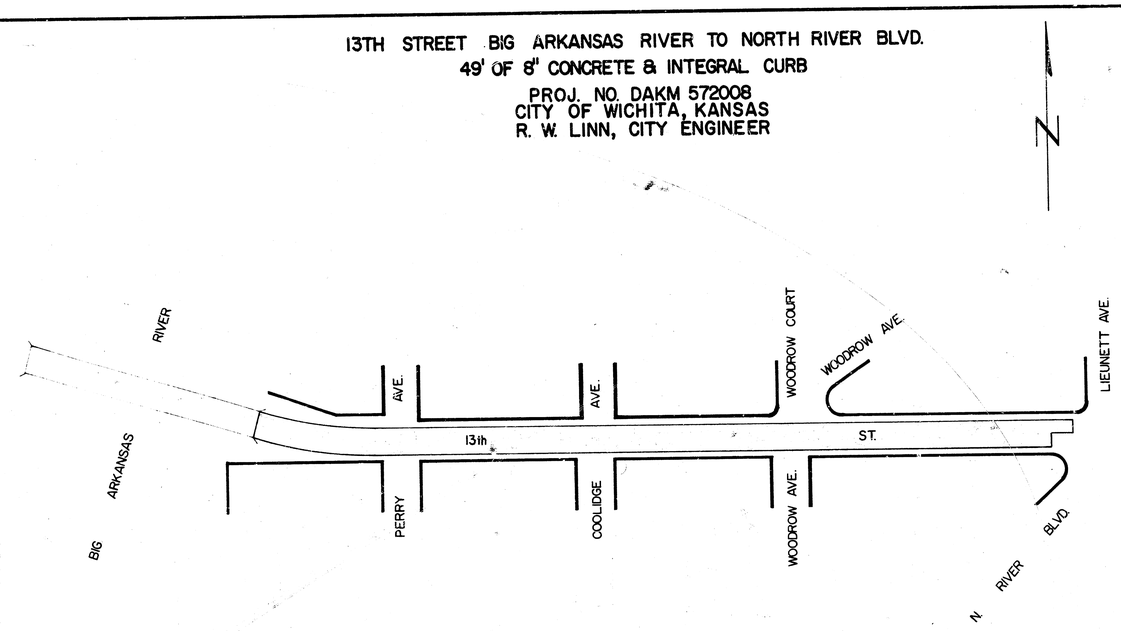
13TH STREET BIG ARKANSAS RIVER TO NORTH RIVER BLVD.
49' OF 8" CONCRETE & INTEGRAL CURB

PROJ. NO. DAKM 572008
CITY OF WICHITA, KANSAS
R. W. LINN, CITY ENGINEER

INDEX

Description	Sheet No.
Title Sheet	1
Typical Sections	2
Plan Sheets	3-5
Detail Sheet	6
Cross-sections	7-13



GENERAL NOTES:

1. FIELD ENGINEER TO TAKE TIES TO ALL EXISTING IRONS & IRONS IN THIMBLES. EXISTING IRONS IN THIMBLES TO BE REPLACED WITH IRON IN THIMBLE. ALL IRONS IN PAVEMENT TO BE REPLACED WITH IRON IN THIMBLE.

2. FIELD ENGINEER TO DETERMINE WHICH AREAS OF THE SUB-GRADE ARE TO BE CEMENT OR LIME TREATED AND WHICH AREAS ARE TO BE SUB-GRADE MODIFIED.

3. NO WORK TO BE DONE ON PRIVATE PROPERTY WITHOUT PRIOR CONSENT OF PROPERTY OWNER.

4. ALIGNMENT ON WEST END OF PROJECT IS TIED TO THE ℄ OF THE EXISTING BRIDGE OVER THE BIG ARKANSAS RIVER AT 13TH STREET.

5. FIELD ENGINEER TO FIELD LOCATE THE ALIGNMENT OF THE PROPOSED PAVEMENT BEFORE MARKING TREES FOR REMOVAL. SAVE AS MANY TREES AS POSSIBLE.

6. FIELD ENGINEER TO LOCATE BACK OF WALK LINE TO SAVE TREES ALONG PROPERTY LINE. MAXIMUM DISTANCE BETWEEN PROPERTY LINE & BACK OF WALK LINE IS 12 FT.

7. THE FIELD ENGINEER SHALL DETERMINE WHERE NEW MANHOLE FRAMES AND COVERS ARE NEEDED. NEW MANHOLE FRAMES AND COVERS SHALL BE PAID BY FORCE ACCOUNT.

8. FIELD ENGINEER SHALL APPROVE ALL BORROW EXCAVATION BEFORE IT IS USED ON THIS PROJECT.

9. FIELD ENGINEER TO REGRADE SECTION AREAS WHERE STORM SEWER CONTRACTOR STORED EXCAVATED MATERIAL OVER NEW STORM SEWER TRENCH.

