

CONSTRUCTION PLANS

LATERAL 111 WAR INDUSTRIES SEWER

COTTAGE GARDENS ADDITION

TO

THE CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER

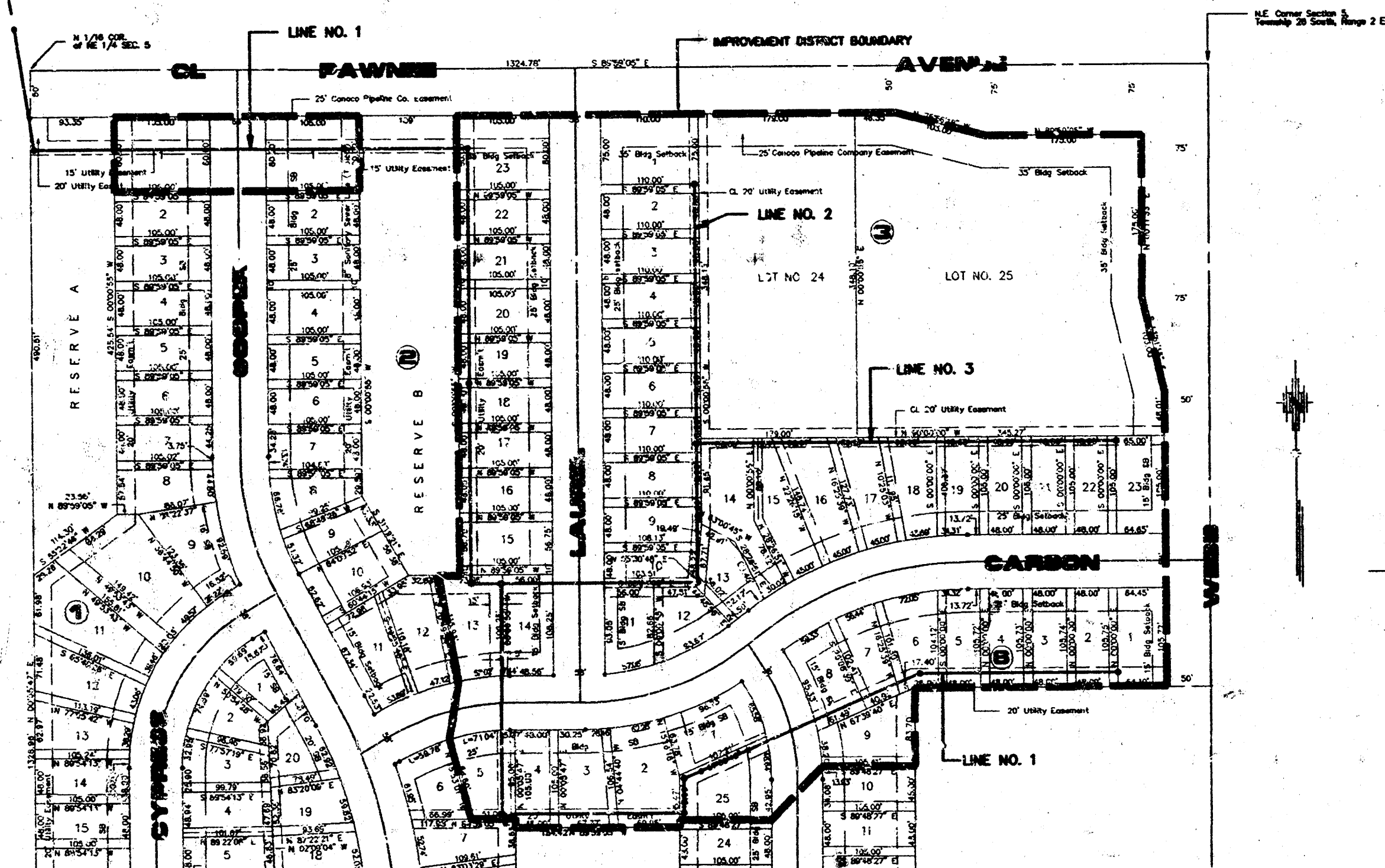
PROJECT NO. 468-82122

INDEX CODE 741140

GENERAL NOTES:

- Existing utility lines and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structured and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.

All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.
- The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractor's proposed method for maintaining sewage flow shall be approved by the Engineer. Cost of maintaining flow of sewage through construction will not be paid for directly and this cost shall be considered as subsidiary to the other pay items of the work.
- The Contractor shall be responsible for preserving property irons. The Contractor will 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.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with the proposed new construction shall be saved and protected from damage.
- Contractor shall vacuum test all manholes according to the City of Wichita standard specifications.



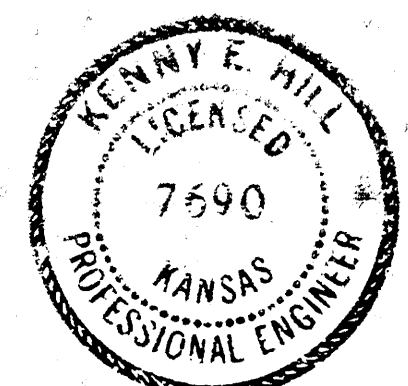
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BENCH MARKS

(City of Wichita Datum)

- City of Wichita Std. BM disc at Webb & Pawnee. 53' S. & 47' W. of centerline of both. Elev. 205.678
- Square on headwall (SE Corner South Headwall) 5' x 5' RCB under Pawnee approximately 1300' W of NE Corner Sec. 5-28S-2E. Elev. 186.94
- 40d nail in service pole approximately 1330' S and 150' W of NE Corner Sec. 5-28S-2E. Elev. 204.69



JULY 1992

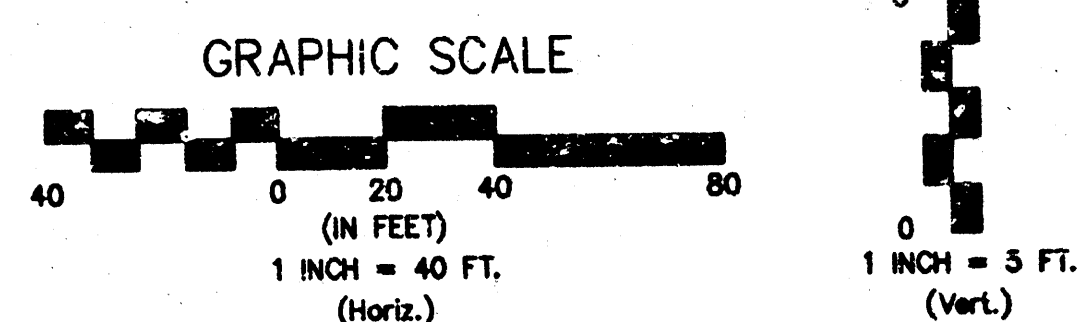
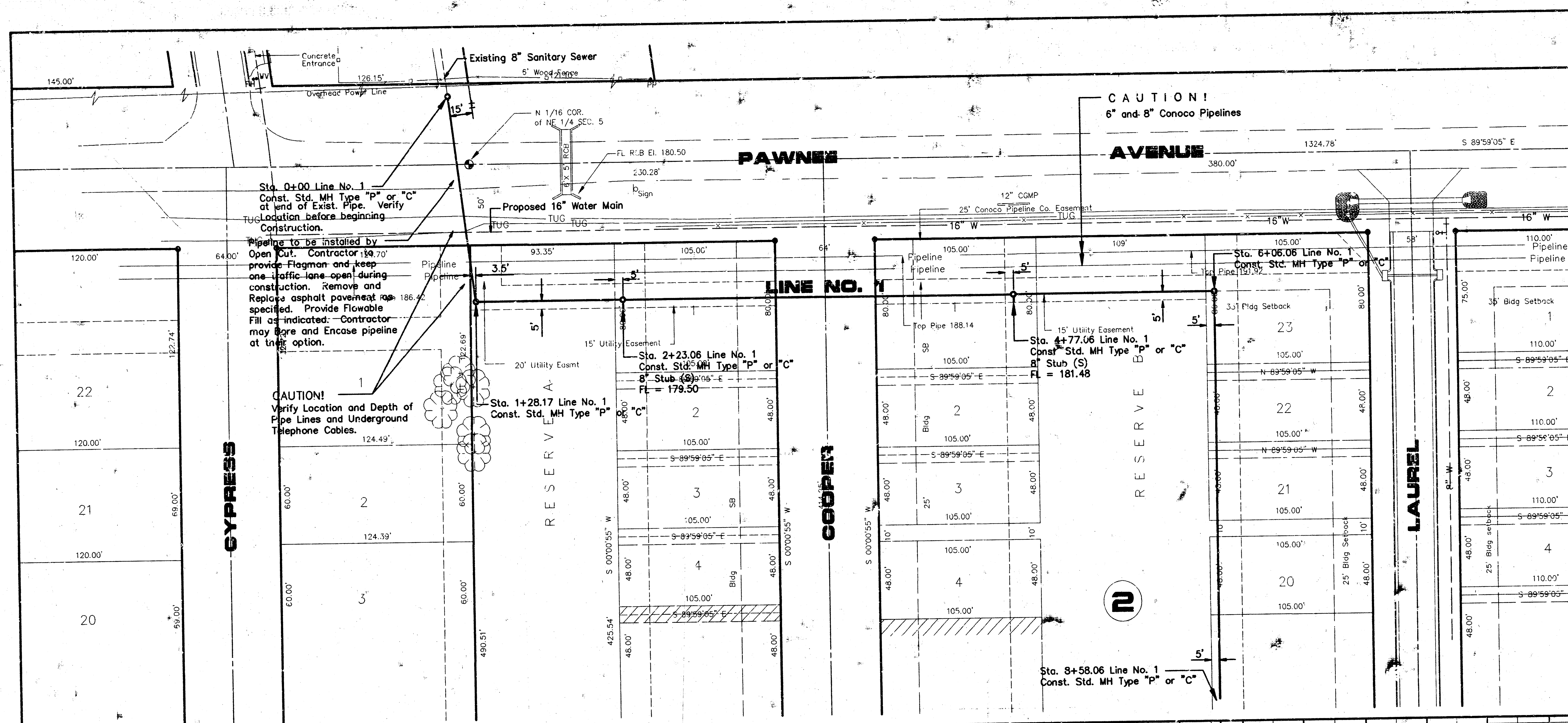
PLANS PREPARED
BY

POE & ASSOCIATES OF KANSAS, INC.

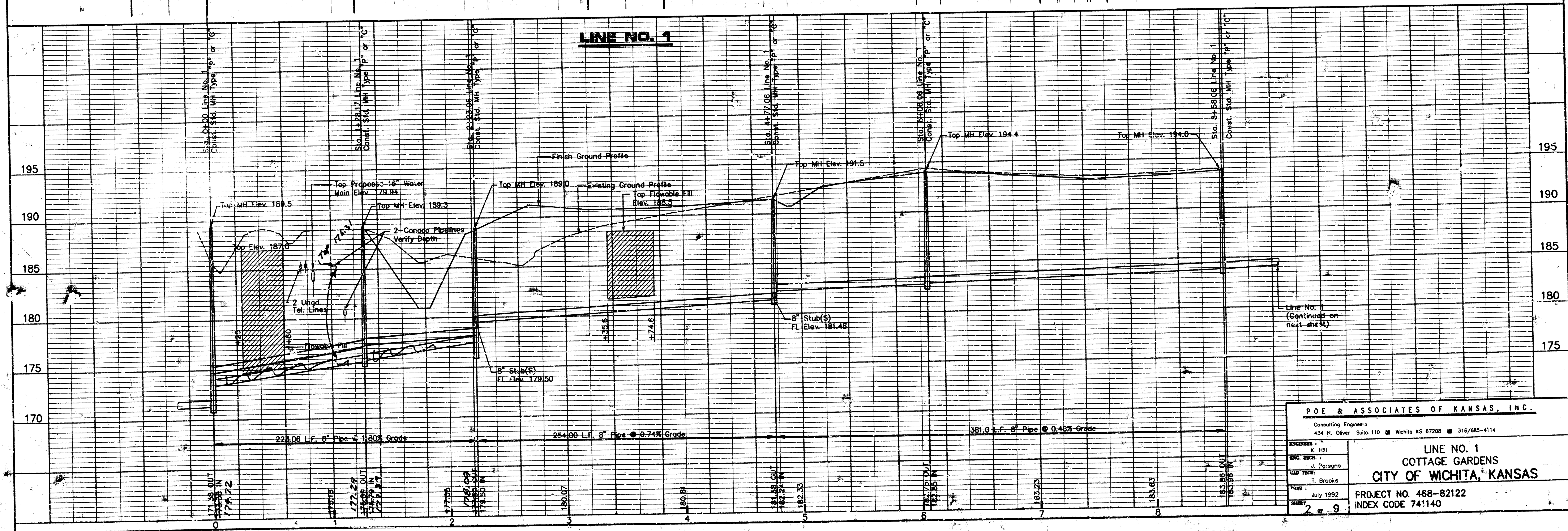
Consulting Engineers

434 N. Oliver Suite 110 Wichita KS 67208 316/685-4114

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 R11 c2



STATION LINE NO. 1	Northing	Easting
0+00	10080.05	8881.25
1+28.17	9953.05	8898.47
2+23.06	9953.02	8993.37
4+77.06	9952.95	9247.37
6+06.06	9952.92	9376.37
8+58.06	9700.92	9376.30

