CITY OF WICHITA, KANSAS

STREET IMPROVEMENTS

(G.P-S. 3RD ADDITION)

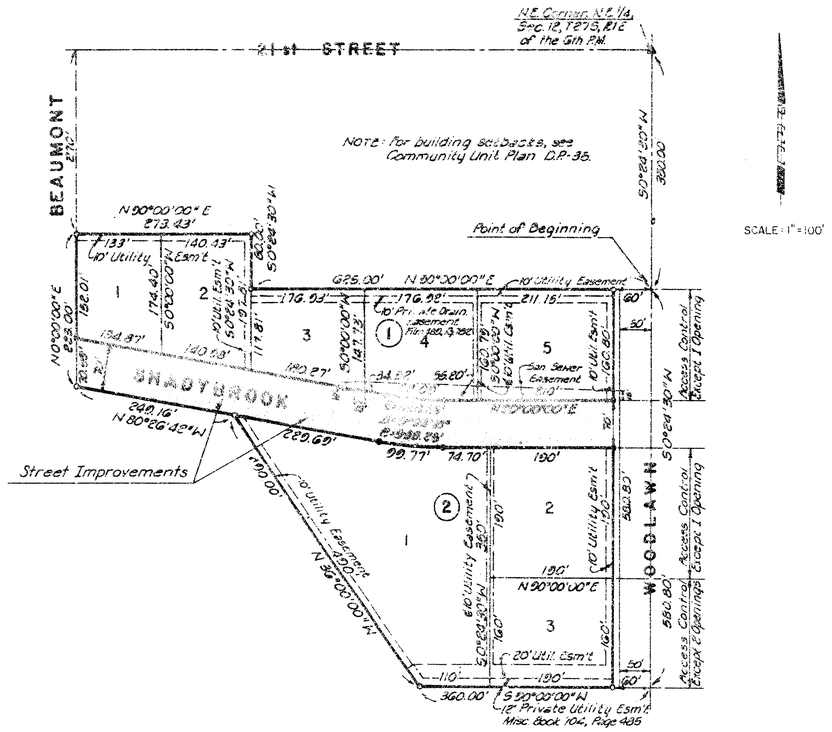
R. W. BRUGGEMAN - DIRECTOR OF ENGINEERING/CITY ENGINEER

PROJECT NO. 472-76-245-81114-000-000-001

BENCH MARKS

B.M.- City of Wichita Bench Mark Disc, N.E. Cor. 21st Street & Woodlawn. Elev. = 200.05

B.M.- R.R. Spike in Power Pole, S.W. Cor. of Bowling Alley Elev. = 209.67



INDEX OF SHEETS

1. TITLE SHEET
2. TYPICAL SECTIONS
3.-4. PLAN SHEETS
5. PAVING DETAILS
6. STORM SEWER PLAN & PROFILE
7. TYPE 22 CURB INLET
8. TYPE 22 CURB INLET (RADIUS)
9.-11. CROSS SECTIONS

Note: All excess excavated material from street construction shall be wasted on Block 1 of G.P-S. 3rd Addition. The waste material shall be leveled such that no Stockpiles are formed and graded to drain.

JUNE, 1982

HERBERT E. REMBERT LICENSED 8158 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

TITLE SHEET

STREET IMPROVEMENTS

PROJ. NO. 472-76-245-81114-000-000-001

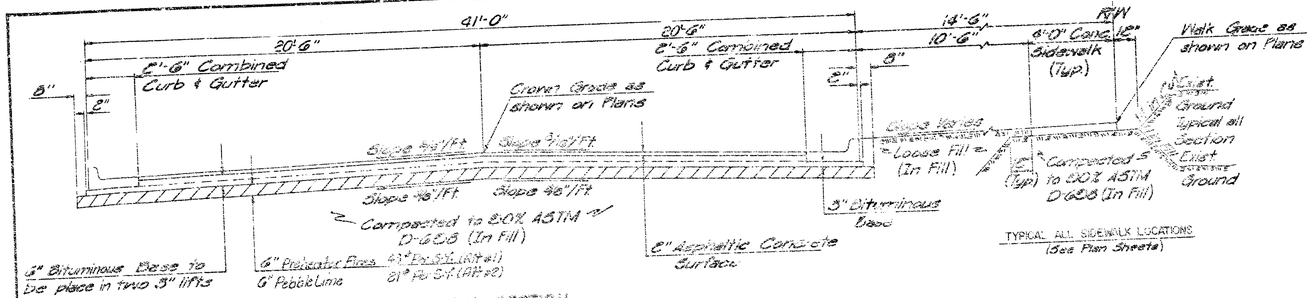
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

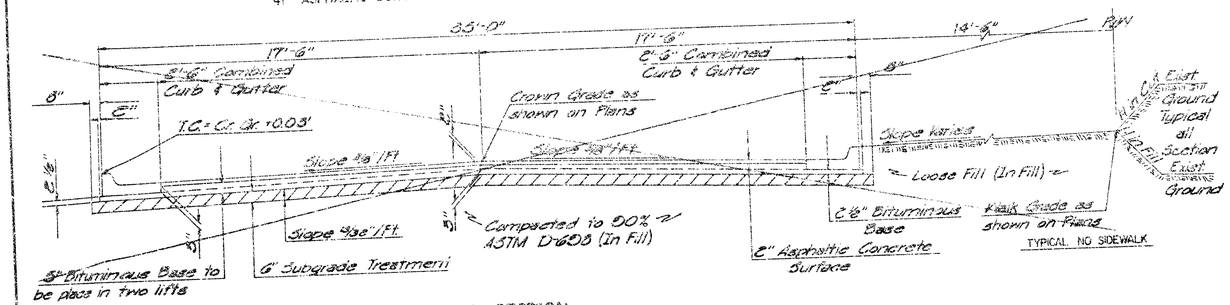
Designed by BER | Job No. 82218 | Sht. 1 of 11

