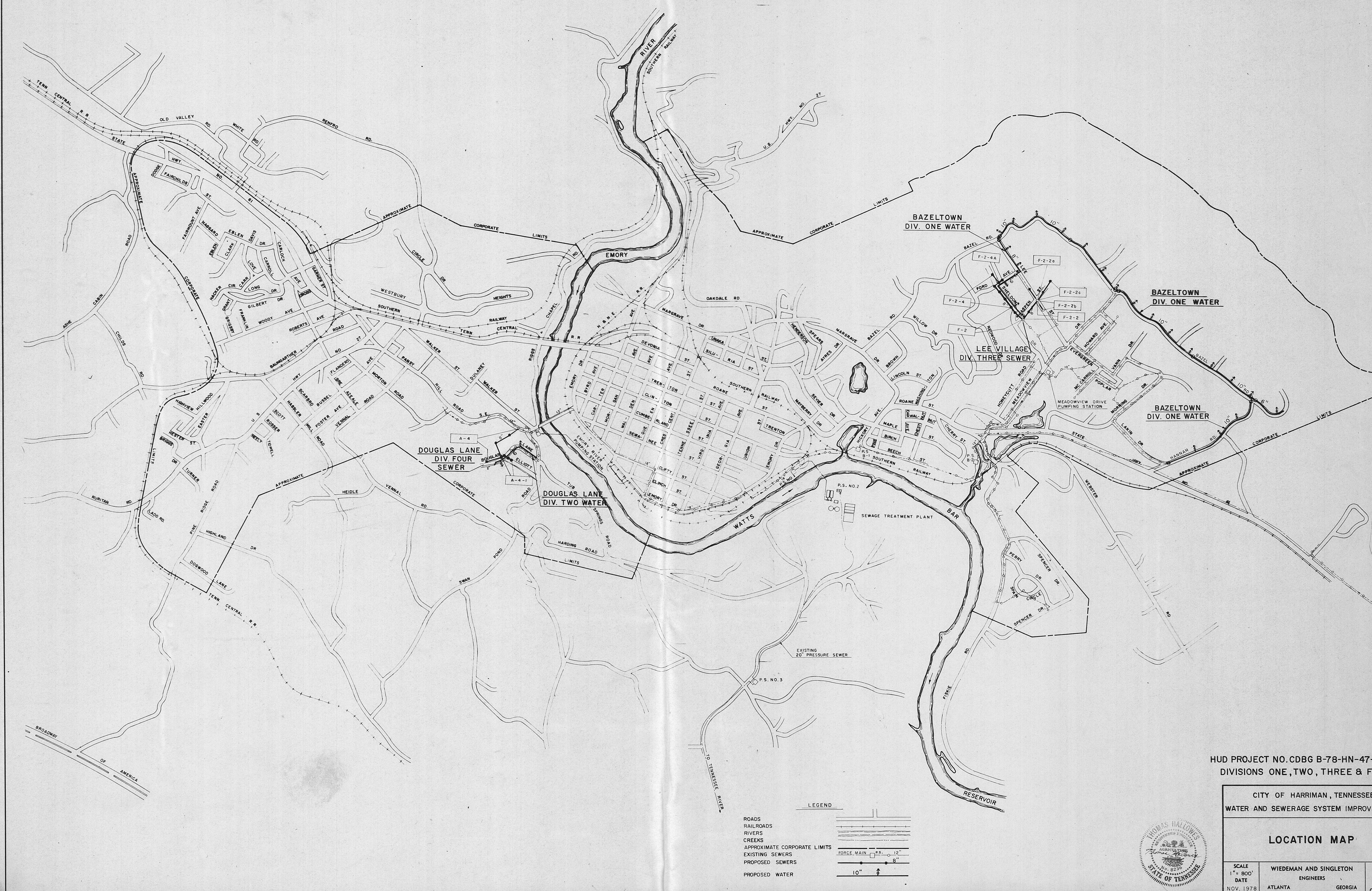




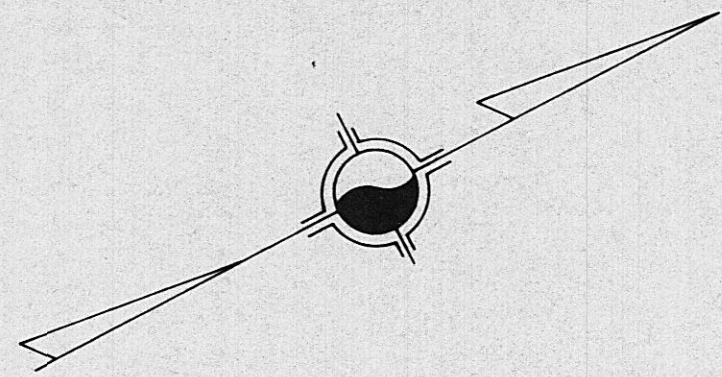
HUD PROJECT NO. CDBG B-78-HN-47-0
DIVISIONS ONE, TWO, THREE & FOUR

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

LOCATION MAP

SCALE 1" = 800'	WIEDEMAN AND SINGLETON ENGINEERS
DATE NOV. 1978	ATLANTA GEORGIA





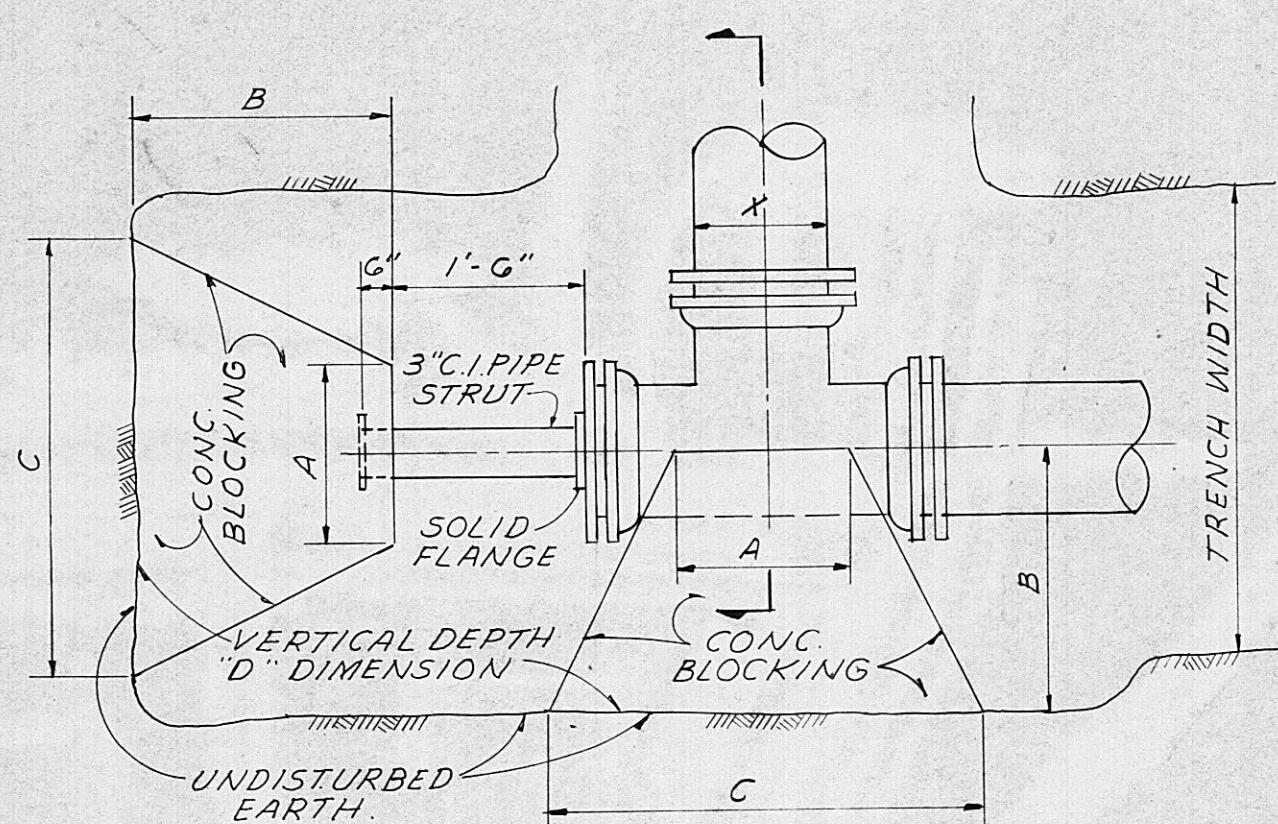
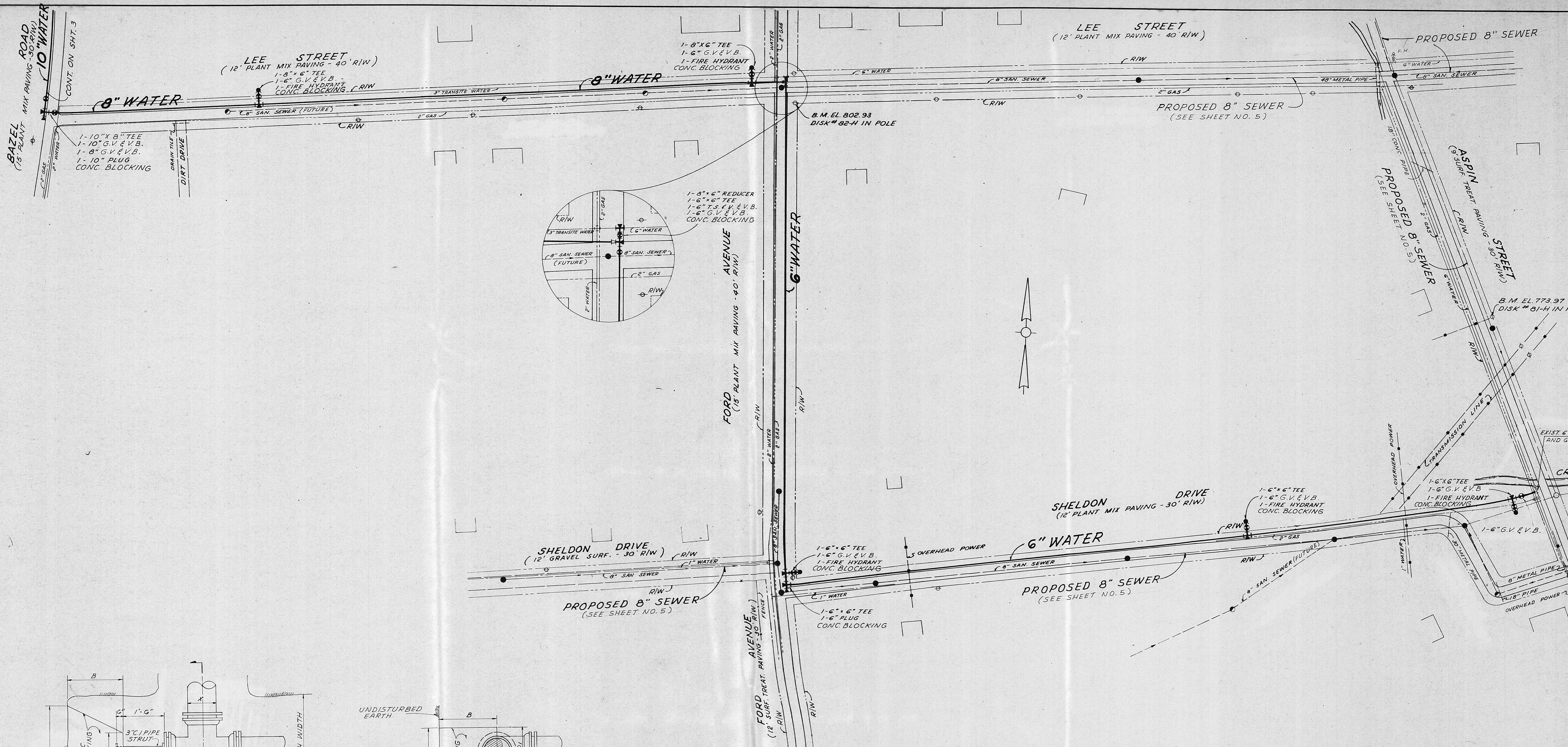
HUD PROJECT NO. CDBG B-78-HN-47
DIVISIONS ONE, TWO, THREE & F