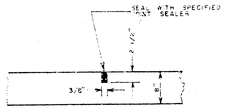
LARRY W. LAUREN — LICENSED — 6363 — KANSAS — PROFESSIONAL ENGINEER

R. W. LINN — LICENSED — 3534 — KANSAS — PROFESSIONAL ENGINEER

1/13

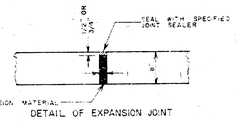
PROJ. NO. DAKM 572008
CITY OF WICHITA, KANSAS
R. W. LINN, CITY ENGINEER

SAWED CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT 30' 0" INTERVALS EXCEPT WHERE AN EXPANSION JOINT IS USED.

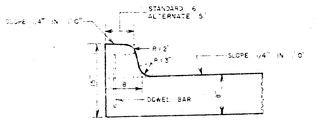


DETAIL OF SAWED CONTRACTION AND LONGITUDINAL JOINTS

EXPANSION JOINTS ARE TO BE CONSTRUCTED AT MAXIMUM INTERVALS OF 120' 0".



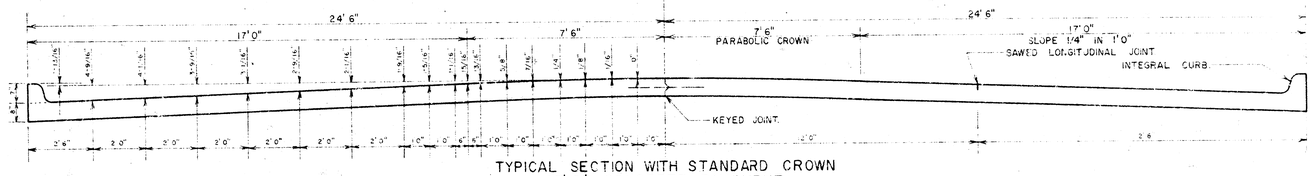
DETAIL OF EXPANSION JOINT



DETAIL OF INTEGRAL CURB

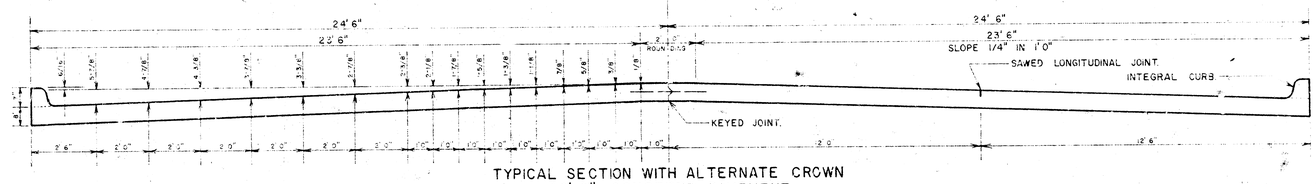
INTEGRAL CURB SHALL BE CUT THROUGH TO THE PAVEMENT IN UNIFORM LENGTHS OF NOT MORE THAN TEN FOOT INTERVALS BETWEEN EXPANSION JOINTS. EXPANSION JOINTS HAVING THE SAME THICKNESS AS THE EXPANSION JOINTS IN THE PAVEMENT SHALL BE CONSTRUCTED IN THE INTEGRAL CURB AT THE SPECIFIED LOCATIONS. NUMBER 4 OR NUMBER 6 DOWELS SHALL BE INSTALLED IN THE INTEGRAL CURB AS SHOWN ON APPROXIMATELY 2' 6" CENTERS. PAVEMENT GRADES SHOWN ON PLANS ARE FOR STANDARD CROWN.

