

LATERAL 238, SOUTHWEST INTERCEPTOR

SANITARY SEWER IMPROVEMENTS

FOR

WESTWOOD HEIGHTS SECOND ADDITION

Lots 8 through 15, inclusive, Block 11

Lots 6 through 25, inclusive, and Lots

28 through 30, inclusive, Block 13.

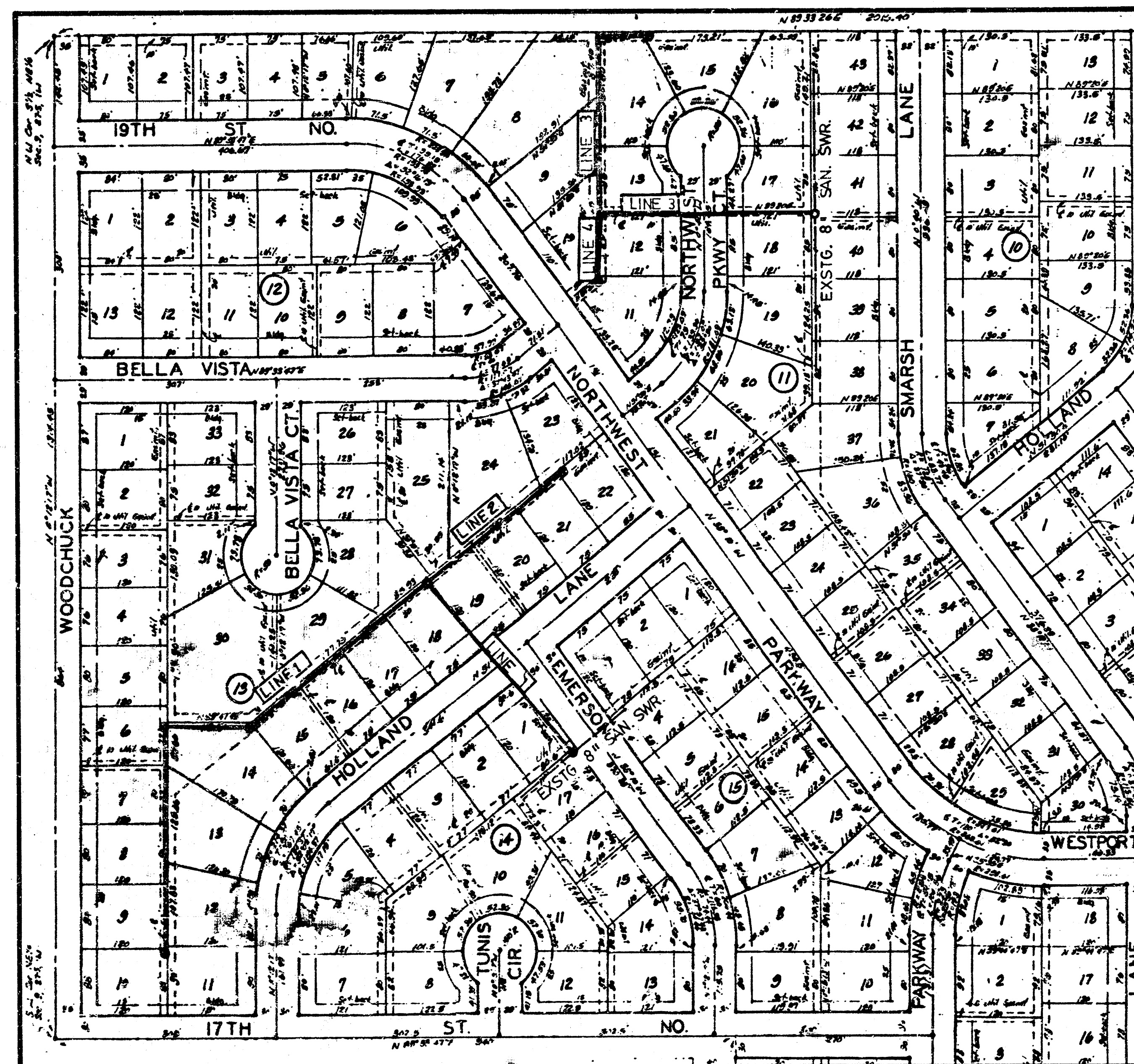
PROJECT NUMBER

468-76-245-81674-000-000-C01

GENERAL NOTES

1. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are disturbed by his construction operations. Such irons shall be re-established by a licensed land surveyor or professional engineer, in accordance with state laws.
2. The Contractor shall excavate and remove the existing pipe plug at Sta. 1+24, Line 3, in order to verify the pipe fio elevation prior to proceeding with construction.

North
No Scale



BENCH MARKS

1. City Disc. 42' no. and 36.5' east of 16 sec. cor., intersection of Ridge Road at 17th Street No.
Elev. = 142.51 city datum
2. 1' cut in top of curb, east side 22' north of intersection Holladay Ln. at Northwest Parkway, on Northwest Parkway.
Elev. = 156.47 city datum
3. 1' cut, 2' east of exstg. end of return on the northerly side Northwest Parkway, located near west end of Lot 20, Blk. 11, Westwood Heights Second Addn.
Elev. = 154.62 city datum
4. 1' cut 5.5' west of end of exstg. curb (east of exstg. ab. in side) South Side 17th Street No., located near the NE cor. of Westlink 16th Addn.
Elev. = 157.25 city datum

CITY of WICHITA, KANSAS

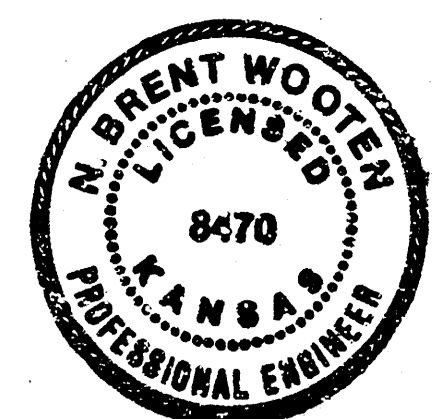
MICHAEL E. LINDEBAK
CITY ENGINEER

INDEX of SHEETS

Title and Benefit District	1
Plan/Profile sheets	2-4
Type 'P' Manhole Detail	5
Type 'C' Manhole Detail	6