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROV

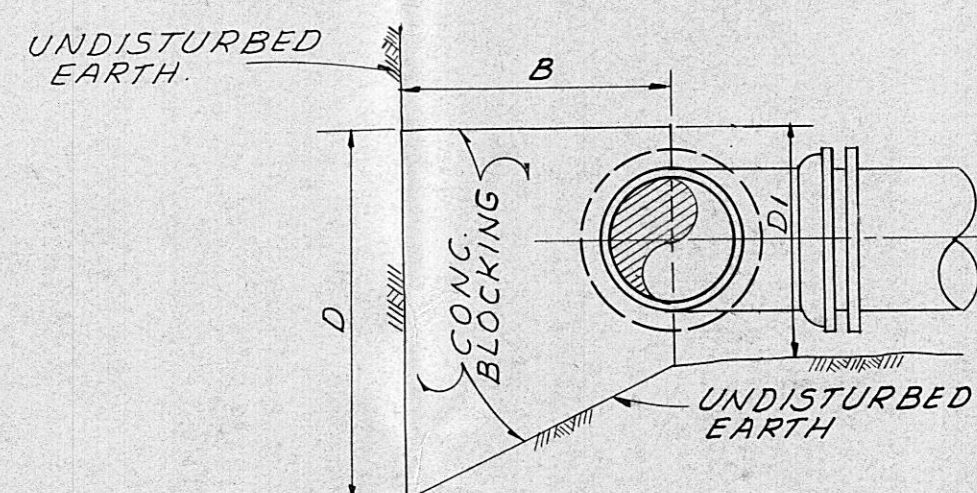
LOCATION MAP

SCALE 1" = 800' DATE NOV. 1978	WIEDEMAN AND SINGLETON ENGINEERS ATLANTA GEORGIA
---	---

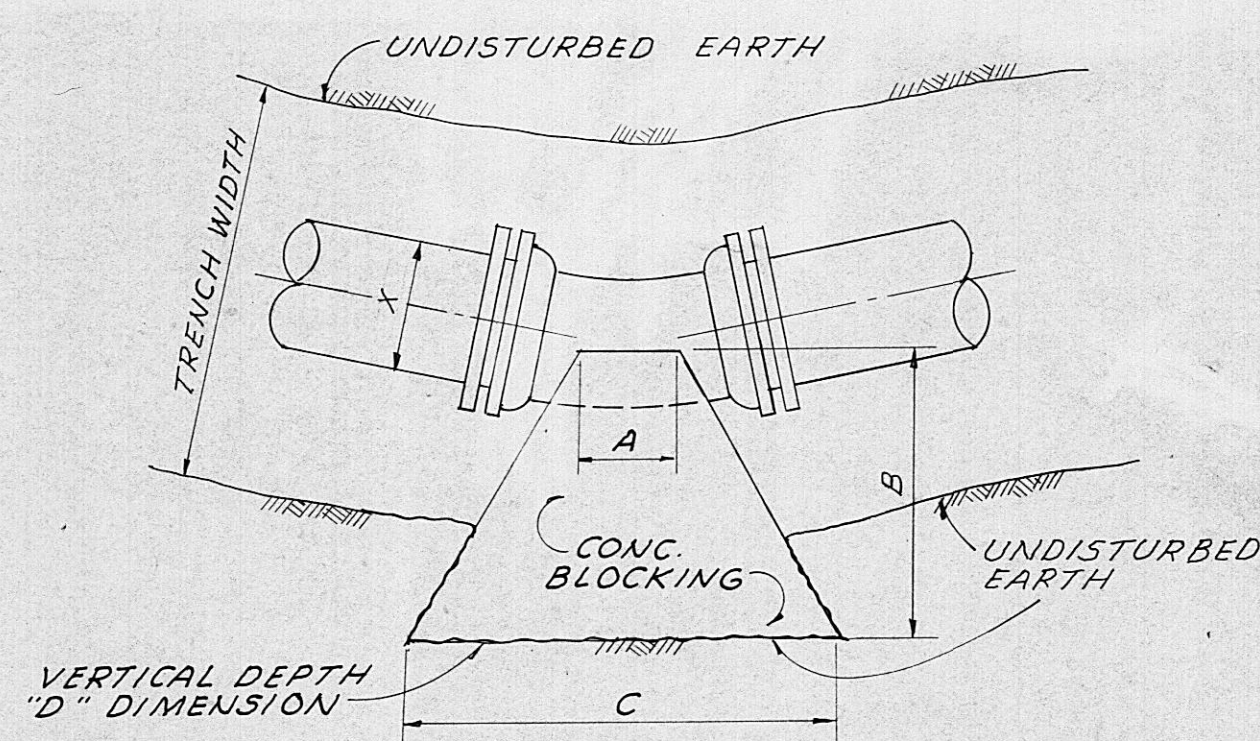




TEES



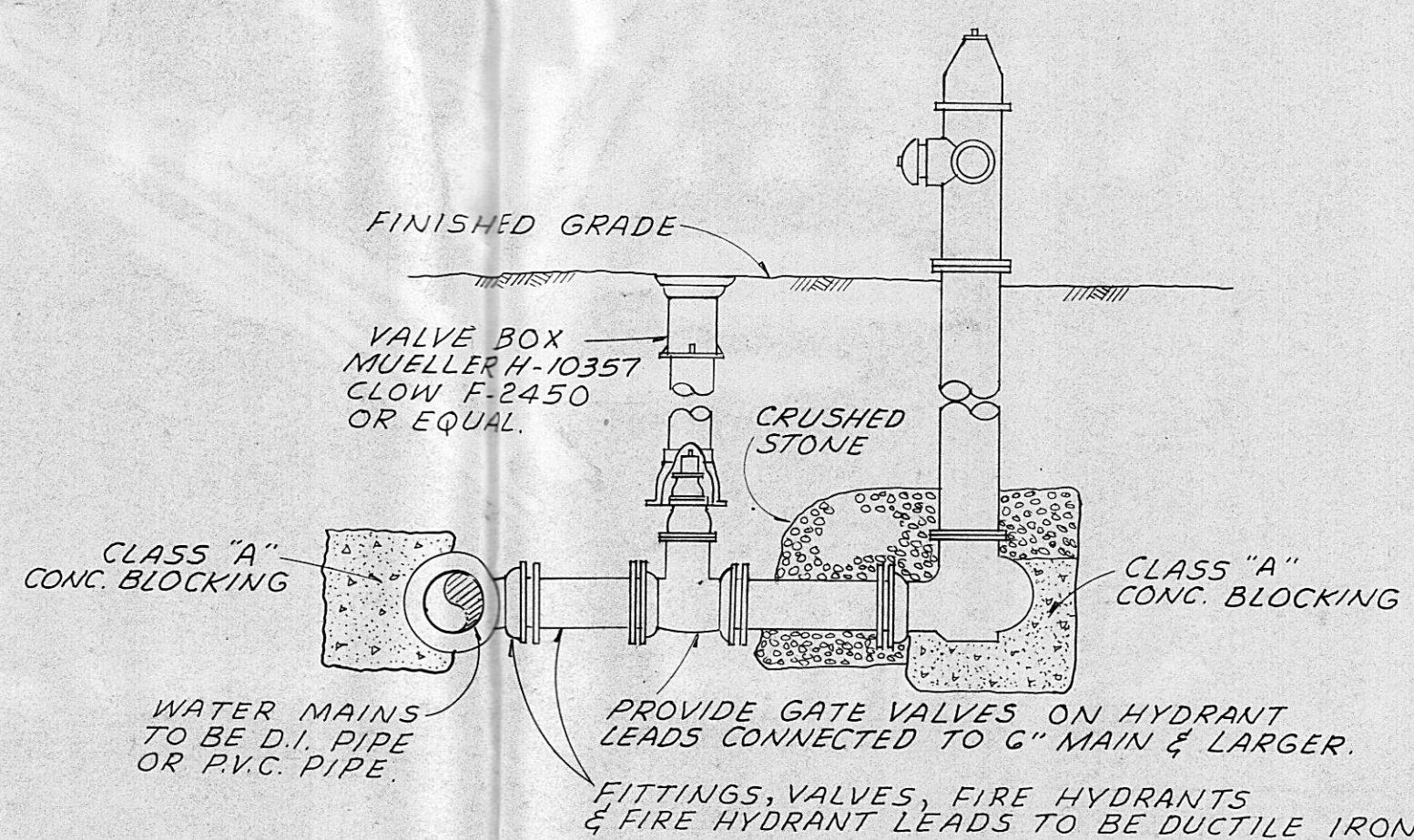
SECTION



BENDS

TYPICAL BLOCKING DETAILS
N.T.S.
(DIVISIONS ONE & TWO)

X	A	B	C	D	DI
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 P.S.F. SOIL PRESSURE.					

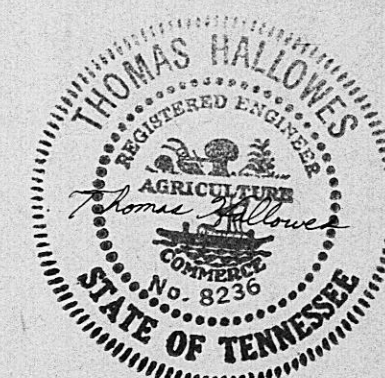


TYPICAL DETAIL OF HYDRANT INSTALLATIONS
N.T.S.
(DIVISIONS ONE & TWO)

