US90 , 28-13-1

	TEXAS	FEDERAL AID PROJECT
DIST.	COUNTY	CONTROL
20	Jefferson	28-13-

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
	DETOUR LAYOUT
2	TYPICAL CROSS SECTIONS
	ESTIMATE AND QUANTITY
3	PLAN PROFILE
	HAUL DIAGRAM
4	ROADWAY DETAILS & ESTIMATE SUMMARY
	DRAINAGE LAYOUT
	CULVERT LAYOUTS
	BRIDGE LAYOUTS
5-9	STRUCTURAL DETAILS AND STANDARDS — 5-INLET DETAILS; 6-CONCRETE PAVEMENT DETALS (46-1); 7-CONCRETE JOINT DETAILS (46-2); 8-9-B.W.-46(1) & (2)

STATE OF TEXAS
STATE HIGHWAY DEPARTMENT

PLANS OF COMPLETED STATE HIGHWAY IMPROVEMENT

U.S. 90

STATE PROJECT C28-13-1

SCALES: PLAN: 1 IN. = 100 FT.
PROFILE: 1 IN. HOR. = 100 FT., 1 IN. VERT. = 10 FT.
CROSS-SECTIONS: 1 IN. HOR. AND VERT. = 5 FT.
OTHERS AS NOTED.

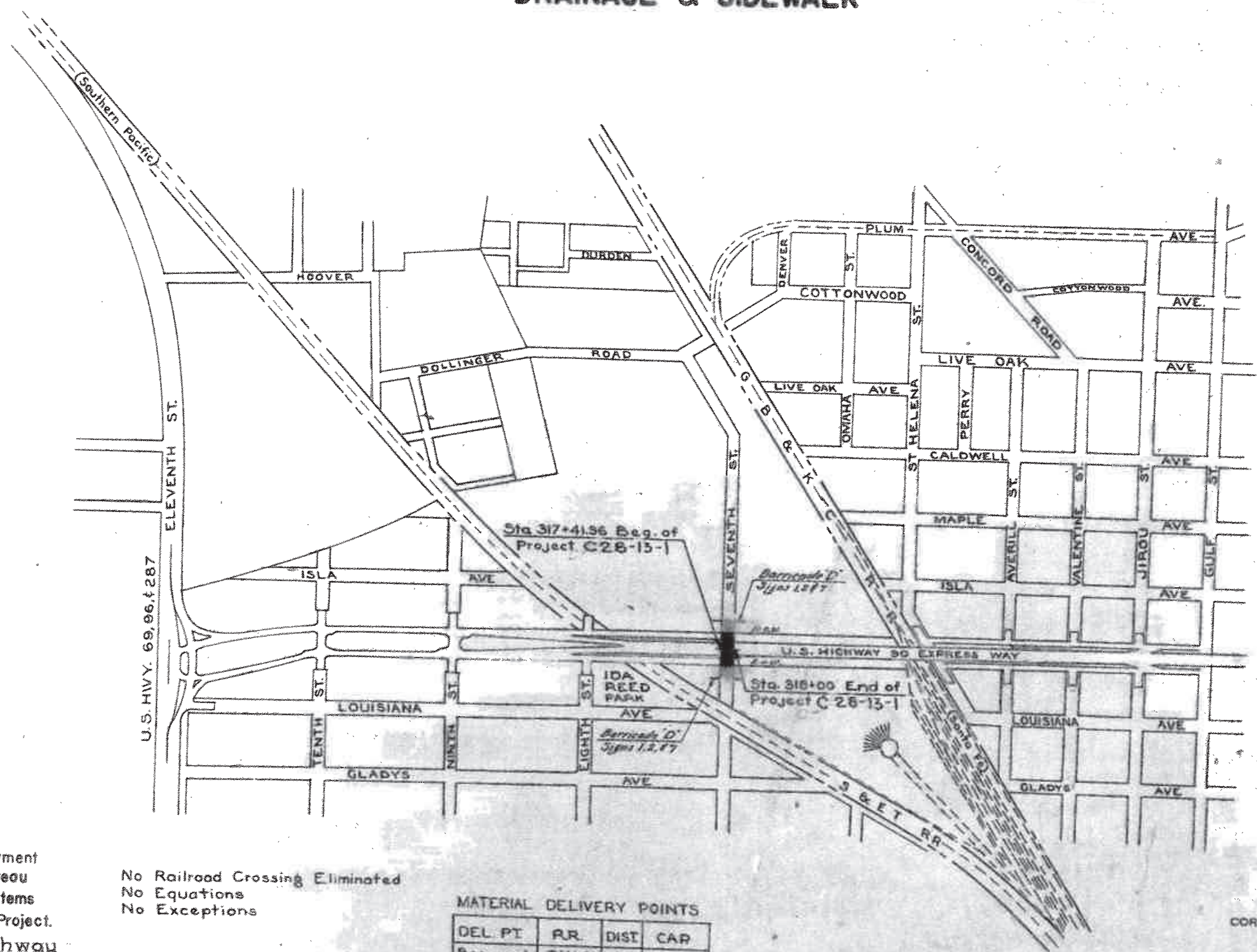
NET LENGTH OF PROJECT= 58.04 FT.=0.011MI.