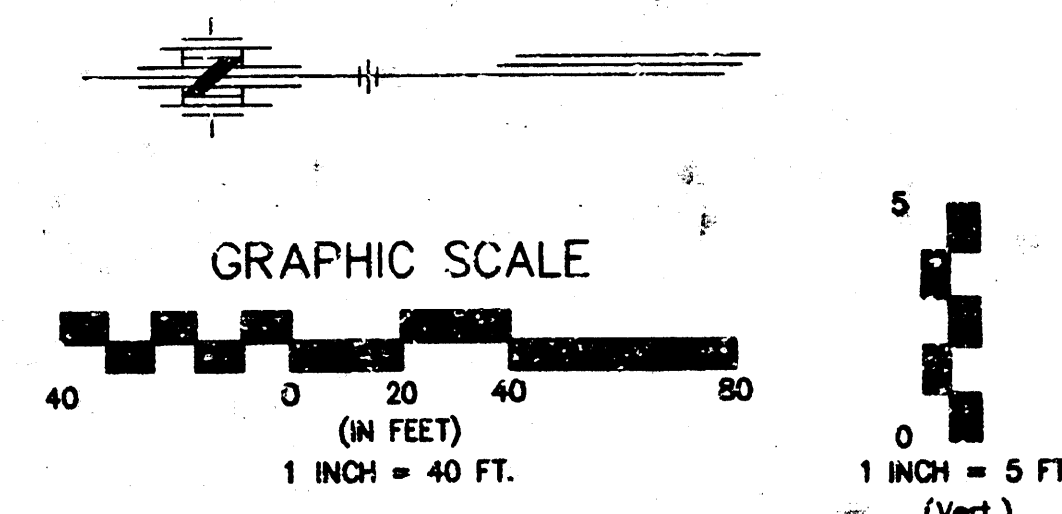
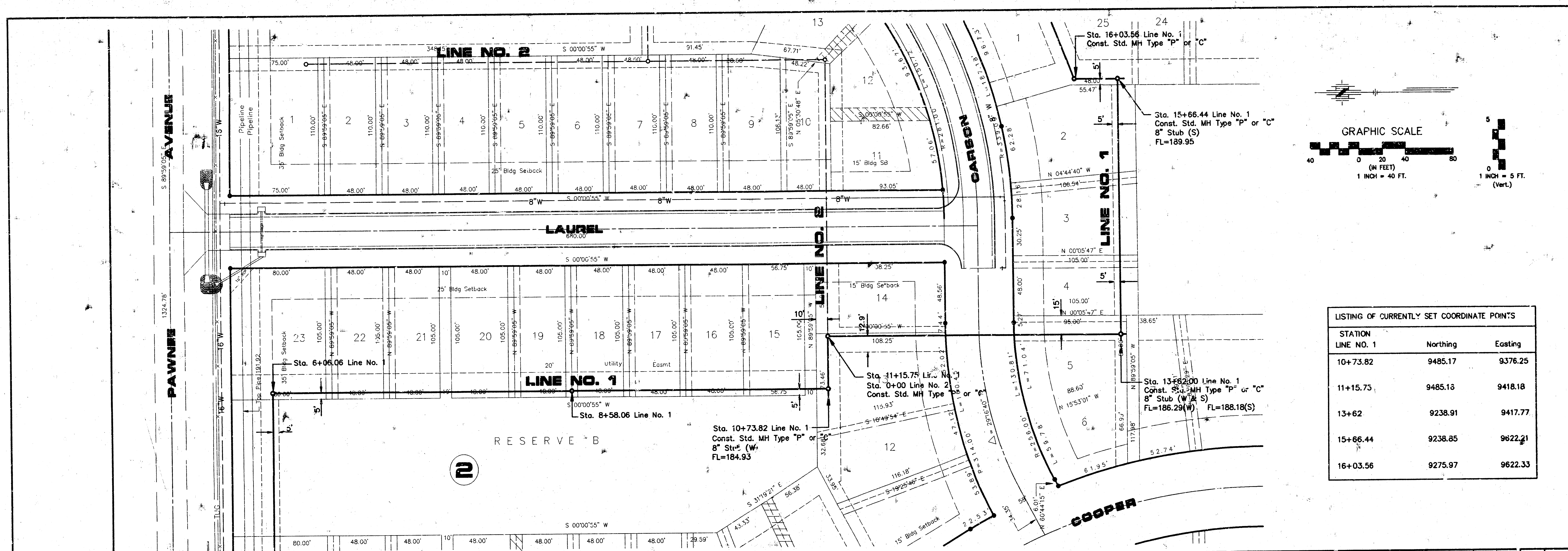


P.O.E. & ASSOCIATES OF KANSAS, INC.
 Consulting Engineers
 434 N. Oliver Suite 110 Wichita KS 67208 316/685-4114

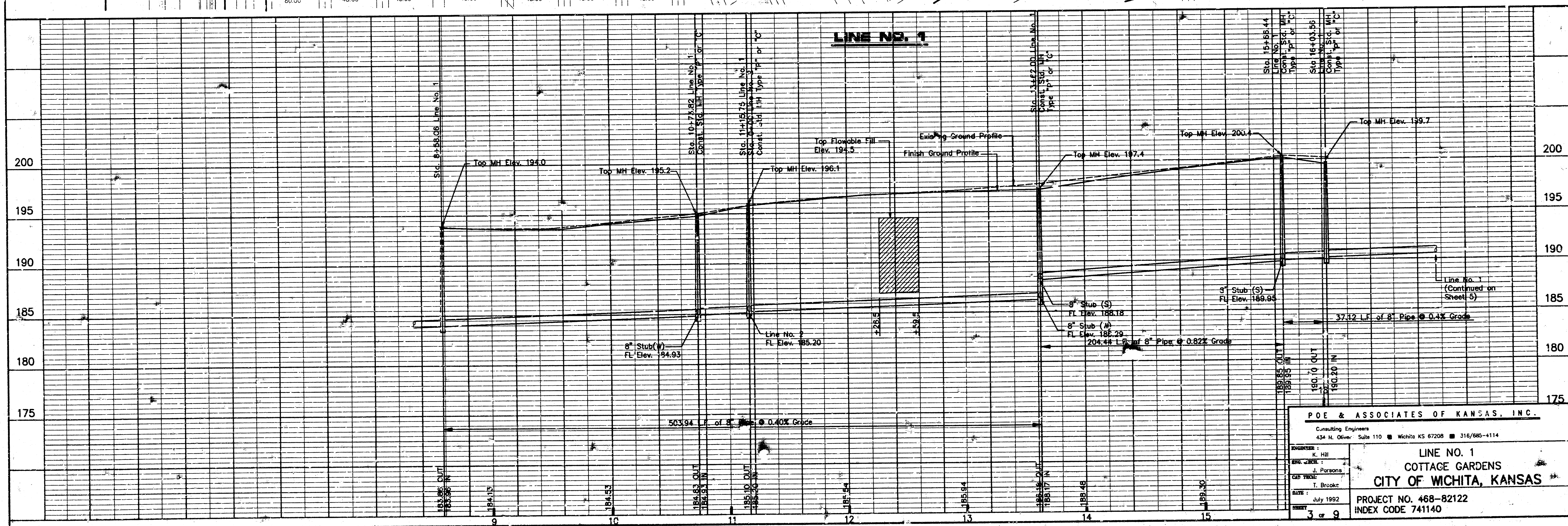
ENGINEER: K. Hill
 DRAFTER: J. Parsons
 CAD TECH: Brooks
 DATE: July 1992
 SHEET: 2 of 9

LINE NO. 1
 COTTAGE GARDENS
 CITY OF WICHITA, KANSAS
 PROJECT NO. 468-82122
 INDEX CODE 74:140

Time Is: 8:59
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 P11 52



LISTING OF CURRENTLY SET COORDINATE POINTS		
STATION	North	East
LINE NO. 1		
10+73.82	9485.17	9376.25
11+15.73	9485.18	9418.18
13+62	9238.91	9417.77
15+66.44	9238.85	9622.21
16+03.56	9275.97	9622.33



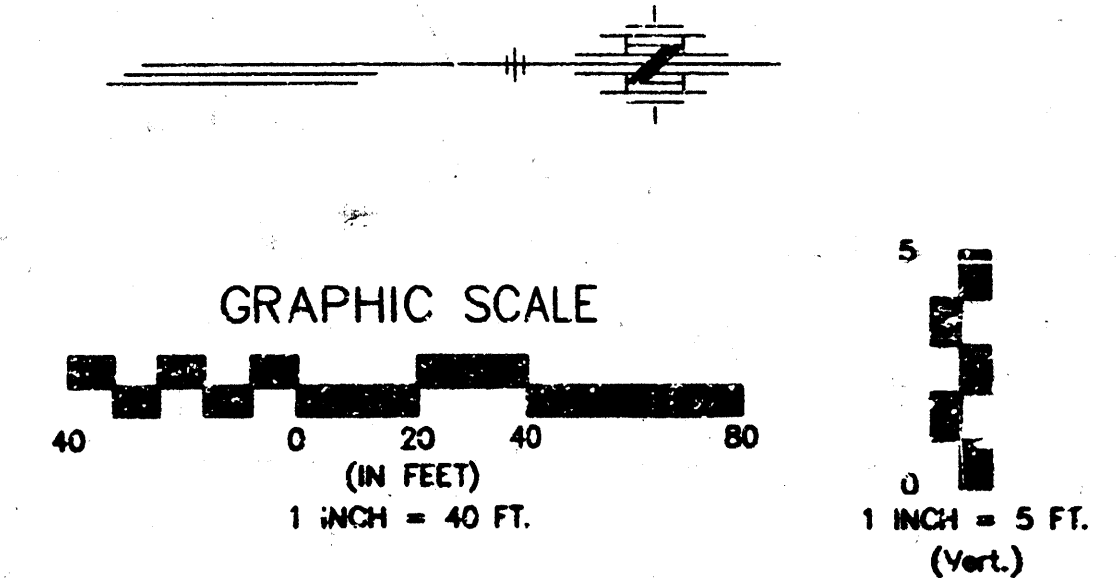
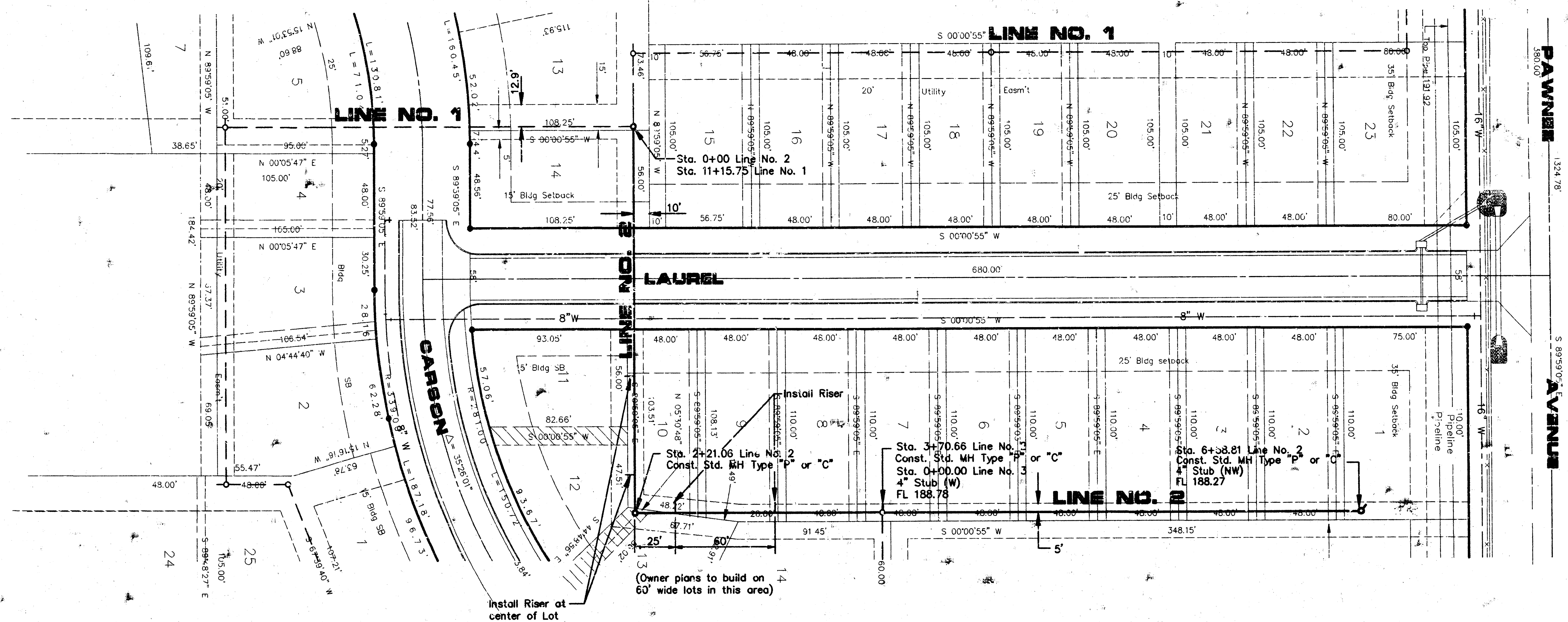
PDE & ASSOCIATES OF KANSAS, INC.
 Consulting Engineers
 434 N. Oliver, Suite 110 ■ Wichita, KS 67208 ■ 316/685-4114