AS BUILT
RPL
7-20-87

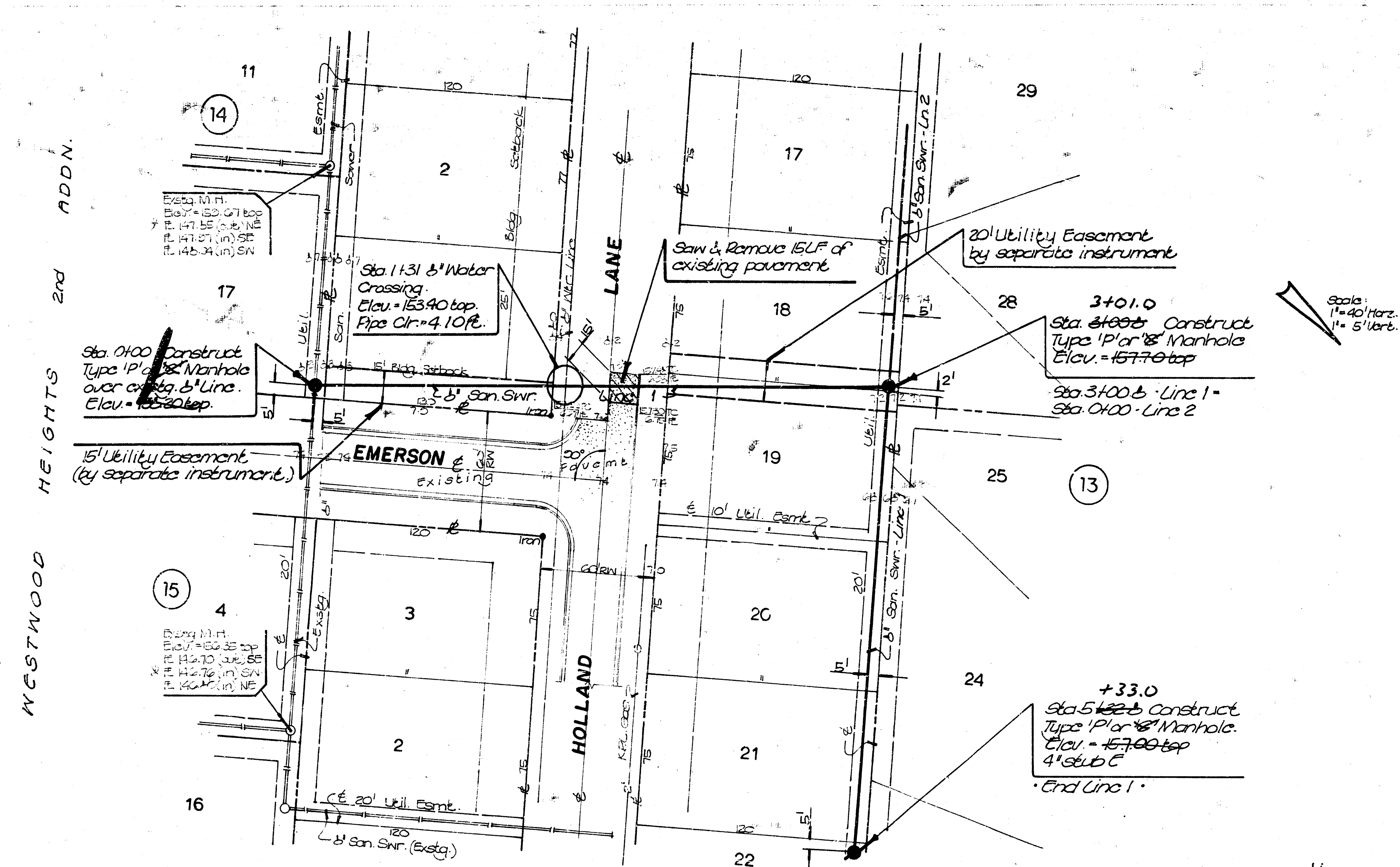
TITLE SHEET



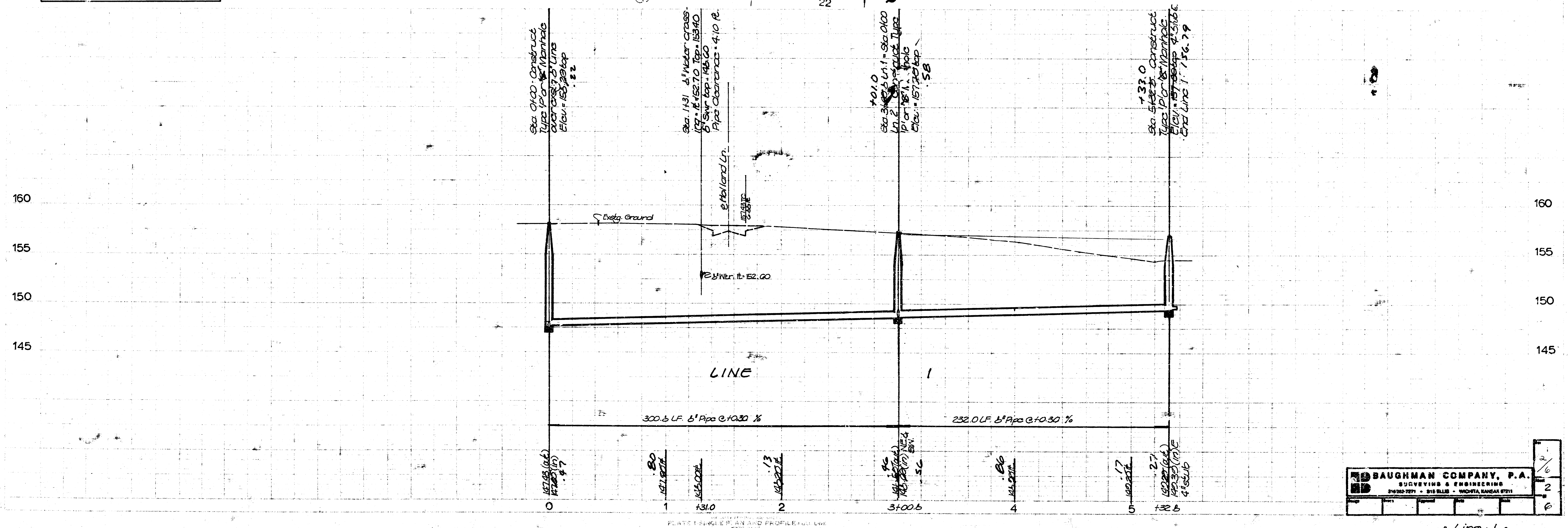
BAUGHMAN COMPANY, P.A.					
SURVEYING & ENGINEERING					
315262-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
Design	Drawn	Approved	Date	Scale	Sheet
W.B. Nader	See Jr.		April, 87	1"=40'±	1 of 6

FILMED FROM THE BEST
AVAILABLE COPY

- Benchmarks:**
1. City Disc 42" no and 36" cast of 14300 cor, intersection of Ridge Road at 17th Street No. Elev. = 142.61 city datum
 2. 1' x 1' Out in Top of curb east side 22' north of intersection Holland Ln at Northwest Parkway on Northwest Parkway. Elev. = 156.71 city datum
 3. 1' x 1' out 2' east of existing and of return on the northern side Northwest Parkway, located north west and lot 20, 21, 11, Westwood Heights Second Addition. Elev. = 154.82 city datum
 4. 1' x 1' out 55' west of end of existing curb (out of curb on road) South side 17th Street No. located near the NE cor. of Nashville Loan Road. Elev. = 157.23 city datum

