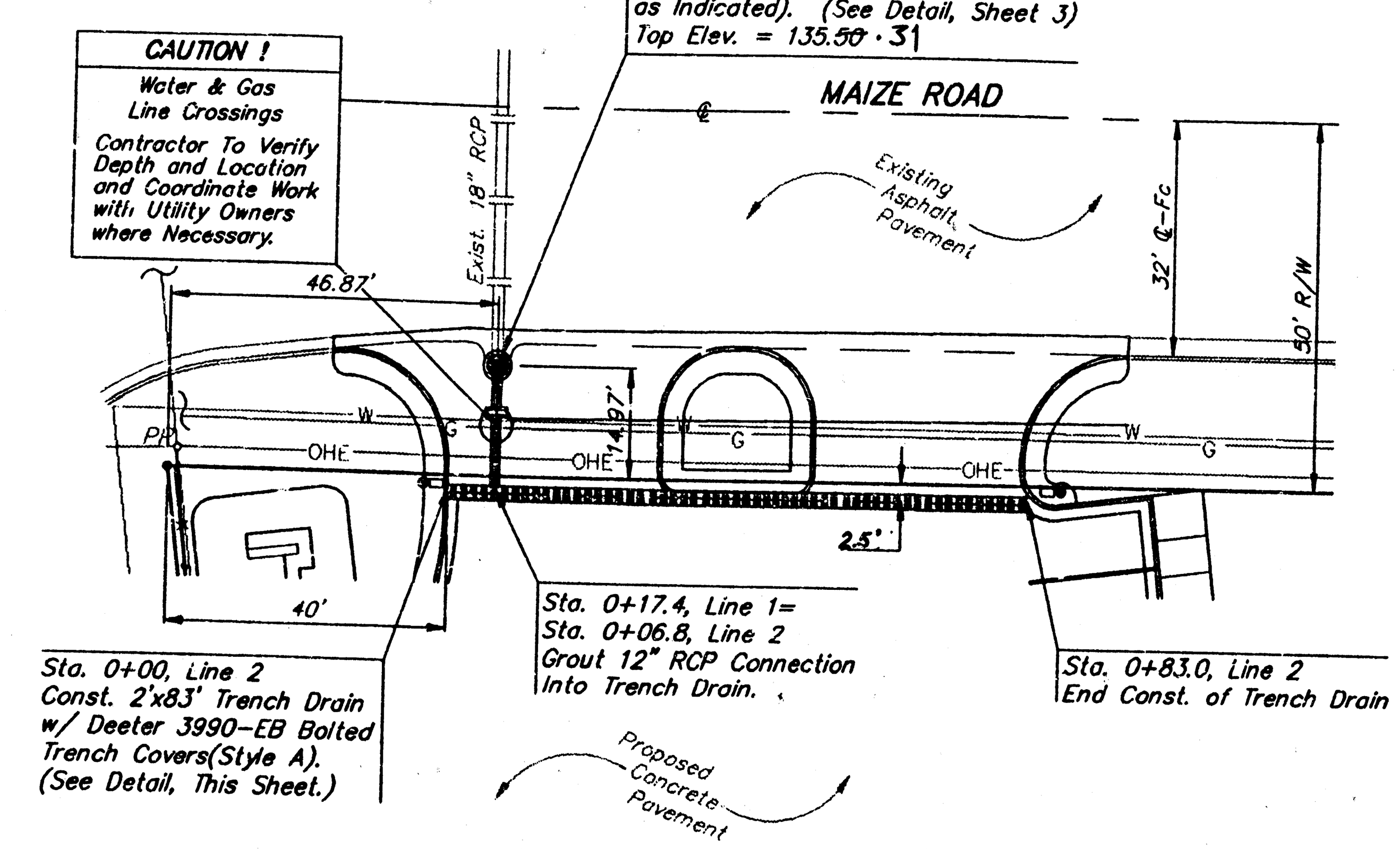
Benchmarks:

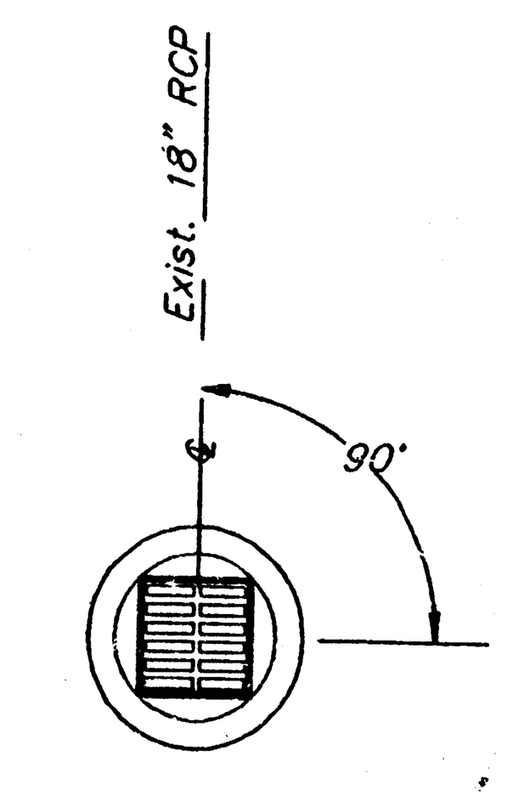
City of Wichita Benchmark, Top of Hubguard at the Southwest Corner of South Bridge (Eastbound lane, West End.) 1/4 Mile East of Maize Rd. on U.S. 54 Hwy.
Elev. = 135.29 (City Datum)

Temp. Benchmark, R.R. Spike in the West Face of HLP on the East Side of Maize Rd. (First Pole South of R.R. Tracks) 200'± South of U.S. 54 Hwy.
Elev. = 136.11 (City Datum)

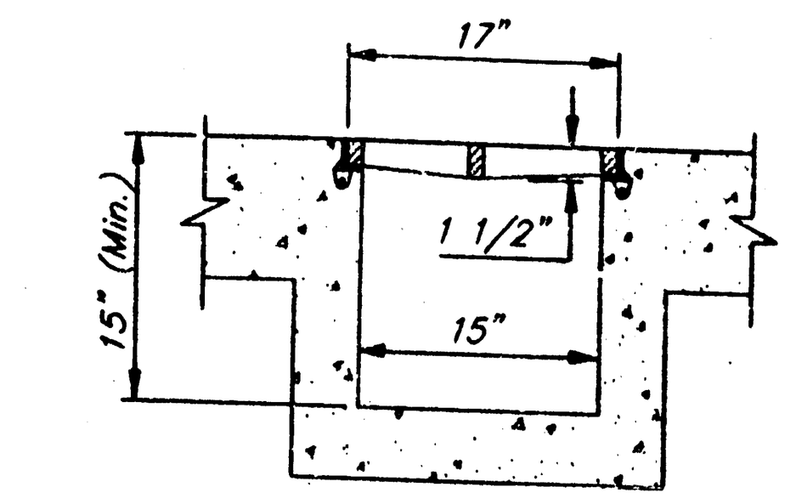
Contractor To Verify Depth and Location and Coordinate Work with Utility Owner.