ENGINEER: K. Hill
DATE: July 1992
SHEET: 3 of 9

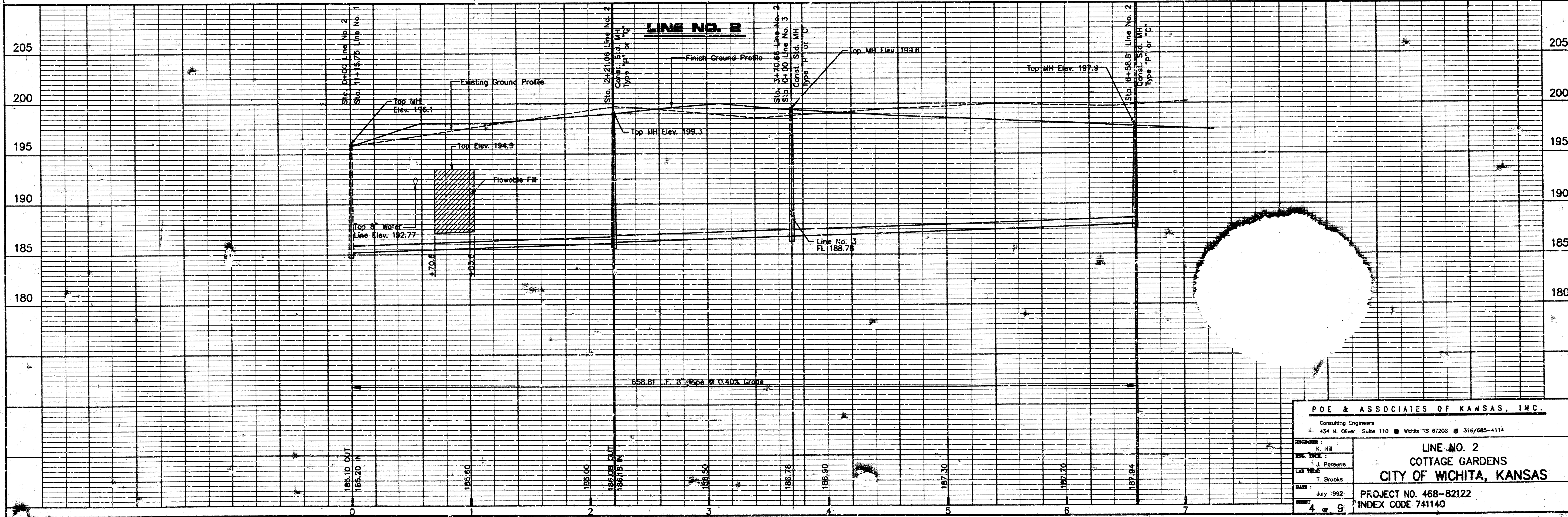
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COTTAGE GARDENS
CITY OF WICHITA, KANSAS

PROJECT NO. 468-82122
INDEX CODE 741140

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 R11 c2



LISTING OF CURRENTLY SET COORDINATE POINTS		
STATION LINE NO. 2	Northing	Eastng
0+00.00	9485.17	9418.18
2+21.06	9485.10	9639.25
3+70.66	9634.70	9639.29
6+58.81	9922.85	9639.36



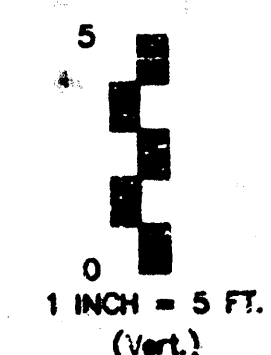
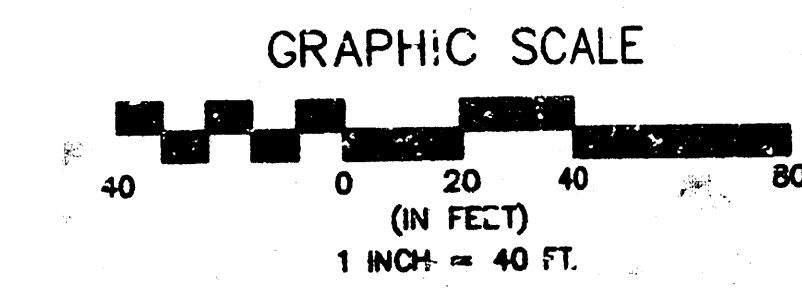
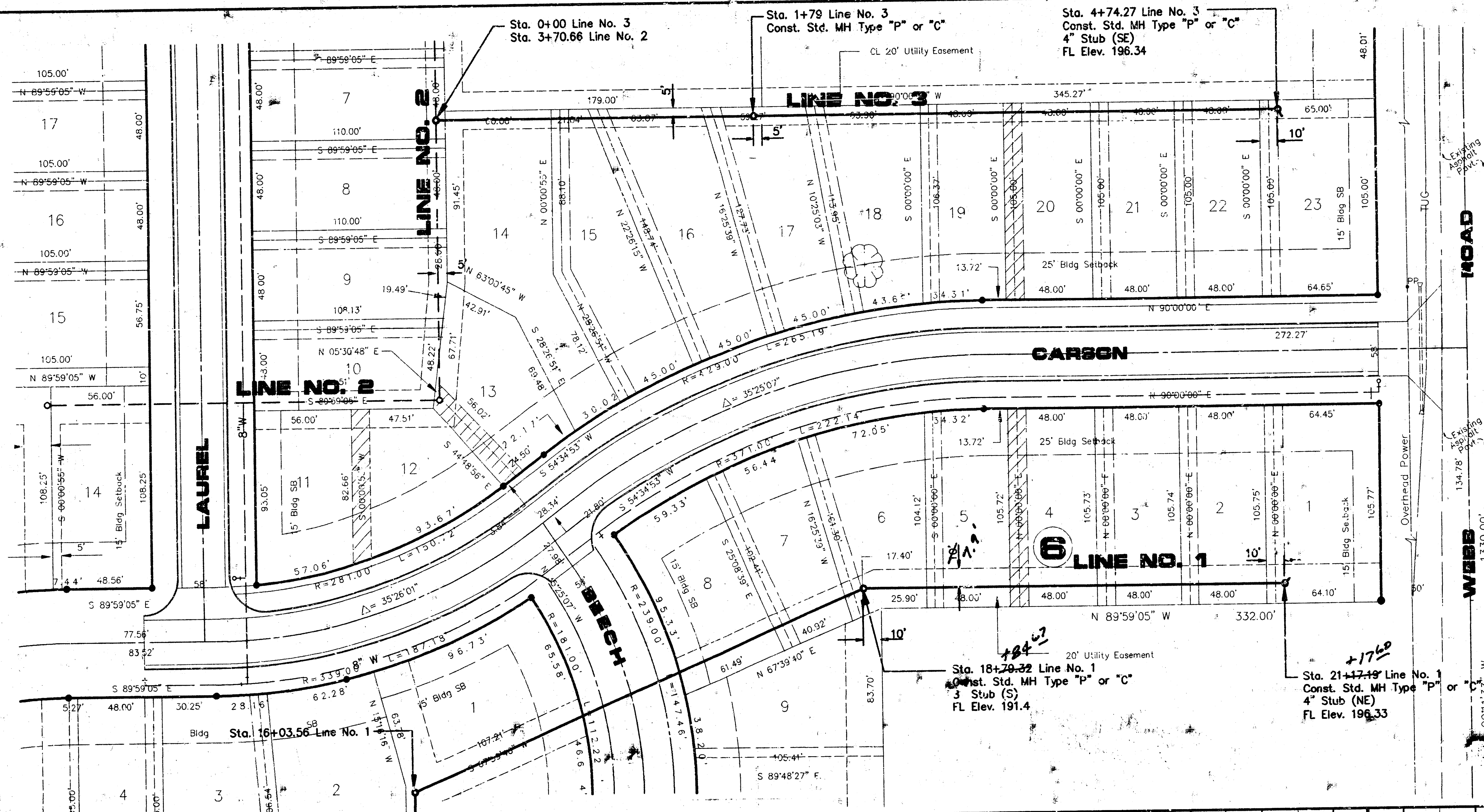
POE & ASSOCIATES OF KANSAS, INC.
 Consulting Engineers
 434 N. Oliver Suite 110 Wichita KS 67208 316/685-4114

ENGINEER: K. Hill
 DRAFTER: J. Parsons
 CHECKED: T. Brooks
 DATE: July 1992
 SHEET: 4 of 9

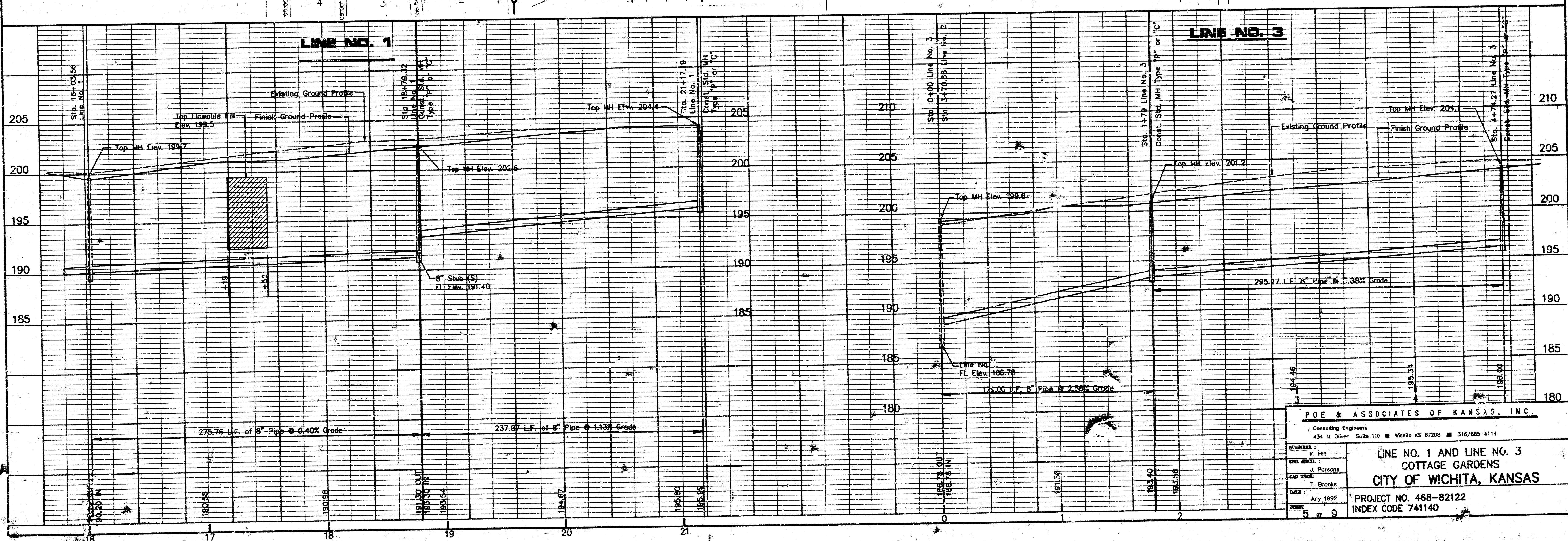
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 CITY OF WICHITA, KANSAS
 PROJECT NO. 468-82122
 INDEX CODE 741140

