SHEET NO.	TOTAL SHEETS
1	13

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

STREET IMPROVEMENTS

ALDERNY COURT - FROM THR E.L. RESERVE A TO THE E.L. LOT 16, BLOCK 2.

IN

BRIARWOOD ESTATES 6TH ADDITION

CITY OF WICHITA PROJECT NO. 472-76-245-82244-000-000-001
INDEX NO. 763292

INDEX OF SHEETS

1. TITLE SHEET
2. PLAT
3. TYPICAL SECTIONS
4. STD. DRIVE ENTRANCES
5. PAVING PLAN - ALDERNY COURT
~~6. STORM WATER SEWER PLAN AND DETAILS~~
7. TYPE 1A CURB INLET
8. R.C. MANHOLE
9. MANHOLE FRAME AND COVER DETAILS
10. *Inlet Protection, Inlet Modification and Storm Water Sewer Profile*
11. *Sanitary Sewer Manhole Detail*
12.-13. *Cross Sections*

PROJECT SURVEY CONTROL

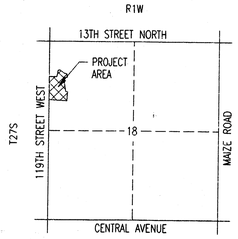
B.M. #4 - CHISELED "6" BACK OF CURB 1.5' EAST OF ℄ DRIVE HOUSE #49 ALDERNY COURT.
ELEV.=147.95 CITY DATUM

B.M. - CITY OF WICHITA STD. BRASS CAP IN CONCRETE 25' NORTH AND 30' EAST OF SOUTH 1/4 CORNER SEC. 17, T27S, R1W OF THE 6TH P.M.
ELEV.=157.93 CITY DATUM

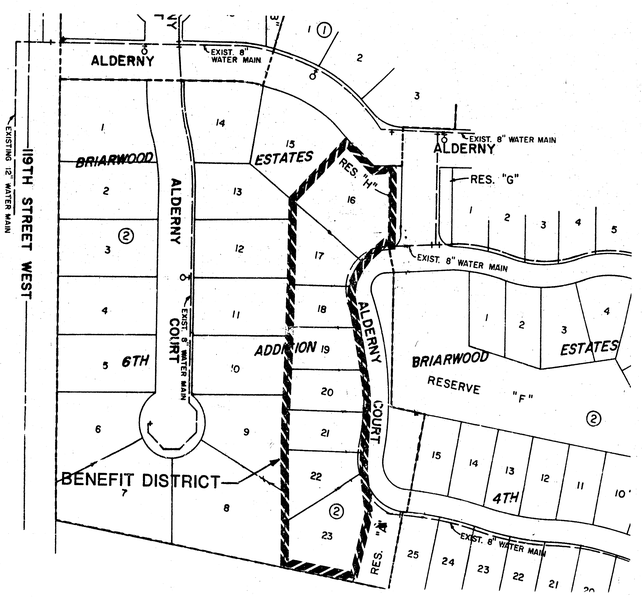
EARTHWORK

EXCAVATION	518 CU. YDS.
COMPACTED FILL	0 CU. YDS.

PROJECT LENGTH = 414 LIN. FT.



VICINITY MAP



SCALE: 1" = 100'

BRYAN D. SOUTHALL
LICENSED
13689
PROFESSIONAL ENGINEER
11-29-95

SEPTEMBER, 1995

PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

I.D. BOOKED 4-22-96 MCG D-285

GENERAL NOTES

Contractor shall seed and mulch all street Right-of-Ways (Temporary) at the rates shown below. This work shall be paid for as a lump sum for "Temporary Seeding" and shall be full compensation for all material, labor, tools, equipment, and incidentals necessary to complete the work in accordance with City Specs.
Annual Rye Seed @ 4 lbs./1000 s.f.
Hay Mulch @ 90 lbs./1000 s.f.

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. 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 WIT PROPOSED CONSTRUCTION.

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.

RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR AND APPROVED AS NOTED BELOW.

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 ARCHEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

CONTRACTOR SHALL SATISFY HIMSELF OF SUBSURFACE CONDITIONS PRIOR TO BIDDING.

TEMPORARY SURFACING MATERIAL (ROCK, ASPHALT, ETC.) MAY HAVE BEEN PLACED WITHIN STREET RIGHTS-OF-WAY FOR HAUL ROADS AND TEMPORARY ACCESS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO DETERMINE EXTENT, IF ANY, OF SUCH SURFACING. CONTRACTOR SHALL REMOVE SAID TEMPORARY SURFACING IN THE SAME MANNER AS NOTED ABOVE FOR RUBBLE. THIS REMOVAL SHALL BE SUBSIDIARY TO "EXCAVATION".

CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION, TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: K.G.&E. GAS, PEOPLES NATURAL GAS, K.G.&E. ELECTRIC, SOUTHWESTERN BELL TELEPHONE, MULTIMEDIA CABLEVISION, CITY OF WICHITA SEWER MAINTENANCE AND CITY OF WICHITA WATER DEPARTMENT.

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 IN ACCORDANCE WITH STATE LAWS.

THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

THE CONTRACTOR SHALL ADJUST WATER VALVE BOXES AS DIRECTED BY THE ENGINEER. THIS WORK TO BE SUBSIDIARY TO OTHER BID ITEMS.

INLET HOOKUPS AND INLET PEOTECTION SHALL BE BID PER EACH REGARDLESS OF INLET SIZE.

~~THIS PROJECT DOES NOT INCLUDE ANY PROVISIONS FOR CONSTRUCTION OF DRIVEWAYS.~~

TOPS OF ALL EXISTING SWS INLETS SHALL BE SET IN PLACE AS SHOWN ON THE SWS INLET DETAIL SHEET AND AT THE PROPER ELEVATION TO MATCH THE ADJACENT TOP OF CURB. PAYMENT FOR THIS WORK SHALL BE PER EACH AT THE UNIT PRICE BID FOR "INLET ADJUSTMENT", REGARDLESS OF INLET SIZE OR AMOUNT OF ADJUSTMENT REQUIRED.

THIS PROJECT INCLUDES ALTERNATE PAVEMENT TYPES. THE CONTRACTOR SHALL BID ALL ALTERNATE 1 AND ALTERNATE 2 BID ITEMS AND THE CITY ENGINEER SHALL THEN SPECIFY WHICH PAVEMENT TYPE IS TO BE USED FOR THIS PROJECT. THE ALTERNATE SELECTED BY THE CITY ENGINEER SHALL BE USED FOR THE ENTIRE PROJECT.

PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHTS-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

This project includes a certain amount of roll type curb construction. Roll curbs shall be depressed through all driveway openings when such drives are constructed as a part of the project. No more than 1 drive 20 feet in width is to be constructed with this project.

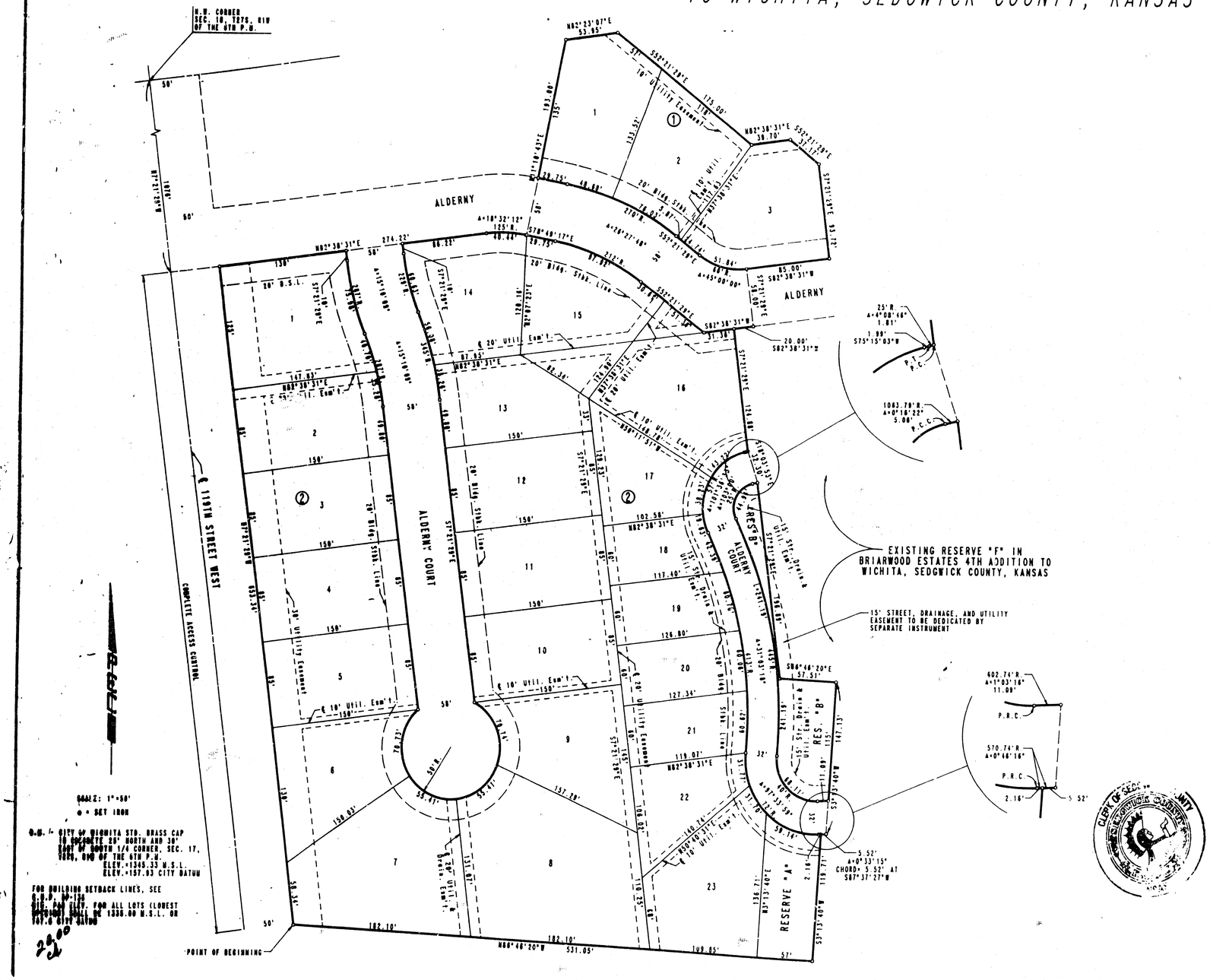
usr/justin/dgn: i:\1994\94009\strtitle.dgn
date plotted: 9/21/95
deliver to: sanchez

