

CENTRAL RIVERSIDE PARK SANITARY SEWER IMPROVEMENTS

PROJECT NO. 468-76-245-82399-000-000-001

INDEX CODE 623124

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK - CITY ENGINEER

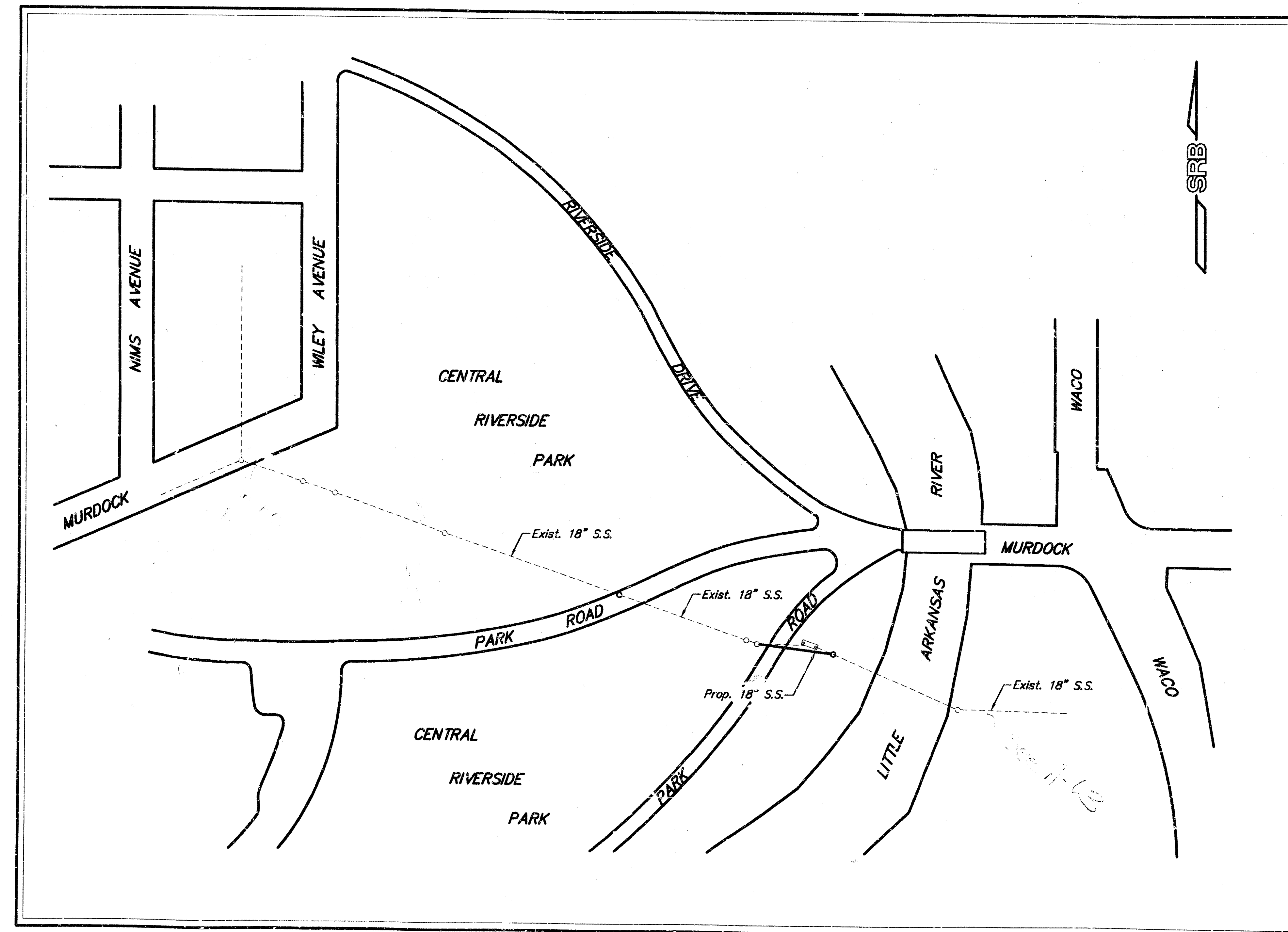
GENERAL NOTES

1. Traffic generated outside the project area and local business or residential traffic generated within the project area are to be carried through construction.
2. Underground utility service lines and overhead utility pole lines are to be adjusted by others if necessary prior to construction unless the plans specifically call for their adjustment by the Contractor or by their owner. Existing utilities 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.
3. Rubble from the removal of miscellaneous structures 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 Agricultural 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.
4. Trees and shrubs in public right-of-way which are in direct conflict with proposed construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed construction shall be saved and protected from damage.
5. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
6. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are disturbed by his construction operations. Such irons shall be re-established by a licensed Land Surveyor in accordance with state laws.
7. Contractor will be required to provide a minimum notice of twenty-four (24) hours to utility companies prior to starting any excavation as follows:

Kansas One-Call 687-2470

The Contractor must notify the following before construction and in case of an emergency:

Kansas Gas & Electric 264-1141
Arkia Gas Company 942-8350 or 263-8161
Southwestern Bell Telephone Company 1-571-2611
Multimedia Cablevision 262-4270 or 263-2061
City of Wichita Water Department 268-4908
City of Wichita Sewer Maintenance 268-4071
8. Contractor shall contact City of Wichita Sewer Maintenance Department at 268-4024 two (2) weeks prior to construction of this project.
9. The Contractor shall restore disturbed areas per City Administrative Regulation 78.
10. 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 other pay items of work.
11. Contractor shall contact Mr. Dan Young, Trans Americe Management, at 687-9797 to arrange construction access to the manhole located on the east bank of the river.