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 R11 c2

LISTING OF CURRENTLY SET COORDINATE POINTS		
STATION LINE NO. 3	Northing	Easting
0+00.00	9634.70	9639.29
1+79.00	9634.70	9818.29
4+74.27	9634.70	10113.56



LISTING OF CURRENTLY SET COORDINATE POINTS		
STATION LINE NO. 1	Northing	Easting
16+03.56	9275.97	9622.33
18+94.88	9386.70	9891.79
21+17.19	9381.70	10113.56



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 434 N. Oliver Suite 110 Wichita KS 67208 316/685-4114

PROJECT: LINE NO. 1 AND LINE NO. 3
 COTTAGE GARDENS
 CITY OF WICHITA, KANSAS

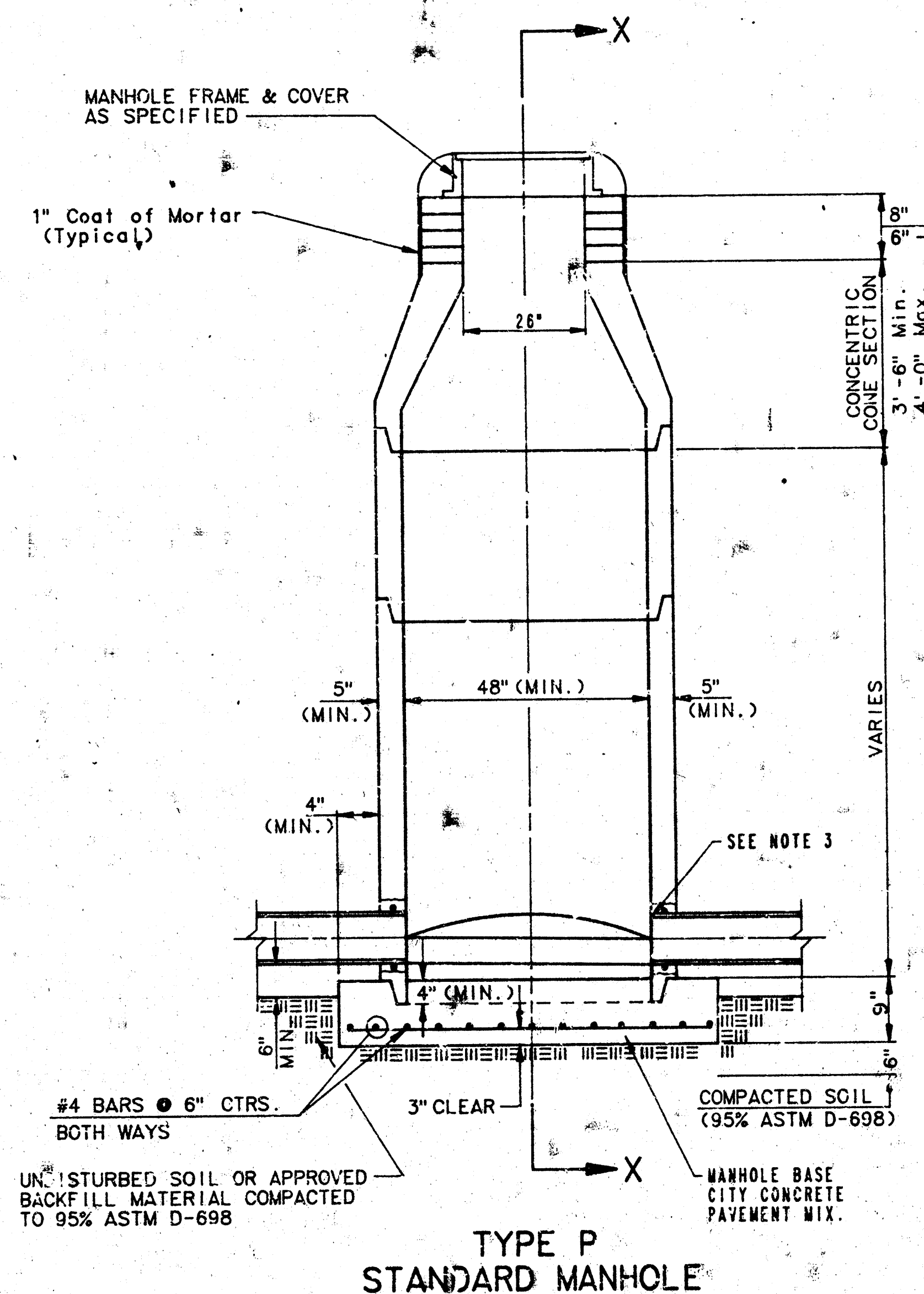
DATE: July 1992
 PROJECT NO. 468-82122
 INDEX CODE 741140

SEWER APPURTENANCES DETAILS

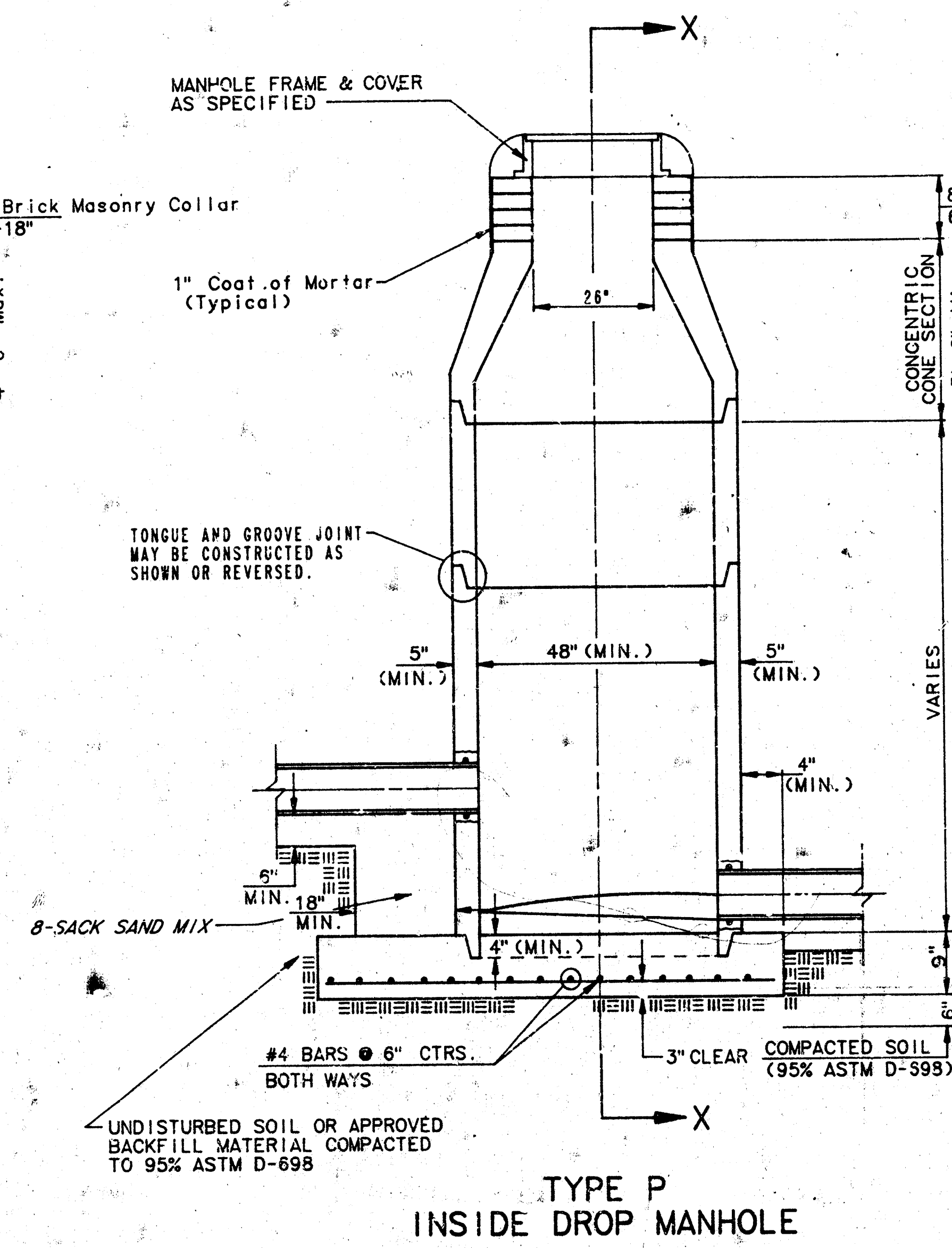
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BY