BRIARWOOD ESTATES 6TH ADDITION

TO WICHITA, SEDGWICK COUNTY, KANSAS

PROJ. No. 472-76-245-82244-000-000-001

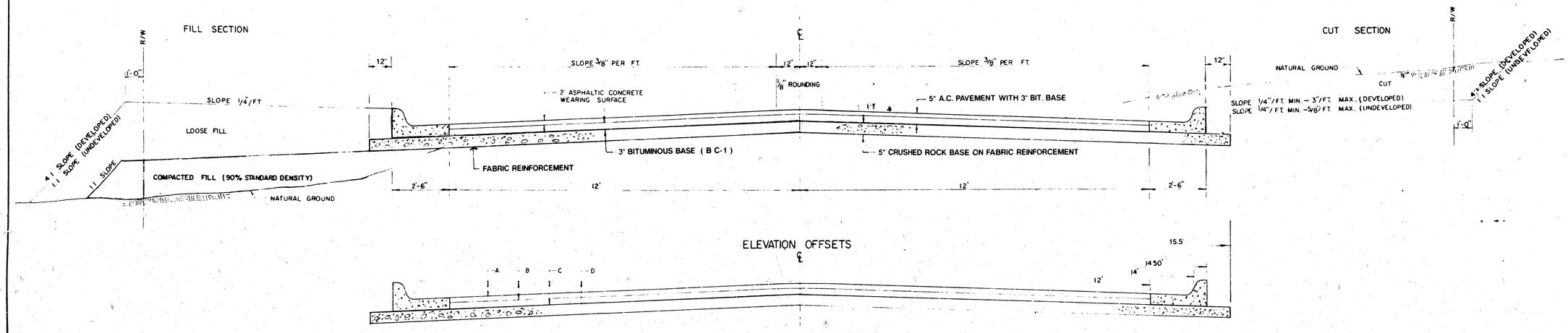
SH 2 OF 13



TYPICAL 29' PAVEMENT DETAILS

PROJ. No. 472.76-245-B2241.000-000-001

TRANSVERSE SECTION

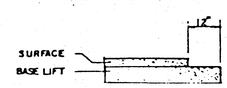


ELEVATION OFFSETS

	DISTANCE FROM CENTERLINE (LT. & RT.)											
	0'	2'	4'	6'	7'	8'	10'	12'	14'	14.5'		
A. TOP OF CURBS TO TOP OF SURFACE LIFT	0.13	0.18	0.24	0.30	0.33	0.36	0.43	0.49	—	—	—	—
B. TOP OF CURBS TO TOP OF BASE LIFT	0.30	0.35	0.41	0.47	0.50	0.53	0.60	0.66	—	—	—	—
C. TOP OF CURBS TO TOP OF ROCK BASE	0.55	0.60	0.66	0.72	0.75	0.78	0.85	0.91	0.98	1.00	—	—
D. TOP OF CURBS TO TOP OF SUBGRADE												

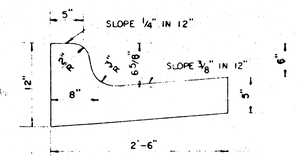
FABRIC BASE REINFORCEMENT SHALL BE 8 X 1100 BY TENSAR CORP. OR LBO201 BY TENAX CORPORATION OR APPROVED EQUAL.
FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS. ~~CRUSHED ROCK SHALL BE UNIFORMLY GRADED FROM 1-1/2" MAXIMUM SIZE TO NOT MORE THAN 10% PASSING A NO. 200 SIEVE. ROCK QUALITY SHALL BE THE SAME AS SPECIFIED FOR COARSE AGGREGATE FOR CONCRETE MIXES.~~

TRANSVERSE CONSTRUCTION JOINTS

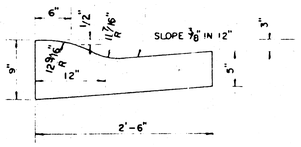


TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 5" ASPHALTIC CONCRETE PAVEMENT (3" BITUMINOUS BASE)

COMBINED CURB & GUTTER



ROLL TYPE COMBINED CURB & GUTTER



CRUSHED ROCK OR RECYCLED ASPHALT PAVEMENT (RAP) GRADATION REQUIREMENTS
PERCENT OF AGGREGATE RETAINED

2-1/2"	0
3/4"	20-60
#4	50-80
#40	80-94
#200	90-98

ROCK QUALITY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY THE KDOT 1990 EDITION STANDARD SPECIFICATION SUBSECTION 1102 FOR DURABILITY CLASS 1

NOTE: 5" CRUSHED ROCK BASE ON FABRIC REINFORCEMENT" IS ALTERNATE NO. 1 MATERIAL. ALTERNATE NO. 2 SHALL BE 5" RECYCLED ASPHALT PAVEMENT (RAP) ON FABRIC REINFORCEMENT. ALL REFERENCES ON THIS SHEET TO ROCK OR CRUSHED ROCK BASE SHALL APPLY ALSO TO RECYCLED ASPHALT PAVEMENT (RAP) BASE MATERIAL.

GENERAL NOTES

ROCK BASE IS TO BE COMPACTED AND SMOOTHED WITH A STEEL FACED ROLLER PRIOR TO PLACEMENT OF ASPHALT. TACK COAT WILL NOT BE APPLIED TO ROCK BASE.

A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

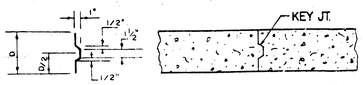
BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.

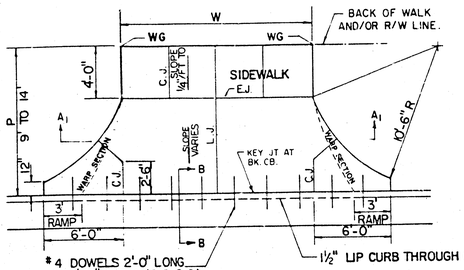
REVISED 1-3-92 JKB

5" RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH CRUSHED ROCK BASE ON FABRIC REINFORCEMENT

10 1 S 31

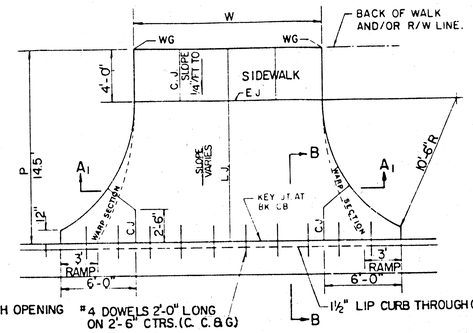


ALT. LONGITUDINAL CONSTRUCTION JOINT



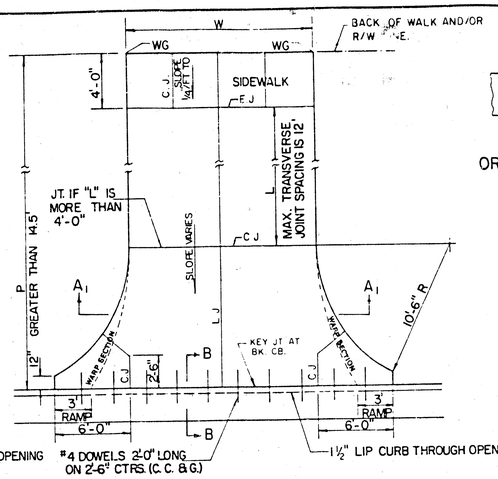
#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C.C. & G.)