Drawn by JGP | Date June, 1981



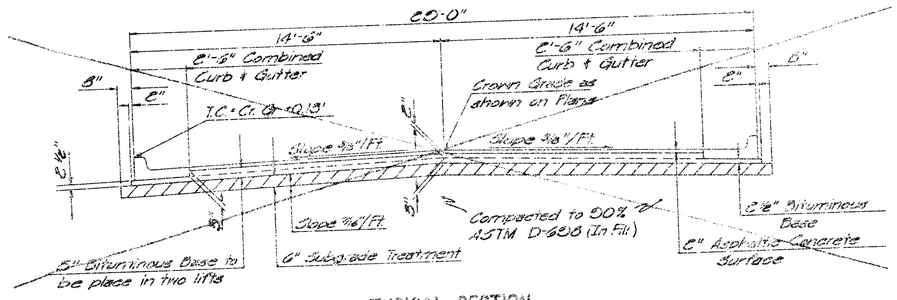
TYPICAL SECTION

41' ASPHALTIC CONCRETE PAVEMENT WITH BITUMINOUS BASE



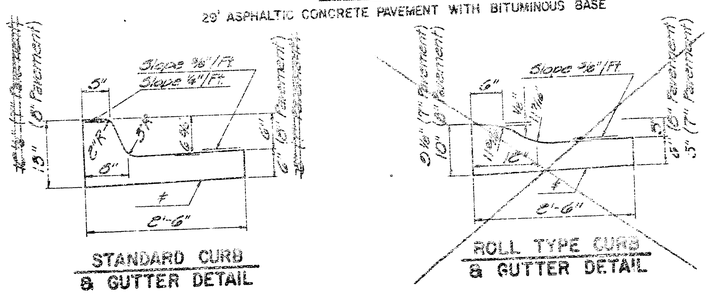
TYPICAL SECTION

35' ASPHALTIC CONCRETE PAVEMENT WITH BITUMINOUS BASE



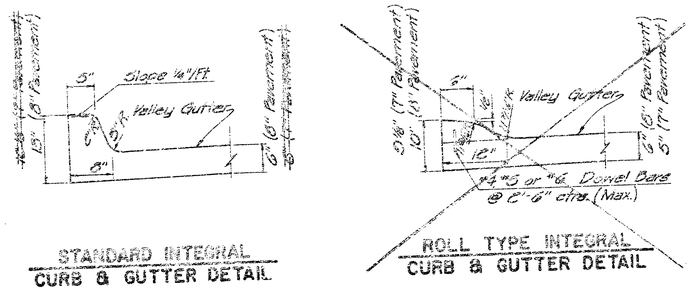
TYPICAL SECTION

29' ASPHALTIC CONCRETE PAVEMENT WITH BITUMINOUS BASE



STANDARD CURB & GUTTER DETAIL

ROLL TYPE CURB & GUTTER DETAIL

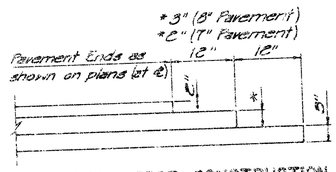


STANDARD INTEGRAL CURB & GUTTER DETAIL

ROLL TYPE INTEGRAL CURB & GUTTER DETAIL

Note: Intergal Curb shall be poured monolithic with valley gutter.

* Slope 3/8"/Ft. (41' Pavement)
* Slope 11/16"/Ft. (35' Pavement)
* Slope 15/16"/Ft. (29' Pavement)



DETAIL OF TRANSVERSE CONSTRUCTION JOINTS

Transverse Construction Joints shall be constructed in flexible base pavements at locations where pavement temporarily ends to facilitate future pavement construction as shown by detail. The cost of constructing the Transverse Construction Joints shall not be measured or paid for directly but shall be included in the bid price for square yards of asphaltic concrete pavement.

GENERAL NOTES

1. A TACK COAT OF EMULSIFIED ASPHALT (SS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE 0.05 GALLONS PER SQUARE YARD BETWEEN LIFTS OF ASPHALTIC MATERIAL. ALL WORK REQUIRED BY THE SPECIFICATIONS SHALL BE PAID FOR DIRECTLY AND SHALL BE CONSIDERED AS INCIDENTAL TO PRICE BID FOR ASPHALTIC PAVEMENT.

   BITUMINOUS BASE AND ASPHALTIC CONCRETE PAVEMENT COURSE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING ADJUSTABLE SCREED'S AND CAPABLE OF CONSTRUCTION JOINTS OR EACH 5' FT SHALL BE STAGGERED A MINIMUM DISTANCE OF 1 FOOT WITH JOINTS IN PRECEDING LIFTS AND SUCH THAT A JOINT WILL BE CONSTRUCTED ON THE PAVEMENT CENTERLINE IN THE TOP LIFT.

2. THE A.C. PAVEMENT REQUIRED UNDERNEATH CURB AND GUTTER IS AT NO TO BACK ~~OF CURB ON STREETS SHALL BE~~ PAID AS SQUARE YARDS OF A.C. PAVEMENT OF THICKNESS SPECIFIED. THE BITUMINOUS BASE UNDER THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 3" BITUMINOUS BASE.

3. SIDEWALK INDICATED ON THE TYPICAL SECTION ARE FOR LOCATION OF THAT SECTION ONLY. SIDEWALKS SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLAN SHEET AS PART OF THIS PROJECT.

4. CONTRACTION JOINTS MAY BE CONSTRUCTED IN PLASTIC CONC BY SAWING WITH AN APPROVED CONCRETE SAW. THE SAW SHALL EXTEND THROUGH THE CURB TO THE PAVEMENT. SAWED CONTRACTION JOINTS SHALL HAVE A MAXIMUM SPACING OF 10'.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY MONUMENTS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY CORNER MONUMENTS OR PROPERTY CORNER MARKERS 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 APPLICABLE STATE LAWS.

6. NO MORE THAN 4-25' DRIVEWAYS APPROACHES OR THE EQUIVALENT TO BE CONSTRUCTED.

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

TYPICAL SECTIONS
STREET IMPROVEMENTS

PROJ. NO. 472-78-245-81114 -000-000-001

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

Designed by	Job No. 82218	Sht. 2 / 11 / 11
Drawn by	Date June, 1982	

ORIGINAL (KEEP)

Remove 82 L.f. Curb & Gutter

Construct Wheelchair Ramp Lt. See Sh. No. 5

Scale: 1"=20'

Note: Any Damage To Exist. Asph. To Be Repaired As Directed By The Engineer At The Contractor's Expense.

Sta. 9+69.58 ℄ Shadybrook = ℄ Beaumont

Sta. 9+82.76 Construct 8" Valley Gutter See Sh. No. 5

Telephone Box to be relocated by others

Construct Wheelchair Ramp Rt. See Sh. No. 5

℄ Beaumont

℄ Shadybrook

℄ Dirt Road

+3.20 % Lt. ℄

-1.20 % Lt. ℄

Wk. Gr. +0.5'

+3.20 % Rt.

-1.20 % Rt.

Wk. Gr. +0.7'

See Spot Elev. for Wk. Gr.

200' V.C.

50' V.C.

+00 P.V.C.

+00 P.V.I.

+00 P.V.T.

4"x4' Concrete Walk (Typ.)

10' Utility Easement

℄ 8" San. Sewer

San. Sewer Easement

MH

+59.75 P.V.C.

+84.75 P.V.T. & P.C.

Exist. Iron (Typ.)

40' Fc.-Fc.

35'

99°33'

21°88

+94.11

+06.80

+05.89

+29.89

215.15

INTERSECTION QUANTITIES

- S.Y. Concrete Pavement
- S.Y. " Asphaltic Conc. Pavement (" Bituminous Base)
- S.Y. " Bituminous Base
- L.F. Combined Curb & Gutter
- 68.6 L.F. Integral Curb
- 20.0 S.F. 4" Wheelchair Ramp
- S.F. 4" Walk
- 101.0 C.Y. Excavation
- 1.8 C.Y. Compacted Fill
- Lbs. Reinforcing Steel
- 1344 S.Y. Manipulation
- 1.7 Tons Lime or Cement
- 180.8 S.Y. V.B. 6" Concrete & 2" Asphaltic Concrete Base

* Additional Concrete widening shall be placed with combined curb and gutter. This work shall not be paid for directly, but shall be considered subsidiary to the bid item "Combined Curb and Gutter."