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

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

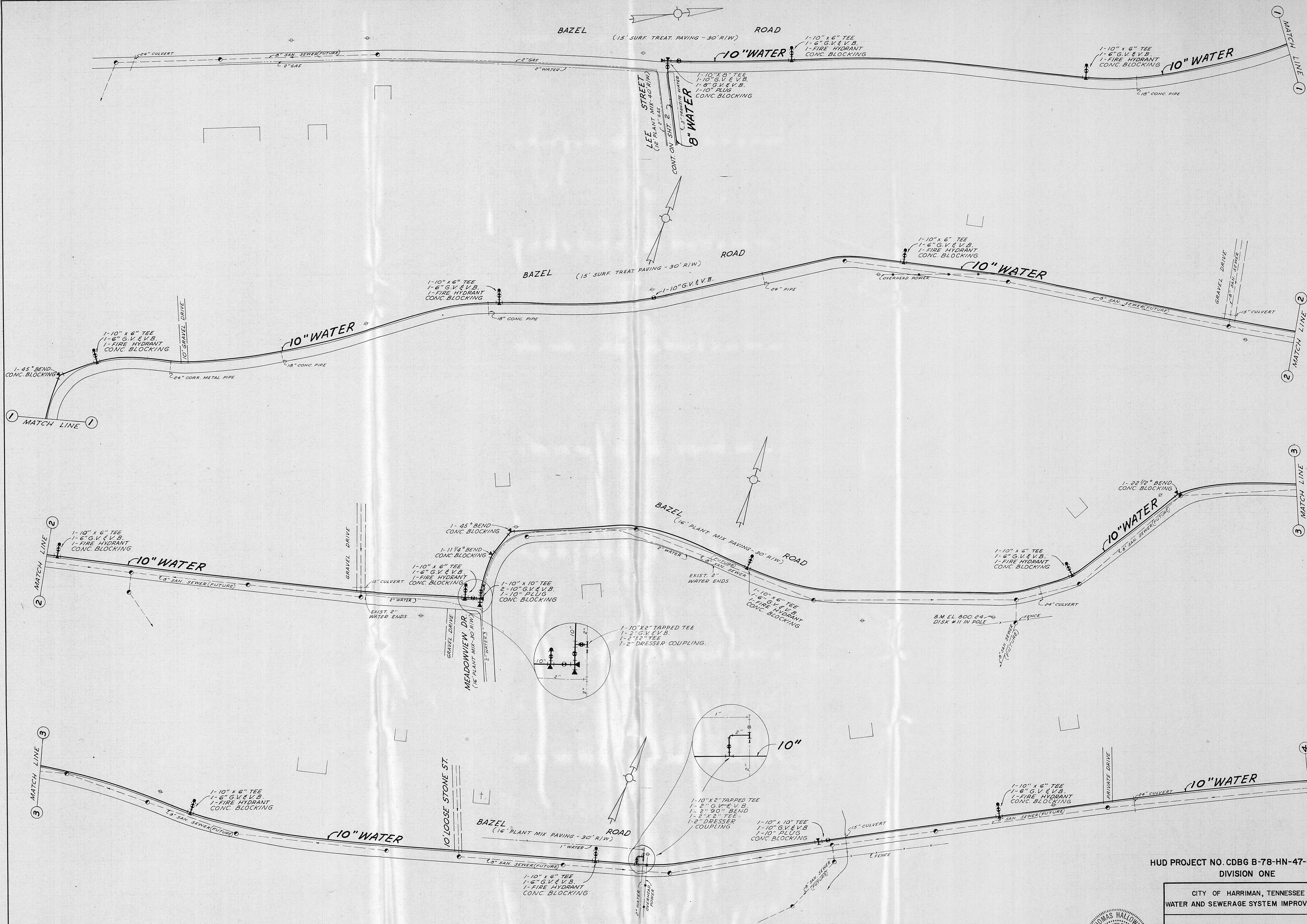
BAZELTOWN WATER



SCALE
1"=50'
DATE
NOV. 1978

WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA
GEORGIA

SH
OF



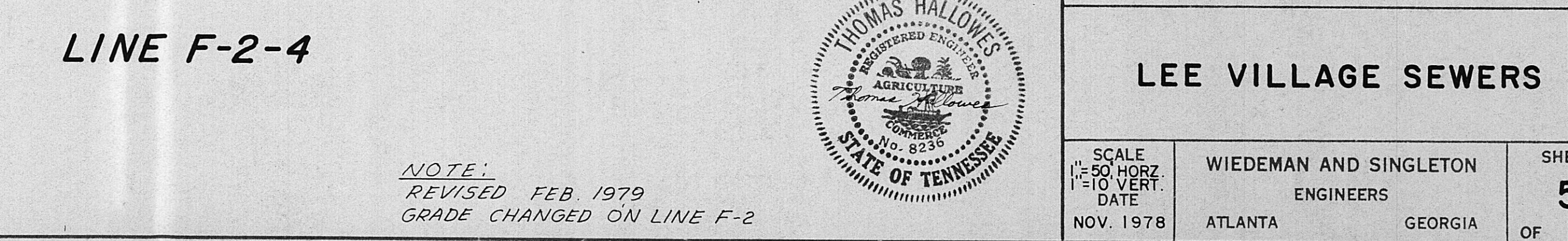
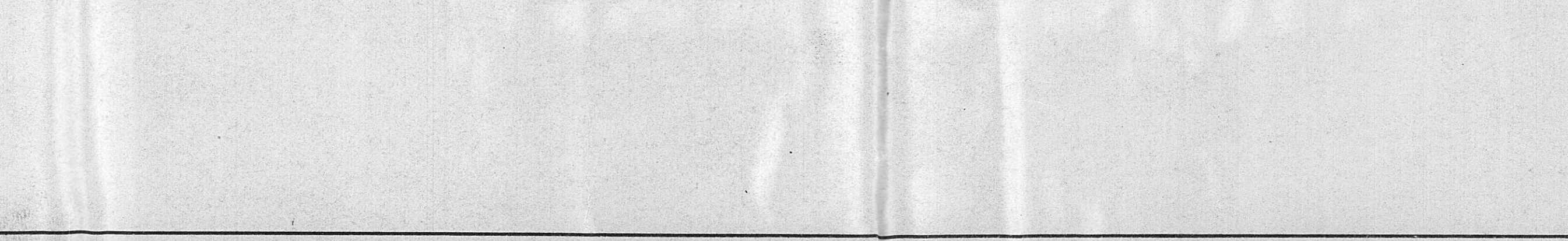
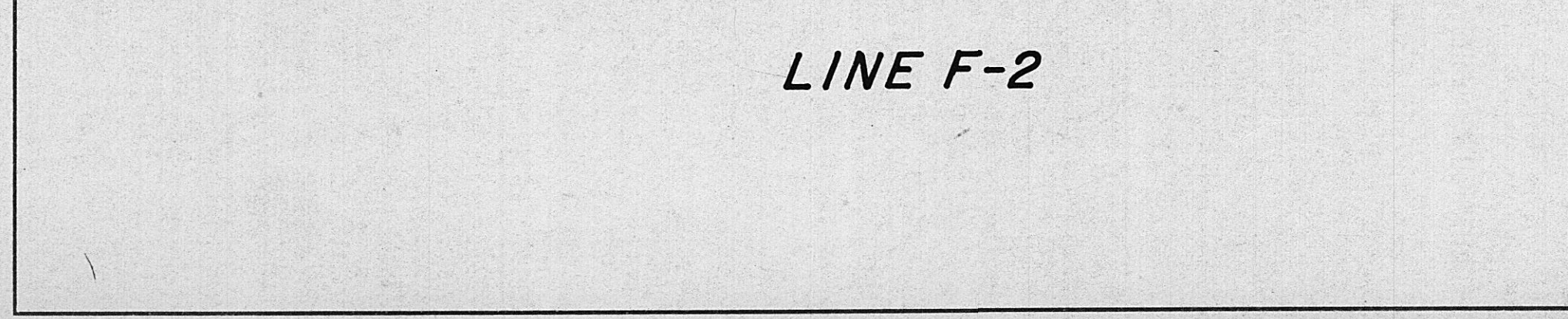
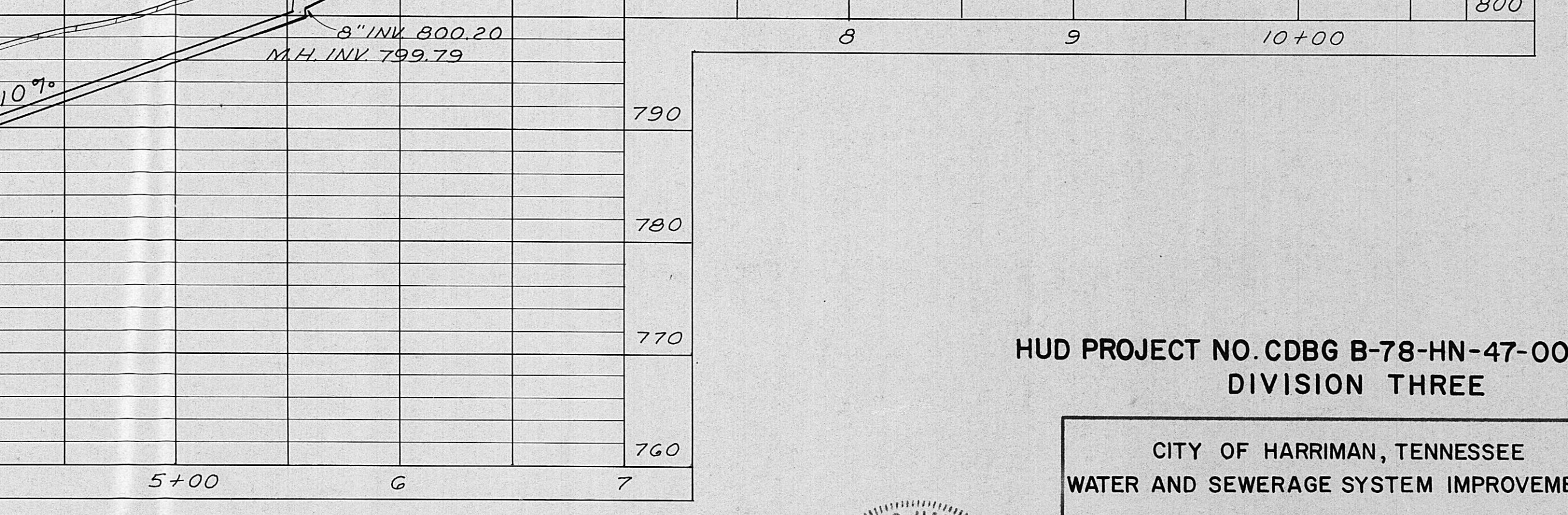
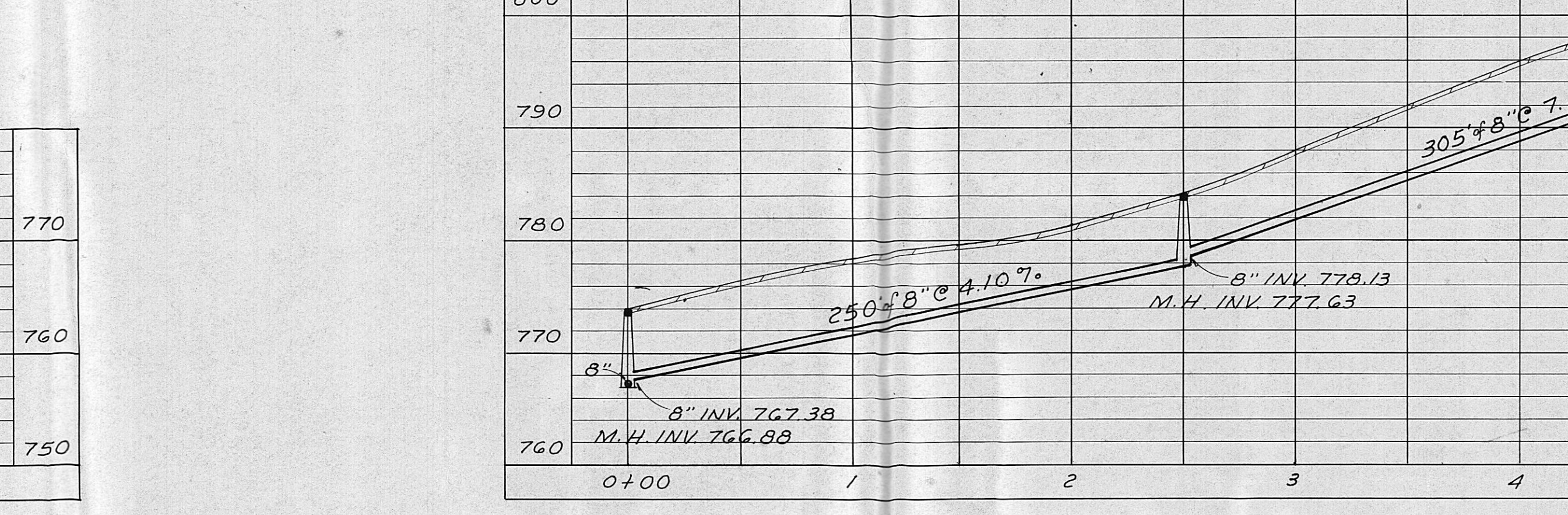
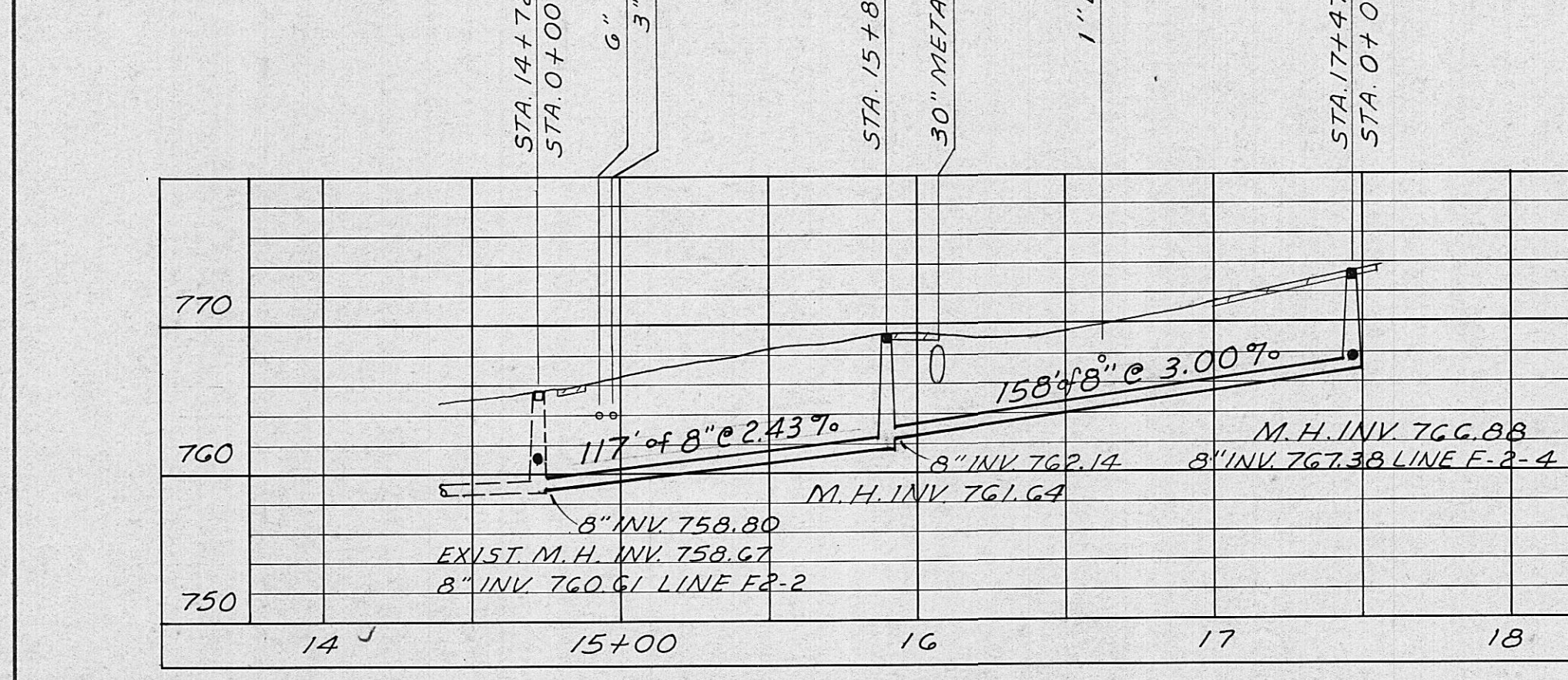
