AutoCAD Drawing File Name 9324E-1.DWG
Archive Computer Disk # ACAD-DWG19
Plot Scale 1=300

CONSTRUCTION PLANS FOR

DRAINAGE SYSTEM IMPROVEMENTS

TO SERVE

GROVE ST., 13TH ST. TO 17TH ST.

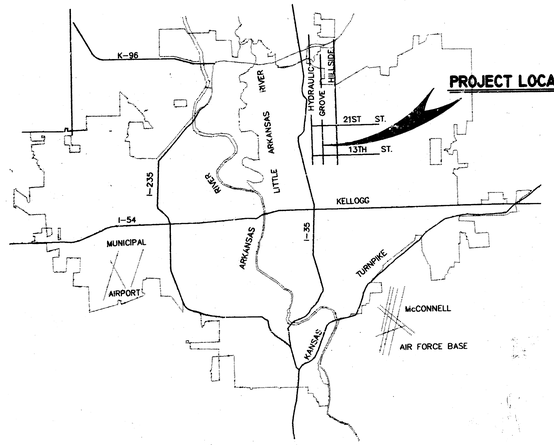
THE CITY OF WICHITA,

SEDGWICK COUNTY, KANSAS

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

SYMBOL LEGEND

WM WATER METER	TREE
GM GAS METER	W WATER LINE
WV WATER VALVE	G GAS LINE
POWER POLE	SS SANITARY SEWER
FIRE HYDRANT	E ELECTRIC
	GS GAS SERVICE



PHASE I

INDEX CODE -

CITY OF WICHITA PROJECT NO. 468 - 82400

MARCH , 1994

PLANS PREPARED BY

CASTLE & ASSOCIATES

WICHITA, KANSAS

BENCH MARKS

B.M. CITY OF WICHITA BENCH MARK DISK TWENTY FOUR FEET EAST AND FORTY FOUR FEET NORTH OF INTERSECTION OF THE CENTERLINE OF GROVE AND 17TH STREET.
ELEVATION 124.56

B.M. NORTH BOLT OF FIRE HYDRANT, SOUTHWEST CORNER OF 16TH AND GROVE.
ELEVATION 125.30

B.M. CHISELED SQUARE ON SIDEWALK SOUTHEAST CORNER OF 15TH AND GROVE.
ELEVATION 122.37

B.M. NORTH BOLT OF FIRE HYDRANT, SOUTHEAST CORNER OF 14TH AND GROVE.
ELEVATION 123.15

B.M. NORTH EDGE OF MANHOLE RING, SOUTHWEST CORNER OF 13TH AND GROVE.
ELEVATION 120.23

DRAWING INDEX

SHEET	TITLE
1.	MAP AND INDEX
2.	GENERAL NOTES
3.	PLAN & PROFILE GROVE, NORTH OF 13TH STREET STA. 0+00 TO STA. 5+50
4.	PLAN & PROFILE GROVE, STA. 5+50 TO STA. 6+13 AND 15TH STREET INTERSECTION
5.	PLAN AND PROFILE 16TH STREET SPRUCE AVE. TO GROVE AVE.
6.	DETAIL STANDARD TYPE I CURB INLET (6" x 5'-0")
7.	DETAIL STANDARD TYPE II CURB INLET (6" x 2'-3 5/8")
8.	STANDARD SHALLOW MANHOLES TYPE 'A' AND TYPE 'B'

BOOKED
7-26-95
MCG
D-259

CITY OF WICHITA
DRAINAGE IMPROVEMENTS

MAP AND INDEX

CASTLE & ASSOCIATES
ENGINEERS
WICHITA, KANSAS

DSG
DR
CH
APP

DWG FILE NO
9324E - D - 70,005

SHEET NO 1 OF 8

REV.

DATE MARCH 1994

AutoCAD Drawing File Name AC-DWG-2.DWG
Archive Computer Disk # AC-DWG-19
Plot Scale 1 = 20

GENERAL NOTES

1. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF TWENTY-FOUR (24) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

   THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

CABLEVISION	316-262-4270 OR 263-2061
ARKLA GAS	316-942-8350 OR 263-8161
CITY OF WICHITA WATER SANITARY & STORM SEWER	 316-268-4908 316-268-4210
KANSAS ONE-CALL	1-800-344-7233 OR 687-2470
KG&E, THE ELECTRIC CO.	316-264-1141
KG&E GAS SERVICE	316-263-7511
SOUTHWESTERN BELL TELEPHONE	1-571-2611

2. THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.

3. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA IS NOT TO BE CARRIED THROUGH CONSTRUCTION. LOCAL BUSINESS OR APARTMENT TRAFFIC GENERATED WITHIN THE PROJECT AREA IS TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.

4. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, 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 CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

5. A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE COURSE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED, EXCEPT WHEN SAW CUTS ARE WITHIN THREE (3) FEET OF AN EXISTING JOINT THE REMOVAL SHALL BE EXTENDED TO THE EXISTING JOINT. SUCH SAW CUTS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF THE SURFACE OR PAVEMENT.

