# SANITARY SEWER PLANS
# LAT. 2, MAIN 24 W.I.S.
# WOODLAND ESTATES
## PROJECT NO.
## 468-76-245-81604-000-000-001

**CITY OF WICHITA, KANSAS**

**MICHAEL E. LINDEBAK, CITY ENGINEER**

**OCTOBER, 1986**

## 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. A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUNDS SHALL RE CONSTRUCTED WITH A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP OF THE MANHOLE.

3. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES PRIOR TO ANY EXCAVATION:

| | |
|---|---|
| APKLA GAS COMPANY | 942-8450 |
| BELL TELEPHONE | 1-316-571-2115 |
| CABLEVISION | 262-0661 |
| GAS SERVICE COMPANY | 263-7511 |
| KANSAS GAS & ELECTRIC | |
| KANSAS ONE-CALL | 1-800-344-7233 |
| CITIES SERVICE | 524-0491 |
| KANSAS GAS SUPPLY | 316-254-7243 |
| CONTINENTAL PIPELINE COMPANY | 316-681-2081 |

4. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.

5. ALL STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE IN THE SAME MANNER AS RISERS.

6. COST OF EXCAVATION, HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.

7. PRIOR TO LAYING SEWER LINES USING EXISTING STUBS IN EXISTING MANHOLES, THE CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION, GRADE AND ALIGNMENT OF EXISTING STUBS AND NOTIFY THE ENGINEER OF ANY DEVIATION FROM THE PLAN. WHERE CONNECTING TO AN EXISTING MANHOLE THAT DOES NOT HAVE AN EXISTING STUB OR THE STUB IS UNUSABLE DUE TO ELEVATION GRADE OR ALIGNMENT, THE CONTRACTOR SHALL RESHAPE THE EXISTING MANHOLE INVERT TO PROVIDE SMOOTH FLOW. THE COST OF RE-SHAPING EXISTING MANHOLE INVERTS IS INCIDENTAL TO THE PROJECT.

## BENCH MARKS

B.M. #1 SPK STEP IN COR. FC POST 660' E. & 40' S. OF CTR. SEC. 17, 27S, R2E ELEV. = 176.09'

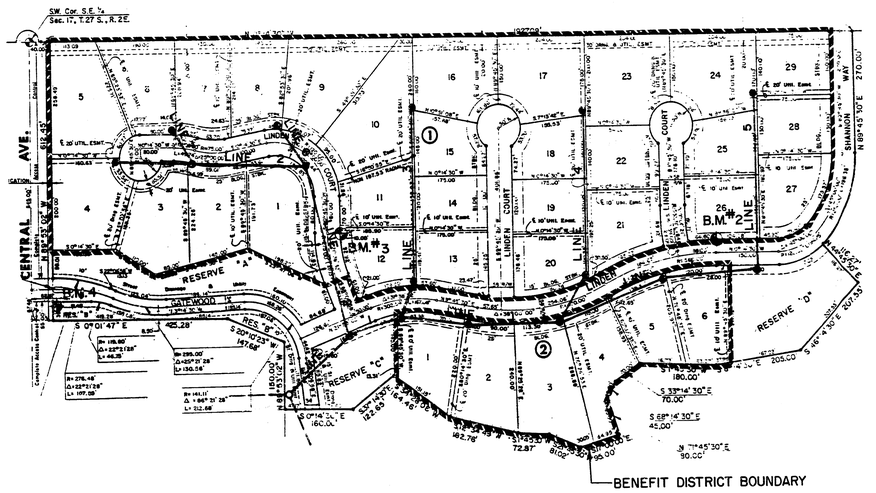
B.M. #2 TOP OF 5/8" BAR & CAP AT P.C. ON E. LINE OF LOT 26, BLK 1, WOODLAND ESTATES ELEV. = 167.32'

TBM #3 TOP OF 5/8" BAR & CAP AT WEST P.C. IRON ON LINDEN COURT ON LOT 12, BLK 1, WOODLAND ESTATES ELEV. = 162.82'

B.M. #4 CITY OF WICHITA BENCH MARK DISC. ON THE N.E. COR. OF RCB AT CENTRAL & GYPSUM CREEK ELEV. = 157.24'

N

Scale: 1" = 150'




## INDEX TO DRAWINGS


| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | TITLE SHEET |
| 2 | LINE 1 |
| 3 | LINE 2 |
| 4 | LINE 3 & 4 |
| 5 | LINE 5 |
| 6 | LINE 6 & 7 |
| 7 | MANHOLE DETAILS |
| 8 | FINAL PLAT |