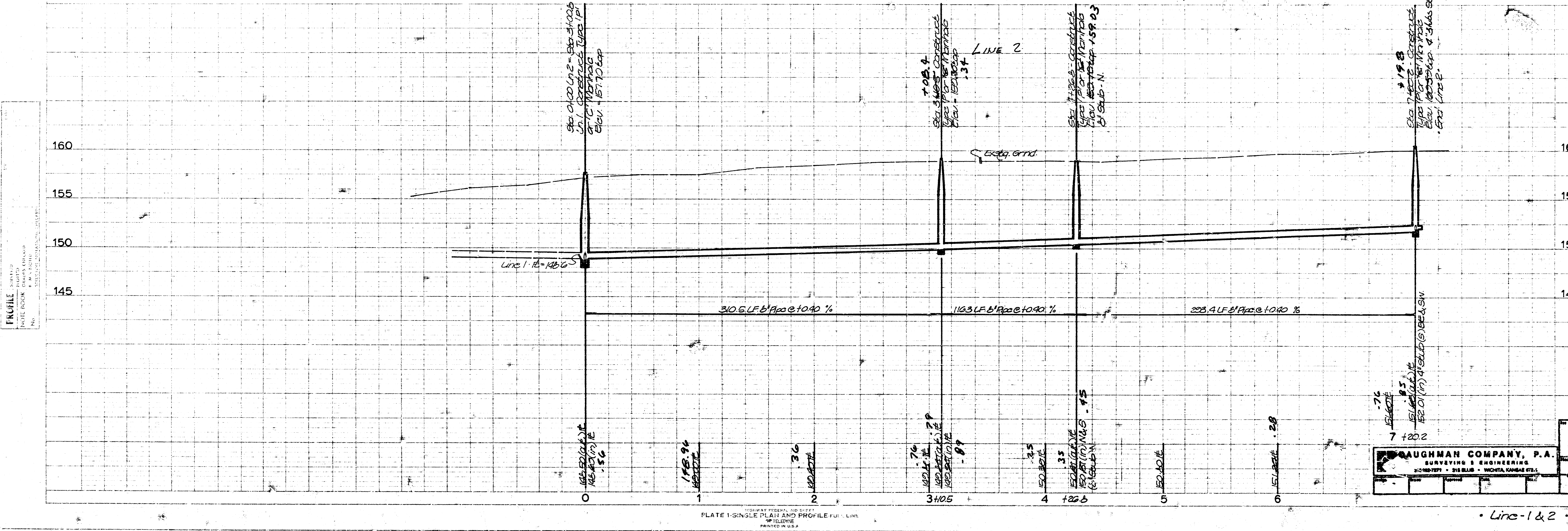
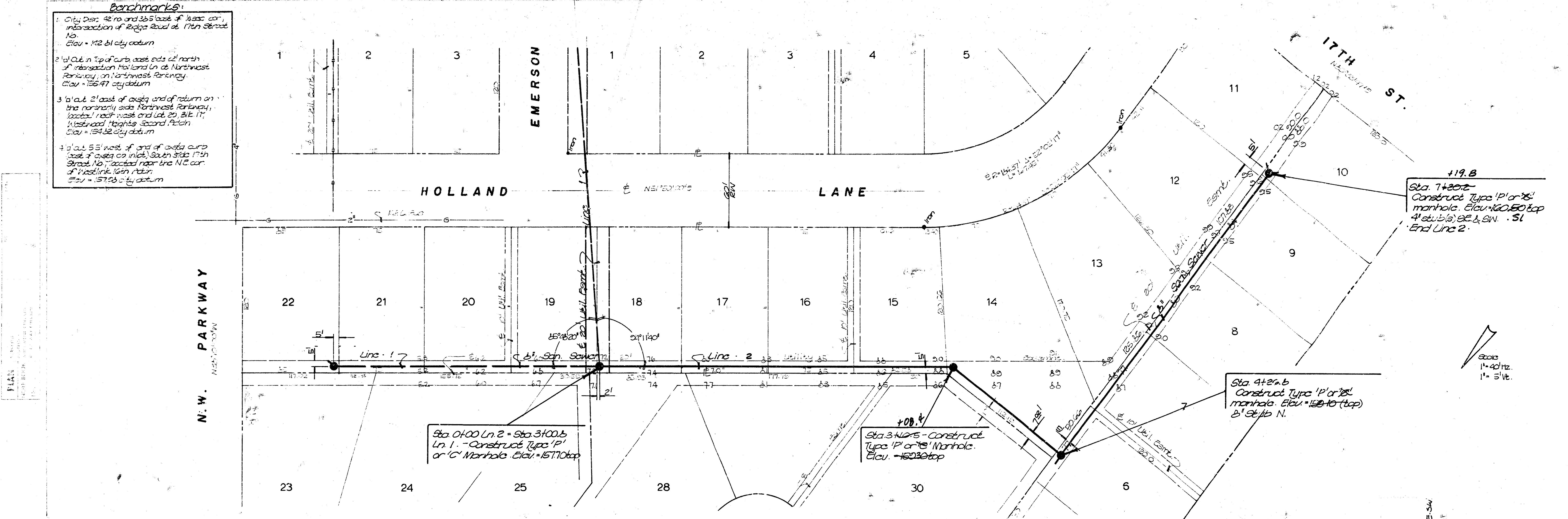


Note: Saw Joint shall be incidental to Pavement Removal Bid Item.

