LATERAL 3, MAIN 9, S.S. 23

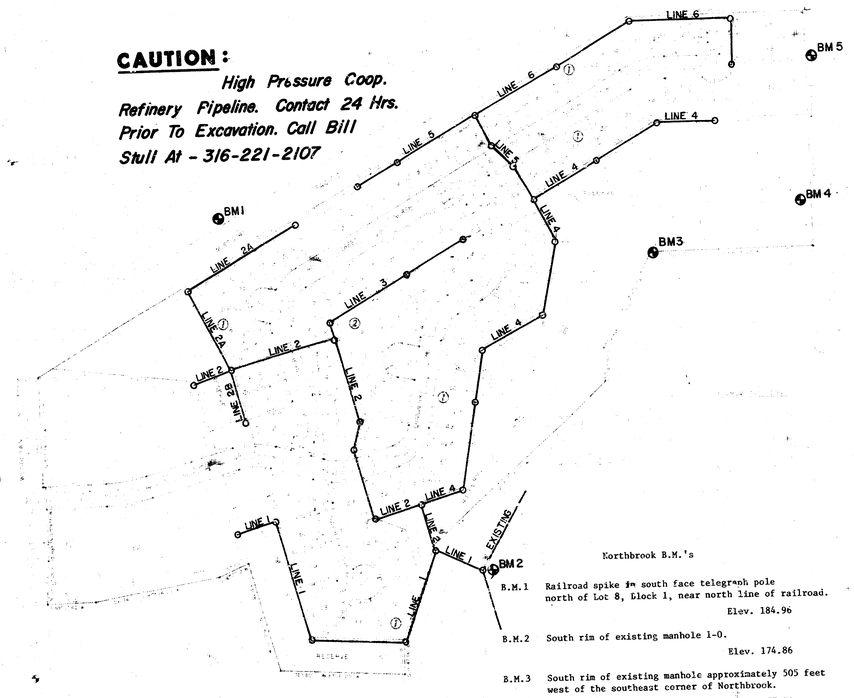
PROJECT NO.

468-76-245-81259-000-000-001

CITY OF WICHITA, KANSAS
R.W. BRUGGEMAN, CITY ENGINEER
APRIL, 1983

As Built
S.S.
284

CAUTION: High Pressure Coop. Refinery Pipeline. Contact 24 Hrs. Prior To Excavation. Call Bill Stull At - 316-221-2107



N

SCALE: 1"=200'

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LINE 1
3	LINE 2
4	LINE 2, LINE 2B
5	LINE 2A
6	LINE 3
7	LINE 4
8	LINE 4
9	LINE 5
10	LINE 6
11	FINAL PLAT
12	MANHOLE DETAILS
13	RISER DETAIL

Northbrook B.M.'s

B.M.1 Railroad spike in south face telegraph pole north of Lot 8, Block 1, near north line of railroad.
Elev. 184.96

B.M.2 South rim of existing manhole 1-0.
Elev. 174.86

B.M.3 South rim of existing manhole approximately 505 feet west of the southeast corner of Northbrook.
Elev. 177.59

B.M.4 Railroad spike in west face of KG&E "H" pole near the east line of Res. A., Northbrook.
Elev. 179.24

B.M.5 Spike step in west face of KG&E "H" pole near the east line of Block 1, Northbrook.
Elev. 179.80

NOTES

1. Risers and additional stubs shall be installed on this project to serve individual lots when ordered by the field engineer. Riser construction shall conform to the requirements as shown on standard riser detail sheet. Locations of the ends of the risers shall be marked by fastening green plastic colored tape to the end of the riser and brought to the ground surface as the excavation is backfilled such that the colored tape will be visible when the project is completed. All risers shall be constructed using S.D.R. 23.5 A.B.S. or P.V.C. pipe. Elevations of stubs and tops of risers shall be such that will facilitate connection of basement drains when these lots are developed.

2. To expedite construction of the streets, the contractor shall install lines 2 and 5 first and shall clear all trench excavation from within street right-of-way as soon as possible.

3. LUMP SUM BID ITEM CLEARING RIGHT-OF-WAY SHALL INCLUDE ALL COSTS OF REMOVING OBSTRUCTION; CLEARING TREES, SHRUBS, VEGETATION, AND RUBBLE. CONTRACTOR SHALL OBTAIN THE FIELD ENGINEER'S APPROVAL PRIOR TO REMOVING ANY TREES.

KENNETH J. SAUER LICENSED 7213 KANSAS PROFESSIONAL ENGINEER

MICHAEL D. HARDING LICENSED 9399 KANSAS PROFESSIONAL ENGINEER

NORTHBROOK
SANITARY SEWER
LATERALS

MID-KANSAS ENGINEERING CONSULTANTS PA
240 NORTH ROCK ROAD SUITE 130
WICHITA, KANSAS 67206
682-8881

1/13

NORTHBROOK
LATERAL 3 , MAIN 9 , S.S. 23
468-76-245- 81259-000-000-001

N

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

B.M.2 South rim of existing manhole 1-0.
Elev. 174.86

RESERVE "B"

RESERVE "A"

RESERVE "B"

62

BAYBERRY CIRCLE

MH 1-0 · MH 1-1 · MH 1-2 · MH 1-3 · MH 1-4 · MH 1-5

EXISTING MAIN 9 S.S. 23

EXIST. 27"

112° 54' 21"

LINE 1

LINE 2

Utility Easement

10' Util. Esmt.

20' Drng. Esmt.

56 · 57 · 58 · 59 · 60 · 61 · 54 · 55

As Built
SHL
2-84

PLAN - LINE 1

PROFILE - LINE 1

Sta. 0+00.00 - Line 1
Existing Std. Type "A" Manhole
Main 9 San Sewer #3

Sta. 1+25.60 - Line 1
Sta. 0+00.00 - Line 2
Const. Std. Type "A"
"C" MH.
Top of MH. Elev. = 174.88

Sta. 4+79.88 - Line 1
Const. Std. Type "A"
"C" MH.
Top of MH. Elev. = 174.86

Sta. 7+60.06 - Line 1
Const. Std. Type "A"
"C" MH.
Top of MH. Elev. = 174.86

Sta. 11+29.44 - Line 1
Const. Std. Type "A"
"C" MH.
Top of MH. Elev. = 174.86

Sta. 12+44.44 - Line 1
Const. Std. Type "A"
"C" MH.
Top of MH. Elev. = 174.85

Fill To Elev. 174.00
Compact To 90% A.S.T.M.D.-698

Existing Ground

175.00 L.F.-8" ABS, PVC, or VCP pipe @ 0.40 %

298.88 L.F.-8" ABS, PVC, or VCP pipe @ 0.40 %

286.98 L.F.-8" ABS, PVC, or VCP pipe @ 0.98 %

358.58 L.F.-8" ABS, PVC, or VCP pipe @ 0.72 %

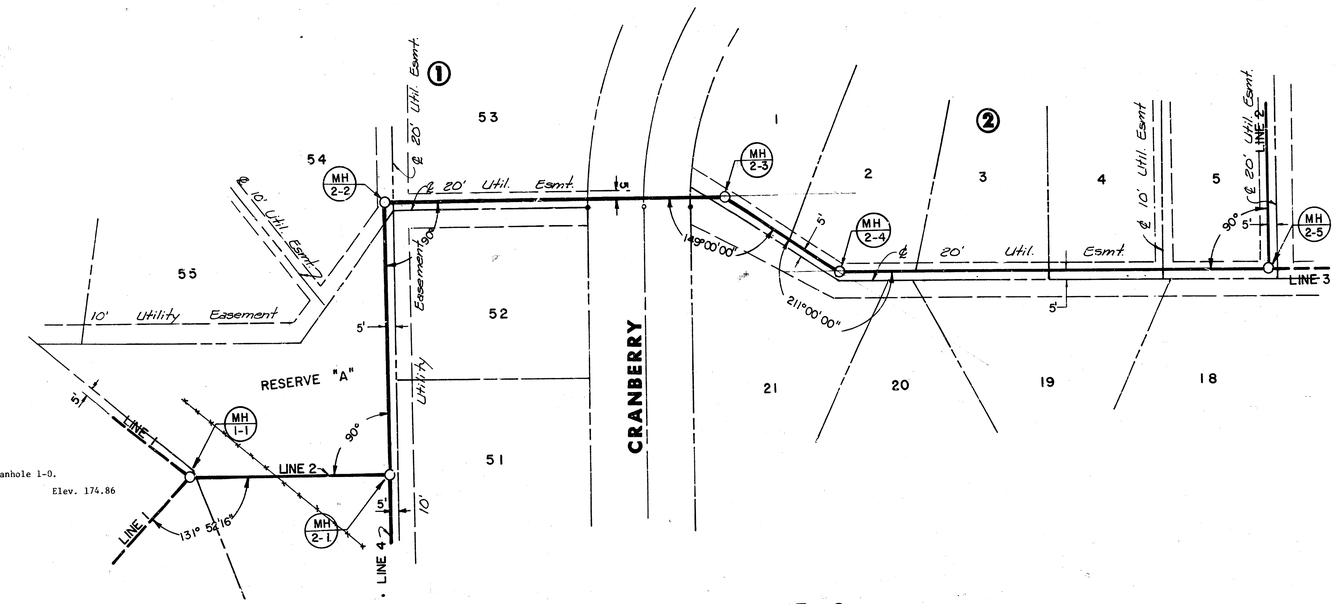
125.00 L.F.-8" ABS, PVC, or VCP pipe @ 0.72 %