AS BUILT
RDL
7-87

JOHN R. DENGLER LICENSED 7238 KANSAS PROFESSIONAL ENGINEER

**WOODLAND ESTATES SANITARY SEWER PLANS**

Design
Drawn by
Checked by
Date
100 no

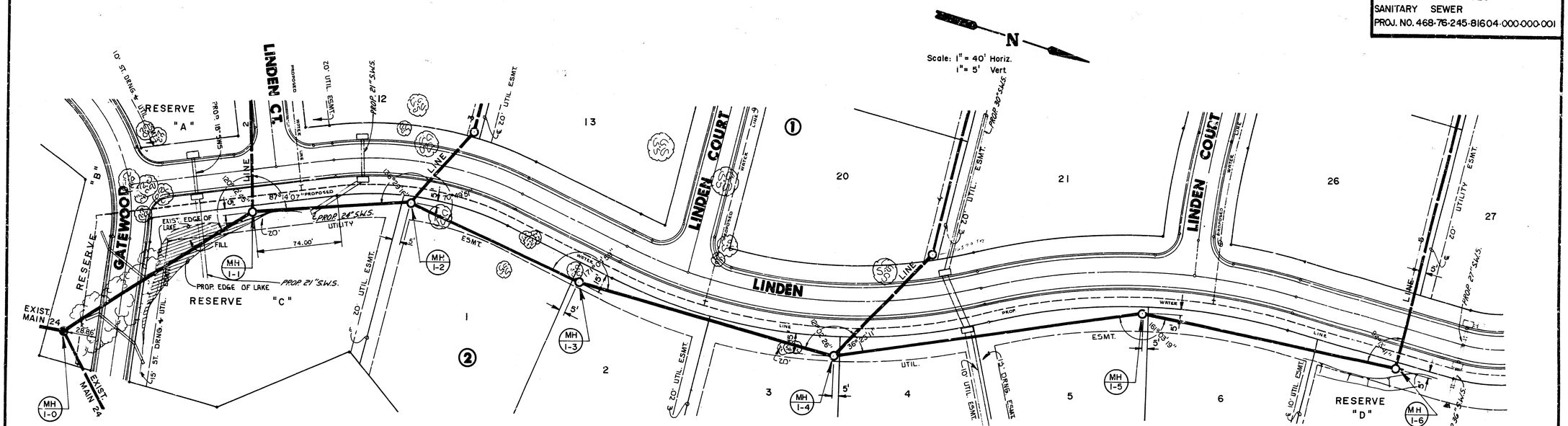

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226
682-6561


Sheet 1 1/8 of 8

WOODLAND ESTATES
SANITARY SEWER
PROJ. NO. 468-76-245-81604-000-000-001

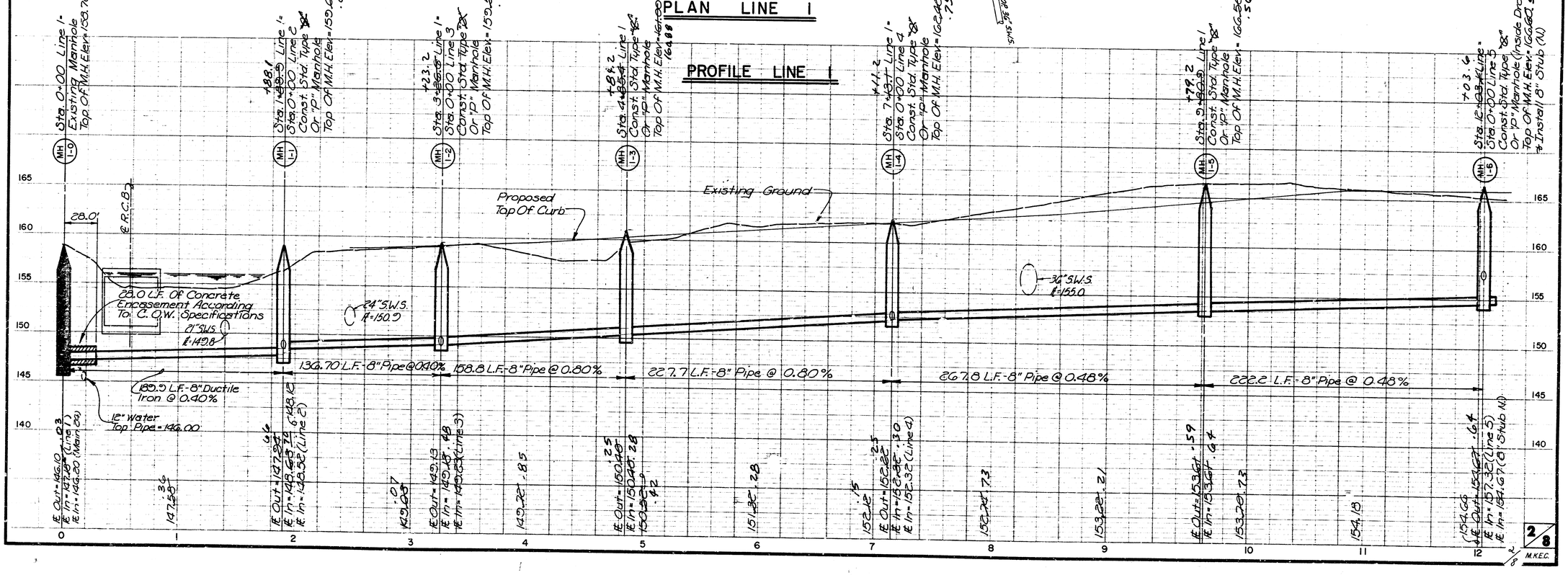
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Scale: 1" = 40' Horiz.
1" = 5' Vert.