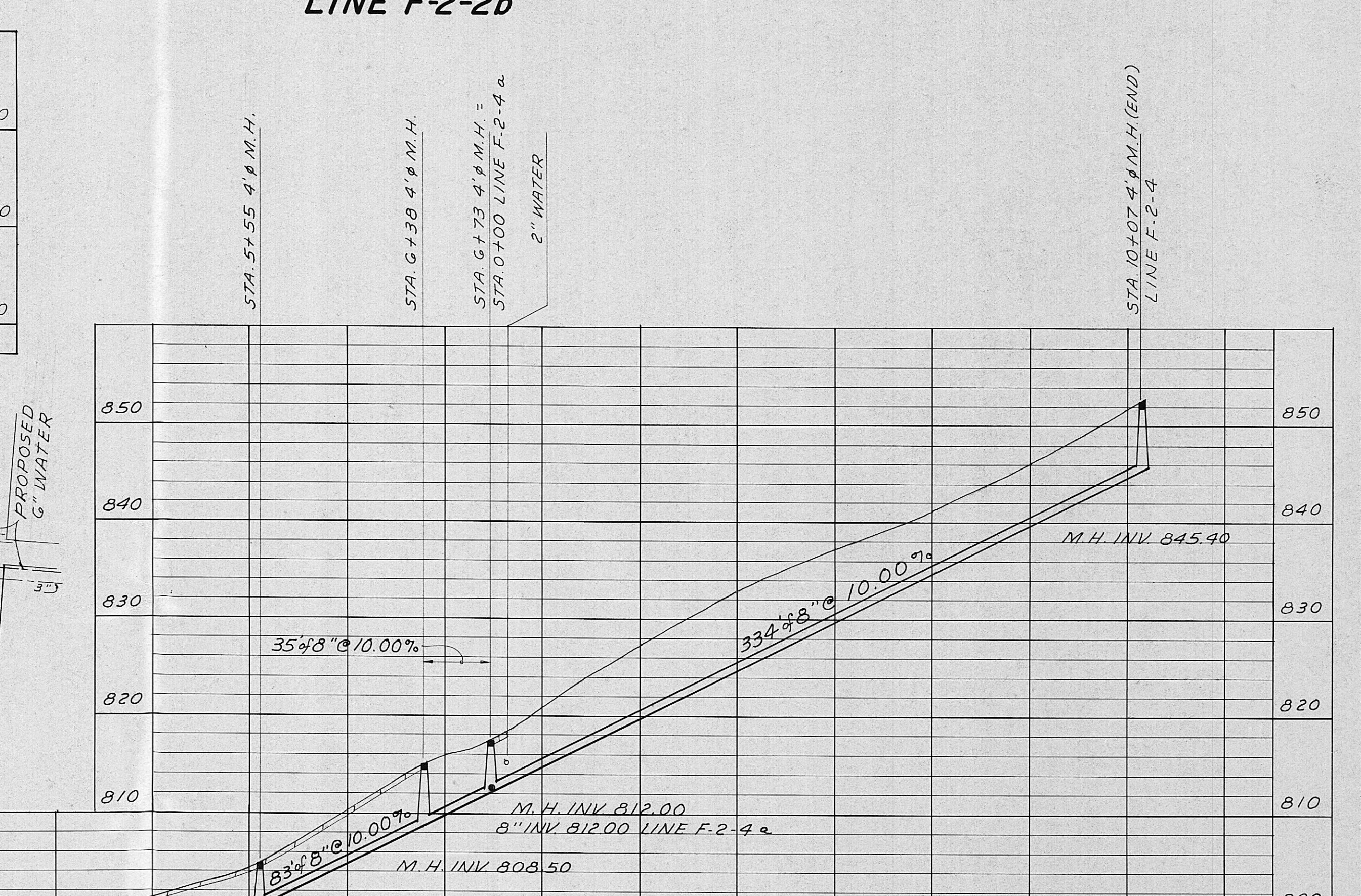
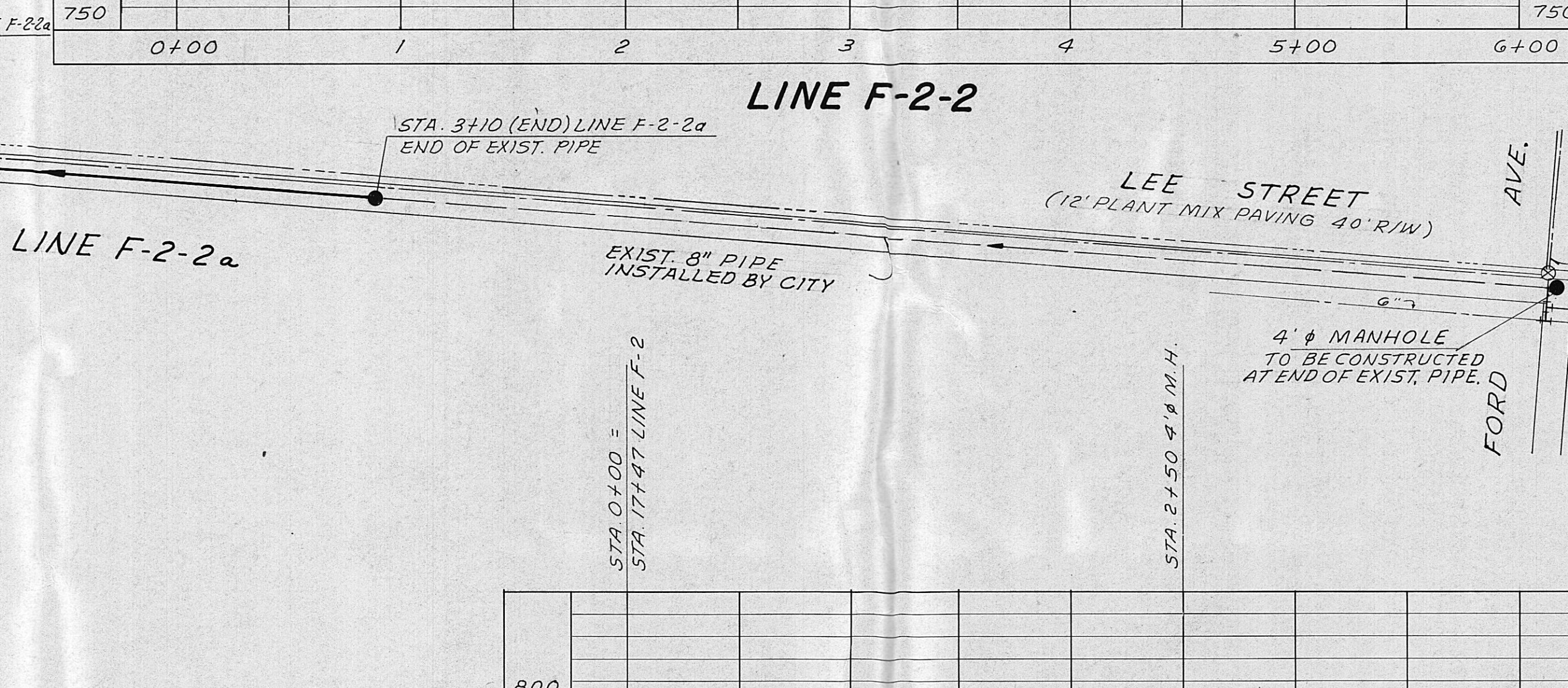
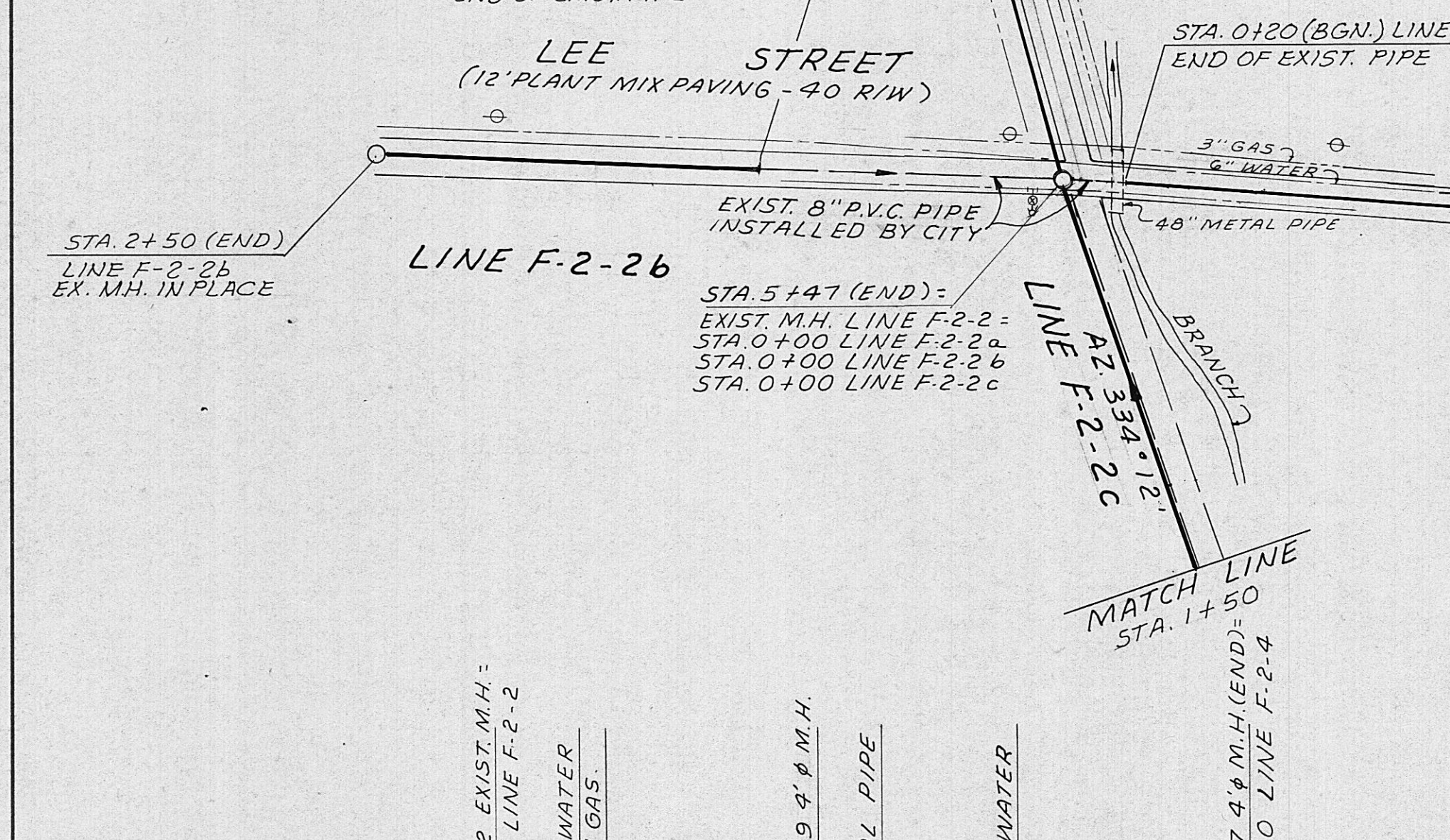
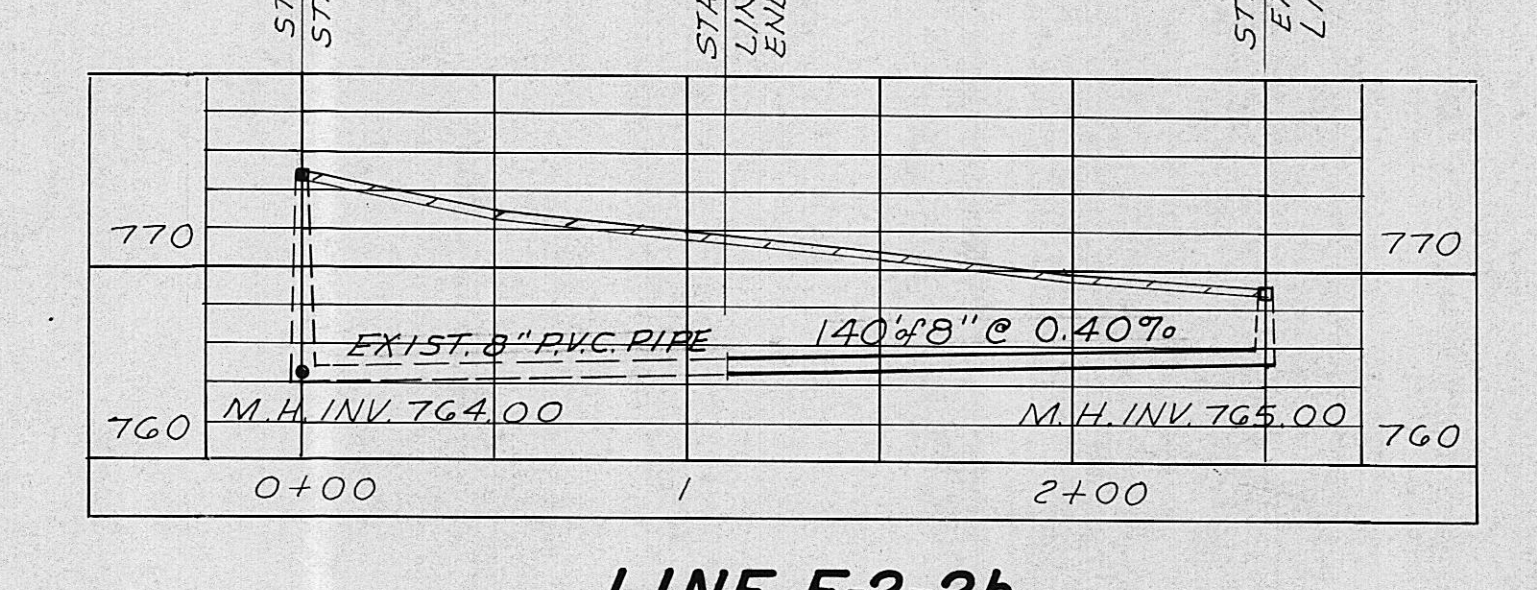
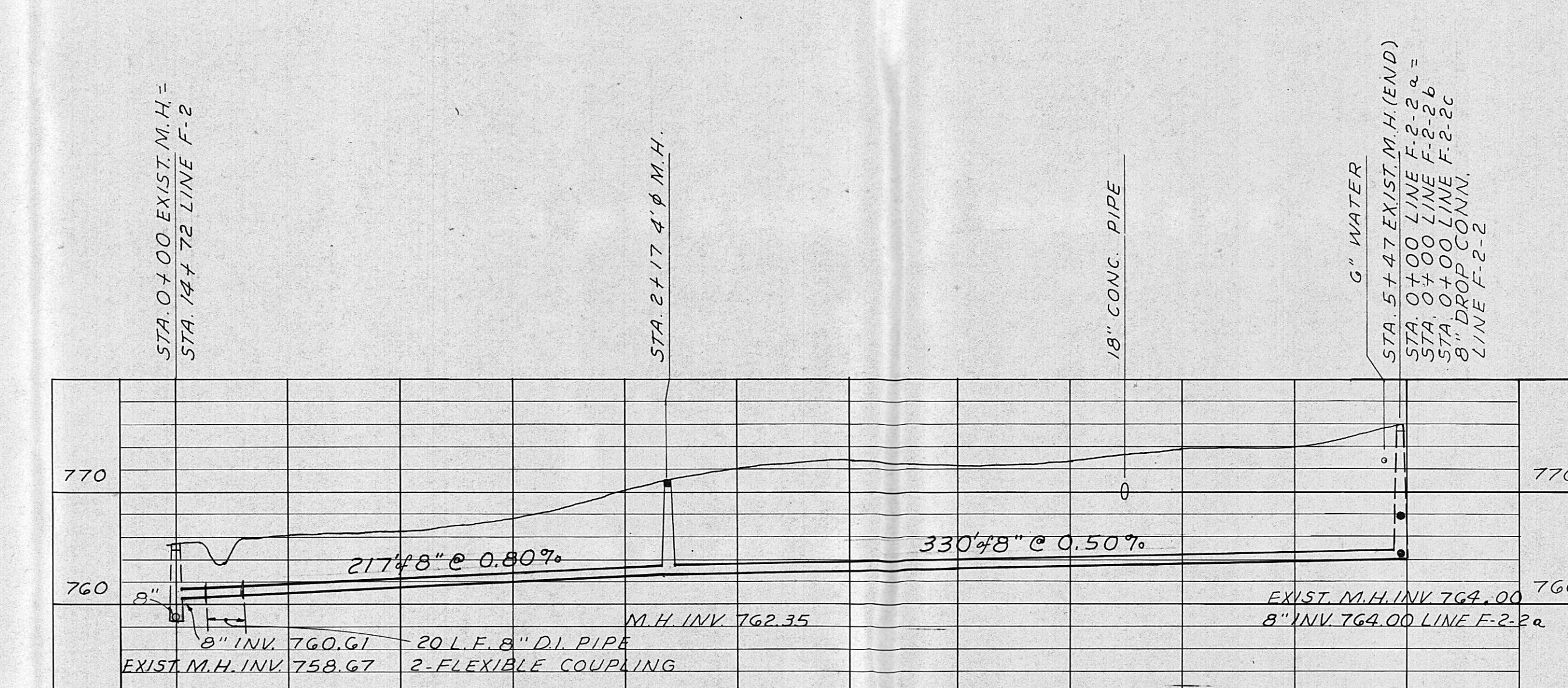
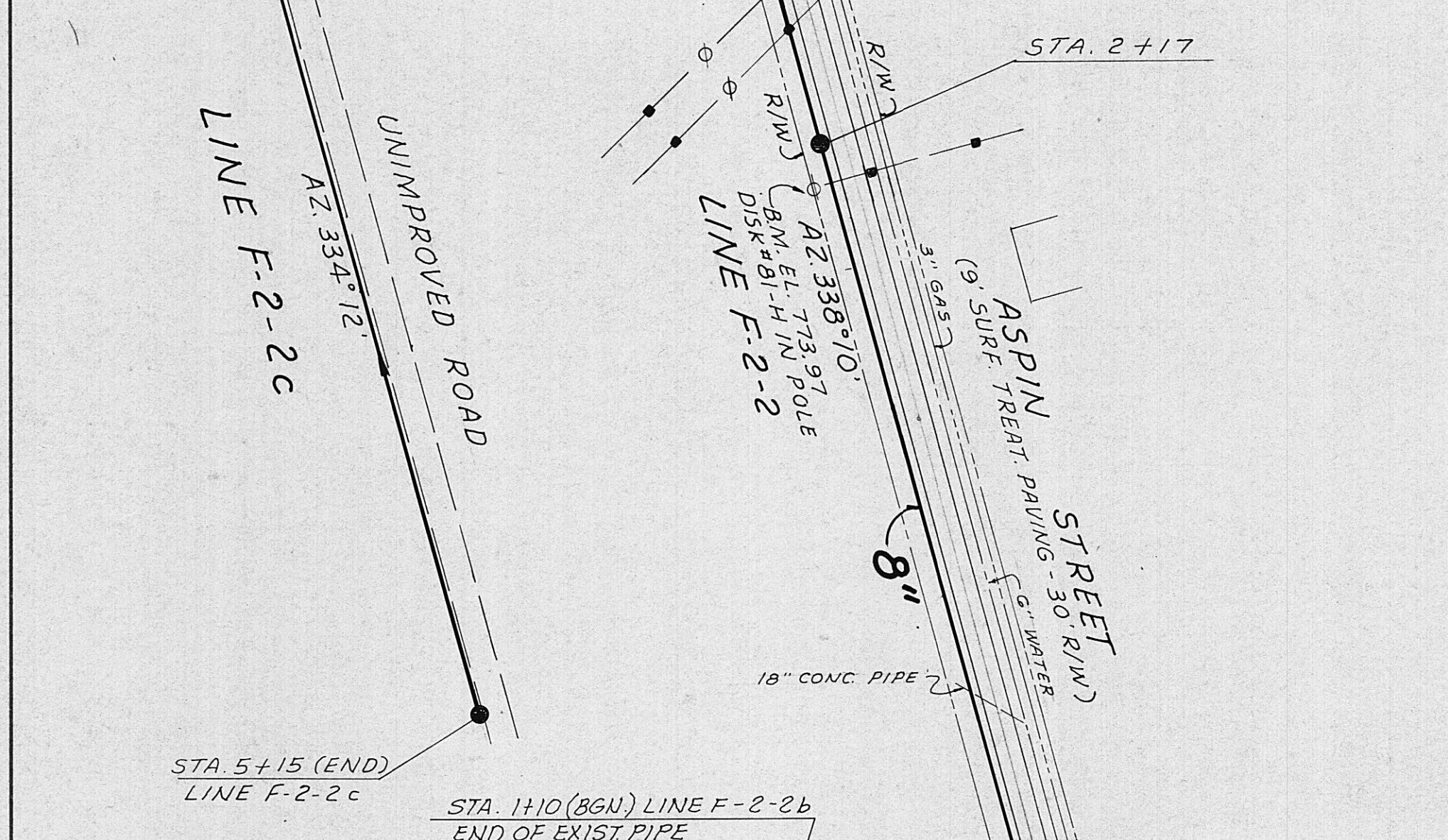
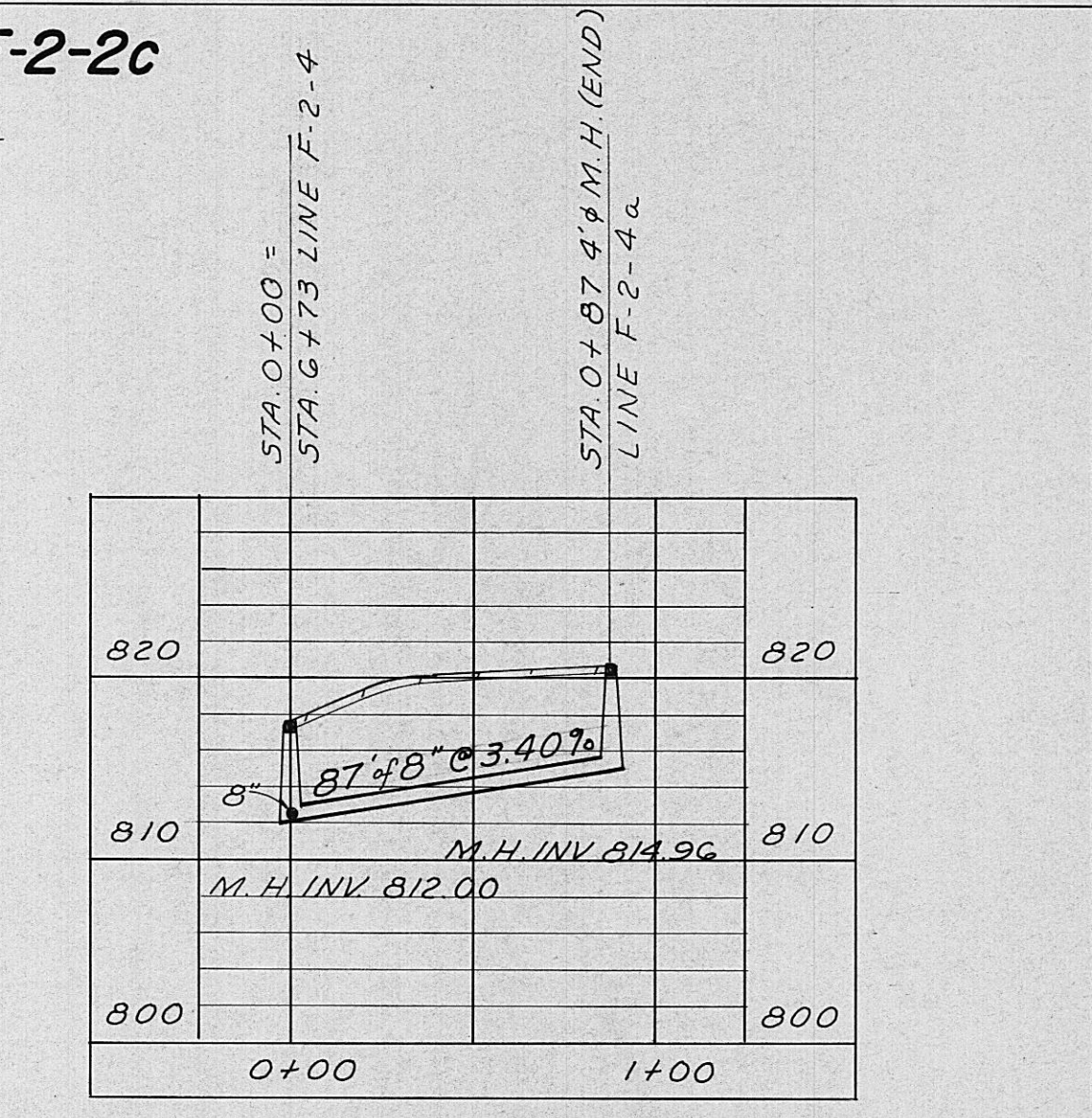
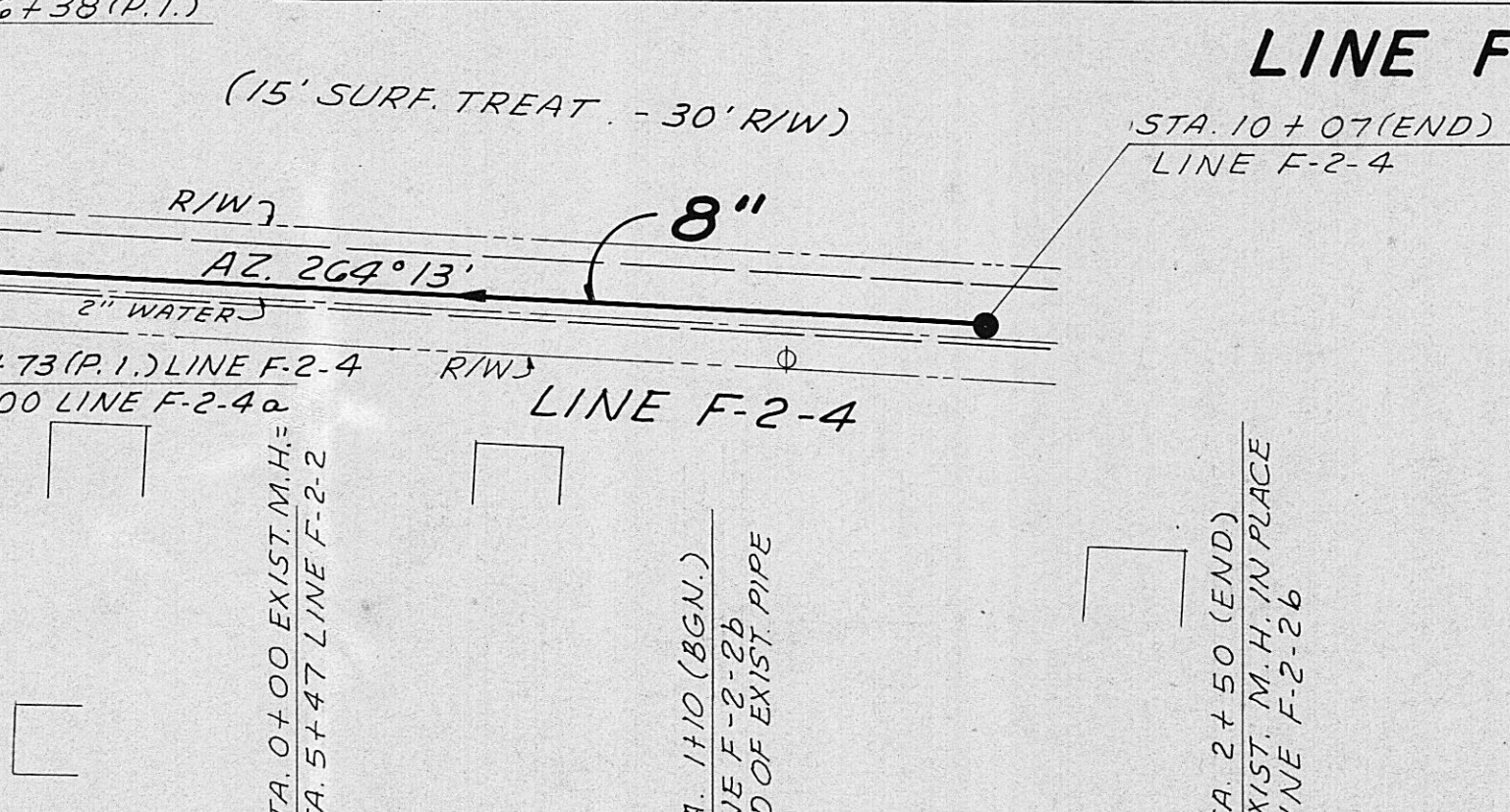
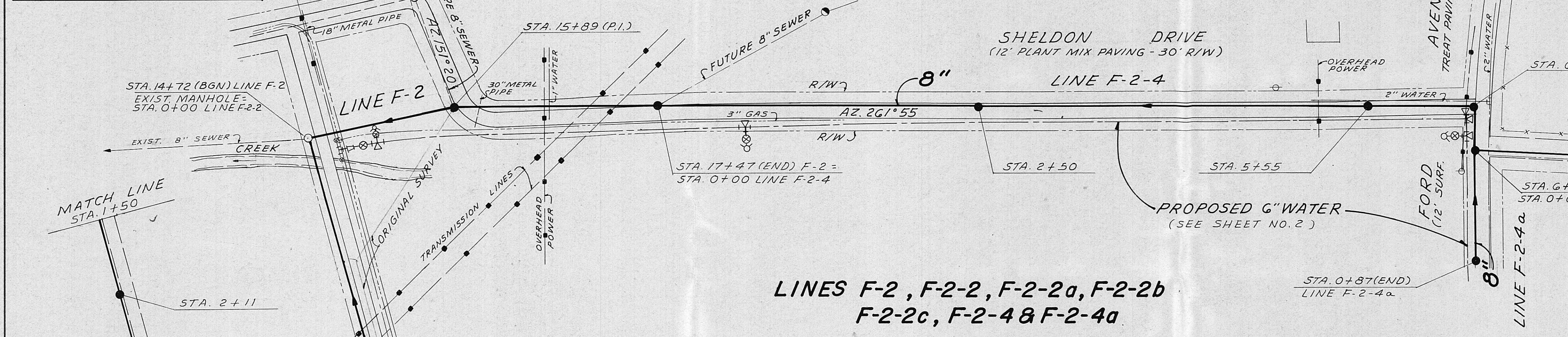
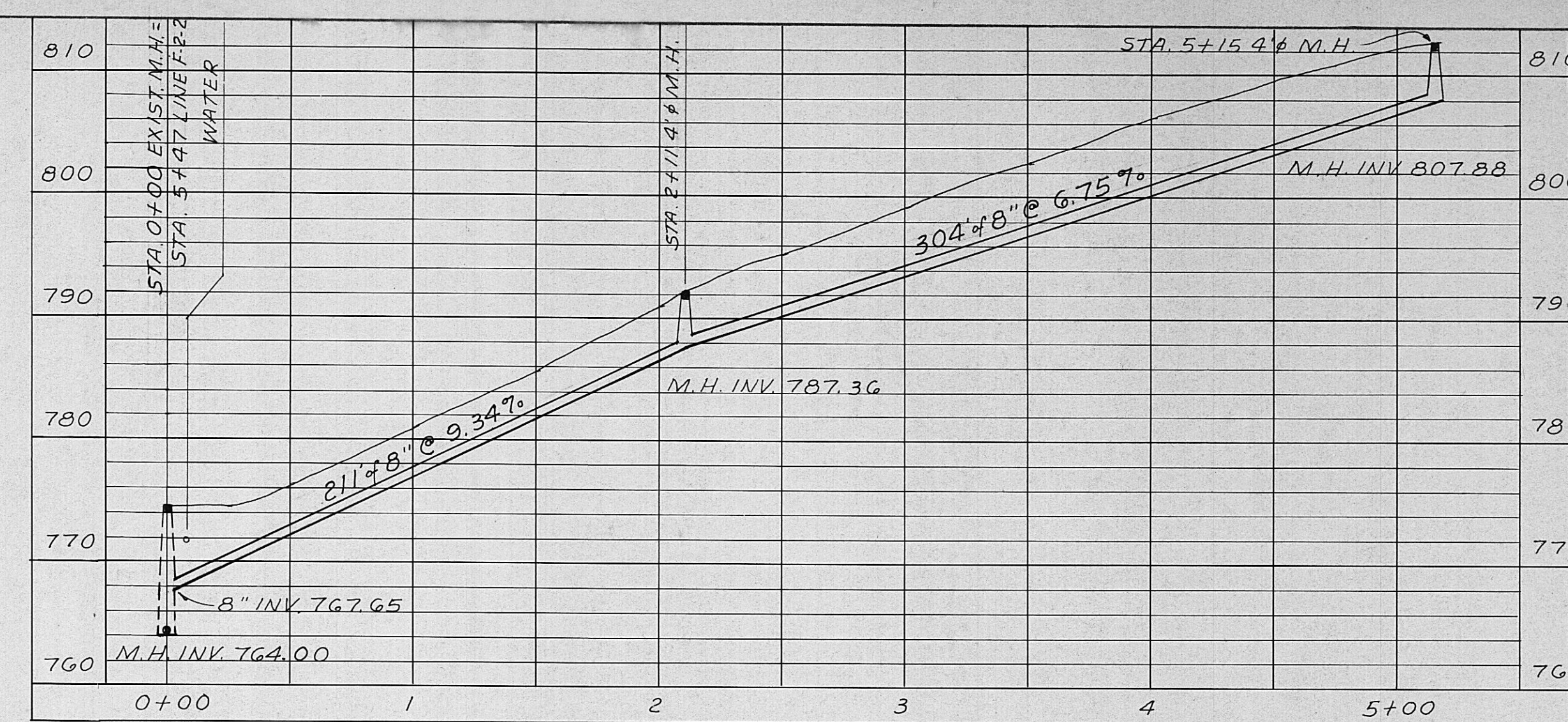
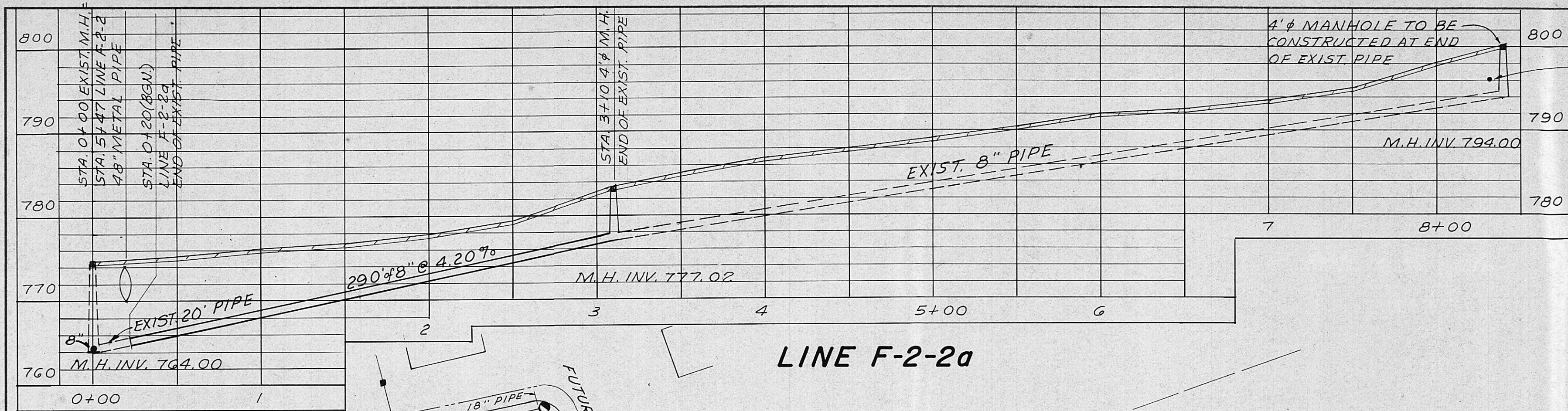
HUD PROJECT NO. CDBG B-78-HN-47-00
DIVISION ONE