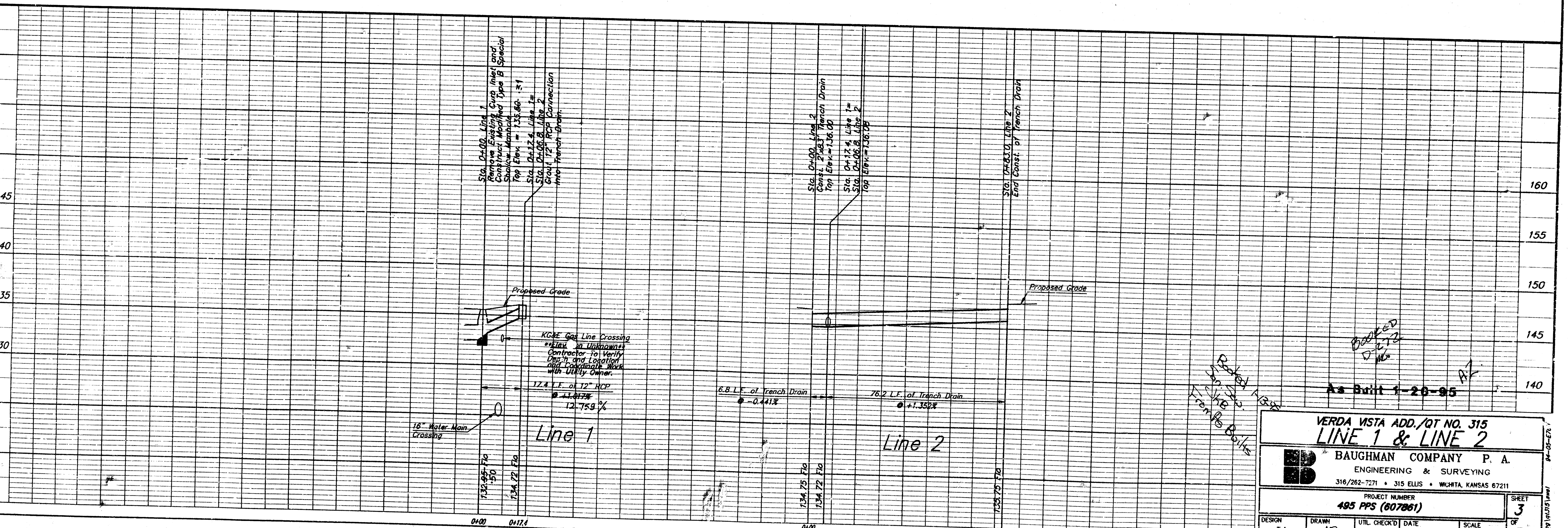
Scale: 1" = 20' Horizontal
1" = 5' Vertical
• = Iron



Grate Alignment Detail



TRENCH DRAIN DETAIL



Booked D-272

Booked 1-13-95 Line 1 & 2 Trench Bolts

As Built 1-26-95

VERDA VISTA ADD./QT NO. 315 LINE 1 & LINE 2					
BAUGHMAN COMPANY P. A. ENGINEERING & SURVEYING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
PROJECT NUMBER 495 PPS (607861)					SHEET 3
DESIGN T.A.	DRAWN MSP	UTIL. CHECK'D	DATE Aug. 1994	SCALE Noted	OF 5