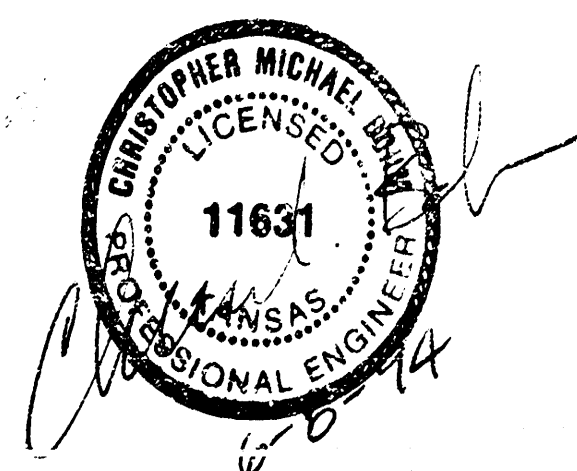


VICINITY MAP

INDEX OF SHEETS

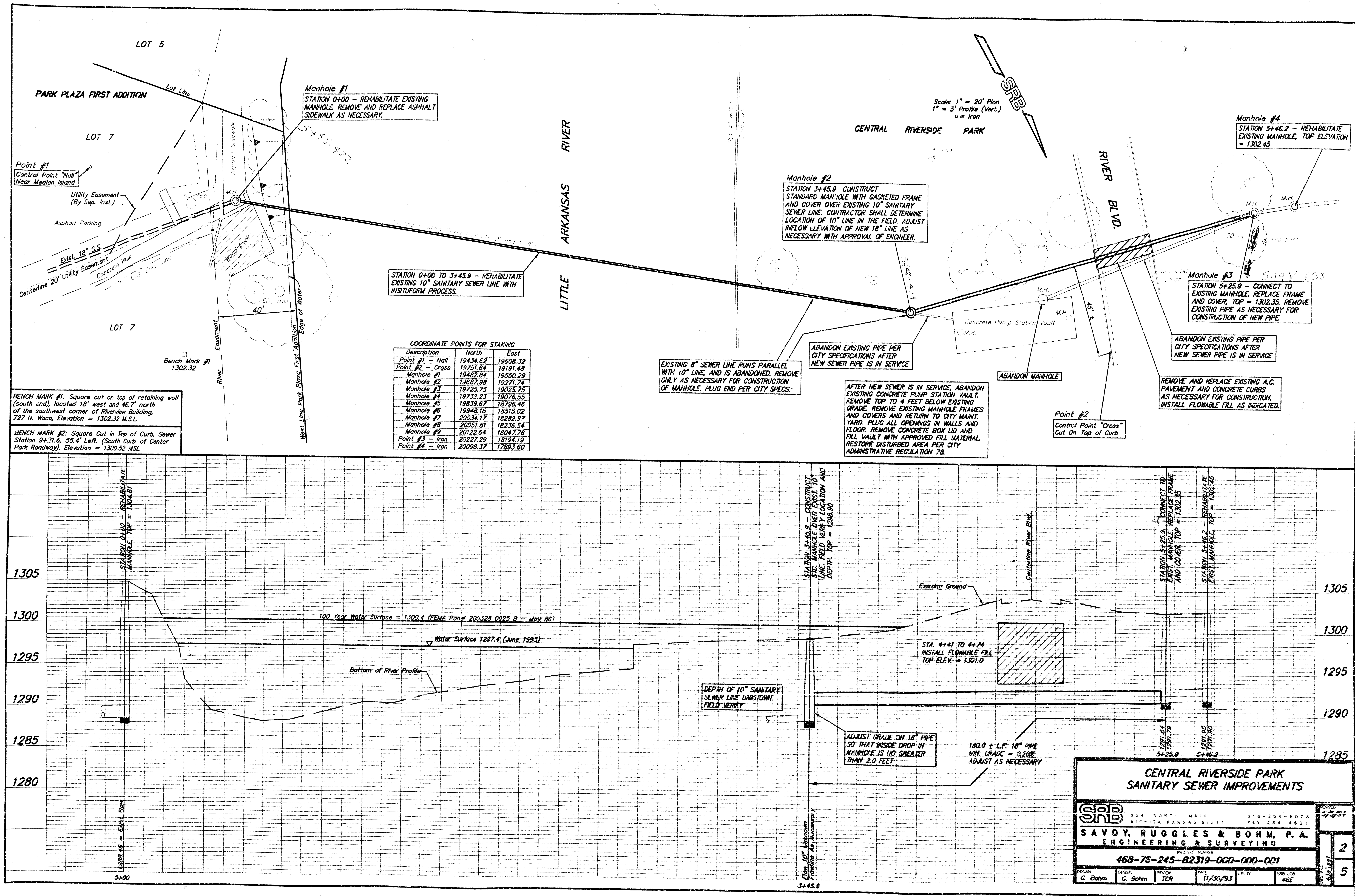
1. TITLE SHEET
- 2 - 4. PLAN PROFILE SEWER LINE
5. TYPE P MANHOLE DETAIL

Booked
1-8-99
P-56
ROL



Rev. 6-8-94
REV. 5-5-94

SRB 924 NORTH MAIN 316-264-800P
WICHITA, KANSAS 67211 FAX 264-4621
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING



PARK PLAZA FIRST ADDITION

LOT 5

LOT 7

Point #1
Control Point "Nail"
Near Median Island

Utility Easement
(By Sep. Inst.)