175 · 170 · 165 · 160 · 155

0 · 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12

2/13

NORTHBROOK
LATERAL 3 , MAIN 9 , S.S. 23
468-76-245- 81259-000-000-001



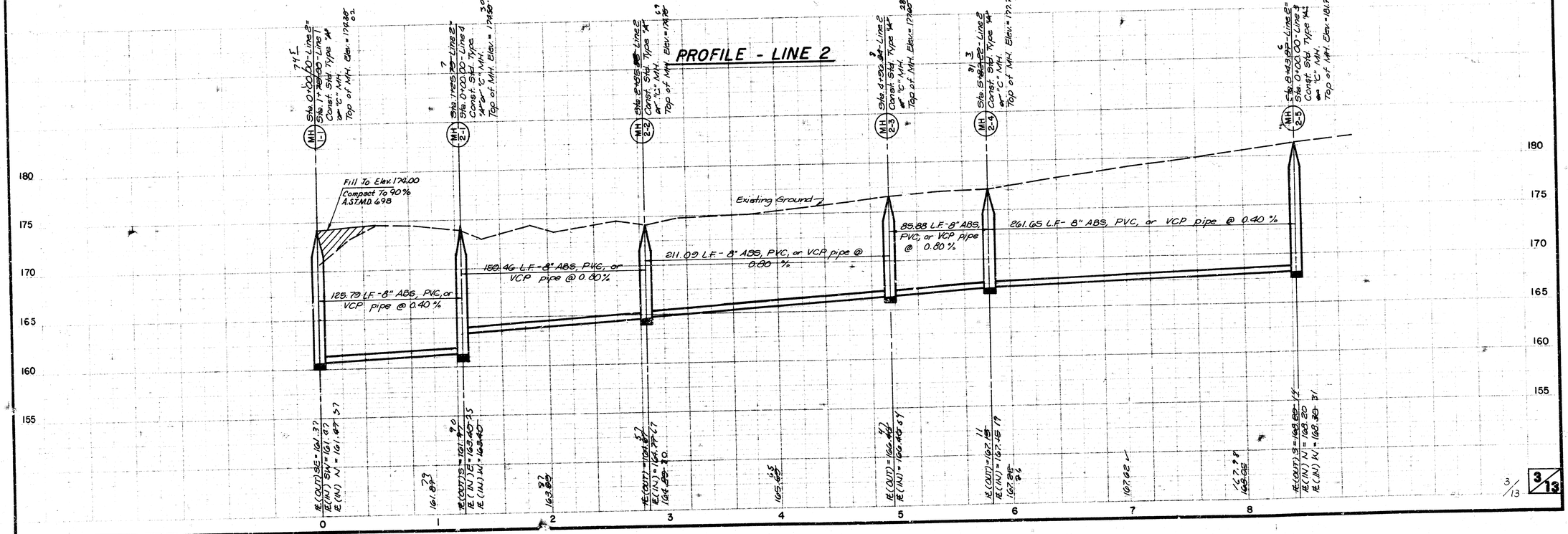
N

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

As Built
JLL
2-84

PLAN - LINE 2

PROFILE - LINE 2

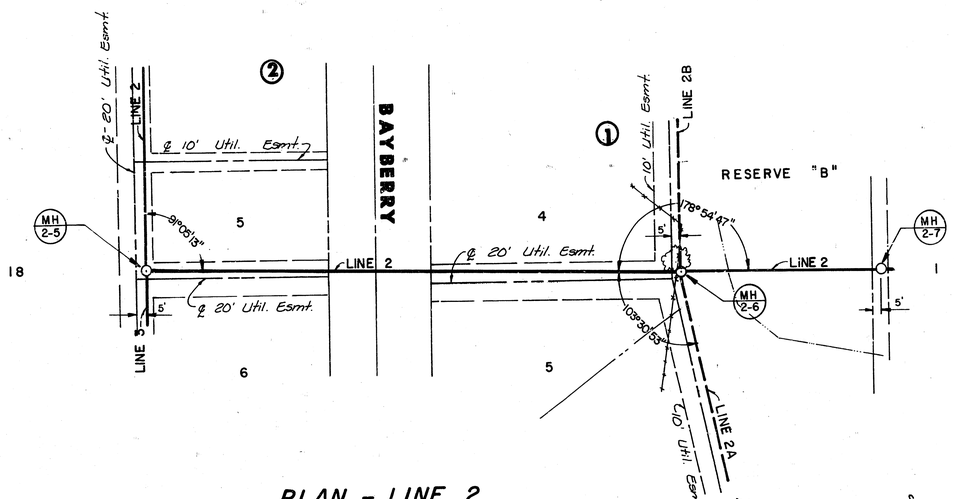


NORTHBROOK
LATERAL 3 , MAIN 9 , S.S. 23
468-76-245-81259-000-000-001

B.M.1 Railroad spike in south face telegraph pole north of Lot 8, Block 1, near north line of railroad.
Elev. 184.96

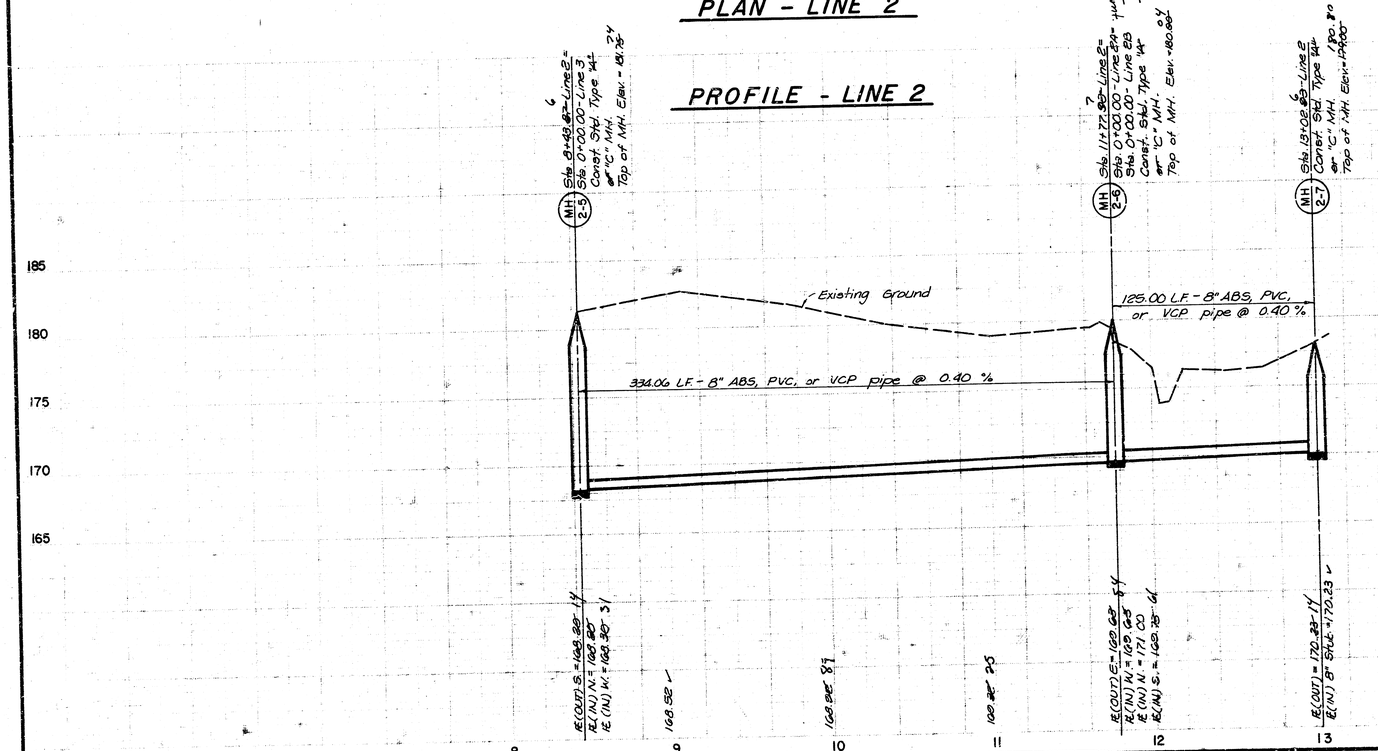
N

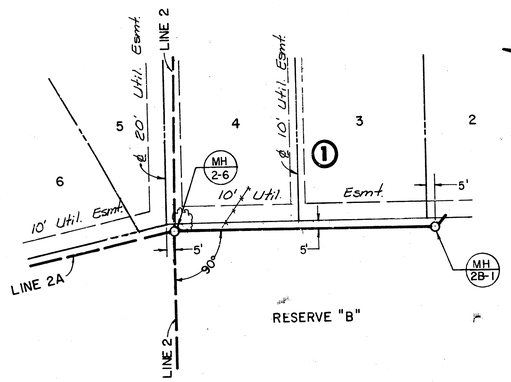
Scale:
1" = 40' Horiz.
1" = 5' Vert.