   CURB AND GUTTER REMOVAL FOR INLETS SHALL BE SAWED AT A MINIMUM OF TWO (2) FEET SIX, (6) INCHES FROM THE BACK OF CURB AND PARALLEL WITH IT AND A MINIMUM OF FOUR (4) FEET, SIX (6) INCHES TO THE LEFT AND RIGHT DIRECTIONS FROM THE CENTER LINE OF THE INLET PERPENDICULAR TO THE BACK OF CURB.

6. 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 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.

7. THE ENGINEER SHALL TAKE FIELD TIES TO ALL QUARTER SECTION CORNERS. THE CONTRACTOR SHALL SET A CITY SURVEY MONUMENT IN THE REQUIRED LOCATION WHERE SUCH QUARTER SECTION CORNERS FALL WITHIN THE LIMITS OF PAVEMENT CONSTRUCTION. SURVEY MONUMENTS WILL BE FURNISHED BY THE CITY. THE ENGINEER WILL ACCURATELY LOCATE AND INSTALL THE IRON AT THE QUARTER SECTION CORNER. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE OTHER PAY ITEMS OF WORK IN THE CONTRACT.

9. 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 PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

9. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.

10. ONLY ACTIVE BUILDING DRAIN LINES WHICH CONNECT ACTUAL BUILDINGS TO THE STORM SEWER SYSTEM ARE TO BE RECONNECTED TO THE NEW STORM SEWER CONSTRUCTION. BUILDING DRAIN LINES AND/OR CONNECTIONS WHICH HAVE BEEN ABANDONED ARE NOT TO BE RECONNECTED TO THE NEW STORM SEWER CONSTRUCTION. IT WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN WHICH SUCH BUILDING DRAIN LINES AND/OR CONNECTIONS ARE ACTIVE AND WHICH SUCH DRAINS AND/OR CONNECTIONS HAVE BEEN ABANDONED. ALL WORK INVOLVED WITH BUILDING DRAIN LINE CONSTRUCTION AND/OR BUILDING DRAIN LINE CONNECTIONS SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE CITY OF WICHITA CODE. THIS WORK WILL BE PAID FOR AT THE UNIT PRICES BID FOR THE VARIOUS SIZES AND TYPES OF PIPE INVOLVED. CONNECTION OF BUILDING DRAIN LINES TO STORM SEWER PIPE WILL BE PAID FOR AT THE UNIT PRICE BID FOR BUILDING DRAIN LINE CONNECTION AND SUCH CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLAN.

11. 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.

12. ALL COSTS FOR REMOVAL OF EXISTING PAVEMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR CLEARING RIGHT-OF-WAY AND SITE PREPARATION. ALL COSTS FOR REPLACEMENT OF EXISTING PAVEMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR SITE RESTORATION. REMOVAL OF EXISTING PAVEMENT AND/OR REPLACEMENT OF EXISTING PAVEMENT SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE CITY OF WICHITA STANDARD SPECIFICATIONS. MINIMUM LIMITS OF SUCH PAVEMENT REMOVAL AND REPLACEMENT SHALL BE ONE FOOT BEYOND THE LIMITS OF THE EXCAVATION MADE FOR THE SEWER OR THE STRUCTURE, EXCEPT WHEN SUCH LINES OF REMOVAL ARE WITHIN THREE (3) FEET OF AN EXISTING JOINT THE LIMITS OF REMOVAL SHALL BE EXTENDED TO THE EXISTING JOINT.