Asphalt Parking

Exist. 18" S.S.

Centerline 20' Utility Easement

LOT 7

Bench Mark #1
1302.32

BENCH MARK #1: Square cut on top of retaining wall (south end), located 18' west and 46.7' north of the southwest corner of Riverside Building, 727 N. Waco, Elevation = 1302.32 M.S.L.

BENCH MARK #2: Square Cut in Top of Curb, Sewer Station 4+11.6, 53.4' Left. (South Curb of Center Park Roadway), Elevation = 1302.52 M.S.L.

Manhole #1
STATION 0+00 - REHABILITATE EXISTING MANHOLE. REMOVE AND REPLACE ASPHALT SIDEWALK AS NECESSARY.

STATION 0+00 TO 3+45.9 - REHABILITATE EXISTING 10" SANITARY SEWER LINE WITH INSITUFORM PROCESS.

COORDINATE POINTS FOR STAKING		
Description	North	East
Point #1 - Nail	19434.62	19608.32
Point #2 - Cross	19751.64	19191.48
Manhole #1	19482.84	19550.29
Manhole #2	19687.98	19271.74
Manhole #3	19723.75	19085.75
Manhole #4	19732.23	19076.55
Manhole #5	19839.67	18796.46
Manhole #6	19948.18	18515.02
Manhole #7	20034.17	18282.97
Manhole #8	20051.81	18236.54
Manhole #9	20122.64	18047.76
Point #3 - Iron	20227.29	18194.19
Point #4 - Iron	20098.37	17893.60

LITTLE ARKANSAS RIVER

CENTRAL RIVERSIDE PARK

Scale: 1" = 20' Plan
1" = 5' Profile (Vert.)
o = Iron

Manhole #2
STATION 3+45.9 CONSTRUCT STANDARD MANHOLE WITH GASKETED FRAME AND COVER OVER EXISTING 10" SANITARY SEWER LINE. CONTRACTOR SHALL DETERMINE LOCATION OF 10" LINE IN THE FIELD. ADJUST INFLOW ELEVATION OF NEW 18" LINE AS NECESSARY WITH APPROVAL OF ENGINEER.

ABANDON EXISTING PIPE PER CITY SPECIFICATIONS AFTER NEW SEWER PIPE IS IN SERVICE

AFTER NEW SEWER IS IN SERVICE, ABANDON EXISTING CONCRETE PUMP STATION VAULT. REMOVE TOP TO 4 FEET BELOW EXISTING GRADE. REMOVE EXISTING MANHOLE FRAMES AND COVERS AND RETURN TO CITY MAINT. YARD. PLUG ALL OPENINGS IN WALLS AND FLOOR. REMOVE CONCRETE BOX LID AND FILL VAULT WITH APPROVED FILL MATERIAL. RESTORE DISTURBED AREA PER CITY ADMINISTRATIVE REGULATION 78.

ABANDON MANHOLE

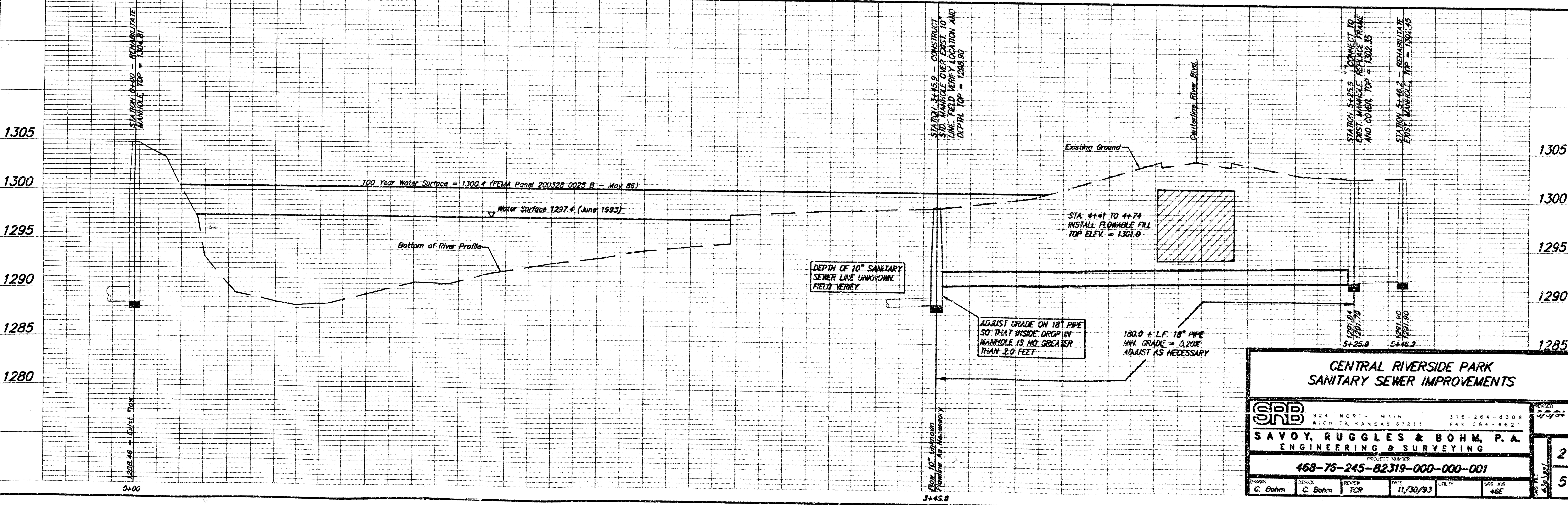
Point #2
Control Point "Cross"
Cut On Top of Curb