1½" LIP CURB THROUGH OPENING



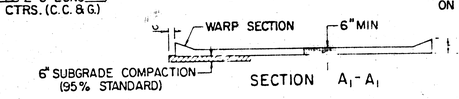
#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C. C. & G.)

1½" LIP CURB THROUGH OPENING



#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C. C. & G.)

1½" LIP CURB THROUGH OPENING

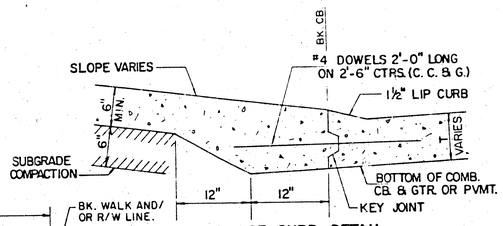


SECTION A_1 - A_1

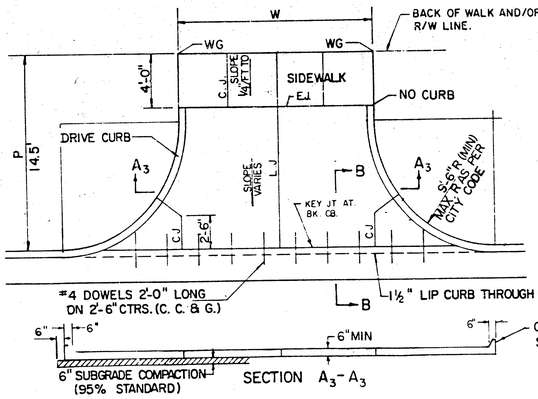
THICKNESS VARIES FROM 13" AT STREET CURB LINE TO 6" AT END OF 10'-6" RADIUS.

PARKING WIDTH "P"	9'	10'	11'	12'	13'	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.27'	0.27'	0.32'	0.37'	0.52'	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.27'	0.27'	0.32'	0.37'	0.52'	0.62'	0.96'	1.22'	1.48'	1.74'	2.00'	2.26'	2.52'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.19'	0.21'	0.23'	0.25'	0.27'	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	-.19'	-.16'	-.13'	-.10'	-.06'	0.00	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

RADIUS RAMP DRIVES (P = 9.0' & GREATER)

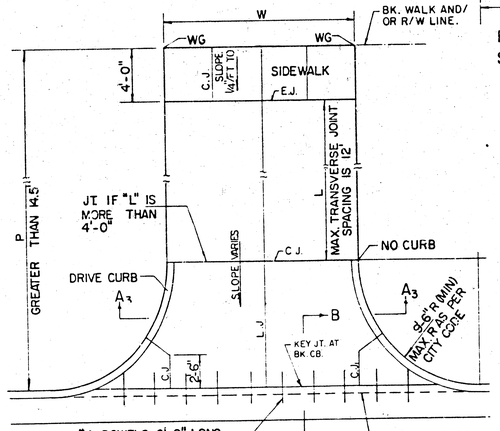


BACK OF CURB DETAIL
SECTION B - B (no scale)



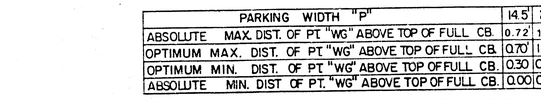
#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C. C. & G.)

1½" LIP CURB THROUGH OPENING



#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C. C. & G.)

1½" LIP CURB THRU. OPENING

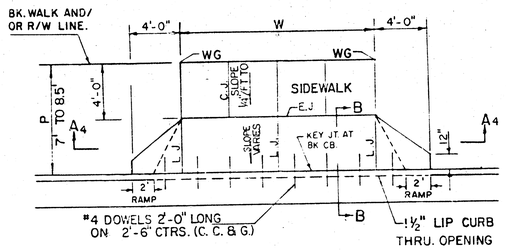


SECTION A_3 - A_3

CURB HEIGHT VARIES FROM FULL HEIGHT AT STREET CURB LINE TO NO CURB AS INDICATED.

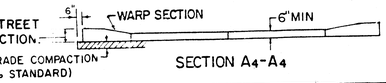
PARKING WIDTH "P"	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.72'	1.27'	1.77'	2.27'	2.77'	3.27'	3.77'	4.27'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.30	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST OF PT. "WG" ABOVE TOP OF FULL CB.	0.00	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

FULL RADIUS DRIVES (P=14.5' & GREATER)



#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C. C. & G.)

1½" LIP CURB THRU. OPENING

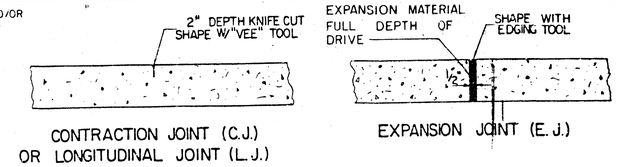


SECTION A_4 - A_4

THICKNESS VARIES FROM 13" AT STREET CURB LINE TO 6" AT SIDEWALK SECTION.

PARKING WIDTH "P"	7'	7.5'	8'	8.5'
ABSOLUTE MAX. DIST OF PT. "WG" ABOVE TOP OF FULL CB.	0.08'	0.02'	0.18'	0.22'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.08'	0.02'	0.18'	0.22'
OPTIMUM MIN. DIST. OF PT. "WG" BELOW TOP OF FULL CB.	-.15'	-.16'	-.17'	-.17'
ABSOLUTE MAX. DIST OF PT. "WG" BELOW TOP OF FULL CB.	-.25'	-.20'	-.20'	-.20'

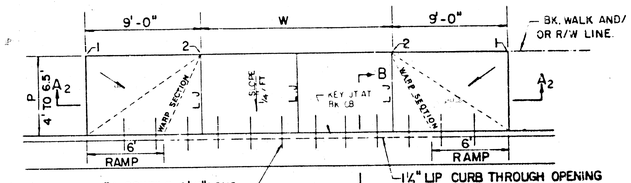
FULL RAMP DRIVE (P=7.0' TO 8.5')



CONTRACTION JOINT (C.J.) OR LONGITUDINAL JOINT (L.J.)

NO SAWN JOINTS WILL BE ALLOWED.

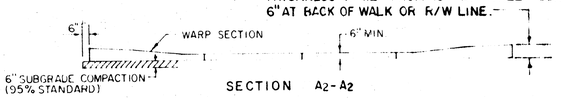
EXPANSION JOINT (E. J.)



#4 DOWELS 2'-0" LONG ON 2'-6" CTRS. (C. C. & G.)

1½" LIP CURB THROUGH OPENING

THICKNESS VARIES FROM 13" AT STREET CURB LINE TO 6" AT BACK OF WALK OR R/W LINE.



SECTION A_2 - A_2

PARKING WIDTH "P"	4'	4.5'	5'	5.5'	6'	6.5'
DIST. OF PT. "1" ABOVE TOP OF FULL CB.	0.08'	0.09'	0.10'	0.12'	0.13'	0.14'
DIST. OF PT. "2" BELOW TOP OF FULL CB.	-.34'	-.32'	-.30'	-.28'	-.26'	-.22'

FULL RAMP DRIVE (P=4.0' TO 6.5')

GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH FULL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A "W" DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A "W" DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS "W" ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 10' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. DOWEL BARS SHALL BE OMITTED FROM THE KEYED CONSTRUCTION JOINT ALONG THE BACK OF THE STREET CURB LINE WHEN DRIVEWAYS ARE CONSTRUCTED IN CONJUNCTION WITH NEW CONCRETE PAVEMENT CONSTRUCTION.
6. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
7. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
8. ALL DRIVEWAYS SHALL BE A MINIMUM OF 6" IN THICKNESS AND SHALL BE WITHOUT REINFORCEMENT. DRIVEWAYS MAY BE CONSTRUCTED THICKER THAN 6" AND THEY MAY BE REINFORCED WITH 6"x12" W4-W4 WELDED WIRE FABRIC WHEN PROPERLY AUTHORIZED BY THE PROPERTY OWNER WITH THE ENGINEER'S CONCURRENCE.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHEREVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THESE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PARKING LOTS. VALUES SHOWN IN THE TABLES ARE BASED ON A FULL CURB HEIGHT ELEVATION OF 0.55' ABOVE THE GUTTER FLOW LINE AND MUST BE ADJUSTED ACCORDINGLY FOR OTHER CURB HEIGHTS. VALUES SHOWN IN THE TABLES WITH MINUS SIGNS INDICATE ELEVATIONS BELOW TOP OF FULL HEIGHT CURB.