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

BAZELTOWN WATER

SCALE 1"=50'	WIEDEMAN AND SINGLETON ENGINEERS	SH
DATE NOV. 1978	ATLANTA GEORGIA	OF 3





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

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENTS

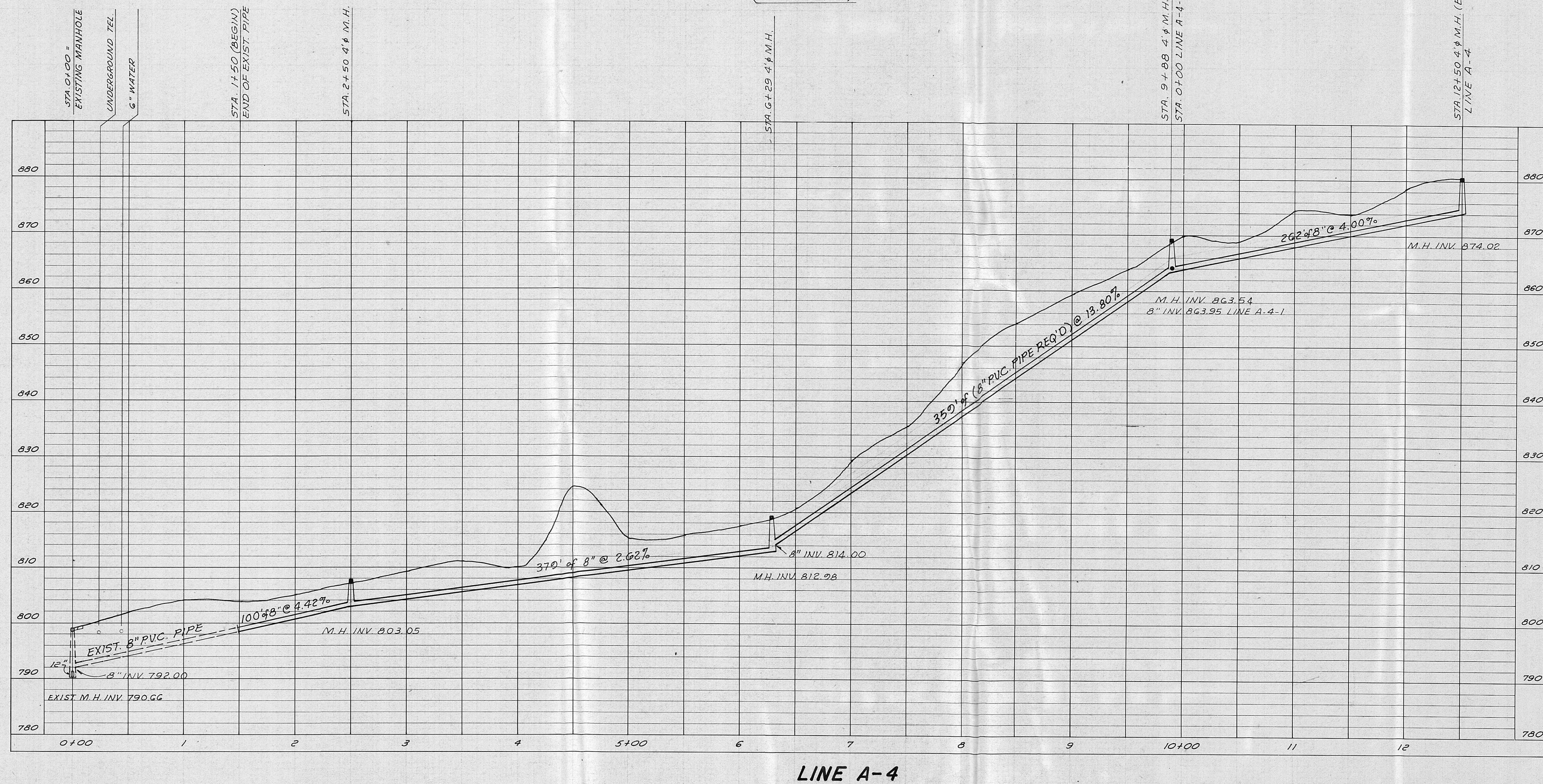
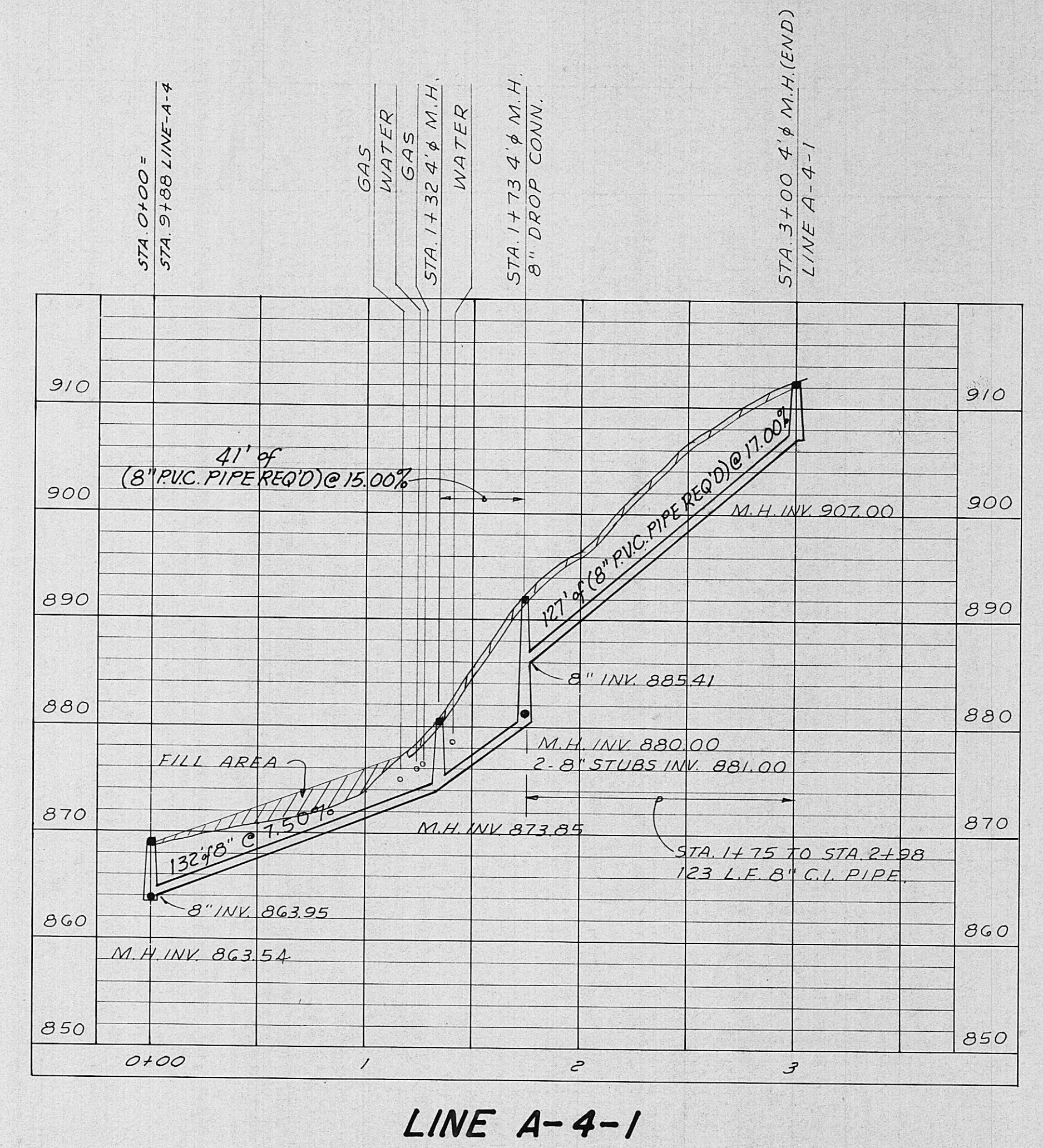
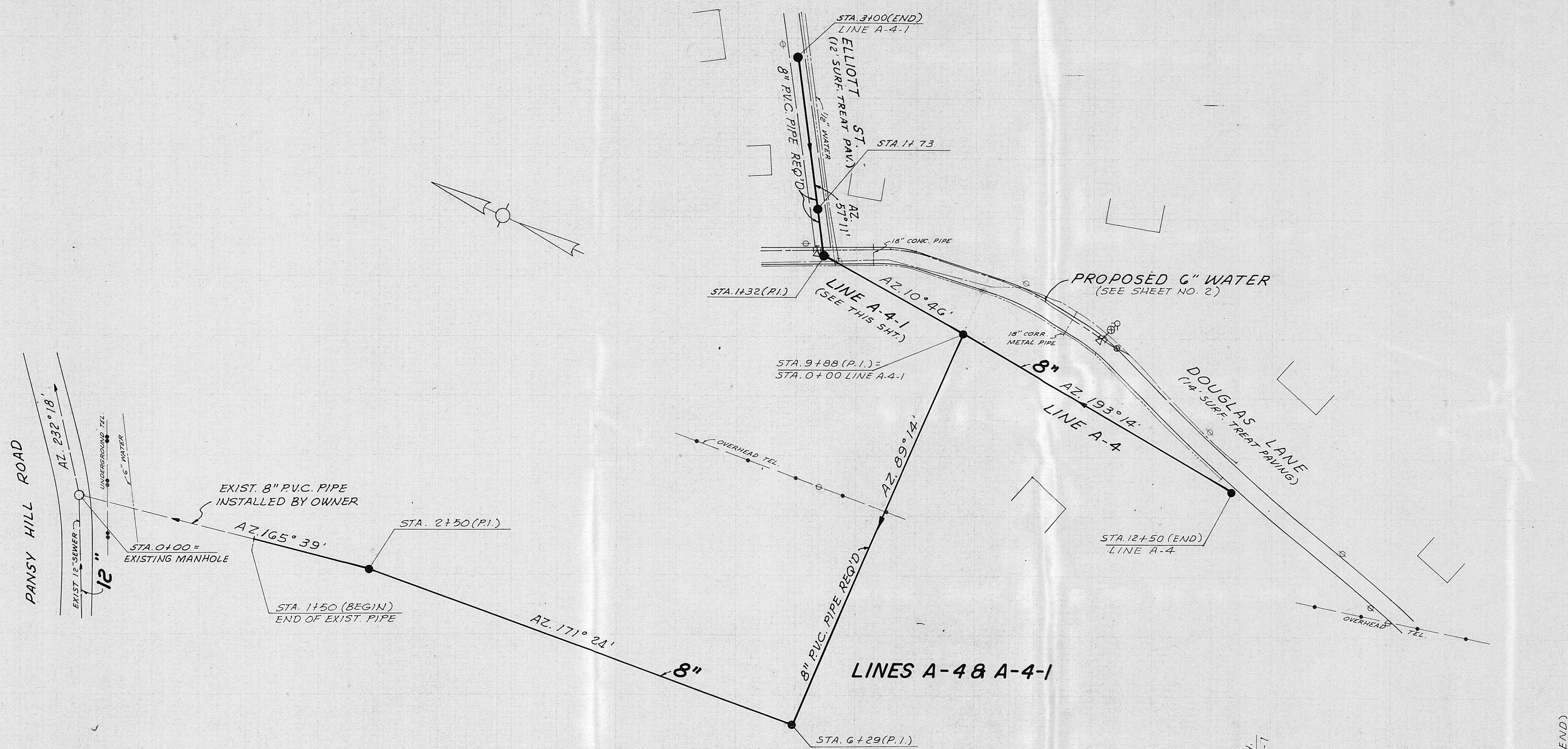
LEE VILLAGE SEWERS

SCALE: 1"=50' HORIZ.
1"=10' VERT.
DATE: NOV. 1978

WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA GEORGIA

STATE OF TENNESSEE
REGISTERED PROFESSIONAL ENGINEER
NO. 8235

NOTE:
REVISED FEB. 1979
GRADE CHANGED ON LINE F-2



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

CITY OF HARRIMAN, TENNESSEE
WATER AND SEWERAGE SYSTEM IMPROVEMENT

DOUGLAS LANE SEWERS



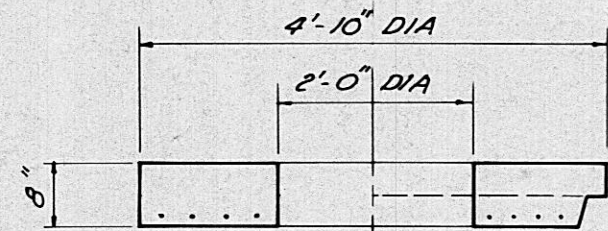
SCALE: 1"=50' HORZ.
1"=10' VERT.
DATE: NOV. 1978
WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA GEORGIA