PLAN - LINE 2

PROFILE - LINE 2





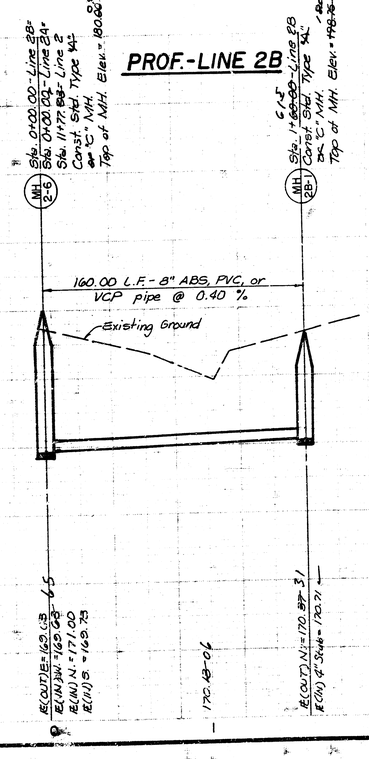
N

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

As Built
J.LL
2-84

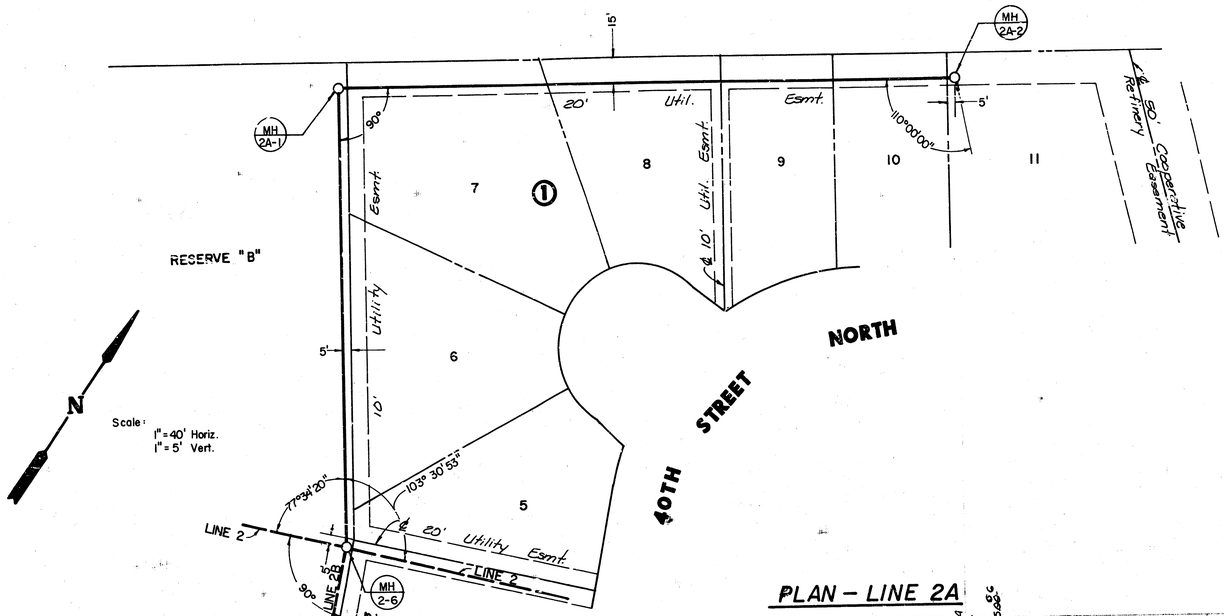
PLAN - LINE 2B

PROF.- LINE 2B



NORTHBROOK
LATERAL 3, MAIN 9, S.S.23
468-76-245- 81259-000-000-001

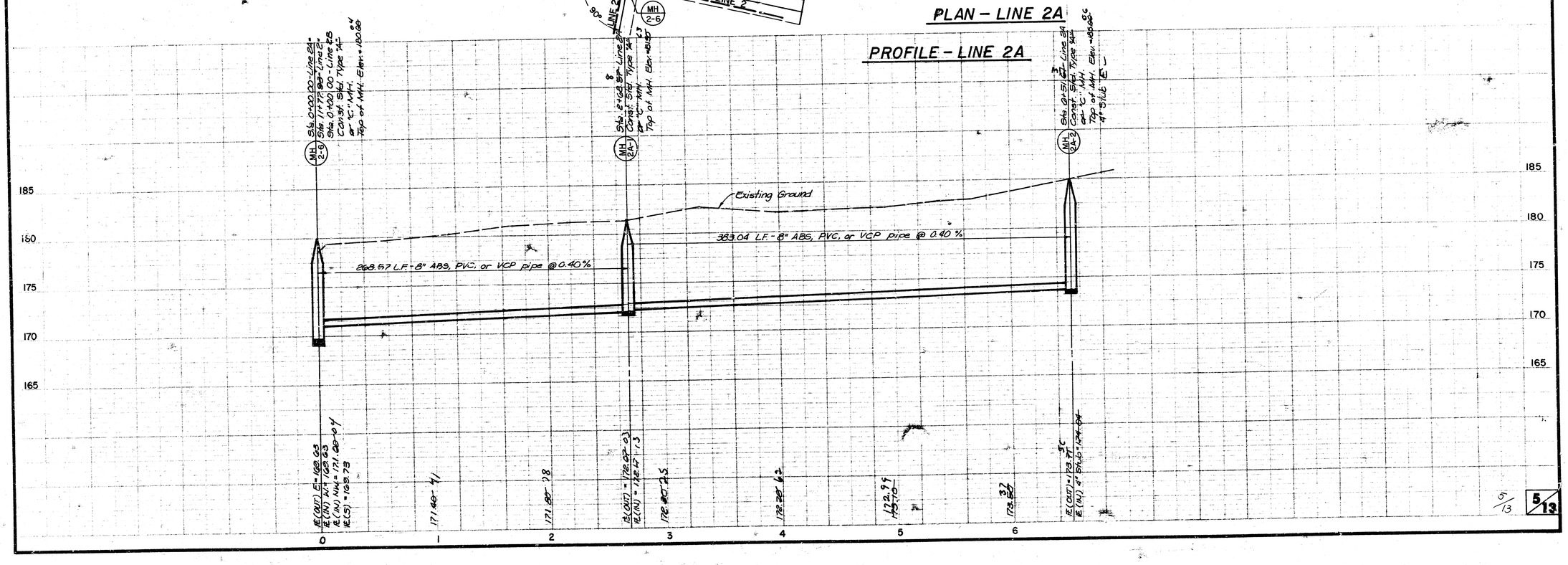
B.M.1 Railroad spike in south face telegraph pole north of Lot 8, Block 1, near north line of railroad.
Elev. 184.96