## PLAN LINE 1

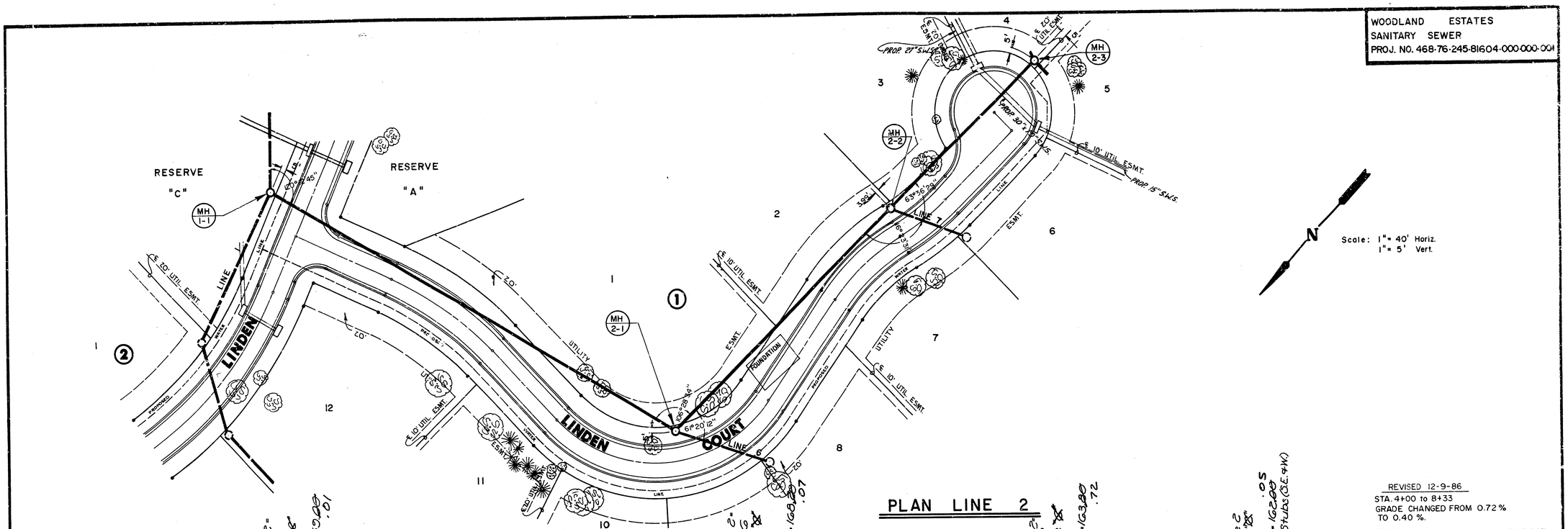
## PROFILE LINE 1






M.K.E.C.

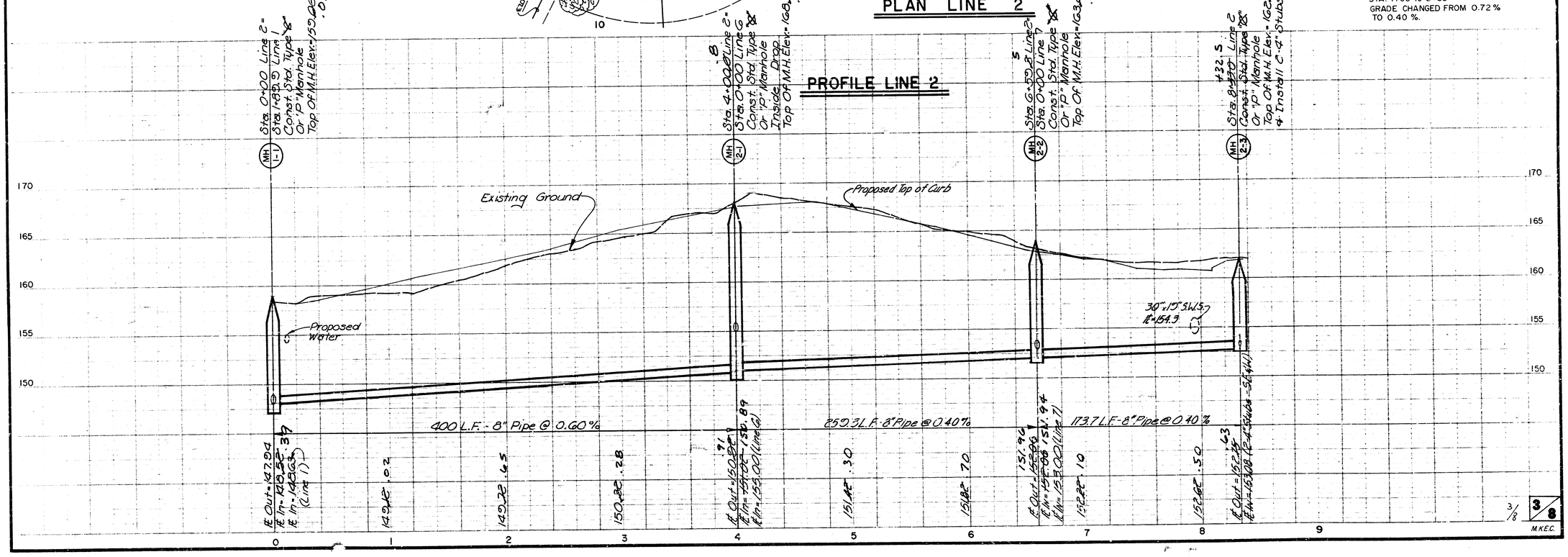
WOODLAND ESTATES
SANITARY SEWER
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REVISED 12-9-86
STA. 4+00 to 8+33
GRADE CHANGED FROM 0.72% TO 0.40 %.