JEFFERSON COUNTY

7TH. STREET IN BEAUMONT

CONCRETE PAVEMENT

DRAINAGE & SIDEWALK



Final Plans

Project Constructed and Final Plans prepared by:

(signature) Resident Engineer

Rec. for Approval (signature) Aug. 16 1951
City Engineer of Beaumont.

Approved (signature) Aug. 16 1951
Mayor, City of Beaumont.

CONVENTIONAL SIGNS
STATE OR NATIONAL LINE
CITY OR VILLAGE LINE
COUNTY LINE
BASE OR SURVEY LINE
RIGHT OF WAY LINE
RIGHT OF WAY MARKERS
FENCE LINE
RAILROAD
TRAVELLED WAY
CULVERT OR BRIDGE
POWER LINE
TELEGRAPH OR TELEPHONE

Specifications adoped by the State Highway Depdrtment of Texas January 2,1951 and approved by The Bureau Of Public Roads July 25, 1951 and Specifications Items listed and dated as follows shall govern on this Project.
Special Labor Provisions for Texas Highway Projects Adopted Aug. 11-1949.

No Railroad Crossing Eliminated
No Equations
No Exceptions

MATERIAL DELIVERY POINTS

DEL. PT.	R.R.	DIST.	CAR
Beaumont	T.&N.O.	1.0	Ample
Beaumont	K.C.S.	1.0	Ample

LAYOUT SCALE: 1 IN. = 500 FT.