As Built
LLL
2-82

PLAN – LINE 2A

PROFILE – LINE 2A

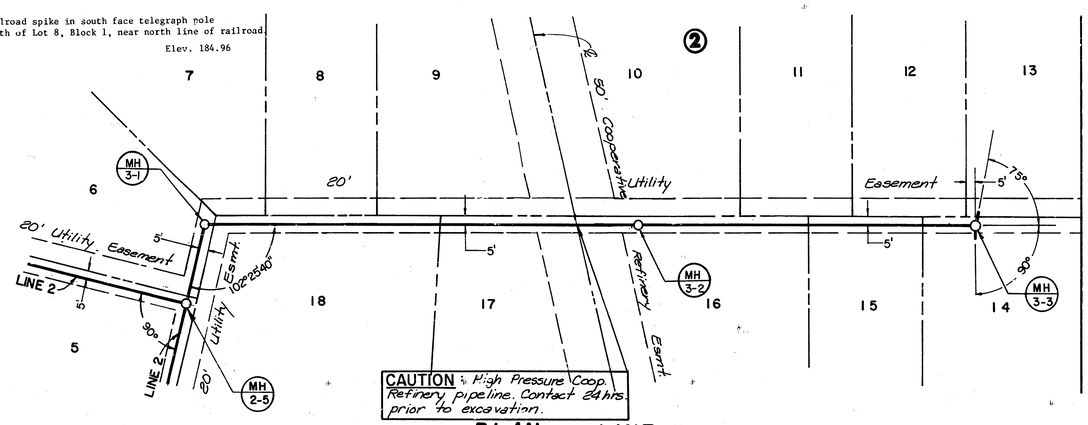


5/13

NORTHBROOK
LATERAL 3, MAIN 9, S.S. 23
468-76-245- 81259 -000-C00-001

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

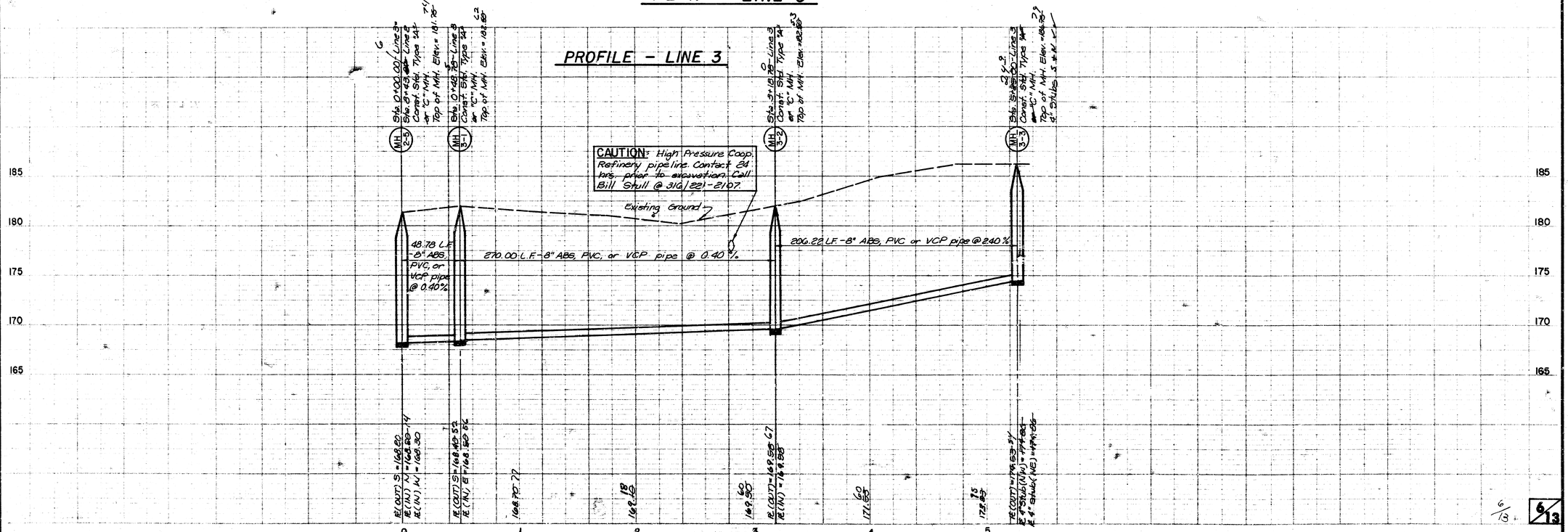
B.M.1 Railroad spike in south face telegraph pole north of Lot 8, Block 1, near north line of railroad. Elev. 184.96



CAUTION: High Pressure Coop. Refinery pipeline. Contact 24 hrs. prior to excavation.

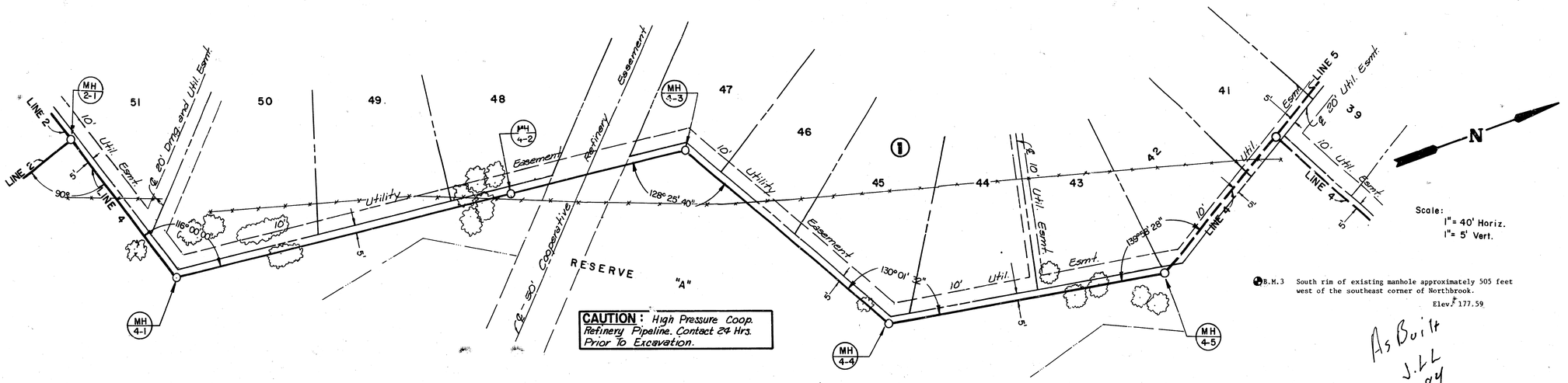
PLAN - LINE 3

PROFILE - LINE 3



As Built
J.L.L.
2-84

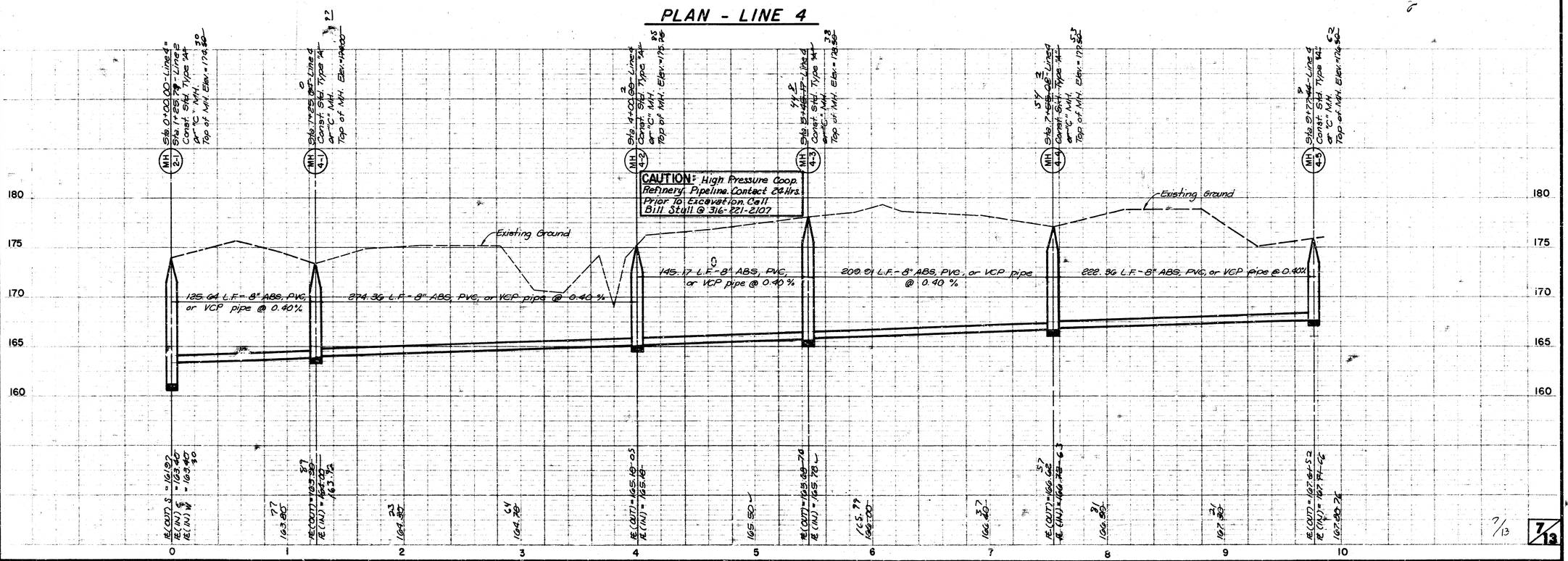
NORTHBROOK
LATERAL 3, MAIN 9, S.S.23
468-76-245-81259-000-000-001



B.M.3 South rim of existing manhole approximately 505 feet west of the southeast corner of Northbrook.
Elev. 177.59