* Match Existing

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

SHADYBROOK

STA. 9+83.39 TO STA. 14+50

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

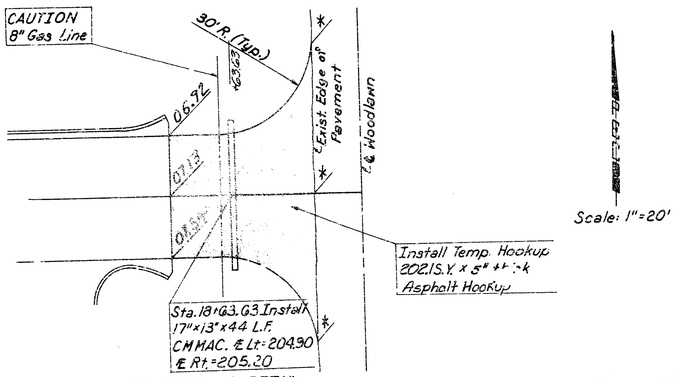
Designed by BER | Job No. 82219 | Sht. 3/11

Drawn by JGP | Date June, 1982

5

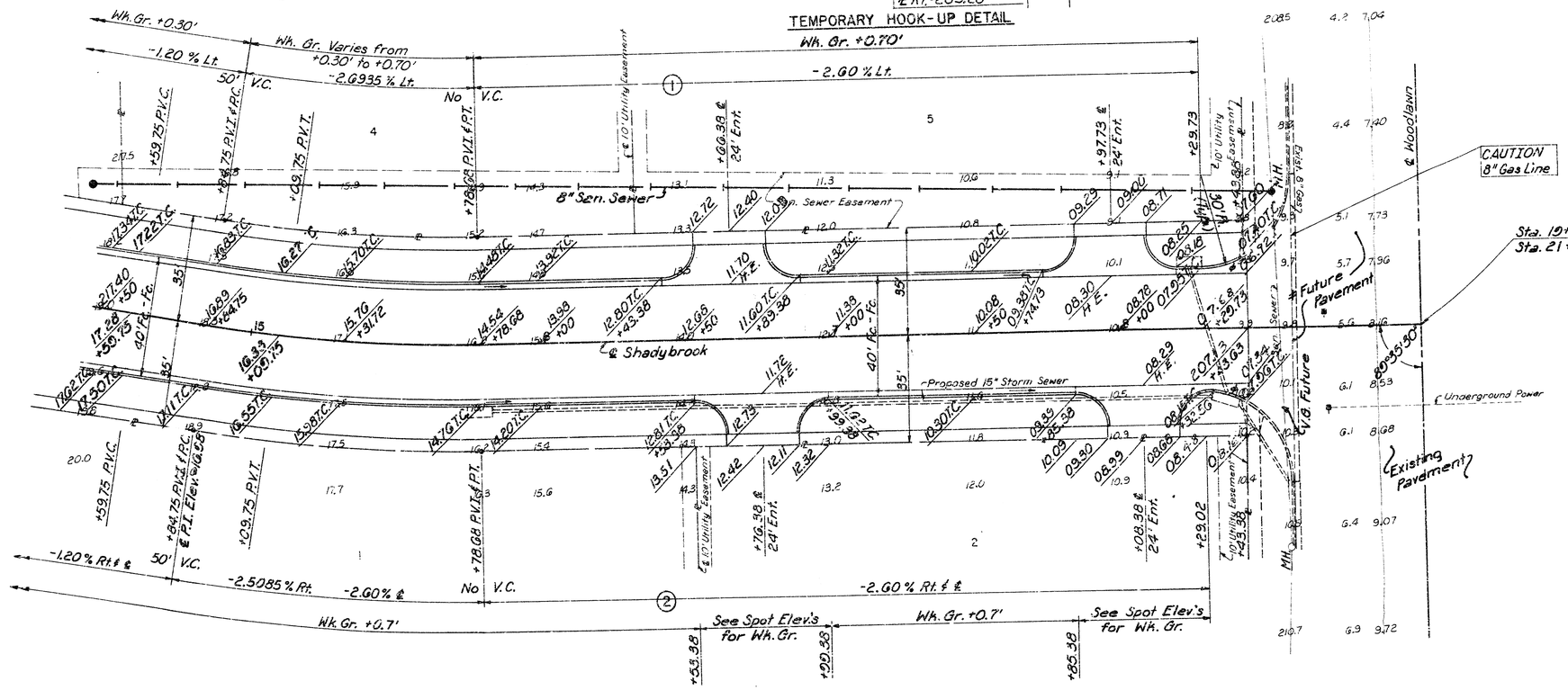
CURVE DATA BASED ON ℄ RADIUS Δ/2 = 4° 46' 39"					
STATION	℄ ARC LENGTH	CHORD LENGTH 8' OFF LEFT FACE CURB	CHORD LENGTH 8' OFF RIGHT FACE CURB	℄ DEFLECTION ANGLE	℄ TOTAL DEFLECTION
14+64.75	—	—	—	0°00'00"	0°00'00"
15+00.00	15.25'	14.48'	16.00'	0°46'31"	0°46'31"
15+25.00	25.00'	23.76'	26.24'	1°16'18"	2°02'49"
15+50.00	25.00'	23.76'	26.24'	1°16'18"	3°19'07"
15+75.00	25.00'	23.76'	26.24'	1°16'18"	4°35'25"
15+78.68	3.68'	3.50'	3.86'	0°11'14"	4°46'39"

℄ Curve Data
Δ = 9°33'18"
D = 10°10'21"
R = 563.25'
T = 47.07'
L = 93.93'



Scale: 1" = 20'

TEMPORARY HOOK-UP DETAIL



See Sheet No. 5 for entrance details

Additional concrete to be placed with combined Curb and Gutter. This work shall not be paid for directly, but shall be considered subsidiary to the bid item "Combined Curb and Gutter."

Match Existing

If the proposed improvement to Woodlawn is not complete, a temporary "hook-up" shall be constructed. See detail this sheet. Quantities for this work have been computed, but may be underrun 100%.

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

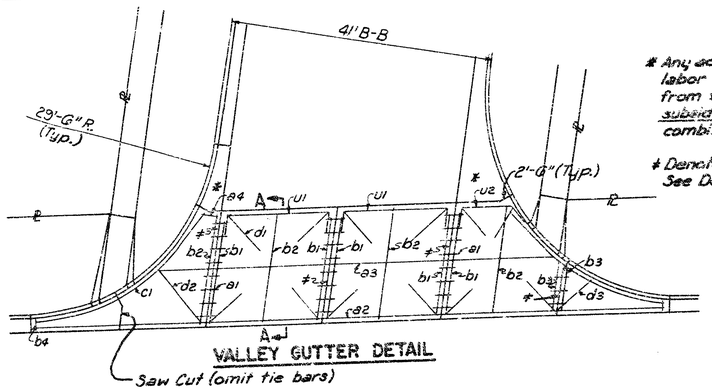
SHADYBROOK

STA. 14+50 TO STA. 18+43.63

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

Designed by BER | Job No. 82218 | Sh. 4 of 11 Sh.

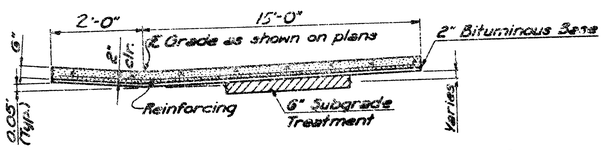
Drawn by JGP | Date June, 1982



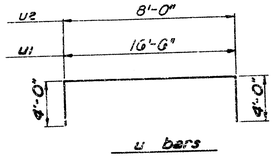
VALLEY GUTTER DETAIL

* Any additional materials or labor required due to flare from typical section shall be subsidiary to base bid for combined Curb & Gutter.

\# Denotes Construction Joint, See Details this sheet.

