SH73 508-03-09

STATE OF TEXAS
STATE HIGHWAY DEPARTMENT

PLANS OF COMPLETED STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT
F 1052(49) AND F-FG 1052(50)

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

NET LENGTH OF PROJECT = 12,484.96 FT. = 2.363 MI.

STATE HIGHWAY 73
JEFFERSON & CHAMBERS COUNTIES

FROM 0.563 MILES EAST OF JEFFERSON-CHAMBERS COUNTY LINE WEST TO INTERSECTION WITH INTERSTATE HIGHWAY 10

GRADING, STRUCTURES, FLEXIBLE BASE AND ASPHALTIC CONCRETE PAVEMENT

CONTROL 508-3-8 F 1052 (49)	CONTROL 508-3-9 F-FG 1052 (50)	CONTROL 508-4-20 F 1052 (49)
ROADWAY 7,383.44 FT = 1.398 MI.	ROADWAY 1,658.86 FT = 0.314 MI.	ROADWAY 2,977.66 FT = 0.564 MI.
BRIDGES 200.00 FT = 0.037 MI.	BRIDGES 265.00 FT = 0.050 MI.	BRIDGES 0.00 FT = 0.000 MI.
TOTAL 7,583.44 FT = 1.435 MI.	TOTAL 1,923.86 FT = 0.364 MI.	TOTAL 2,977.66 FT = 0.564 MI.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT
6	TEXAS	F 1052(49) F-FG 1052(50)
STATE DIST. NO.	COUNTY	CONTROL
20	JEFFERSON CHAMBERS	508-...

CLASS "A" HIGHWAY
DESIGN SPEED 60 M.P.H.