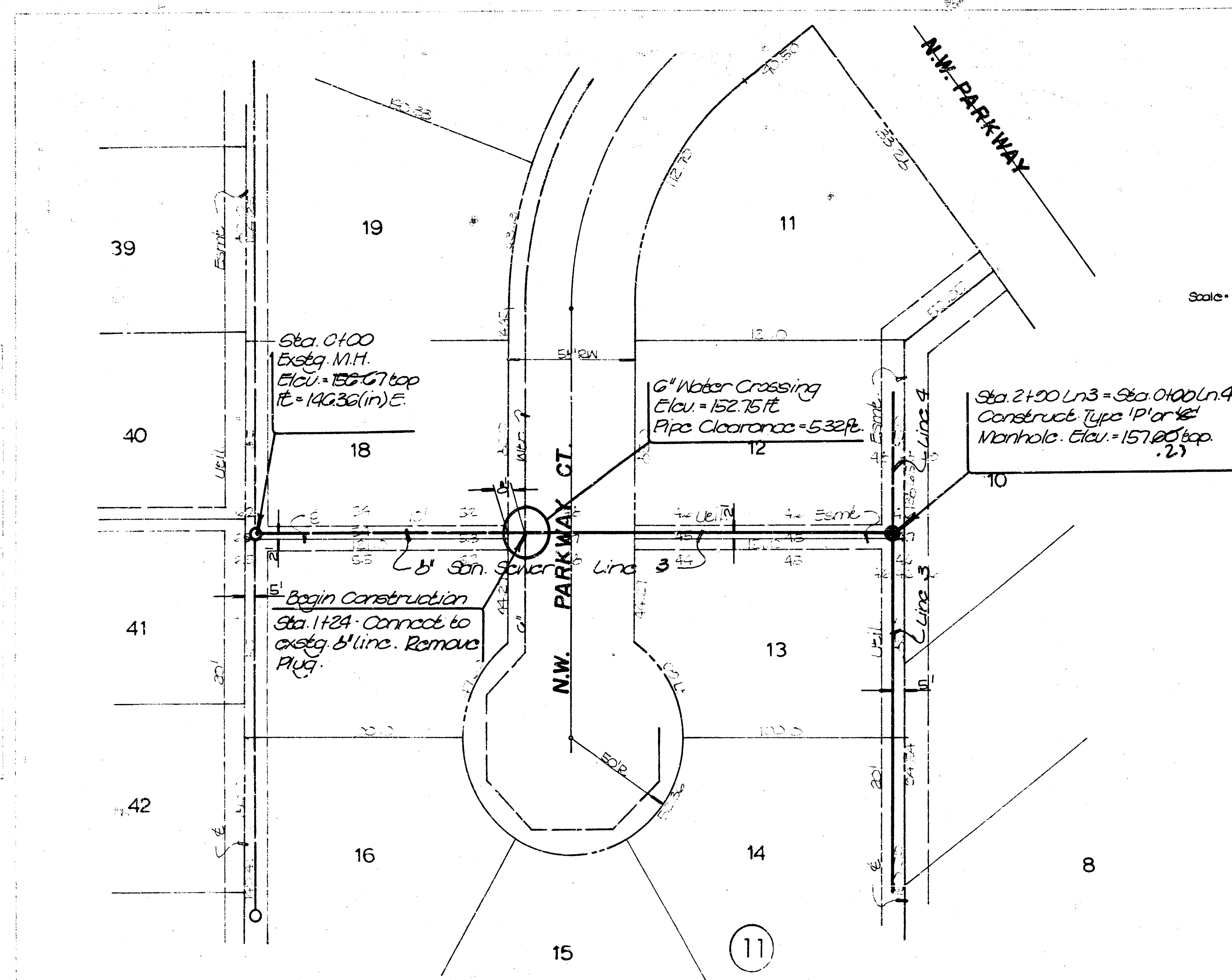


BAUGHMAN COMPANY, P.A.
 SURVEYING & ENGINEERING
 2100 7TH ST. • DUBLIN, OHIO 43017
 614-885-7771 • FAX 614-885-7711

FILMED FROM THE BEST AVAILABLE COPY



FILMED FROM THE BEST AVAILABLE COPY



- Benchmarks**
- City Dwg. 42 to and 43 east of 43rd St. Intersection of 2nd St. and 11th St. No. Elev. = 42.61 city datum
 - 1st Out in Top of curb east side 2nd St. Intersection of 2nd St. and 11th St. Northwest Parkway on Northwest Parkway. Elev. = 156.41 city datum
 - 1st Out 2nd East of 2nd St. end of return on 2nd St. Northwest Parkway located near west end of 2nd St. 11th St. Westwood Heights Second Addition. Elev. = 154.32 city datum
 - 1st Out 55' West of and off curb east side of 2nd St. (1st St. South side 17th St. 1st Out 1st St. Addition. Elev. = 157.25 city datum