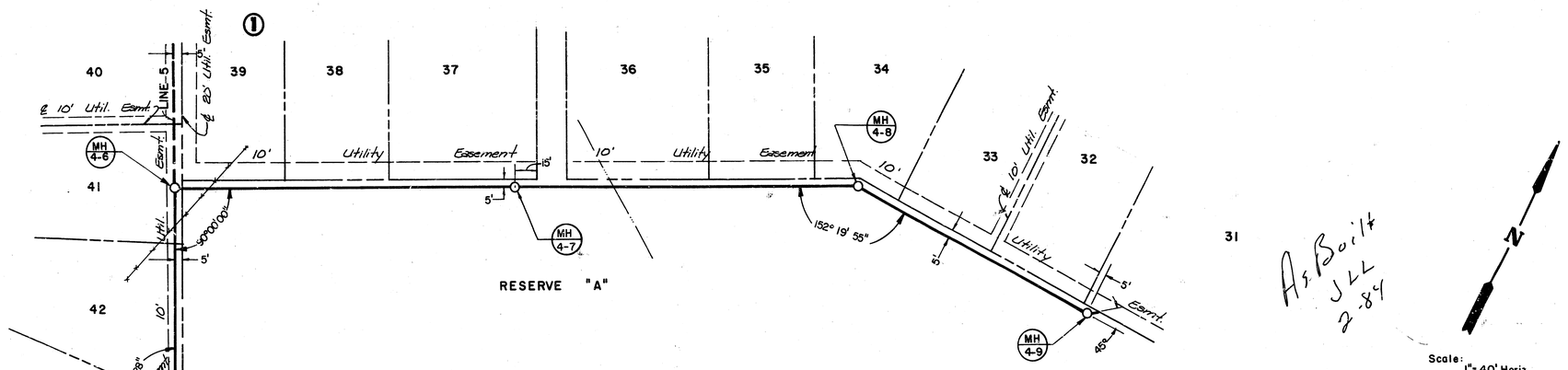
As Built
J.L.L.
-.84

PLAN - LINE 4



7/13

NORTHBROOK
LATERAL 3, MAIN 9, S.S.23
468-76-245-81259-000-000-001

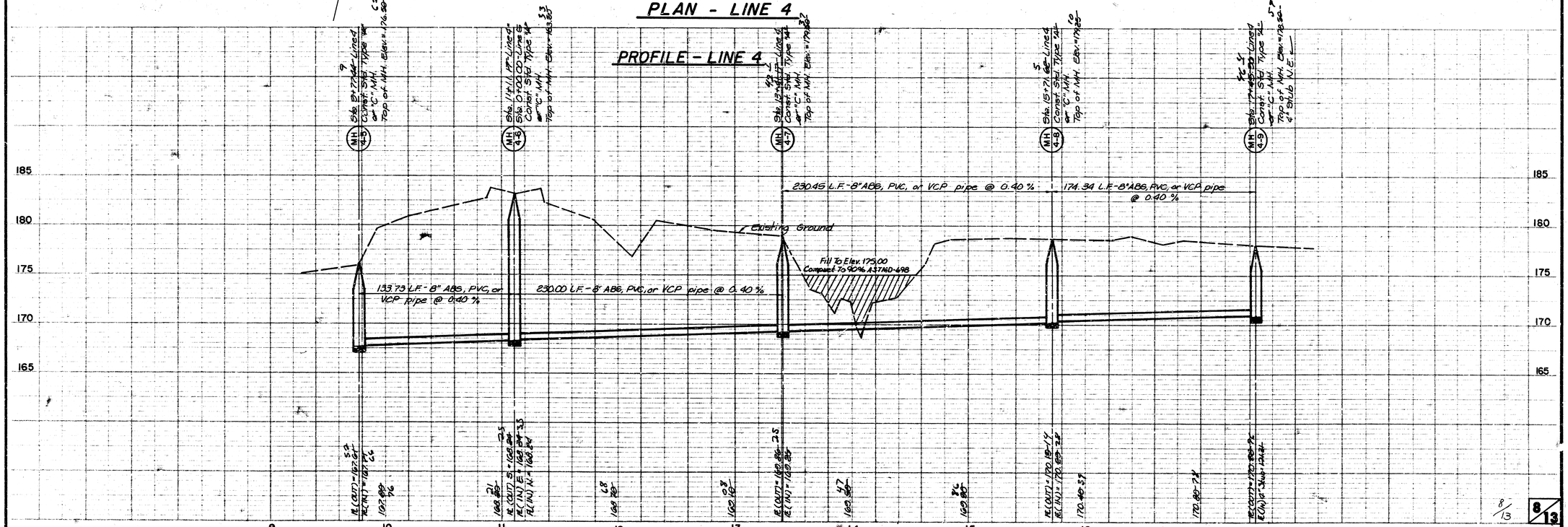


Scale:
1"= 40' Horiz.
1"= 5' Vert.

B.M.4 Railroad spike in west face of KG&E "H" pole near the east line of Res. A., Northbrook.
Elev. 179.24

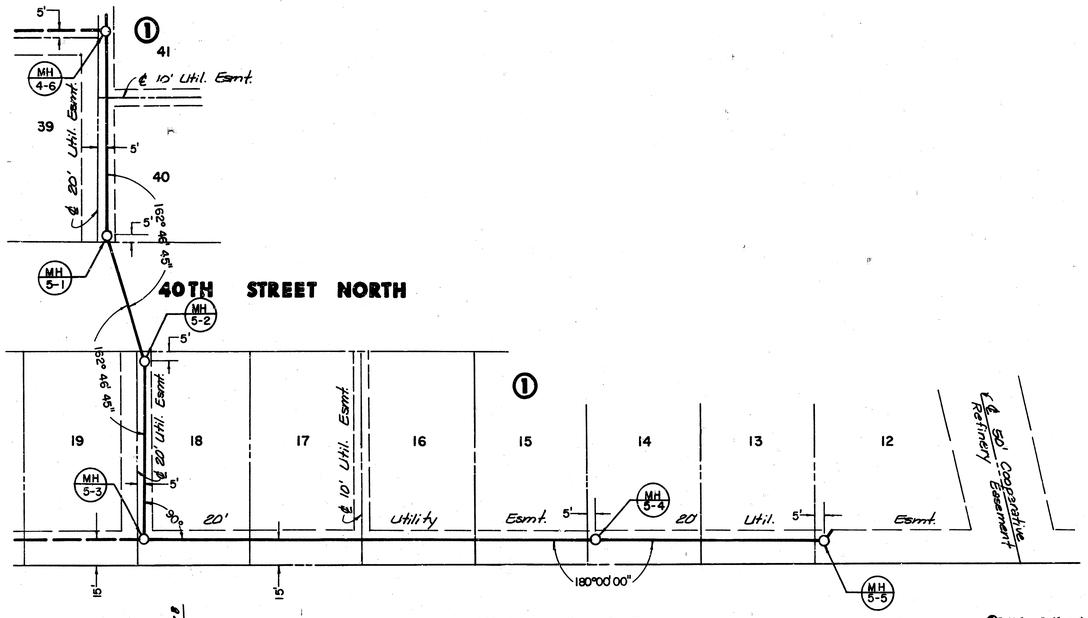
PLAN - LINE 4

PROFILE - LINE 4



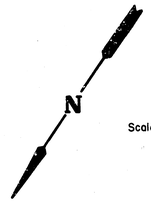
8/13

NORTHBROOK
LATERAL 3, MAIN 9, S.S. 23
468-76-245-81259-000-000-001



PLAN - LINE 5

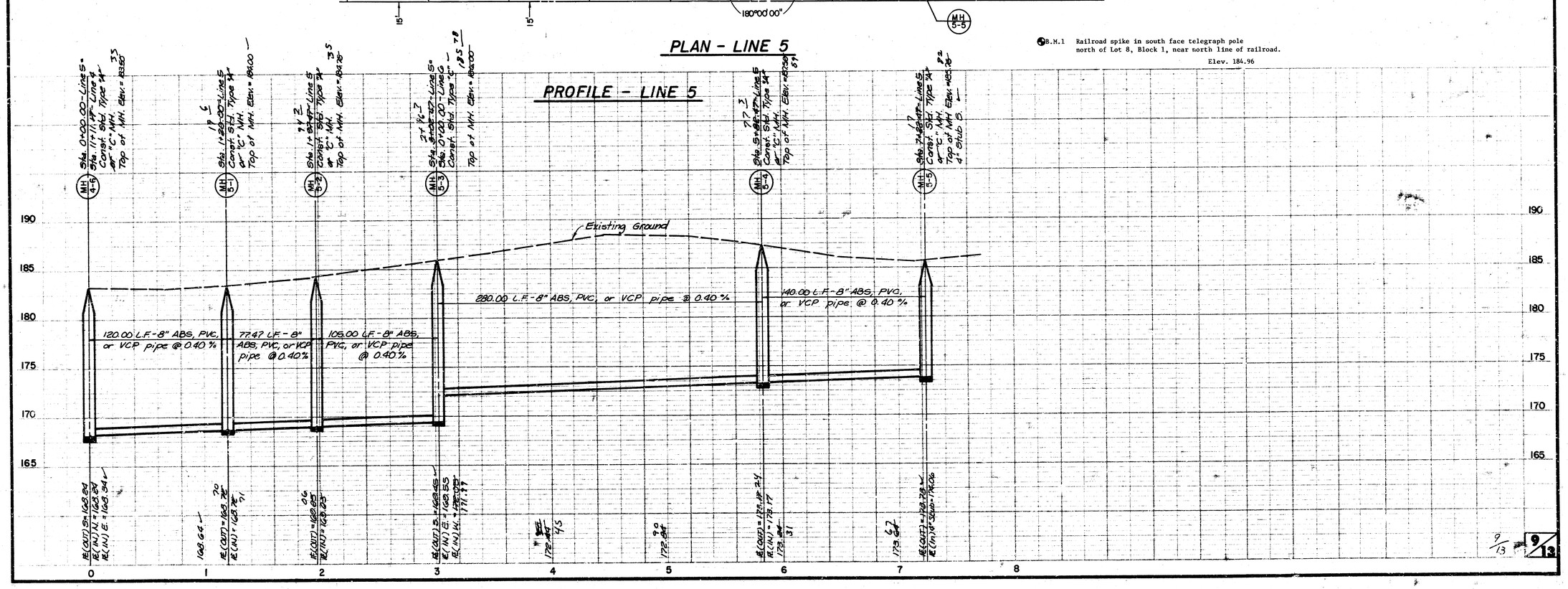
B.M.1 Railroad spike in south face telegraph pole north of Lot 8, Block 1, near north line of railroad.
Elev. 184.96



