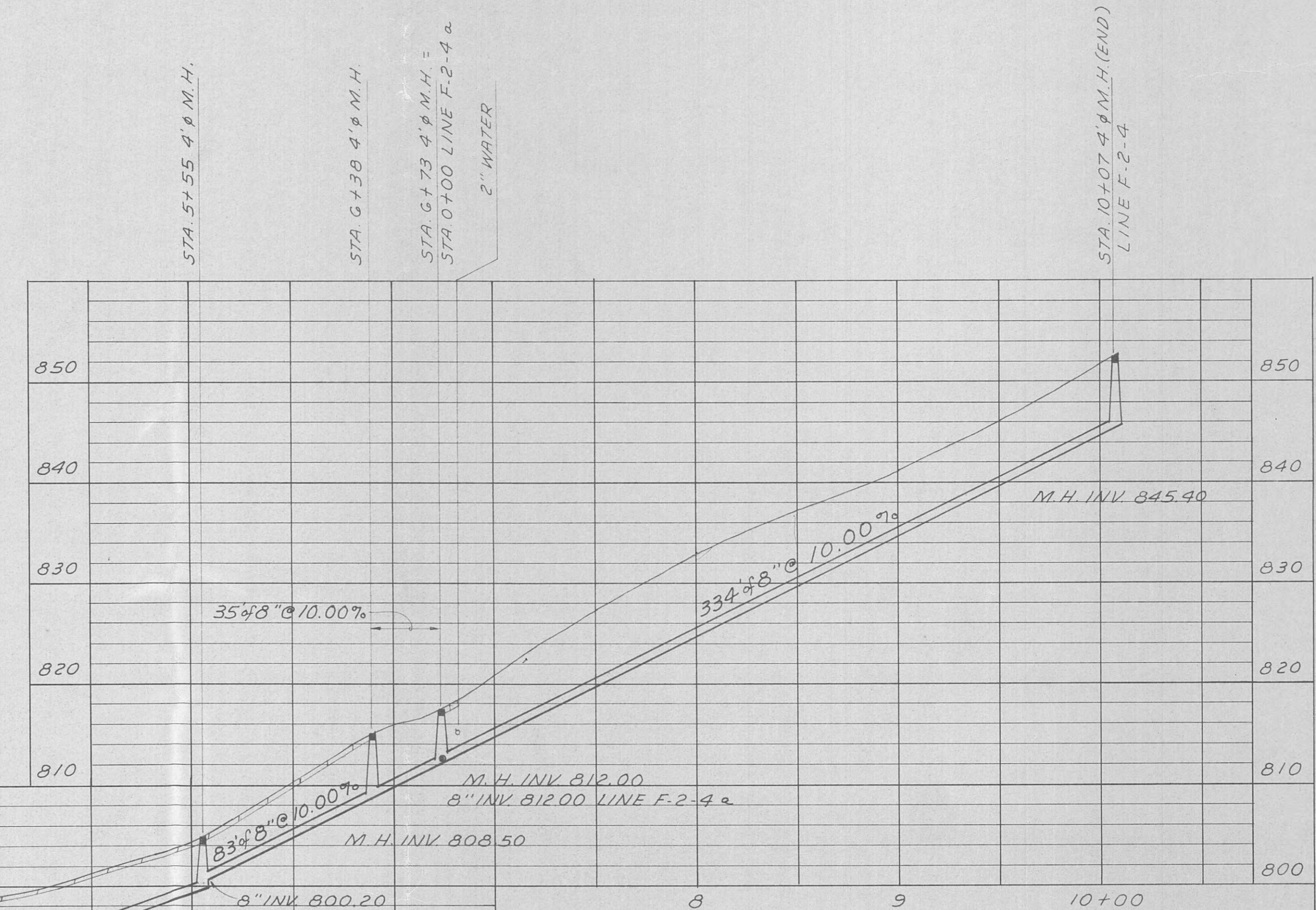
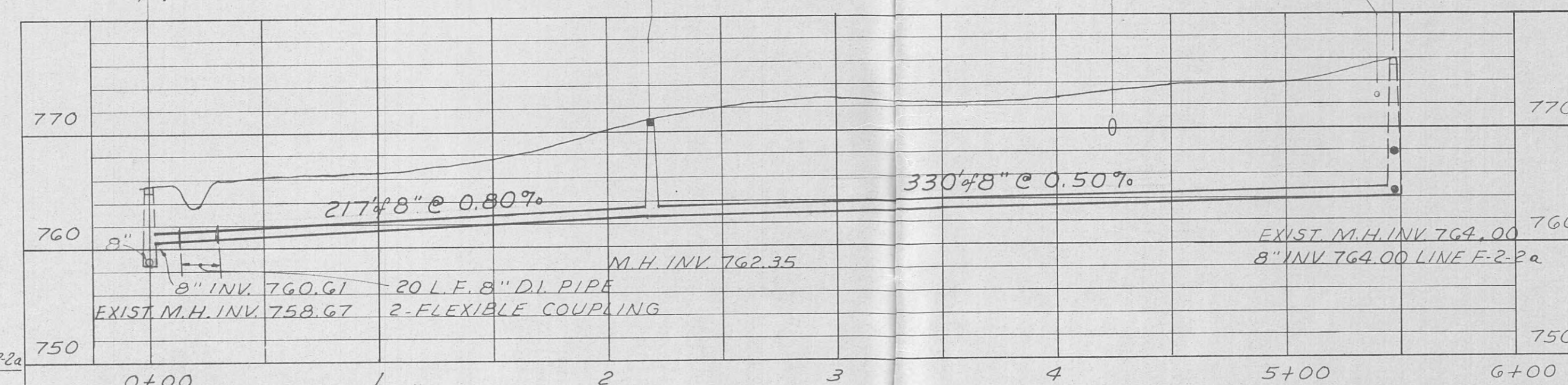
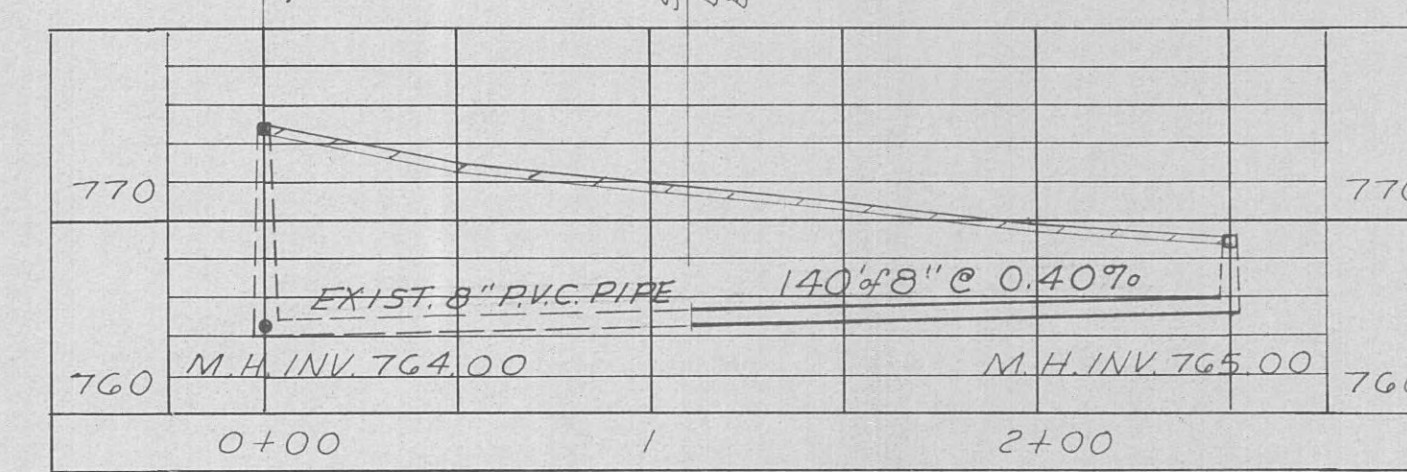
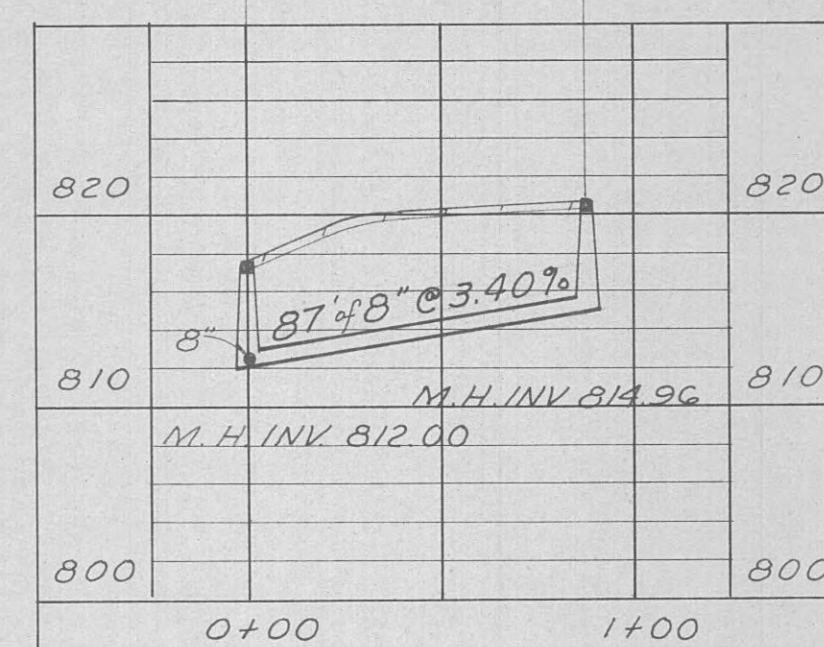