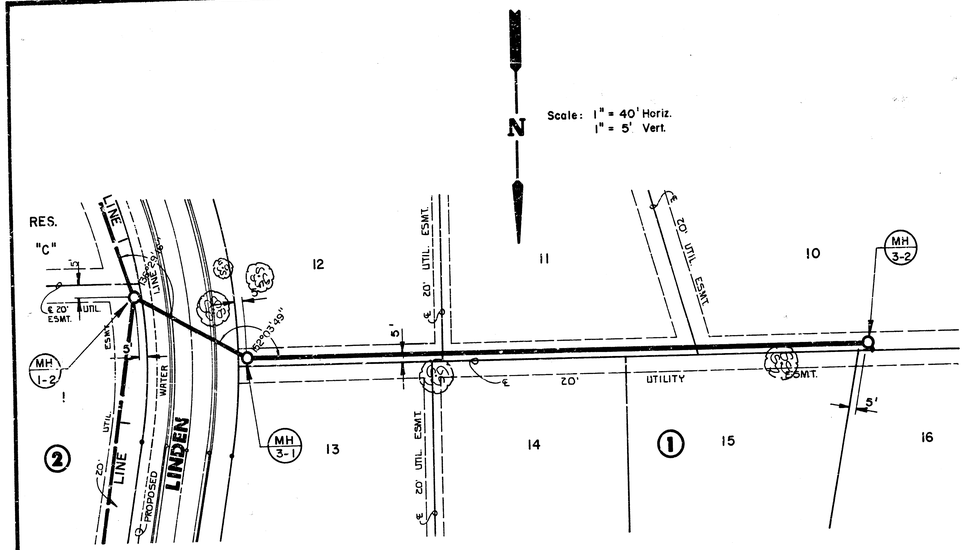
## PLAN LINE 2

## PROFILE LINE 2

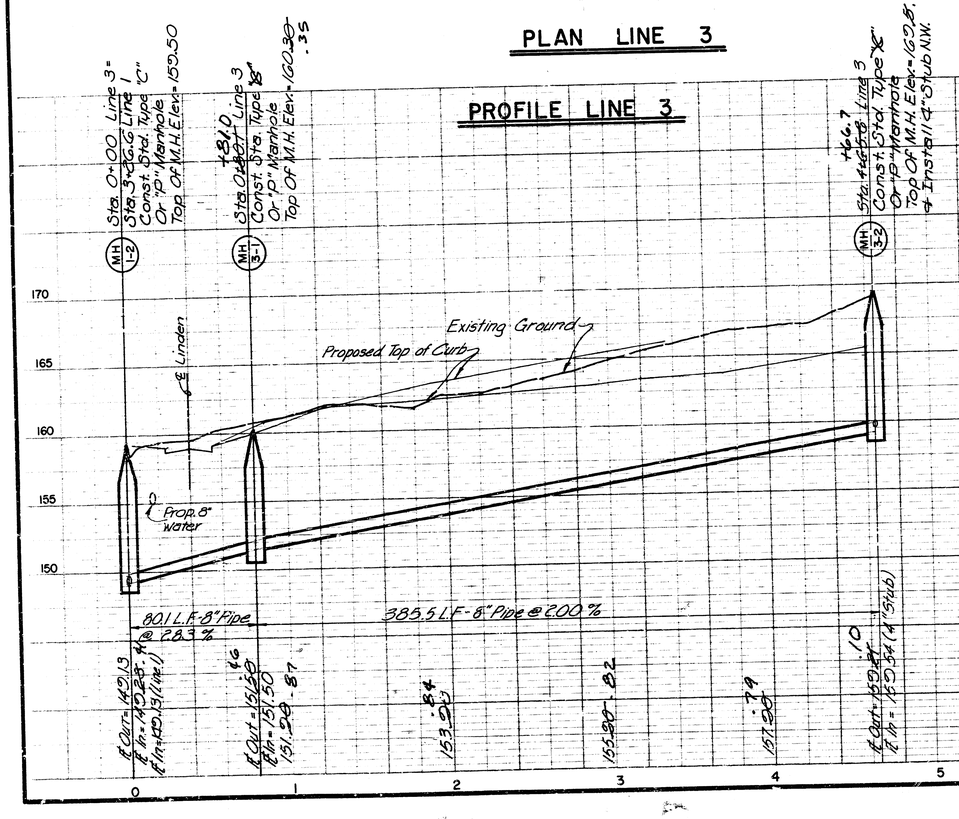


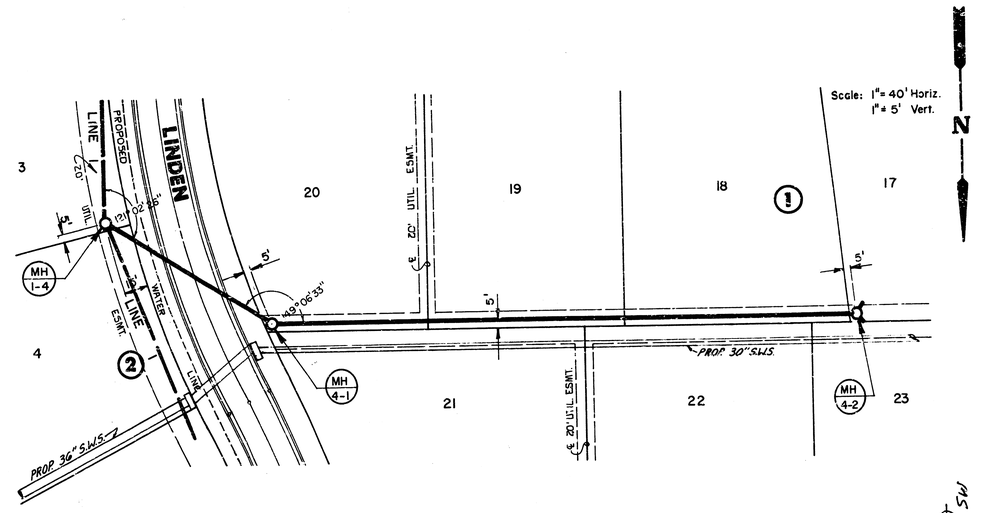

3/8
M.K.E.C.

WOODLAND ESTATES
SANITARY SEWER
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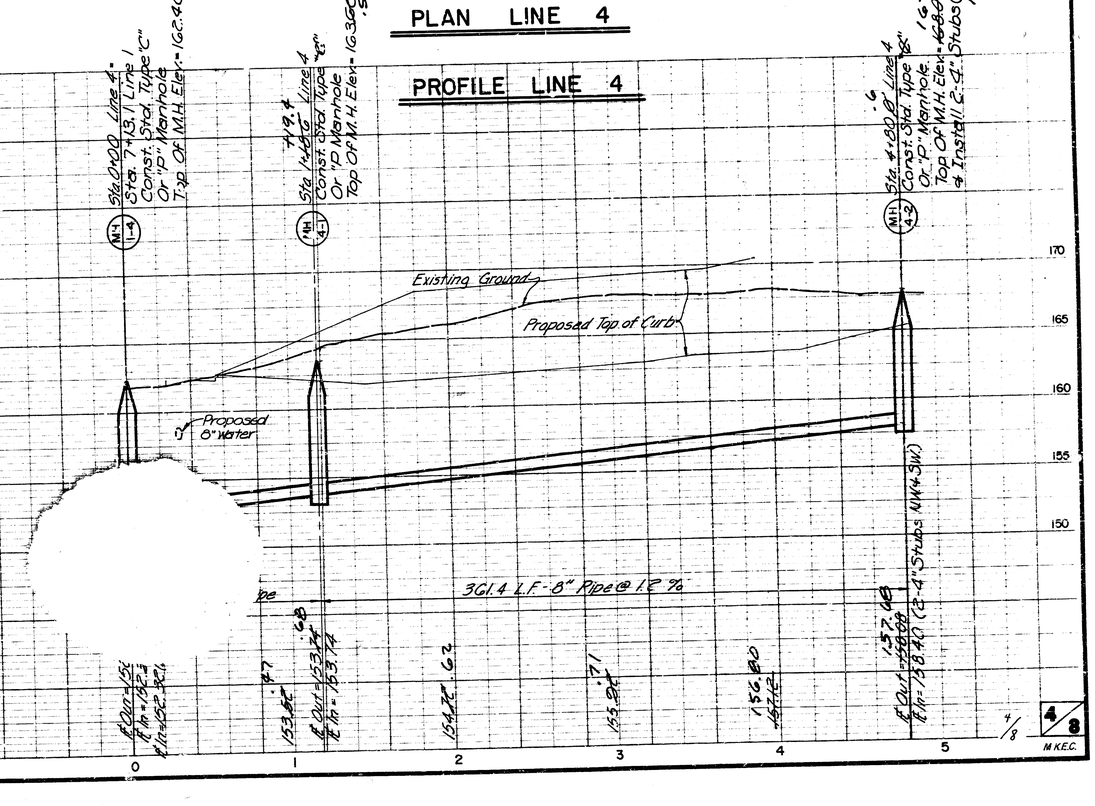