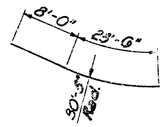


SECTION A-A



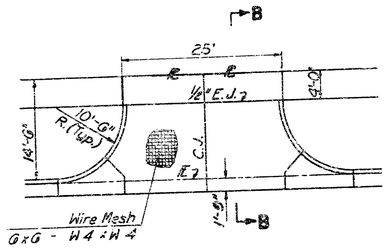
u bars

VALLEY GUTTER BAR LIST			
Bar	No.	Size	Length
a1	27	#3	31'-0"
a2	1	#6	2'-6"
a3	1	#6	6'-0"
a4	1	#6	2'-2"
b1	5	#6	10'-2"
b2	4	#6	10'-0"
b3	2	#6	6'-0"
b4	2	#6	2'-0"
c1	2	#6	31'-6"
d1	12	#6	6'-0"
d2	1	#6	11'-0"
d3	1	#6	7'-0"
u1	2	#6	24'-6"
u2	1	#6	16'-0"
Reinf. Steel = 861.4 Lbs.			



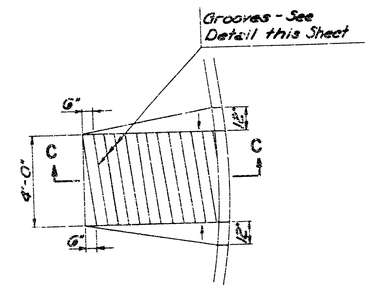
c1 bars

BENDING DIAGRAMS

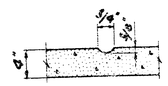


DRIVE APPROACH DETAIL

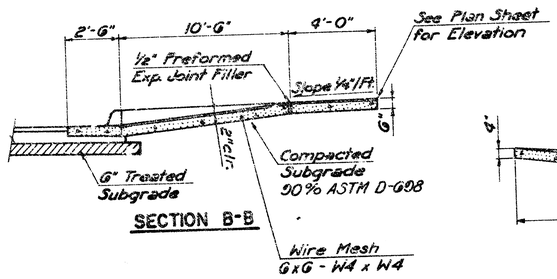
Note: 5½" if Gutter through Drive Opening Should Be Paid for as S.F. 6" Drive.



WHEELCHAIR RAMP DETAIL

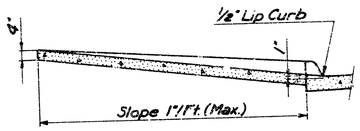


GROOVE DETAIL

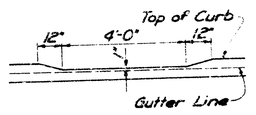


SECTION B-B

Additional excavation and/or compaction required for drive construction shall not be paid for directly, but shall be considered subsidiary to the bid item "6" Concrete Pavement."