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

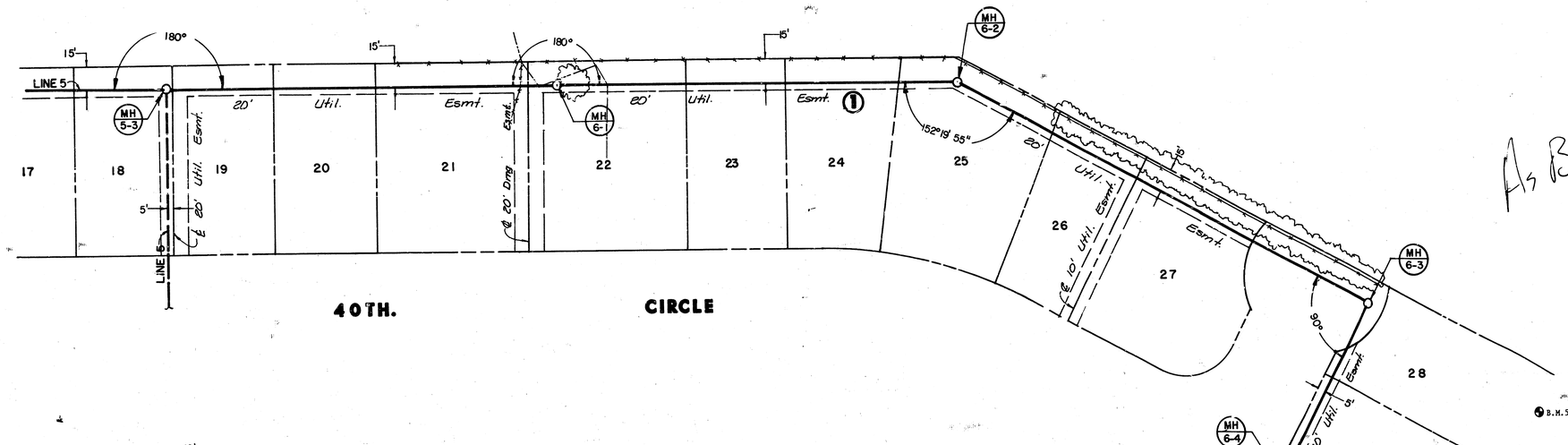
As Built
JLL
2-84

PROFILE - LINE 5



9/13

NORTHBROOK
LATERAL 3, MAIN 9, S.S. 23
468-76-245-81259 -000-000-001



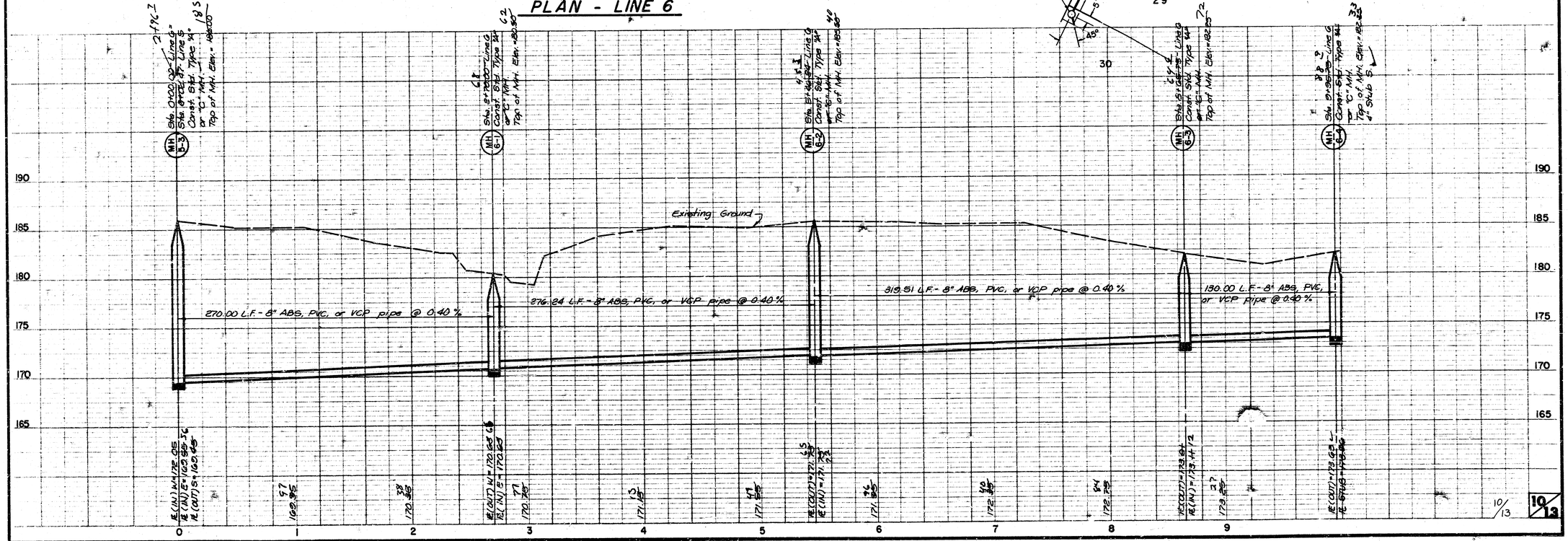
As Built
SLL
2-84

N

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

B.M.5 Spike step in west face of KG&E "H" pole near the east line of Block 1, Northbrook.
Elev. 179.80