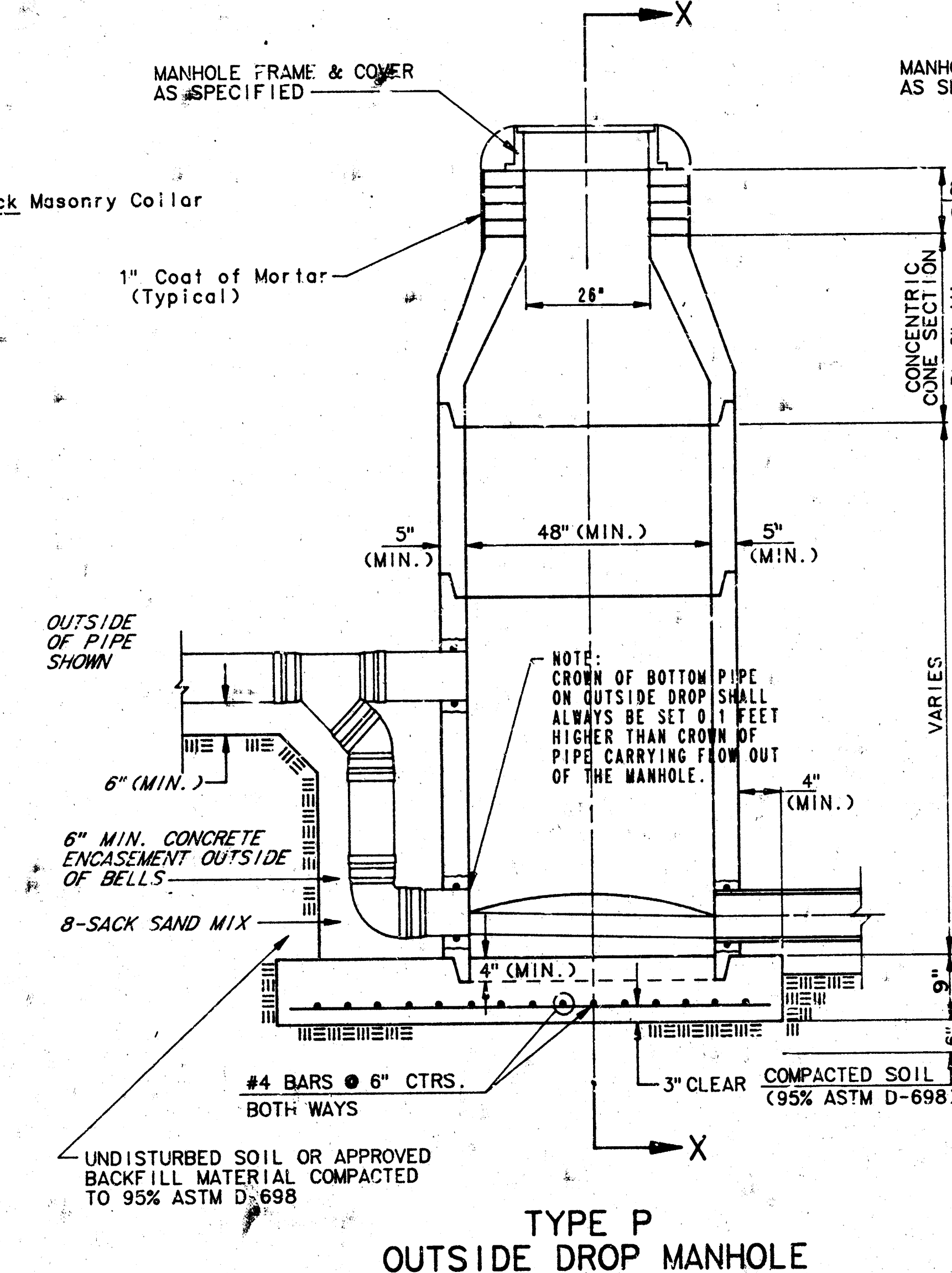
CITY OF WICHITA



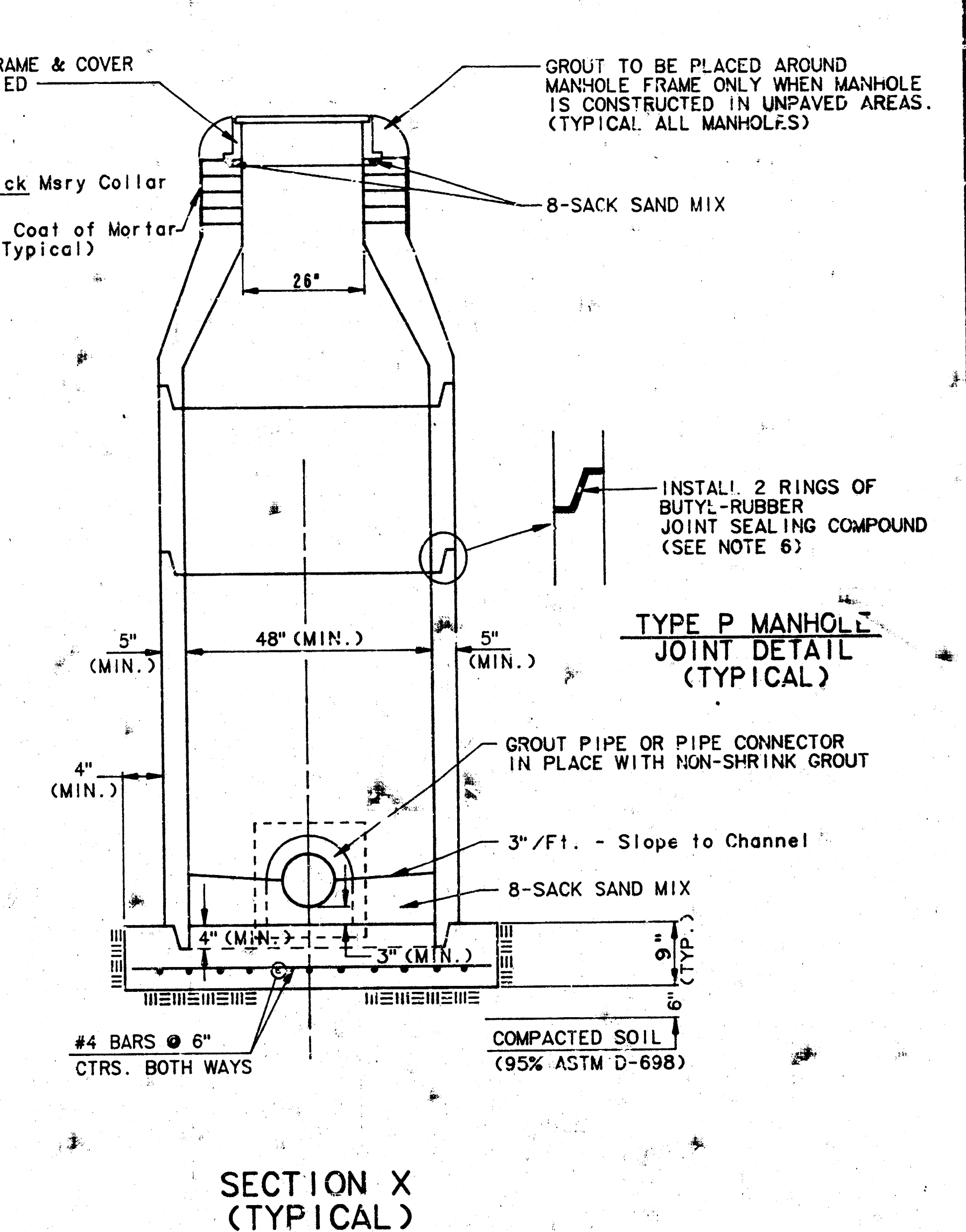
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

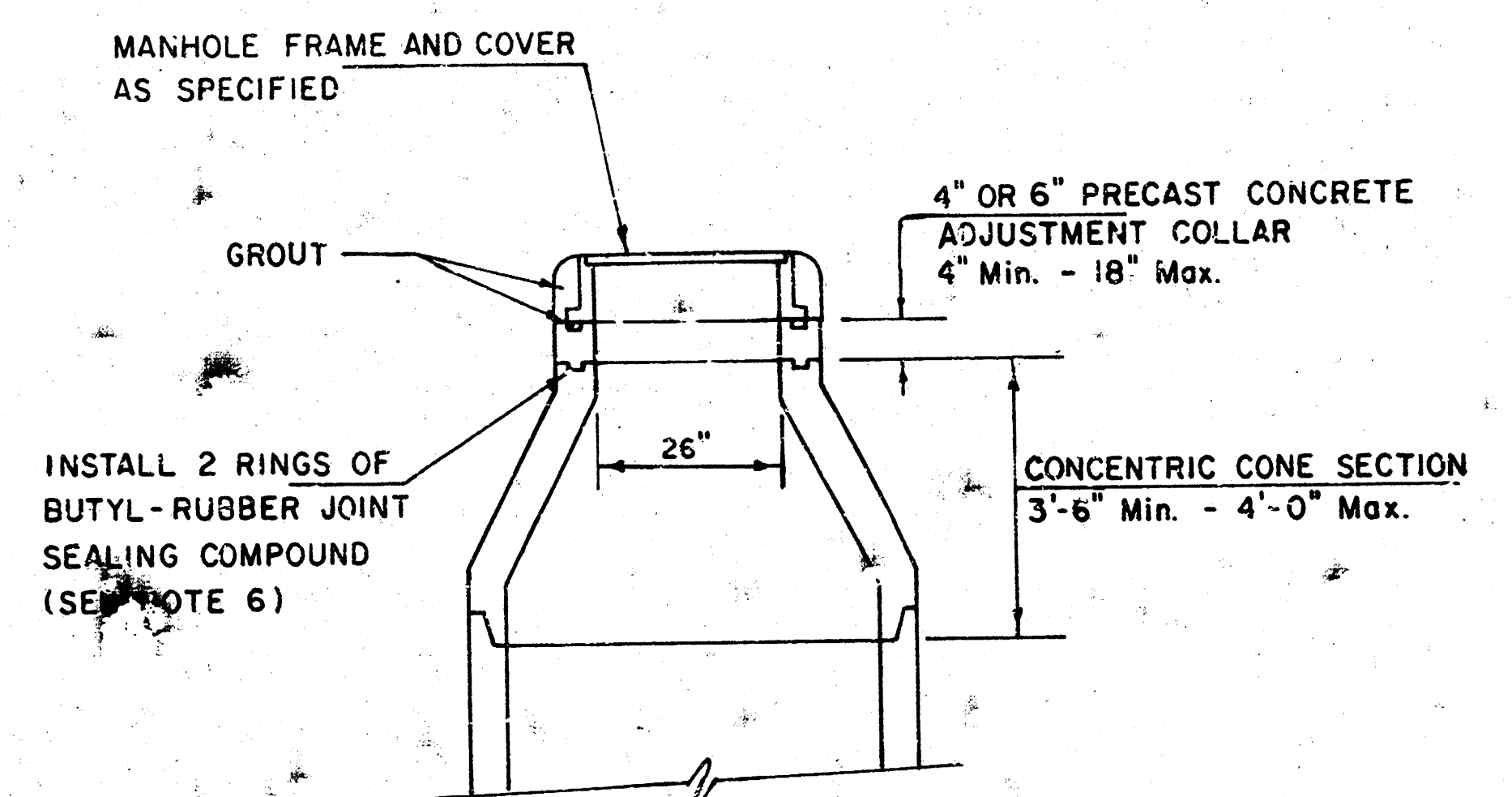
GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE 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 ENCASUREMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR P.V.C., 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 TRENK SERIES 66 HI-BUILD EPOXYLINE, 1/4" THICKNESS OF 8 MILS (MIN.).
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MODULARMA 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 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. 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 FREE FALL DROP INSIDE MANHOLES SHALL NOT EXCEED 2'. 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 6" 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.



ALTERNATE CONSTRUCTION
IN UNPAVED AREAS

COTTAGE GARDENS ADDITION
LATERAL 111 WAR INDUSTRIES SEWER
PROJECT NO. 468-82122
INDEX CODE 741140

SHEET 6 OF 9

NOTE NO. 16 REVISED JAN. 1991
Revised 3-21-89
Revised 8-10-88
Revised June 12, 1986

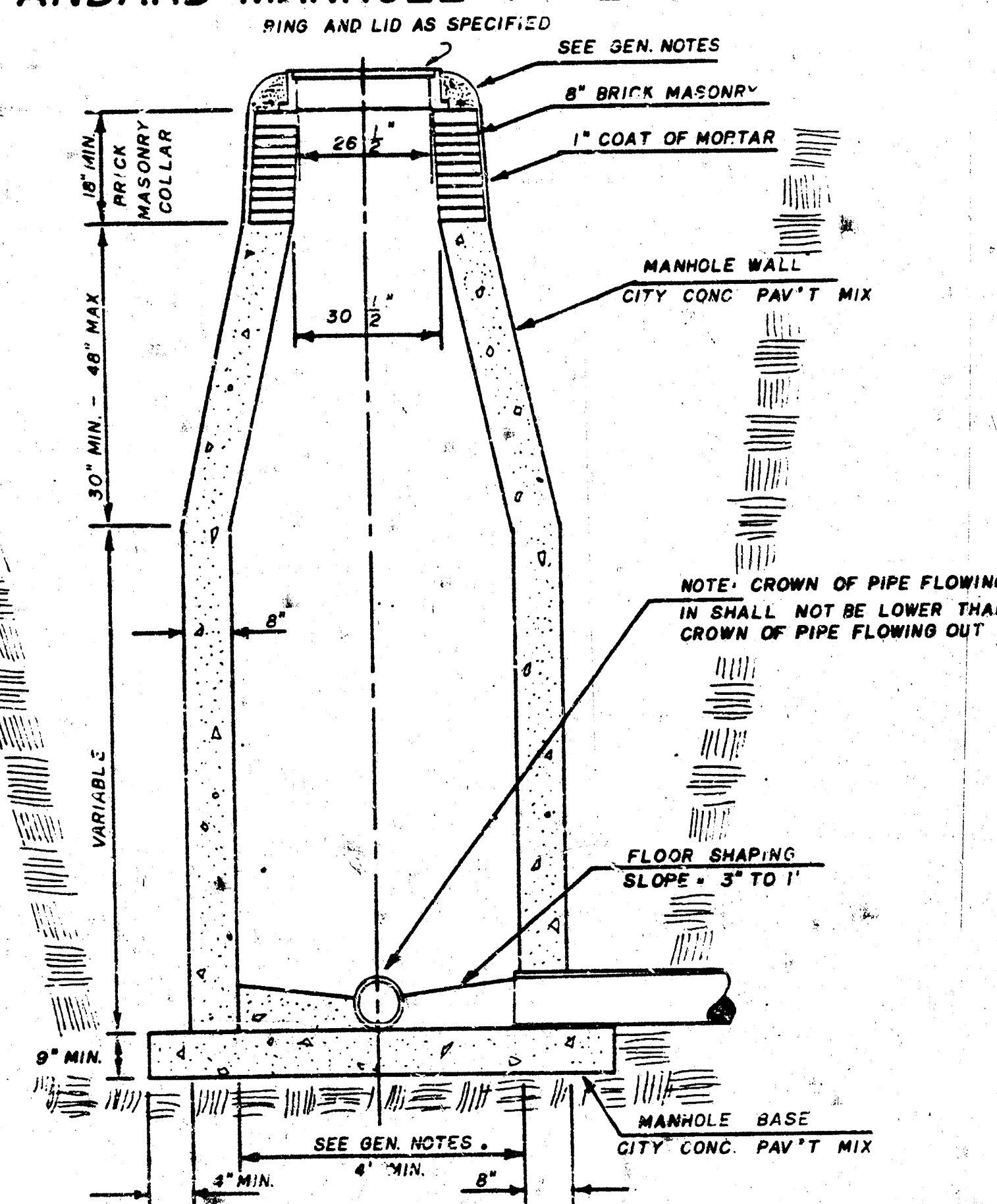
SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN