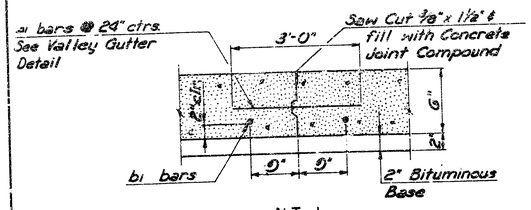


SECTION C-C

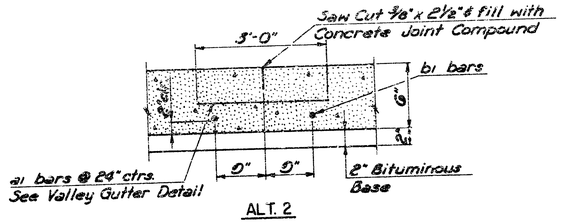


DEPRESSED CURB DETAIL

TYPICAL WHEELCHAIR RAMP DETAILS



ALT. 1



ALT. 2

CONSTRUCTION JOINT DETAILS

No.	Revision	By	Date

CITY OF WICHITA, KANSAS
PAVING DETAILS
STREET IMPROVEMENTS

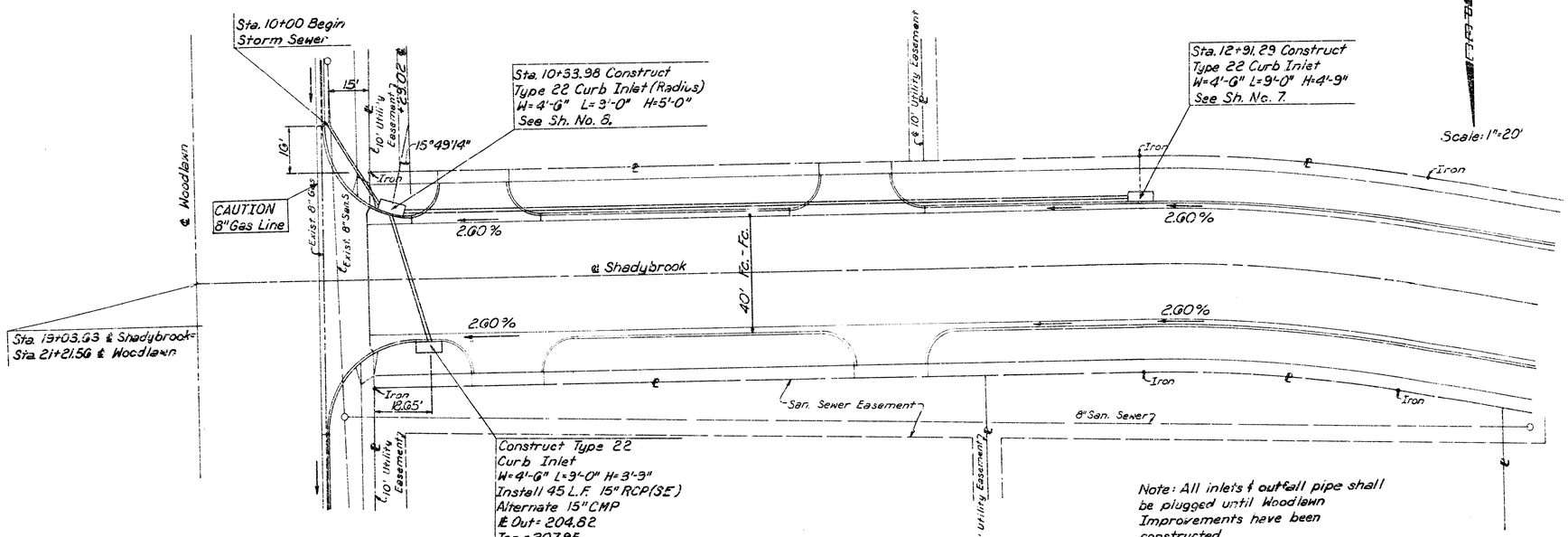
PROJ. NO. 472-76-245- -000-000-001

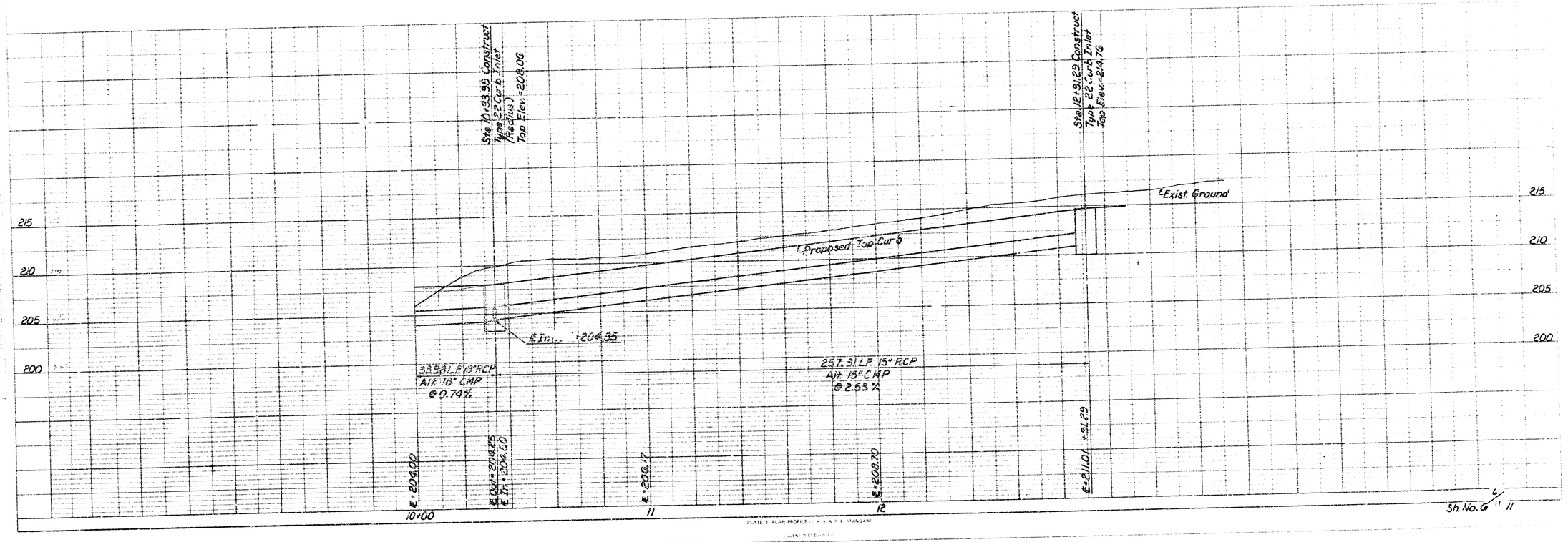
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by
Drawn by
Job No. 82218
Date June, 1982
Sht. 5 of 11

Original (KEEP)

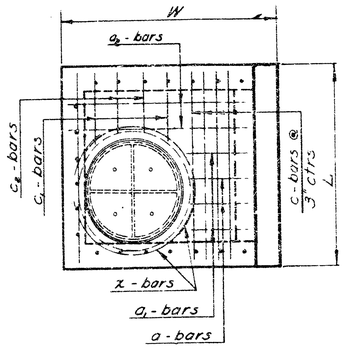
NOTE: TYPE 22 INLETS AS SHOWN ON THESE PLANS MAY BE SET BACK OF THE CURB SIMILAR TO CITY STANDARD TYPE IA INLETS WITH THE APPROVAL OF THE ENGINEER.



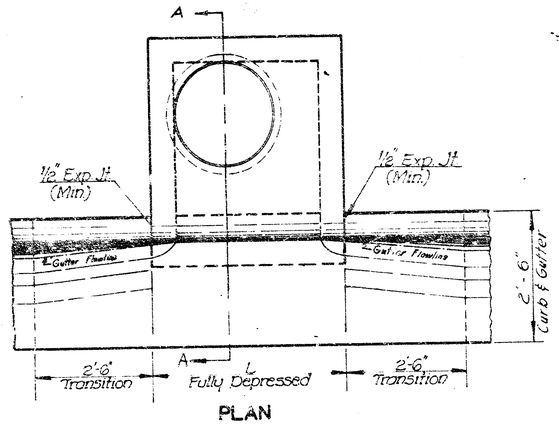


Sh. No. 6

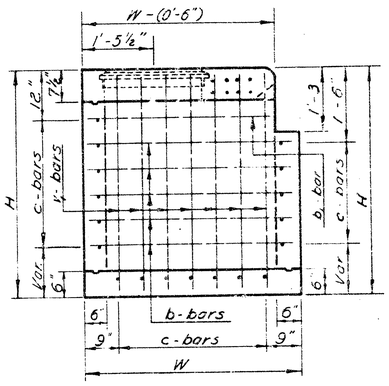
FHWA NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS		197		



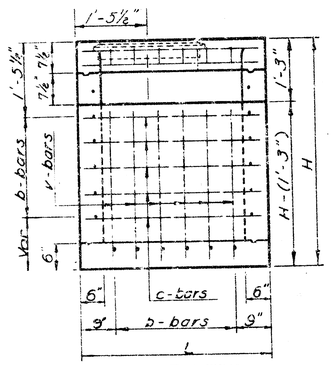
TOP VIEW



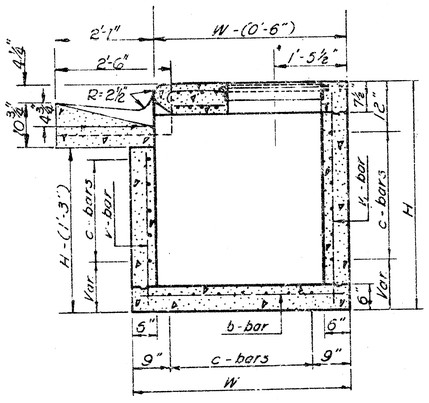
PLAN



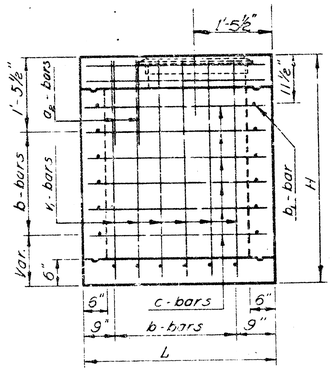
SIDE VIEW



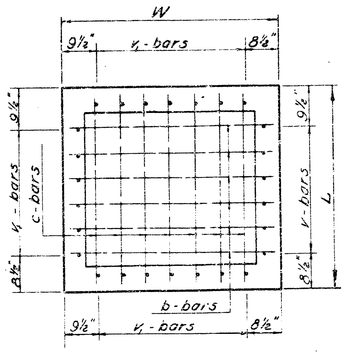
FRONT VIEW



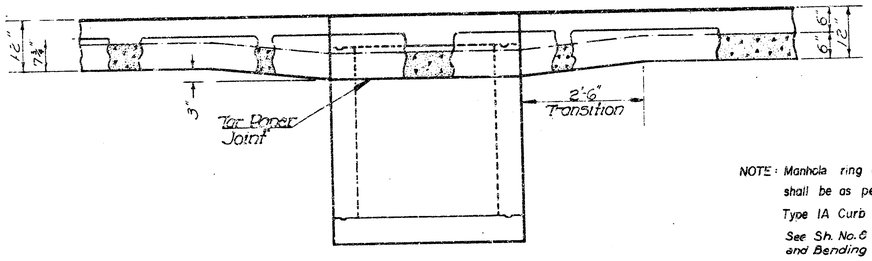
SECTION A-A



REAR VIEW



BOTTOM VIEW



NOTE: Manhole ring and cover to inlet tops shall be as per City of Wichita Standard Type IA Curb Inlet Precast Top.
See Sh. No. 6 for Ring & Cover Details and Bending Diagrams.

GENERAL NOTE

CONCRETE

Shall conform to the City of Wichita Concrete Pavement Specifications.