STATE HIGHWAY DEPARTMENT

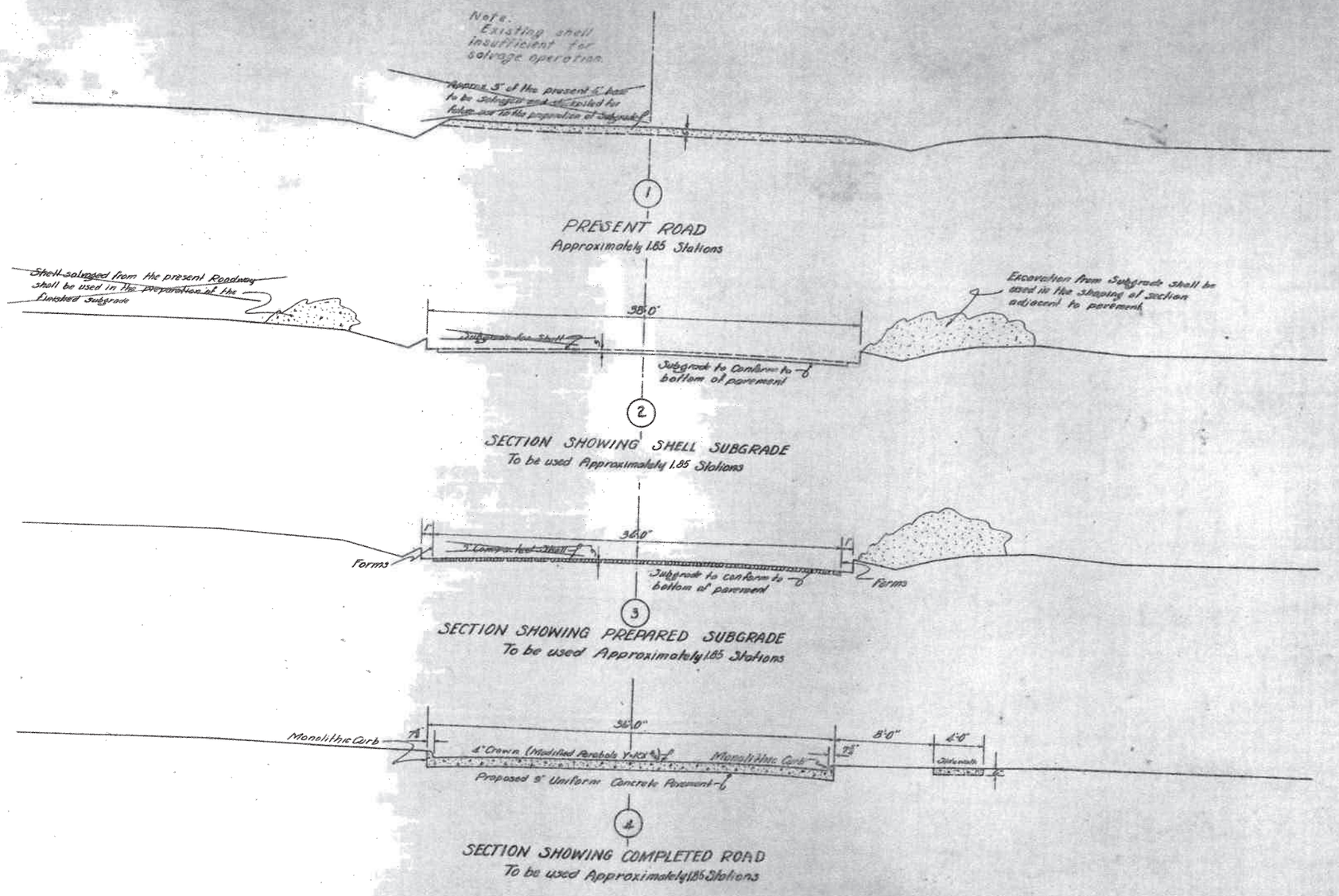
CORRECT: 8-15 1951
(signature) RESIDENT ENGINEER

RECOMMENDED FOR APPROVAL: 8-18 1951
W. C. Simmons DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL: [redacted] BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL: [redacted] ENGINEER ROAD DESIGN
APPROVED: [redacted] CHIEF ENGINEER OF PLANNING

RECOMMENDED FOR APPROVAL: [redacted] DISTRICT ENGINEER PUBLIC ROADS ADMINISTRATION FEDERAL WORKS AGENCY
APPROVED: [redacted] DIVISION ENGINEER PUBLIC ROADS ADMINISTRATION FEDERAL WORKS AGENCY

HWY. NO. ___ LETTING DATE ___
DATE ACCEPTED ___



GENERAL NOTES

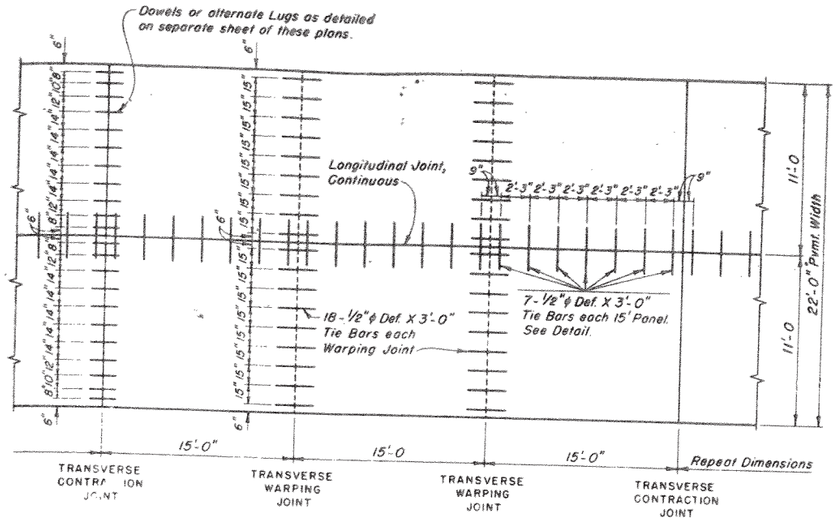
For spacing of longitudinal Joints see Sheets No. 6 Expansion Joints shown on Sheets No. 7