PLAN - LINE 6

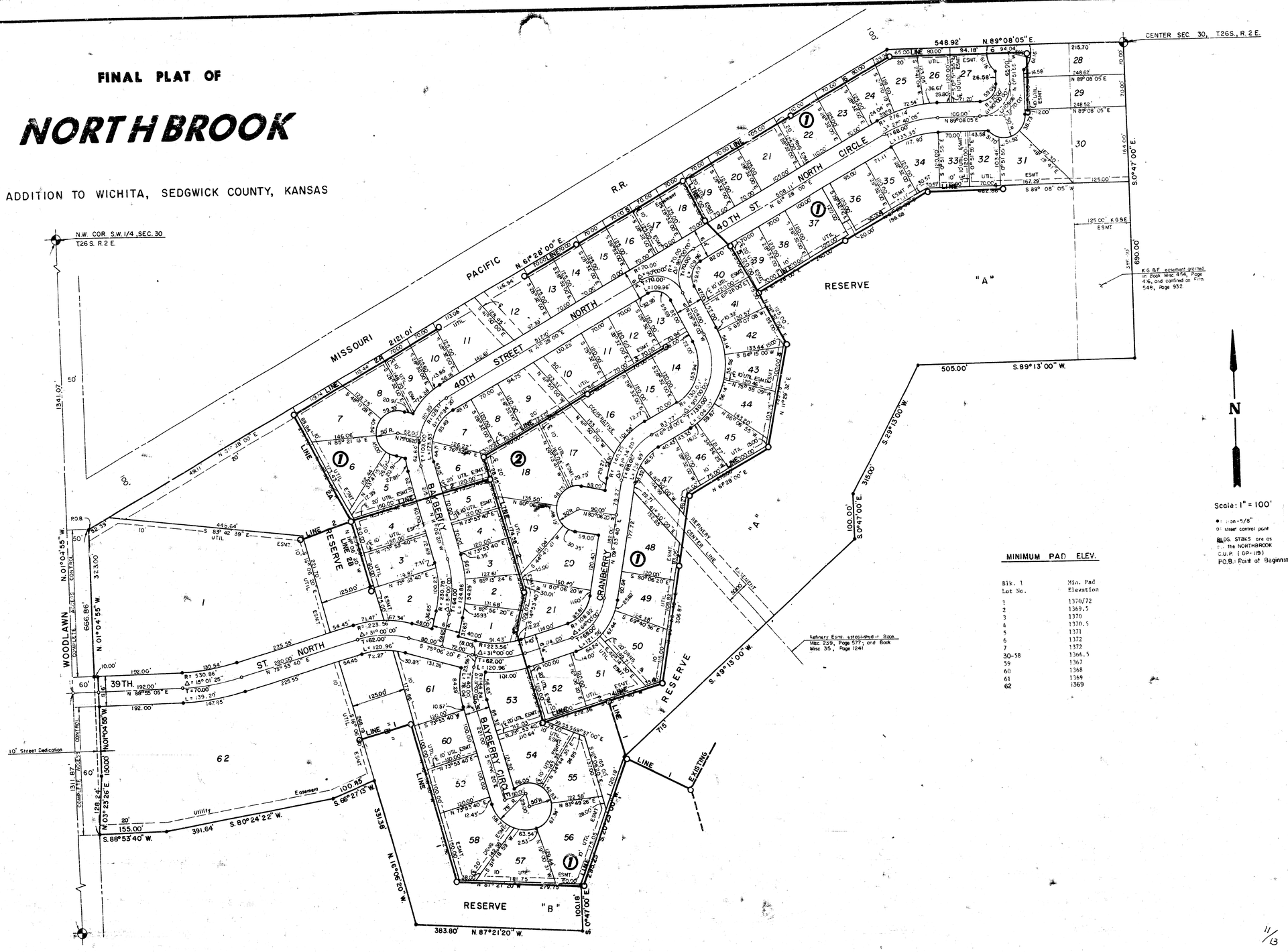


10/13

FINAL PLAT OF

NORTHBROOK

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



Scale: 1" = 100'

● = ...on-5/8"
○ = street control point
BLDG. STAKS are as ... the NORTHBROOK C.U.P. (DP-119)
P.O.B.: Point of Beginning

MINIMUM PAD ELEV.

Blk. 1 Lot No.	Min. Pad Elevation
1	1370/72
2	1369.5
3	1370
4	1370.5
5	1371
6	1372
7	1372
30-58	1366.5
59	1367
60	1368
61	1369
62	1369

11/13

Sheet 11 of 13

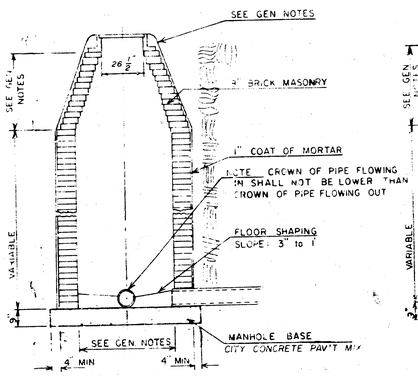
REVISED SEPTEMBER 1980

SEWER APPURTENANCES DETAILS

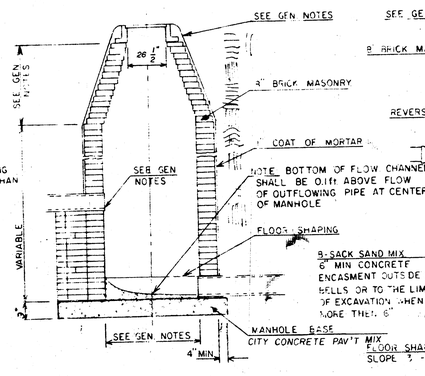
ADOPTED AS STANDARD DESIGN BY

CITY of WICHITA, KANSAS

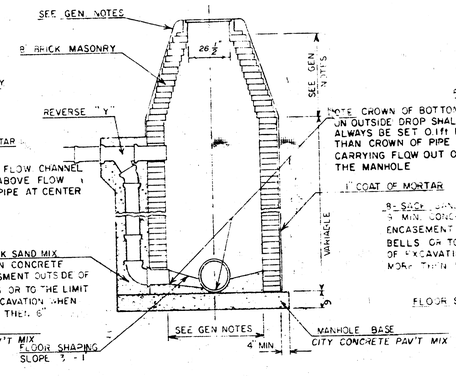
TYPE "A" MANHOLE



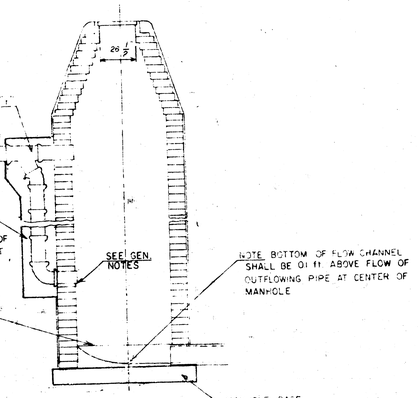
TYPE "A" INSIDE DROP MANHOLE



TYPE "A" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP CONSTRUCTED ON EXISTING MANHOLE



GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 5 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CLASS "A" FOR STANDARD PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING SIZE #467 GRADED PAVEMENT SIX SACKS PER CUBIC YARD FOR REINFORCED CONCRETE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN IN THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN SEWER AREAS. TYPE "A" MANHOLES MAY BE USED ON SLOPES UP TO 20 % WITH DEPTH WHEN THE MANHOLE IS NOT LOCATED WITHIN PAVED STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES AND STRUCTURE 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 CASSOLE ON 4' DIAMETER MANHOLES SHALL BE 4'. MANHOLES HAVING A DIAMETER OF 5' SHALL HAVE CASSOLES 5' IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE AND SHALL CONSIST OF NO. 4 BARS PLACED ON 3" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 5" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS IN FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

3. 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. FLEXIBLE JOINTS SHALL BE USED WITH PLASTIC AND RUBBER 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 FLEXIBLE 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 SHOWN BY THE DRAWING. THE VERTICAL DROP FROM THE LOWER PIPE ON SUCH OUTSIDE DROP CONNECTIONS SHALL NOT EXCEED 1' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES SIZED LARGER THAN 12", EXCEPT THE CROWN OF THE COVER PIPE SHALL NEVER BE SET BELOW THE CROWN OF ANY LARGER OUTFLOWING PIPE. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTION ON EXISTING MANHOLE.

4. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH A SMOOTH CHANNEL SO THAT THE MANHOLE WILL BE SELF CLEANING. THE FLOOR OF SAID MANHOLES SHALL BE SHAPED TO CONFORM AS NEARLY AS POSSIBLE TO THE LOWER HALF OF ALL INSIDE PIPES. THE FLOOR SHALL BE SHAPED TO PROVIDE SMOOTH BENDS OF PARABOLIC FORM FROM INCOMING PIPES TO OUTGOING PIPE SO AS TO PROVIDE THE LEAST LOSS OF HEAD. THE CROWN OF ALL INCOMING PIPES SHALL BE SET NOT LOWER THAN THE CROWN OF THE OUTGOING PIPE. FLOOR SHALL BE FINISHED SMOOTH AND TROWELED TO A UNIFORM GRADE BY THE MASON. INVERT PATTERN SHALL CONFORM TO THE DIAGRAMS ON PAGE 12 OF THIS SECTION.

5. FOR 24 INCH AND LARGER PIPE, THE PIPE SHALL BE LAID WITH THE BOTTOM OF PIPE ON CHANNEL. PIPES LESS THAN 24 INCHES DIAMETER SHALL HAVE THE TOP HALF OF PIPE BURIED TO HEAD WITH THE PIPE INSIDE CONTACT OF THE CONCRETE. MANHOLE FLOOR SHALL FLOW OF SHAPED AROUND THE OUTSIDE HALF OF THE PIPE WHERE FOUND IN FLOW CHANNEL.

6. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE SANITARY SEWER OR GRADING WITH REFERENCE TO THE LEVELS OF THE FINISHED EXCAVATION. THE CLAY PIPE IS USED, THE GRADE MUST BE EXTENDED TO THE PLANE FIXED BY THE MANHOLE. THE GRADE SHALL BE ESTABLISHED AT THE BASE OF PIPE BELLS IN A DEPTH OF NOT LESS THAN 4 INCHES BELOW THE BOTTOM OF THE PIPE. THE USE OF SHALLOW TRENCH EXCAVATION IN TO CLAY PIPE JOINTS SUFFICIENT TO MANHOLE SPECIFICATIONS FOR CONCRETE IN THE PIPE FOR THE MANHOLE.

8. MANHOLE COVER CASTINGS AND GRADING RINGS SHALL CONFORM TO THE REQUIREMENTS AS CONTAINED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.