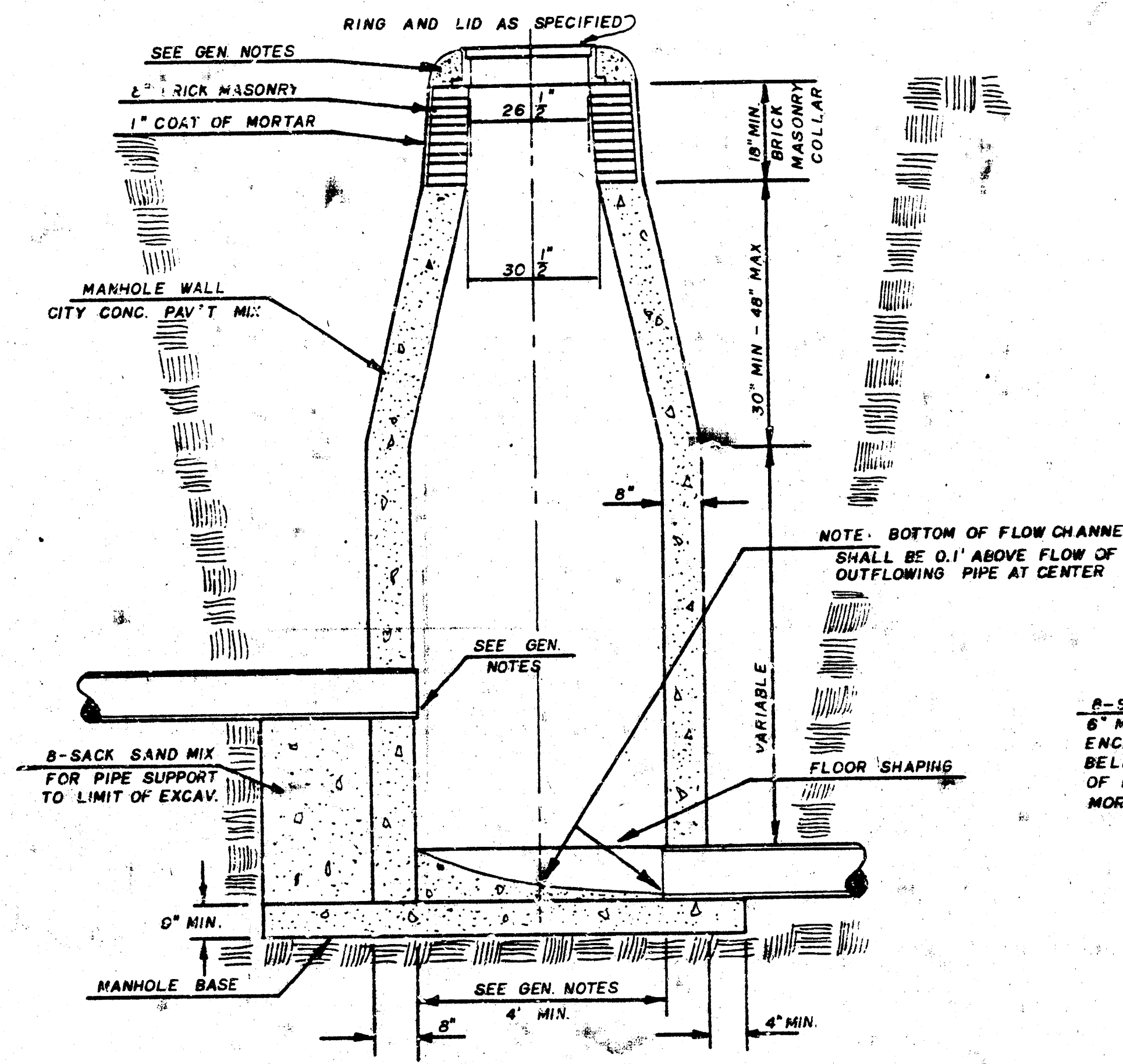
BY

City of Wichita, Kansas

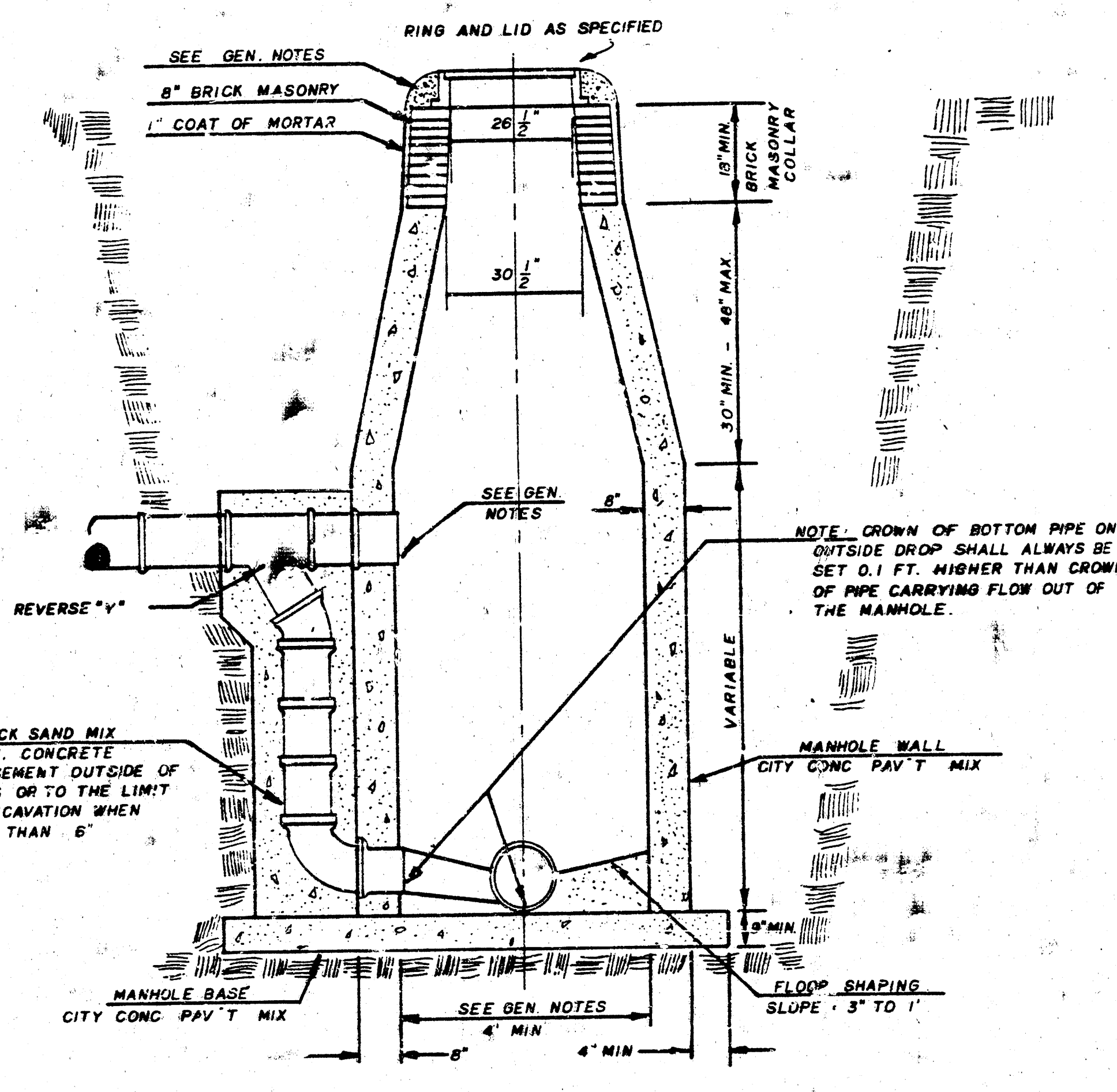
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. 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 ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED 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.
- 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.
- 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 GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.
- 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.
- 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.
- 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 FREE FALL DROP INSIDE MANHOLES SHALL NOT EXCEED 2'. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- 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.

COTTAGE GARDENS ADDITION
LATERAL 111 WAR INDUSTRIES SEWER
PROJECT NO. 468-82122
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SHEET 7 OF 9