See concrete pavement details Sheet No. 6 for spacing of tie bars at longitudinal and warping Joints.

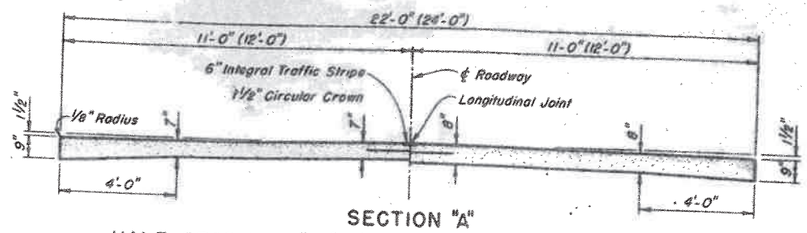
TYPICAL CROSS SECTIONS

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.
6	TEXAS	

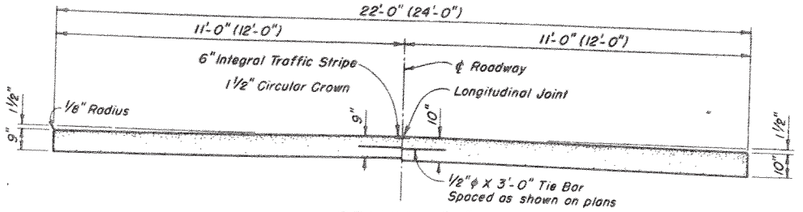
STATE DIST. NO.	COUNTY				
20	[illegible]				



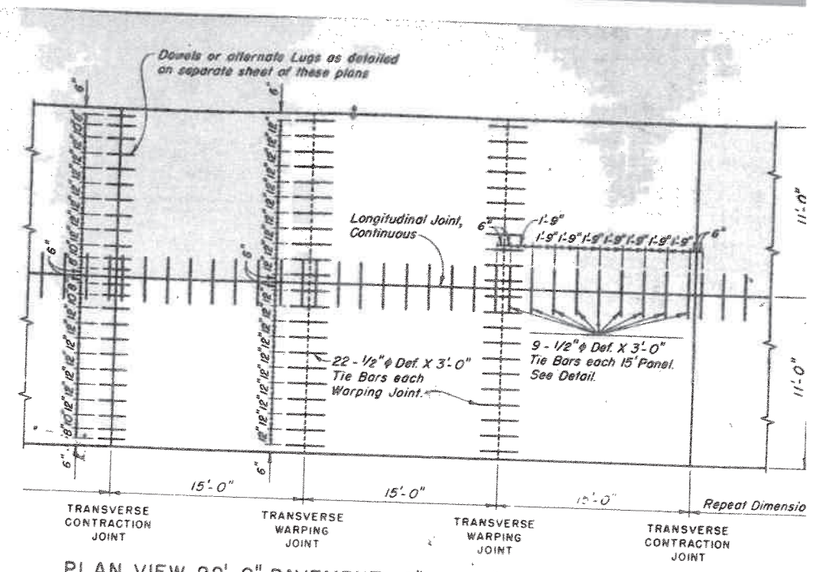
PLAN VIEW 22'-0" PAVEMENT - 7" OR 8" SECTION
SEE SECTION "A"



