

STORM SEWER PLANS FOR WATERFORD NORTH

S.W.S. NO. 230 PROJECT NO. 468-76-245-81113-000-000-001

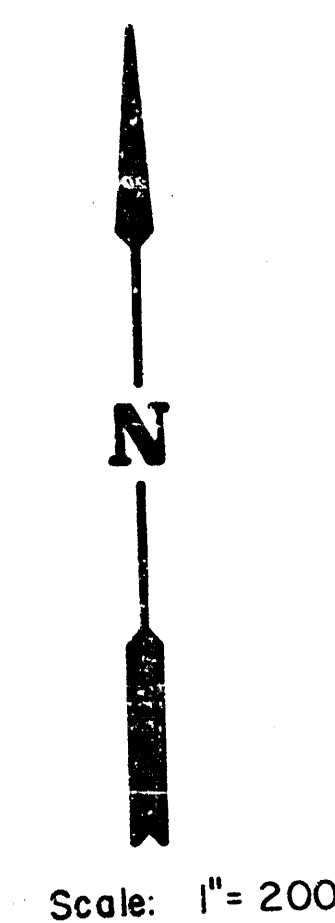
CITY OF WICHITA, KANSAS

MIKE LINDEBAK, CITY ENGINEER

AUGUST, 1983

GENERAL NOTES

1. The Contractor shall be responsible for preserving property irons. The Contractor shall be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor or a licensed professional engineer in accordance with state laws.
2. The tops of inlets and manholes as noted on the plans may vary so as to meet proposed top of curb elevations or pavement elevations. The field Engineer shall locate inlets and manholes with reference to proposed paving plans of the pertinent streets.
3. All concrete shall be Standard Paving Mix unless otherwise noted.
4. The riprap for this project shall be type 3. The type 3 riprap shall be 12" riprap. The rock for riprap and gravel protection shall be hard, dense, durable and shall be reasonably well graded. The size range of rock used shall be a maximum of one cubic foot and a minimum of 1 1/2".
5. Contractor shall avoid uncovering existing water lines unless absolutely necessary. Uncovering shall be done only in the presence of a Water Department Engineer.



Scale: 1" = 200'

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LINE 1
3	LINE 2 & 3
4	LINE 4
5	DITCH (By Others)
6	CURB INLET DETAILS
7	MANHOLE DETAILS
8-9	FINAL PLATS

PEPPERWOOD

2ND.

ADDITION

WATERFORD

NORTH

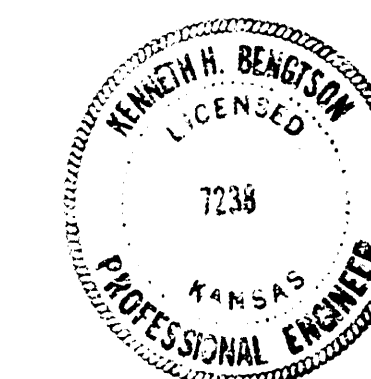
ADDITION

BENEFIT DISTRICT BOUNDARY

B.M. #1
Graveled square on S.W.
corner of N. headwall
of culvert W. of N. 1/4
corner, Section 6.
ELEV. = 181.09'

B.M. #2
60d spike in E. pole of
power line, 1st wood
pole south & west of
S.W. corner, Waterford
North.
ELEV. = 190.73'

B.M. #3
60d spike in E. pole of
power line, 1st wood pole
north & west of S.W. cor-
ner, Waterford North.
ELEV. = 192.93'



WATERFORD NORTH
STORM WATER SEWER

MID-KANSAS ENGINEERING CONSULTANTS PA
243 NORTH ROCK ROAD
SUITE 130
WICHITA, KANSAS 67206

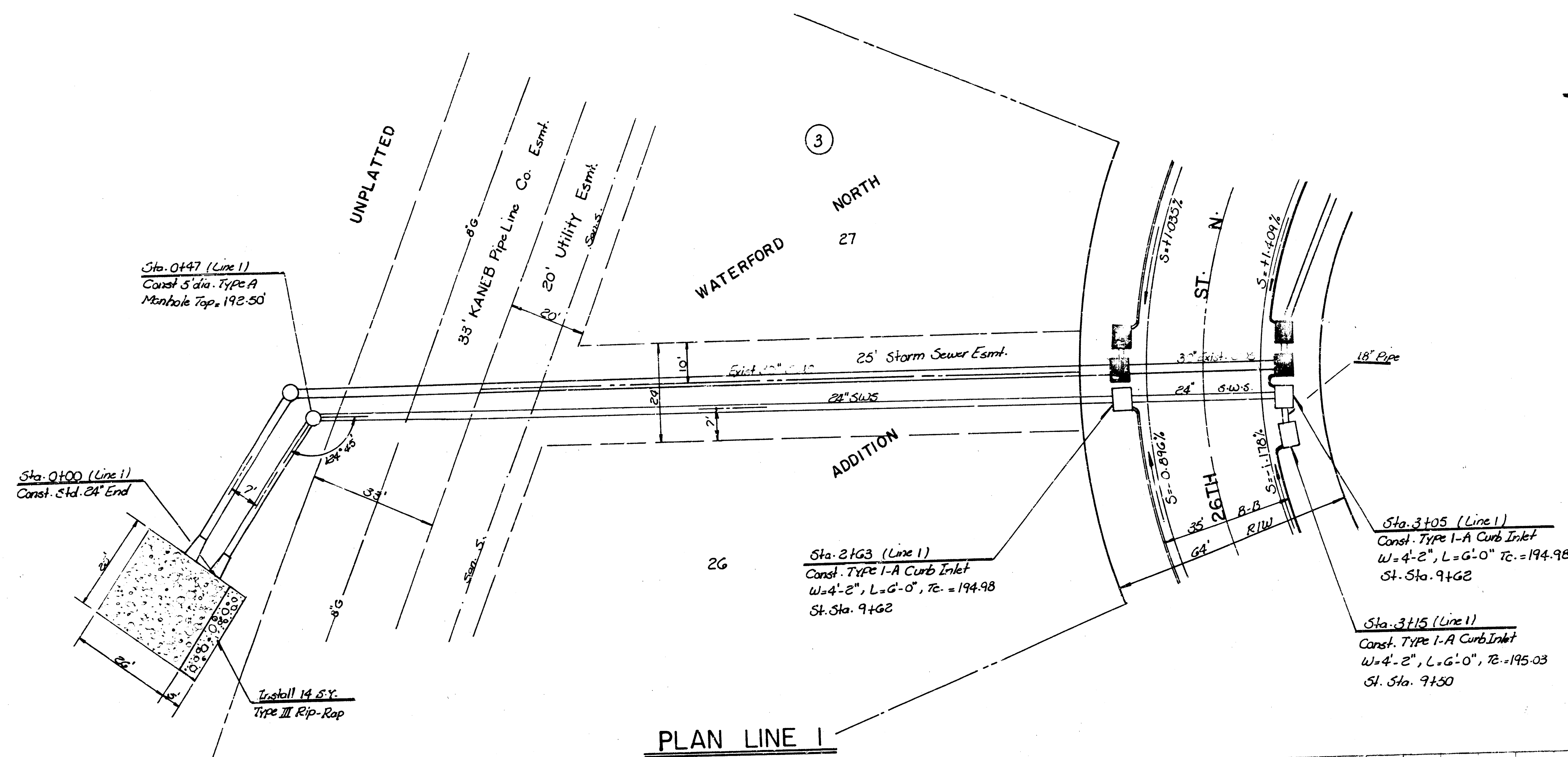
682-6561

Design: AMS
Drawn by: AMS
Checked by: KHB
Date: AUGUST, 1983
Job No.