SYMETRICAL ABOUT CENTERLINE

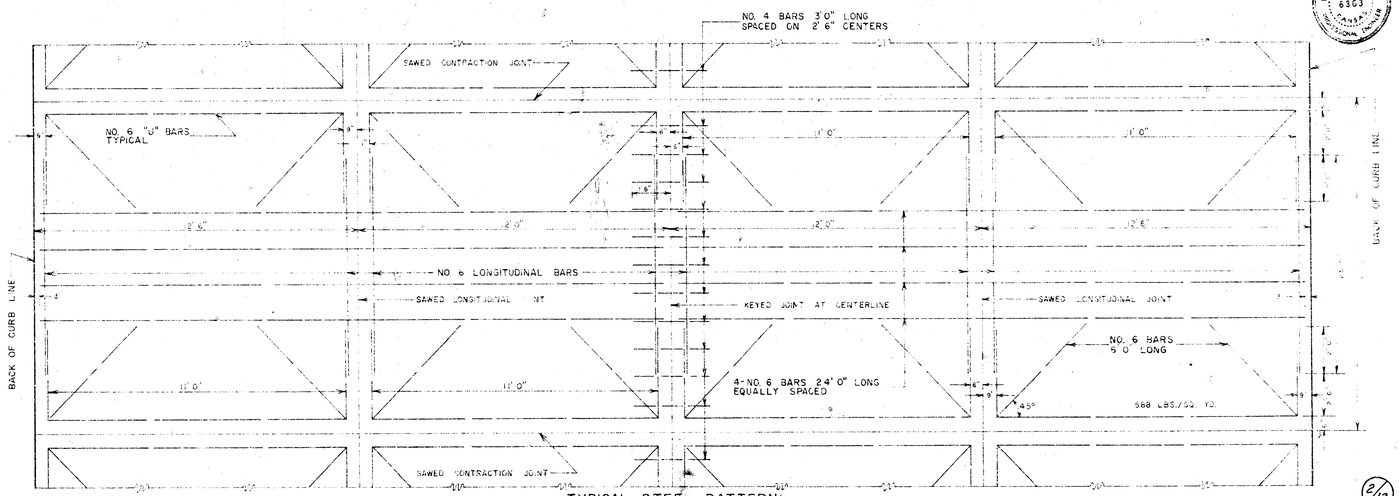


TYPICAL SECTION WITH STANDARD CROWN
48' 0" CONCRETE PAVEMENT

SYMETRICAL ABOUT CENTERLINE



TYPICAL SECTION WITH ALTERNATE CROWN
48' 0" CONCRETE PAVEMENT



TYPICAL STEEL PATTERN
48' 0" CONCRETE PAVEMENT

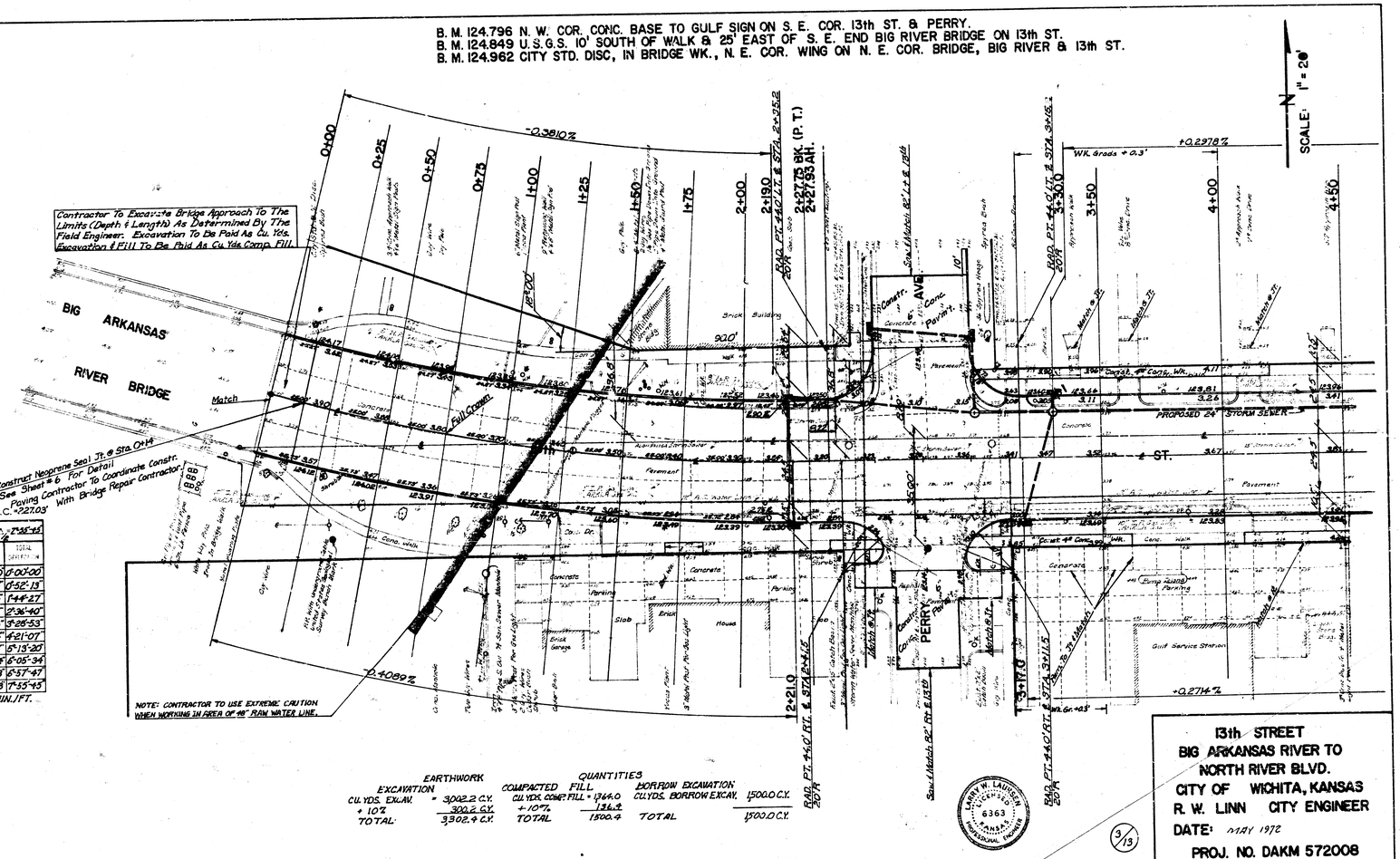
LARRY W. LAURSEN
6803
KANSAS
REGISTERED PROFESSIONAL ENGINEER

2/13

Survey Granite Bk. 176, Pg. 7/16/69
Plat Laursen
Est.
Checked O.L.S.

B. M. 124.796 N. W. COR. CONC. BASE TO GULF SIGN ON S. E. COR. 13th ST. & PERRY.
B. M. 124.849 U.S.G.S. 10' SOUTH OF WALK & 25' EAST OF S. E. END BIG RIVER BRIDGE ON 13th ST.
B. M. 124.962 CITY STD. DISC, IN BRIDGE WK., N. E. COR. WING ON N. E. COR. BRIDGE, BIG RIVER & 13th ST.

SCALE: 1" = 20'



CURVE DATA BASED ON ℄ R'way. RAD. Δ = 7°58'45" R=822.87'