7. THE VERTICAL DROP IN CASTING SHALL MANHOLES SHALL BE ADJUSTED AS FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWN OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

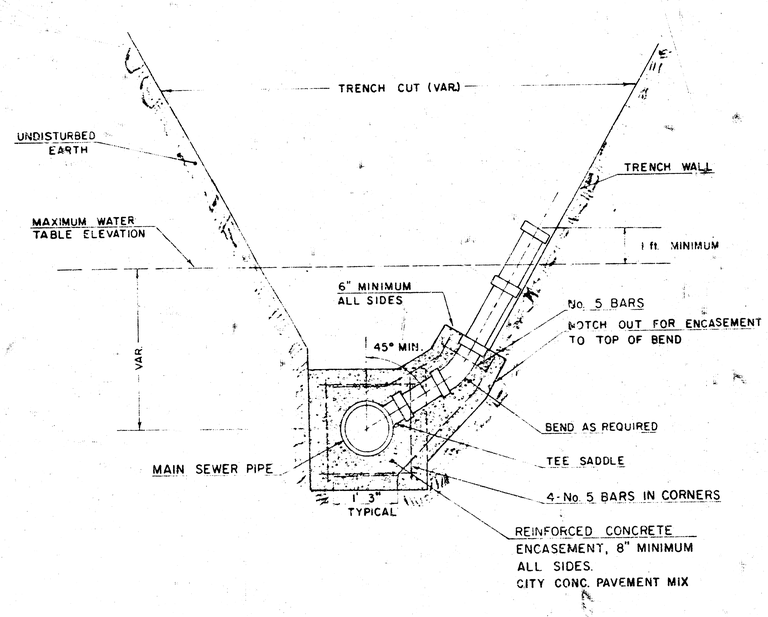
8. STANDARD MANHOLES TYPE "A" AND SHALLOW TYPE "B" AS SHOWN ON PAGE 13 OF THIS SECTION TYPE "B" SHALL BE USED AS STANDARD MANHOLES FOR 10" PIPE AND DIAMETER INCREASES. OUTSIDE DROP MANHOLES FOR A" SIZES OF PIPE OR A SHALLOW OUTSIDE DROP MANHOLE FOR THE PIPE AND DIAMETER INCREASES. THE MANHOLE DIAMETER SHALL BE 4' UNLESS INDICATED OTHERWISE.

REVISED APRIL, 1980

VERTICAL RISER DETAIL

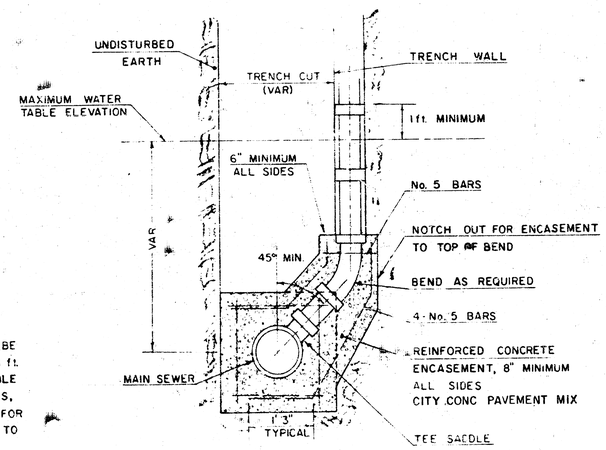
ADOPTED AS STANDARD DESIGN BY

CITY OF WICHITA, KANSAS

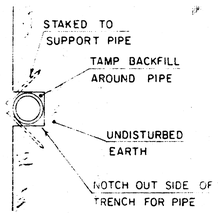


TYPICAL RISER FOR SLOPING TRENCH WALLS

NOTE:
TOP OF 4" OR 6" RISER PIPE TO BE EXTENDED TO AN ELEVATION OF 1 ft. MINIMUM ABOVE THE WATER TABLE ELEVATION, WHEN WATER EXISTS, OR TO AN ELEVATION SUITABLE FOR PROVIDING SERVICE TO THE LOT TO BE SERVED AND THEN PLUGGED.



TYPICAL RISER FOR VERTICAL TRENCH WALLS



GENERAL NOTES

RISERS SHALL BE INSTALLED TO SERVE ALL LOTS OVER 100 FEET WHEN THE MAIN SEWER LINE IS BELOW THE WATER TABLE. RISERS SHALL ALSO BE INSTALLED TO SERVE ALL LOTS AND TRACTS WITHIN THE CORPORATE LIMITS OF THE CITY WHERE SOLID WASTE PICK-UP BUILDING SEWER LINE CONSTRUCTION DIFFICULT. INSTALLATION OF RISERS BECAUSE OF MAIN LINE SEWER DEPTH SHALL BE AS APPROVED BY THE ENGINEER. THE LOCATION OF RISERS TO SERVE UNDEVELOPED PROPERTY SHALL BE APPROVED BY THE ENGINEER AND/OR. PIPE STUBS SHALL BE INSTALLED IN MANHOLES WHERE LOCATIONS OF MANHOLES WILL PROVIDE SATISFACTORY SERVICE CONSTRUCTION AS DETERMINED BY THE FIELD ENGINEER. THE VERTICAL DISTANCE BETWEEN THE FLOW LINE OF THE MANHOLE PIPE STUB AND THE FLOW LINE OF THE MAIN SEWER LINE SHALL NOT EXCEED 4 FT. MANHOLE PIPE STUBS SHALL NOT BE SET BELOW AN ELEVATION WHICH WILL PERMIT THE TOP OF THE INSIDE OF THE STUB TO MATCH THE TOP OF THE SIDE OF THE MAIN SEWER PIPE. PIPE STUBS AND RISERS INSTALLED TO SERVE COMMERCIAL OR INDUSTRIAL PROPERTY SHALL BE 6 INCH. PIPE STUBS AND RISERS INSTALLED TO SERVE RESIDENTIAL PROPERTY MAY BE EITHER 4 INCH OR 6 INCH DEPENDING UPON THE AVAILABLE GRADE AND THE SIZE OF THE LOT AS DETERMINED BY THE FIELD ENGINEER. EASEMENT OF WIDTH REQUIRED FOR MAIN SEWER PIPE SHALL EXTEND TO THE FIRST JOINT IN THE VITRIFIED CLAY SEWER CLAY PIPE ON EACH SIDE OF THE RISER INSTALLATION. EASEMENTS OF A.C.P., COMPOSITE OR P.V.C. MAIN SEWER PIPE SHALL EXTEND A MINIMUM OF 15', ON BOTH SIDES OF THE CENTERLINE OF THE RISER. FOUR INCH AND SIX INCH RISER PIPE SHALL BE ENCASED WITH CONCRETE TO THE TOP OF THE END AS INDICATED IN THE DRAWINGS. FOUR INCH AND SIX INCH CLAY PIPE USED FOR RISERS SHALL BE EXTRA STRENGTH PIPE CONFORMING TO THE REQUIREMENTS OF THE LATEST REVISION OF A.S.T.M. DESIGNATION C700 WITH COMPRESSION JOINTS AS SPECIFIED FOR CLAY PIPE IN THE STANDARD SPECIFICATIONS. FOUR INCH AND SIX INCH A.C.P., OR P.V.C. PIPE SHALL BE PIPE APPROVED FOR USE IN THE CITY BY THE CITY PLUMBING AND MECHANICAL INSPECTOR FOR THE CENTRAL INSPECTION DIVISION OF THE DEPARTMENT OF HOUSING AND ECONOMIC DEVELOPMENT. LOCATIONS OF THE ENDS OF THE RISERS SHALL BE MARKED BY FASTENING GREEN COLORED PLASTIC TAPE TO THE END OF THE RISER WHICH SHALL BE EXTENDED TO THE GROUND SURFACE AS THE EXCAVATION IS BACKFILLED SUCH THAT THE COLORED TAPE WILL BE VISIBLE WHEN THE PROJECT IS COMPLETED. THE ENDS OF THE RISER PIPE AND MANHOLE STUBS SHALL BE CAPPED OR PLUGGED USING FITTINGS FURNISHED BY THE MANUFACTURER OF THE PIPE. CONTRACTOR'S METHODS FOR SETTING RISER AND BACKFILLING RISER PIPE SHALL BE APPROVED BY THE ENGINEER.

FURNISHING AND INSTALLING RISERS SHALL BE PAID FOR AT THE UNIT PRICES BID FOR 4" PIPE, 6" PIPE AND REINFORCED CONCRETE ENCASEMENT FOR THE VARIOUS MAIN SEWER PIPE SIZES INDICATED, WHICH PRICE SHALL INCLUDE ALL COSTS FOR COMPLETION OF THIS ITEM INCLUDING SADDLES, BENDS, CONCRETE, REINFORCING STEEL, CAPS OR PLUGS, AND ALL OTHER NECESSARY MATERIALS OR WORK. CONCRETE ENCASEMENT OF THE RISER PIPE TO THE TOP OF THE BEND AS SHOWN BY THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THE COST FOR THIS WORK SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER ITEMS OF WORK.

THE PROJECT INSPECTOR SHALL REPORT ON INSPECTOR CARDS THE LOCATION OF ALL RISERS CONSTRUCTED AS MEASURED FROM THE NEAREST MANHOLE, THE DIRECTION OF SERVICE, THE ELEVATION OF THE TOP OF THE RISER, AND THE PAY QUANTITIES INVOLVED. THE PROJECT INSPECTOR SHALL ALSO REPORT ON INSPECTOR CARDS THE LOCATION, DIRECTION OF SERVICE, AND SIZE OF ALL STUBS INSTALLED IN MANHOLES.

13/13

13/13

le S S 50