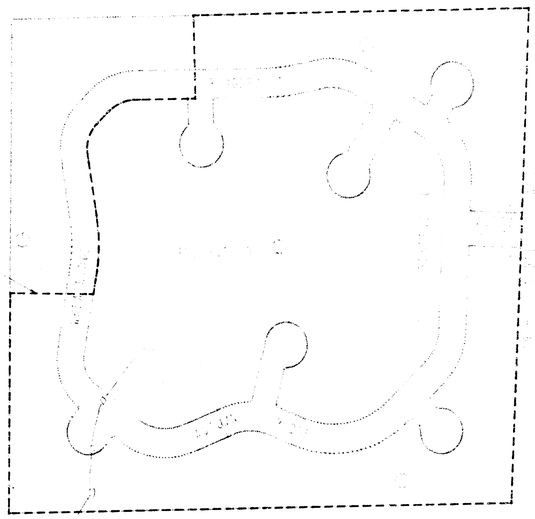
CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, P.E., CITY ENGINEER
STORM WATER SEWER NO. 321
AUTUMN RIDGE ADDITION
CITY OF WICHITA PROJECT NO. 468-76-245-81615-000-000-001

INDEX OF SHEETS

8. DETAIL STANDARD TYPE IA CURB INLET (L=11'-4")
9. DETAIL STANDARD SHALLOW MANHOLE
10. DETAIL STANDARD REINFORCED CONCRETE MANHOLE
11. DETAIL MANHOLE FRAME AND COVER
12-15. CROSS-SECTIONS



THE OWNER SHALL HAVE FIRST RIGHT TO EXCESS EXCAVATED MATERIAL FROM THIS PROJECT.

CONSTRUCTION.

6. Excavation for the detention pond shall be included in the lump sum price for "Detention Pond Grading". Quantities shown on this sheet are approximate only. Contractor shall satisfy himself of all quantities prior to bid.

7. The contractor shall fertilize, seed and mulch all disturbed areas within reserves "C" and "D" as directed by the engineer. This work shall be included in the lump sum price for "Detention Pond Grading". Said price shall be considered full compensation for all materials, labor, tools, equipment, and incidentals necessary to complete the work in accordance with C.O.W. standard specifications. The approximate quantity for this work is 2.3 acre.

As Bullets 5/87 Greene

PROJECT SURVEY CONTROL

VERT. (U.S.) DATUM: CITY OF WICHITA DATUM

DATUM BENCH MARK: [illegible] AND 143rd STREET [illegible] ELEV. = 1358.73

BENCH MARK: [illegible] ELEV. = 1364.73

BENCH MARK: [illegible] ELEV. = 1358.17

EARTHWORK (FOR INFORMATION ONLY)

EXCAVATION

A-SECTION:	POINTS CU. YDS.	1291
B-SECTION:	POINTS CU. YDS.	1581
TOTAL:	POINTS CU. YDS.	1385

JANUARY, 1987

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

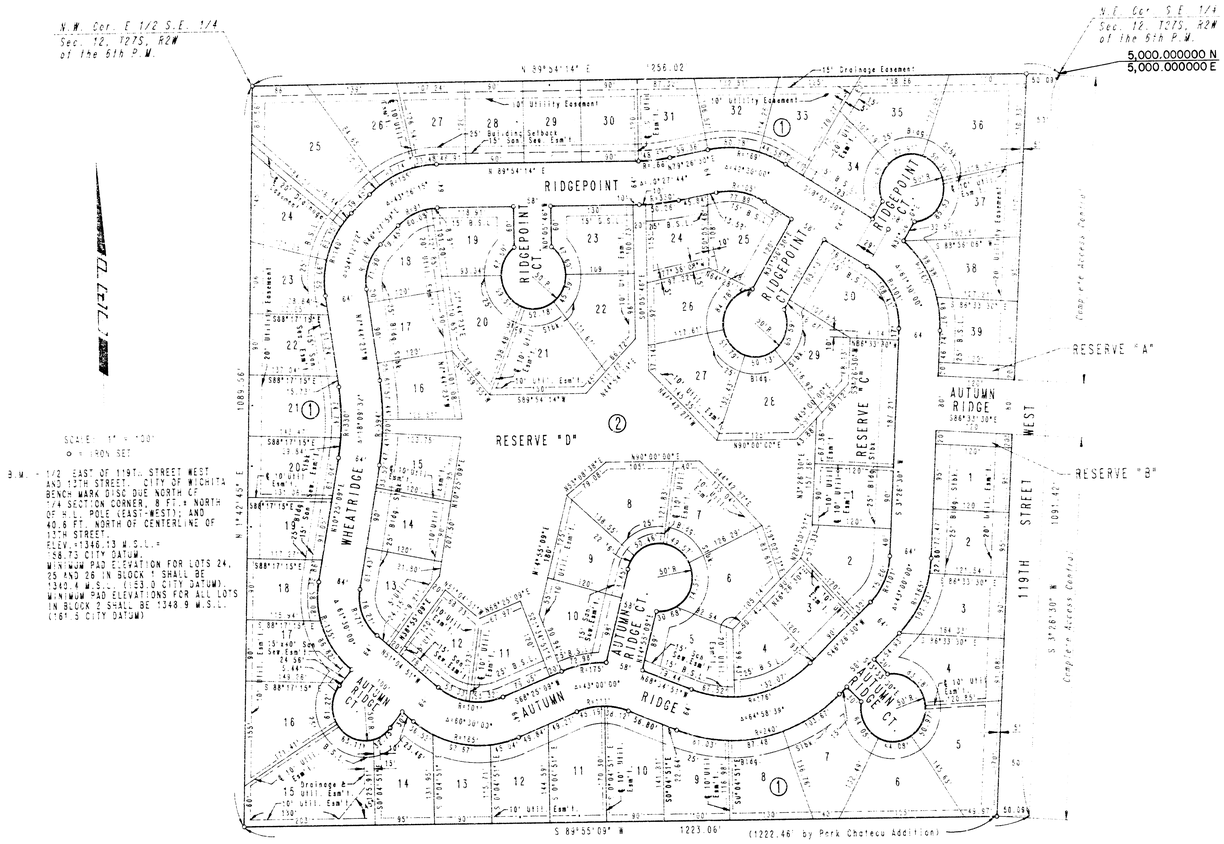
CHARLES S. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

1/15

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AUTUMN RIDGE

TO WICHITA, SEDGWICK COUNTY, KANSAS



PLAT

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEER — ARCHITECT — PLANNER

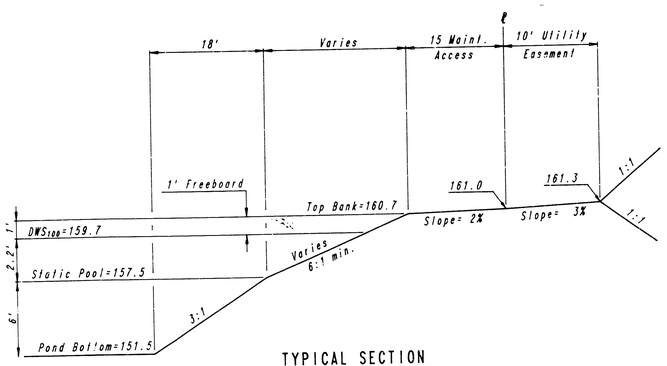
2/15

Designed by — Checked by

Drawn by SEP — Date — Job No.