Manhole #4
STATION 5+46.2 - REHABILITATE EXISTING MANHOLE. TOP ELEVATION = 1302.45

Manhole #3
STATION 5+25.9 - CONNECT TO EXISTING MANHOLE. REPLACE FRAME AND COVER. TOP = 1302.35. REMOVE EXISTING PIPE AS NECESSARY FOR CONSTRUCTION OF NEW PIPE.

ABANDON EXISTING PIPE PER CITY SPECIFICATIONS AFTER NEW SEWER PIPE IS IN SERVICE

REMOVE AND REPLACE EXISTING A.C. PAVEMENT AND CONCRETE CURBS AS NECESSARY FOR CONSTRUCTION. INSTALL FLOWABLE FILL AS INDICATED.



**CENTRAL RIVERSIDE PARK
SANITARY SEWER IMPROVEMENTS**

SRB
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

468-76-245-82319-000-000-001

11/30/93

2
5

Scale: 1" = 20' Plan
1" = 5' Profile (Vert.)
o = Iron

CENTRAL RIVERSIDE PARK

Manhole #4
STATION 5+46.2 - REHABILITATE
EXISTING MANHOLE. TOP ELEVATION
= 1302.45

1300.52
Bench Mark #2

Manhole #5 5-48-660
STATION 8+46.2 - REHABILITATE
EXISTING MANHOLE. TOP ELEVATION
= 1300.17. REMOVE AND REPLACE
CURB AND GUTTER AND PAVEMENT
AS NECESSARY TO REPLACE FRAME
AND COVER.

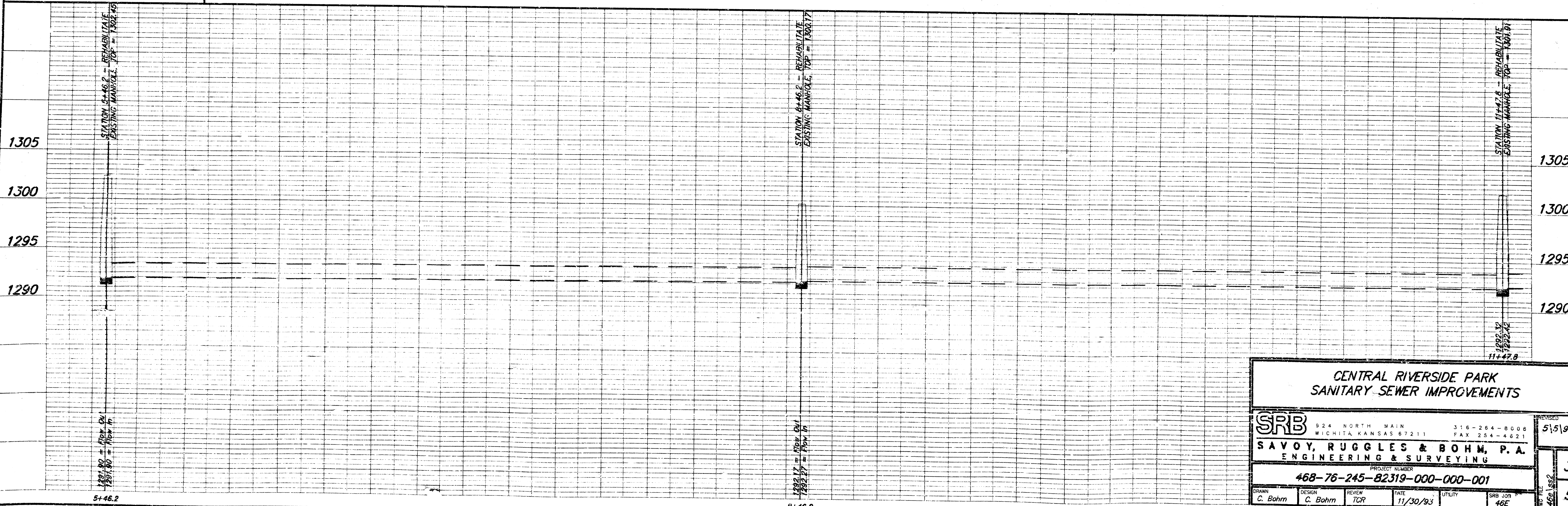
Manhole #6
STATION 11+47.8 - REHABILITATE
EXISTING MANHOLE. TOP ELEVATION
= 1301.91