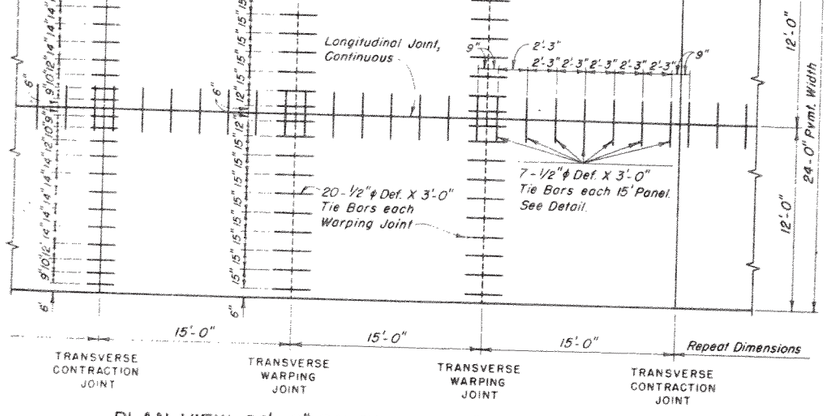
SECTION "A"
HALF SECTION 9"-7"-9" HALF SECTION 9"-8"-9"



SECTION "B"
9" HALF SECTION - UNIFORM THICKNESS - 10" HALF SECTION



PLAN VIEW 22'-0" PAVEMENT - 9" OR 10" UNIFORM THICKNESS
SEE SECTION "B"



PLAN VIEW 24'-0" PAVEMENT - 7" OR 8" SECTION
SEE SECTION "A"

GENERAL NOTES:

Contraction Joints shall be constructed in accordance with the governing details in these plans.

Expansion Joints shall be placed adjacent to bridge approach slabs, and when required by these plans or special provision, shall be spaced as required at a normal contraction joint location, and shall be constructed in accordance with the governing details in these plans.

At each bridge end construct a thickened and reinforced approach slab as detailed on other sheet in these plans. Additional work, concrete and steel shall be included in unit price bid for "Concrete Pavement."

The furnishing of all material and the installation of all reinforcing steel, tie bars, joints, including load transmission units or dowels and sleeves, and all dowel or bar chairs, shall be subsidiary work and shall be included in the unit price bid for "Concrete Pavement."

Integral Traffic Stripes shall be applied as required by plans and governing specifications.

Provisions for use of this patented installation have been made by the State free of royalty charges to the Contractor.

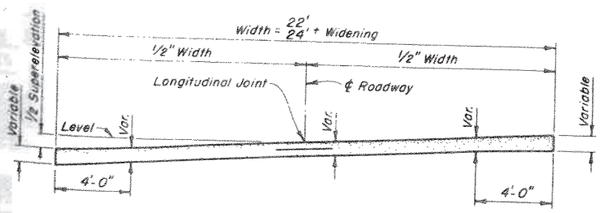
The Contractor shall hold and save the State, its officers, its agents, and its employees harmless to liability of any nature or kind, including costs and expenses, for or on account of any patent or unpatented invention, article or appliance manufactured or used in accordance with the details of these plans.

The section of pavement used will be as shown on Typical Cross Section Sheet of these plans.