STA	ARC.	CHORD LENGTH ℄ of Curve	CHORD LENGTH ℄ of Tan.	DEFLECTION	TOTAL
0+00	—	—	—	0°00'00"	0°00'00"
0+25	25.00'	24.02'	25.98'	0°52'13"	0°52'13"
0+50	"	24.03'	25.97'	0°52'14"	1°44'27"
0+75	"	24.02'	25.98'	0°52'13"	2°36'40"
1+00	"	24.02'	25.98'	0°52'13"	3°28'53"
1+25	"	24.03'	25.97'	0°52'14"	4°21'07"
1+50	"	24.02'	25.98'	0°52'13"	5°13'20"
1+75	"	24.03'	25.97'	0°52'14"	6°05'34"
2+00	25.00'	24.02'	25.98'	0°52'13"	6°57'47"
2+27.75	27.75'	26.67'	28.83'	0°57'58"	7°55'45"

Δ = 15°51'30" R. 822.87' T. = 114.61' L. = 227.75' LC. = 227.03'

DEFLECTION IN MIN./FT. = 2.08891328 MIN./FT.

QUANTITIES

EARTHWORK

EXCAVATION		COMPACTED FILL		BORROW EXCAVATION	
CU. YDS. EX.AV.	3002.2 C.Y.	CU. YDS. COMP. FILL	1364.0	CU.YDS. BORROW EXCAV.	1500.0 C.Y.
+ 10%	300.2 C.Y.	+ 10%	136.4		
TOTAL	3302.4 C.Y.	TOTAL	1500.4	TOTAL	1500.0 C.Y.