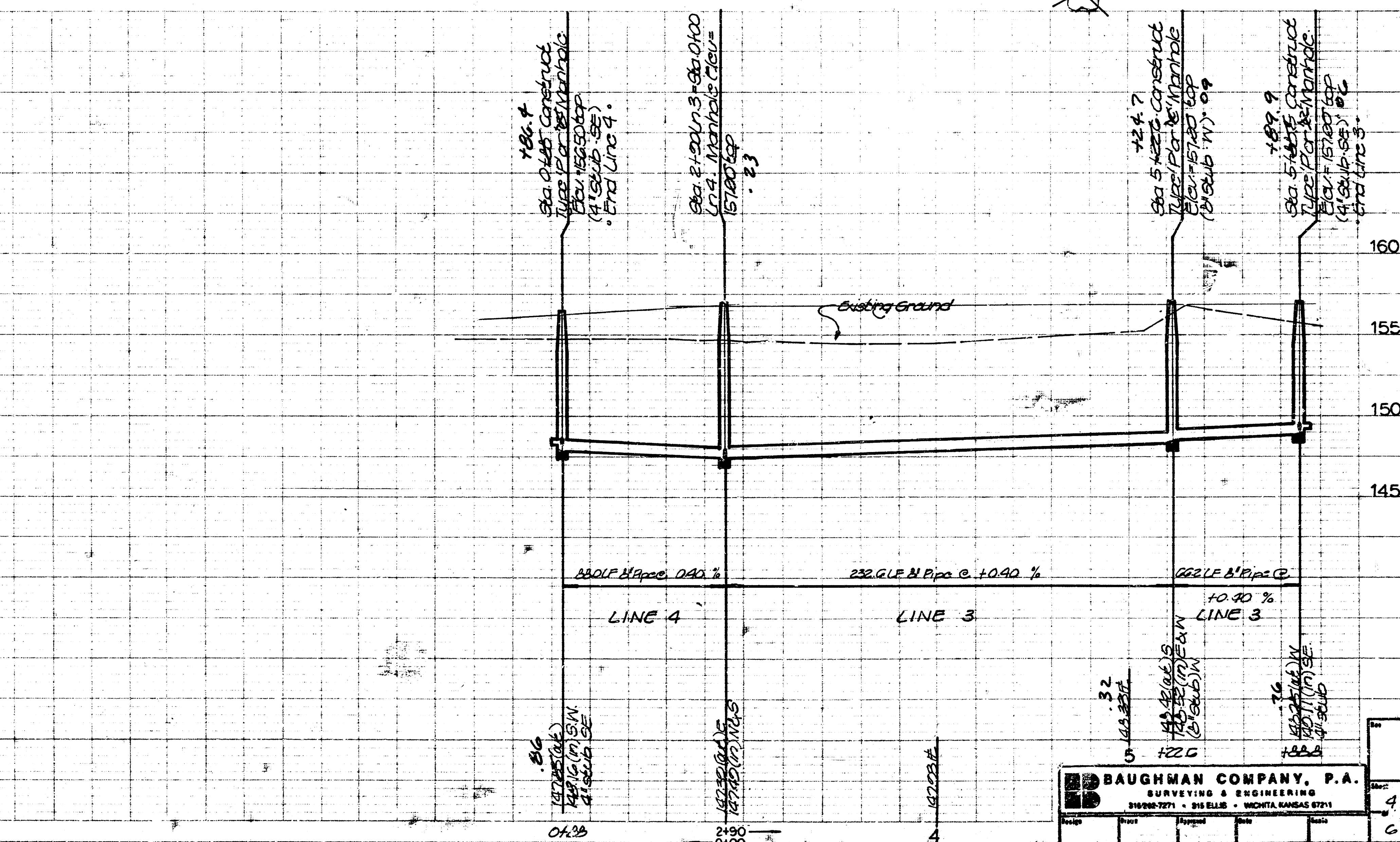
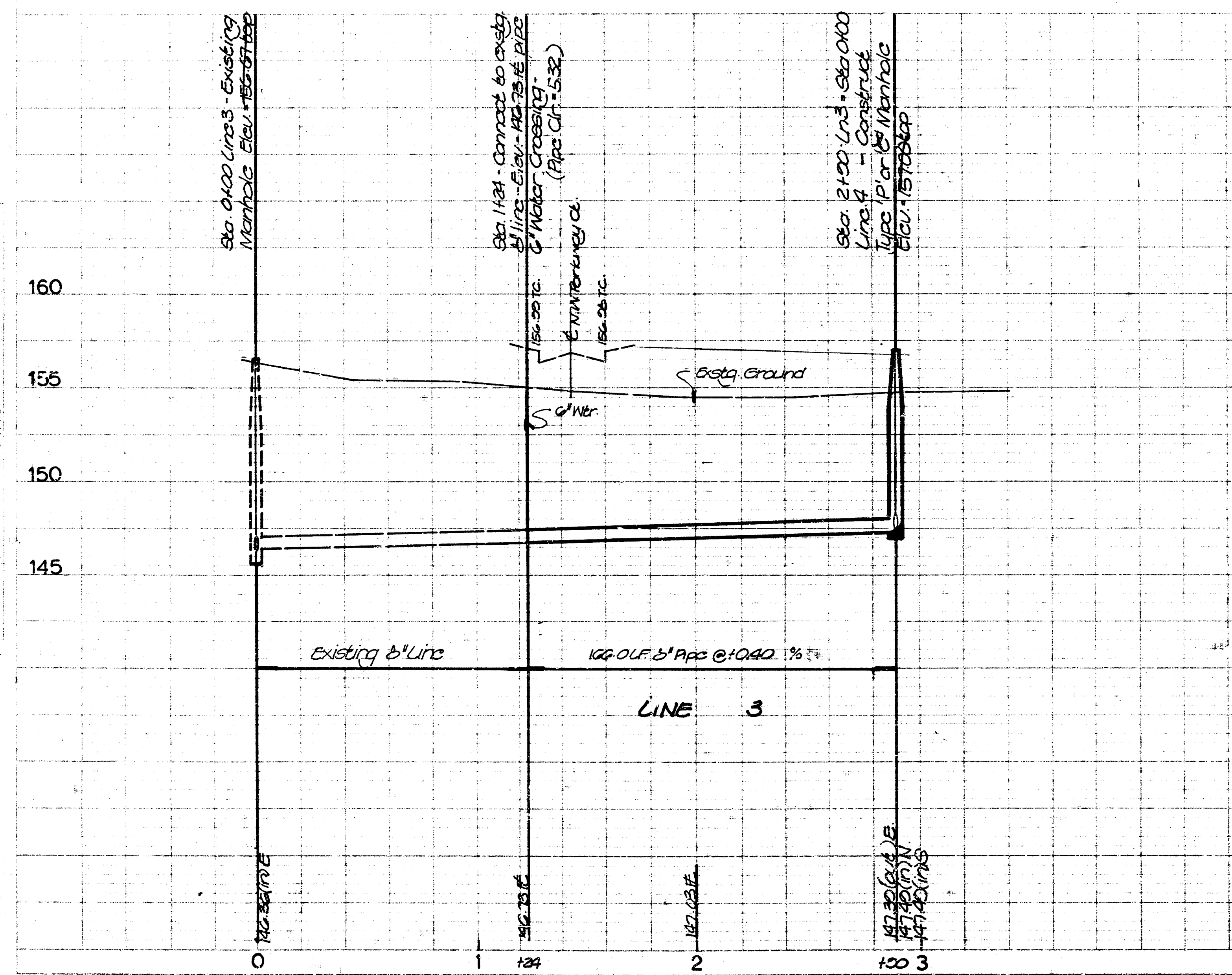
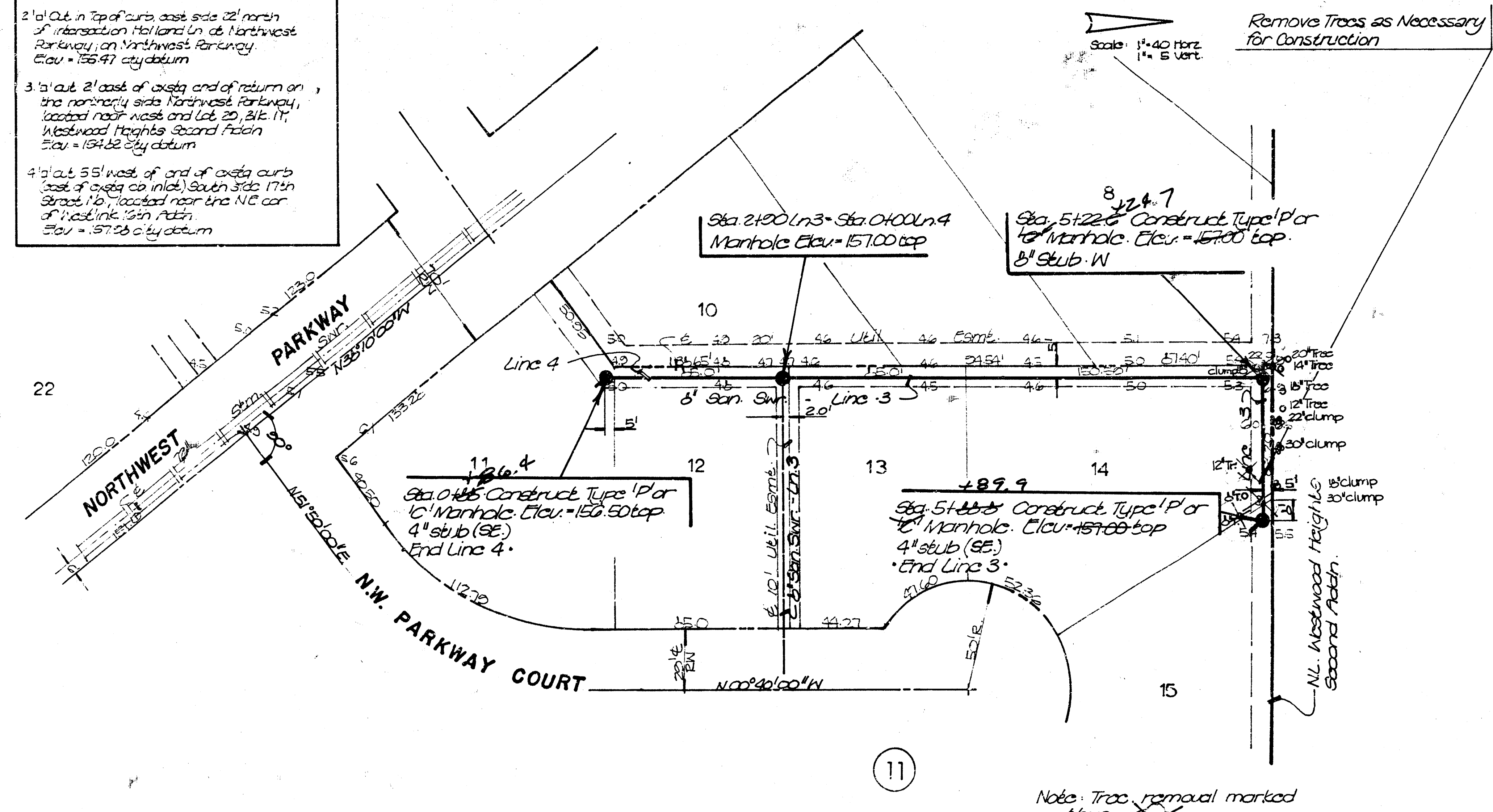