ROADWAY
PARK

CENTRAL RIVERSIDE PARK

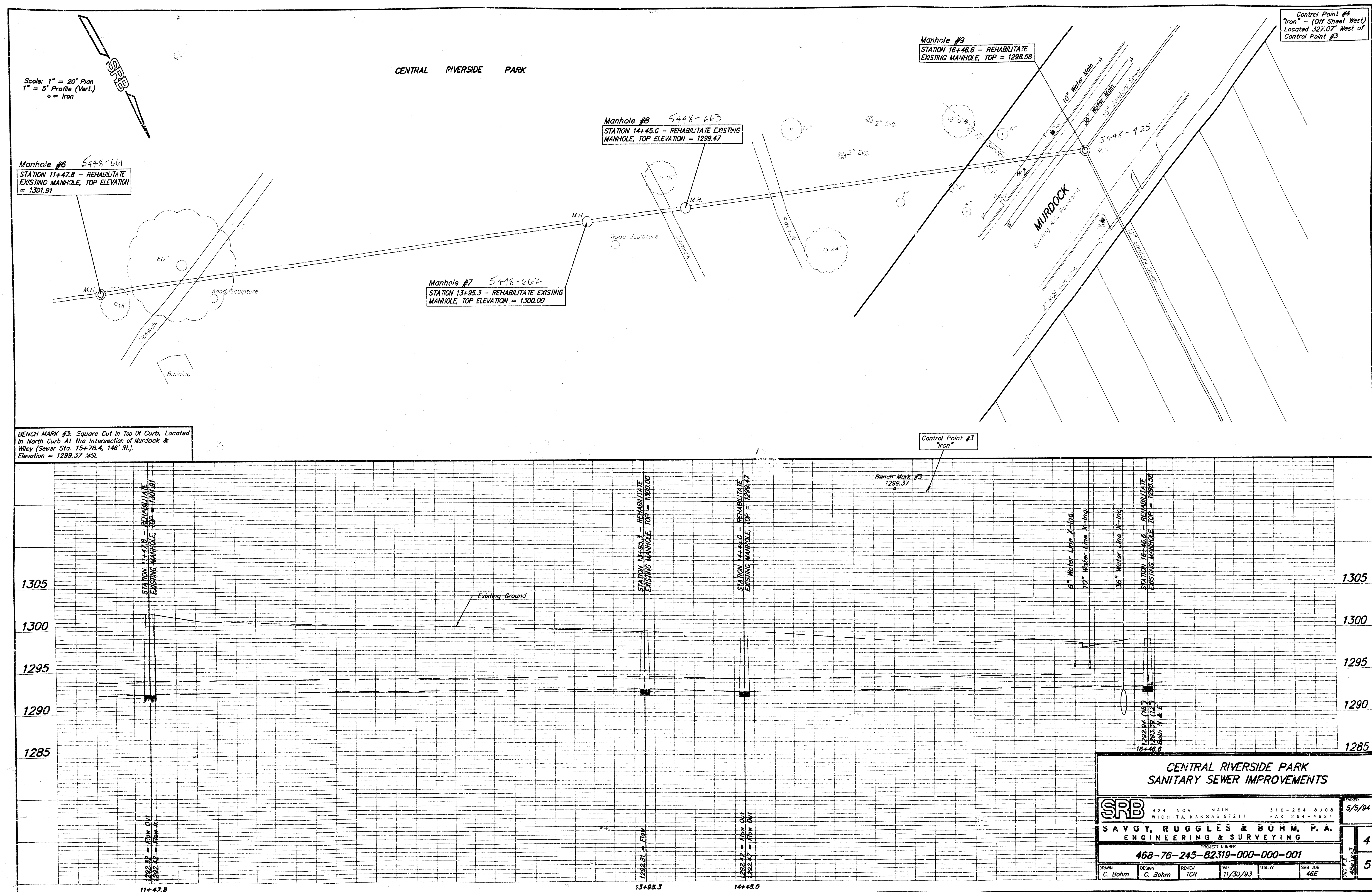
BENCH MARK #1: Square cut on top of retaining wall
(south end), located 18' west and 46.7' north
of the southwest corner of Riverview Building,
727 N. Waco, Elevation = 1302.32 M.S.L.

BENCH MARK #2: Square Cut in Top of Curb, Sewer
Station 9+21.6, 55.4' Left (South Curb of Center
Park Roadway), Elevation = 1300.52 M.S.L.