PROJ. No. 472-76-849-22244-000-000-001

REVISED APRIL 1994 (JKB)

SCALE: 1" = 5'

STANDARD DRIVE ENTRANCES
FULL HEIGHT CURB
CITY OF WICHITA, KANSAS

PROJECT NUMBER

PROJECT NO	SHEET NO	TOTAL SHEETS
478-76-845-82244-000-000-001	5	13

℄ CURVE TABLE

△=31°03'18" D=13°21'20" R=429.00' L=232.52' T=119.19' E=16.25'

CURVE DATA BASED ON ℄ RADIUS △/2 = 15°31'39"

℄ Station	℄ Arc Length	FACE CURB LENGTH LEFT CURB	FACE CURB LENGTH RIGHT CURB	CHORD LENGTH 8' Off Left Face Curb	CHORD LENGTH 8' Off Right Face Curb	Deflection Angle	℄ Total Deflection
1+95.36	—	—	—	—	—	00°00'00"	00°00'00"
2+50	54.64'	52.86'	56.42'	51.80'	57.41'	03°38'56"	03°38'56"
3+00	50.00'	48.37'	51.63'	47.41'	52.53'	03°20'20"	06°59'16"
3+50	50.00'	48.37'	51.63'	47.41'	52.53'	03°20'20"	10°19'36"
4+27.88	77.88'	75.34'	80.42'	73.78'	81.76'	05°12'03"	15°31'39"
TOTAL	232.52'	224.93'	240.11'				

Defl./Ft. = 4.006700 min.

PSEA

Scale 1" = 20'

Remove 160 S.F. Conc. Driveway Pavt. Construct Radius Ramp Driveway Approach Lt. (Exact Location to be Determined by Owner).

Install 31.0 L.F. Flowable Fill to Elev. 145.8

Construct Inlet Modification Convert Inlet to Manhole Provide & Install new Std. Ring & Cover Top. Elev = 147.63 See Sh. No 10

Const. Std. Type 1A Inlet Hookup

Remove & Salvage Signs Deliver to City of C.M.F.

Line No. 1 Sta. 0+43.6= Sta. 1+05 Lt. Const. Std. Type 1A Curb Inlet L=6'-4" W=4'-4" Top Elev=147.60 Install Inlet Protection See Sh. No. 7 & 10

CAUTION ! Abandoned Cable T.V.

CAUTION ! Undg. Water

CAUTION ! Undg. Power

RESERVE "A"

BRIARWOOD ESTATES 6TH ADDITION

ALDERNY COURT

RESERVE "B"

RESERVE "F"

RESERVE "H"

5" Asphaltic Concrete Pavmt. (3" Bituminous Base)

Combined Curb & Gutter (3⅝ and 1⅝)

Remove & Salvage Signs Deliver to City of C.M.F.

Construct Inlet Modification Convert Inlet to Manhole Provide & Install new Std. Ring & Cover Top Elev.= 149.00 See Sh. No. 10

Saw, Cut, Remove & Replace Asphalt Surface Course as necessary to provide neat line. This work to be Subsidiary to Asphalt Pavement.

Remove & Reset U.S.P.S. Mailbox & Slab. Coordinate with Postmaster

Sta. 1+95, 26' Rt. = Line No 1 Sta 0+00.0 Const. R.C. Manhole on Exist. 27" RCP & remove pipe between Manhole walls. L=4'-4" W=4'-4" H=6'-8" Top Elev.= 148.30 Install 18"x 8.3' RCP (11) See Sh. No. 8 & 10

Line No. 1 Sta. 0+08.3= Sta. 1+95 Rt. Const. Std. Type 1A Curb Inlet L=6'-4" W=4'-4" Top Elev.= 147.60 Install 18"x 35.3' RCP Storm Swr. (W) Install Inlet Protection See Sh. No. 7 & 10

Sta. 2+70, 15' Rt. Remove Manhole & 6 L.F. 8" Main Const. New Manhole (Type P) (4'-0" Dia.) Top Elev.= 148.15 See Sh. No. 11

Saw, Cut, Remove & Replace Asphalt Surface Course as necessary to provide neat line. This work to be Subsidiary to Asphalt Pavement.

+0.62% TC Lt.

+0.50% ℄

+0.05' Wk. Gd. Lt

-0.34% TC Lt.

-0.43% ℄

-0.34% TC Lt.

-0.45 ℄

+0.58% TC Rt.

Match Walk Grade Rt.

Match Walk Grade Rt.

-0.32% TC Rt.

Match Walk Grade Rt.

Match Walk Grade Rt.

(Spare)

(Spare)

(Spare)

(To Remain)

1+00 PRC

11+95.36 PVI ℄

4+27.88 PRC PVI ℄

5+10.59 PCC

℄ CURVE TABLE

△=97°33'59" D=102°18'50" R=56.00' L=95.36' T=63.93' E=28.99'

CURVE DATA BASED ON ℄ RADIUS △/2 = 48°46'59"

℄ Station	℄ Arc Length	FACE CURB LENGTH LEFT CURB	FACE CURB LENGTH RIGHT CURB	CHORD LENGTH 8' Off Left Face Curb	CHORD LENGTH 8' Off Right Face Curb	Deflection Angle	℄ Total Deflection
1+00	—	—	—	—	—	00°00'00"	00°00'00"
1+25	25.00'	31.25'	18.75'	34.53'	15.05'	12°47'21"	12°47'21"
1+50	25.00'	31.25'	18.75'	34.53'	15.05'	12°47'21"	25°34'42"
1+75	25.00'	31.25'	18.75'	34.53'	15.05'	12°47'21"	38°22'03"
1+95.36	20.36'	25.45'	15.24'	28.20'	12.29'	10°24'56"	48°46'59"
TOTAL	95.36'	119.20'	71.52'				

Defl./Ft. = 30.69417 min.

℄ CURVE TABLE

△=103°00'00" D=139°44'45" R=41.00' L=73.71' T=51.54' E=24.86'

CURVE DATA BASED ON ℄ RADIUS △/2 = 51°30'00"

℄ Station	℄ Arc Length	FACE CURB LENGTH LEFT CURB	FACE CURB LENGTH RIGHT CURB	CHORD LENGTH 8' Off Left Face Curb	CHORD LENGTH 8' Off Right Face Curb	Deflection Angle	℄ Total Deflection
4+27.88	—	—	—	—	—	00°00'00"	00°00'00"
4+50	22.12'	29.67'	14.51'	33.58'	10.13'	15°27'21"	15°27'21"
4+75	25.00'	33.54'	16.46'	37.82'	11.41'	17°28'06"	32°55'27"
5+01.59	26.59'	35.66'	17.51'	40.14'	12.11'	18°34'33"	51°30'00"
TOTAL	73.71'	98.87'	48.54'				

Defl./Ft. = 41.923733 min.

NOTE: Top of Curb Elevations shown ⊕ = Top of Roll Curb. Top of Curb Elevations shown ⊕ = Top of Standard Curb.