Sheet 1
of 9

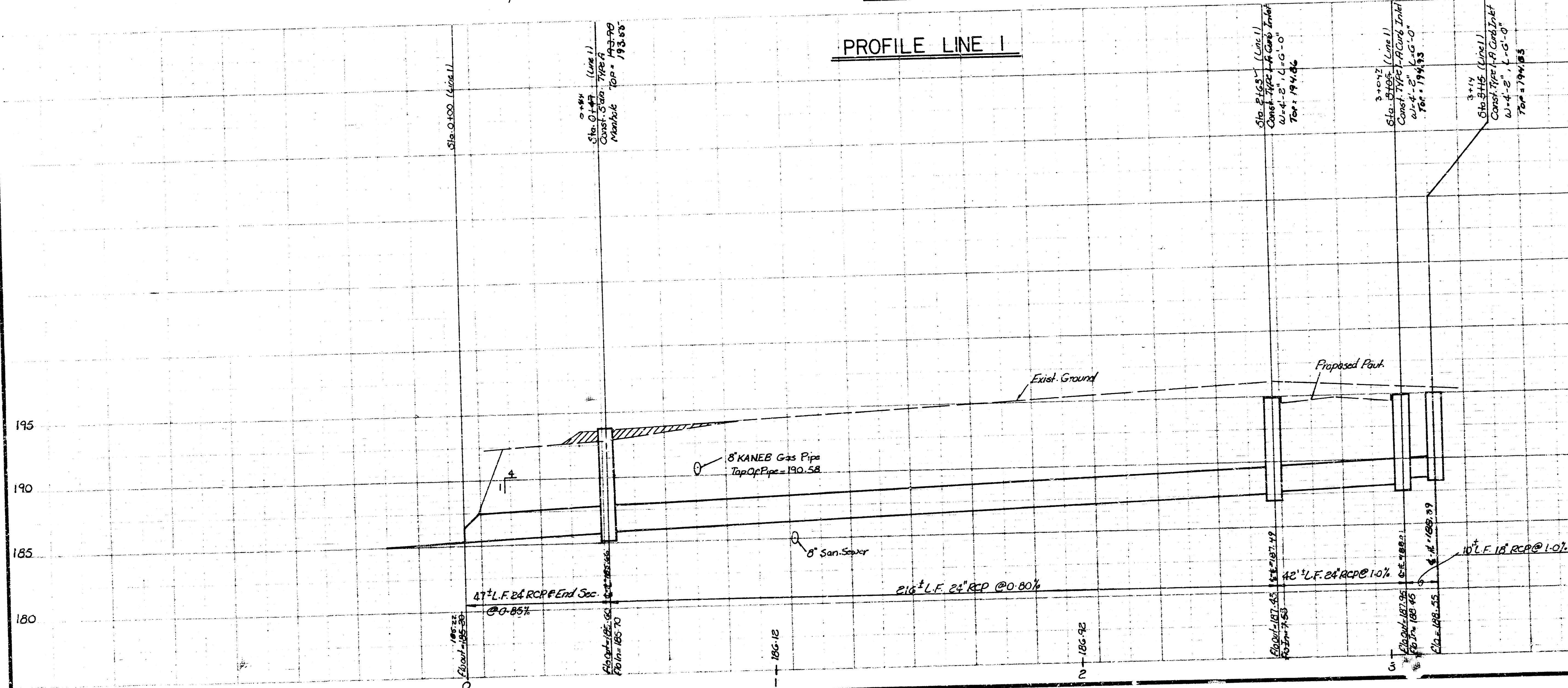
SWS 230

468-7C-245-81113-000-000-001

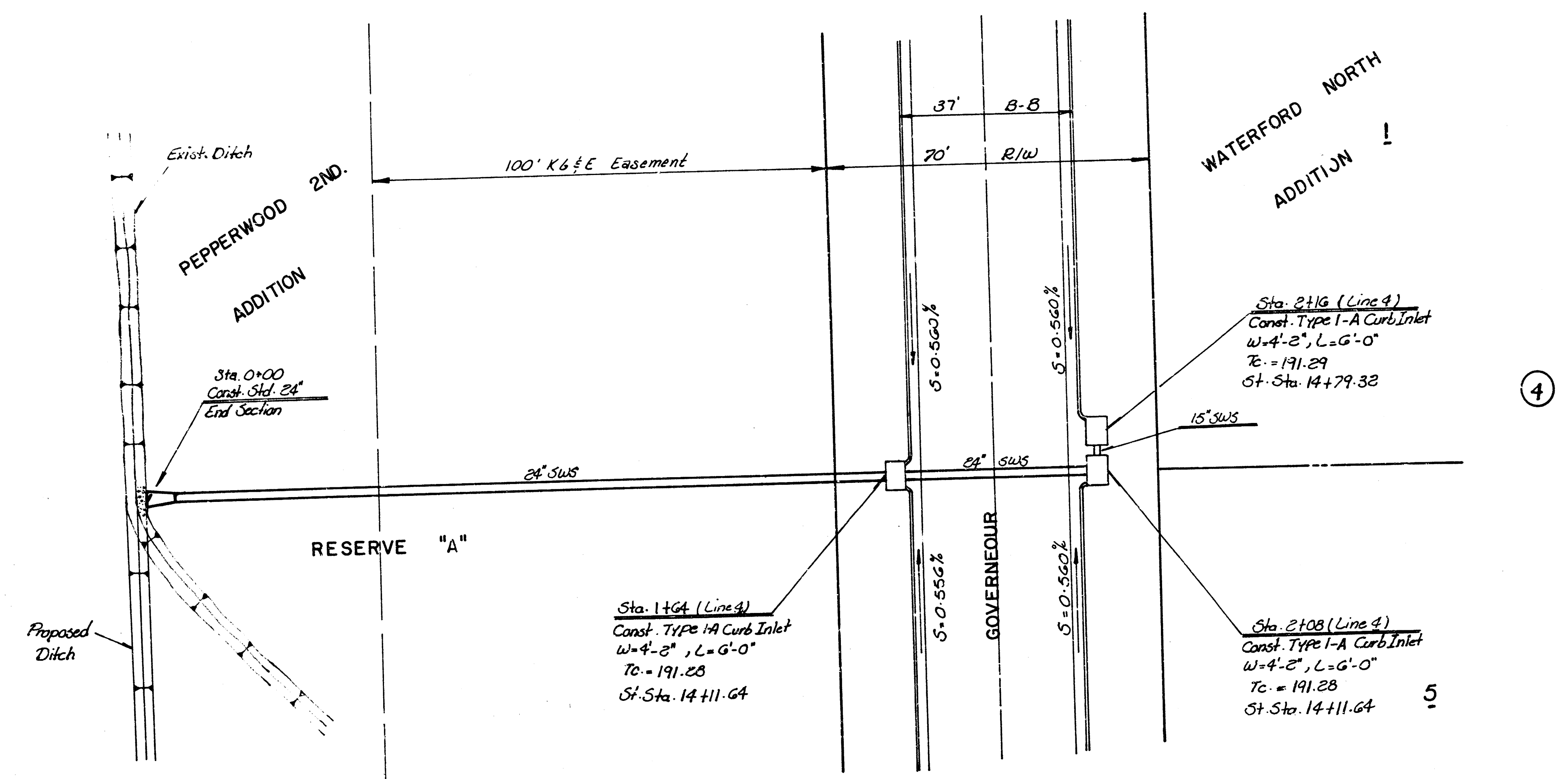


PLAN LINE I

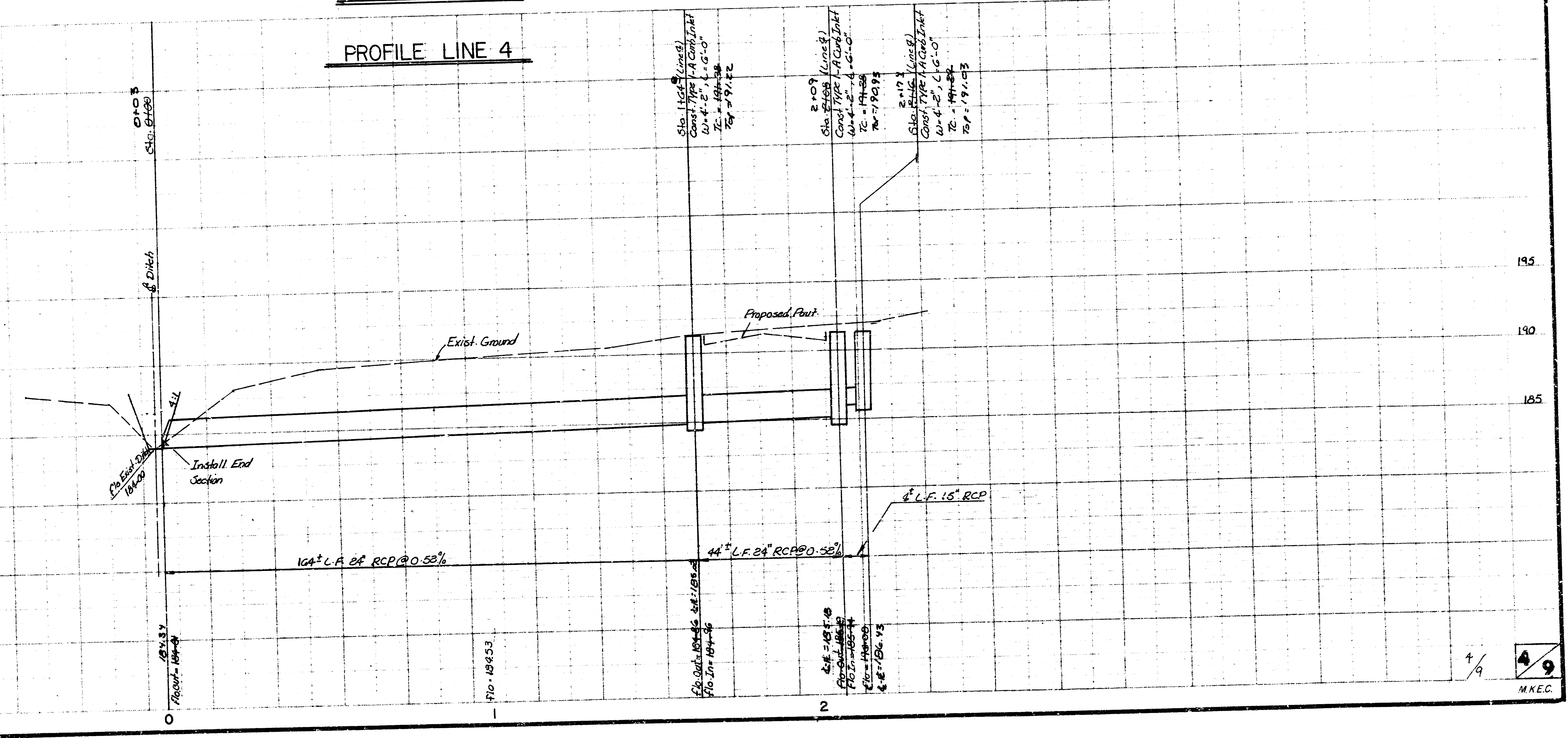
PROFILE LINE I



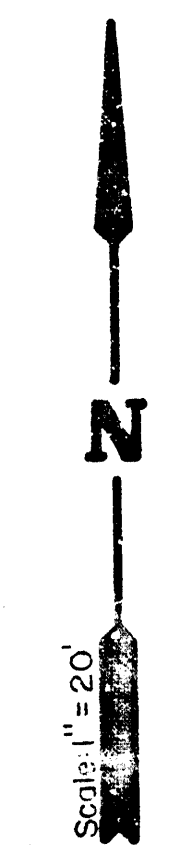


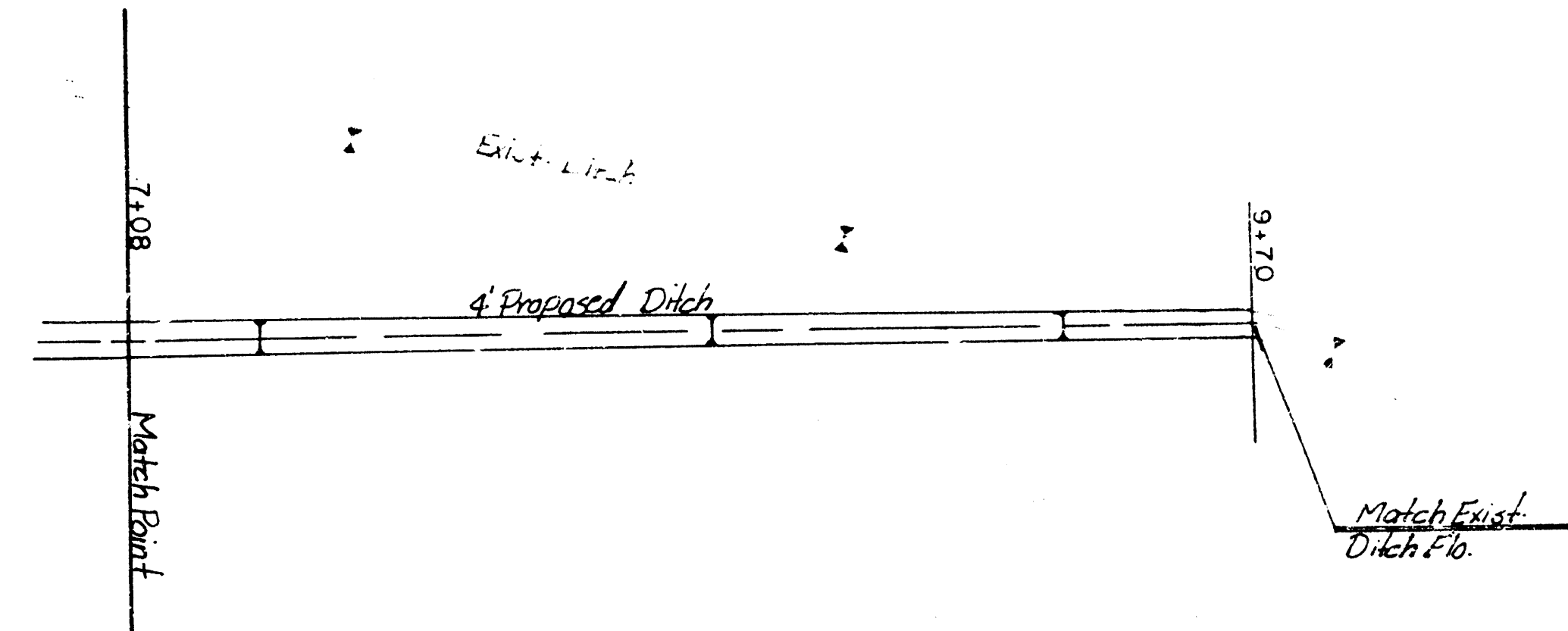