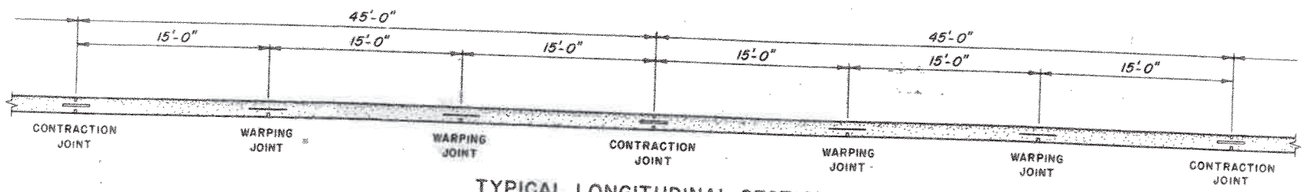
TABLE OF REINFORCING STEEL QUANTITIES

Each 45' Typical Slab:		7" or 8" Slab	Lb.		9" or 10" Slab	Lb.	
Warping Joint Tie Bars	22'-0" Section	2 @ 18 - 1/2"ϕ Def. X 3'-0"	72		2 @ 22 - 1/2"ϕ Def. X 3'-0"	88	
	24'-0" Section	2 @ 20 - 1/2"ϕ Def. X 3'-0"		80	2 @ 24 - 1/2"ϕ Def. X 3'-0"		96
Longitudinal Joint Tie Bars	22'-0" Section	21 - 1/2"ϕ Def. X 3'-0"	42		27 - 1/2"ϕ Def. X 3'-0"	54	
	24'-0" Section	21 - 1/2"ϕ Def. X 3'-0"		42	27 - 1/2"ϕ Def. X 3'-0"		54
Lb./sq. yd. of Typical 45' Slab		Total	114	122		142	150
	22'-0" Section	1.036			1.291		
	24'-0" Section	1.016			1.250		

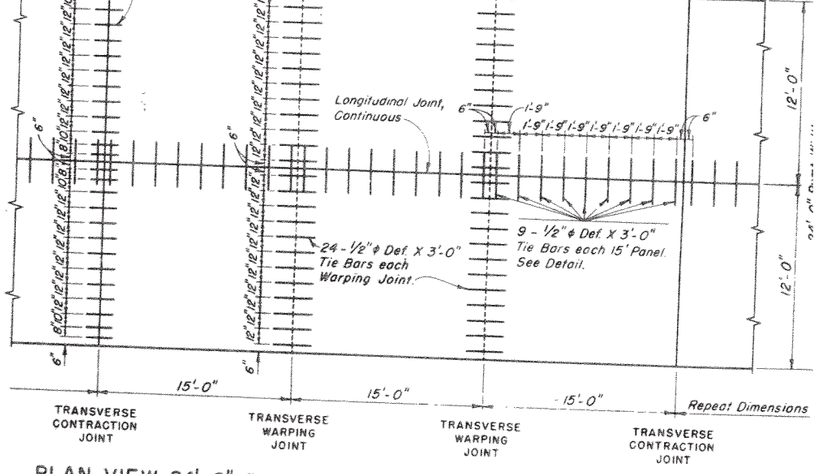
Steel quantities are for information of bidders. No direct payment will be made for reinforcing steel. Refer to "General Notes."



TYPICAL SECTION OF PAVEMENT
ON SUPERELEVATED AND WIDENED CURVES
Pavement on all curves shall be superelevated and widened as indicated on the governing Departmental Curve Standards.



TYPICAL LONGITUDINAL SECTION



PLAN VIEW 24'-0" PAVEMENT - 9" OR 10" UNIFORM THICKNESS
SEE SECTION "B"

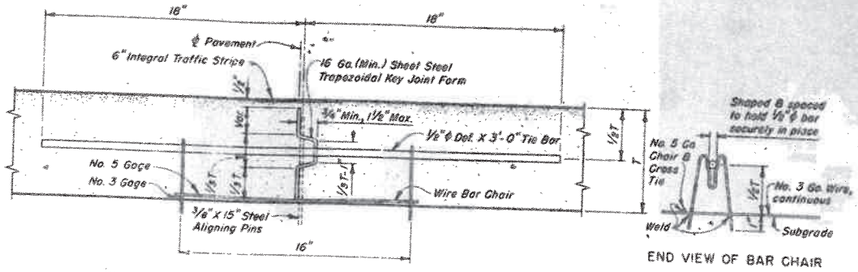
TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT DETAILS

7"-8"-9"-10" SLABS
22' AND 24' WIDTHS

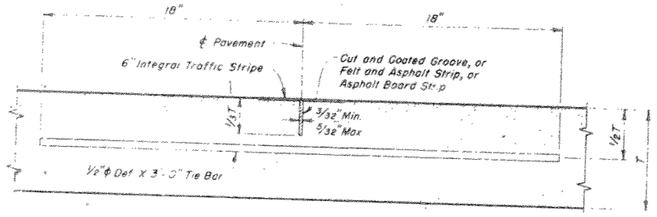
DESIGN NO. 46-1

APPROVED: ENGINEER OF ROAD DESIGN	FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.
REVISED:	6	TEXAS	
	STATE DIST. NO.	COUNTY	CONTROL SEC. NO. / SECTION NO. / JOB NO.
	20	Jefferson	28 / 13 / 1