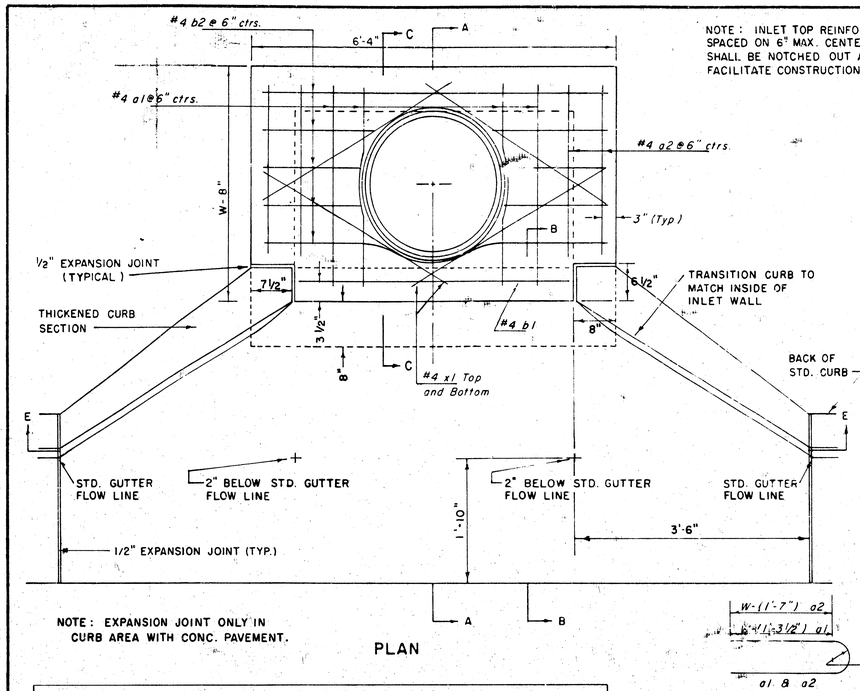
BRIARWOOD ESTATES 6TH ADDITION

ALDERNY COURT

STA. 0+92 TO STA. 5+07.5

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

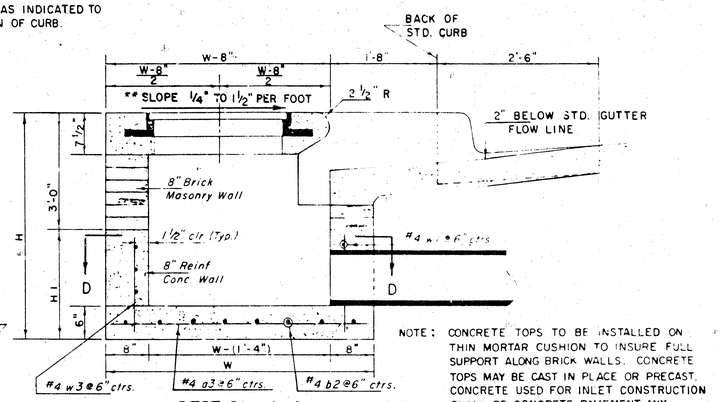
Designed by	DRC	Checked by	MWB	
Drawn by	ES	Date	Oct., 1995	Job No. 94009



NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

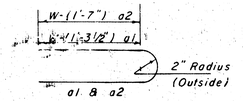
PLAN

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



SECTION A-A

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 WITH AIR ENTRAINMENT.



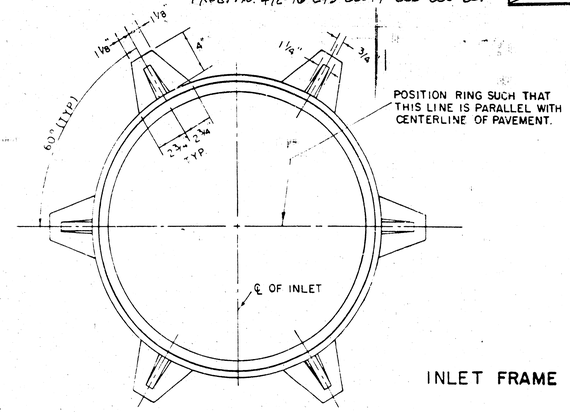
BENDING DIAGRAM

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.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

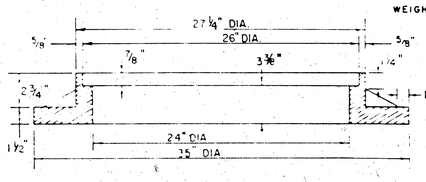
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

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
ta1	#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"
tb2	#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

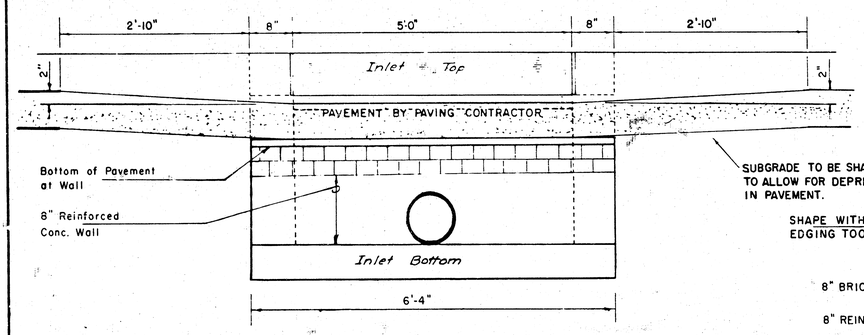
* Field bend or cut Reinforcing as required for clearance.

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

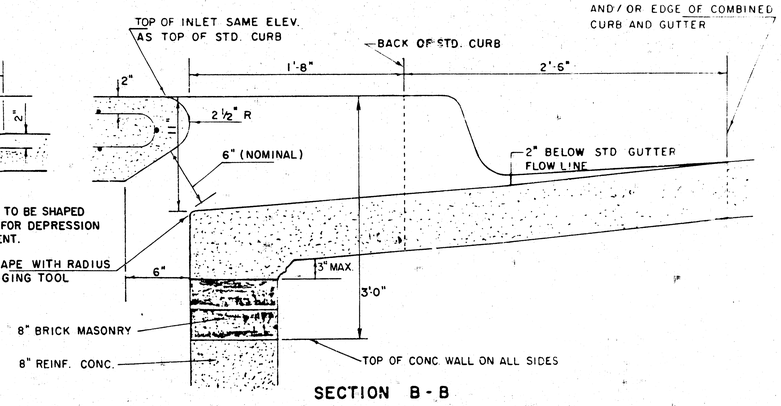
② H1-3"

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

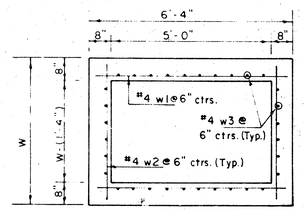
** NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.



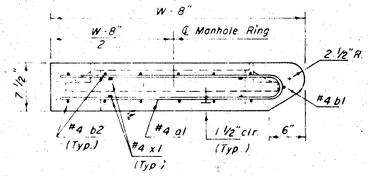
SECTION E - E



SECTION B - B



SECTION D-D



SECTION C-C

~~REVISED 11-30-1988~~

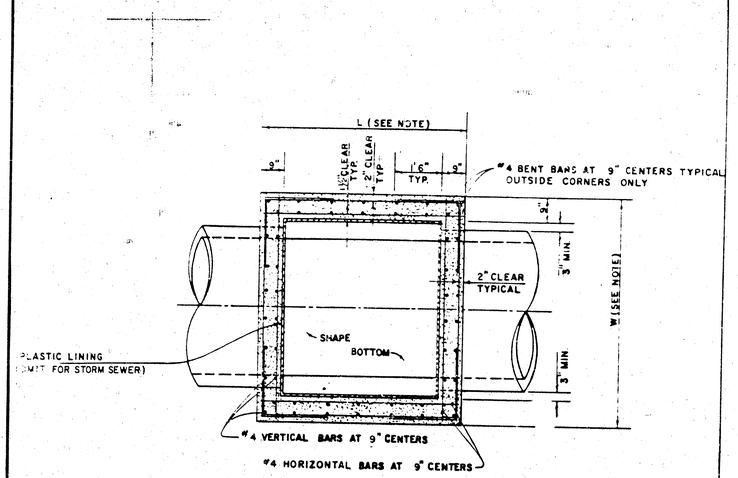
~~REVISED 12-21-1984~~ Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET

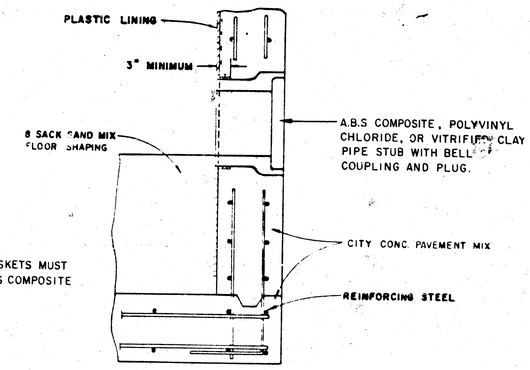
CITY OF WICHITA, KANSAS

INLET OPENING = 6" x 5'0"