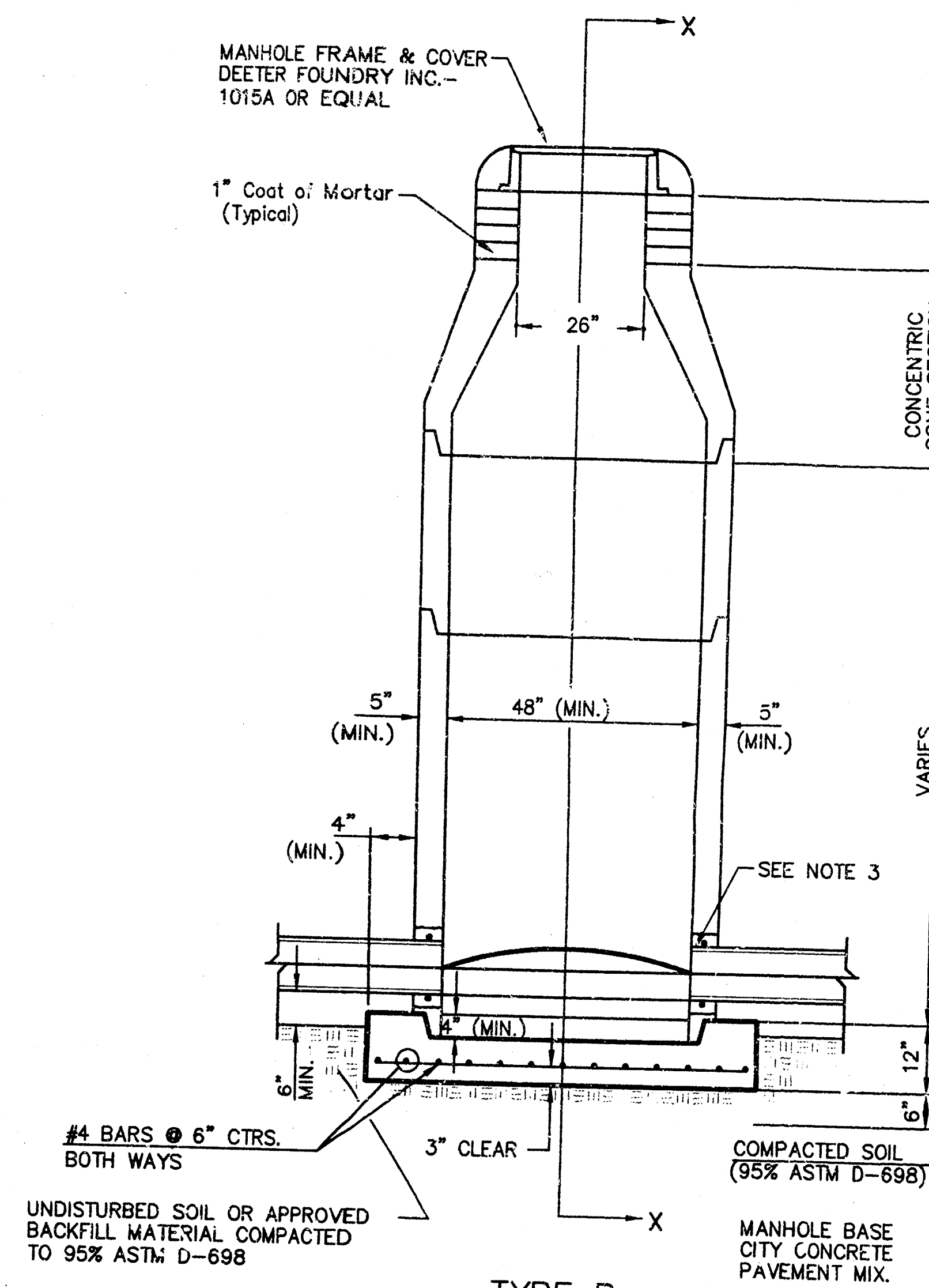


CENTRAL RIVERSIDE PARK
SANITARY SEWER IMPROVEMENTS

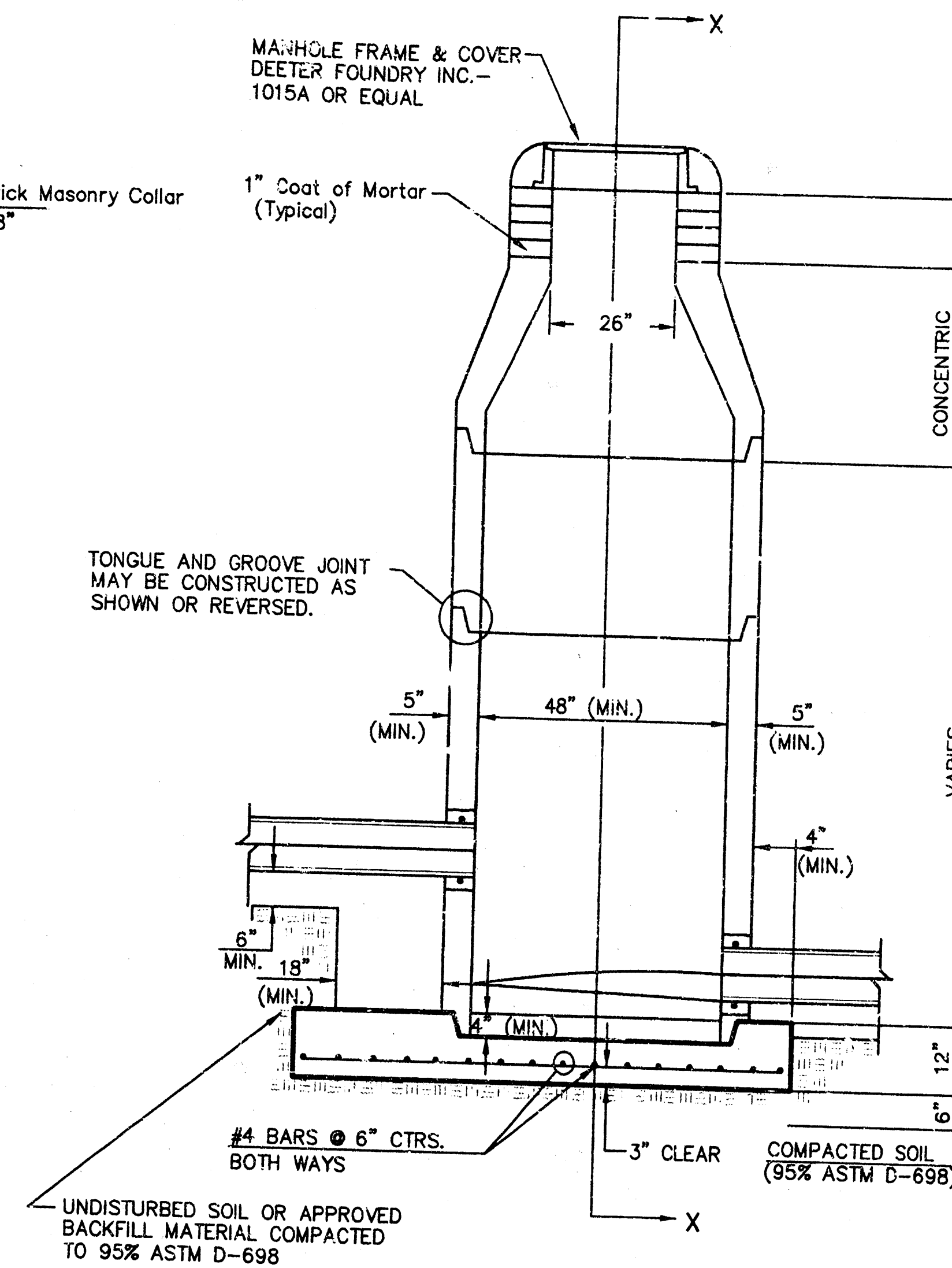
SRB		924 NORTH MAIN WICHITA, KANSAS 67211		316-264-8008 FAX 254-4821		5/5/94	
SAVOY, RUGGLES & BOHM, P.A. ENGINEERING & SURVEYING							
PROJECT NUMBER 468-76-245-82319-000-000-001							
DESIGN C. Bohm	DESIGN C. Bohm	REVIEW TCR	DATE 11/30/93	UTILITY	SRB JOB # 468	DATE 4/26/94	5