Robert E. Steele 4/1/94

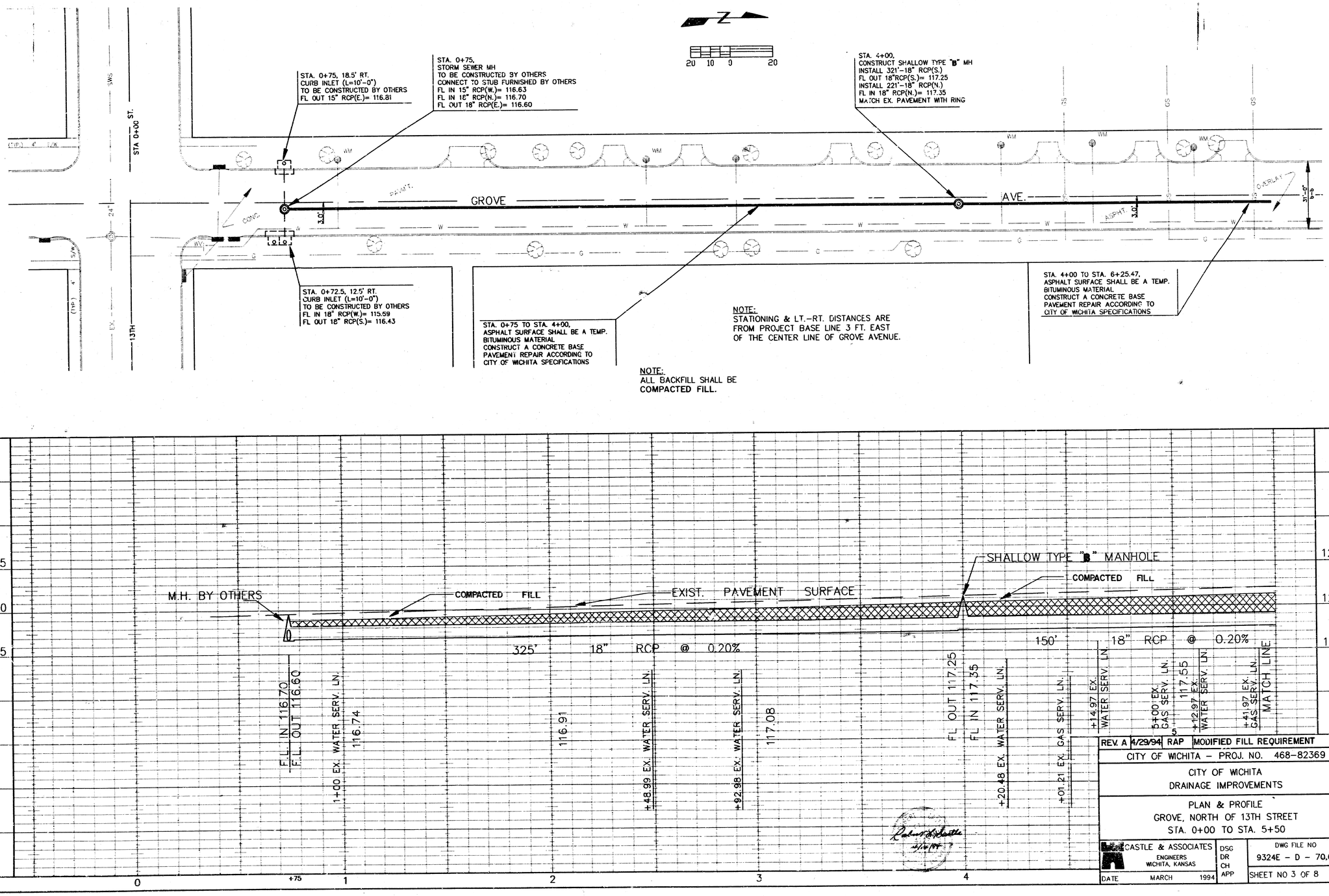
CITY OF WICHITA - PROJ. NO. 468-82369

CITY OF WICHITA
DRAINAGE IMPROVEMENTS

GENERAL NOTES

SCHLICKSTILE & ASSOCIATES ENGINEERS WICHITA, KANSAS	DSG DR CH APP	DWG FILE NO 9324E - D - 70,006	
DATE MARCH 1994		SHEET NO 2 OF 8	REV.

AutoCAD Drawing File Name 9234-3_.DWG
Archive Computer Disk # AC-DWG-19
Plot Scale 1=20



REV.			
A	4/29/94	RAP	MODIFIED FILL REQUIREMENT

CITY OF WICHITA – PROJ. NO. 468-82369

CITY OF WICHITA
DRAINAGE IMPROVEMENTS

PLAN & PROFILE
GROVE, NORTH OF 13TH STREET
STA. 0+00 TO STA. 5+50

CASTLE & ASSOCIATES
ENGINEERS
WICHITA, KANSAS

DSG
DR
CH
APP

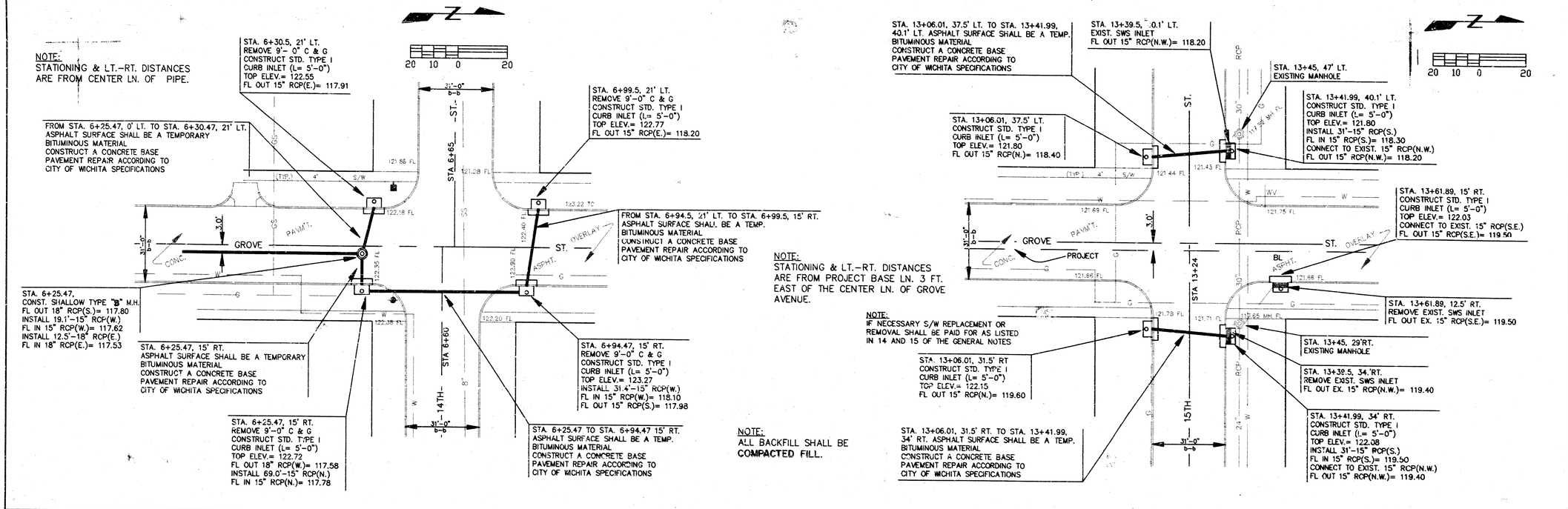
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DWG FILE NO
9324E – D – 70.007