JUNE 1984

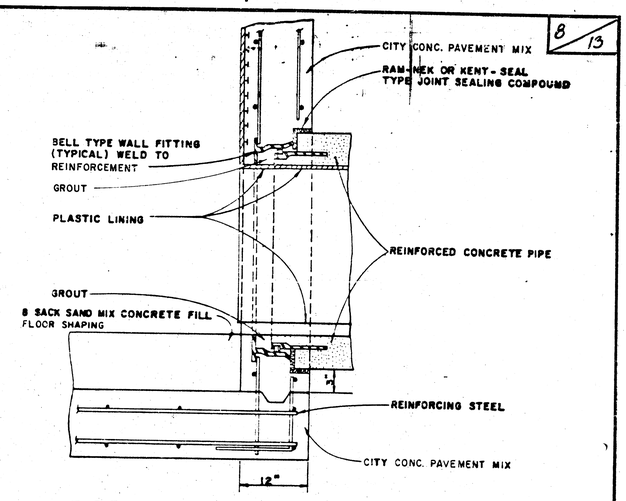


TOP VIEW

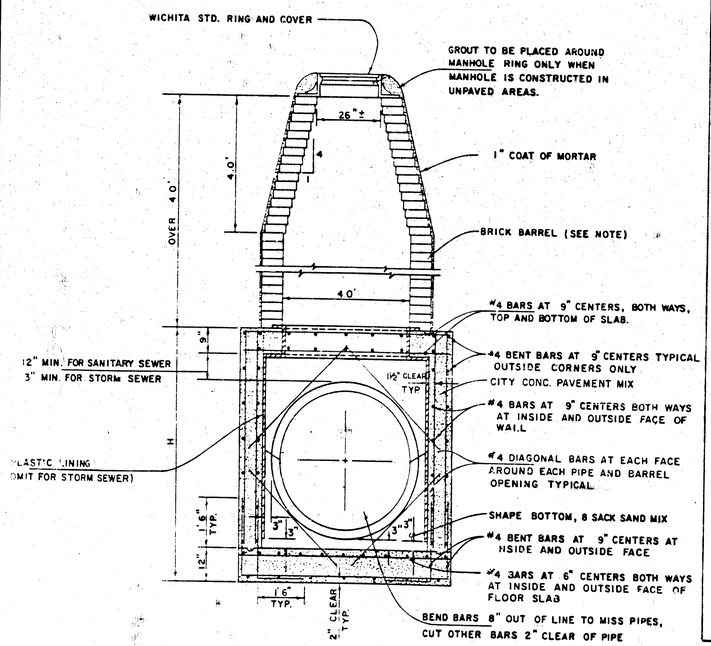


NOTE: WATERSTOP GASKETS MUST BE USED WITH A.B.S COMPOSITE OR P.V.C. PIPE.

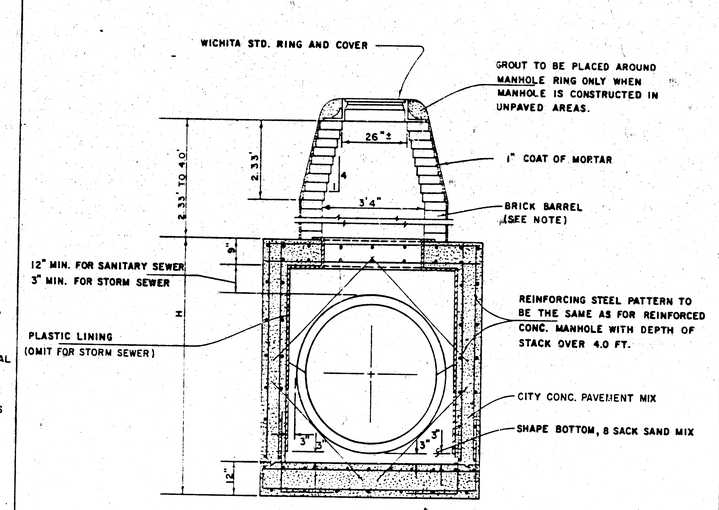
PIPE STUB DETAIL
SANITARY SEWER ONLY



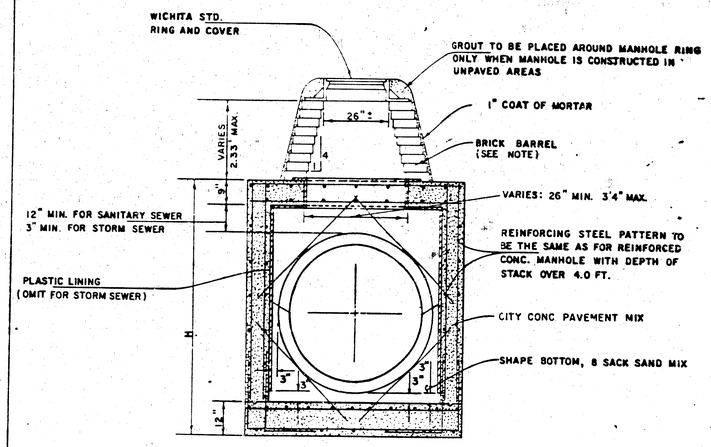
R.C.P. CONNECTION DETAIL
SANITARY SEWER ONLY



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

NOTE:
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS WHEN THE BRICK BARRELS ARE OVER 4 FT. IN HEIGHT. COMLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATERTIGHT.

PROJ. No. 472-76-245-82244-000-000-001
REVISIED 1-7-85

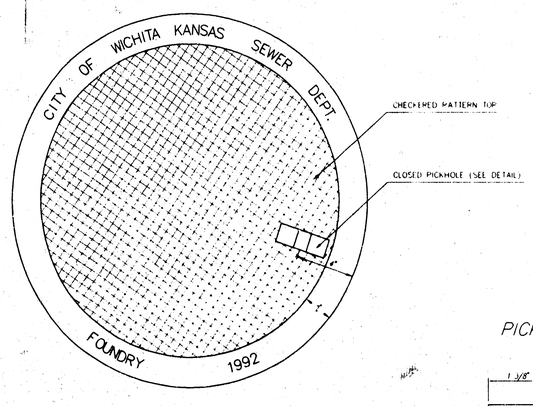
STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
CITY OF WICHITA

FEBRUARY 1984

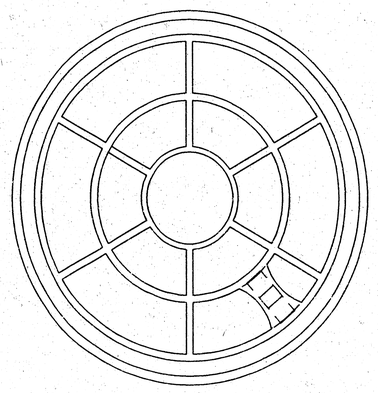
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

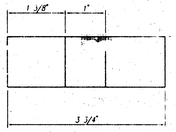


TOP VIEW

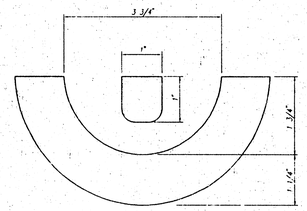


BOTTOM VIEW

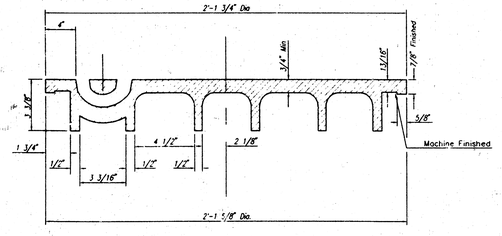
PICKHOLE DETAIL



TOP VIEW

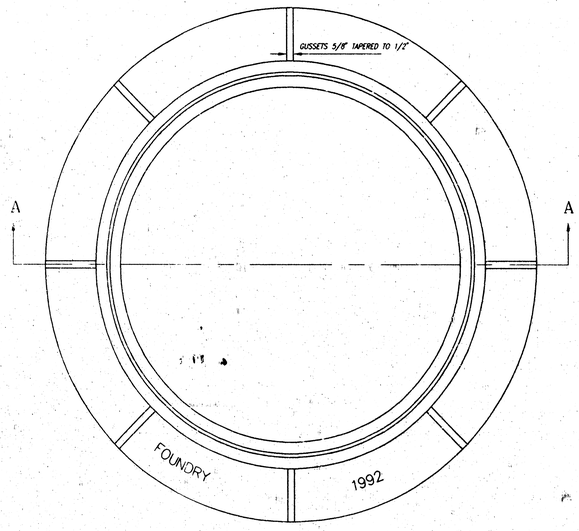


SECTION VIEW

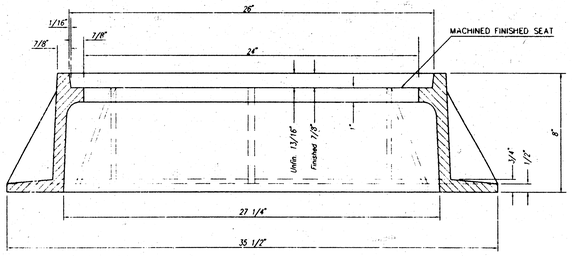


SECTION VIEW

MANHOLE FRAME
Weight = 240 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTES

MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

MANHOLE CASTINGS SHALL WEIGH A MINIMUM OF 180 POUNDS ON THE SOLID COVER AND 240 POUNDS ON THE MANHOLE RING. THIS IS A TOTAL OF 420 POUNDS ON A RING AND COVER SET. CASTINGS WEIGHING LESS THAN THE MINIMUM SPECIFICATIONS WILL NOT BE ACCEPTED.

TO INSURE CONFORMANCE TO TENSILE STRENGTH REQUIREMENTS ALL CASTINGS SHALL BE JULIAN HEAT DATED WITH THE FOLLOWING REQUIREMENTS:

TWO TEST BAR SPECIMENS MUST BE POURED WHEN PRODUCING CITY OF WICHITA CASTINGS. ONE OF THE TEST BAR SPECIMENS SHALL BE SENT TO AN INDEPENDENT LABORATORY FOR TENSILE STRENGTH VERIFICATION TESTING. A TEST REPORT SHALL ACCOMPANY EACH SHIPMENT OF CASTINGS. THE HEAT DATE(S) ON THE CASTINGS SHALL RESPOND TO THE TENSILE STRENGTH REPORT(S). THE TEST REPORT WILL BE PAID FOR BY THE SUPPLIER. THE REMAINING TEST BAR SPECIMEN WILL BE SHIPPED TO SEWER MAINTENANCE AT 715 W. HARRY, WICHITA, KANSAS 67213.

MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

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

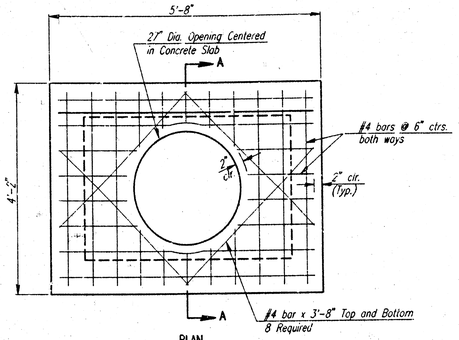
REVISED 6/27/95

PROJ. NO. 468-76-245-~~8284~~-000-000-001

SHEET

OF

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-76-245-87244-000-000-001	10	13



PLAN
Cast-in-place or Precast

GENERAL NOTES

CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 P.S.I.

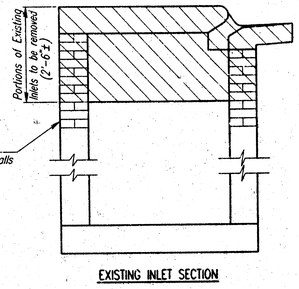
ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. DESIGNATION A615 GRADE 60. CLEARANCE SHALL BE 2" UNLESS OTHERWISE NOTED.

CONCRETE TOPS WHEN PRECAST SHALL BE INSTALLED ON A THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG EXISTING BRICK WALLS.

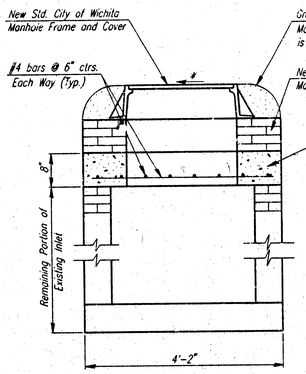
THE CONTRACTOR SHALL REMOVE PORTIONS OF EXISTING INLET AS SHOWN ON PLANS. ALL MATERIALS FROM EXISTING INLET SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

CONCRETE SLAB MAY BE CAST-IN-PLACE OR PRECAST AT THE CONTRACTOR'S OPTION.

"INLET MODIFICATIONS" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH IN PLACE INCLUDING CONCRETE, REINFORCING, STEEL, DEBRIS REMOVAL, EXCAVATION AND ALL OTHER MISCELLANEOUS MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

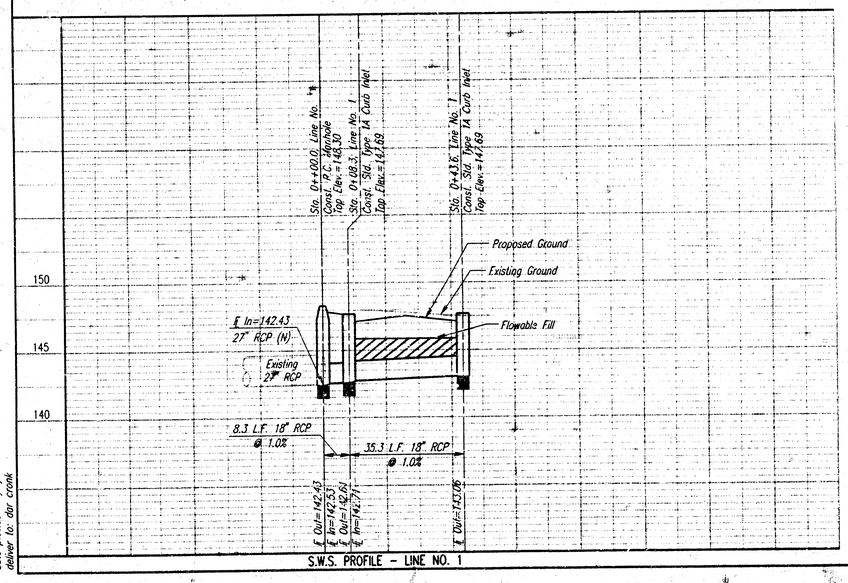


EXISTING INLET SECTION



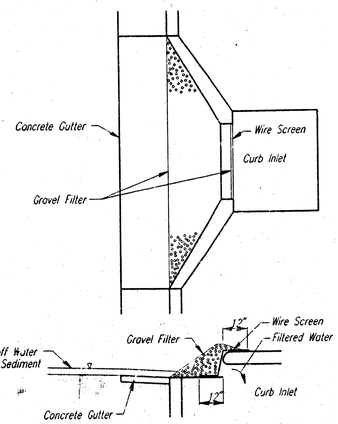
TYPICAL INLET SECTION A-A

* Slope Top of Std. City of Wichita Manhole same as Proposed Pavement or set level in unpaved areas.

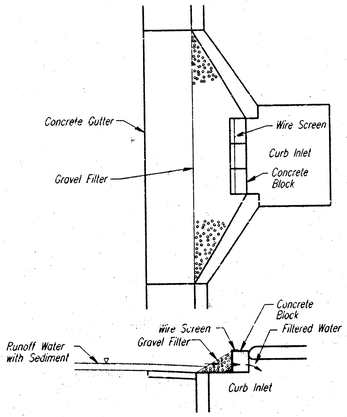


S.W.S. PROFILE - LINE NO. 1

usr/astn/dgn: i:\99\94009\inletmod.dgn
date plotted: 11/9/95
deliver to: dan cronk



CURB INLET PROTECTION
GRAVEL AND WIRE MESH FILTER



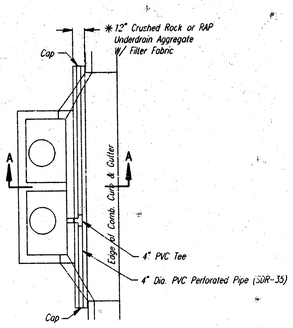
CURB INLET PROTECTION
BLOCK AND GRAVEL FILTER

GENERAL NOTES
INLET PROTECTION

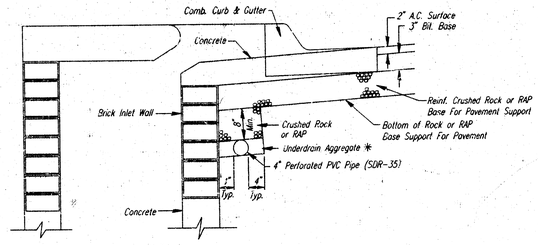
1. INLET PROTECTION METHOD MAY BE ANY OF THE APPLICABLE TYPES SHOWN, AT THE CONTRACTORS OPTION.
2. GRAVEL FILTER SHALL BE A DURABLE, WELL-GRADED SAND-GRAVEL OR CRUSHED STONE, MAXIMUM 1-1/2 IN. SIZE. AS AN ALTERNATE GRAVEL FILLED BAGS OF BURLAP OR OTHER FABRIC MAY BE USED. WHERE BAGS ARE USED, THE WIRE SCREEN, WHERE SHOWN, MAY BE OMITTED.
3. FILTER FABRIC, WHERE USED, SHALL BE RESISTANT TO ULTRAVIOLET LIGHT. MATERIALS MAY BE SUPPLIED BY THE FOLLOWING MANUFACTURERS:

   MIRAFI, INC. - 100X
   HOECHST FIBERS INDUSTRIES - TREVIRA 1115
   EXXON - TYPAR 3301 W

   MATERIALS SUPPLIED BY THE ABOVE NAMED MANUFACTURERS SHALL BE ACCEPTED UPON VISUAL INSPECTION BY THE ENGINEER. OTHER COMPARABLE MATERIALS MAY BE USED IF APPROVED BY THE ENGINEER
4. INLET PROTECTION SHALL BE ERECTED AS SOON AS THE STRUCTURE HAS BEEN BACKFILLED. MEASURES SHALL BE TAKEN TO PRECLUDE ENTRY OF SEDIMENT INTO THE STORM WATER SEWER SYSTEM DURING CONSTRUCTION OF THE STRUCTURE.
5. REMOVAL AND DISPOSAL OF ACCUMULATED SILT AND DEBRIS AND/OR REMOVAL AND RECONSTRUCTION OF INLET PROTECTION INSTALLATIONS SHALL BE PERFORMED THROUGHOUT THE PROJECT LIFE WHENEVER DEBRIS REACHES ONE-THIRD THE BARRIER HEIGHT, OR AS DEEMED NECESSARY BY THE ENGINEER. ULTIMATE REMOVAL AND DISPOSAL OF INLET PROTECTION AND DEBRIS WILL BE PERFORMED BY THE DEVELOPER.
6. MEASUREMENT AND PAYMENT: THE ITEM "INLET PROTECTION" SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR EACH INLET LOCATION PROTECTED REGARDLESS OF METHOD SELECTED BY THE CONTRACTOR. SAID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR EXCAVATION, COMPACTION, BACKFILL, SEDIMENT, AND DEBRIS REMOVAL AND DISPOSAL, AND ALL LABOR, MATERIALS, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. RECONSTRUCTION OF INLET PROTECTION INSTALLATION DUE TO DAMAGE BY WIND, FLOOD, FIRE, ETC. OR DUE TO ACTIONS BY THE CONTRACTOR OR OTHERS SHALL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.