Bevel all exposed 90° concrete edges with a 3/4" triangular bevel.

CAST IRON

All exposed cast iron surfaces not subject to traffic shall receive one coat of a zinc dust paint applied either in the shop or in the field and two coats of aluminum paint applied in the field.

REINFORCING STEEL

All dimensions relative to reinforcing steel are to the center of bars unless otherwise noted on the plans.
Reinforcing steel shall be spaced at 6" centers and shall be 1-1/2" clear distance from slab surfaces unless otherwise shown on the plans.
All reinforcing steel shall be placed within ± 1/4" of plan dimension unless waived by the Engineer.
Reinforcing steel shall be bent around all pipes unless otherwise directed by the Engineer.
~~See plan sheet entitled REINFORCING STEEL FOR INLETS AND JUNCTIONS for reinforcing steel quantities and fabrication details.~~

MISCELLANEOUS

When directed by the Engineer the top of the inlet shall be sloped in order to match the longitudinal roadway grade ground line and/or other conditions.
When directed by the Engineer, small openings may be required in the back of the inlet in order to drain a low area. No deductions in concrete quantities will be made for these openings.
Expansion joint material shall be either poured joint sealing compound (hot or cold) or pre-molded joint filler (non-extruding Type B) unless otherwise noted on the plans.
Inlet floors shall be shaped as directed by the Engineer.
No concrete quantities shall be computed for this work.
Gutter shaping shall be accomplished as shown, and payment shall be subsidiary to the adjacent type of curb and gutter.

BASIS OF PAYMENT & METHOD OF MEASUREMENT

Curb Inlet (Type 22) shall be measured & paid for at the contract unit price bid per each. This shall be considered full compensation for all excavation, backfilling, for all materials, labor, equipment, tools & incidentals necessary to complete the work.
No separate payment shall be made for "Inlet Hook-Up". No deduction in combined curb & gutter shall be made.

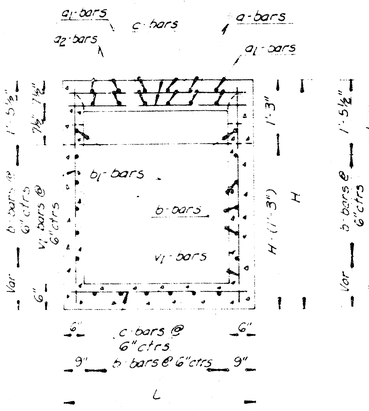
NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

STATE HIGHWAY COMMISSION OF KANSAS

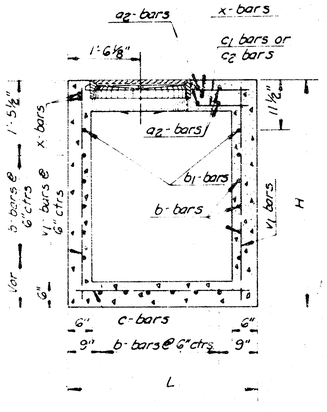
TYPE 22
CURB INLET

SHEET NO. OF	SCALE	APP'D	TRACED
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	

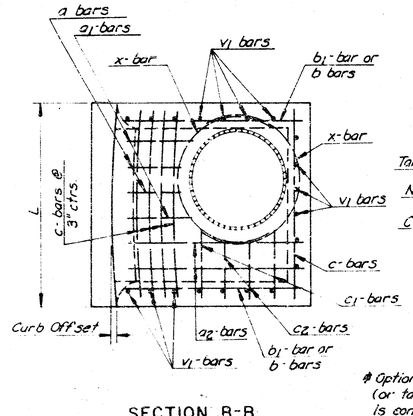
Sh. No. 7 \ 11



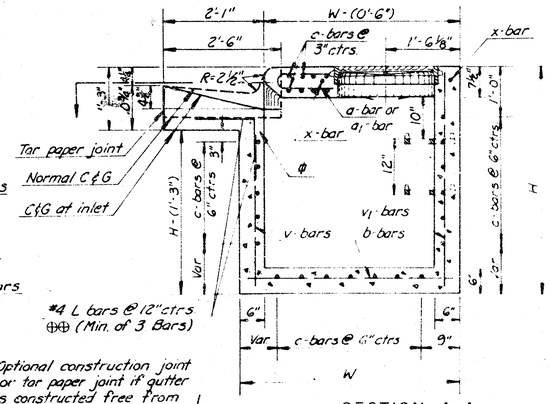
SECTION D-D



SECTION C-C

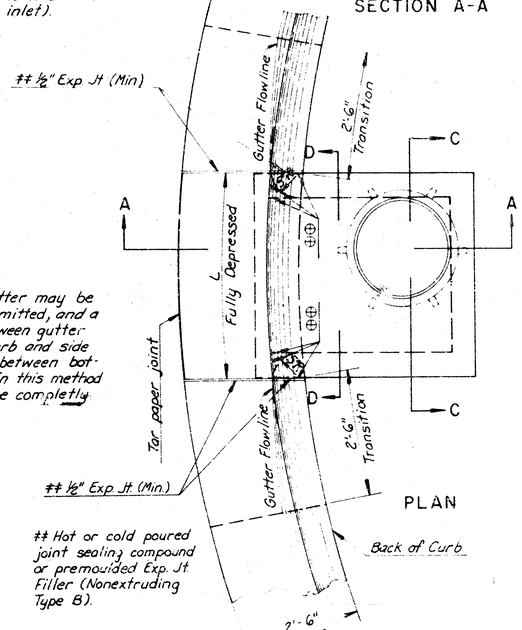


SECTION B-B



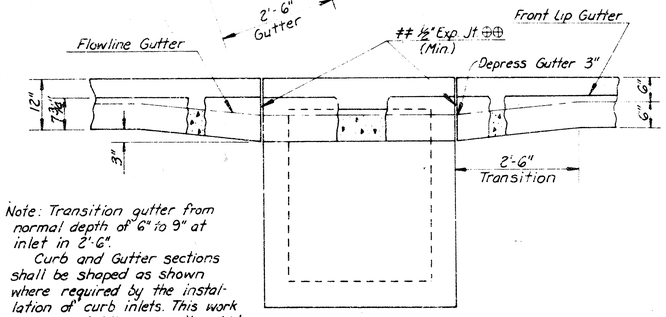
SECTION A-A

Optional construction joint (or tar paper joint if gutter is constructed free from inlet).



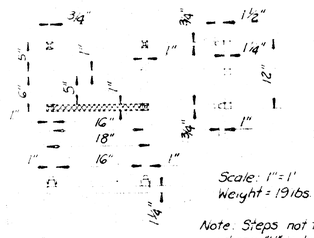
PLAN

Hot or cold poured joint sealing compound or premoulded Exp. Jt Filler (Nonextruding Type B).



ELEVATION

Note: Transition gutter from normal depth of 6" to 9" at inlet in 2'-6".
Curb and Gutter sections shall be shaped as shown where required by the installation of curb inlets. This work will be subsidiary to other bid items.