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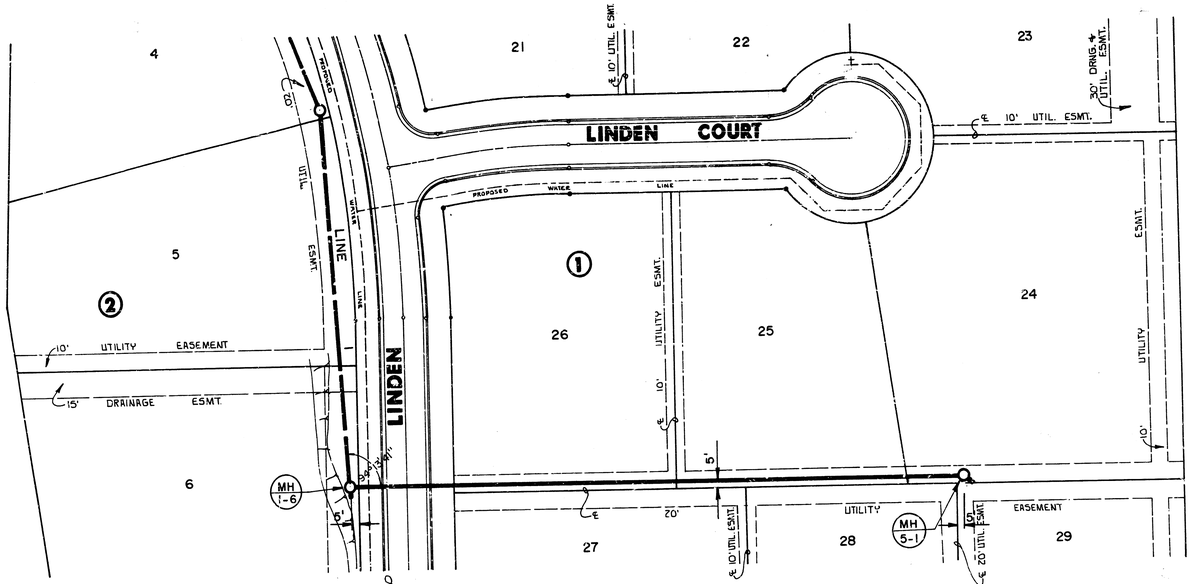

## PLAN LINE 4






M.K.E.C.

WOODLAND ESTATES
SANITARY SEWER
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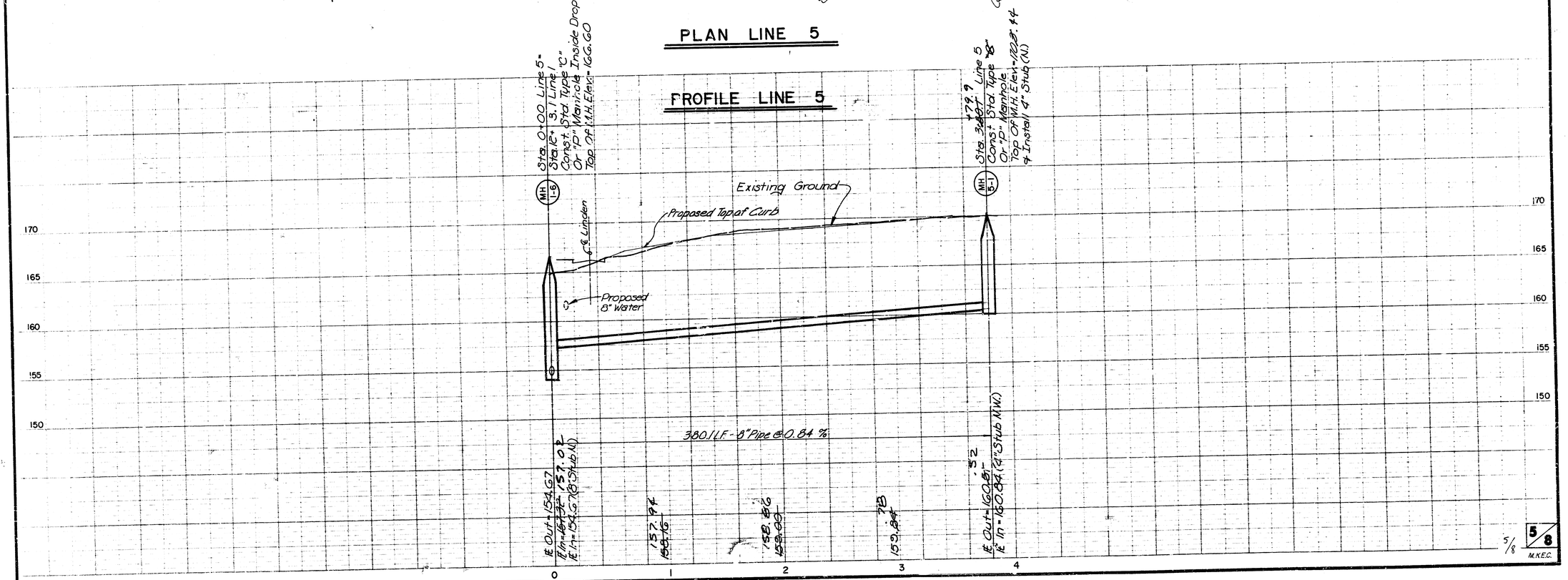



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Scale: 1" = 40' Horiz.
1" = 5' Vert.