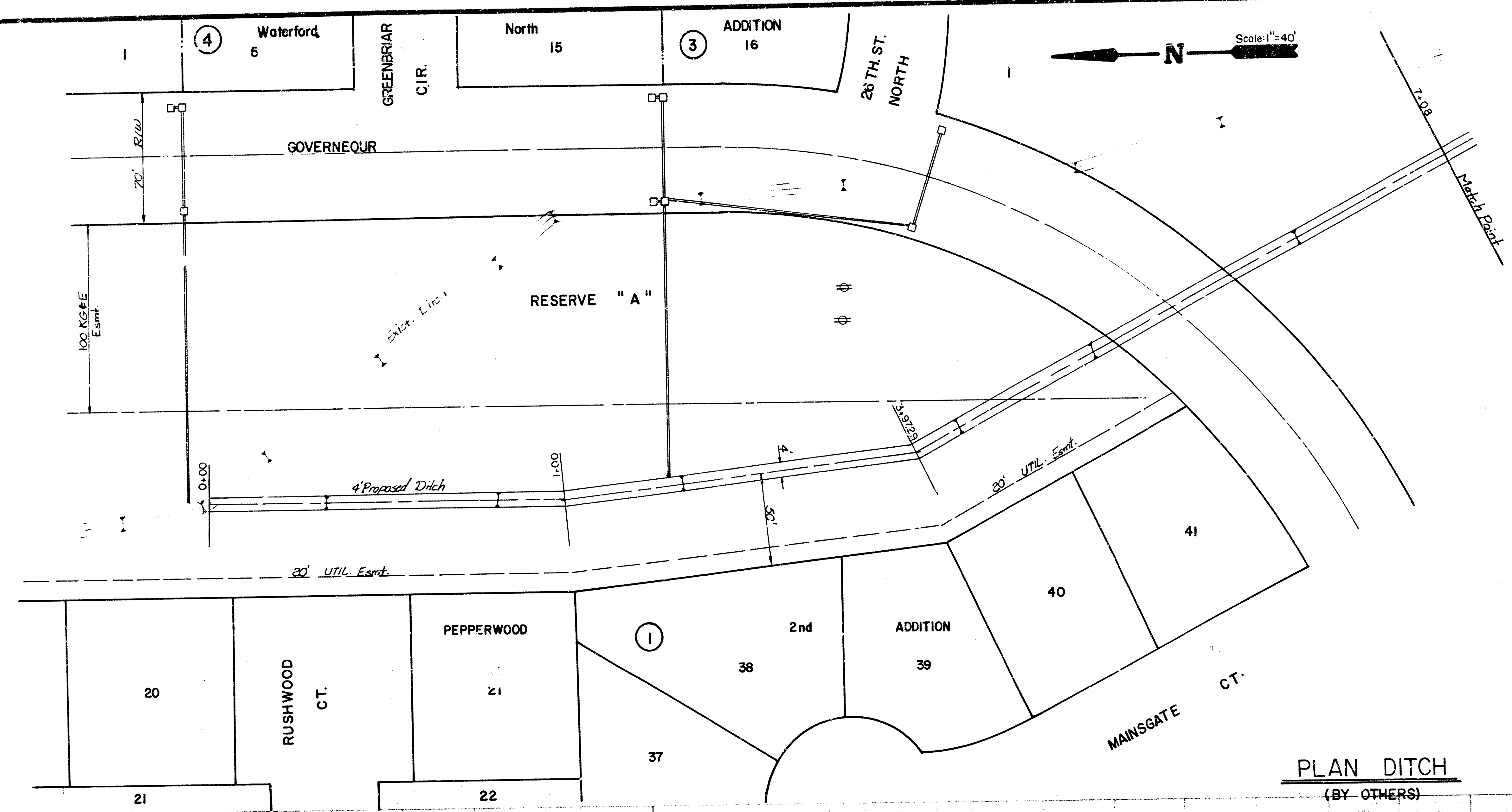


PLAN LINE 4

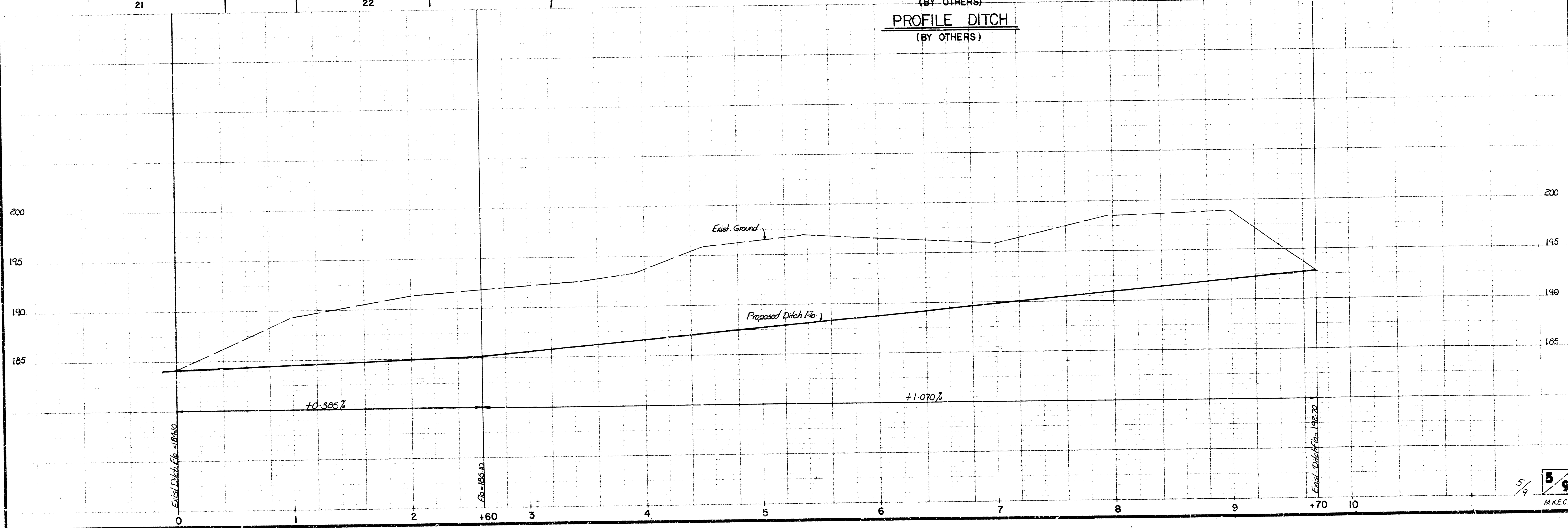


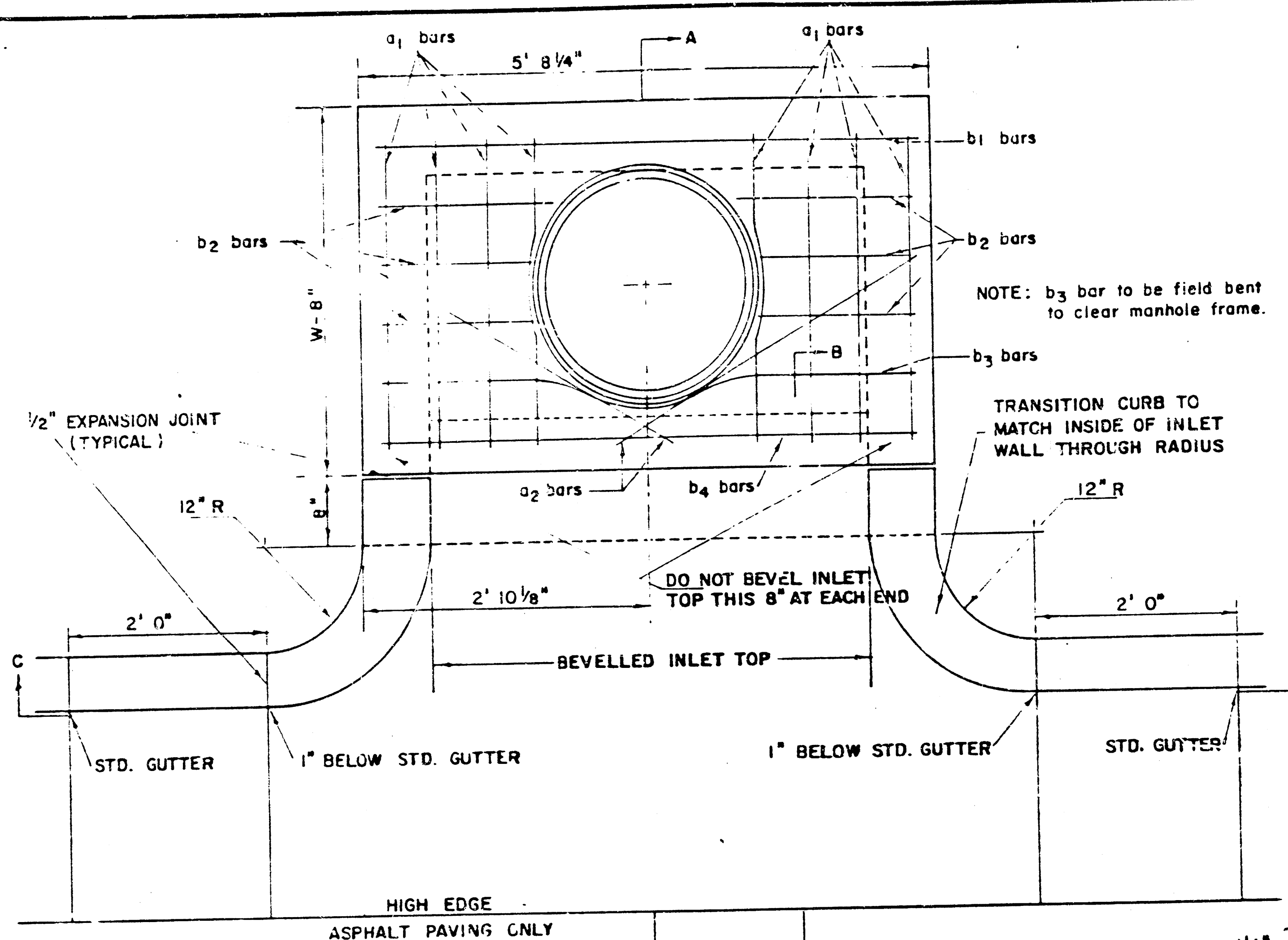
PROFILE LINE 4





PLAN DITCH
(BY OTHERS)
PROFILE DITCH
(BY OTHERS)





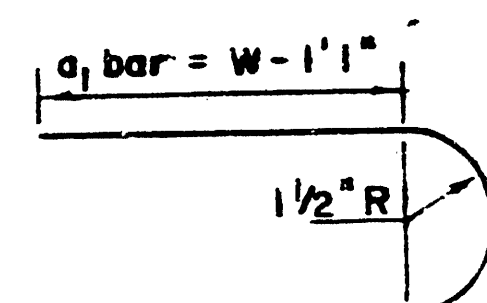
PLAN (SCALE 1" = 1' 0")