94-05-E7e

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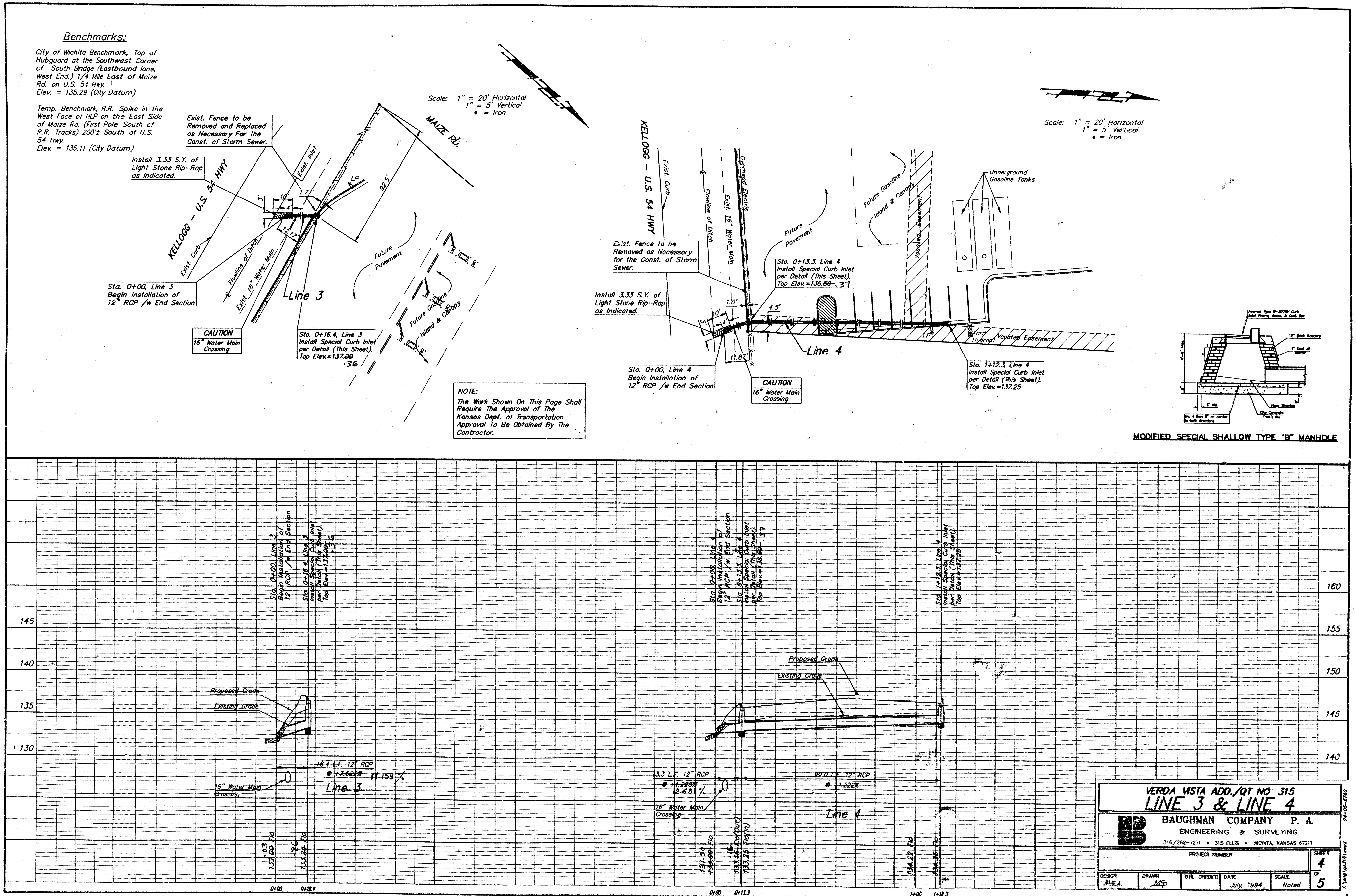
Benchmarks:
City of Wichita Benchmark, Top of Hubguard at the Southwest Corner of South Bridge (Eastbound lane, West End.) 1/4 Mile East of Maize Rd. on U.S. 54 Hwy. Elev. = 135.29 (City Datum)
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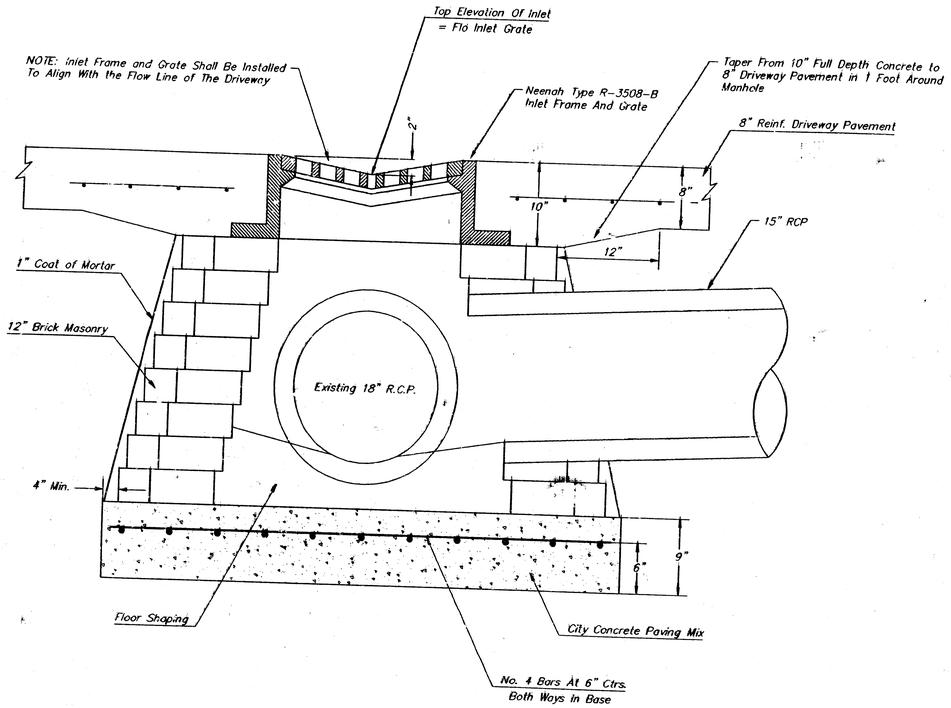
Scale: 1" = 20' Horizontal 1" = 5' Vertical • = Iron
KELLOGG – U.S. 54 HWY
MAIZE RD.
Exist. Fence to be Removed and Replaced as Necessary For the Const. of Storm Sewer.
Install 3.33 S.Y. of Light Stone Rip-Rap as Indicated.
Exist. Inlet
Exist. Curb
Flowline of Ditch
Exist. 16" Water Main
Future Pavement
Future Gasoline Island & Canopy
Sta. 0+00, Line 3 Begin Installation of 12" RCP /w End Section
Line 3
CAUTION 16" Water Main Crossing
Sta. 0+16.4, Line 3 Install Special Curb Inlet per Detail (This Sheet). Top Elev.=137.36
NOTE: The Work Shown On This Page Shall Require The Approval of The Kansas Dept. of Transportation Approval To Be Obtained By The Contractor.
Overhead Electric