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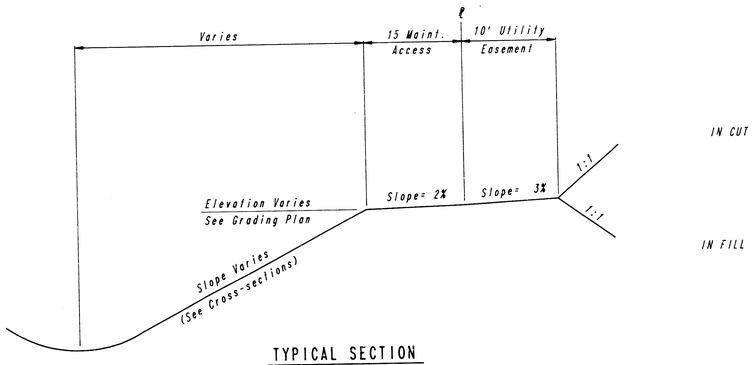
PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-245-81615-000-000-001	3	15



IN CUT

IN FILL

TYPICAL SECTION
DETENTION POND



IN CUT

IN FILL

TYPICAL SECTION
RESERVE GRADING

TEST BORING LOG — ALLIED LABORATORIES

AUTUMN RIDGE

BORING NO. 2 LOC See Boring Location Plan
SCALE 1"= 5' FT. BORING DATE 11-11-86 BY B.R.D.D. LEVELS BY B.E. CHECKED BY
EL. WATER LEVEL N.O. DATE EL. DATE EL.
BM NO. LOC

BS	HI	FS	EL	REMARKS
			163.6	TOP B-2

FM	LOG	ELEVATION	REMARKS	S/C	TOOL	BPF	%	WT PCF FT
		163.6	TOP HOLE					
			BROWN SILTY CLAY					
			SOME RED SILTY CLAY					
		154.6	9.0					
			GRAYISH GREEN SILTY CLAY					
		150.6	13.0					
		149.6	RED BROWN SANDY CLAY 14.0					
		149.6	RED AND BROWN FINE SAND 15.0					
			BOTTOM HOLE					

ALLUVIUM

TEST BORING LOG — ALLIED LABORATORIES

AUTUMN RIDGE

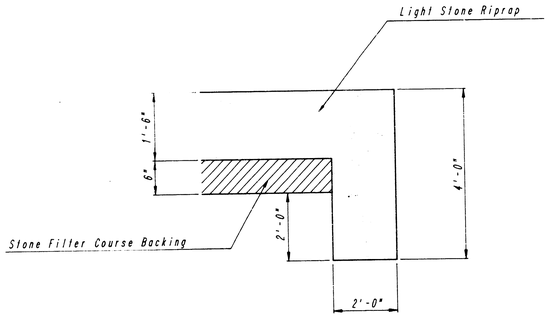
BORING NO. 1 LOC See Boring Location Plan
SCALE 1"= 5' FT. BORING DATE 11-11-86 BY B.R.D.D. LEVELS BY B.E. CHECKED BY
EL. WATER LEVEL N.O. DATE EL. DATE EL.
BM NO. LOC

BS	HI	FS	EL	REMARKS
			163.3	TOP B-1

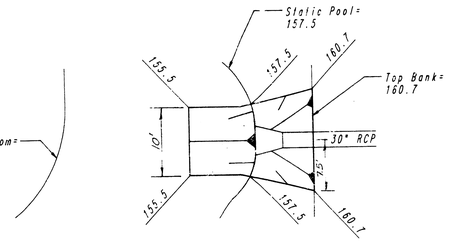
FM	LOG	ELEVATION	REMARKS	S/C	TOOL	BPF	%	WT PCF FT
		163.3	TOP HOLE					
			BROWN SILTY CLAY					
			SOME RED SILTY CLAY					
		154.3	9.0					
			GRAYISH GREEN SILTY CLAY					
		150.3	13.0					
		149.3	RED BROWN SANDY CLAY 14.0					
		149.3	LIGHT BROWN SAND CLAYEY 15.0					
			BOTTOM HOLE					

ALLUVIUM

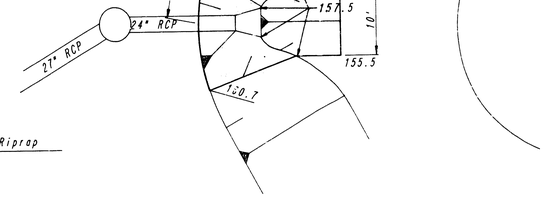
SOIL BORING LOGS
See Sheet 4 for Locations



TYPICAL SECTION THRU TOEWALL
NOTE: Toewalls shall be installed along all edges of stone riprap.



RIPRAP DETAIL
Line No. 1
Scale: 1"=10'



RIPRAP DETAIL
Line No. 2
Scale: 1"=10'

CITY OF WICHITA, KANSAS
AUTUMN RIDGE ADDITION
STORM WATER SEWER NO. 321

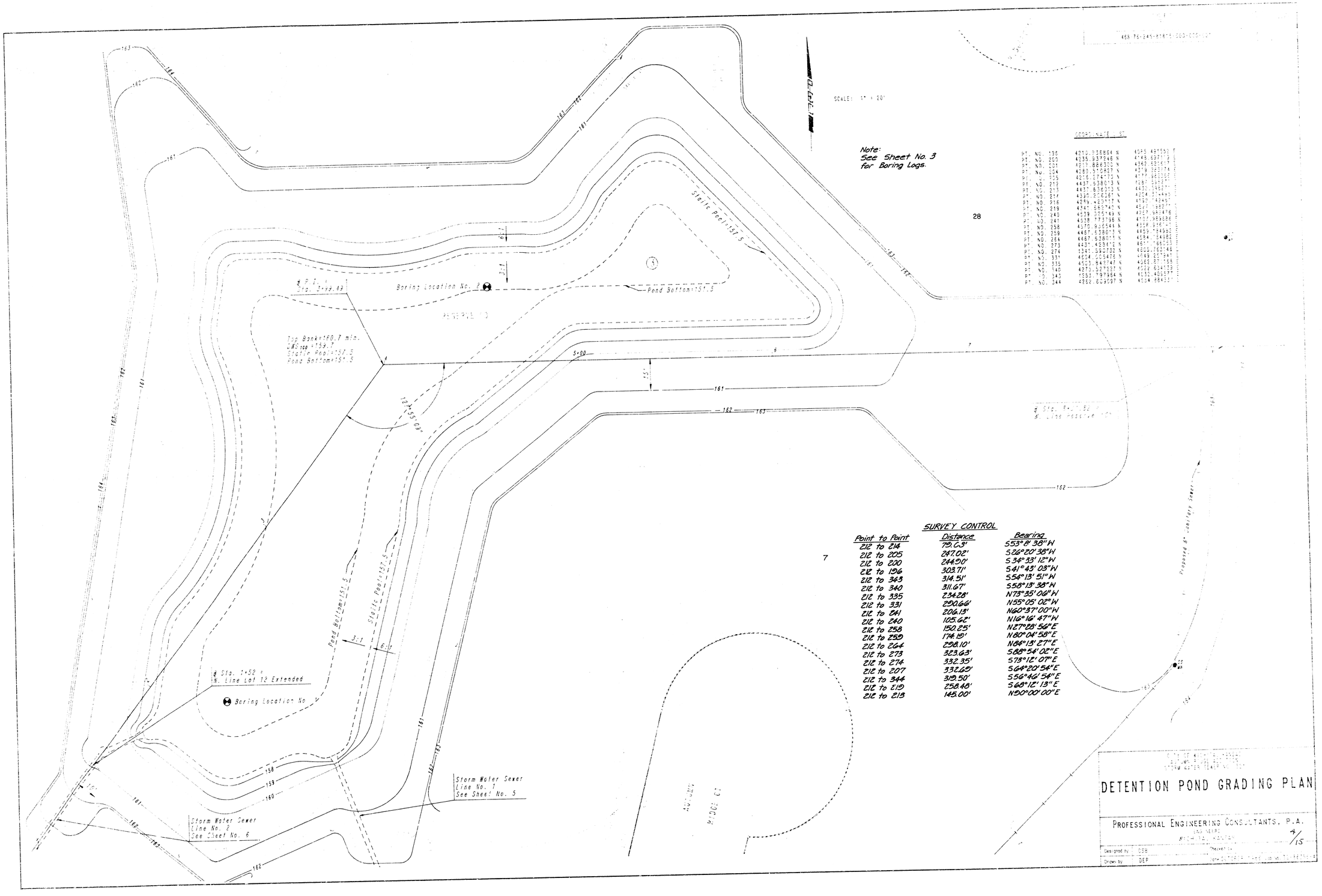
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

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

3/15

Designed by	CSB	Checked by	
Drawn by	DEP	Date OCTOBER, 1986	Job No. 32-86356-4

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PT. NO.		
PT. NO. 135	4212.036864 N	4545.497550 E
PT. NO. 200	4235.937946 N	4743.687123 E
PT. NO. 201	4217.886302 N	4362.521617 E
PT. NO. 204	4280.570827 N	4379.263774 E
PT. NO. 205	4276.274472 N	4717.961565 E
PT. NO. 212	4437.538013 N	4281.591277 E
PT. NO. 213	4437.838213 N	4431.596577 E
PT. NO. 214	4330.256286 N	4274.834497 E
PT. NO. 216	4259.472177 N	4529.142465 E
PT. NO. 219	4341.582747 N	4527.393277 E
PT. NO. 240	4539.355149 N	4357.961476 E
PT. NO. 241	4538.773196 N	4107.989588 E
PT. NO. 258	4270.965641 N	4558.576 E
PT. NO. 259	4467.538011 N	4452.734962 E
PT. NO. 264	4467.538011 N	4594.734582 E
PT. NO. 273	4431.423412 N	4811.665233 E
PT. NO. 274	4341.592732 N	4853.123145 E
PT. NO. 331	4604.053478 N	4749.267744 E
PT. NO. 335	4503.844747 N	4266.857155 E
PT. NO. 340	4273.527327 N	4262.634733 E
PT. NO. 343	4533.797964 N	4535.405377 E
PT. NO. 344	4282.653097 N	4594.284431 E