SHEET NO 3 OF 8

REV. A

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Archive Computer Disk # AC-DWG-19
Plot Scale 1=20



REV. A	4/29/94	RAP	MODIFIED FILL REQUIREMENT

CITY OF WICHITA – PROJ. NO. 468-82369

CITY OF WICHITA
DRAINAGE IMPROVEMENTS

PLAN & PROFILE
GROVE, STA. 5+50 TO STA. 6+27.13
AND 15TH STREET INTERSECTION

CASTLE & ASSOCIATES
ENGINEERS
WICHITA, KANSAS

DSG
DR
CH
APP

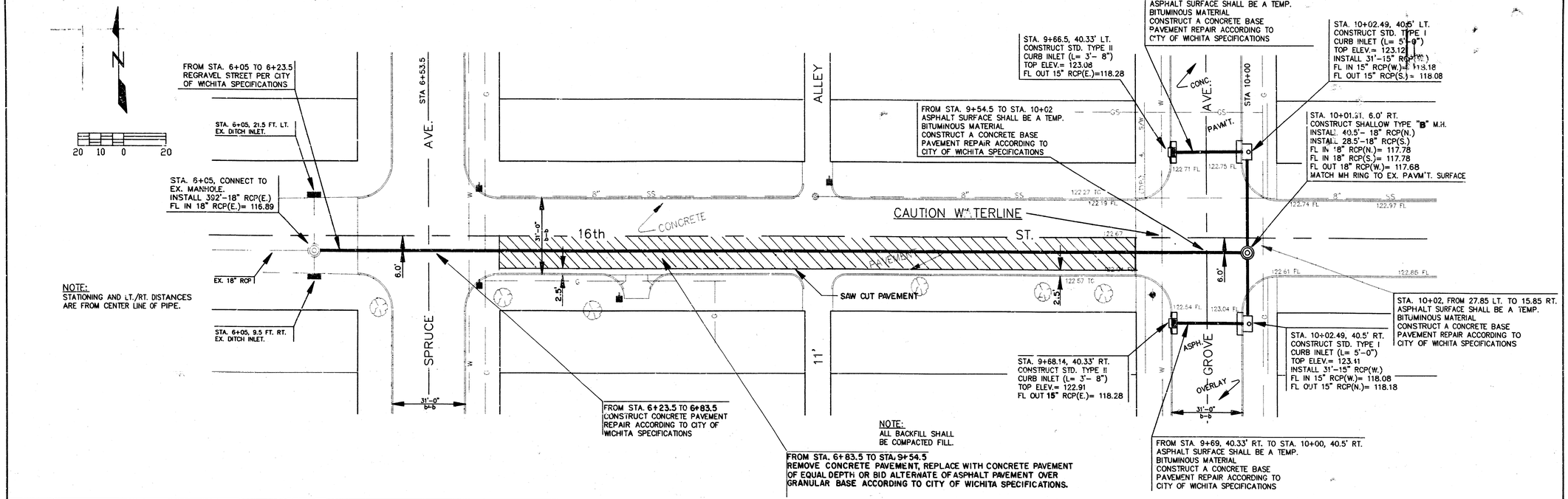
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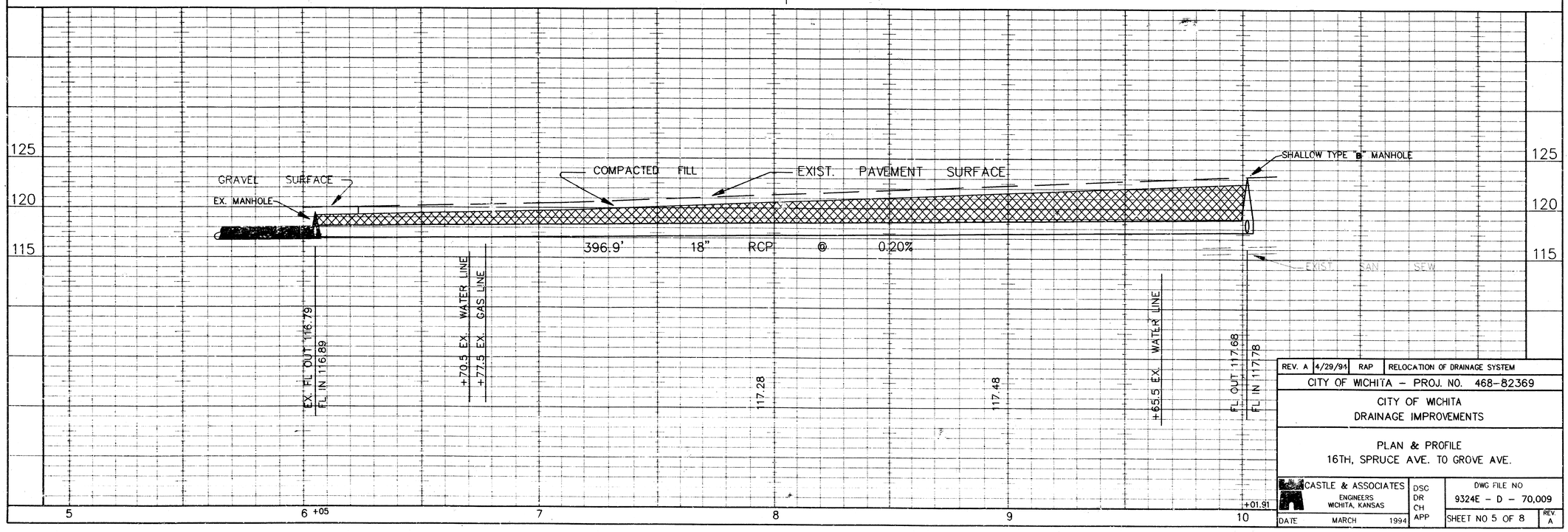
DATE MARCH 1994