STEEL SCHEDULE

BAR	a1	a2	b1	b2	b3	b4	WT. LBS.
NUMBER	8	2	3	7	9	6	1
SIZE	#4	#4	#4	#4	#4	#4	#6
W=4' 2"	6' 5"	3' 4"	5' 5"	-	-	1' 5"	5' 6"
W=5' 0"	8' 1"	4' 4"	-	5' 5"	-	1' 5"	5' 6"
W=6' 0"	10' 1"	5' 4"	-	5' 5"	-	1' 5"	5' 6"
W=7' 0"	11' 1"	6' 4"	-	5' 5"	-	1' 5"	5' 6"
W=8' 0"	12' 1"	7' 4"	-	5' 5"	-	1' 5"	5' 6"

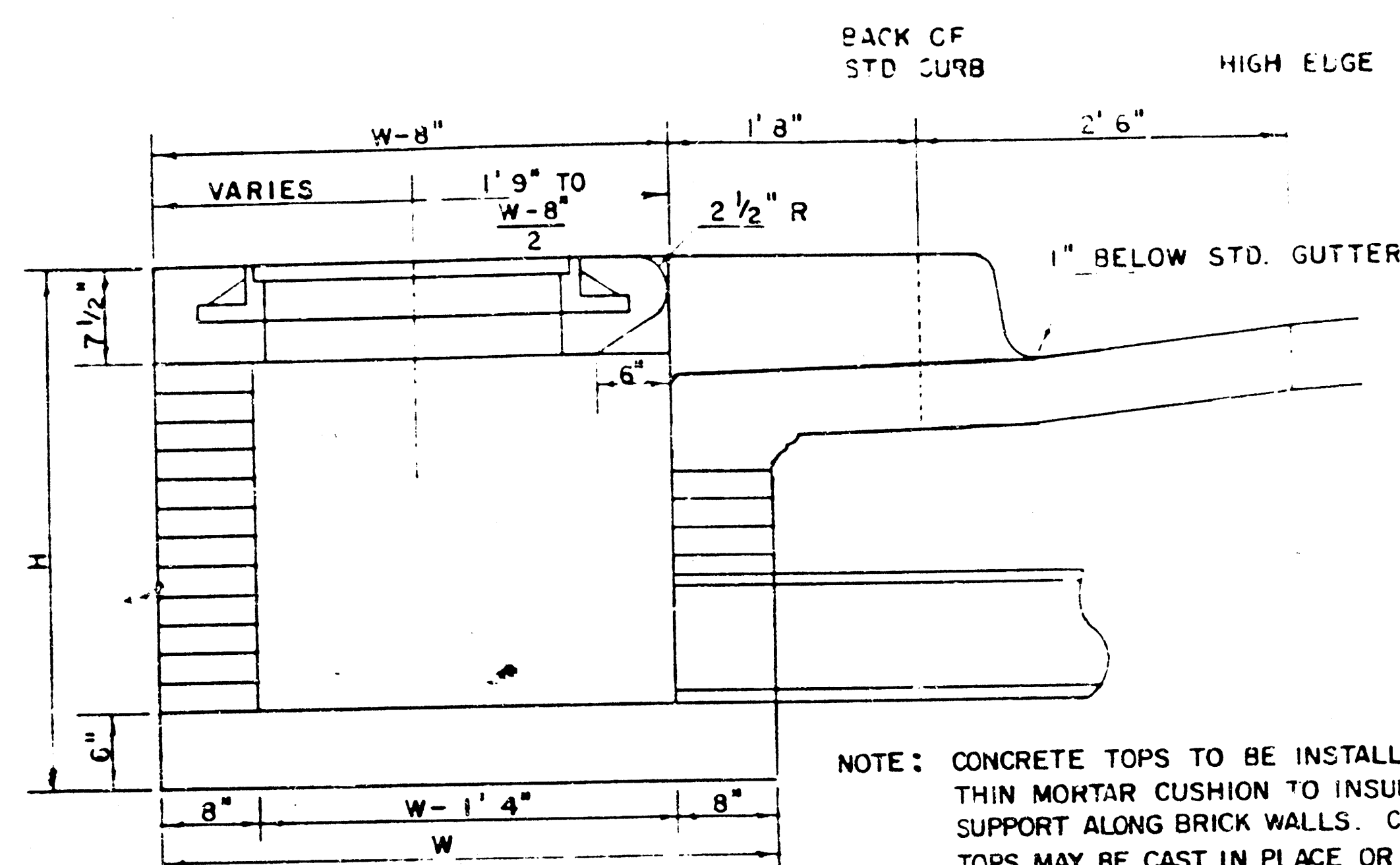
* NOTE: a2 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

BENDING DIAGRAM

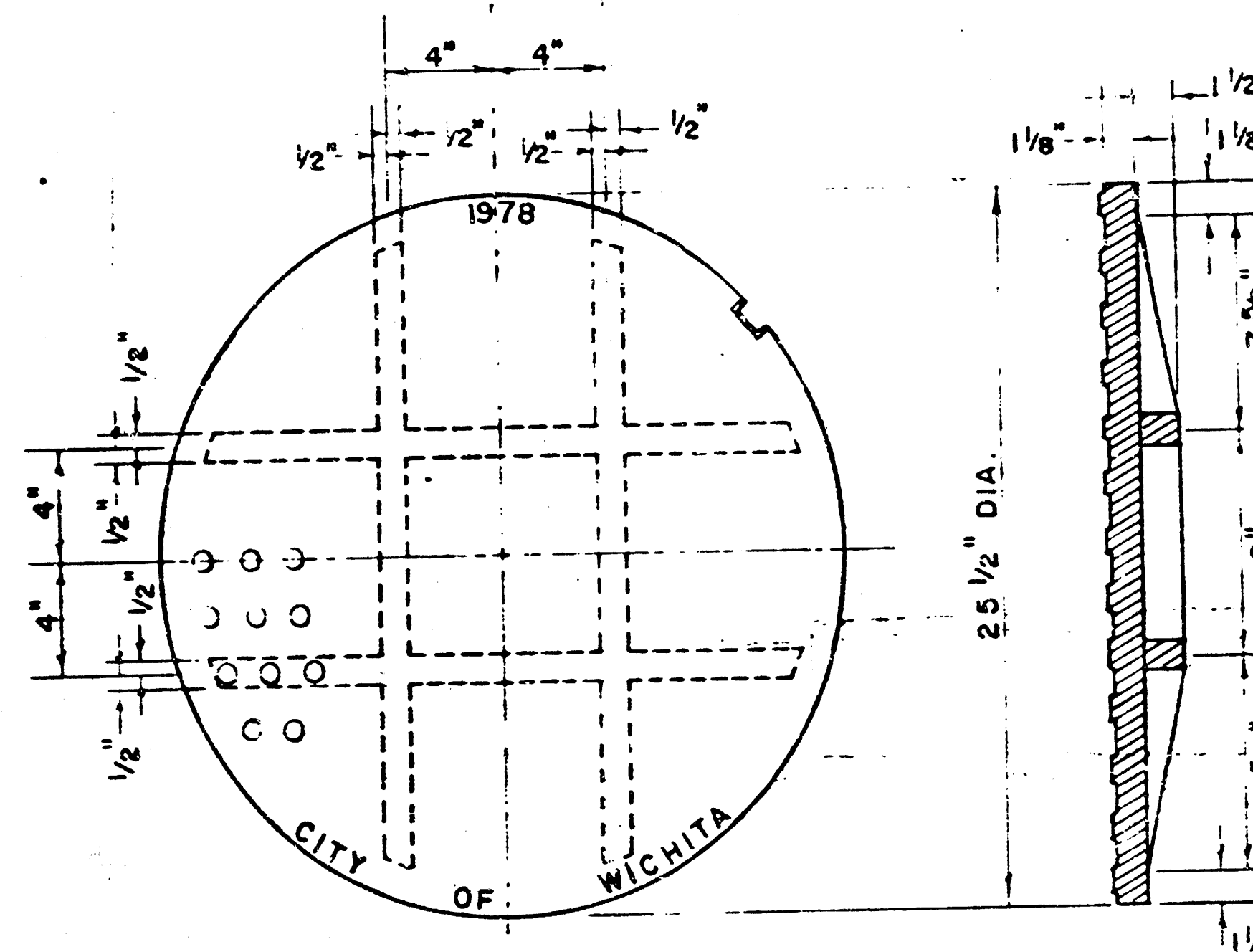


* GROSS VOLUME

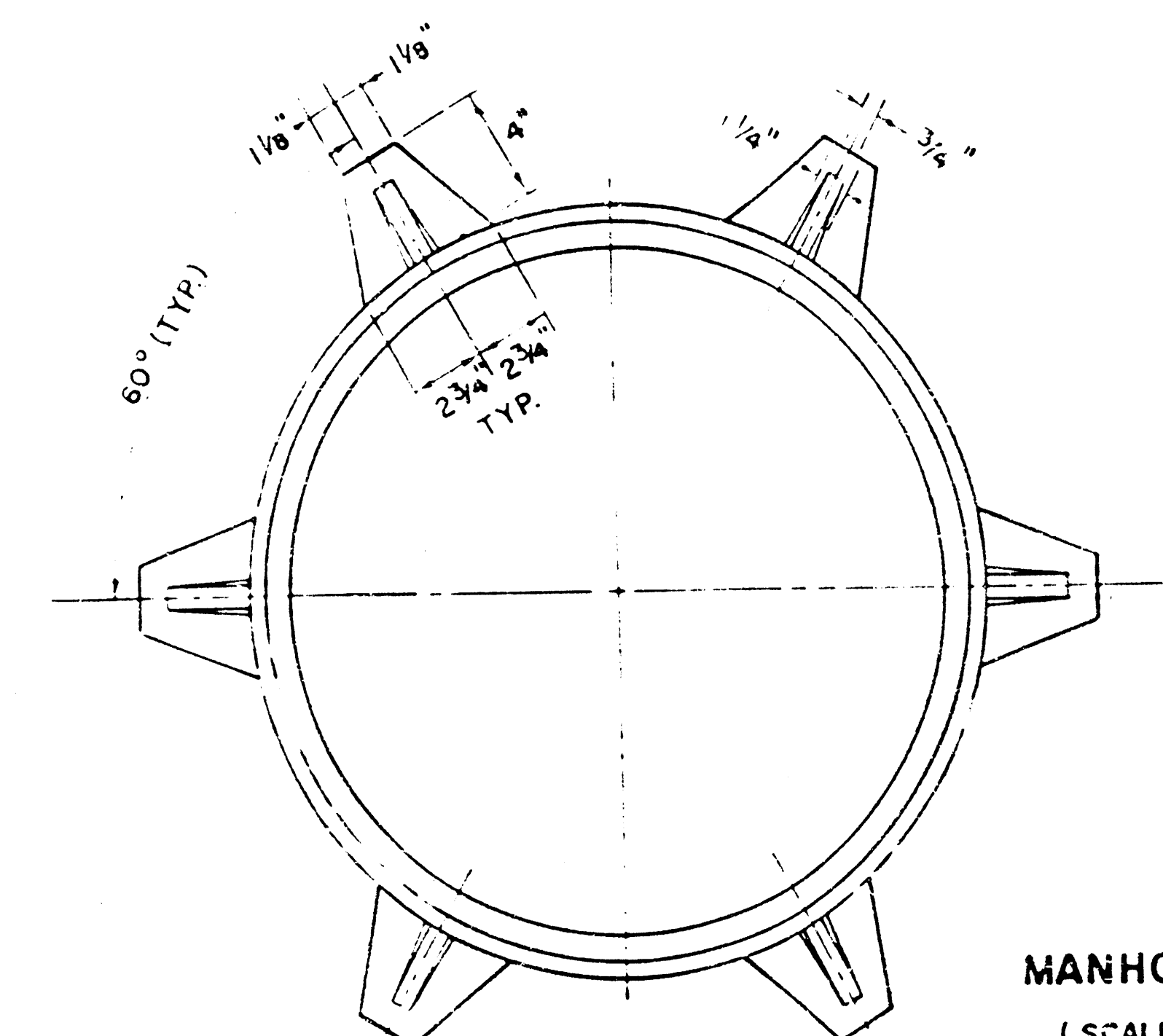
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 2"	36" x 5' 8 1/4" x 7 1/2"	21" & SMALLER	0.46 *
5' 0"	44" x 5' 8 1/4" x 7 1/2"	24" & 30"	0.57 *
6' 0"	54" x 5' 8 1/4" x 7 1/2"	36" & 42"	0.71 *
7' 0"	64" x 5' 8 1/4" x 7 1/2"	48" & 54"	0.84 *
8' 0"	74" x 5' 8 1/4" x 7 1/2"	60" & 66"	0.97 *