SURVEY CONTROL

Point to Point	Distance	Bearing
212 to 214	79.63'	S53°8'38"W
212 to 205	247.02'	S26°20'38"W
212 to 200	244.20'	S 34°33'12"W
212 to 196	303.71'	S41°43'03"W
212 to 343	314.51'	S54°13'51"W
212 to 340	311.67'	S58°13'38"W
212 to 335	234.28'	N73°35'06"W
212 to 331	290.66'	N55°05'02"W
212 to 241	206.13'	N60°37'00"W
212 to 240	105.62'	N16°16'47"W
212 to 258	150.25'	N27°28'56"E
212 to 259	174.19'	N80°04'59"E
212 to 264	298.10'	N84°13'27"E
212 to 273	323.63'	S88°54'02"E
212 to 274	332.35'	S73°12'07"E
212 to 207	332.69'	S64°20'54"E
212 to 344	319.50'	S56°46'54"E
212 to 219	258.48'	S62°12'13"E
212 to 218	145.00'	N90°00'00"E

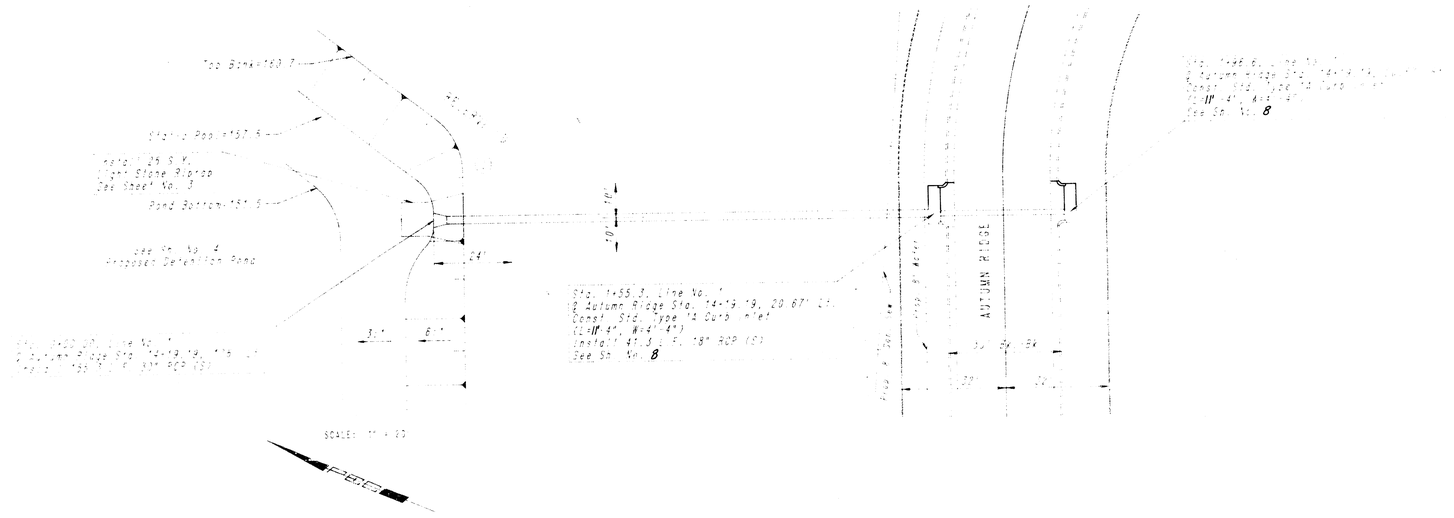
DETENTION POND GRADING PLAN

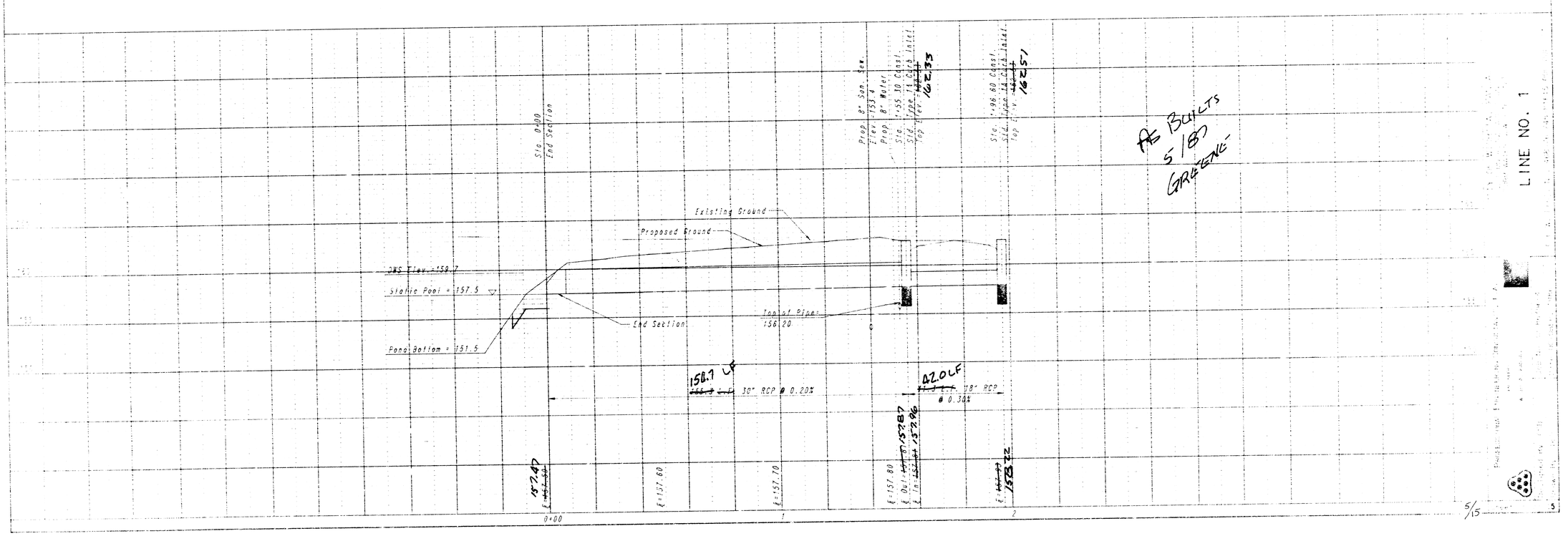
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
SIOUX FALLS, SOUTH DAKOTA

Designed by: DSB
Drawn by: DEP
Checked by:

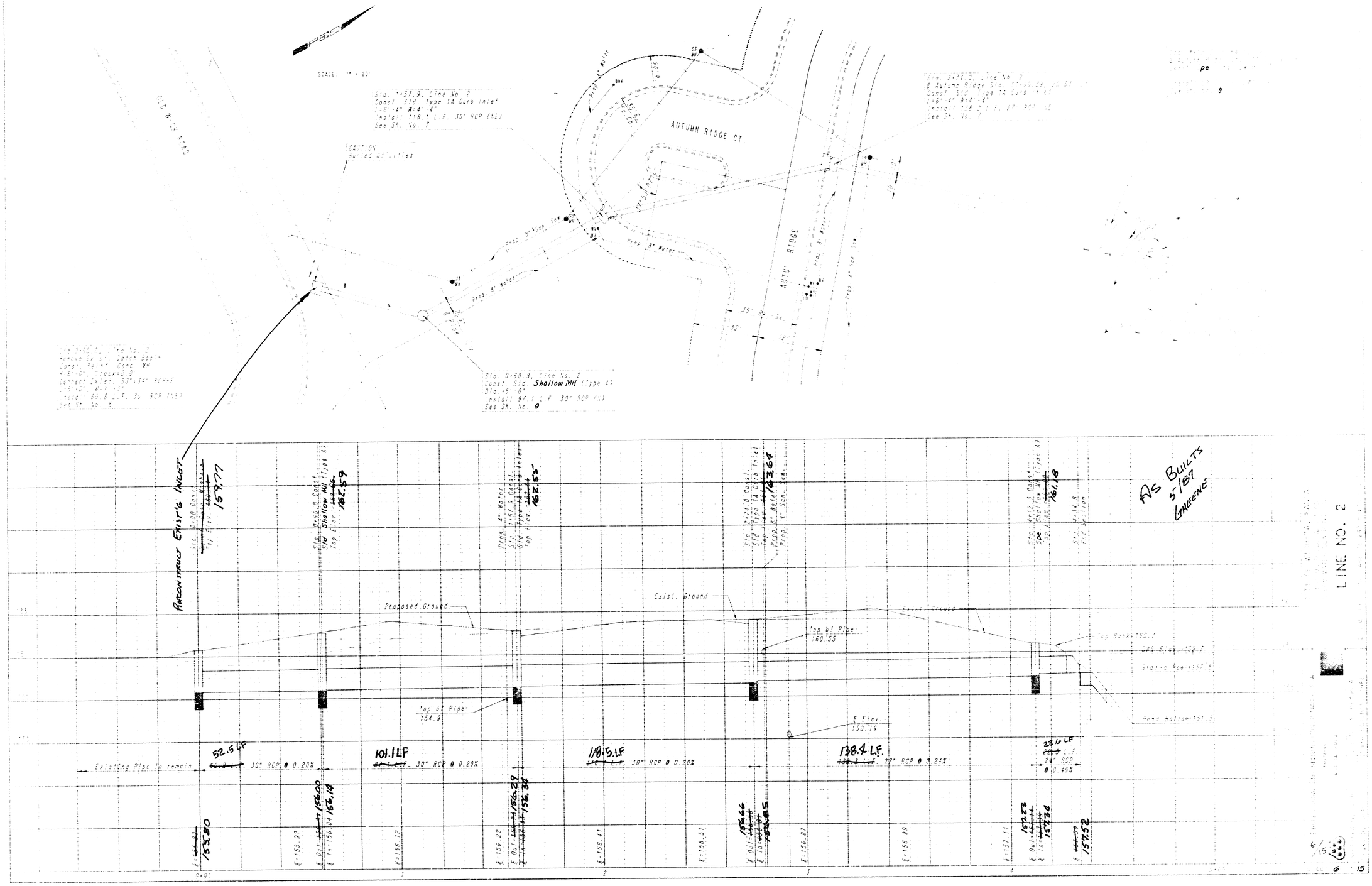
4/15

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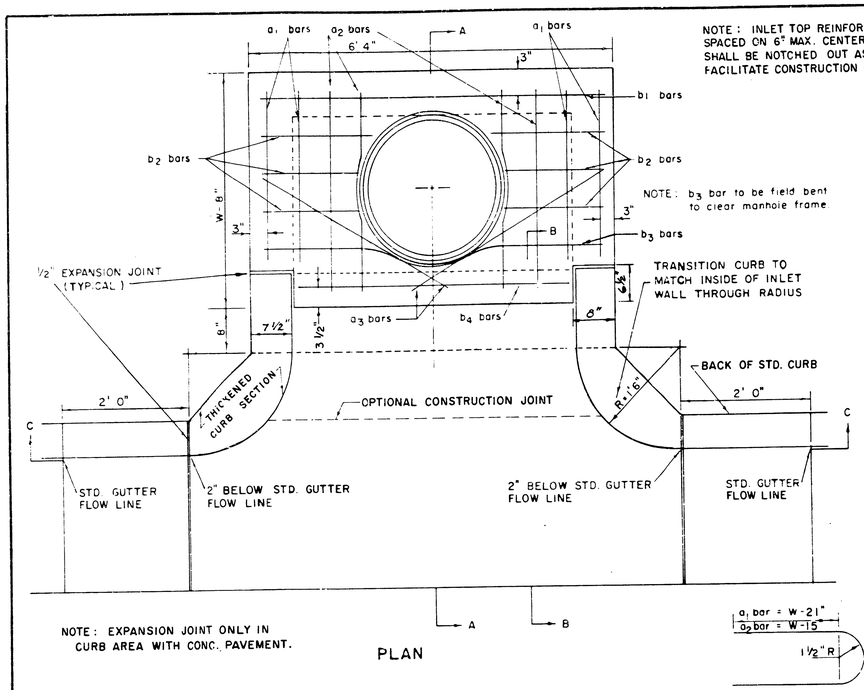




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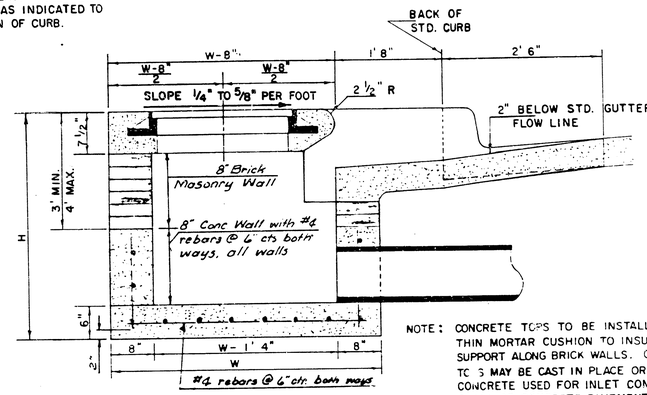
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NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

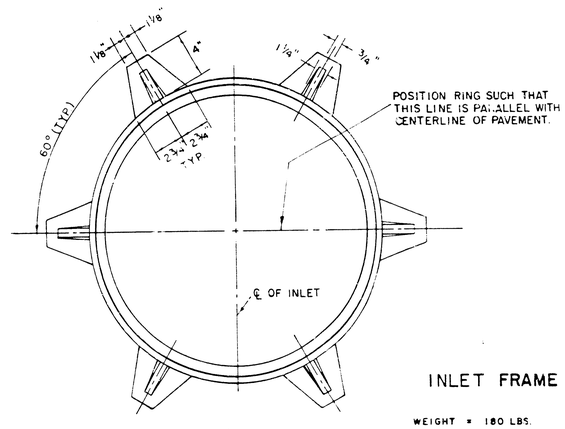
PLAN

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



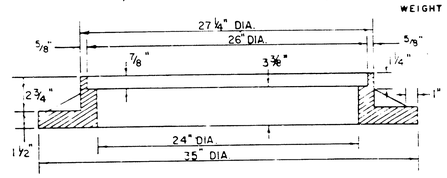
SECTION A-A

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.



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.

BENDING DIAGRAM

STEEL SCHEDULE

BAR	a_1	a_2	a_3*	b_1 W=4'4"	W=5'4"	W=6'4"	W=7'4"	W=8'4"	b_2	b_3	b_4	WT. LBS.
NUMBER	4	4	2	1	3	5	7	9	6	1	1	
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH W=4'4"	5'7"	6'7"	4'0"	6' 1"	–	–	–	–	1' 9"	6' 2"	4' 8"	60±
LENGTH W=5'4"	7'7"	8'7"	5'0"	–	6' 1"	–	–	–	1' 9"	6' 2"	4' 8"	81±
LENGTH W=6'4"	9'7"	10'7"	6'0"	–	–	6' 1"	–	–	1' 9"	6' 2"	4' 8"	101±
LENGTH W=7'4"	11'7"	12'7"	7'0"	–	–	–	6' 1"	–	1' 9"	6' 2"	4' 8"	121±
LENGTH W=8'4"	13'7"	14'7"	8'0"	–	–	–	–	6' 1"	1' 9"	6' 2"	4' 8"	141±

* NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

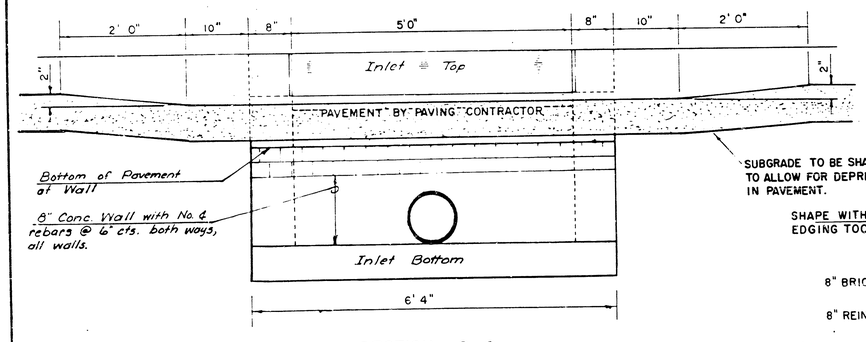
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3'8" x 6'4" x 7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4'8" x 6'4" x 7 1/2"	24" & 30"	0.51 ±
6' 4"	5'8" x 6'4" x 7 1/2"	36" & 42"	0.64 ±
7' 4"	6'8" x 6'4" x 7 1/2"	48" & 54"	0.77 ±
8' 4"	7'8" x 6'4" x 7 1/2"	60" & 66"	0.90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

NOTE: 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.