Exist. 16" Water Main
Exist. Fence to be Removed as Necessary for the Const. of Storm Sewer.
Install 3.33 S.Y. of Light Stone Rip-Rap as Indicated.
Sta. 0+13.3, Line 4 Install Special Curb Inlet per Detail (This Sheet). Top Elev.=136.37
Future Gasoline Island & Canopy
Vacated Easement
Underground Gasoline Tanks
Line 4
Yard Hydrant
Sta. 0+00, Line 4 Begin Installation of 12" RCP /w End Section
CAUTION 16" Water Main Crossing
Sta. 1+12.3, Line 4 Install Special Curb Inlet per Detail (This Sheet). Top Elev.=137.25
MODIFIED SPECIAL SHALLOW TYPE "B" MANHOLE
Proposed Grade
Existing Grade
16.4 L.F. 12" RCP
11.159 %
Line 3
16" Water Main Crossing
13.3 L.F. 12" RCP
12.481 %
16" Water Main Crossing
99.0 L.F. 12" RCP
@ 1.222%
Line 4
132.03 Flo
133.86 Flo
131.50 Flo
133.16 Flo(Out)
133.25 Flo(In)
134.22 Flo
134.36 Flo
145
140
135
130
160
155
150
145
140
0+00
0+16.4
0+00
0+13.3
1+00
1+12.3
VERDA VISTA ADD./QT NO 315
LINE 3 & LINE 4
BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211
PROJECT NUMBER
SHEET 4 of 5
DESIGN
DRAWN
UTIL. CHECK'D
DATE July, 1994
SCALE Noted