LARRY W. LAURSEN LICENSED 6363 KANSAS PROFESSIONAL ENGINEER

3/13

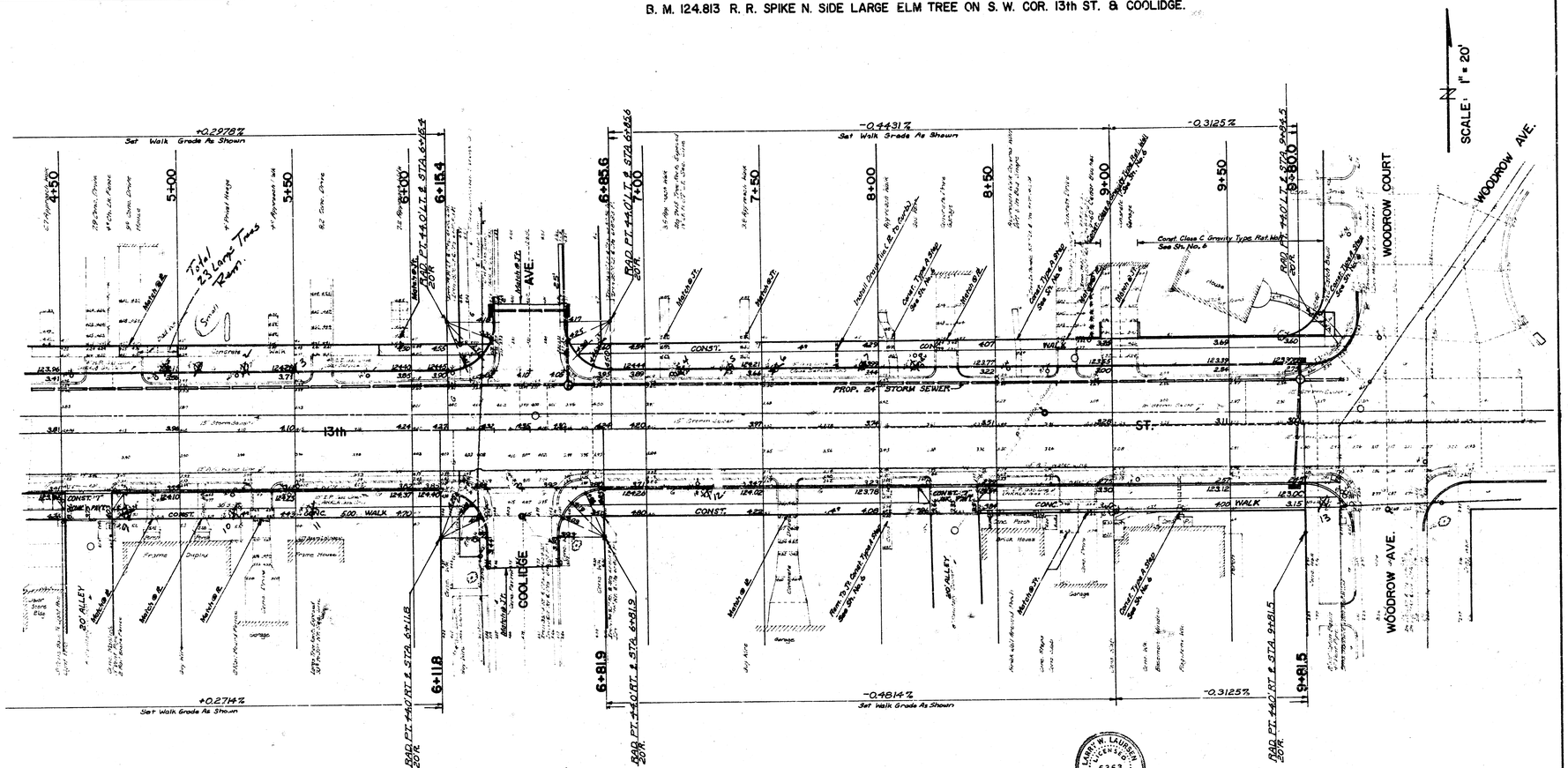
13th STREET
BIG ARKANSAS RIVER TO NORTH RIVER BLVD.
CITY OF WICHITA, KANSAS

R. W. LINN CITY ENGINEER

DATE: MAY 1972

PROJ. NO. DAKM 572008

B. M. 124.813 R. R. SPIKE N. SIDE LARGE ELM TREE ON S. W. COR. 13th ST. & COOLIDGE.


+0.2978%
Set Walk Grade As Shown
-0.4431%
Set Walk Grade As Shown
-0.3125%
4+50
5+00
5+50
6+00
6+15.4
6+85.6
7+00
7+50
8+00
8+50
9+00
9+50
9+800.11
Total 23 Large Trees Rem.
Small
Match 8.6
Match 8.6
Match 8.6

B. M. 123.357 R.R. SPIKE N. SIDE LARGE ELM TREE ON S.E. COR. 13th ST. & WOODROW.
B. M. 122.26 "X" CUT ON N. E. COR. CONC. M. H. (CITY) ON W. SIDE LIEUNETT, APPROX. 35' N. OF N. L. 13th ST.

SCALE: 1" = 20'

P.I. ELEV. 122.30 NO V.C.

-0.2736%

-0.6091%

WOODROW COURT

WOODROW AVE.

LIEUNETT AVE.

13th ST.

PROP. 24" STORM SEWER

Total 2 Small Trees To Be Removed

-0.2727%

-0.7417%

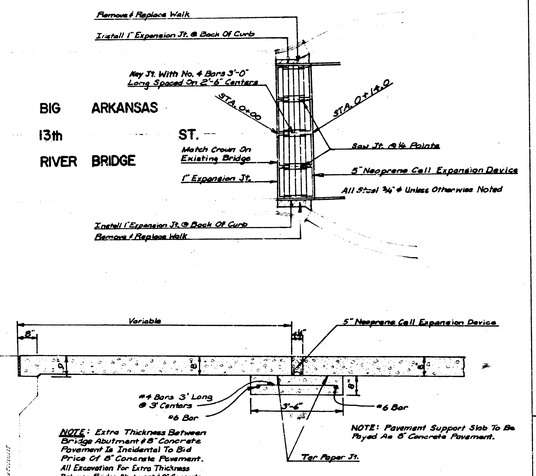
P.I. ELEV. 122.05 NO V.C.