SHEET NO 4 OF 8

REV. A

AutoCAD Drawing File Name 9234-5 .DWG
Archive Computer Disk # AC-DWG-19
Plot Scale 1=20





REV. A	4/29/94	RAP	RELOCATION OF DRAINAGE SYSTEM

CITY OF WICHITA – PROJ. NO. 468-82369

CITY OF WICHITA
DRAINAGE IMPROVEMENTS

PLAN & PROFILE
16TH, SPRUCE AVE. TO GROVE AVE.

CASTLE & ASSOCIATES
ENGINEERS
WICHITA, KANSAS

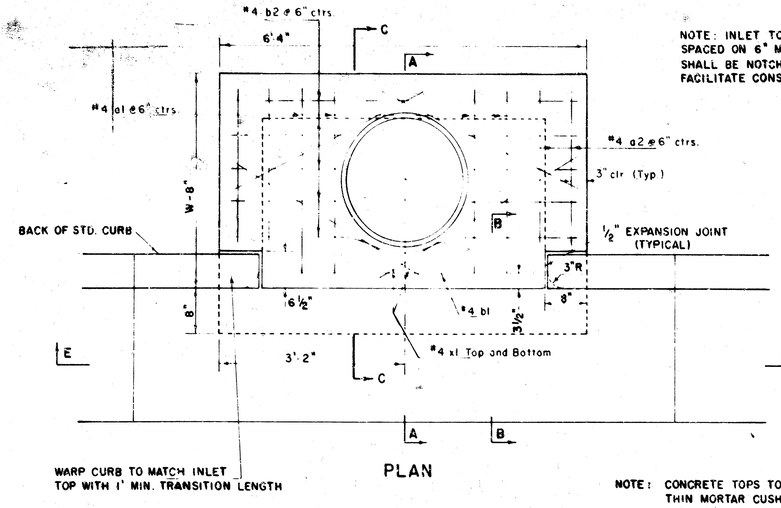
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DATE MARCH 1994

SHEET NO 5 OF 8

REV. A

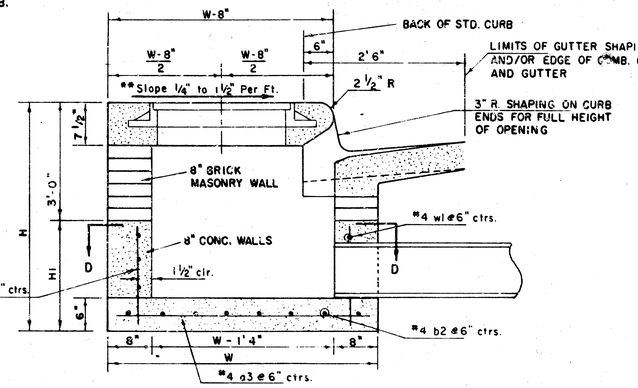


PLAN

WARP CURB TO MATCH INLET TOP WITH 1' MIN. TRANSITION LENGTH

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.



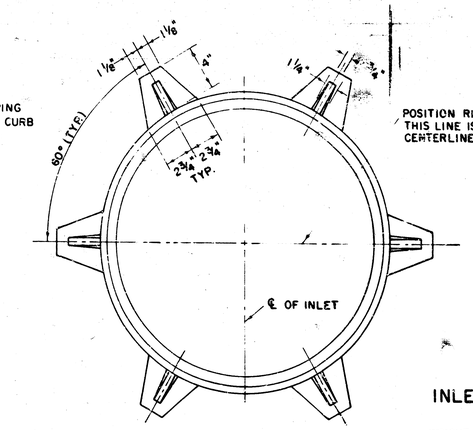
SECTION A-A

** NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits Indicated.

NOTE CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'4" AND H = 7'0" OR LESS.

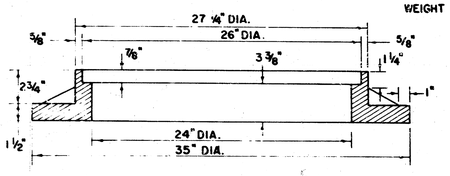
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.