PLAN



(Min. 16 Perforations Per Lin. Ft. @ 1/4" Dia.)
Perforations To Be on Bottom Half

SECTION A-A

* UNDERDRAIN AGGREGATE
PERCENT OF AGGREGATE RETAINED

1"	0
3/4 "	0-10
3/8 "	45-80
#4	90-100
#8	95-100

ROCK QUALITY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY THE KDOT 1990 EDITION STANDARD SPECIFICATION SUBSECTION 1102 FOR DURABILITY CLASS 4.

PAVEMENT UNDERDRAIN LOCATIONS		
STREET	STATION	SIDE
ALDERNY COURT	1+65	LT. & RT.

PAVEMENT UNDERDRAIN DETAIL

NOTE: PLACE 4" PVC PERFORATED PIPE AT ALL DRAINAGE SUMP LOCATION

COST OF UNDERDRAIN SYSTEM TO BE INCIDENTAL TO THE REINFORCED CRUSHED ROCK OR REINFORCED RECYCLED ASPHALT PAVEMENT (RAP) BASE.

INLET TYPE MAY VARY FROM THAT SHOWN.

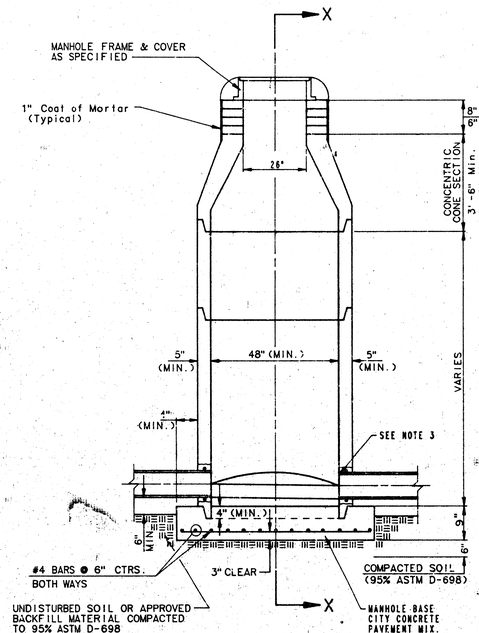
ARWOOD ESTATES 6TH ADDITION

INLET MODIFICATIONS, INLET PROTECTION, AND S.W.S. PROFILE - LINE NO. 1

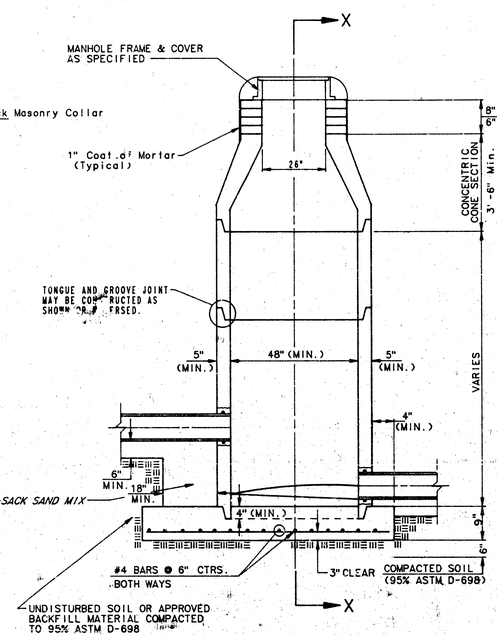
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by	MWB, GDD	Checked by	
Drawn by	DEP	Date OCT., 1995	Job No. 94009

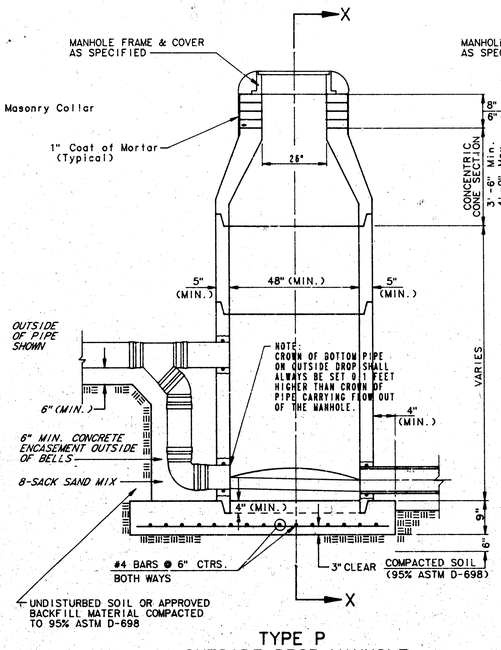
SEWER APPURTENANCES DETAILS
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA



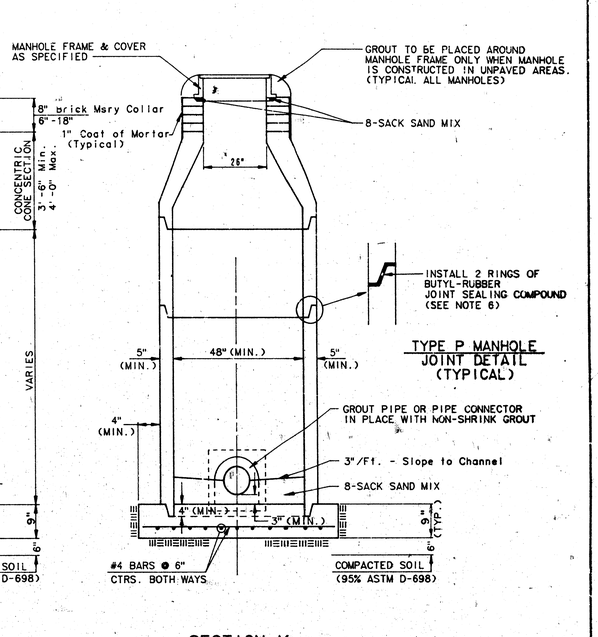
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



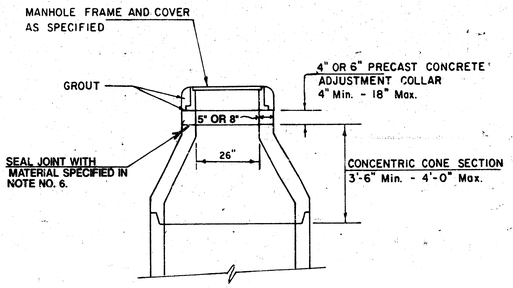
SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE 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 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 TNEMEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 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 MEET 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 8" WALLS AND A VERTICAL HEIGHT OF 8" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.



ALTERNATE CONSTRUCTION
IN UNPAVED AREAS

REVISED NOV. 1993
NOTE NO. 16 REVISED JAN. 1991
Revised 3-21-89
Revised 8-10-88
Revised: June 12, 1986

[redacted]

50 40 30 20 10 0 10 20 30 40 50

150 / 145

48.25 C.G

F=6.0 C=22.5

3+12

48.13 C.G.

F= 0 C=39.5

2+92

48.02 C.G

F=0 C=?.6

2+73

47.88 C.G.

F=0 C=41.5

2+50

47.86 C.G.

F=0 C=47

1+95.86

47.74 C.G

F=0 C=47.5

1+50

47.98 C.G.

F=0 C=?2.5

1+00

STA 0+75

1" = 5' HORIZ.
1" = 5' VERT.

SH 12 OF 13

50 40 30 20 10 0 10 20 30 40 50

150
145

F= 0

C= 21.7

STORM AVERAGE

150
145

48.12 C. Gr.

150
145

F= 6

C= 21.7

5+01.59

150
145

48.35 C.Gr.

150
145

F= 13

C= 15.5

4+50

150
145

48.45 C.Gr.

150
145

F=0

C= 49.5

4+27.88

150
145

48.34 C.Gr.

150
145

F= 30.5

C= 5

4+00

150
145

48.48 C.Gr.

150
145

F= 17

C= 8

3+50

SM 42-76-54

SH 13 OF 13

1"= 5' HORIZ
1"= 5' VERT

ERIA RAILROAD CO. 400

0-1-8-41

50 40 30 20 10 0 10 20 30 40 50