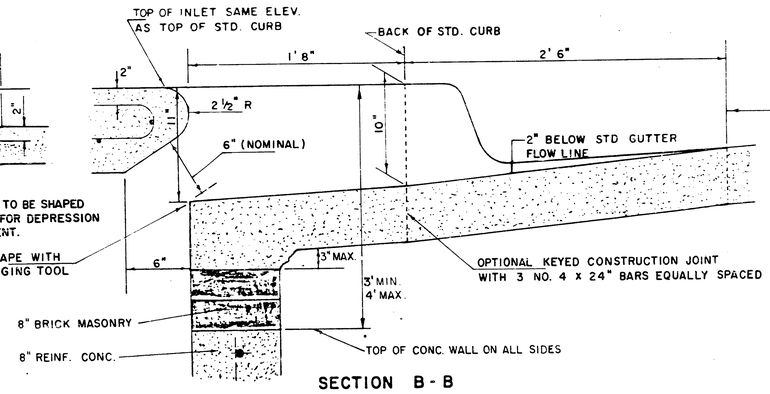
ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

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.



SECTION C-C



SECTION B-B

REVISED 12-21-1984 Proj: No. 468 76 845 81615 000 020 001

DETAIL STANDARD TYPE IA CURB INLET

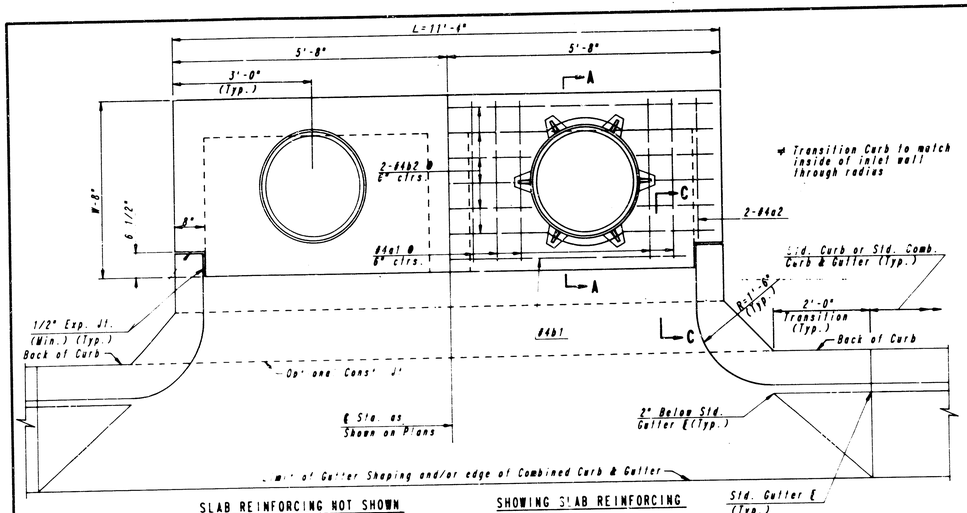
CITY OF WICHITA, KANSAS

INLET OPENING = 6" × 5' 0"

JUNE 1984 Sheet No. 7 of 15

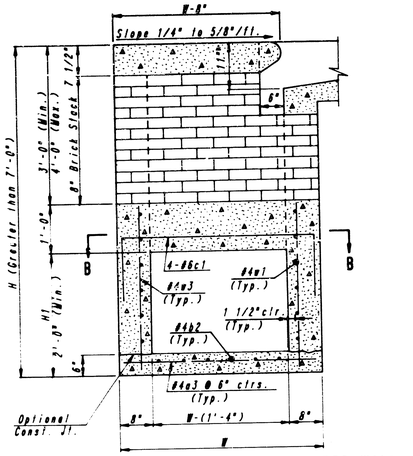
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PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-245-81615-000-000-001	8	15

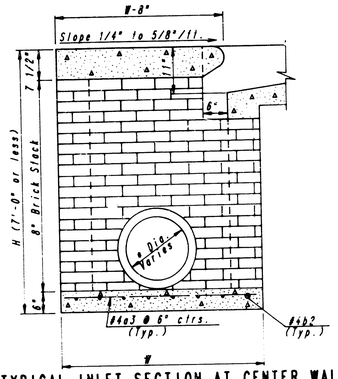


SLAB REINFORCING NOT SHOWN — SHOWING SLAB REINFORCING

PLAN

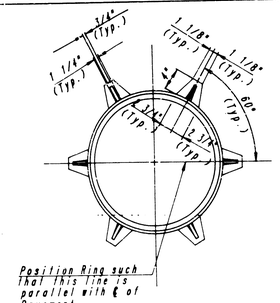


TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)

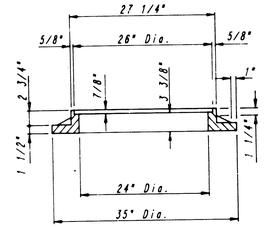


TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

* A center wall opening shall be provided by means of a section of reinforced concrete pipe. The minimum diameter used shall be that of the outlet pipe.

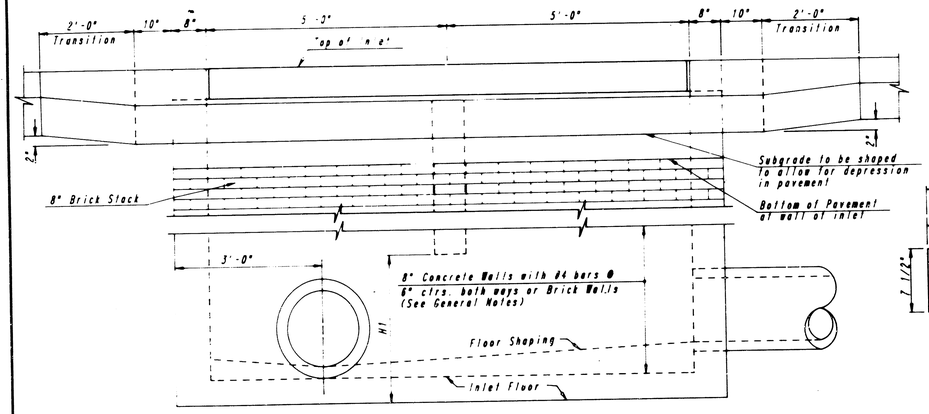


Position Ring such that this line is parallel with ℄ of Pavement

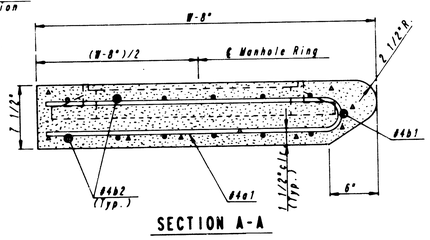


CAST IRON INLET FRAME
Wt.=180 lbs.

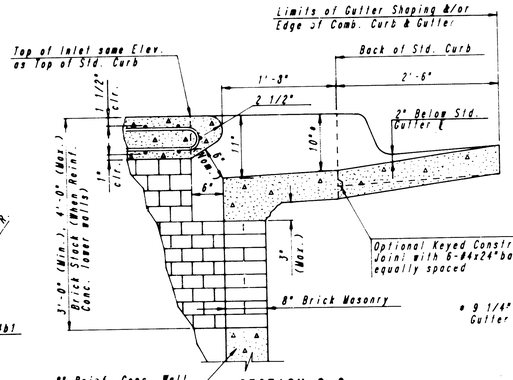
See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to be used with Inlet Frame.