## PLAN LINE 5

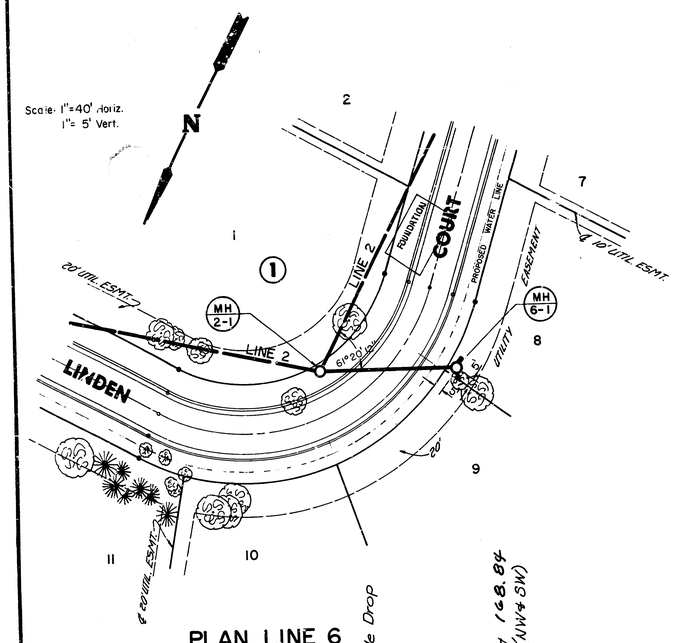
## PROFILE LINE 5



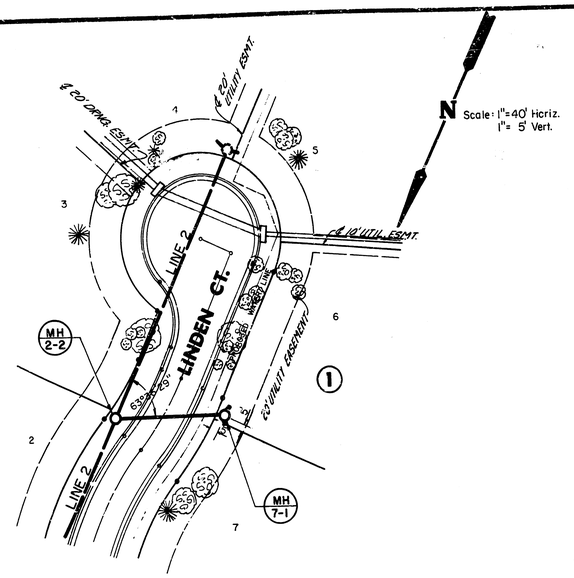

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M.K.E.C.

WOODLAND ESTATES
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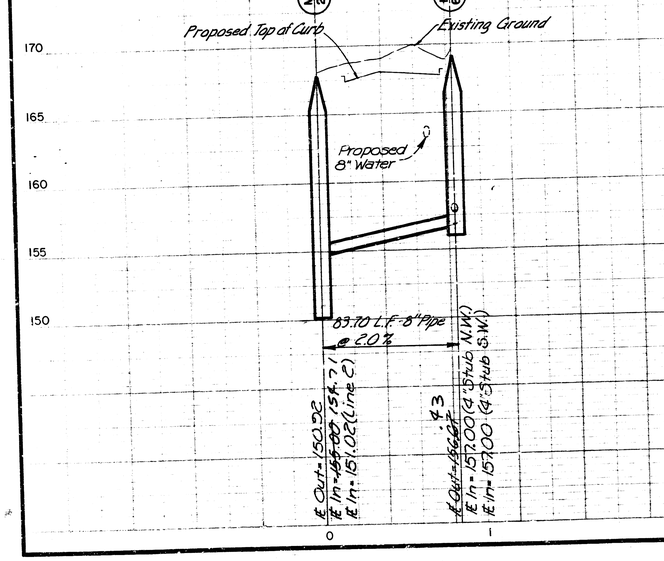



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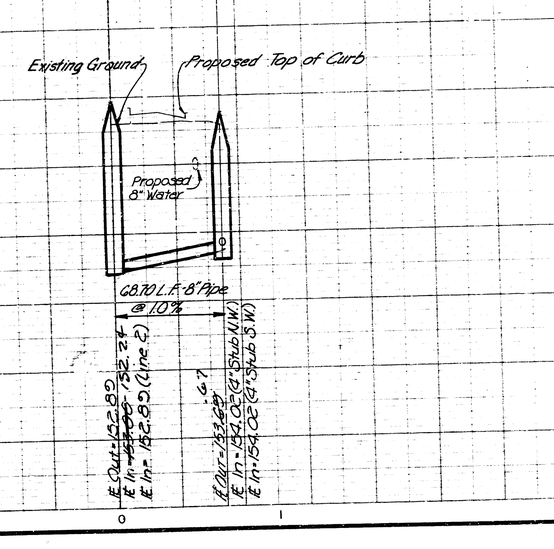