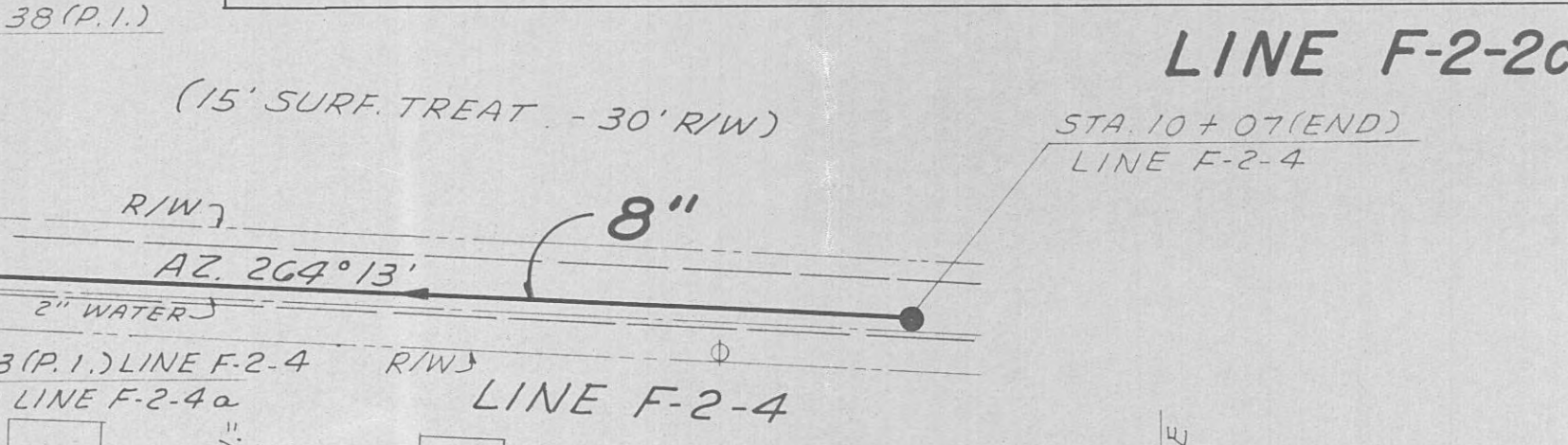
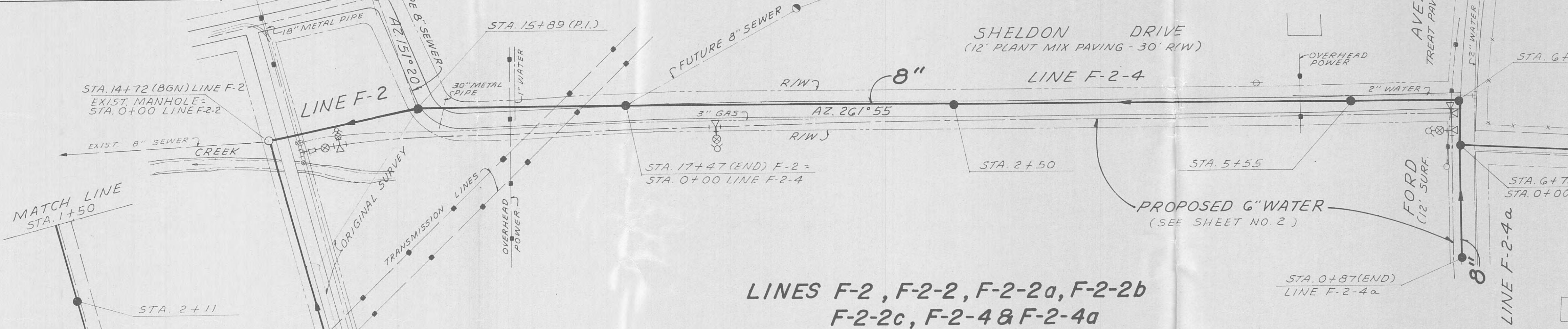
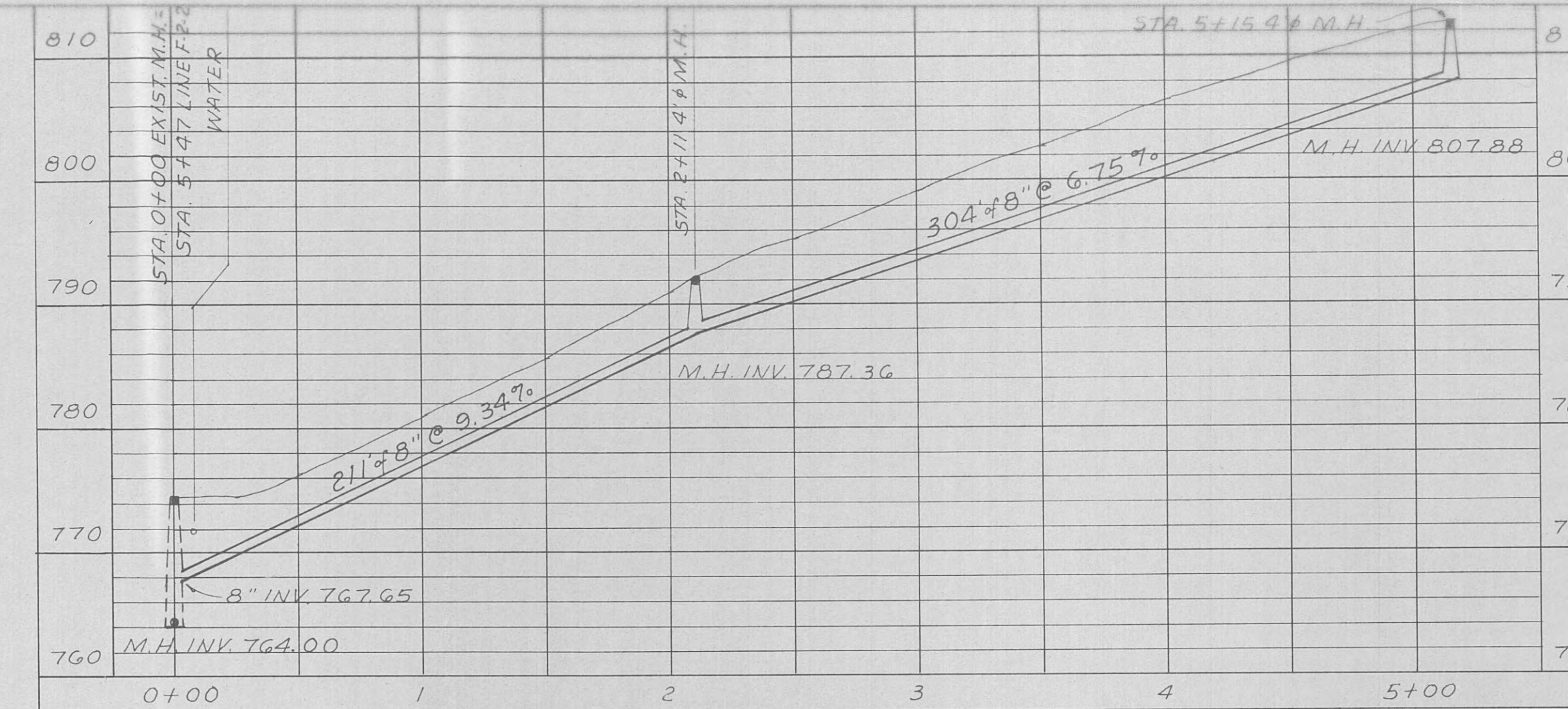
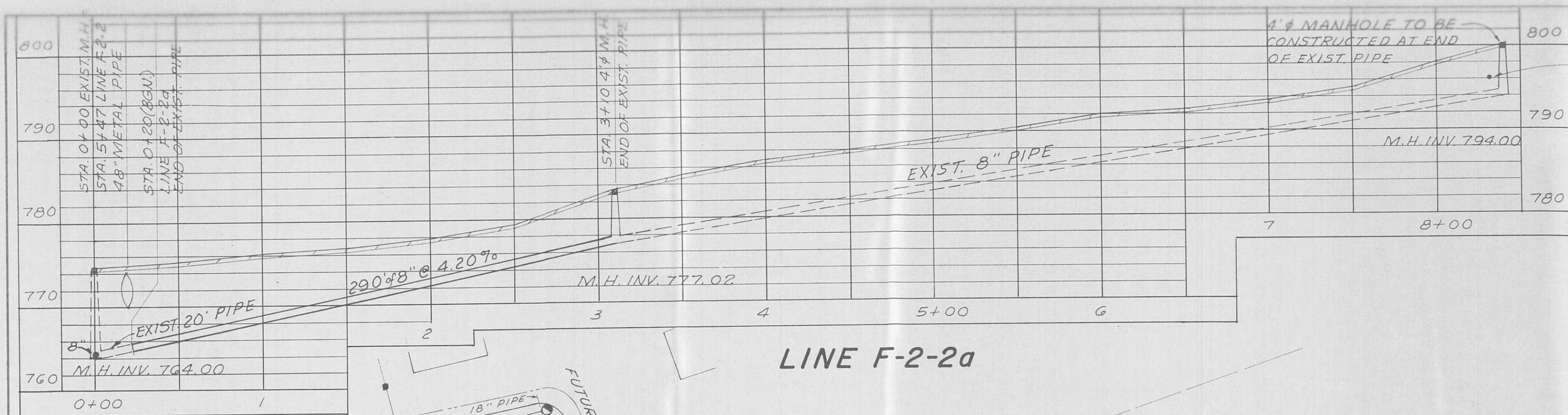
HUD PROJECT NO. CDBG B-78-HN-47-C
DIVISION ONE

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

BAZELTOWN WATER

SCALE 1"=50'	WIEDEMAN AND SINGLETON ENGINEERS
DATE NOV. 1978	ATLANTA GEORGIA





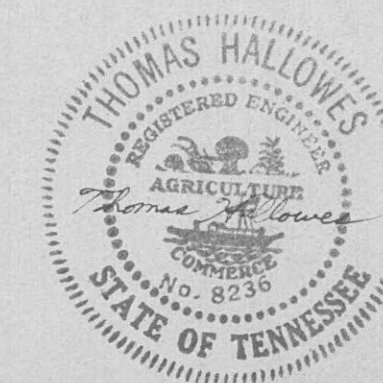
LINE F-2

LINE F-2-4

HUD PROJECT NO. CDBG B-78-HN-47-DIVISION THREE

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENTS

LEE VILLAGE SEWERS



SCALE
1" = 20' HORIZ.
1" = 10' VERT.
DATE
NOV. 1978

WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA GEORGIA