PLATE 1-SINGLE PLAN AND PROFILE-ULL LINE

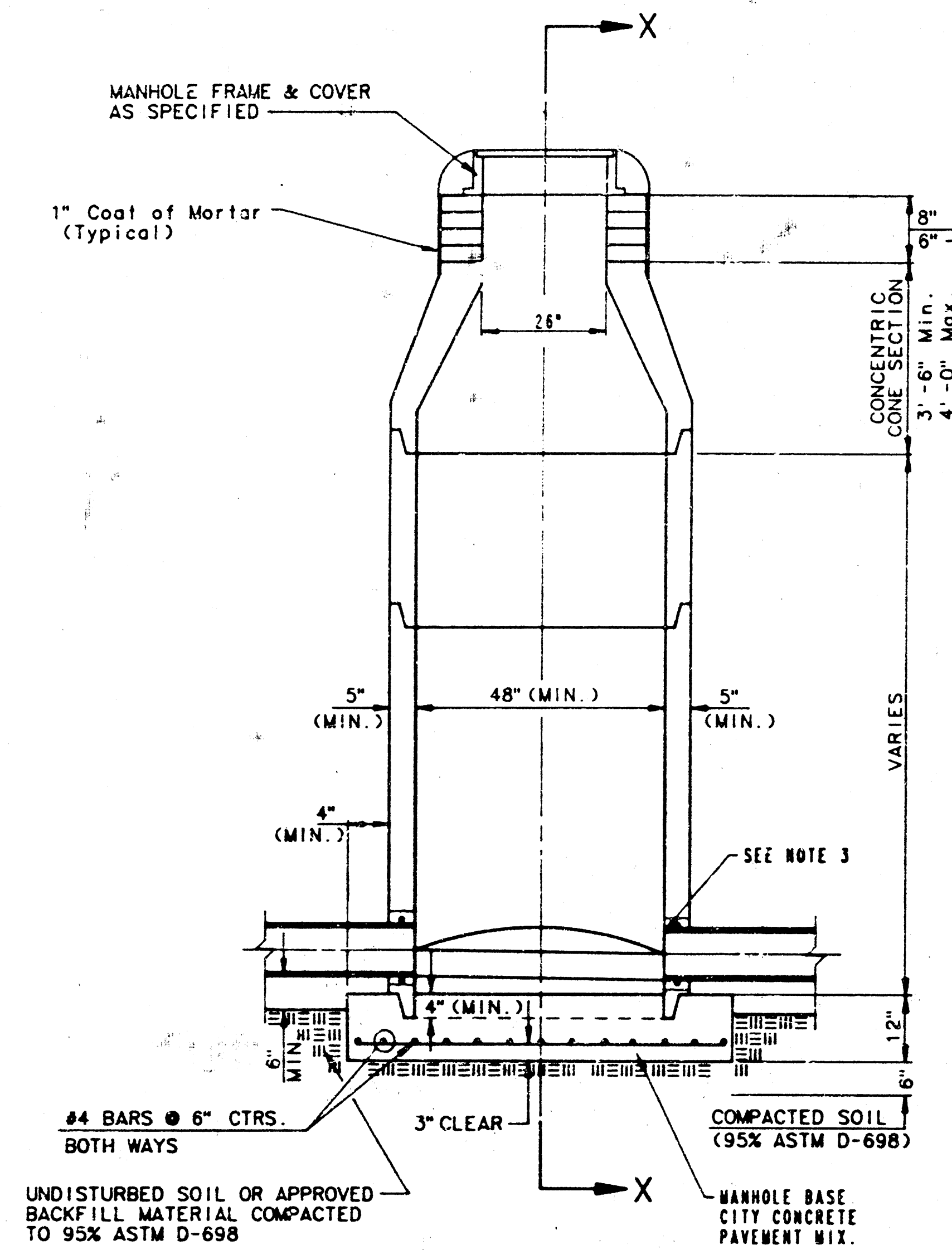
FILMED FROM THE BEST AVAILABLE COPY

SEWER APPURTENANCES DETAILS

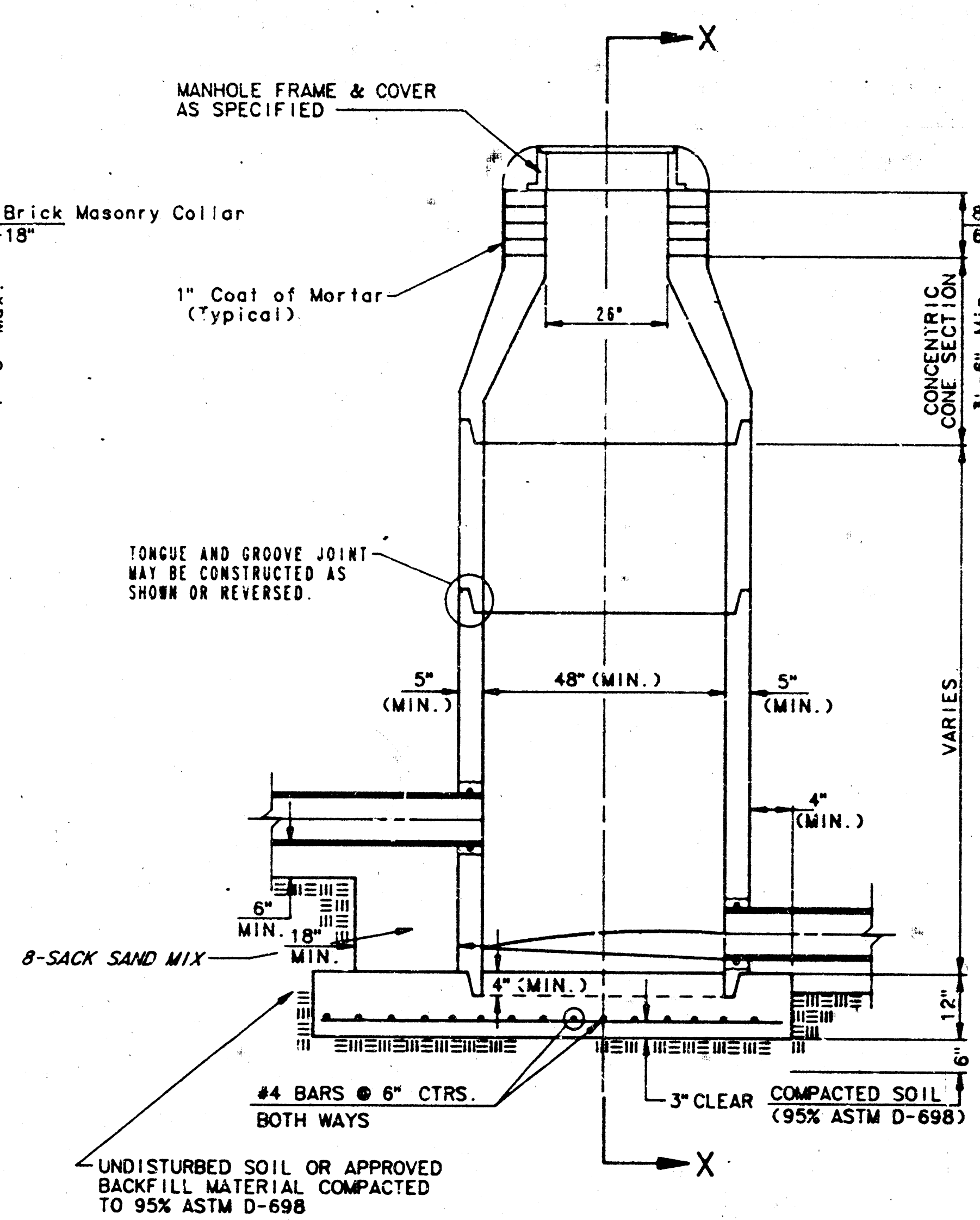
ADOPTED AS STANDARD DESIGN

BY

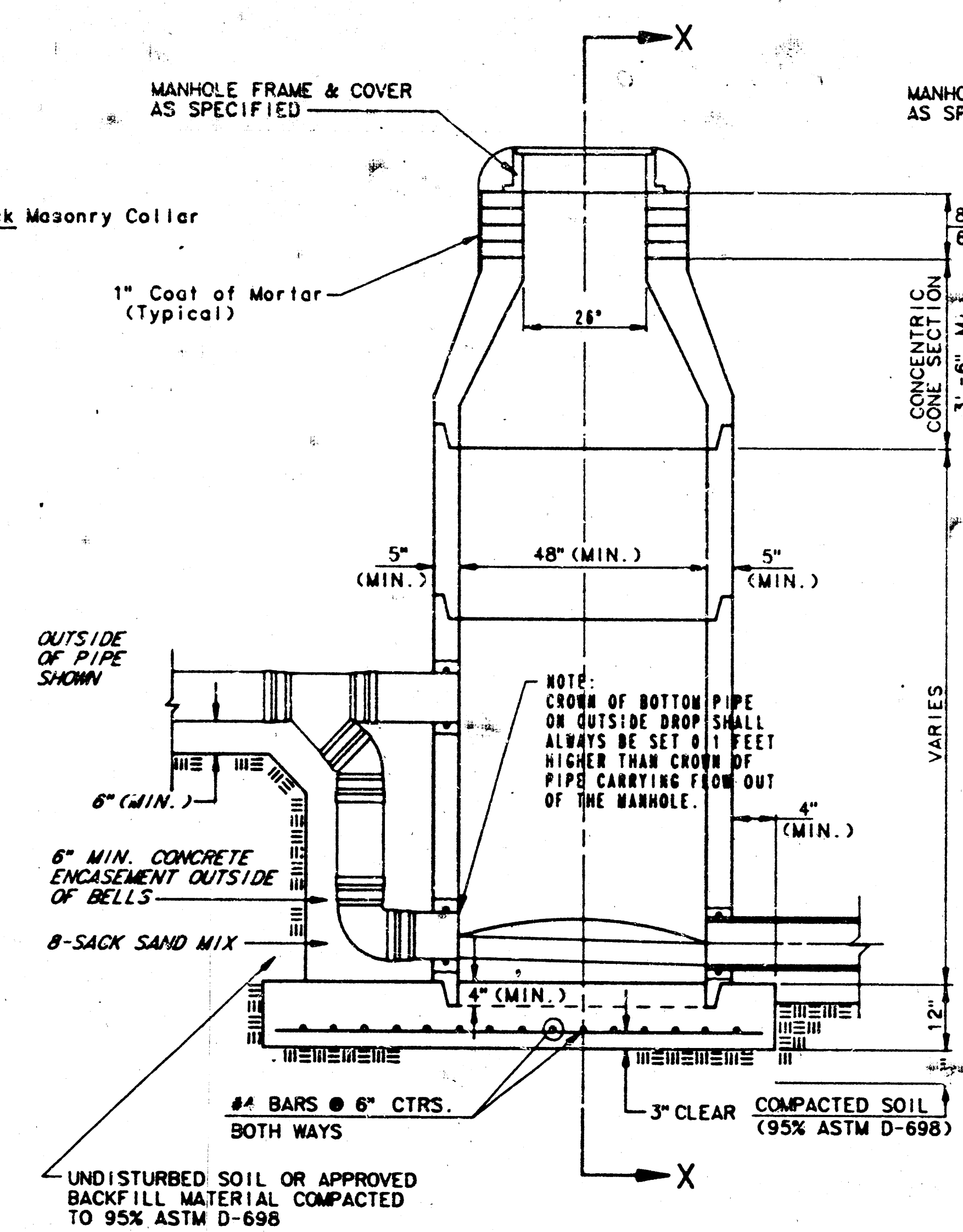
CITY OF WICHITA



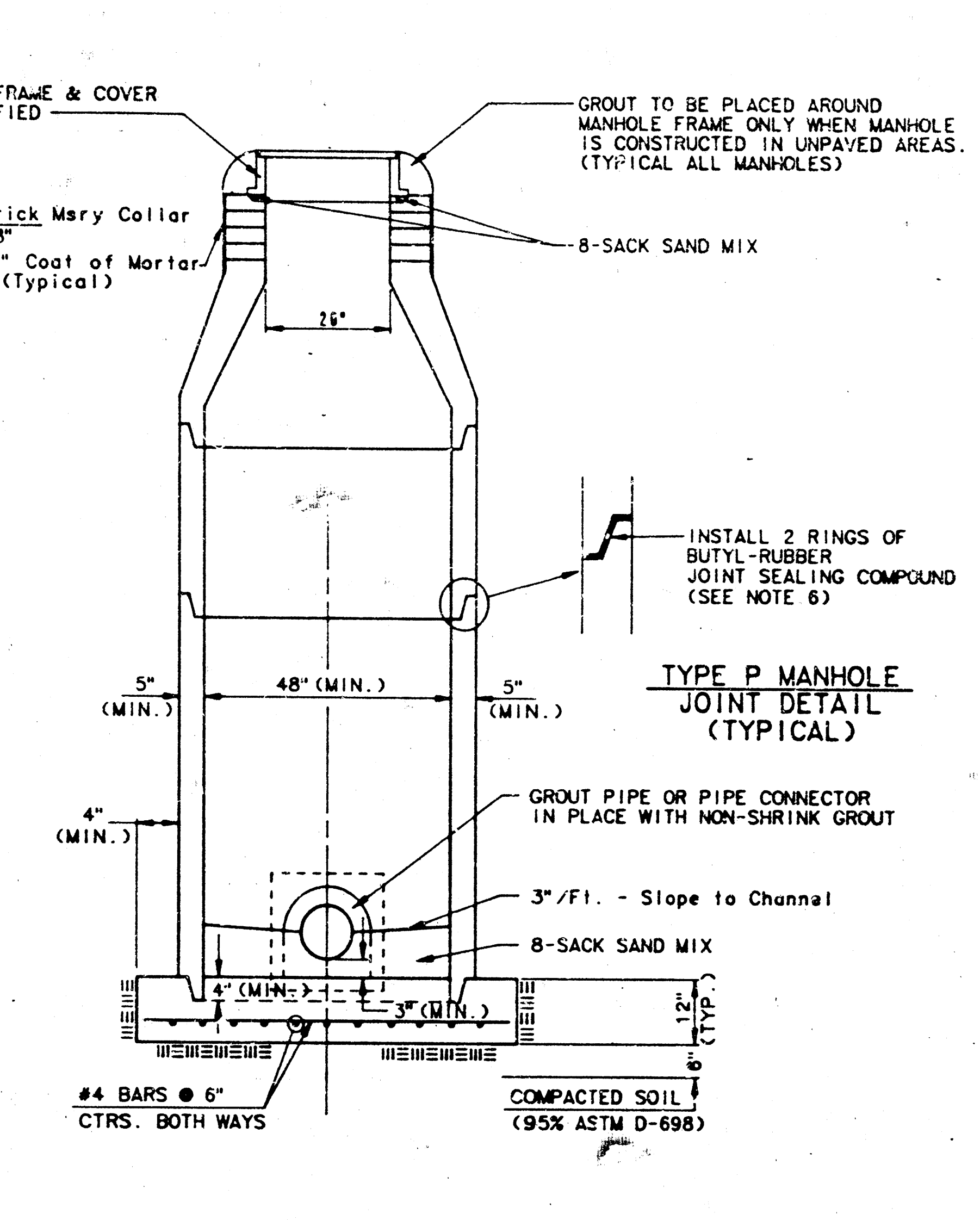
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF A.S.T.M. C-1278 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASUREMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS OF NEMEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT OF NORTALARMA 633 BITUMINUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN PACKS OF CEMENT PER CUBIC YARD. COARSE SAND SHALL BE USED IN MASONRY. CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT SPECIFICATIONS USUALLY CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADJUTIVE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTION ON EXISTING MANHOLE.
13. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO REVEAL LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.

SHEET 5 OF 6
468-76-245-81674-000-000-001
Revised: June 12, 1985

FILMED FROM THE BEST
AVAILABLE COPY....

City of Wichita, Kansas

Technical drawing of a manhole structure, showing various components and dimensions. The drawing is a cross-section view of a manhole, including the top ring and lid, the main shaft, and the base. Key components and dimensions are labeled as follows:

- Top Section:**
 - RING AND LID AS SPECIFIED**: Located at the very top.
 - SEE GEN NOTES**: Points to the top of the shaft.
 - 8" BRICK MASONRY**: The upper part of the shaft wall.
 - 1" COAT OF MORTAR**: The outer layer of the brick masonry.
 - 26"**: The diameter of the top opening.