INLET FRAME

WEIGHT = 180 LBS.



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

PRECAST SLAB AND FLOOR REINFORCING

		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	6	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1"	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
†b2	#4	23	6'-1"	29	6'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"

WALL REINFORCING

		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	①	6'-1"	①	6'-1"	①	6'-1"	①	6'-1"	①	6'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	32	②	36	②	40	②	44	②	48	②

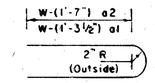
† Field bend or cut. Reinforcing as required for clearance.

① 4(H1-12"); (H1-12") Round down to nearest 0.5'

② H1-3"

STANDARD CURB INLET PRECAST TOPS

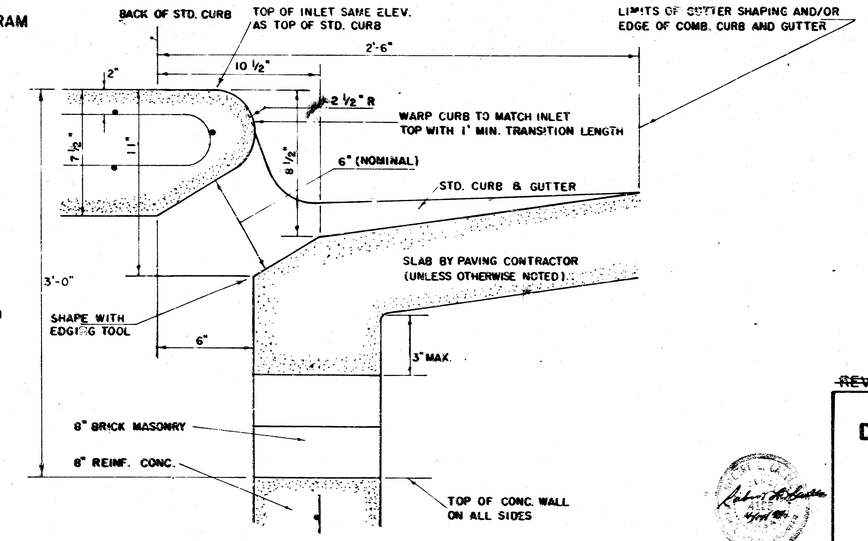
W	PRE-CAST TOP SIZE			PIPE SIZE	CU. YD. CONC.
4' 4"	3'8"	6'4"	7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4'8"	6'4"	7 1/2"	24" & 30"	0.51 ±
6' 4"	5'8"	6'4"	7 1/2"	36" & 42"	0.64 ±
7' 4"	6'8"	6'4"	7 1/2"	48" & 54"	0.77 ±
8' 4"	7'8"	6'4"	7 1/2"	60" & 66"	0.90 ±

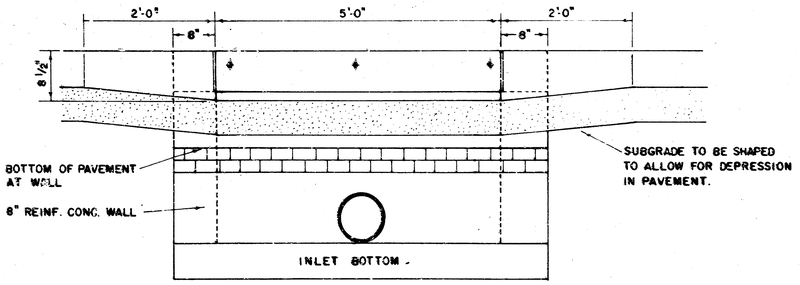


a1 & a2

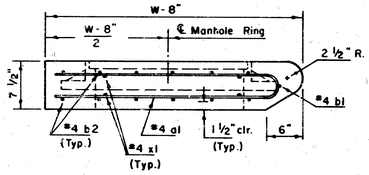
BENDING DIAGRAM

SECTION B-B

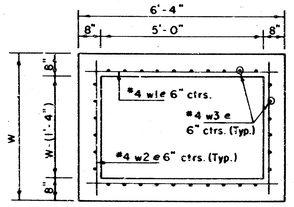




SECTION E-E



SECTION C-C



SECTION D-D

~~REVISED 12-21-1984~~ REVISED 2-15-1989

DETAIL STANDARD TYPE I CURB INLET

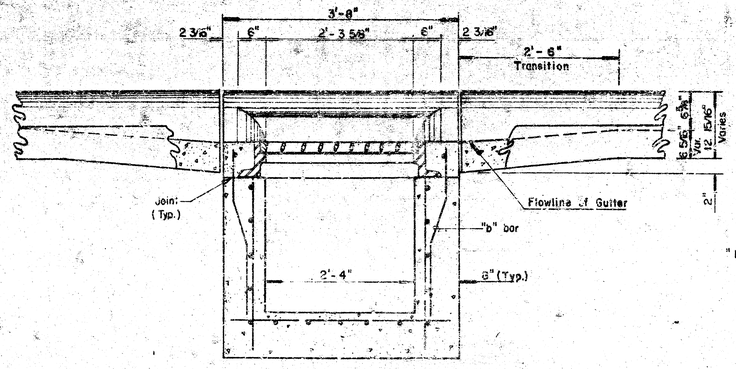
CITY OF WICHITA, KANSAS

INLET OPENING = 6" × 5'0"