(NTS)

GENERAL NOTES

1. 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 PAVEMENT SPECIFICATIONS USING CITY CONCRETE CEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. 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 6 INCHES 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.

MODIFIED TYPE B SPECIAL SHALLOW MANHOLE W/ INLET FRAME AND GRATE

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
315/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

REV.

PROJECT NUMBER
495 PPS (607861)

SHEET 5 OF 8

DESIGN	DRAWN	APPROVED	DATE	SCALE
T.A.	MP		Aug. 1994	None

A-1-A-81

Benchmarks:

City of Wichita Benchmark, Top of Hubguard at the Southwest Corner of South Bridge (Eastbound lane, West End.) 1/4 Mile East of Maize R.I. on U.S. 54 Hwy.
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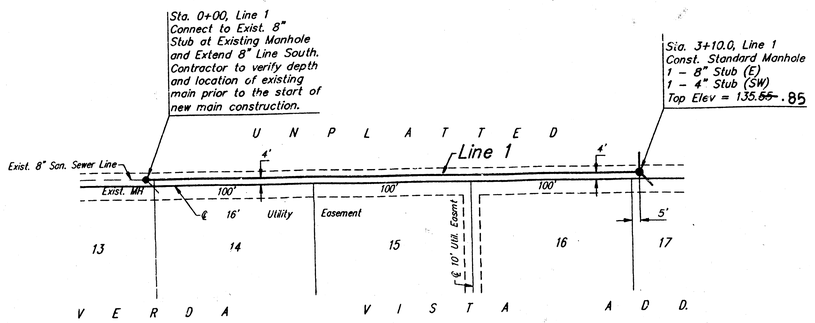


GENERAL NOTES

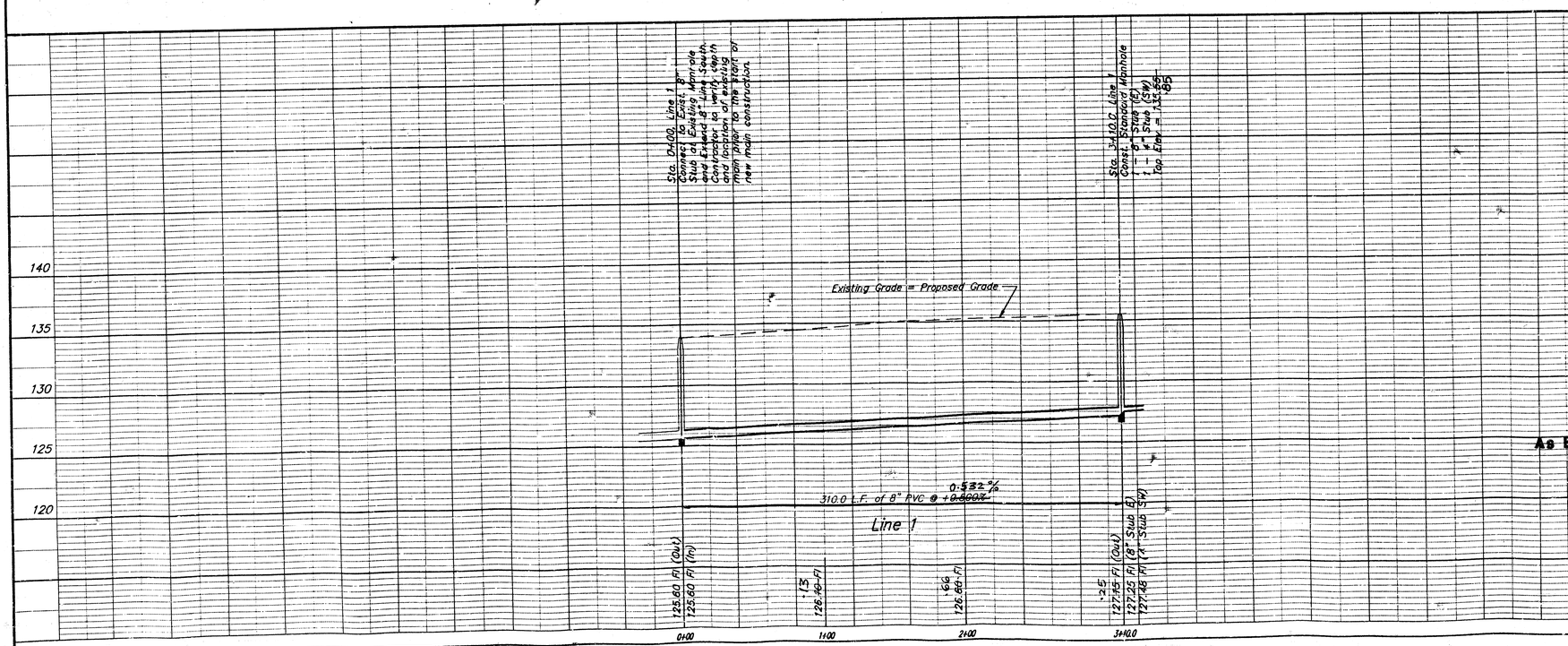
1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation as follows:
   Kansas One-Call 687-2470
2. Existing utilities and their locations as shown on the plans represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company records or company field-provided locations. The Contractor will be required to work around existing utilities which do not conflict with proposed construction.
3. The Contractor is to verify utility locations prior to construction for this project.
4. All disturbed areas shall be seeded with Rebel II fescue at the rate of 300 lbs. per acre. Fertilizer (13-13-13) shall be applied at the rate of 100 lbs. per acre.
5. Traffic affected by construction of this project shall be handled in accordance with the latest addition of the Manual on Uniform Traffic Control Devices.
6. Work within the US-54 right-of-way will require a permit from the Kansas Dept. of Transportation at 744-1271. The Contractor shall be responsible to obtain said permit.