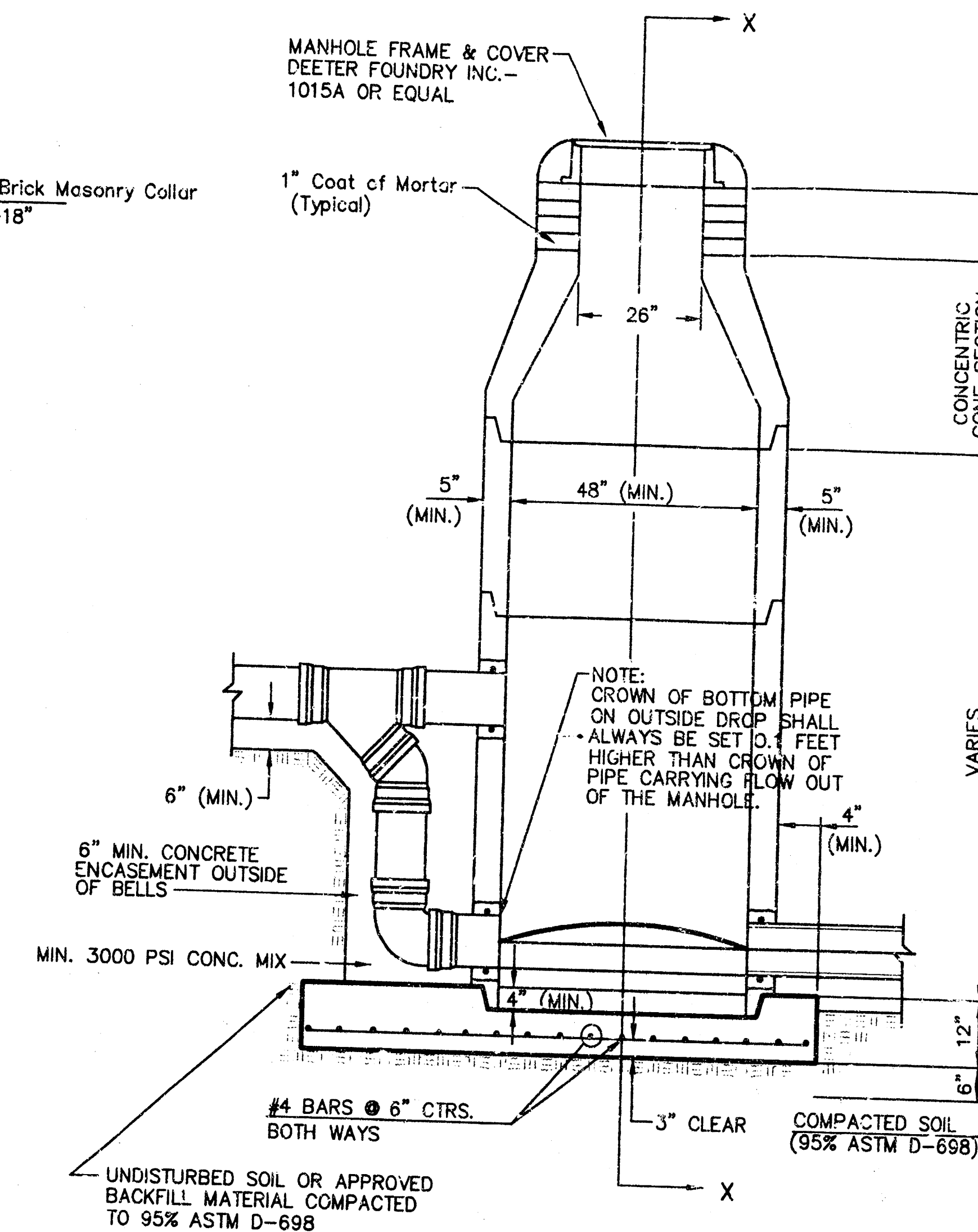
SEWER APPURTENANCES DETAILS



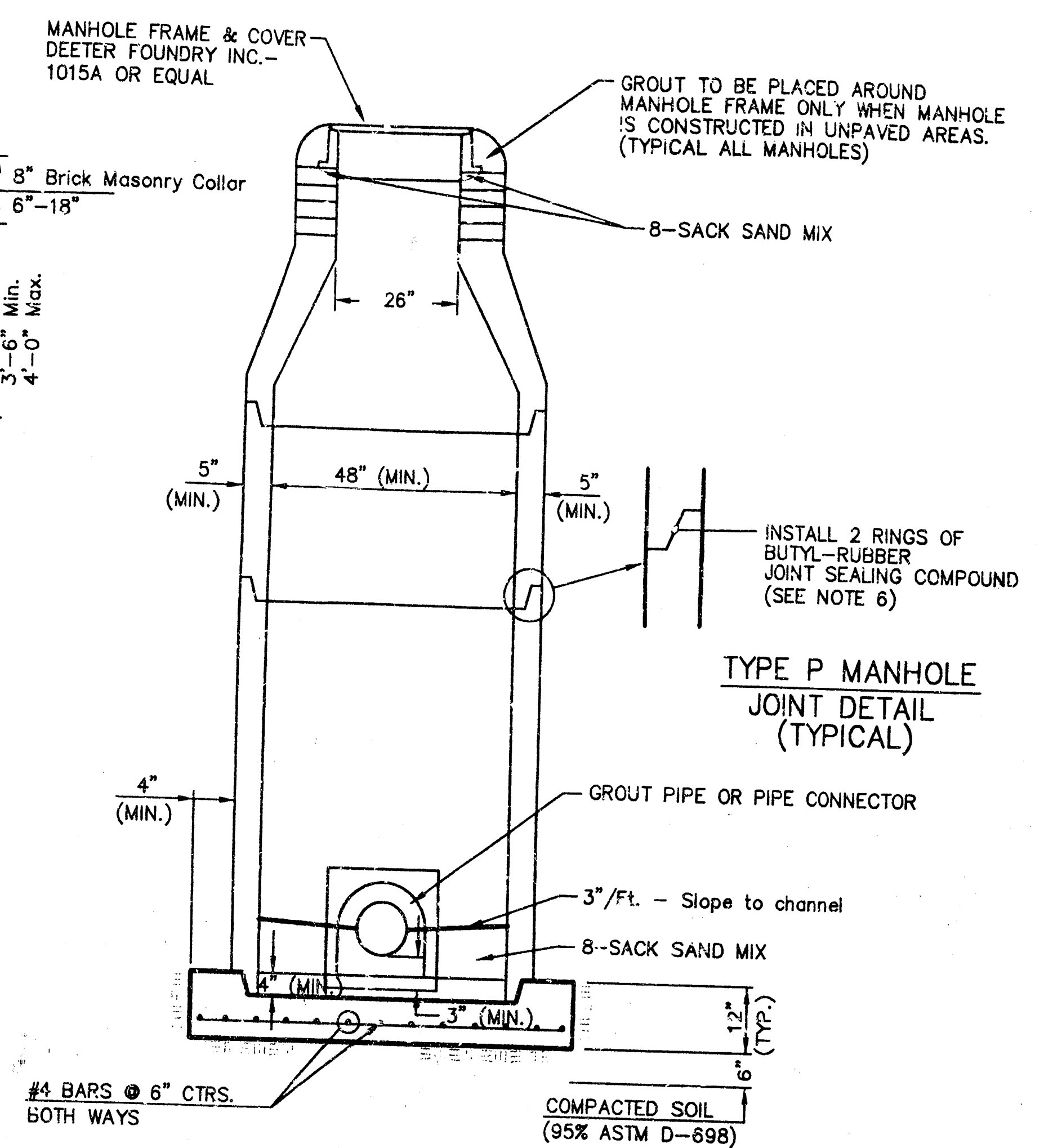
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

GENERAL NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- 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.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS NEMEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- 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.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL BE IN 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.

- 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.
- 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.
- 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 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 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.
- 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.
- 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.

STANDARD MANHOLE DETAILS
SEWER APPURTENANCES DETAILS
CITY OF WICHITA, KANSAS