- Manhole Wall:**
 - CITY CONC PAV'T MIX**: The material used for the main shaft wall.
 - MANHOLE WALL**: The main vertical structure.
 - NOTE CROWN OF PIPE FLOWING IN SHALL NOT BE LOWER THAN CROWN OF PIPE FLOWING OUT**: A note indicating the required slope for the pipe.
 - FLOOR SHAPING SLOPE - 3" TO 1'**: The slope of the floor at the bottom of the shaft.
- Dimensions and Verticality:**
 - 8" MIN - 18" MAX BRICK MASONRY COLLARS**: The height of the top section.
 - 30"**: The diameter of the main shaft.
 - 8"**: The thickness of the wall.
 - 30' MIN - 48' MAX**: The height of the main shaft.
 - VARIABLE**: The height of the main shaft is variable.
 - 9" MIN**: The minimum height of the base.
- Base Section:**
 - MANHOLE BASE**: The bottom of the shaft.
 - CITY CONC PAV'T MIX**: The material used for the base.
 - SEE GEN NOTES**: Points to the base.
 - 4" MIN**, **4" MIN**, **8"**: The width of the base sections.

Technical drawing of a manhole structure showing dimensions and construction details. The drawing includes the following labels and dimensions:

- SEE GEN NOTES
- 8" BRICK MASONRY
- 1" COAT OF MORTAR
- 20"
- 30"
- 8" MIN
- 18" MAX
- BRICK MASONRY COLLAR
- 30" MIN - 48" MAX
- MANHOLE WALL (10% CONC. PAV'T MIX)
- 8"
- NOTE: BOTTOM SHALL BE 0' OUTFLOWING
- SEE GEN NOTES
- 8" SACK SAND MIX FOR PIPE SUPPORT TO LIMIT OF EXCAV
- 9" MIN
- FLOOR SHAPING
- SEE GEN NOTES
- 8"
- 4" MIN
- 3" MIN
- MANHOLE BASE

SEE GEN. NOTES

8" BRICK MASONRY

1" COAT OF MORTAR

26 1/2

30 1/2

8" MIN. 18" MAX. BRICK MASONRY COLLAR

30' MIN. - 40' MAX.

8"

SEE GEN. NOTES

REVERSE "Y"

8-SACK SAND MIX
6 MIN. CONCRETE
ENCASEMENT OUTSIDE OF
BELLS OR TO THE LIMIT
OF EXCAVATION WHEN
MORE THAN 6'

NOTE: CROWN OF BOTTOM PIPE ON