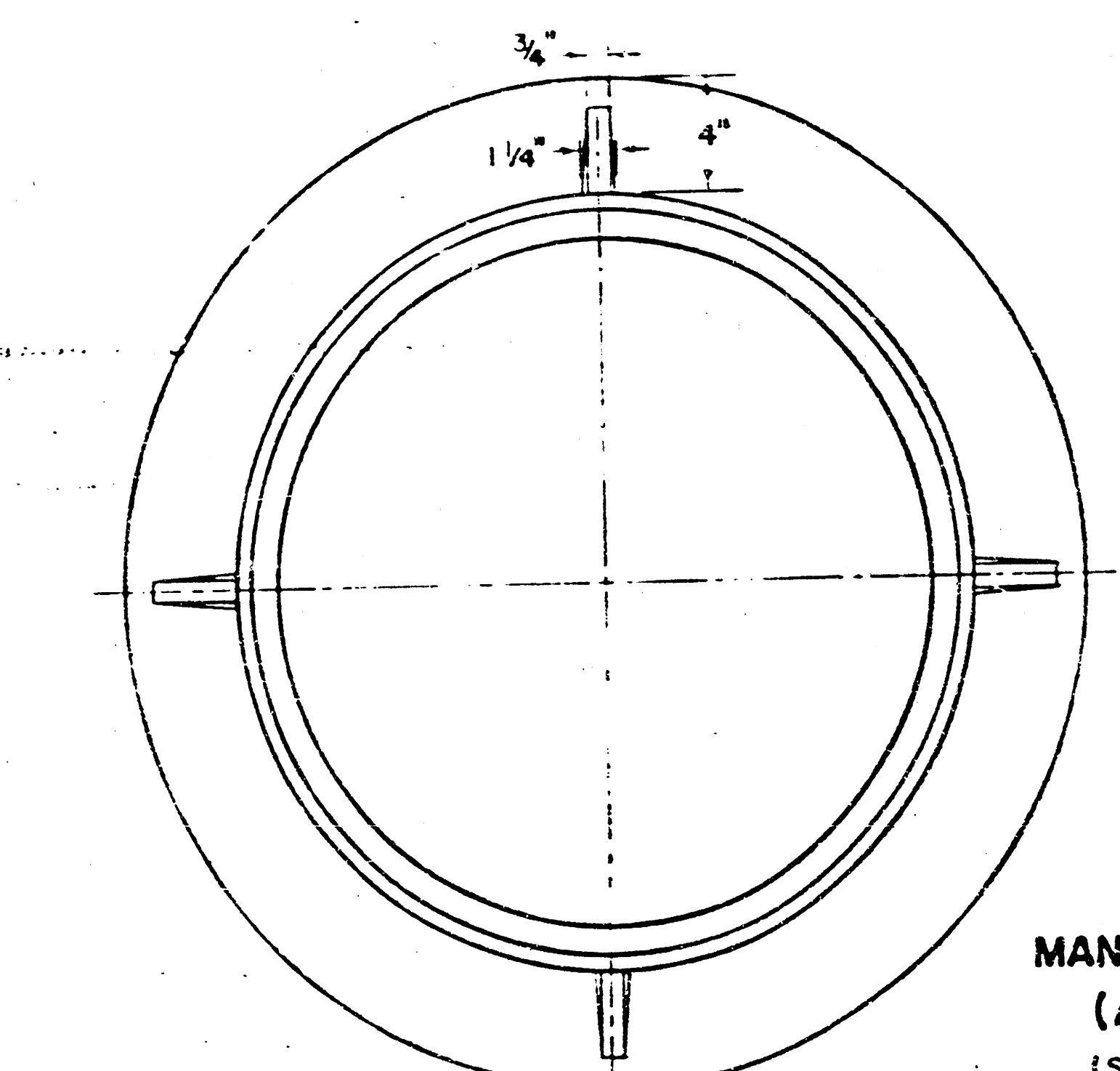
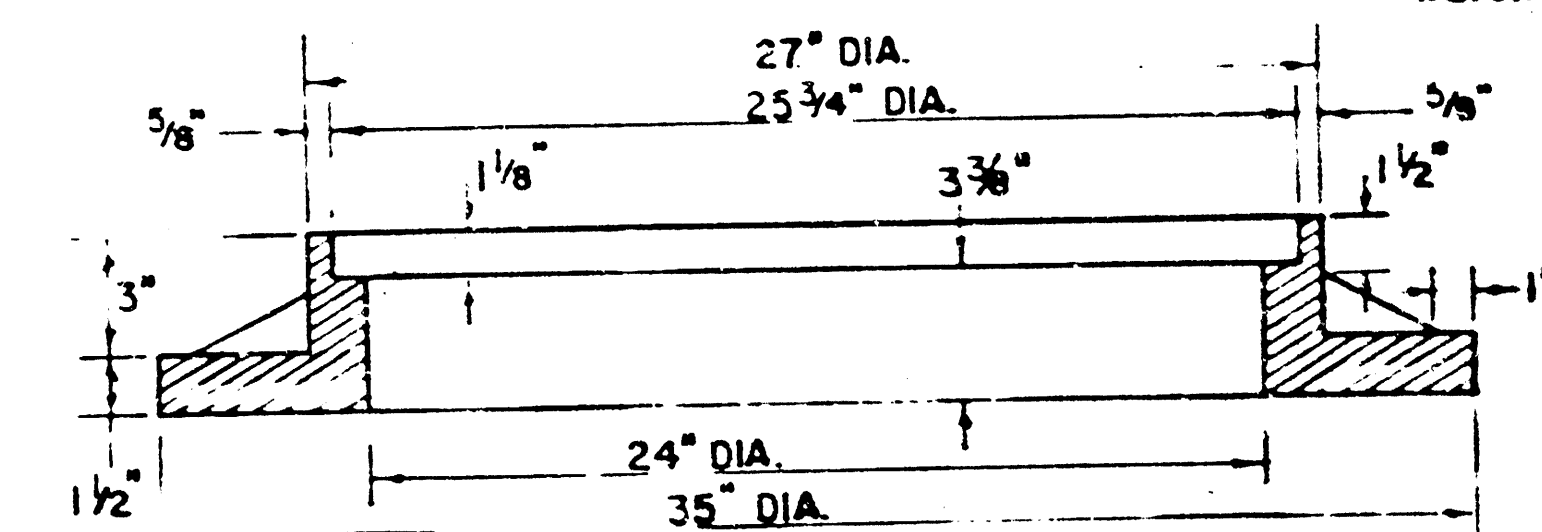
SECTION A-A
(SCALE 1" = 1' 0")



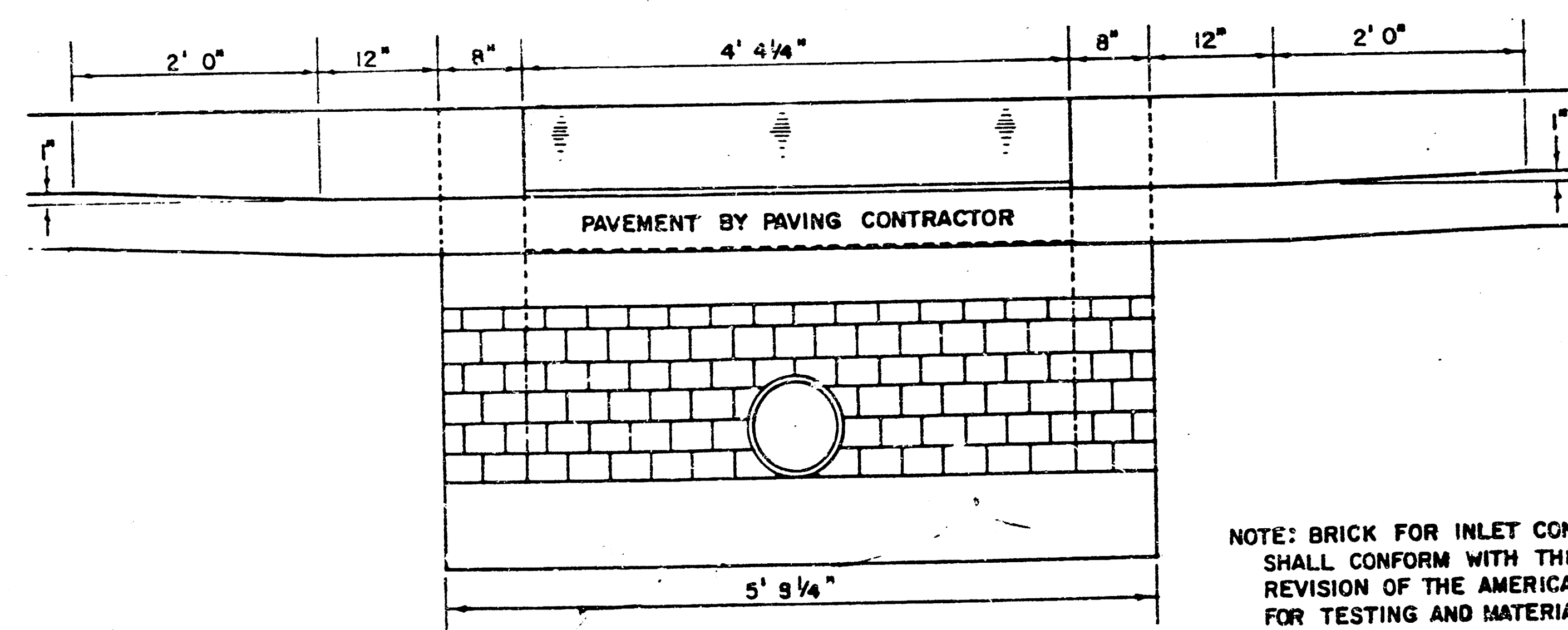
MANHOLE COVER
(SCALE 1" = 6")
WEIGHT = 170 LBS.



MANHOLE FRAME
(SCALE 1" = 6")
WEIGHT = 180 LBS.