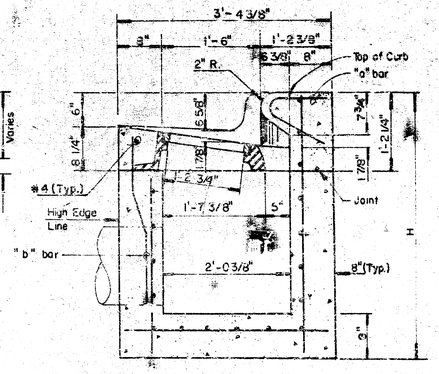
PROJ. NO. 468-82369

9324E-D-70,010 JUNE 1984

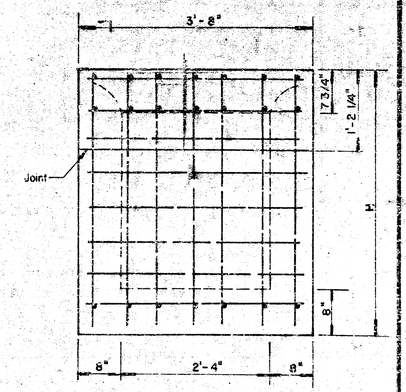
SHEET NO 6 OF 8



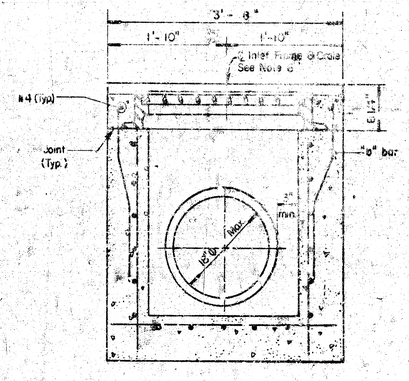
SECTION C-C



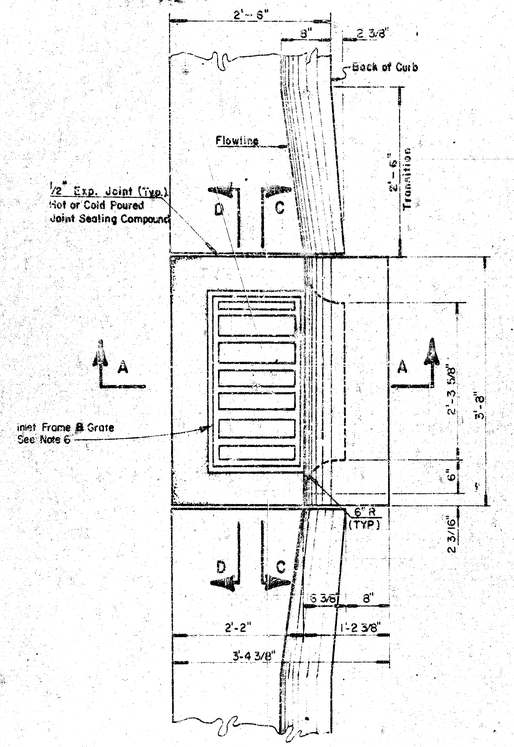
SECTION A-A



REAR WALL

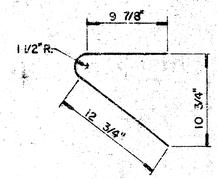


SECTION D-D





"b" bar



"a" bar

BENDING DIAGRAM

GENERAL NOTES:

1. Use the concrete mix specified for the City of Wichita concrete pavement throughout. All exposed edges shall be finished with an edging tool. Reinforcing bars shall be bent around pipe.
2. Inlet invert shall be shaved with B sack mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.
3. All bars are #4 with 6" spacing and shall have a minimum clearance of 1½ inches unless otherwise noted on the plans.
4. When directed by the Engineer, a small opening may be required in the back of the inlet in order to drain a low area. Reinforcing bars will extend through the openings. No deductions in concrete quantities will be made for these openings.
5. No deductions will be made in pay items for curb, gutter, or curb and gutter through the inlet area.
6. Use Neenah R-3289 HV Single Inlet Frame and Grate or approved equal. Inlet frame to be proof load tested to 40,200 lbs on unsupported side.
7. Reinforcing bars shall be cut or bent around pipes. No deduction in concrete quantities shall be made for pipe openings.
8. The vanes of the grate shall be oriented with respect to the flow arrows shown on the plans.

ROBERT L. CASTER 4123 LICENSED PROFESSIONAL ENGINEER

DETAIL STANDARD TYPE II CURB INLET

CITY OF WICHITA, KANSAS

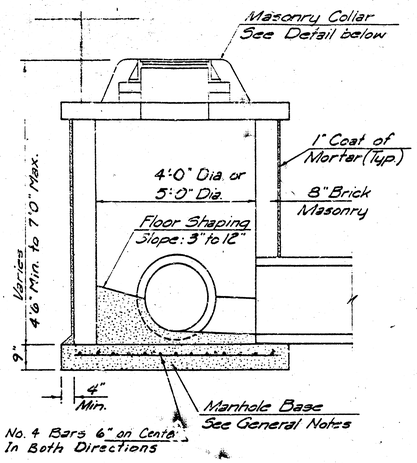
INLET OPENING = 6"x2'-3 5/8"