ELEVATION

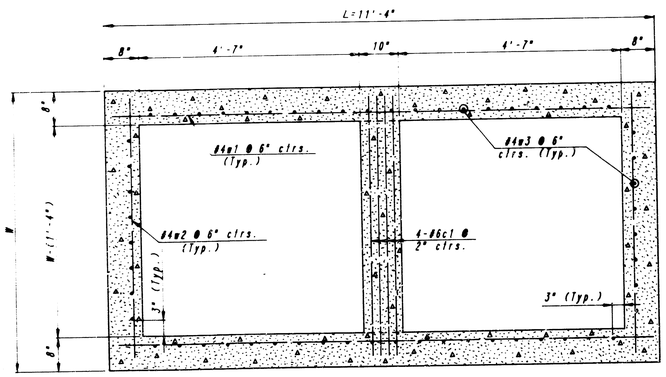


SECTION A-A



* 9 1/4" for Combined Curb & Gutter (Type I)

SECTION C-C



SECTION B-B

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	13	6'-7 1/4"	13	8'-7 1/4"	13	10'-7 1/4"	13	12'-7 1/4"	13	14'-7-1/4"
a2	#4	2	6'-0"	2	8'-0"	2	10'-0"	2	12'-0"	2	14'-0"
a3	#4	20	4'-1"	20	5'-1"	20	6'-1"	20	7'-1"	20	8'-1"
b1	#4	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"
*b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

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
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	②	③	②	③	②	③	①	③	②	③

* Field bend or cut Reinforcing as required for clearance

① 4(H1-6")+4 (H1-6") Rounded down to nearest 0.5'

② 40+4(W - 16") ③ H1+(9")

GENERAL NOTES

THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OF THIS INLET WHEN W=6'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0", THE OUTSIDE WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.

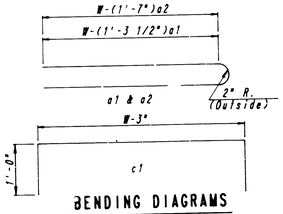
INLET INVERT SHALL BE SHAPED WITH A SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

CONCRETE SHALL BE CITY OF WICHITA STANDARD PAVING MIX. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL. INLET TOPS ARE TO BE PLACED ON A THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE PRECAST OR CAST IN PLACE. INLET TOPS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

UNLESS OTHERWISE NOTED, ALL BARS ARE #4 ON 6" MAX. CENTERS AND SHALL HAVE A MINIMUM CLEARANCE OF 1-1/2". BARS SHALL BE FIELD BENT OR CUT TO CLEAR MANHOLE RINGS AND PIPE OPENINGS.

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

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



BENDING DIAGRAMS

CITY OF WICHITA, KANSAS

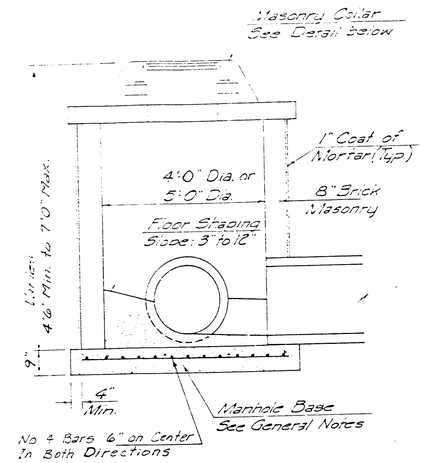
DETAIL STANDARD TYPE IA CURB INLET

INLET OPENING = 8'X10'-0" (L=11'-4")

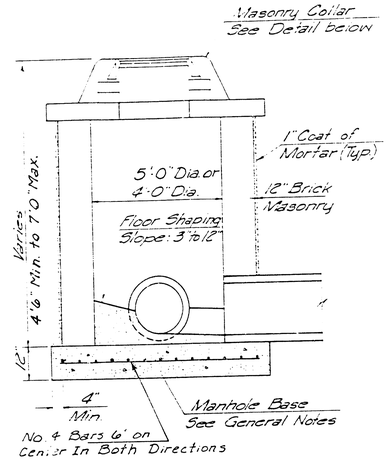
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by		Checked by	
Drawn by		Date Jan. 1987	Job No 86356-4

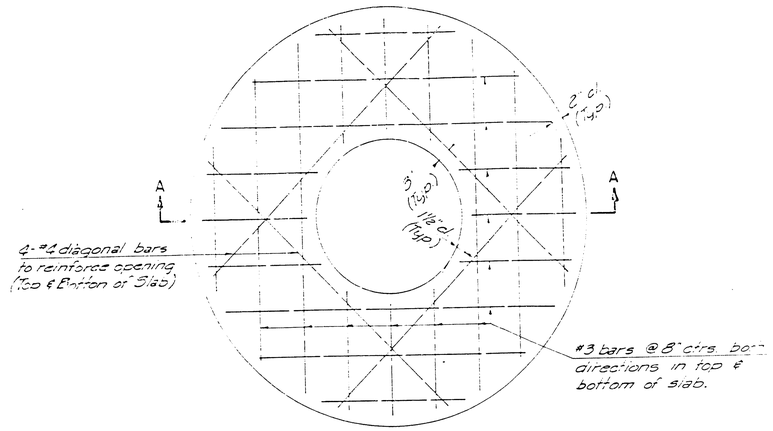
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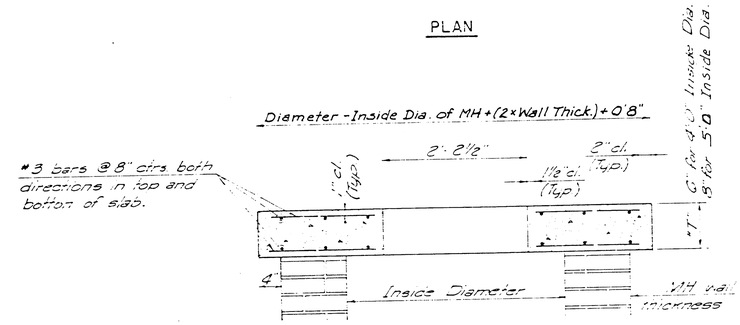
SHALLOW TYPE "A" MANHOLE



SHALLOW TYPE "B" MANHOLE

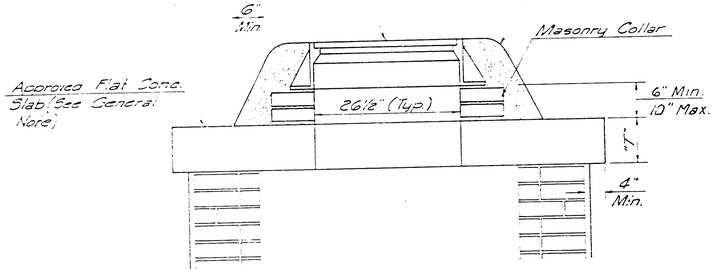


PLAN



SECTION A-A

FLAT CONCRETE SLAB DETAILS



MASONRY COLLAR DETAIL

Std. Manhole Frame & Cover

See General Notes

GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 5 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.

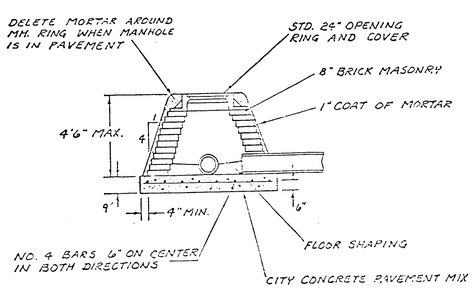
3. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOW 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.

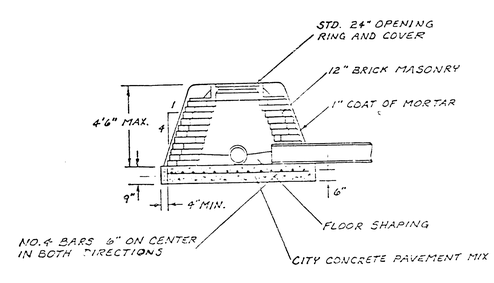
5. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.

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.