GOVERNING DIMENSIONS FOR CIRCULAR MANHOLES

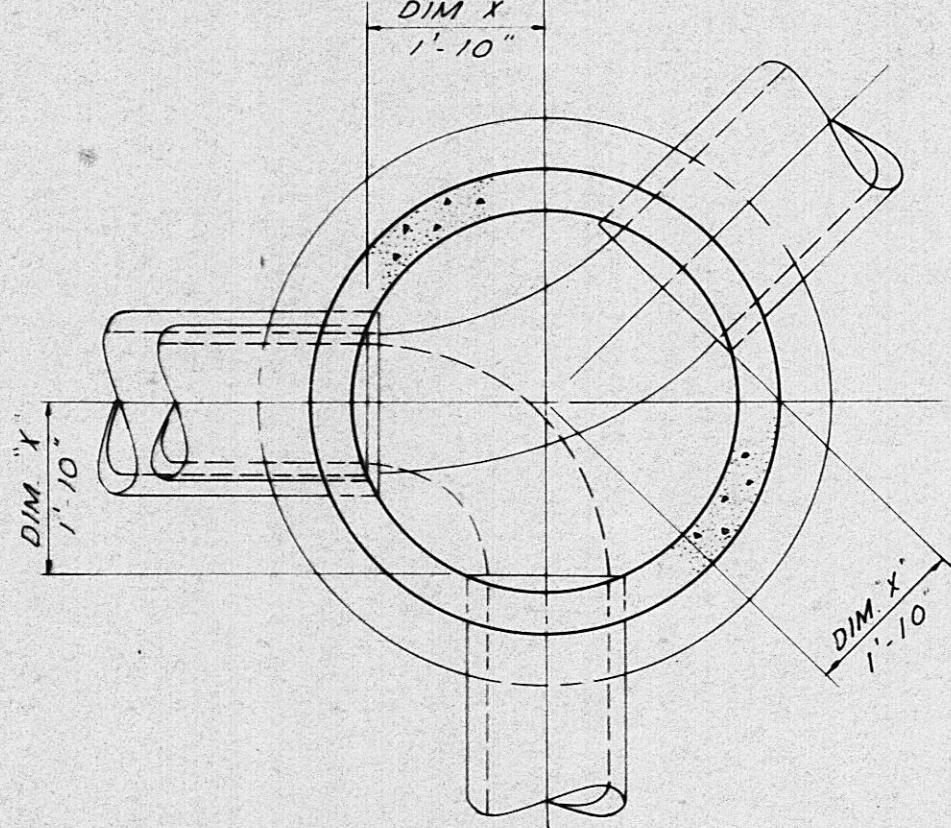
PIPE SIZE	DEFLECTION	M.H. DIA.	"X"
8" & 15"	0°-90°	4'-0"	1'-10"

4-#5 BARS, HOOK EA END
4 SIDES OF OPG
BOTTOM OF SEAB

PLAN

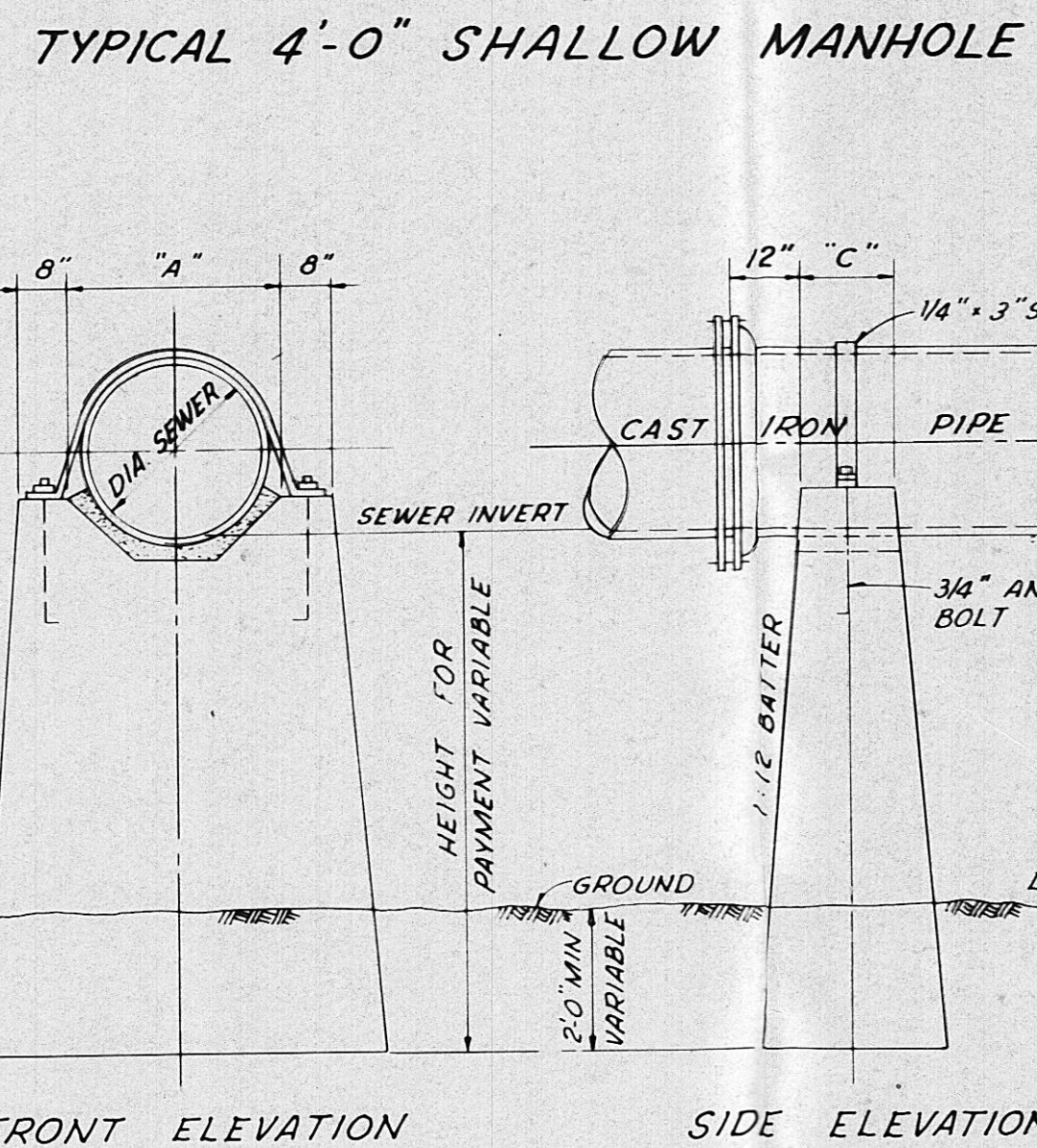
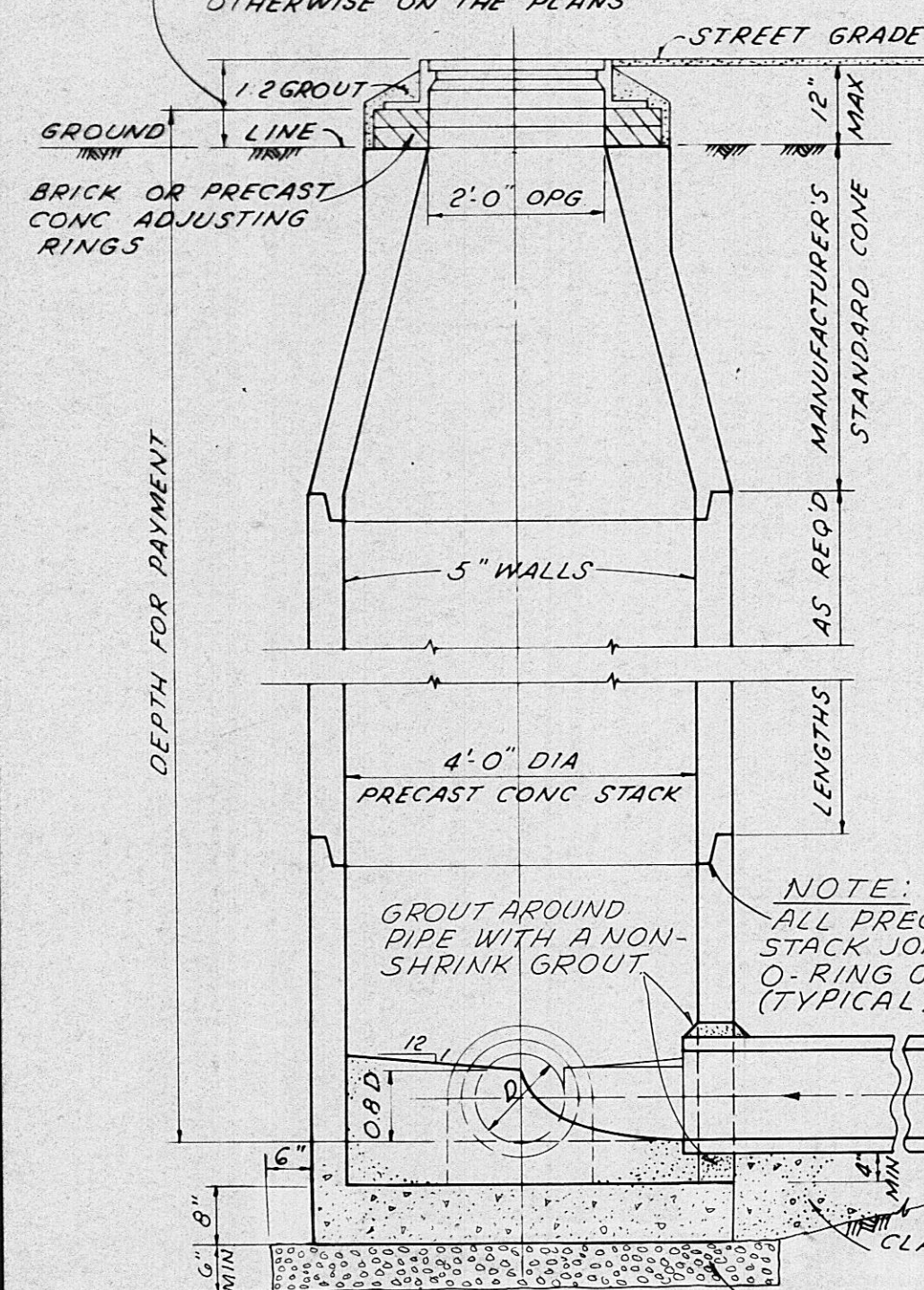


SECTION
4'-0" COVER SLAB
SCALE: 1/2"=1'-0"



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

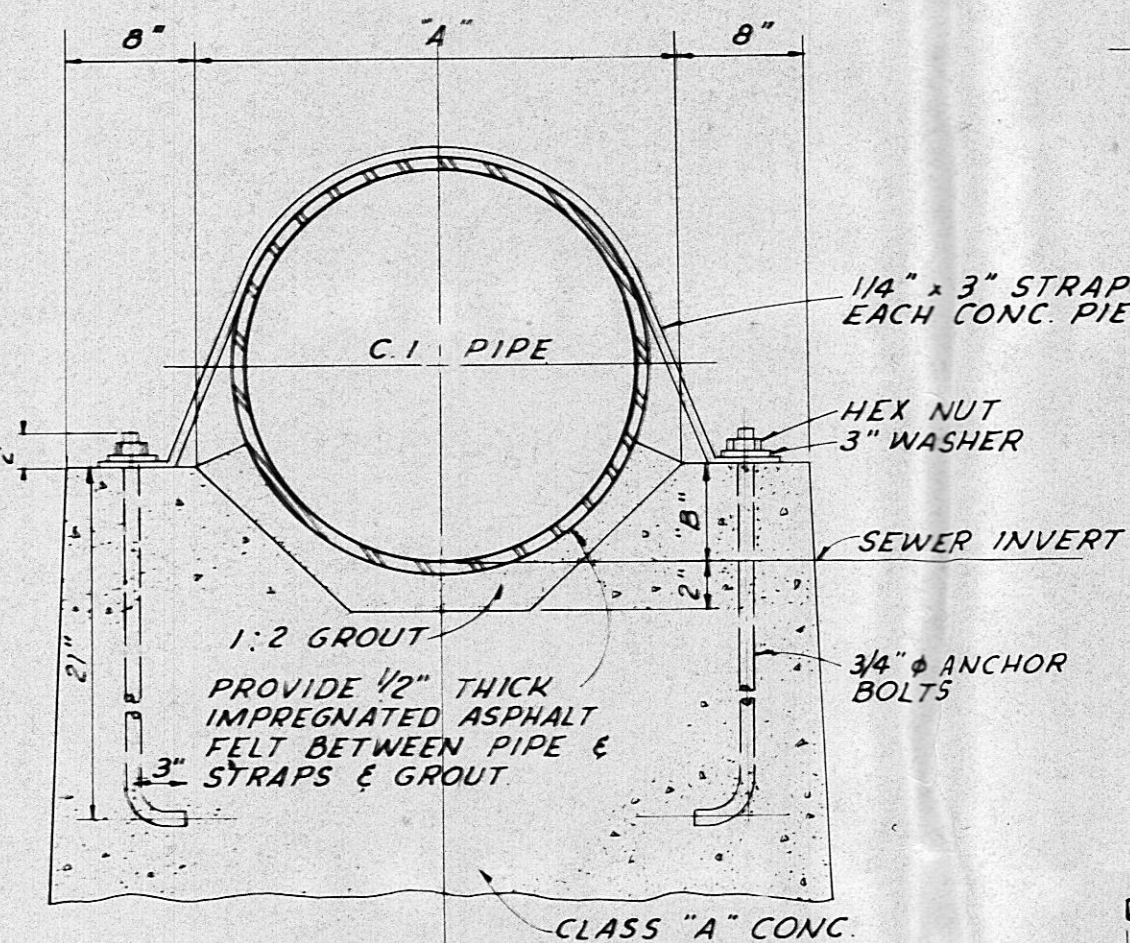
NOTE:
TOP OF MANHOLE FRAME TO
EXTEND AT LEAST 10" BUT NO
MORE THAN 15" ABOVE NATURAL
GROUND EXCEPT WHERE LOCATED
IN STREETS OR WHERE SHOWN
OTHERWISE ON THE PLANS



TYPICAL DETAIL OF C.I. PIPE ON PIERS
N.T.S.

MANHOLE STEP DETAIL
(FOR BRICK MANHOLES)

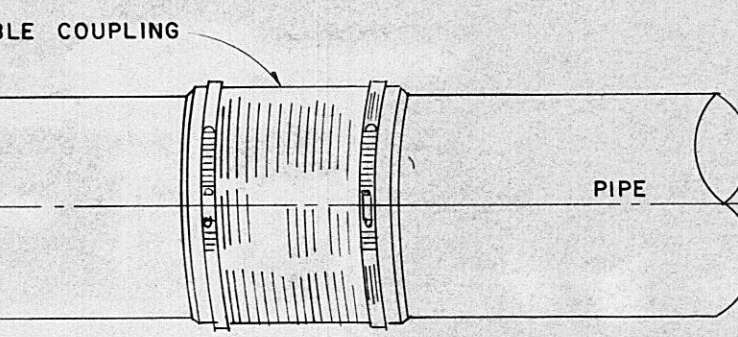
MANHOLE STEP DETAIL
(FOR PRECAST MANHOLES)



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

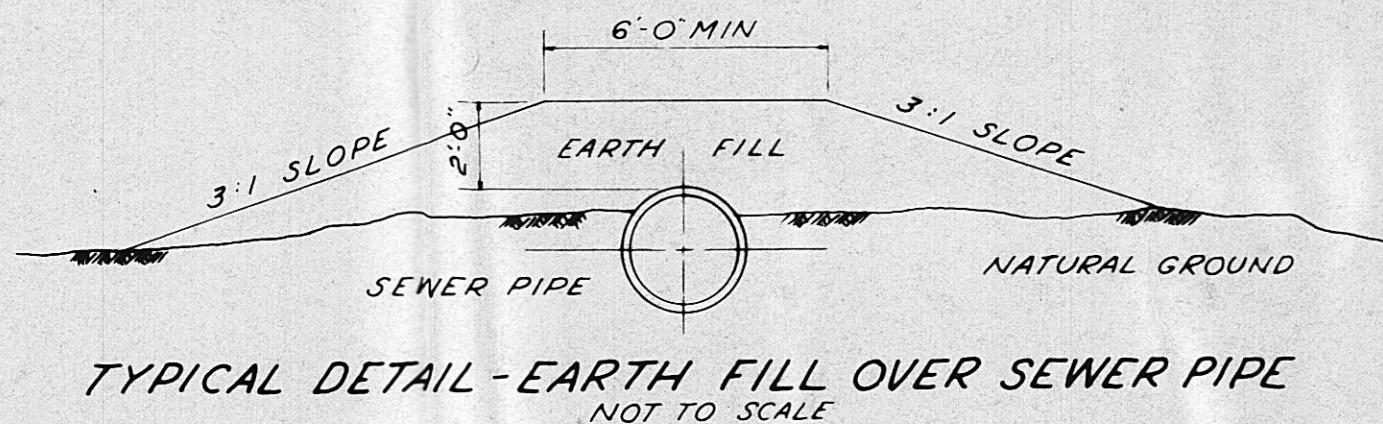
GOVERNING DIMENSIONS FOR CONCRETE PIERS

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"	12"
15"	19"	4"	15"