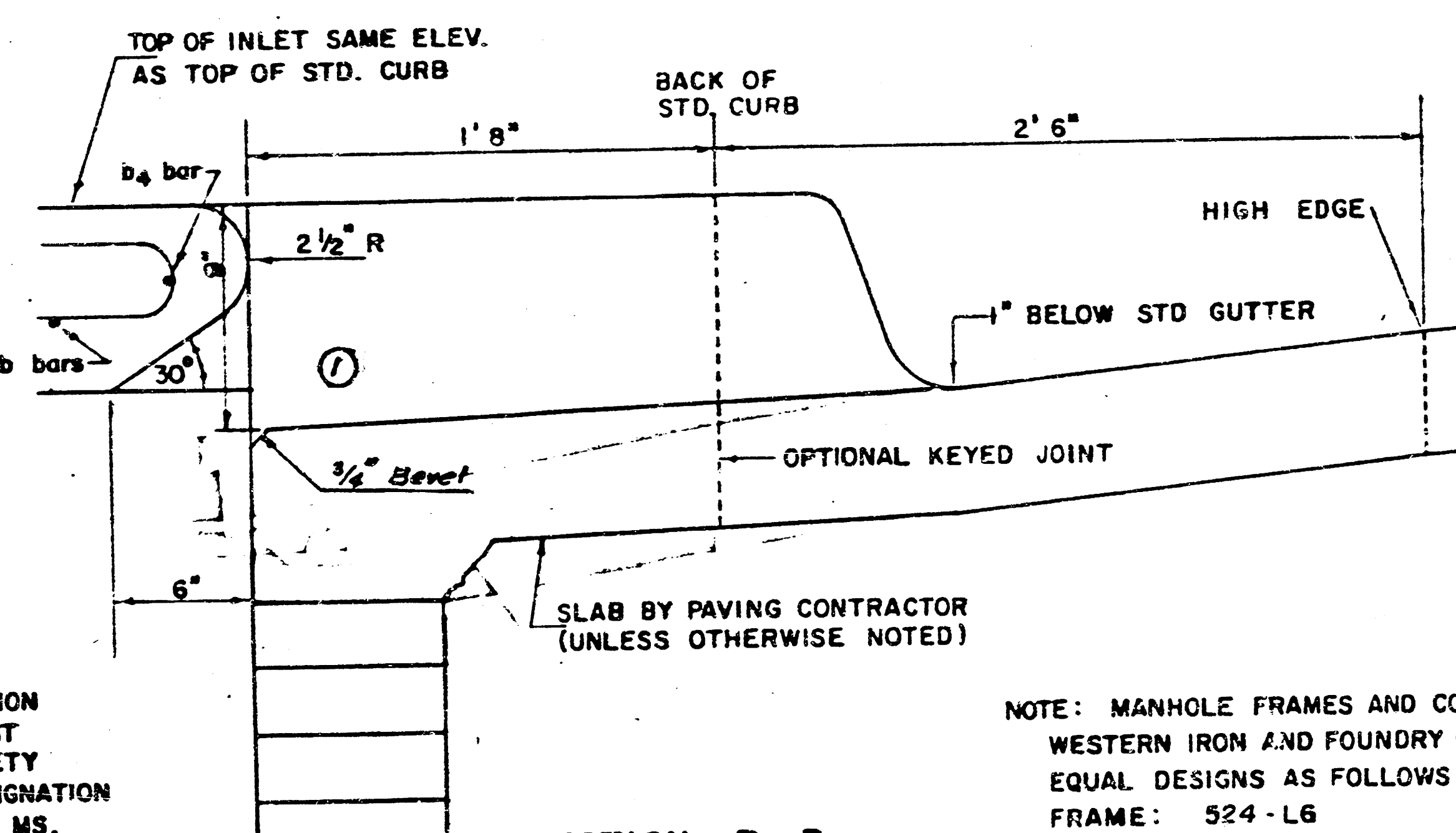


MANHOLE FRAME
(ALTERNATE)
(SCALE 1" = 6")
WEIGHT = 180 LBS.



SECTION C-C
(SCALE 1" = 1' 0")

NOTE: BRICK FOR INLET CONSTRUCTION SHALL CONFORM WITH THE LATEST REVISION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DESIGNATION C-32 FOR MANHOLE BRICK GRADE MS.



SECTION B-B
(SCALE 1" = 6")

NOTE: MANHOLE FRAMES AND COVER ARE WESTERN IRON AND FOUNDRY CO. INC. OR EQUAL DESIGNS AS FOLLOWS:
FRAME: 524-L6
FRAME (ALTERNATE): 500 A4
COVER: 222 S4 "NOBBY"

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
468-76-245-81113-000-000-001

Rev. 5-18-81

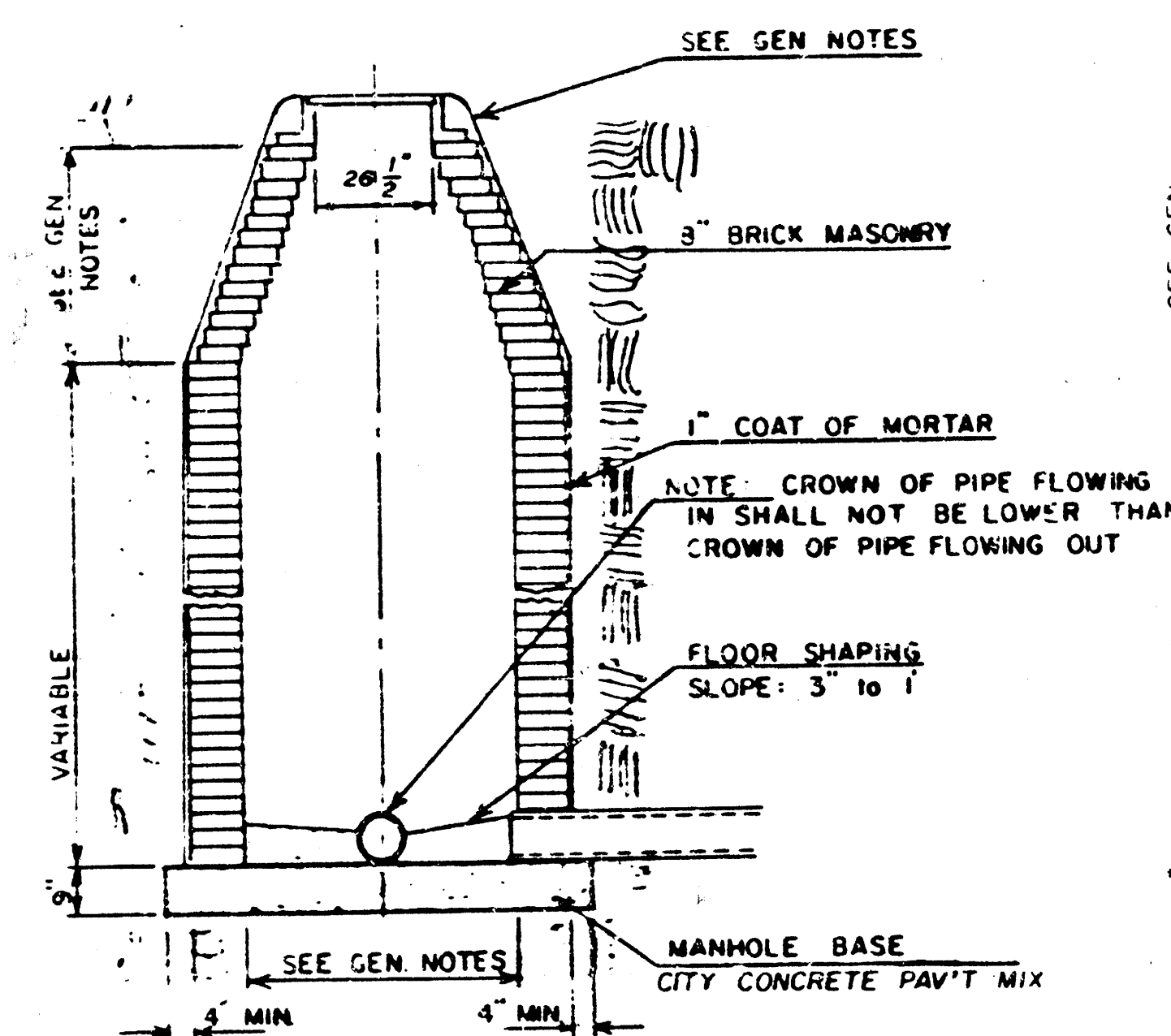
SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN
BY