N. RIVER BLVD.

LARRY W. LAURSEN LICENSED 6363 KANSAS PROFESSIONAL ENGINEER

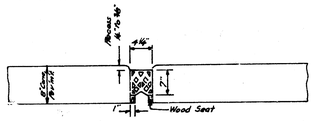
13TH STREET BIG ARKANSAS RIVER TO NORTH RIVER BLVD.

5/13



NOTE: Extra Thickness Between Bridge Abutment & 8" Concrete Pavement Is Incidental To Bid Price Of 8" Concrete Pavement. All Excavation For Extra Thickness Between Bridge Abutment & 8" Concrete Pavement Is Incidental To The Bid Price Of 8" Concrete Pavement.

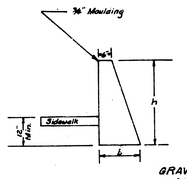
NOTE: Pavement Support Slab To Be Payed As 8" Concrete Pavement.



Install 5" Wide Preformed Open Cell Neoprene Joint Seal. Use "H" Series Dekatic Bridge Seal Catalog No. H-5000, D. S. Brown Co. Or An Approved Equal.

The Neoprene Joint Material Shall Be Machine Installed With Equipment Capable Of Placing The Strips At The Specified Depth Without Increasing Or Decreasing The Length As Taken From The Roll Or Box By More Than 5%. No Splices Will Be Permitted Across The Roadway, 6" Long Sections Are To Be Installed Vertical In The Curb Section Of The Roadway Pavement. The Seals Shall Be Secured In Place With An Approved Lubricant Adhesive Which Shall Cover Both Sides Of The Seal Over The Full Contact Area. The Seals And Installation Shall Not Be Paid For Directly, But Shall Be Subsidiary To The Bid Item Of 8" Concrete Pavement.

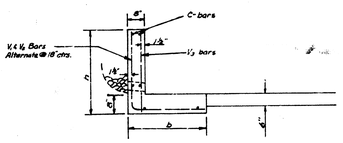
EXPANSION DEVICE DETAILS



GRAVITY TYPE (Concrete)

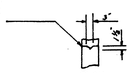
CLASS	DIMENSIONS h	b	Conc/Ft. Cu. Yds.
A	1'-8"	11"	.046
	2'-0"	13"	.059
B	2'-3"	15"	.073
	2'-6"	17"	.089
C	2'-9"	18½"	.104
	3'-0"	20"	.120

CLASS	DIMENSIONS h	b	PER LIN. FT. OF WALL Weight Stl.	% Conc.
A	1'-6"	1'-6"	3.676	.058
	1'-9"	1'-9"	3.896	.070
	2'-0"	2'-0"	4.120	.083
B	2'-3"	2'-3"	6.173	.095
	2'-6"	2'-6"	6.985	.107
C	2'-9"	2'-9"	6.732	.120
	3'-0"	3'-0"	7.097	.132

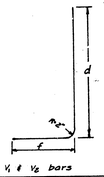


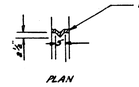
L,-TYPE RETAINING WALL FOR DRIVEWAYS

Construct Tar Paper & Keyed Construction Joints @ 20' Intervals. Discontinue Reinf. Steel In L-Type Retaining Walls



PLAN





Expansion Joints @ 100' Maximum Spacing, 1" Premoulded Expan. Jt. Material, Discontinue Reinf. Steel.

PLAN

REINF. STEEL SCHEDULE

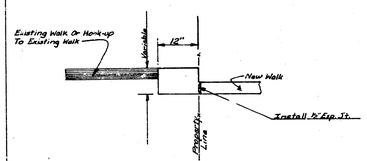
L,-TYPE RETAINING WALL FOR DRIVEWAYS

h	bar	size	Cutting Length	Spacing	d	f	Remarks
1'-6"	V.	#3 @	2'-3"	18"	1'-1"	1'-3"	L Shape
	C	#3 @	4 Horiz. Bars Continuous				Straight
1'-9"	V.	#3 @	2'-9"	18"	1'-4"	1'-6"	L Shape
	C	#3 @	4 Horiz. Bars Continuous				Straight
2'-0"	V.	#3 @	3'-3"	18"	1'-7"	1'-9"	L Shape
	C	#3 @	4 Horiz. Bars Continuous				Straight
2'-3"	V.	#5 @	3'-9"	36" @	1'-6"	2'-0"	L Shape
Weep	V.	#5 @	3'-0"	36" @	1'-1"	2'-0"	L Shape
Holes	V.	#5 @	2'-0"	24"			Straight
	C	#3 @	6 Horiz. Bars Continuous				Straight
2'-6"	V.	#4 @	4'-3"	36" @	2'-1"	2'-3"	L Shape
	V.	#5 @	3'-6"	36" @	1'-6"		L Shape
	V.	#5 @	2'-3"	24"			Straight
	C	#3 @	∴ Horiz. Bars Continuous				Straight
2'-9"	V.	#5 @	4'-0"	36" @	2'-4"	2'-6"	L Shape
	V.	#5 @	3'-0"	36" @	1'-7"		L Shape
	V.	#5 @	2'-6"	24"			Straight
	C	#3 @	6 Horiz. Bars Continuous				Straight
3'-0"	V.	#5 @	3'-3"	36" @	2'-7"	2'-9"	L Shape
	V.	#5 @	4'-0"	36" @	1'-10"	2'-9"	L Shape
	V.	#5 @	3'-9"	24"			Straight
	C	#3 @	6 Horiz. Bar Continuous				Straight