## PLAN LINE 7

## PROFILE LINE 6



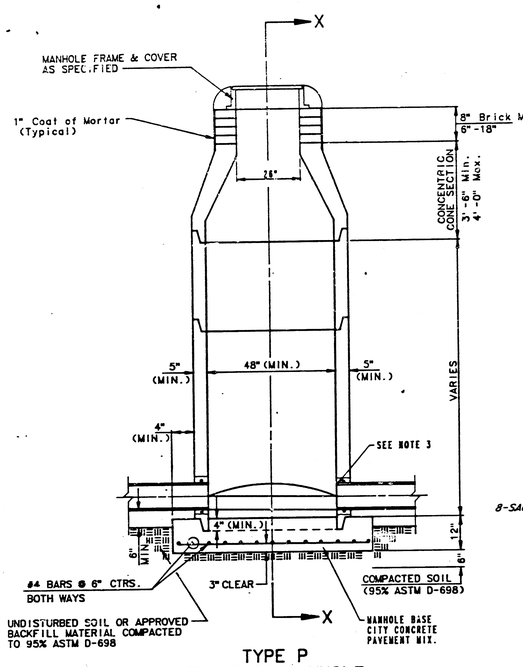

## PROFILE LINE 7



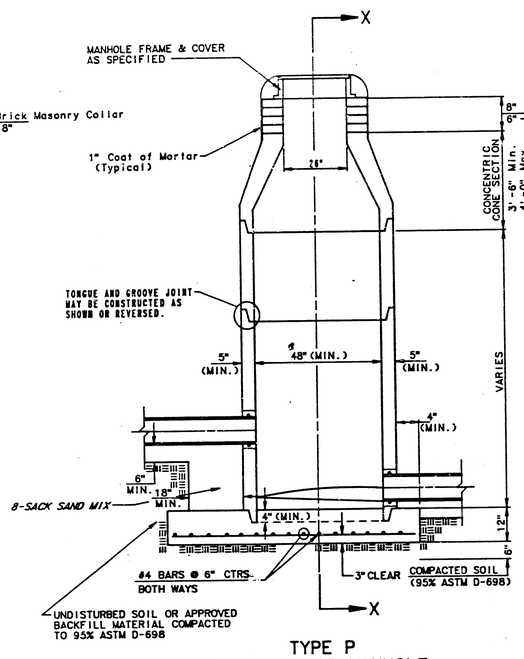


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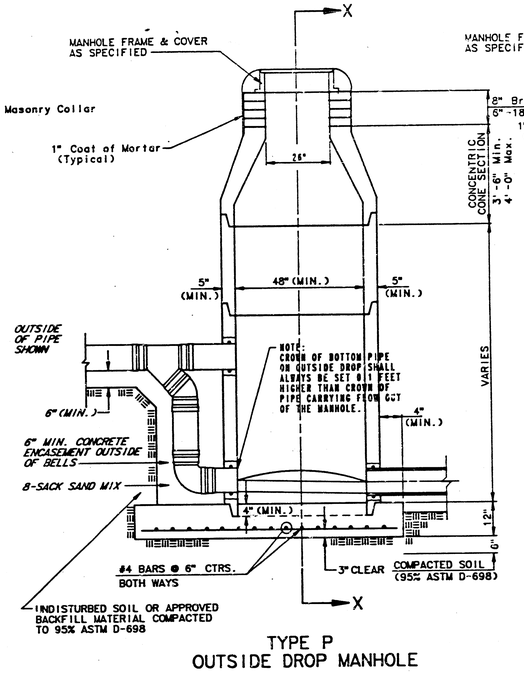
# SEWER APPURTENANCES DETAILS
## ADOPTED AS STANDARD DESIGN
## BY
## CITY OF WICHITA



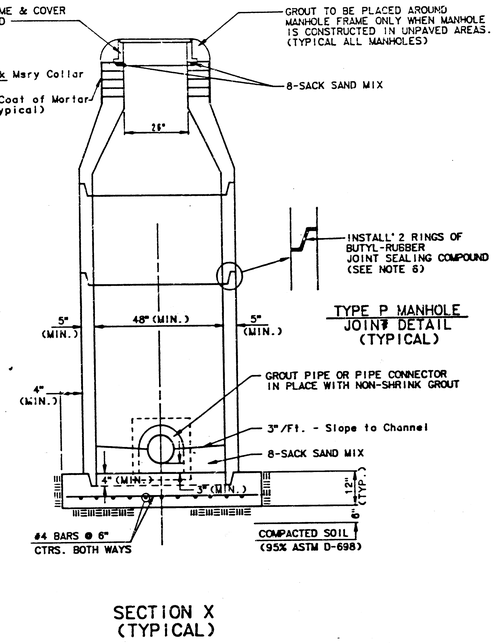

TYPE P
STANDARD MANHOLE




TYPE P
INSIDE DROP MANHOLE




TYPE P
OUTSIDE DROP MANHOLE




TYPE P MANHOLE JOINT DETAIL (TYPICAL)

SECTION X
(TYPICAL)