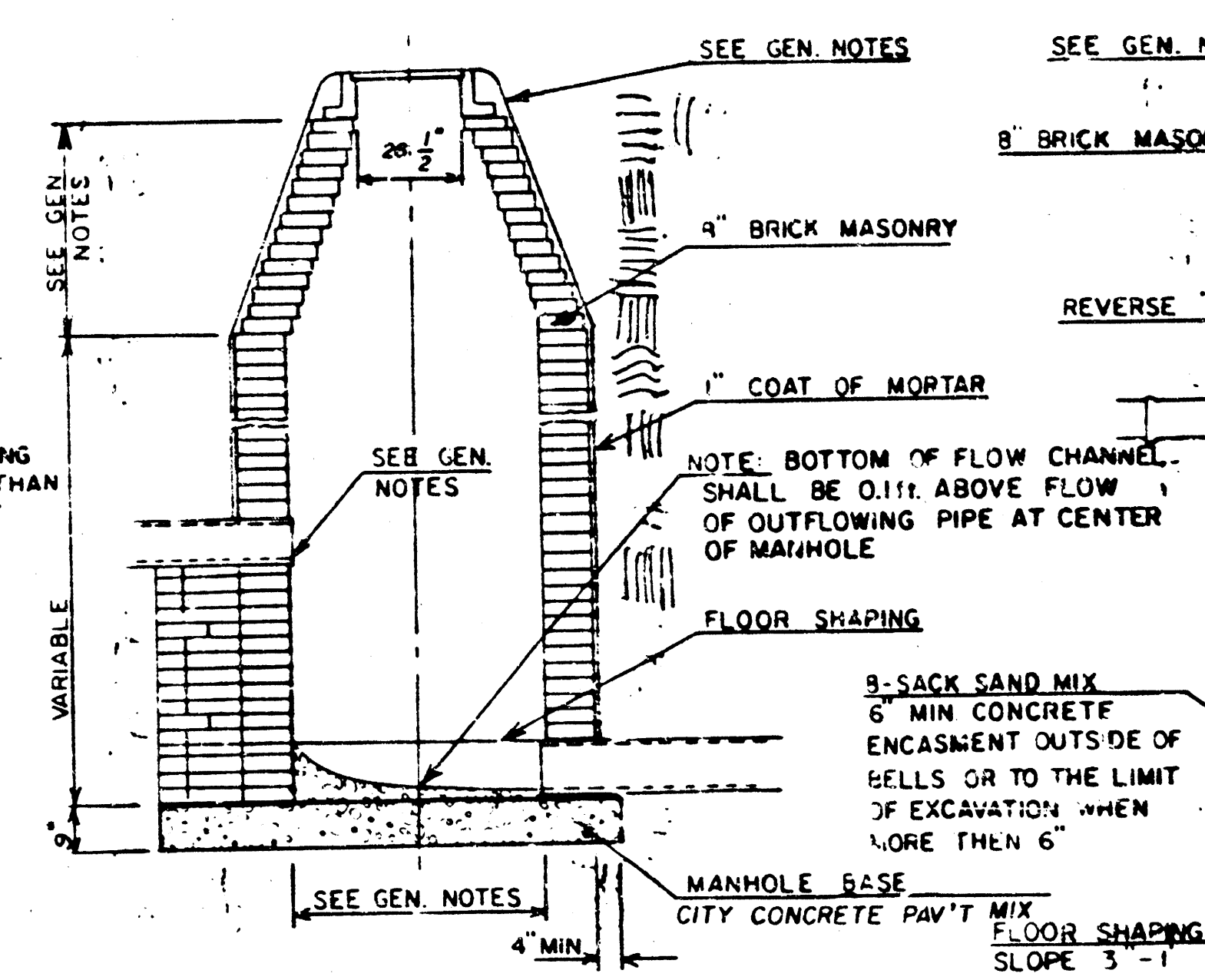
CITY of WICHITA, KANSAS

REVISED SEPTEMBER 1980
REVISED DECEMBER 1981

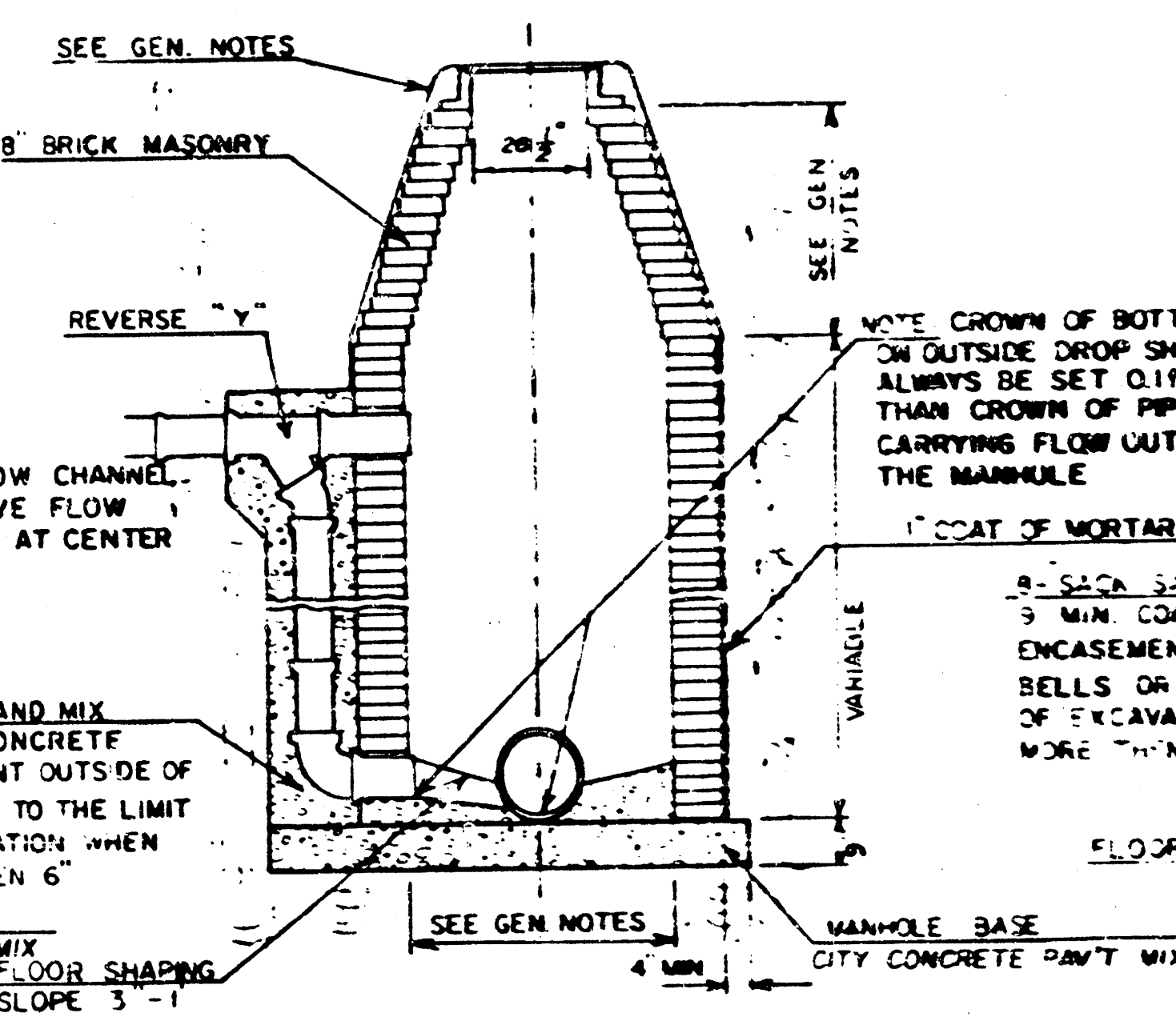
TYPE "A" MANHOLE



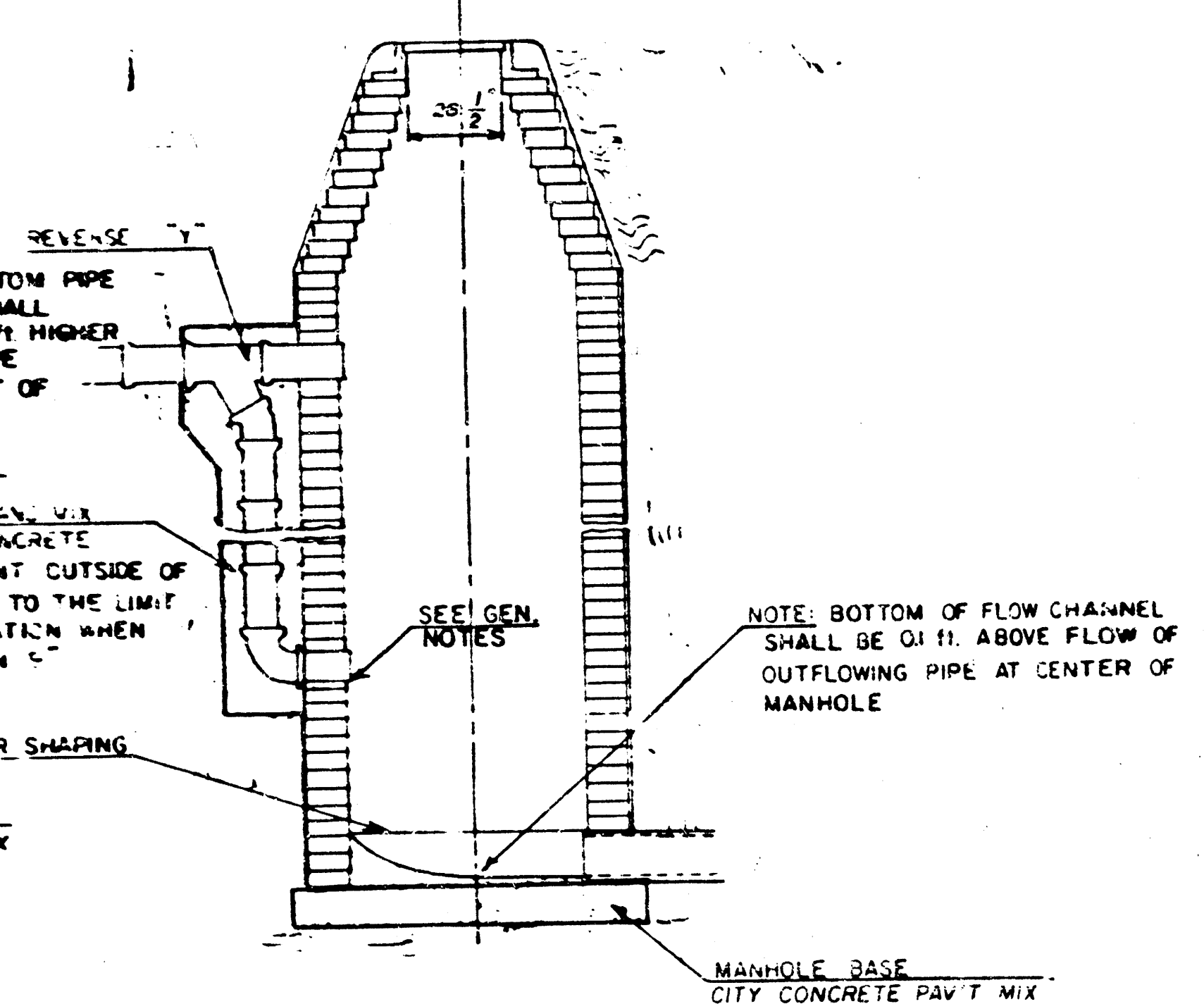
TYPE "A" INSIDE DROP MANHOLE



TYPE "A" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP
CONSTRUCTED ON EXISTING MANHOLE



GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE 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 ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "A" MANHOLES CAN BE USED ON SEWERS UP TO 16" IN DEPTH WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. 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'. THE HEIGHT OF THE CORBELS ON 4' DIAMETER MANHOLES SHALL BE 4'. MANHOLES HAVING A DIAMETER OF 5' SHALL HAVE CORBELS 6' IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 6" 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.
- 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. THE VERTICAL DROP FROM THE LOWER PIPE ON SUCH OUTSIDE DROP CONNECTIONS SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES SIZED LARGER THAN 12". EXCEPT THE CROWN OF THE LOWER PIPE SHALL NEVER BE SET BELOW THE CROWN OF ANY LARGER OUT- FLOWING PIPE. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE THE SOLUTION 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 RE- MOVED 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.
- 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 THE CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- 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.
- 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.
- STANDARD MANHOLES TYPE "A" AND STANDARD INSIDE DROP MANHOLES TYPE "A" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "A" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

FINAL PLAT OF WATERFORD NORTH

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

I, Kenneth H. Bengtson, a Civil Engineer in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "Waterford North" an addition to Wichita, Sedgwick County, Kansas, into lots, blocks, streets, floodway, and reserve, the same being accurately set forth in the accompanying plat and described as follows:

Beginning at the center of Section 6, Township 27 South, Range 2 East of the 6th P.M.; thence east along the south line of the northeast quarter of said Section bearing N 89° 20' 11" E, 524.43 feet; thence N 89° 05' 38" E, 100.00 feet to the west right of way line of Rock Road; thence along said west right of way line of Rock Road bearing N 00° 54' 32" E, 1529.51 feet to the point of beginning, containing 62.39 acres, more or less.

I hereby certify that the details on this plat are correct to the best of my knowledge and belief this 22 day of October, 1980.

By: *Kenneth H. Bengtson*
Kenneth H. Bengtson
VAN DOREN-HAZARD-STALLINGS
Architects-Planners-Engineers
260 North Rock Road, Suite 250
Wichita, Kansas 67206

Know all men by these presents, that we the undersigned property owners of the land as above set forth in the Engineer's Certificate, have caused the same to be surveyed and platted into lots, blocks, streets, floodway, and reserves, the same to be known as "Waterford North", an addition to Wichita, Sedgwick County, Kansas. The streets are hereby dedicated to and for the use of the public. Easements for the construction and maintenance of public utilities and storm sewers are hereby granted. All abutters rights of access over and across the subdivision shall have access to Rock Road at the location shown on the accompanying plat. The floodway shall be the responsibility of the owners of the property in the subdivision until such time as the governing body exercising jurisdiction elects to assume the responsibility for maintenance and improvement of the drainage, provided further, that no building shall be constructed on or within said floodway, nor shall any fill, change of grade, creation of channel or other work be carried on without the permission of the Wichita-Sedgwick County Flood Control Office or their successors in office. The reserve is platted for sidewalks, open space, recreation and buffer zone, and shall be owned and maintained by the owners of the lots within the subdivision.