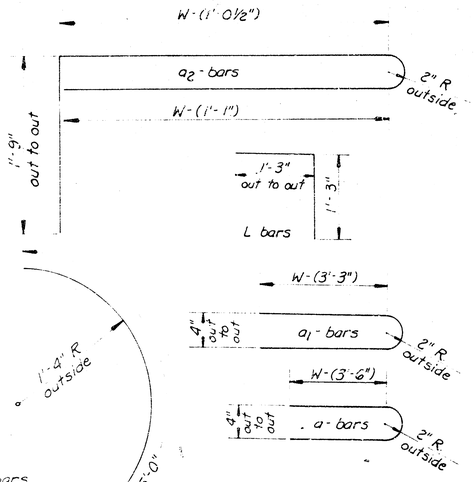
Note: Steps not to be used where "H" is less than 6 ft.

CAST IRON STEP

LENGTH OF INLET	RADIUS OF RETURN 20'	25'	30'	35'	40'	45'	50'
4'	1 1/8"	1"	3/4"	5/8"	5/8"	1/2"	1/2"
5'	1 1/8"	1 1/8"	1 1/4"	1"	7/8"	7/8"	3/4"
6'	2 5/8"	2 1/8"	1 3/4"	1 1/2"	1 3/8"	1 1/4"	1"
7'	2 7/8"	2 3/4"	2 1/8"	1 7/8"	1 5/8"	1 1/2"	
8'	3 1/8"	2 3/4"	2 3/4"	2 3/8"	2 1/8"	1 7/8"	
9'	3"	2 5/8"	2 3/4"				
10'	3"						

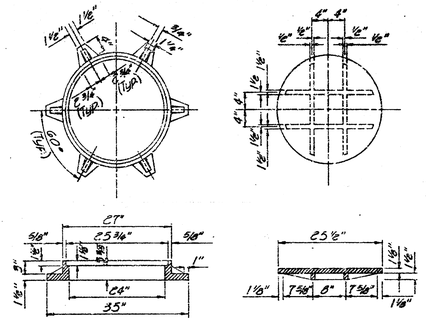
CURB OFFSETS

⊕⊕ At the Contractors option, gutter may be constructed continuous, L bars omitted, and a 1/2" Expansion joint installed between gutter and face of inlet and between curb and side of inlet with a tar paper joint between bottom of gutter and top of wall. In this method of construction, the inlet shall be completly free of the gutter and curb.



BENDING DIAGRAMS

Note: Reinforcing steel for L bars is not included in the steel quantity and is subsidiary to the other inlet items.



TYPE D

CAST IRON MANHOLE RING
Weight = 190 lbs.

CAST IRON MANHOLE COVER
Weight = 170 lbs.

MANHOLE COVER & RING

FHWA REGION NO. 7 | STATE KANSAS | PROJECT NO | YEAR | SHEET NO. | TOTAL SHEETS

Note: Concrete shall conform to the City of Wichita Concrete Pavement Specifications.

All exposed edges shall be finished with an edging tool.

Reinforcing bars shall be bent around pipe.

No deductions in concrete quantities shall be made for pipe openings.

~~At the contractor's option, base course may be~~ used in concrete pavement may be used throughout.

When so ordered by the Engineer, the top of the inlet shall be sloped slightly to approximately fit the ground line or other conditions.

All exposed cast iron surfaces shall be painted either in the shop or at the field with one coat of a zinc dust paint, followed by two field coats of aluminum paint.

Floor of inlet shall be shaped as **directed by the Engineer.**

~~No drill channel shall be shaping floor of inlet.~~ ~~Inlet floor shall be formed when practicable.~~ No additional concrete for this shall be made for shaping floor of inlets.

All bars are #4 bars @ 6" spacing and shall have a minimum clearance of 1 1/2" unless otherwise noted on the plans.

~~Cast iron steps shall be installed in all storm sewer inlets with an H dimension greater than 6 feet.~~

When directed by the Engineer, small openings may be required in the back of the inlet in order to drain a low area. Reinforcing bars will extend through the opening. No deductions in concrete quantities will be made for these openings.

The weight of castings includes no allowance for fillets and overruns. All castings shall be gray iron and shall comply with ASTM A-48 Class 25 S.

~~See sheet entitled "Reinforcing Steel for Inlets and Manholes" for details & quantities.~~

~~For additional notes and details on Cast Type Curb Iron Manhole Cover & Ring Type C, and Cast Iron Steps, see Standard drawing #633 "Reinforced Concrete Manhole".~~

No deductions will be made in pay length of curb, gutter, or curb & gutter thru the inlet area.

BASIS OF PAYMENT & METHOD OF MEASUREMENT

Curb Inlet (Type 22 Radius) shall be measured & paid for at the contract unit price bid per each. This shall be considered full compensation for all excavation, backfilling, materials, labor, equipment, tools & incidentals necessary to complete the work.

No separate payment shall be made for "Inlet Hook-Up".

NO	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TYPE 22 RADIUS CURB INLET

STD NO 645

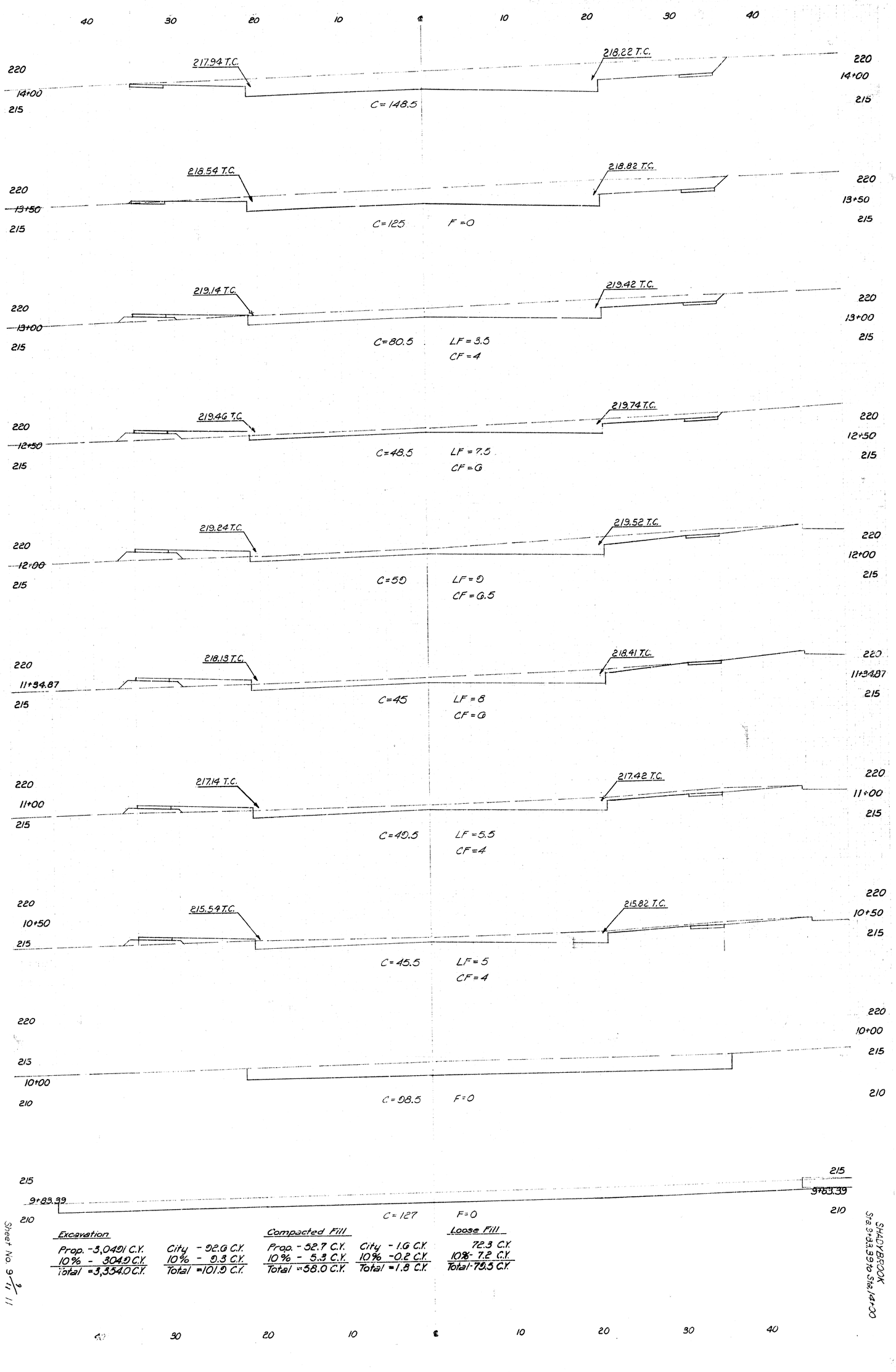
DATE 4-23-80 | SCALE ø 3/4" = 1' | APP'D | QUANTITIES | TRACED | BASED