OUTSIDE DROP SHALL ALWAYS BE
SET 0.1 FT. HIGHER THAN CROWN
OF PIPE CARRYING FLOW OUT OF
THE MANHOLE

MANHOLE WALL
CITY CONC. PAV'T MIX

9" MIN.

MANHOLE BASE
CITY CONC. PAV'T MIX

SEE GEN. NOTES

4' MIN.

8"

4' MIN.

FLOOR SHAPING
SLOPE 3" TO 1"

CHANNEL
LOW OF
ENTER

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF CEMENT PER CUBIC YARD OF CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR EXTRACTING ADVERTISE. MORTAR SHALL BE PLACED AROUND THE MANHOLE AND THE DRAINING HAVING MANHOLES ARE COMPLETED IN UNPAVED AREAS. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER, THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. COST OF FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
3. AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUDED INTO THE MANHOLE WALL. THE LOWER INLET PIPE SHALL BE GROUDED INTO THE MANHOLE WALL. THE GROUDED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.
4. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE FOLLOWING PIPES AND THE OUTLET PIPES. SHOWING THE FOLLOWING EXCEPT FOR INSIDE DROP MANHOLES, FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY

THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLE SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.

5. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
6. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
7. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4" FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2" FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
8. STANDARD MANHOLES TYPE "C" AND STANDARD INSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

SHEET 6 OF 6

468-76-245-81674-000-000-001

JNL JAN. 1982

1934

FILMED FROM THE BEST
AVAILABLE COPY....