VICINITY MAP

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA
Sanitary Sewers VRH 10/5/94
Storm Sewers VRH 10/5/94

NOTE TO CONTRACTORS

Inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).



Booked 1/12/95 From As Built

As Built 1-3-95

VERDA VISTA ADD.
SANITARY AND STORM SEWER IMP.

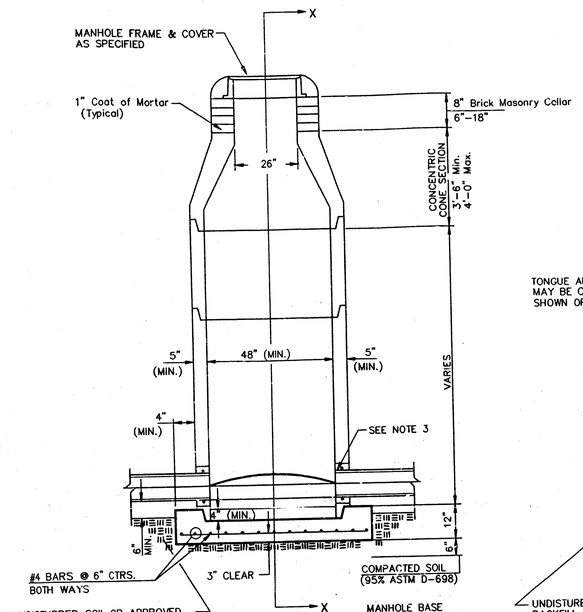
BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 495 PPS (6078B1)