Wichita Development Company
By: *Robert R. Fox*
Robert R. Fox
Attorney in Fact for Wichita Development Company

We the Citibank, N.A., New York City, New York, mortgagees on the above described property do hereby consent to the plat of "Waterford North".

The Citibank, N.A., New York, New York

By: *Robert R. Fox*
Robert R. Fox
Attorney in Fact for Citibank, N.A.

This plat of "Waterford North" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Planning Commission, Kansas this 19th day of October, 1980.

Dated this 19th day of October, 1980.
Wichita-Sedgwick County Metropolitan Planning Commission

James L. Gaebler II
James L. Gaebler II, Chairman

Robert A. Davis
Robert A. Davis, Secretary

This plat approved and all dedications shown hereon, if any, accepted by the City Commission of the City of Wichita, Kansas this 19th day of October, 1980.

Robert A. Davis
Robert A. Davis, Mayor

James L. Gaebler II
James L. Gaebler II, City Clerk

This plat approved and all dedications shown hereon, if any, accepted by the Board of County Commissioners of Sedgwick County, Kansas this 19th day of October, 1980.

James L. Gaebler II
James L. Gaebler II, Chairman

Tom Scott
Tom Scott, Commissioner

Donald E. Gragg
Donald E. Gragg, Commissioner

Attest: *Donna K. White*
Donna K. White, County Clerk

Entered on transfer record this 6 day of January, 1981.

Donna K. White
Donna K. White, County Clerk

STATE OF KANSAS
COUNTY OF SEDGWICK

This is to certify that this instrument was filed for record in the Register of Deeds Office at 3:00 P.M. on the 6th day of January, 1981.

Bette J. McCall
Bette J. McCall, Register of Deeds

Pat Kettler
Pat Kettler, Notary Public

State of Kansas,
County of Sedgwick,

Be it remembered that on this 22nd day of October, 1980 before me a Notary Public in and for said State and County, came the Citibank, N.A., New York City, New York, by Robert R. Fox, Attorney in Fact for Citibank, N.A., to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof, I have hereunto set my hand and affixed my notarial seal the day and year above written.

Carolyn R. Owen
Carolyn R. Owen, Notary Public

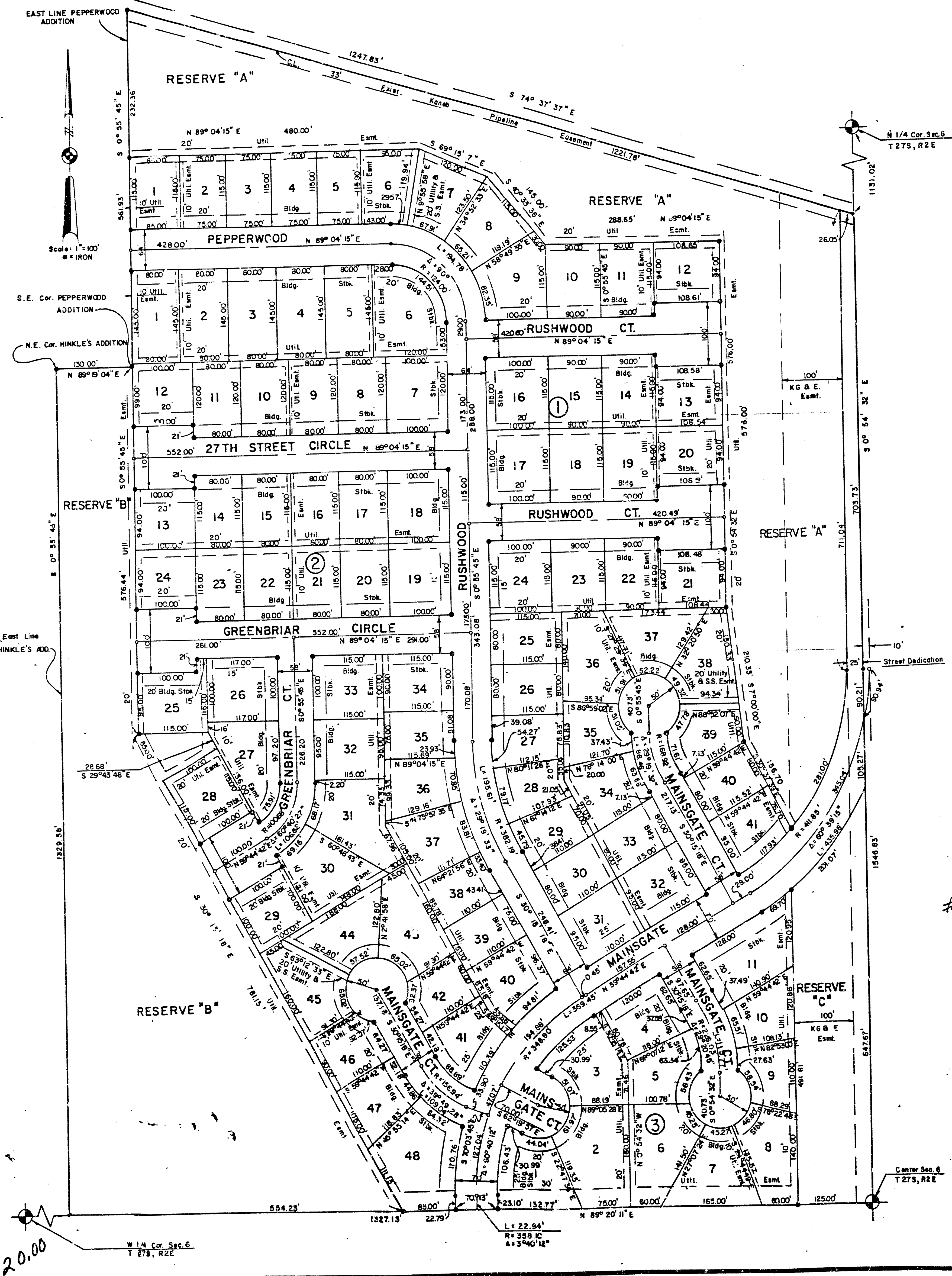
My Appointment Expires May 17, 1981

State of Kansas,
County of Sedgwick,

Be it remembered that on this 22nd day of October, 1980 before me a Notary Public in and for said State and County, came the Wichita Development Company by Robert R. Fox, Attorney in Fact for Wichita Development Company, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof, I have hereunto set my hand and affixed my notarial seal the day and year above written.

Carolyn R. Owen
Carolyn R. Owen, Notary Public

My Appointment Expires May 17, 1981



FINAL PLAT OF PEPPERWOOD SECOND ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

I, Steven E. Anderson, a Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "Pepperwood Second Addition", an addition to Wichita, Sedgwick County, Kansas into lots, blocks, streets and reserves, the same being accurately set forth in the accompanying plat and described as follows:

Beginning at the center of Section 6, T 27 S, R 2 E of the 6th P.M.; thence westerly along the south line of the northwest quarter of said Section 6 bearing S 89° 20' 11" W, 1327.15 feet to the southeast corner of Hinkle's Addition; thence northerly along the east line of said addition bearing N 0° 55' 45" W, 1329.58 feet to the south line of Pepperwood Addition, an addition to Wichita, Sedgwick County, Kansas; thence along the boundary of Pepperwood Addition bearing N 89° 19' 04" E, 150.00 feet; thence N 0° 55' 45" W, 561.93 feet to the centerline of an existing 33 foot wide Kaneb pipeline easement; thence southeasterly along said centerline bearing S 74° 37' 37" E, 1247.83 feet to the east line of said northwest quarter; thence southerly along said east line bearing S 0° 54' 32" E, 1546.83 feet to the point of beginning; containing 51.227 acres, more or less.

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 20th day of November, 1980.

Steven E. Anderson
Steven E. Anderson
VAN DOREN-HAZARD-STALLINGS
Architects/Engineers
260 N. Rock Road Suite 250
Wichita, Kansas 67218

We the Citibank, N.A., New York City, New York, mortgagees on the above described property do hereby consent to the plat of "Pepperwood Second Addition".

The Citibank, N.A., New York City, New York

By: Robert R. Fox
Robert R. Fox
Attorney in fact for Citibank, N.A.

State of Kansas ss:
County of Sedgwick

Be it remembered on this 20th day of November, 1980, before me, a Notary Public in and for said State and County, came the Citibank, N.A., New York City, New York, by Robert R. Fox, attorney in fact for Citibank, N.A., to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof, I have hereunto set my hand and affixed my notarial seal the day and year above written.

Carolyn R. Owen, Notary Public
Carolyn R. Owen
My Appointment Expires: May 17, 1981.

This plat of "Pepperwood Second Addition" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 20th day of November, 1980
Wichita-Sedgwick County Metropolitan Area Planning Commission

Michael J. Savina, Chairman
Robert A. Lakin, Secretary

This plat approved and all dedications shown hereon, if any, accepted by the City Commission of the City of Wichita, Kansas this 23rd day of December, 1980.

R. C. Brown, Vice Mayor
Donald C. Gluck, City Clerk

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Land Surveyor's Certificate, have caused the same to be surveyed and platted into lots, blocks, streets and reserves, the same to be known as "Pepperwood Second Addition" to Wichita, Sedgwick County, Kansas. The streets are hereby dedicated to and for the use of the public. Easements for the construction and maintenance of public utilities and storm sewers are hereby granted. Reserves A, B, and C are platted for the use of sidewalks, utilities, drainage, recreation and open space. The reserves shall be owned and maintained by the Pepperwood Second Addition Owners Association.

Wichita Development Company

By: Robert R. Fox
Robert R. Fox
Attorney in fact for
Wichita Development Company

State of Kansas ss:
County of Sedgwick

Be it remembered that on this 20th day of November, 1980 before me, a Notary Public in and for said State and County, came the Wichita Development Company by Robert R. Fox, attorney in fact for Wichita Development Company, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof, I have hereunto set my hand and affixed my notarial seal the day and year above written.

Carolyn R. Owen, Notary Public
Carolyn R. Owen
My Appointment Expires: May 17, 1981.

This plat approved and all dedications shown hereon, if any accepted by the Board of County Commissioners of Sedgwick County, Kansas this 5th day of January, 1981.

Tom Scott, Chairman
Everett & Patrick, Commissioner
Donald E. Gragg, Commissioner

Attest: Dorothy K. White, County Clerk
DOROTHY K. WHITE

State of Kansas ss:
County of Sedgwick

This is to certify that this instrument was filed for record in the Register of Deeds Office at 3:00 P.M. on the 6th day of January, 1981.

Bette F. McCart, Register of Deeds
Pat Kettler, Deputy

Entered on transfer record this 6th day of January, 1981.

Dorothy K. White, County Clerk
DOROTHY K. WHITE

Upland Covenants F453 pgs. 978+979
F454 pgs. 563+567