### GENERAL NOTES

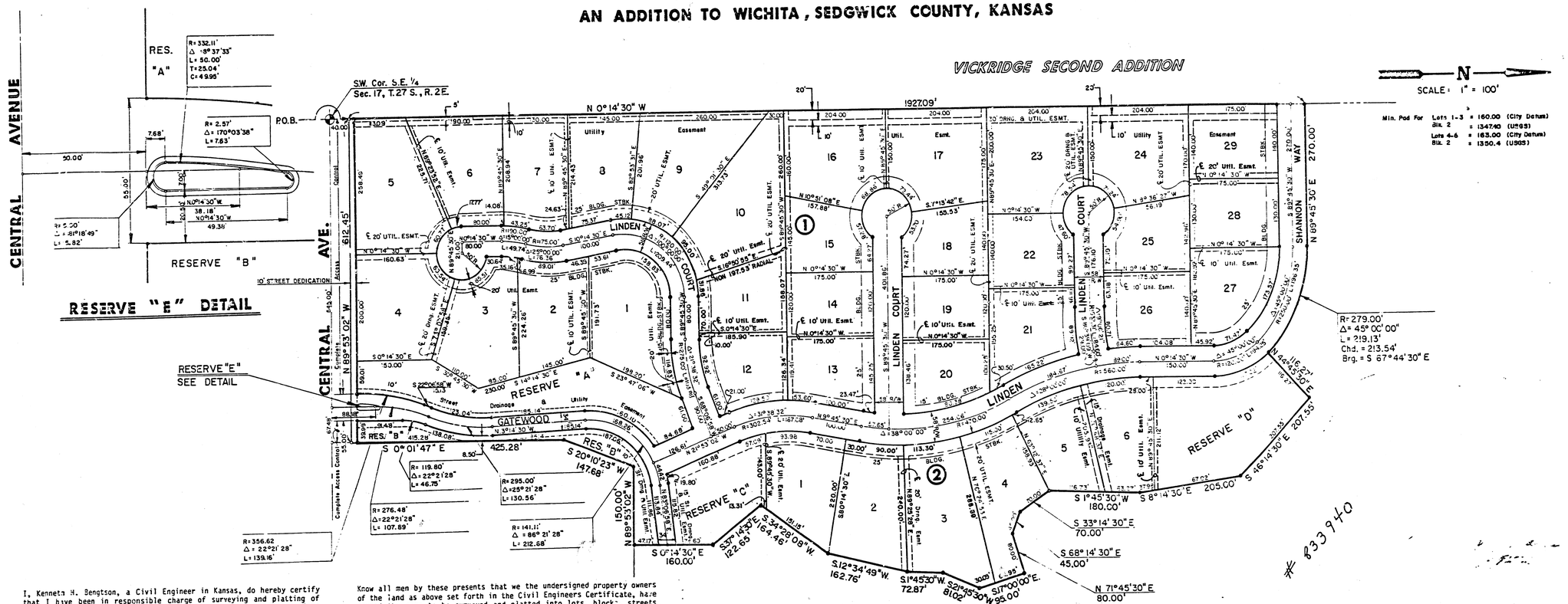
### PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF A.S.T.M. C478 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 ENCASEMENT 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 TNEMEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS 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 6 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. 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 CONSTRUCTED 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 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.
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.

# FINAL PLAT OF

# WOODLAND ESTATES

## 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 "WOODLAND ESTATES" an addition to Wichita, Sedgwick County, Kansas, into Lots, Blocks, Reserves, and Streets, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Southeast Quarter of Section 17, Township 27 South, Range 2 East of the 6th P.M., more particularly described as follows:

Beginning at a point 40.00 feet North and on the West line of said Southeast Quarter; thence N 0° 14' 30" W, 1927.09 feet; thence N 89° 45' 30" E, 270.00 feet to a point on a curve to the right having a central angle of 45° 00' 00", a radius of 279.00 feet, and a long chord of 213.54 feet bearing S 67° 44' 30" E; thence along said curve a distance of 219.13 feet; thence N 44° 45' 30" E, 116.27 feet; thence S 46° 14' 30" E, 207.55; thence S 8° 14' 30" E, 205.00 feet; thence S 1° 45' 30" W, 180.00 feet; thence S 33° 14' 30" E, 70.00 feet; thence S 68° 14' 30" E, 45.00 feet; thence N 71° 45' 30" E, 80.00 feet; thence S 17° 00' 00" E, 95.00 feet; thence S 21° 45' 30" W, 81.02 feet; thence S 34° 28' 08" W, 164.46 feet; thence S 37° 14' 30" E, 122.65 feet; thence S 12° 34' 49" W, 162.76 feet; thence S 1° 45' 30" W, 72.87 feet; thence S 21° 45' 30" W, 81.02 feet; thence S 17° 00' 00" E, 95.00 feet; thence S 0° 14' 30" E, 164.46 feet; thence N 89° 53' 02" W, 150.00 feet; thence S 20° 10' 23" W, 147.68 feet; thence S 0° 01' 47" E, 425.28 feet to a point 40.00 feet North of the South line of said Southeast Quarter; thence N 89° 53' 02" W, 612.45 feet, parallel with the South line of said Southeast Quarter to the point of beginning.

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 20th day of August, 1986.

Kenneth H. Bengtson, P.E.
Mid-Kansas Engineering Consultants, P.A.
3500 N. Rock Road, Building #800

KENNETH H. BENGTSON LICENSED Kansas PROFESSIONAL ENGINEER

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Civil Engineers Certificate, have caused the same to be surveyed and platted into lots, blocks, streets and reserves, the same to be known as "WOODLAND ESTATES" 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 street, drainage and public utilities as indicated on the accompanying plat are hereby granted. Reserves "A", "B" & "C" are being platted for construction and maintenance of public utilities, drainage, landscaping, walks, open space and entry monuments. Reserve "E" is platted for landscaping. Reserve "D" is being platted for construction and maintenance of public utilities, drainage, landscaping and irrigation. The Reserves shall be owned and maintained by the Homeowners Association. Minimum pad elevation on Lots 1 through 6 inclusive, Block 2 shall be as indicated on the face of the plat. All abutters right of access to or from the North line of Central Avenue over and across the South lines of Lots 4 and 5 Block 1, Reserve A, and Reserve B of "Woodland Estates" are hereby granted to the City of Wichita.

RITCHIE ASSOCIATES, INC., a Kansas Corporation

By: Jack D. Ritchie, President

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

Be it remembered that on this ___ day of _____, 1986, before me a Notary Public in and for said State and County, came Ritchie Associates, Inc., by Jack D. Ritchie, President, 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.

_____, Notary Public
Teresa A. Niles
My Appointment Expires: _____

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

Dated this 7TH day of AUGUST, 1986.

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

David Sayouth, Vice-Chairman

Michael E. Lindebak, Secretary

This plat approved and all dedications shown hereon, if any, accepted by the City Commission of the City of Wichita, Kansas, this 2nd day of September, 1986.

Tony Casado, Mayor

Donald C. Gisick, City Clerk

Entered on transfer record this 22 day of September, 1986.

Don Wright, County Clerk

STATE OF KANSAS)
) SS:
SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this 22nd day of September, 1986.

Pat Kettler, Register of Deeds

Ed Resa, Deputy

20.00

C-1 3-28

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