NOTE NO. 7 REVISED JAN. 1991

VERTICAL RISER DETAILS

ADOPTED AS STANDARD DESIGN

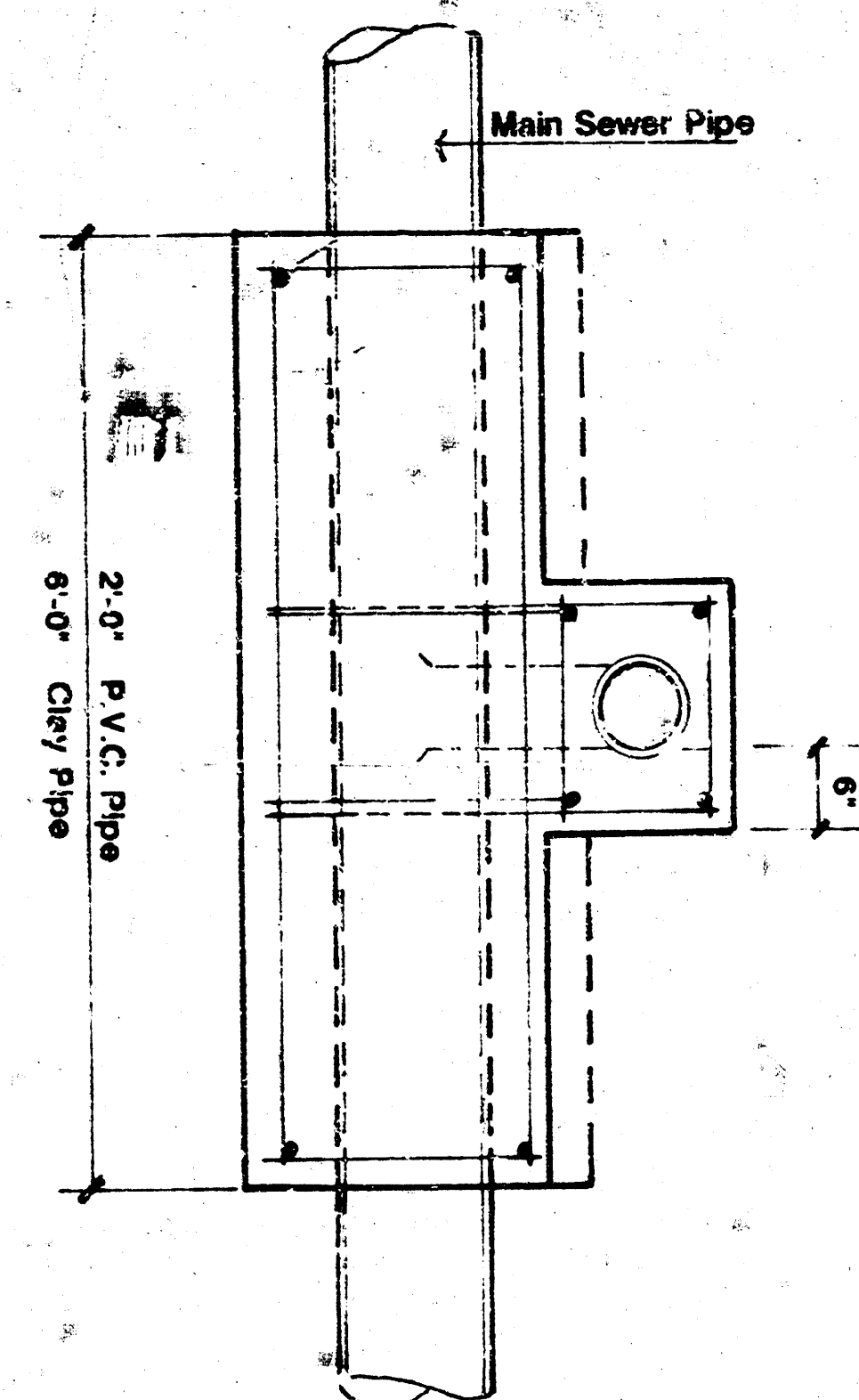
BY

CITY OF WICHITA, KANSAS

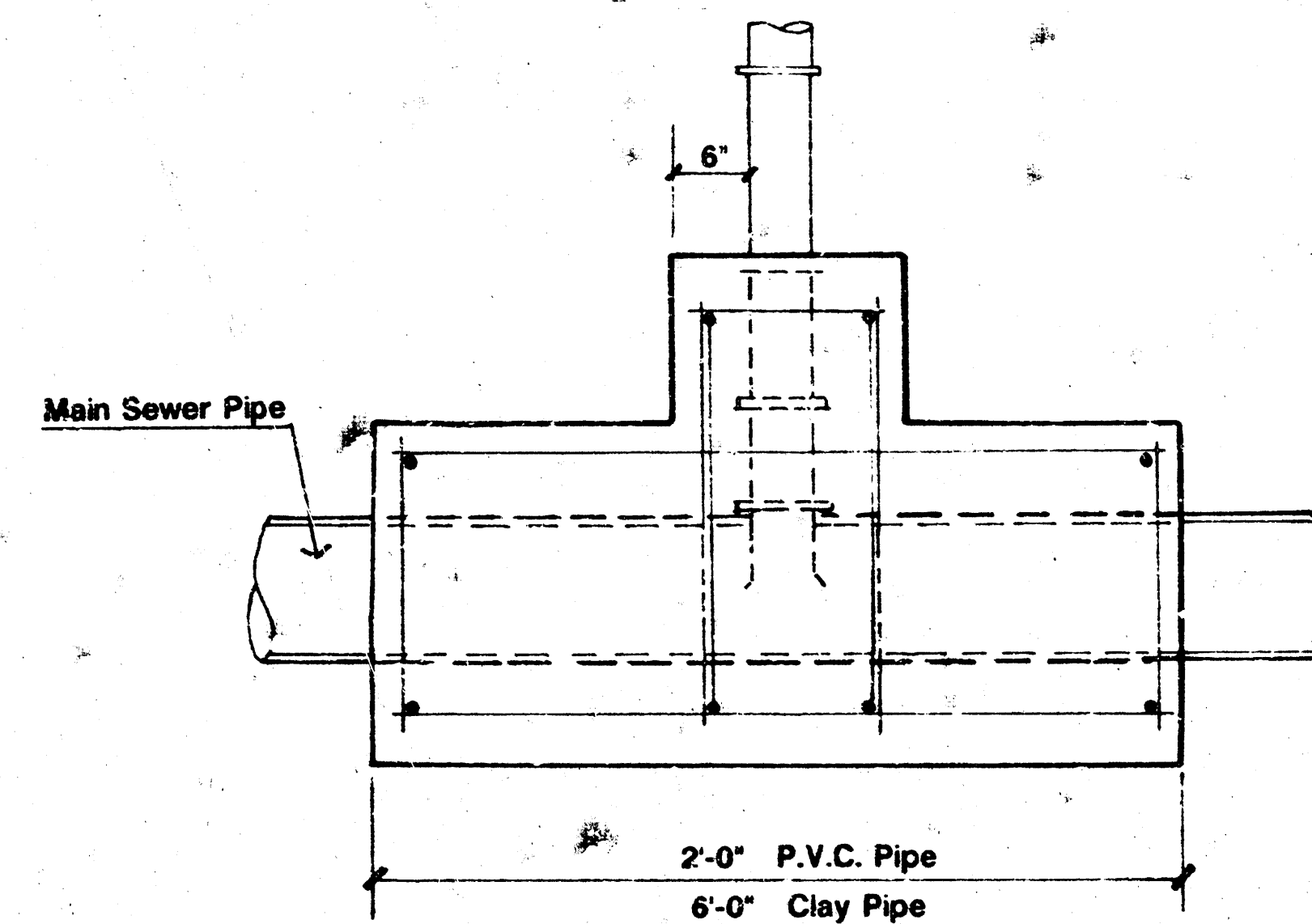
GENERAL NOTES

- Risers.** Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be as approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
- Pipe Stubs.** Pipe stubs shall be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the top of the manhole pipe stub and the top of the sanitary sewer main shall not exceed 2 feet. Manhole pipe stubs shall be set such that the top of the stub is no lower than the top of the sanitary sewer main.
- Sizing.** Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
- Riser or Stub Material.** Risers and stubs shall be constructed of SDR 35 PVC Pipe, Schedule 40 P.C. Pipe, or extra strength Clay Pipe meeting 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.
- Reinforced Concrete Encasement.** Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary Sewer mains, shall be reinforced concrete encased one foot each way from the riser centerline. The reinforced concrete encasement shall extend to the top of the vertical bend. The concrete encasement shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
- Bedding.** Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.
- Support of Risers.** Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
- Plugging.** The ends of the riser pipes and manhole stubs shall be plugged using an airtight cap. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.
- Top of the Riser Pipe.** The top elevation of the sanitary sewer riser pipe shall be built per plan elevations unless otherwise directed by the Construction Engineer. Where riser elevations are not shown on the plans, the top of the risers shall be at an elevation four feet below the proposed ground surface. If ground water is found within four feet of the proposed ground surface, the top of the sanitary sewer riser pipe shall be at an elevation two feet above the ground water elevation, regardless of the riser elevation shown on the plans.
- Marking.** Locations of the ends of the sanitary sewer riser pipe shall be marked by fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2x4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The green tape shall be 4 mil Polyethylene film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.
- Location Measures.** The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating the direction from the manhole, the direction and distance from the main, size and elevation of the top of the riser.
- Riser Location.** The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
- Payment.** "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2x4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.

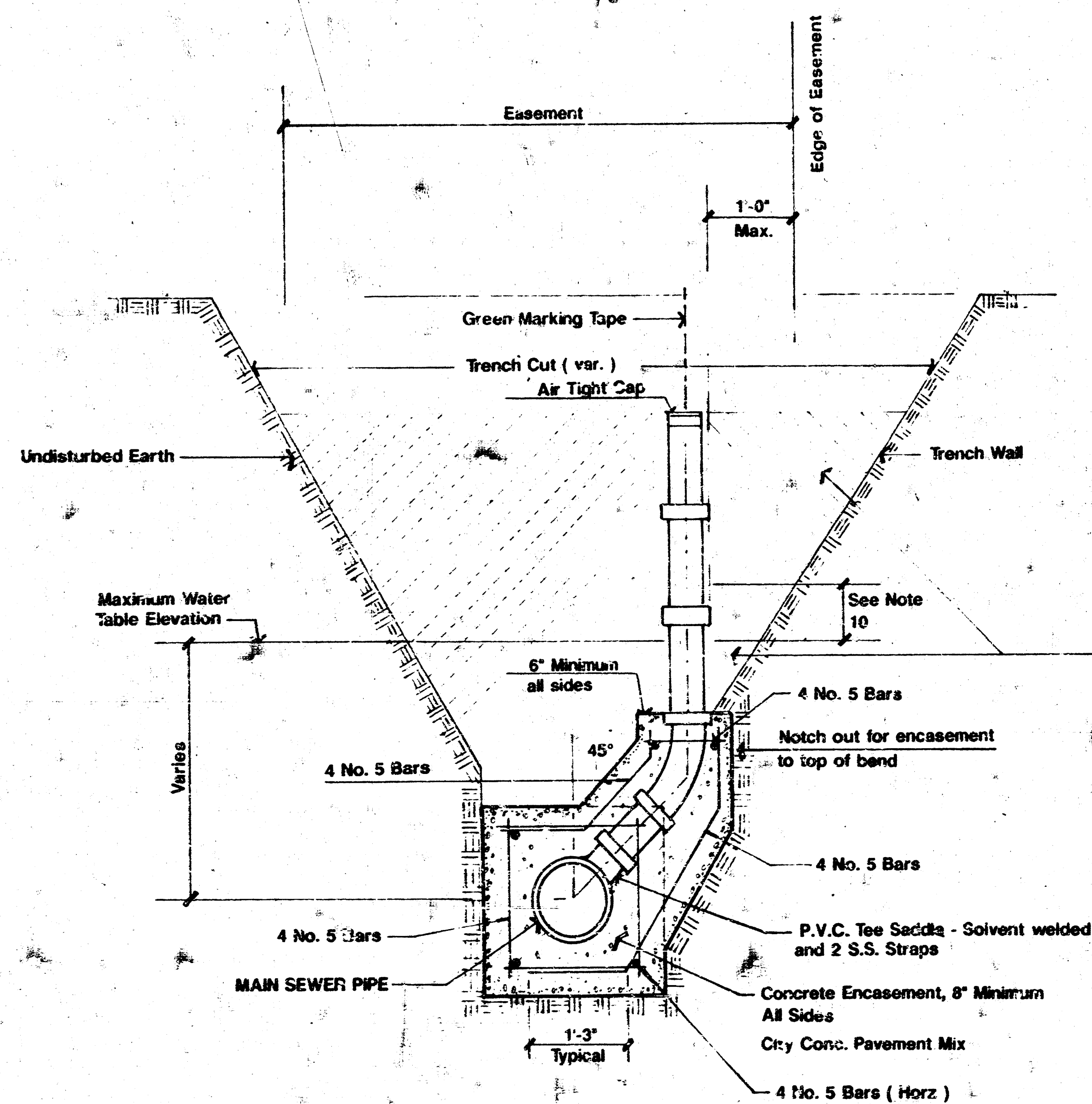
"Manhole stubs" shall be paid for at the contract unit price per each, which shall be full compensation for all labor and material, and incidentals necessary to complete the work.