DESIGNED Seitz | DETAILED | QUANTITIES | TRACED | BASED

DESIGN CK | DETAIL CK Hecht | QUAN. CK | TRACE CK Feuerborn

Sh. No. 8 / 11 11

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Excavation

Prop. -3,040.1 C.Y.	City - 92.6 C.Y.	
10% - 304.0 C.Y.	10% - 9.3 C.Y.	
Total =3,334.0 C.Y.	Total =101.9 C.Y.	

Compacted Fill

Prop. - 52.7 C.Y.	City - 1.6 C.Y.	
10% - 5.3 C.Y.	10% -0.2 C.Y.	
Total =58.0 C.Y.	Total =1.8 C.Y.	

Loose Fill

72.3 C.Y.
10%- 7.2 C.Y.
Total-79.5 C.Y.

Sheet No. 9 of 11

SHADYBROOK
Sta 9+83.39 to Sta 14+30

40 30 20 10 ℄ 10 20 30 40

215
210
17+50
205

210.02 T.C.

210.30 T.C.

C=115.5

215
210
17+00
205

211.82 T.C.

211.60 T.C.

C=110

220
215
16+50
210

212.62 T.C.

212.90 T.C.

C=118

220
215
16+00
210

213.92 T.C.

214.20 T.C.

C=117.5

220
215
15+78.68
210

214.48 T.C.

214.76 T.C.

C=121.5

220
215
15+31.72
210

215.70 T.C.

215.98 T.C.

C=124

220
215
14+84.75
210

216.88 T.C.

217.12 T.C.

C=128

220
215
14+50
210

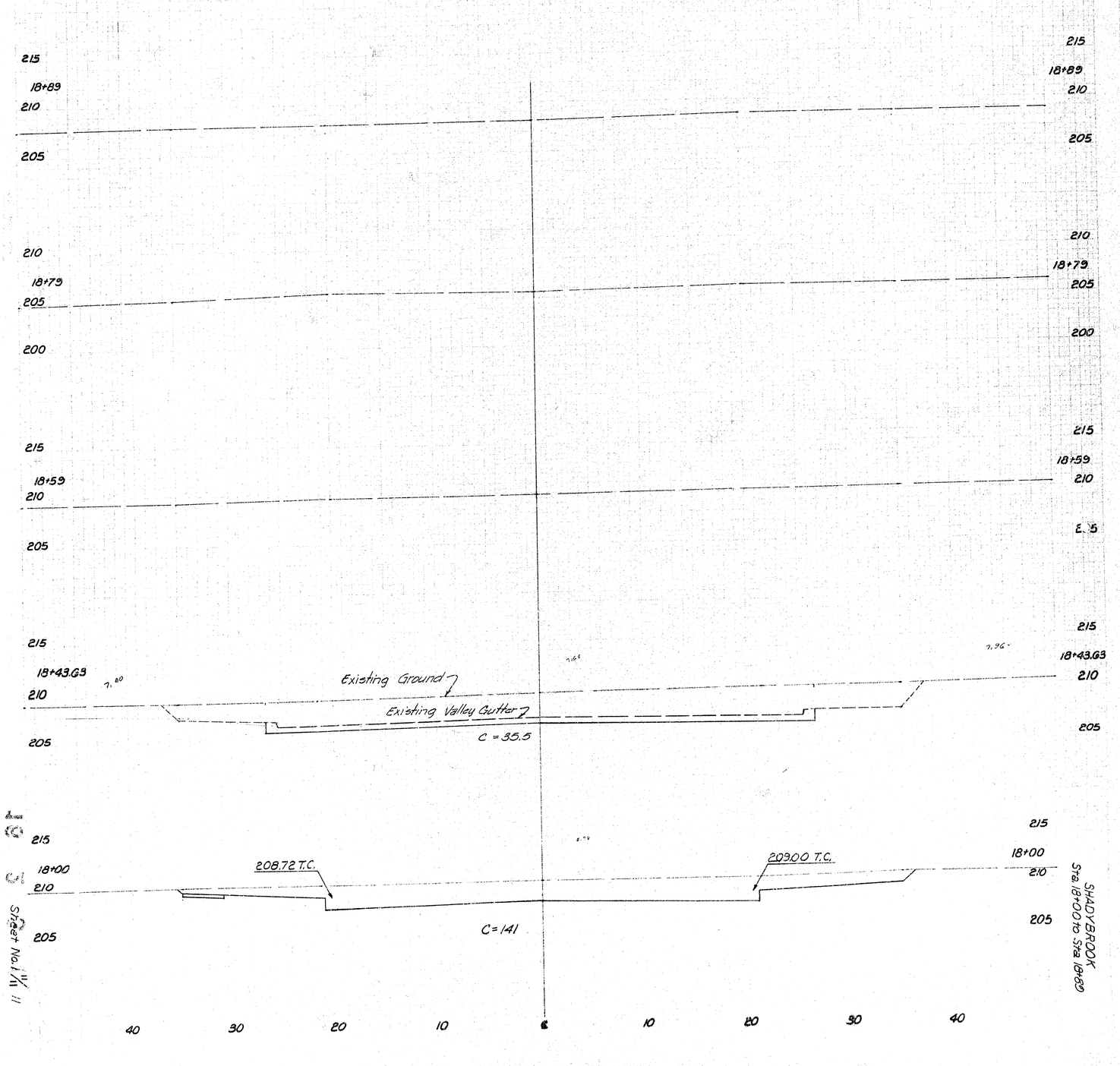
217.34 T.C.

217.62 T.C.

C=140.5

SHADYBROOK
Sta. 14+50 to Sta. 17+50

Sheet No. 10/11


215
18+89
210
205
210
18+79
205
200
215
18+59
210
205
215
18+43.63
210
205
7.80
Existing Ground
Existing Valley Gutter
C = 35.5
7.96
215
18+89
210
205
210
18+79
205
200
215
18+59
210
E. S
215
18+43.63
210
205
215
18+00
208.72 T.C.
209.00 T.C.
210
205
C = 141
215
18+00
210
205
40
30
20
10
10
20
30
40
SHADYBROOK
Sta. 18+00 to Sta. 19+69
Sheet No. 11 of 11