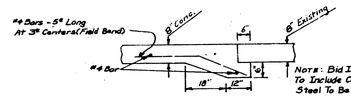
@ Alternate V. & ½ @ 18" Ctrs.

NOTE: All excavation for retaining walls shall be included in the bid price per Lin.ft. of retaining wall. The 4" tile weep holes & crushed rock or coarse gravel for drainage, shall be included in the bid price per lin. ft. of retaining wall.

Note: The Field Engineer shall final measure retaining walls prior to backfill operations.



TYPE A STEP DETAIL



Note: Bid Item for "L.F. Under-Pinning To Include Cost Of Concrete & Excavation. Steel To Be Paid As Lbs. Of Reinf. Steel.

"UNDER-PINNING DETAIL"

LARRY W. LAUFSEN LICENSED 6363 KANSAS PROFESSIONAL ENGINEER

13TH STREET BIG ARKANSAS RIVER TO NORTH RIVER BLVD.

6/13

B. M. 123.357 R. R. SPIKE N. SIDE LARGE ELM TREE ON S. E. COR. 13th ST. & WOODROW.
B. M. 122.28 "X" CUT ON N. E. COR. CONC. M. H. (CITY) ON W. SIDE LIEUNETT, APPROX. 35' N. OF N. L. 13th ST.

GENERAL NOTES:
1. ALL EXISTING INLETS & INLET LEADS SHALL BE REMOVED & PAID FOR AT THE BID PRICE FOR INLETS REM. & LIN. FT. PIPE REM. RESPECTIVELY.
2. THE EXISTING STORM SEWER LINE SHALL BE ABANDONED, SAND FILLED, AND PLUGGED. PLUGGING OF PIPES SHALL BE PAID FOR AT THE BID PRICE FOR PIPE PLUGS.
3. ANY LABOR & EQUIPMENT COSTS NECESSARY TO FILL THE ABANDONED STORM SEWER WITH SAND SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.
4. MANHOLES TO BE ABANDONED SHALL HAVE THE TOP REM. TO THE TOP OF EXISTING PIPES. THIS WORK SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE BID PRICE FOR LIN. FT. 24" R.C.P.

GENERAL NOTES CONTINUED:
5. CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH UTILITIES INVOLVED.
6. CONTRACTOR SHALL SALVAGE ALL EXISTING CASTINGS FOR MANHOLES & INLETS. CONTRACTOR TO DELIVER SALVAGED CASTINGS TO CITY OF WICHITA MAINTENANCE DIVISION YARD AS DIRECTED BY THE FIELD ENGINEER.
7. ALL COSTS OF INSTALLING CONC. COLLAR AROUND JOINT BETWEEN DUCTILE IRON & "LAY" PIPE TO BE SUBSIDIARY TO THE BID PRICE OF DUCTILE IRON PIPE.

CONSTR. STD. 8'x5' INLET
FLO OUT 15" R.C.P. E. 118.00
FLO IN 15" R.C.P. N.E. 117.40
FLO OUT 15" R.C.P. S. 117.20
TOP CURB 123.65

CONSTR. STD. 8'x5' INLET
FLO OUT 15" R.C.P. S.W. 119.00
TOP CURB 122.80

STA. 0+00
EXISTING M. H.
FLO IN 18" R.C.P. N.E. 117.18 (EXISTING)
FLO IN 18" R.C.P. & 115.86 (EXISTING)
FLO IN 8" PIPE W. 115.18 (EXISTING TO BE REM.)
FLO OUT 24" R.C.P. E. 111.06 (EXISTING)
FLO IN 24" R.C.P. N. 111.14
TOP M.H. 121.40

STA 0+43
CONSTR. STD. M. H. (TYPE A)
FLO IN 15" R.C.P. N. 118.43
FLO IN 15" R.C.P. S. 118.40
FLO 24" R.C.P. 112.83
TOP M.H. 122.83