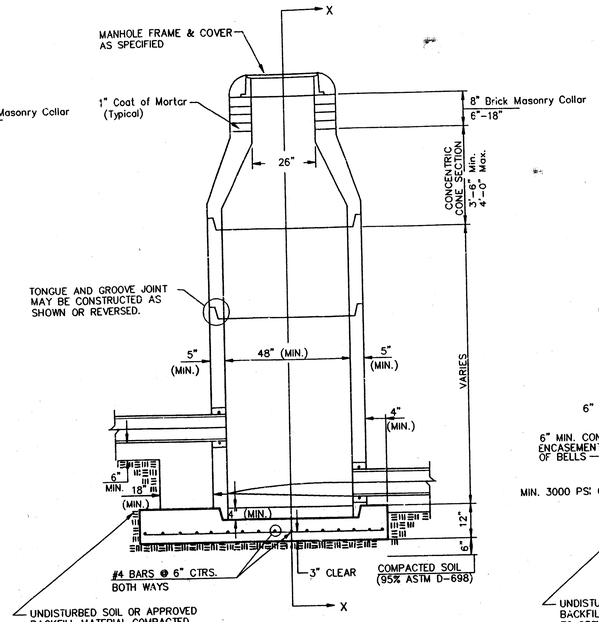
SHEET 1 OF 5

DESIGN	DRAWN	UTIL. CHECK'D	DATE	SCALE
T.A.	MS		SEPT. 94	Noted

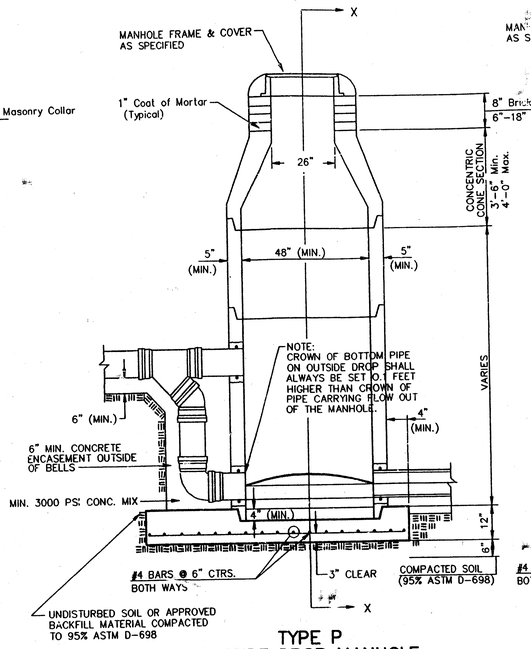
SEWER APPURTENANCES DETAILS



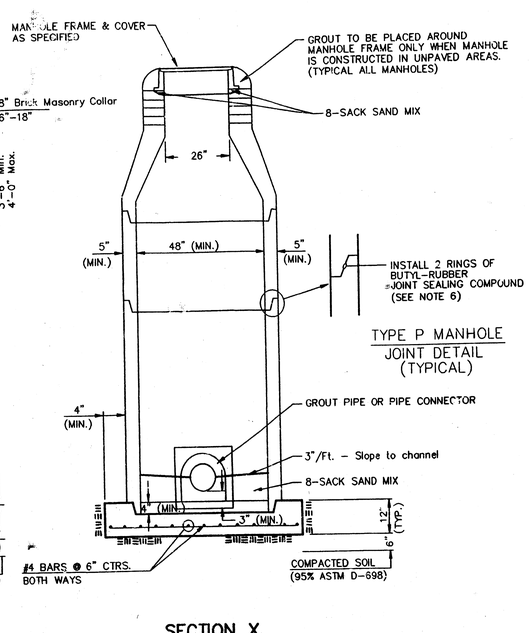
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



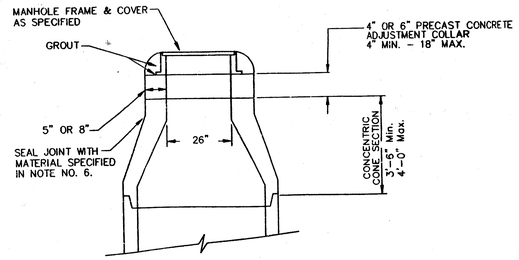
TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS 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 THEMEC 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 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 DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' 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. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.



ALTERNATE CONSTRUCTION
IN UNPAVED AREAS

CITY OF WICHITA, KANSAS
STANDARD MANHOLE DETAILS
SEWER APPURTENANCES DETAILS

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

REV. NOV. 1993

PROJECT NUMBER 495 PPS (607861)

SHEET 2 OF 5

DESIGN	DRAWN	APPROVED	DATE	SCALE