SPECIAL SHALLOW TYPE 'A' MANHOLE



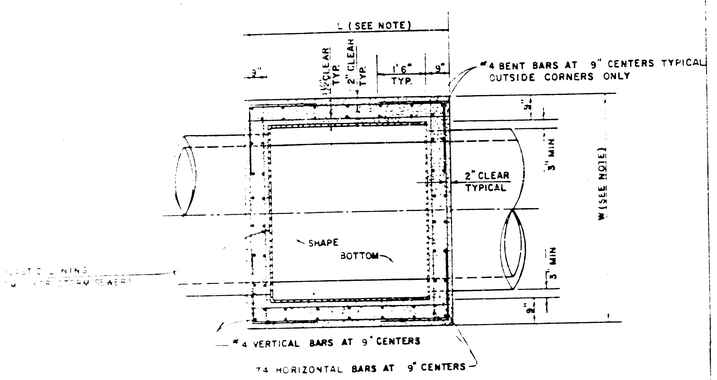
SPECIAL SHALLOW TYPE 'B' MANHOLE

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

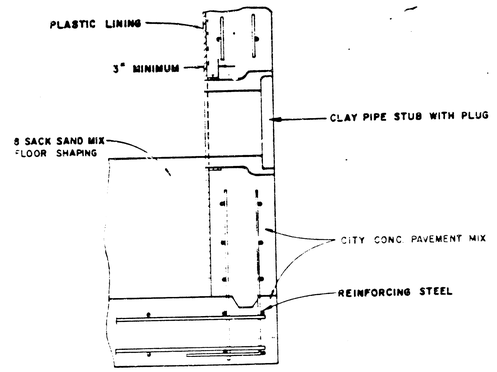
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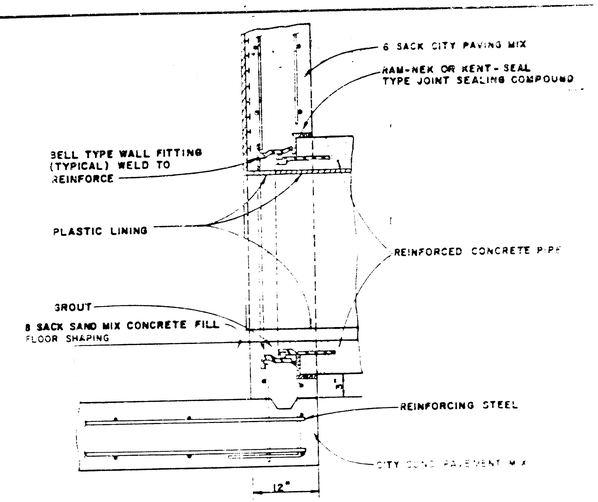
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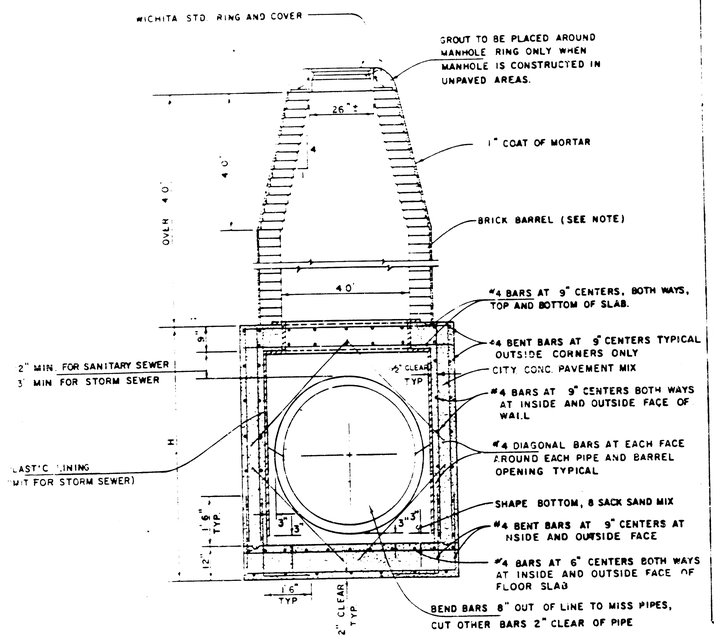
TOP VIEW



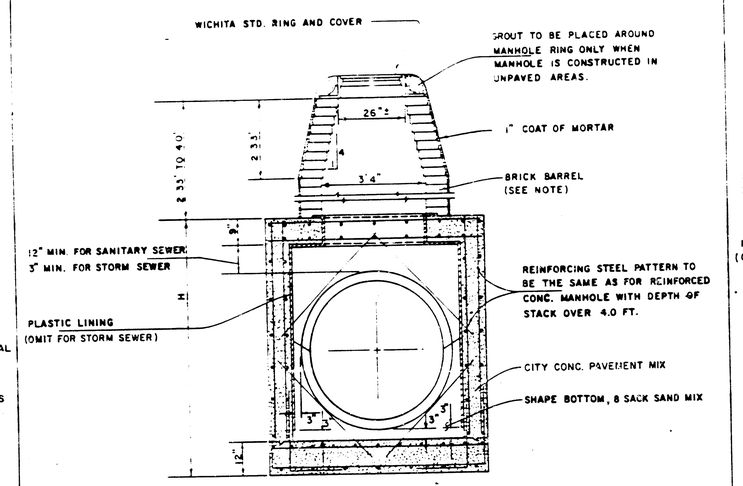
V. C. P. CONNECTION DETAIL
SANITARY SEWER ONLY



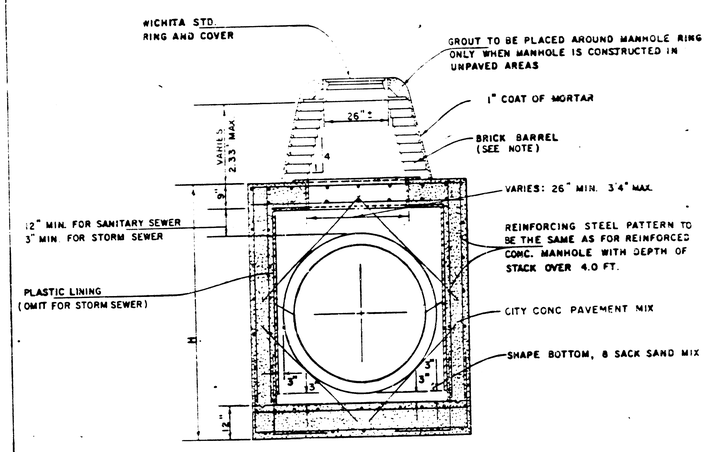
R. C. P. CONNECTION DETAIL
SANITARY SEWER ONLY



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.

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STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
CITY OF WICHITA

FEBRUARY 1984 Sheet No. 10 of 15

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MANHOLE FRAME AND COVER DETAIL

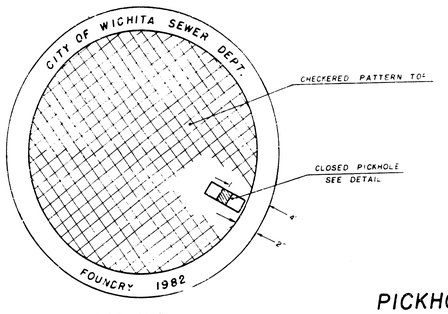
ADOPTED AS STANDARD DESIGN

BY

City of Wichita, Kansas

MANHOLE COVER

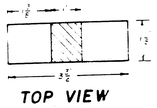
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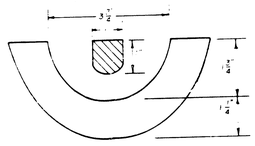
TOP VIEW

BOTTOM VIEW

PICKHOLE DETAIL



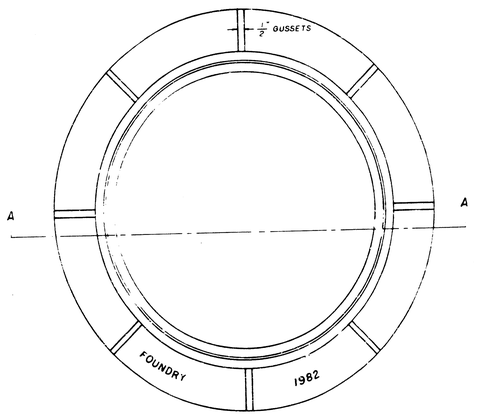
TOP VIEW



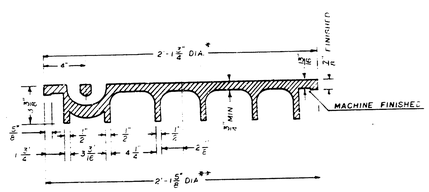
SECTION VIEW

MANHOLE FRAME

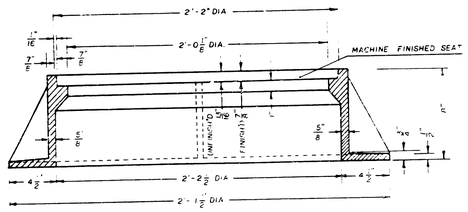
Weight 240 Lbs.



TOP VIEW



SECTION VIEW



SECTION A-A

* OUTSIDE DIA TOP OF COVER

*A OUTSIDE DIA BOTTOM OF COVER

GENERAL NOTE

1. 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 DEVIATION FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY 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.