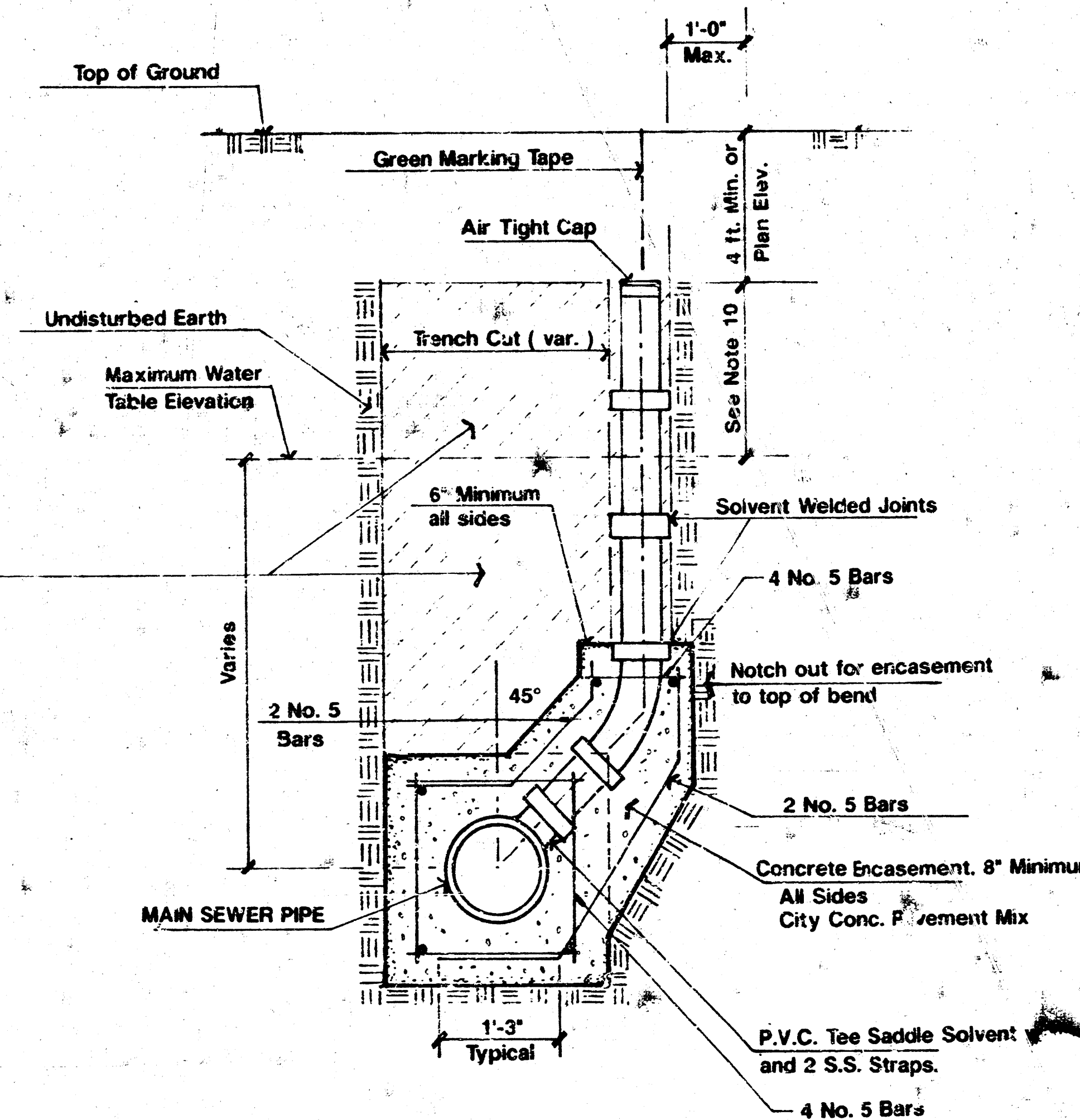
TOP VIEW



FRONT VIEW



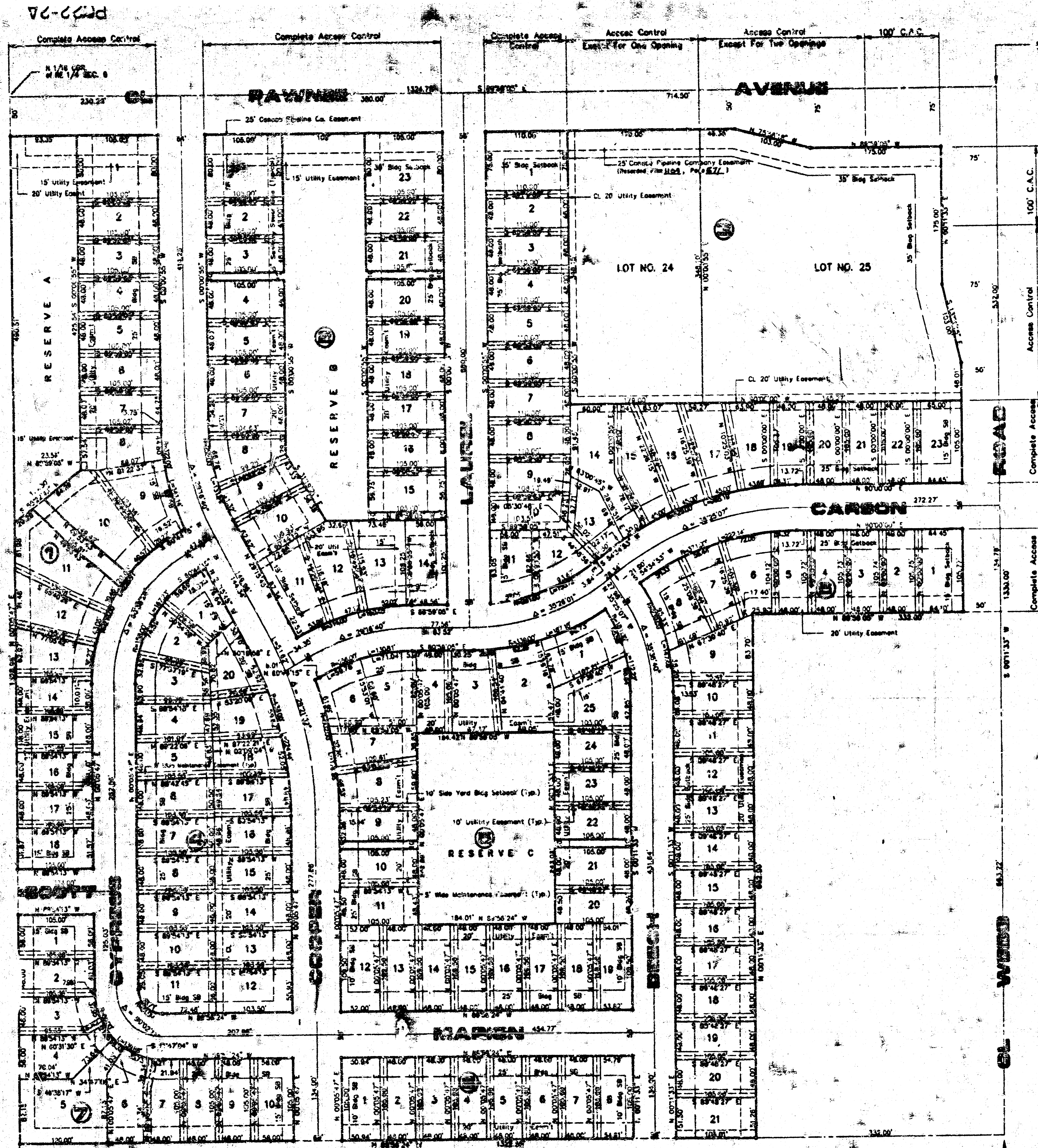
TYPICAL RISER FOR SLOPING TRENCH WALLS



TYPICAL RISER FOR VERTICAL TRENCH WALLS

NOTE: ALL CONNECTIONS TO EXISTING STUBS FROM MANHOLES, OR REALIGNMENT OF EXISTING STUBS, INCLUDING REMOVAL AND REINSTALLATION OF STUBS FOR EXTENSION OF SANITARY SEWER SHALL BE CONSIDERED SUBSIDIARY TO PROJECT AND NOT PAID FOR SEPARATELY.

COTTAGE GARDENS ADDITION
LATERAL 111 WAR INDUSTRIES
PROJECT NO. 468 -- 82122
INDEX CODE 741140



COTTAGE GARDENS

AN ADDITION TO WICHITA - SEDGWICK COUNTY, KANSAS

STATE OF KANSAS, COUNTY OF SEDGWICK: ss.

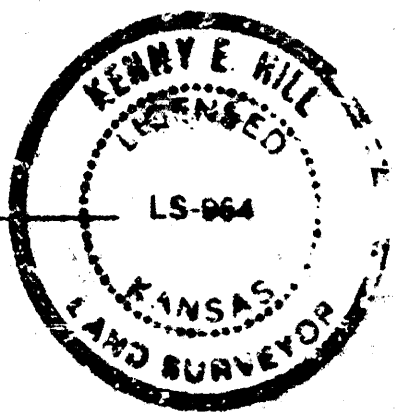
I, Kenny E. Hill, being a duly licensed Land Surveyor in said County and State, do hereby certify that I have been in responsible charge of surveying and plotting "COTTAGE GARDENS" an addition to Wichita, Kansas, being described as follows:

Beginning at the Northeast corner of the Northeast Quarter (NE1/4) of Section 5, Township 28 South, Range 2E, East of the 6th P.M. Sedgwick County, Kansas; thence S 0° 11' 33" W 666.78 feet to the East line of said Northeast Quarter (NE1/4); thence N 89° 59' 05" W 332.40 feet; thence S 89° 11' 33" W 662.96 feet to a point on the South line of the Northeast Quarter (NE1/4) of the Northeast Quarter (NE1/4) of said Section 5; thence N 89° 59' 05" W 332.40 feet to the Southwest corner of the Northeast Quarter (NE1/4) of the Northeast Quarter (NE1/4) of said Section 5; thence N 0° 05' 47" E 1328.96 feet to the Northwest corner of the Northeast Quarter (NE1/4) of the Northeast Quarter (NE1/4) of said Section 5; thence S 89° 59' 05" E 1324.78 feet to the point of beginning, containing 35.34 acres more or less.

The accompanying plat is a true and correct exhibit of property surveyed.

Dated this 23rd day of April, 1991.

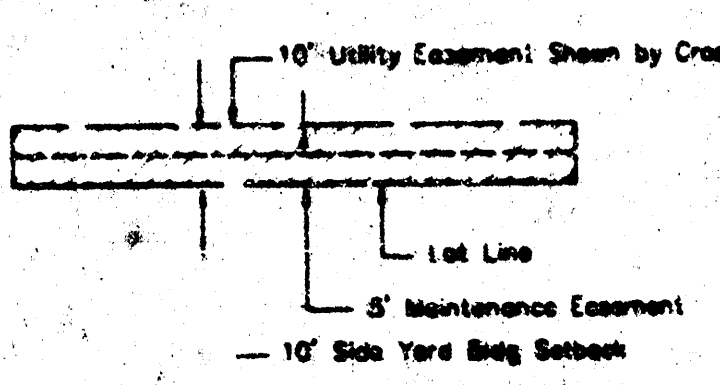
Kenny E. Hill
Kenny E. Hill, L.S.



KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, have caused the land described in the Surveyor's Certificate to be plotted into lots, blocks, streets and reserves. The streets are hereby dedicated to and for the use of the public. Easements are hereby granted as indicated for the construction and maintenance of drainage and utilities. Reserves A, B and C are hereby reserved for common open area and for the construction and maintenance of drainage improvements. The Reserves are to be owned and maintained by a property owners association consisting of all of the owners of property in this addition. All abutters' rights of access to or from Pawnee Avenue or Webb Road over and across the North line of Lot 1, Block 1, the North line of Block 2, the North line of Lot 1, Block 3, the East line of Lot 23, Block 3, the East line of Lot 1, Block 6, the North line of Lot 24, Block 3, except for one opening, the North and East line of Lot 25, Block 3, except for two openings to Pawnee being at least 100.00 feet West of the Northeast corner of said Lot 25 and except for two openings to Webb Road being at least 100.00 feet South of the Northeast corner of said Lot 25 are hereby granted to the appropriate governing body. 5 foot sideyard maintenance easements and 10 foot sideyard setbacks are hereby granted as indicated for the benefit of the adjoining property to allow maintenance of the structure located adjacent to the maintenance easement and that the sideyard setback provides for the proper separation of adjacent structures on abutting lots. Where there is a chance in the boundary between adjoining lots, no part of a zero line structure, except for a roof overhang, shall encroach into a maintenance access easement and a sideyard setback unless the owners of the adjoining lots supersede the maintenance access easement and a sideyard setback with a new private maintenance access easement or sideyard setback. The new private maintenance access easement and sideyard setback shall be recorded and be a minimum of 5 feet in width for the maintenance easement and 10 feet minimum for the sideyard setback and shall specifically state that it supersedes the maintenance access easement and sideyard setback shown on the plat. A roof overhang shall not encroach on any maintenance access easement located within a utility easement.

LEGEND



Devoe Treadwell
Devoe Treadwell
Walter O. Johnson
Walter O. Johnson
Avis M. Johnson
Avis M. Johnson

STATE OF KANSAS, COUNTY OF SEDGWICK: ss.

This instrument was acknowledged before me on this 28th day of May, 1991, by Devoe Treadwell and Theo Treadwell his wife, also by Walter O. Johnson and Avis M. Johnson his wife.

Notary Public
Notary Public
S. Houseman
S. Houseman

My Appointment Expires February 14, 1992.

Scale 1" = 80'

COTTAGE GARDENS ADDITION
LATERAL 111 W.B. INDUSTRIES
PROJECT NO. 468 - 82122
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SHEET 9 OF 9

PC22-2A