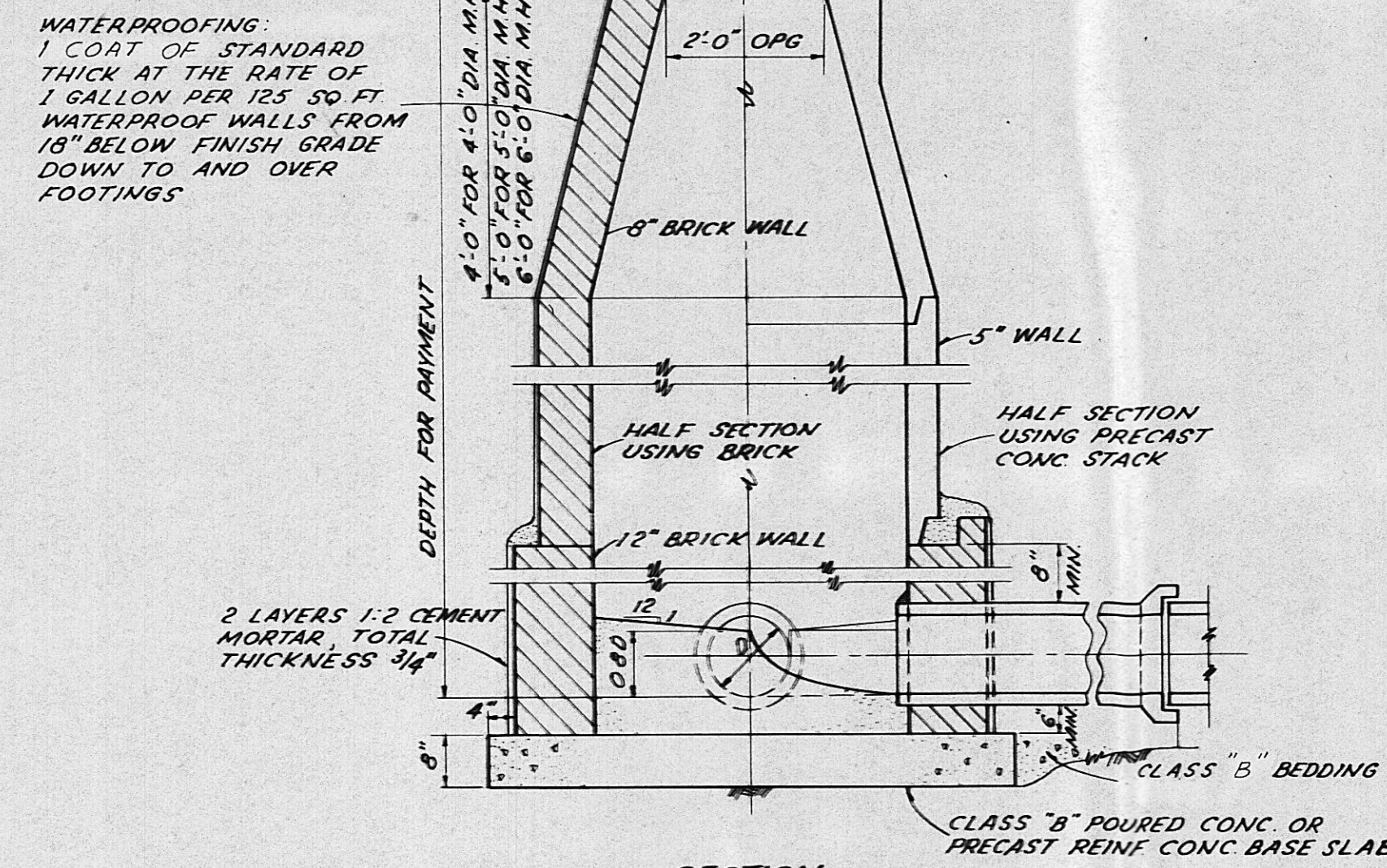


NOTE:
(1) CONTRACTOR TO USE COUPLING AS RECOMMENDED
BY MFG. IN JOINTING UNLIKE TYPES OF PIPE.
(2) FLEXIBLE COUPLING-PIPE SIZES 6" THRU 24"

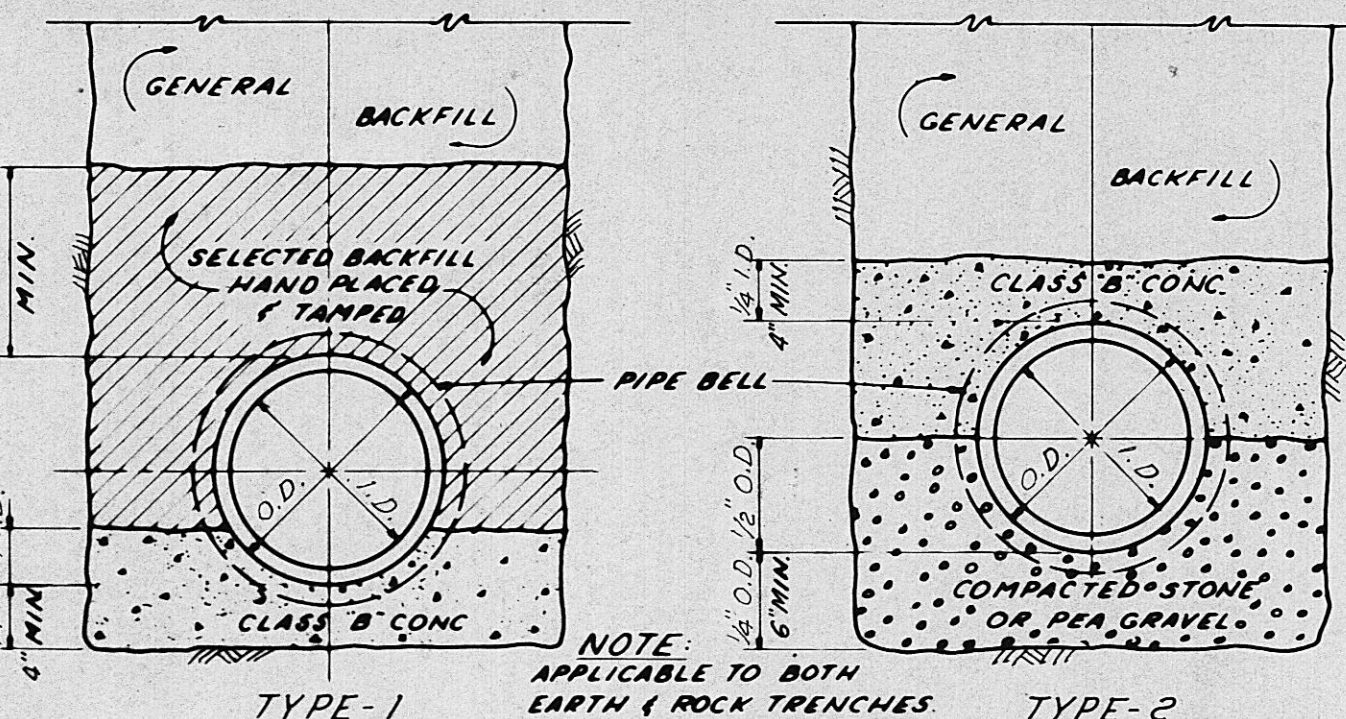
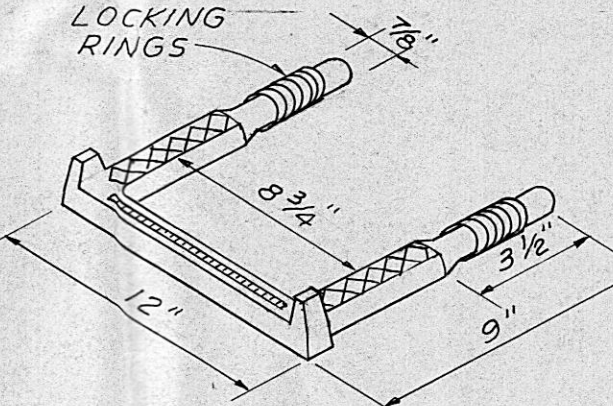
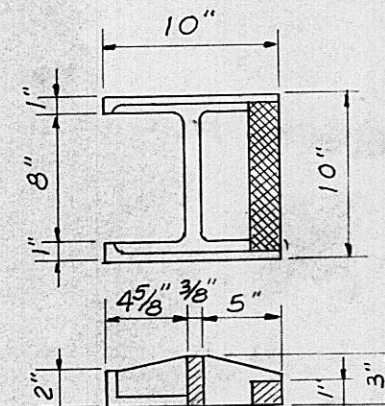
TYPICAL DETAIL-FLEXIBLE COUPLING
FOR JOINING SEWER PIPE



TYPICAL DETAIL-EARTH FILL OVER SEWER PIPE
NOT TO SCALE

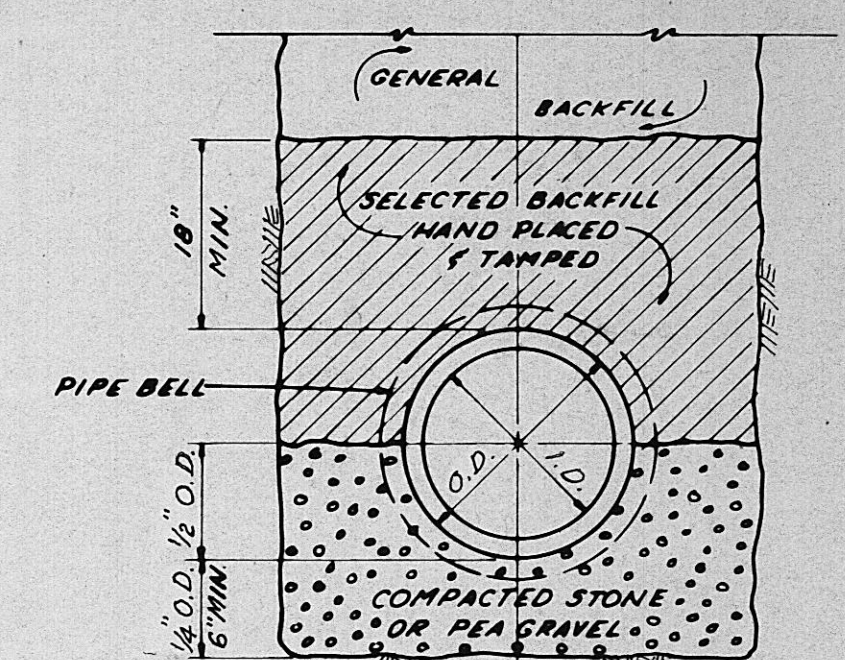


SECTION
4', 5' OR 6' DIA. MANHOLE
(ALTERNATE CONSTRUCTION)
SCALE: 1/2"=1'-0"

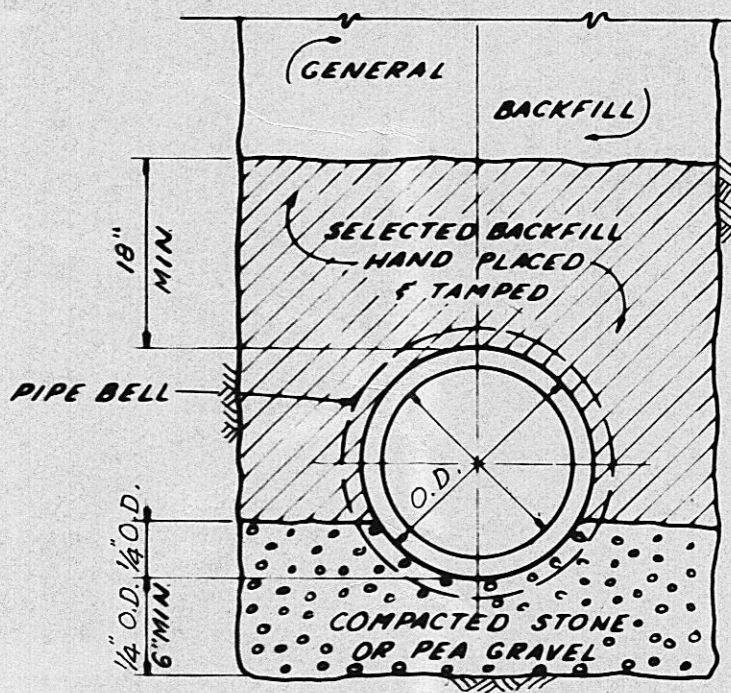


CLASS "A" BEDDING
USE EITHER TYPE

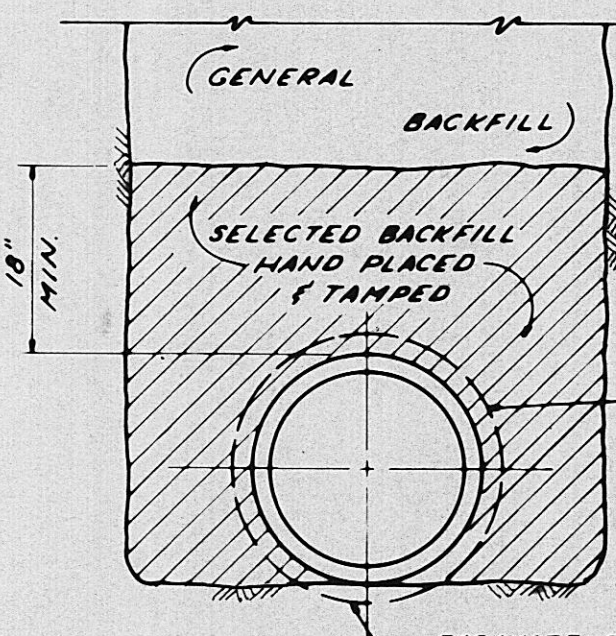
NOTE:
BC= BREADTH OF CONDUIT.