4. 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 THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. 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" 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 DRAWINGS. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

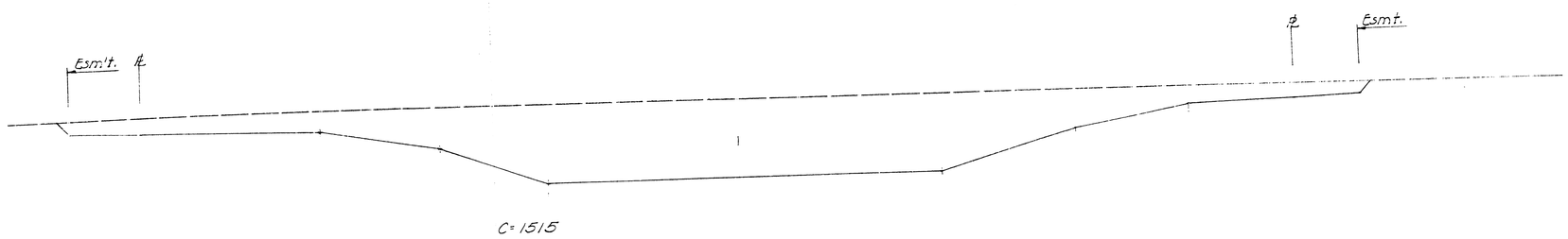
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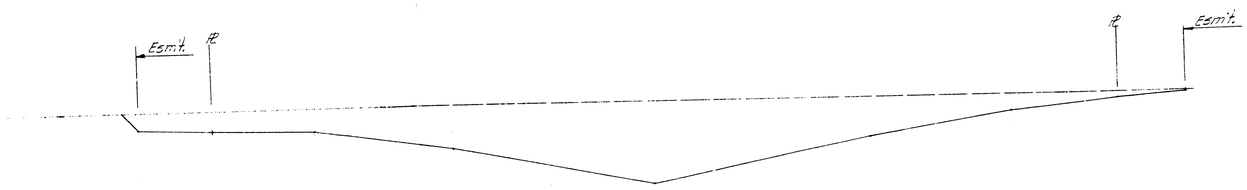
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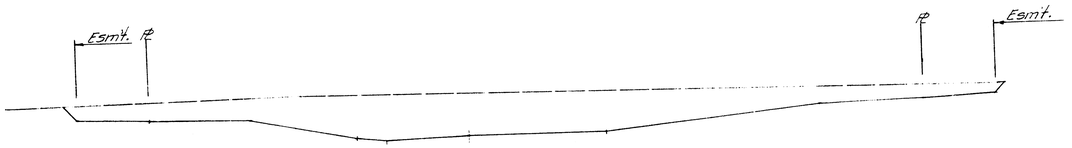
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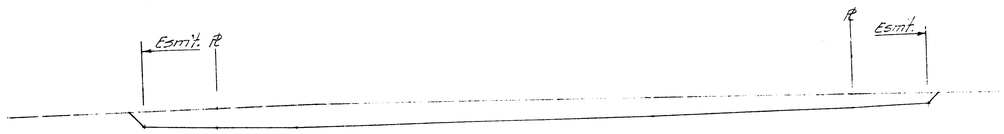
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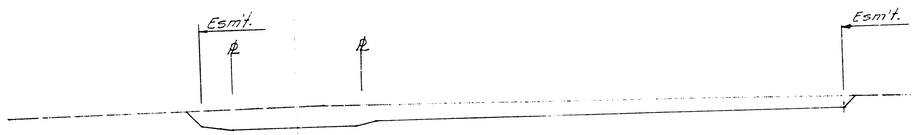
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C=595



C=325



C=245

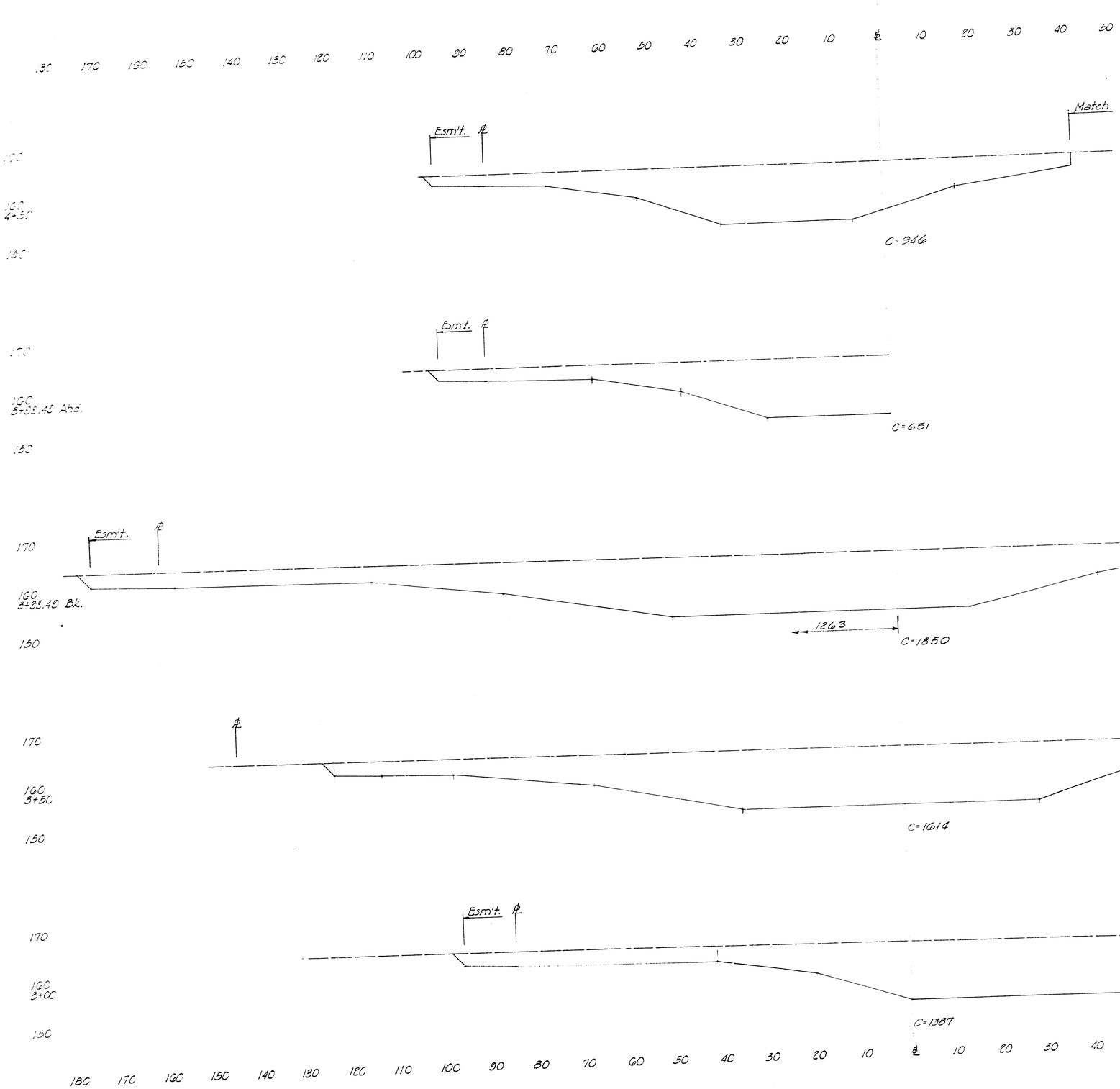
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10% = 2227 C.Y.
Total = 24,498 C.Y.

(For Information Only)

Sheet No. 12 of 15

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190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90

170

120
C+41

150

Esm't. ℄ ℄ Esm't.

C=198

19' Exc.=183 C.Y.

170

120
C+22

150

Esm't. ℄ ℄ Esm't.

C=339

43' Exc.=838 C.Y.

170

120
5+79

150

℄ ℄ Esm't.

C=819

36' Exc.=1,362 C.Y.

170

120
5+43

150

℄ ℄ Esm't.

C=1149

13' Exc.=1,495 C.Y.

170

120
5+00

150

Esm't. ℄ ℄ Esm't.

C=728

50' Exc.=1,550 C.Y.

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14/15

Sheet No. 14 of 15

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170
160
B+41.82
150

Esm't. ℄ Esm't. ℄ ℄

170
130
B+41.82
150
50' Exc.=114 C.Y.

170
160
B+00
150

Esm't. ℄ ℄ Esm't.

C=147

170
100
B+00
150
50' Exc.=220 C.Y.

170
160
7+50
150

Esm't. ℄ ℄ Esm't.

C=155

170
100
7+50
150
50' Exc.=394 C.Y.

170
160
7+00
150

Esm't. ℄ ℄

C=163

170
100
7+00
150
50' Exc.=334 C.Y.

170
160
6+50
150

Esm't. ℄ ℄ Esm't.

C=198

Total this Sheet - 1,088 C.Y.

170
100
6+50
150
3 Exc.=66 C.Y.

15/15

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Sheet No. 15 of 15

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