TYPE 1 - STEEL TONGUE-AND-GROOVE FORM

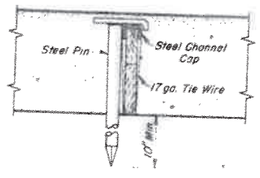
END VIEW OF BAR CHAIR



TYPE 2 - MACHINE CUT GROOVE

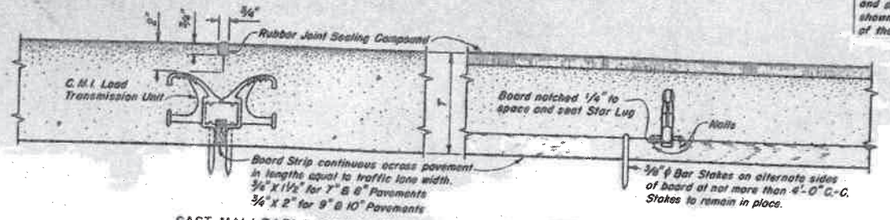
Top groove shall be cut by an approved machine and the vertical faces of the concrete coated with an approved concrete curing compound before closing and final finishing, or a 1/16" asphalt impregnated felt strip shall be inserted, continuous between expansion joints, or an asphalt board strip held in an approved continuous metal shield, shall be placed continuously in a groove cut in the concrete by an approved mechanical device operated in advance of the longitudinal float. The strips or groove shall be true to line, vertical, and of the depth shown. Tie bars shall be installed as in Type 1, or accurately placed in position on the screeded concrete by means of an approved template and forced to the proper position with a suitable tool.

ALTERNATE TYPES OF LONGITUDINAL JOINTS

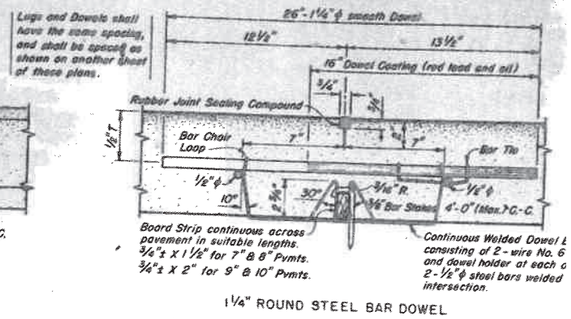


INSTALLING PIN FOR EXPANSION JOINT

Board Joint Filler of specified type shall be secured on subgrade in exact position and line as illustrated or by other approved device. Pins shall be removed after passage of finishing machine, then pavement resurfaced by second pass of finishing machine. After second passage of finishing machine remove concrete to 1" below top of board and nail ¾"x 7/8" wood strip to top of board filler to form joint seal space. Replace concrete and finish with longitudinal float. The wood top strip shall not be removed until immediately prior to pouring joint seal.

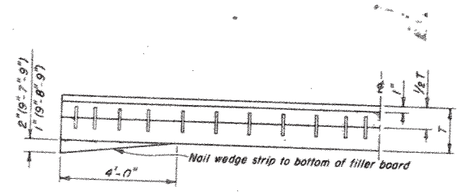


CAST MALLEABLE IRON CANTILEVER TYPE LOAD TRANSMISSION UNIT
D-14 "STAR LUG" as manufactured by Texas Foundries, Lufkin, Texas, or equal Load Transmission Unit