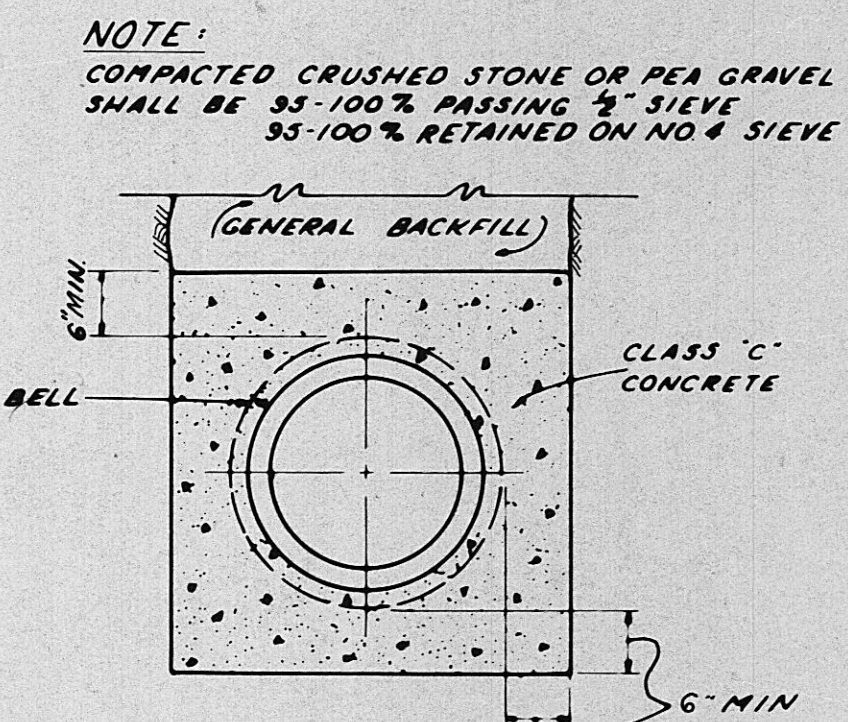
CLASS "B" BEDDING



CLASS "C" BEDDING

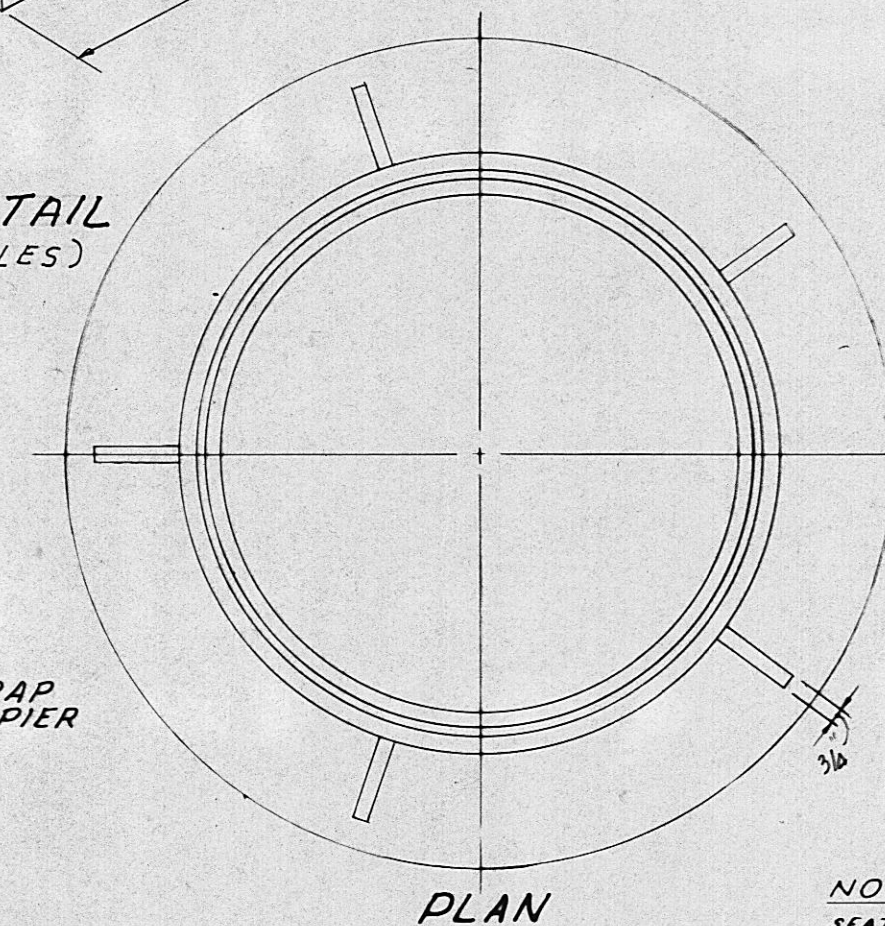


CLASS "D" BEDDING



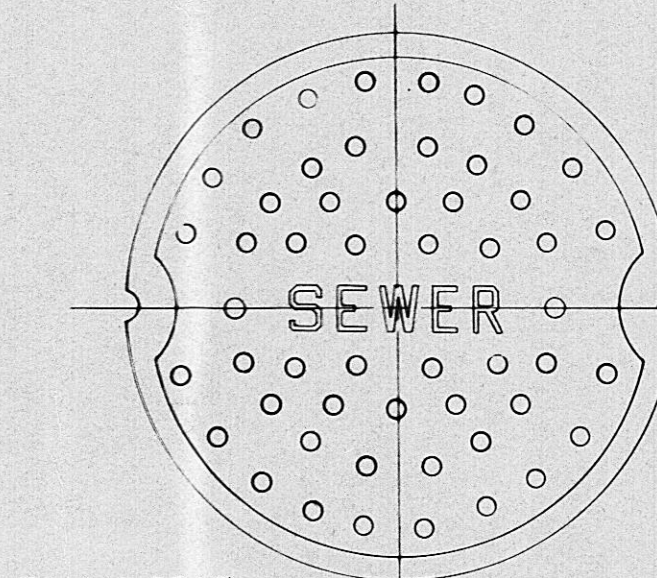
CONCRETE ENCASUREMENT

NOTE:
COMPACTED CRUSHED STONE OR PEA GRAVEL
SHALL BE 35-100% PASSING 1/2" SIEVE
55-100% RETAINED ON NO. 4 SIEVE



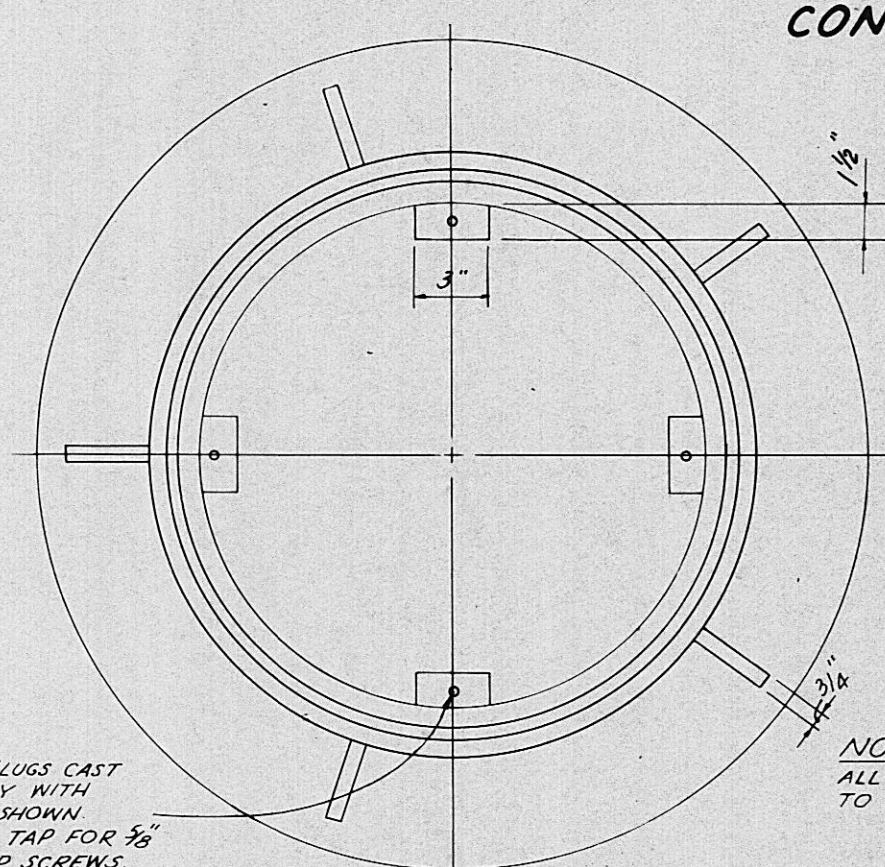
PLAN

NOTE:
APPROX. WT. FRAME 250#
APPROX. WT. COVER 125#
APPROX. WT. TOTAL 375#

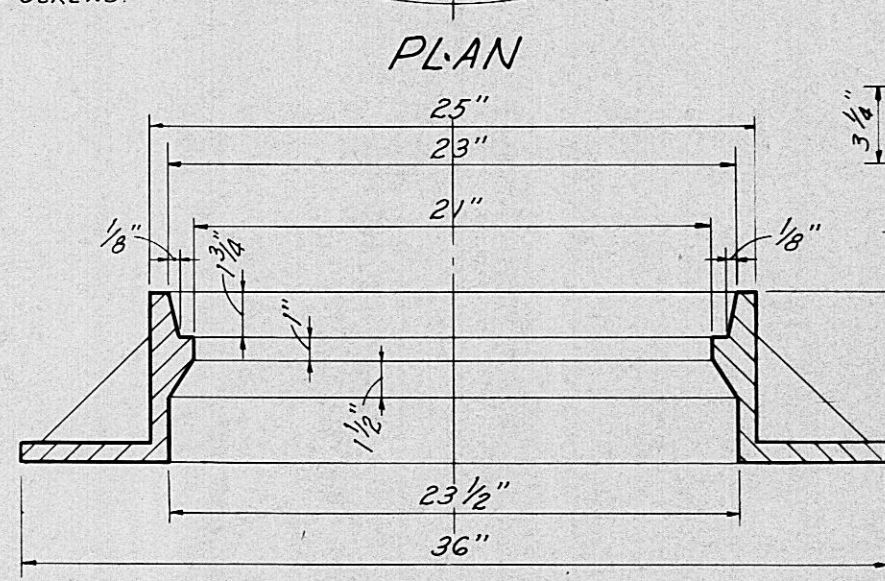


PLAN

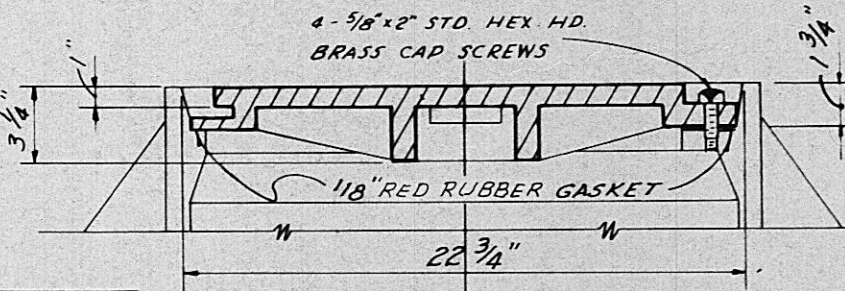
NOTE:
FRAME SHALL BE CAST
INTERIORLY WITH
FRAME AS SHOWN
DRILL AND TAP FOR 3/8"
BRASS CAP SCREWS



SECTION
STANDARD
C.I. MANHOLE COVER
NOT TO SCALE

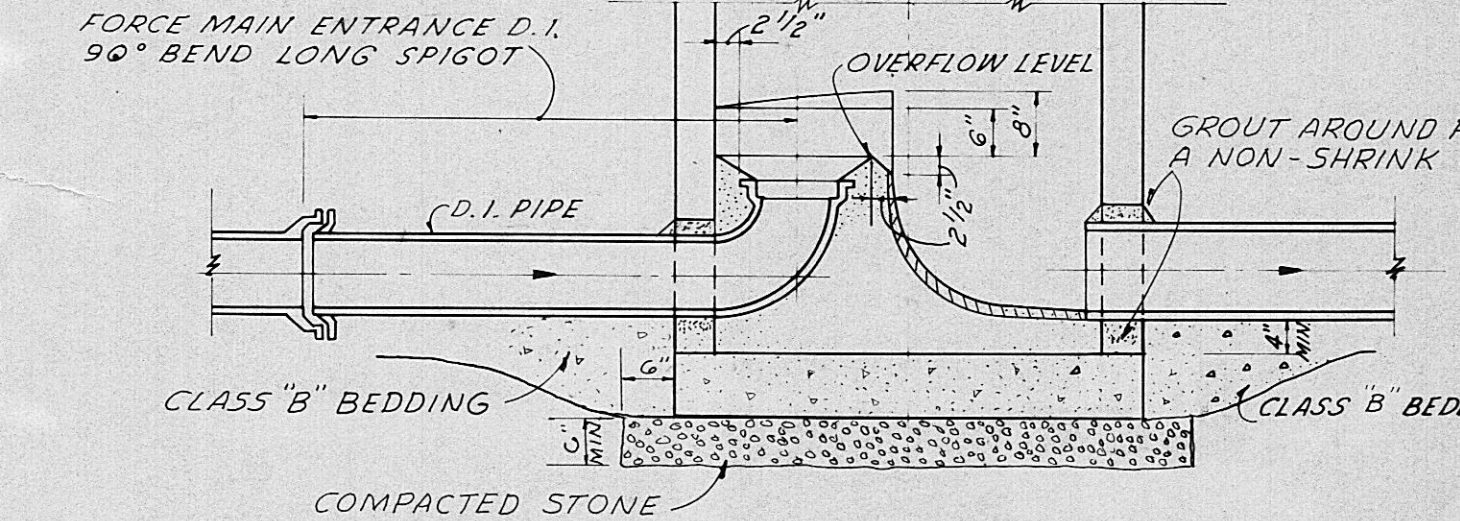


SECTION
WATERTIGHT
C.I. MANHOLE FRAME
NOT TO SCALE

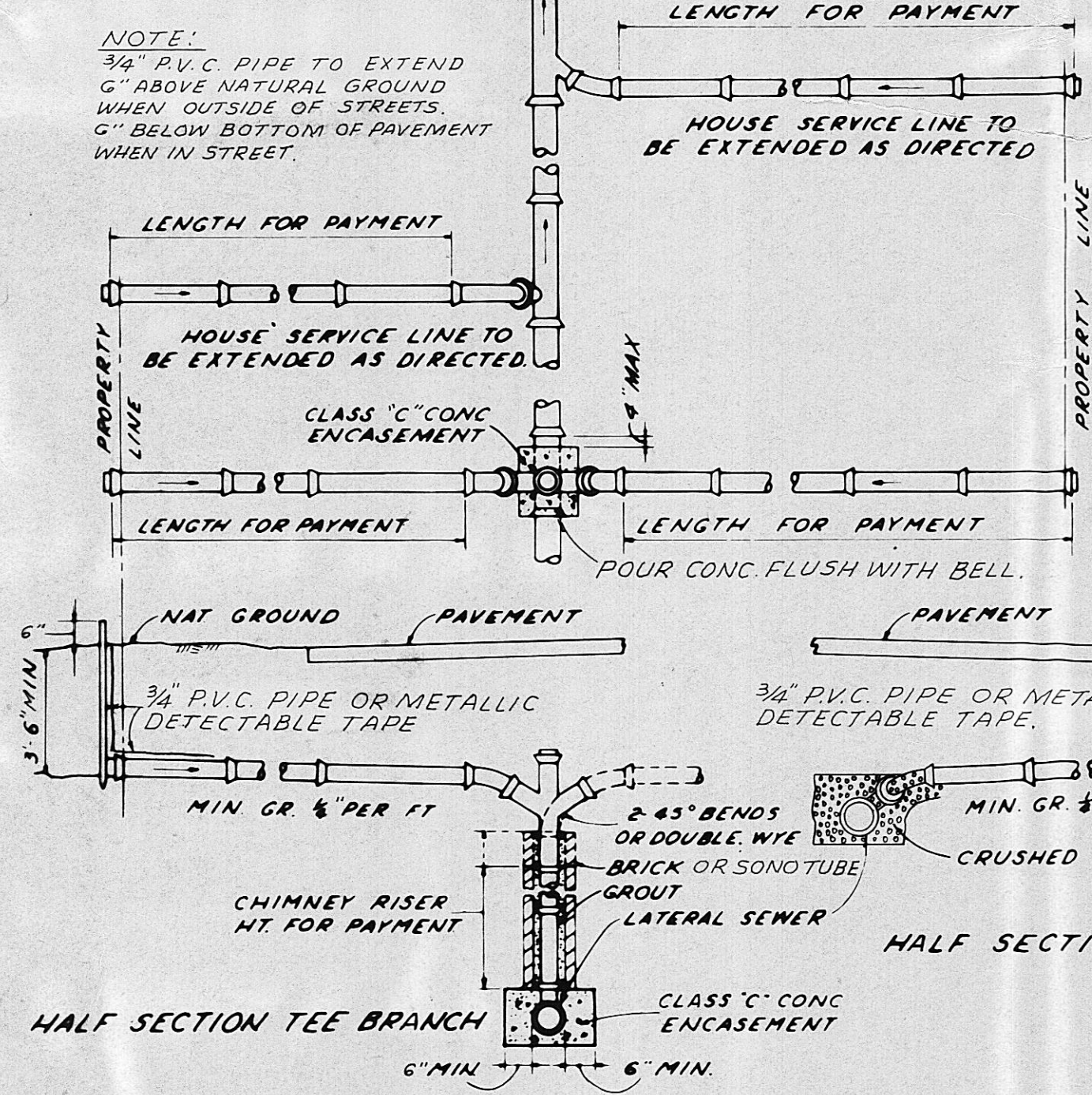


SECTION
WATERTIGHT
C.I. MANHOLE COVER
NOT TO SCALE

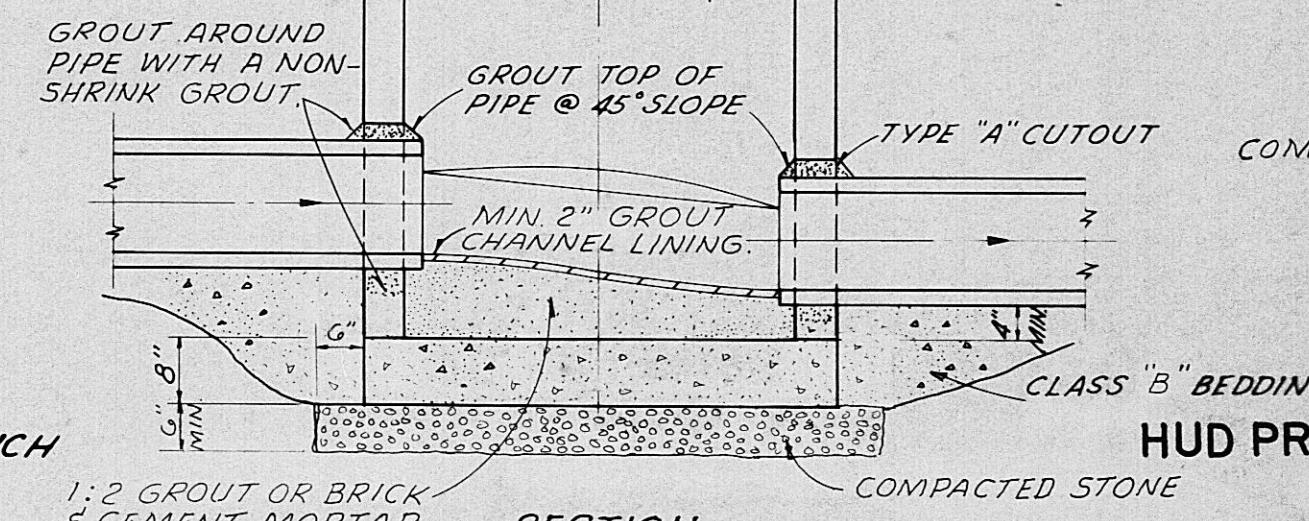
PIPE SIZE	MIN. DIA.
8"	14"
10"	16"
12"	20"
15"	24"



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



TYPICAL DETAILS OF SANITARY HOUSE SERVICE LINE
NOT TO SCALE



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

WIEDEMAN AND SINGLETON
ENGINEERS
ATLANTA GEORGIA



SCALE
AS SHOWN
DATE
NOV. 1978