STA 1+03
CONSTR. STD. M. H. (TYPE A)
FLO IN 18" R.C.P. N. 117.20
FLO 24" RCP 112.63
TOP M.H. 122.52

CONSTR. STD. 8'x5' INLET
FLO OUT 15" R.C.P. N. 118.00
TOP CURB 123.00

WOODROW AVE.
WOODROW COURT
LIEUNETT AVE.
13th ST.
EXISTING PAVEMENT (CONC.)
PROPOSED PAVEMENT
MANHOLES TO BE ABANDONED
INSTALL 10 LIN. FT. 8" DUCTILE IRON PIPE
REMOVE EXISTING 21" STORM SEWER TO CLEAR NEW CONSTRUCTION AS NECESSARY
8" C.I. WATER LINE
8" Sanitary Sewer
8" Abandoned Telephone Conduit
8" Storm Sewer
8" Telephone Conduit

CAUTION
UNDERGROUND UTILITIES

NOTE:
CONTRACTOR TO STOCKPILE 1500 CU. YDS. EXCAVATED MATERIAL THAT IS SUITABLE FOR USE AS COMPACTED FILL. THIS MATERIAL TO BE STORED OVER NEW STORM SEWER TRENCH.

PLAN SCALE : 1"=20'
PROFILE SCALE : 1"=20' HORIZ.
1"= 5' VERT.

BOTTOM PROPOSED PAVEMENT

STA 0+43
Connect to Existing 8" Sanitary Sewer

563 LIN. FT. 24" R.C.P. @ +0.30%

363 LIN. FT. 24" R.C.P. @ +0.20%

STA 0+00 EXISTING M.H.

111.14 FLO IN NEST
111.06 FLO OUT (EXISTING)
118.40 FLO IN SOUTH (EXISTING)
118.43 FLO IN NORTH
118.40 FLO OUT (EXISTING)

"As Built" Final Measurement of 24" Sewer

INCIDENTAL DRAINAGE IN CONNECTION WITH PAVING 13TH STREET FROM BIG ARKANSAS RIVER TO NORTH RIVER BOULEVARD
CITY OF WICHITA, KANSAS
R.W. LINN, CITY ENGINEER
PROJ. NO. DAKD 572008
DATE: MAY 1972

1/3

B. M. 124.813 R.R. SPIKE N. SIDE LARGE ELM TREE ON S. W. COR. 13th ST. & COOLIDGE.

CONSTR. STD. 2'x5' INLET
FLO IN 15" R.C.P. E. 122.20
TOP CURB 124.18

CONSTR. STD. 2'x5' INLET
FLO IN 15" R.C.P. W. 119.90
FLO OUT 15" R.C.P. S. 119.80
TOP CURB 124.18

STA. 3+46
CONSTR. STD. M.H. (TYPE A)
FLO IN 15" R.C.P. N. 119.80
FLO IN 24" R.C.P. W. 118.28
FLO OUT 24" R.C.P. E. 118.17
TOP M.H. 124.15

CAUTION
UNDERGROUND
UTILITIES

STA. 5+43

WOODROW COURT

AVE.

COOLIDGE

13th

ST.

MANHOLE TO BE ABANDONED

MANHOLE TO BE ABANDONED

PROPOSED PAVEMENT

EXISTING PAVEMENT

INSTALL 10 LIN. FT.
8" CULTILE IRON PIPE

WOODROW AVE.

N

JERRY W. LAUDEN
REGISTERED
6363
KANSAS
PROFESSIONAL ENGINEER

130
120
110

STA. 3+46
CONSTR. STD. M.H. (TYPE A)

BOTTOM PROPOSED PAVEMENT

STA. 5+43
TOP M.H. Existing @ Woodrow Ave.

224 LIN. FT. 24" R.C.P. @ +0.50%

313 LIN. FT. 24" R.C.P. @ +0.30%

224 LIN. FT. 24" R.C.P. @ +0.50%

313 LIN. FT. 24" R.C.P. @ +0.30%

11+00 FLO
11+00 M.H.
10+00
9+00
8+46
8+33 FLO IN 24" R.C.P. W.
8+33 FLO OUT 24" R.C.P. SOUTH
8+33 TOP M.H.
8+00
7+00
6+00
5+43

2/3

"As Built"
PROJ. NO. DAKD 572008

B. M. 124.796 N. W. COR. CONC. BASE TO GULF SIGN ON S. E. COR. 13th ST. & PERRY.
B. M. 124.849 U.S.G.S. 10' SOUTH OF WALK & 25' EAST OF S. E. END BIG RIVER BRIDGE ON 13th ST.
B. M. 124.962 CITY STD. DISC, IN BRIDGE WK., N. E. COR. WING ON N. E. COR. BRIDGE, BIG RIVER & 13th ST.