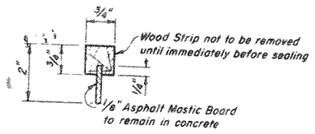
1¼" ROUND STEEL BAR DOWEL

ALTERNATE TYPES OF TRANSVERSE CONTRACTION JOINTS

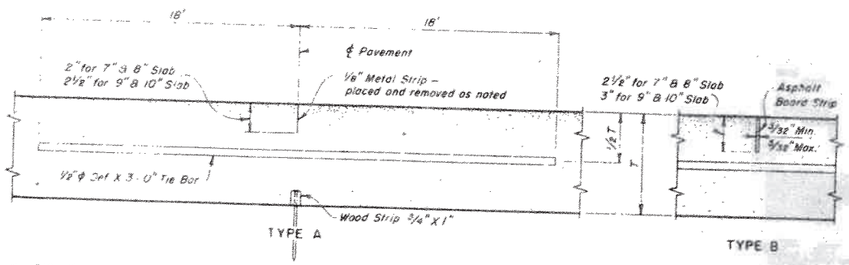


ELEVATION OF BOARD STRIP FOR EXPANSION JOINT WITH C.M.I. LOAD TRANSMISSION UNITS

NOTE: Wedge to be used on all Expansion and Contraction Joints in thickened-edge pavement.

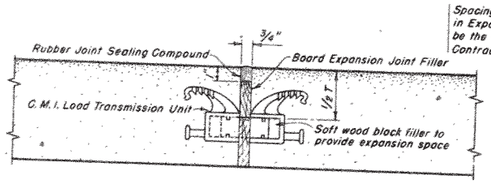


CONTRACTION JOINT SEAL FORM



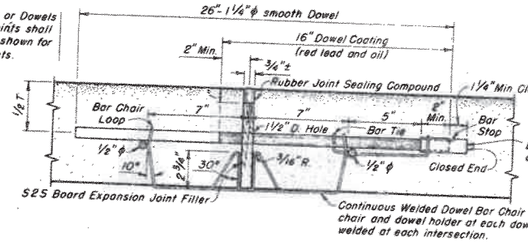
The ¾"X 1" Wood Strip as shown for Type A shall be continuous for width of pavement, and shall be securely fastened to the subgrade by 40-penny wire nails driven through drilled holes on not more than 30" centers. Tie Bars shall be placed accurately in position, after screeding, by means of an approved template. The transverse finishing machine shall pass over the joint area after installing the bars.
Type A, ⅛" X 2" or 2½" Metal Strip --- Cut top surface of concrete directly over wood strip and insert metal strip after screeding and in advance of longitudinal float. After longitudinal float has passed over, remove steel plate prior to finishing.
Type B, Asphalt Board Strip --- Asphalt board strip, held in an approved continuous metal shield, shall be placed continuously in a groove cut by an approved mechanical device operating in advance of the longitudinal float.

ALTERNATE TYPES OF TRANSVERSE WARPING JOINTS



Spacing of Lugs or Dowels in Expansion Joints shall be the same as shown for Contraction Joints.

CAST MALLEABLE IRON CANTILEVER TYPE LOAD TRANSMISSION UNIT
D-13 "STAR LUG" as manufactured by Texas Foundries, Lufkin, Texas or equal Load Transmission Unit



1¼" ROUND STEEL BAR DOWEL

ALTERNATE TYPES OF TRANSVERSE EXPANSION JOINTS

GENERAL NOTES

Either of the alternate types of Joints shown by these details may be constructed, at the option of the Contractor. If the Contractor desires to use any other alternate device, he shall, prior to its use, secure its approval by the Engineer.

Load Transmission Units or Dowels shall be secured parallel to the pavement surface and center line.

All Joints, including all materials, devices, and work required shall be considered subsidiary work and shall be included in the unit price bid for "Concrete Pavement." No direct payment will be made for any material, bar chair, steel, or any other device shown, nor for its installation.

"T" indicates center depth of thickened-edge pavements or depth of uniform pavements.

The Contractor shall hold and save the State, its officers, its agents, and its employees harmless to liability of any nature or kind, including costs and expenses, for or on account of any patent or unpatented invention, article or appliance manufactured or used in accordance with the details of these plans.

TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT JOINT DETAILS

7"-8"-9"-10" SECTIONS

DESIGN NO. 46-2

APPROVED: ENGINEER OF ROAD DESIGN	FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.
REVISED:	6	TEXAS	
	STATE DIST. NO.	COUNTY	CONTROL NO. / SECTION NO. / JOB NO.
	20	Jefferson	28 / 13 / 1