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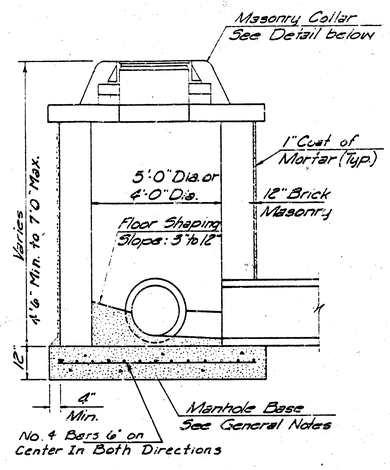
JANUARY, 1987

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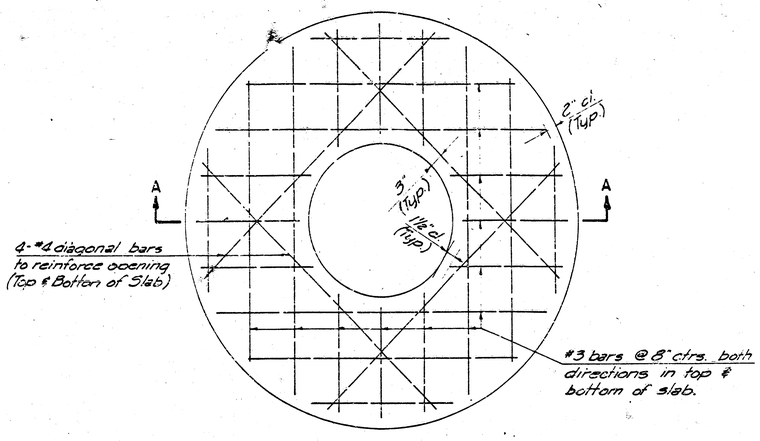
SHEET NO. 7 OF 8



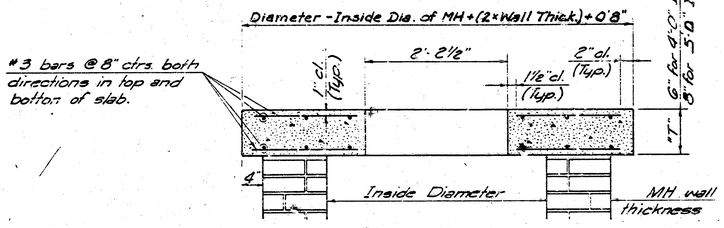
SHALLOW TYPE "A" MANHOLE



SHALLOW TYPE "B" MANHOLE

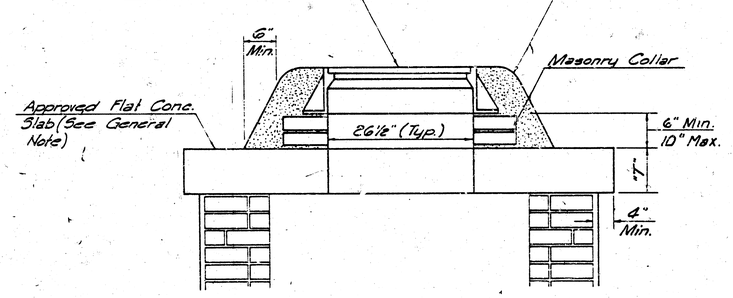


PLAN

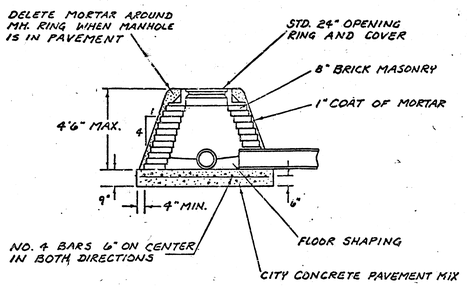


SECTION A-A

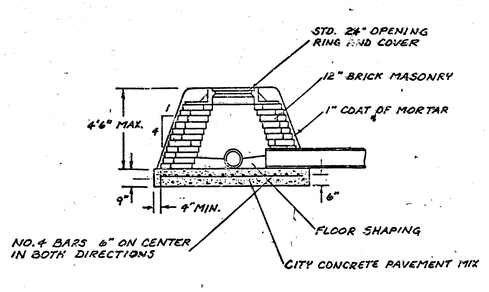
FLAT CONCRETE SLAB DETAILS



MASONRY COLLAR DETAIL



SPECIAL SHALLOW TYPE 'A' MANHOLE



SPECIAL SHALLOW TYPE 'B' MANHOLE

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 PAVING SPECIFICATIONS USING CITY CONCRETE CEMENT 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 "A" SHALLOW MANHOLES CAN BE USED ON SEWERS WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. 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.

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" 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.

3. 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. 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.

4. 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.

5. 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 DRAWINGS.

6. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

7. STANDARD SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE AND DIAMETER INDICATED. STANDARD SPECIAL SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE INDICATED. ALL STANDARD SHALLOW MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

Robert L. Sutton 4153 4/14/94

CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLES TYPE 'A' AND TYPE 'B'

PROJ. NO. 468-82369

18-S-4-8

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Designed by		Checked by	
Drawn by		Date	Job No.