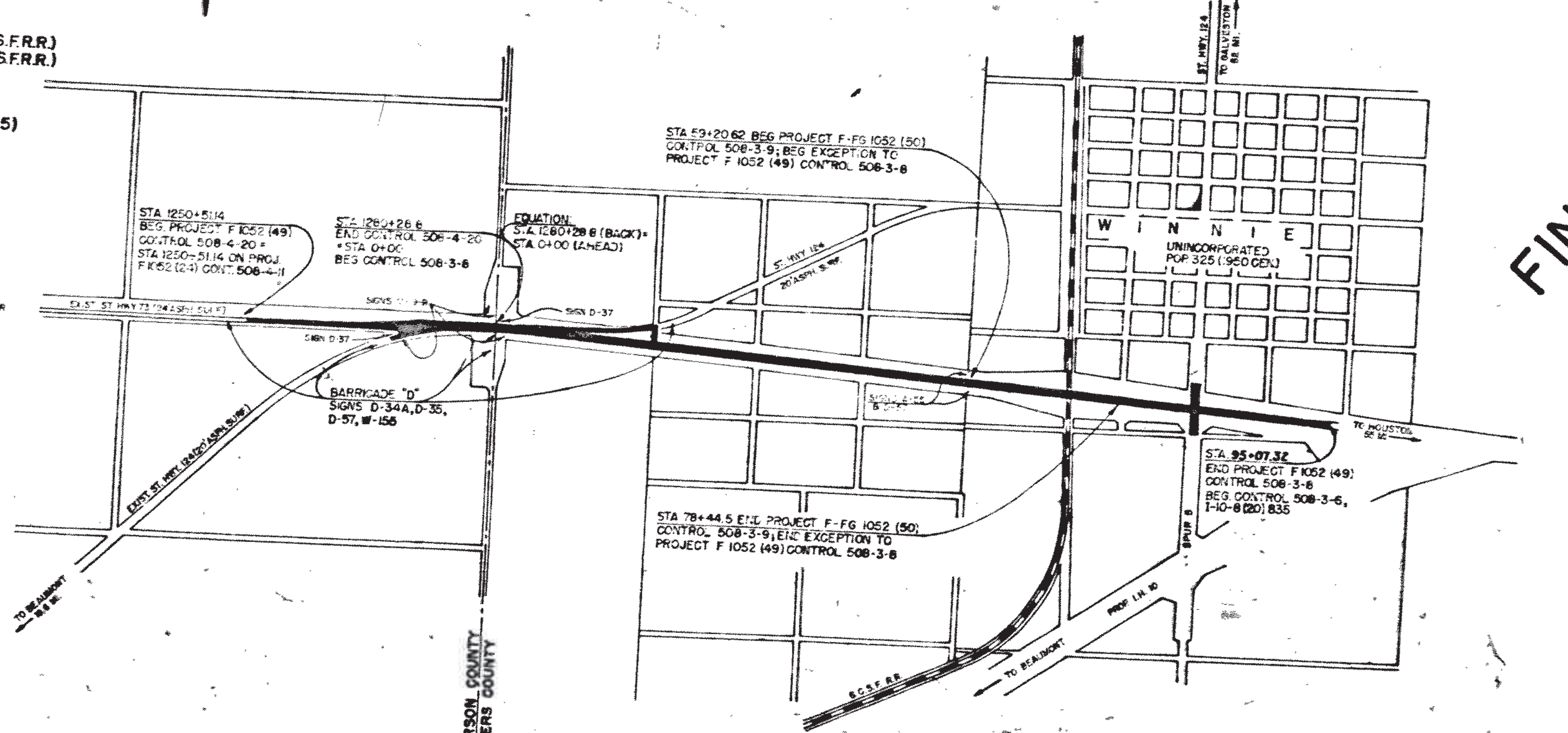
FINAL 676 09

FOR N.H. Long 9

FINAL PLANS

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2&3	TYPICAL CROSS SECTIONS
4&5	ESTIMATE AND QUANTITY
6-14A	PLAN PROFILE
15	BORROW PIT LAYOUT
15A	RAILROAD AGREEMENT
16	DRAINAGE LAYOUT
17-20	CULVERT LAYOUTS
21-26	BRIDGE LAYOUTS
27-62	STRUCTURAL DETAILS AND STANDARDS
27-29	CULVERT & WINGWALL DETAILS (MC6-1 MOD.)
30	LENGTHENING DETAILS FOR MBC
31-32	INLET DETAILS
33	CONCRETE JOINT DETAILS
34	CPCD-57 (MOD.)
35	CONCRETE PVMT. EXPANSION JT. DETAILS
36	BAS-CW-58 (MOD.)
37	BAS-RW-58
38	SC-NA
39	SCL
40	PWN
41	MC5-I
42	MC6-I
43	MCW-PI
44	MCW-FI
45	CH-II
46	RR8
47	RAILING TYPE 4 47-A TYPE 7 GUARD RAIL
48	METAL SHELL PILES (12" ROUND)
49	GP A
50	GP. B MOD. (G.C.S.F.R.R. OVERPASS)
51	55'-0" PRESTRESSED CONC. BEAM SPAN (G.C.S.F.R.R.)
52	50'-0" PRESTRESSED CONC. BEAM SPAN (G.C.S.F.R.R.)
53	INTERIOR BENTS (G.C.S.F.R.R.)
54	ABUTMENT BENTS (G.C.S.F.R.R.)
55	GP. B MOD. (SPUR 5 OVERPASS)
56	50'-0" PRESTRESSED CONC. BEAM SPAN (SPUR 5)
57	INTERIOR BENTS (SPUR 5)
58	ABUTMENT BENTS (SPUR 5)
59	SWC-39
60	M-47
61-62	BW 59 (1) & (2)
63	FIELD CHANGE SKETCHES



EXCEPTION: F 1052 (49) STA. 59+20.62 TO STA. 78+44.5 = 1,923.88 FT.

EQUATION: STA. 1280+28.8 (BACK) = STA. 0+00 (AHEAD) = +128,028.8 FT.

LAYOUT SCALE: 1 IN. = 1,000 FT.

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

COUNTY Jefferson-Chambers PROJ. NO. F1052(49), F-FG 1052(50)
HWY. NO. ST 73 LETTING DATE
DATE ACCEPTED June 7, 1962
Cage Brothers, San Antonio, Contractors

SUMMARY OF FIELD CHANGES

Field Change No. 2 - (1) On Frontage Roads ... to end of project change design depths to ... S.G. (24" Wide), 9" Select Material, 9" Flex. Ba... 200#/SY Hot Mix; (2) Provide left turn refu... on South Main Lane at County Line Road; (3) ... out drainage along South side of S.H. 73 fr... Sta. 1240 to Sta. 1266.

Field Change No. 3 - Provide Concrete Pvmt. ... Anchorage (CPTA-61) on West end of the Spu... Overpasses.

Field Change No. 4 - Rout and seal Contraction ...

Field Change No. 6 - Place one course surface t... on flexible base before placing asphaltic co...

Field Change No. 7 - Place flex base and one c... surface treatment on all frontage roads, turn ... roads, and ramps East of G.C.S.F. R.R. for which ... do not provide base or surfacing.

Field Change No. 8 - Place Hot Mix (Type D @ 20... on North Frontage Road between Sta. 1266+... and Sta. 5+80.

Field Change No. 9 - Revision in quantities and ... ment in unit price of "Common Borrow" and "De... Borrow."

PROJECT CONSTRUCTED AND FINAL PLANS PREPARED BY:
William A. Potts 6-7-62
RESIDENT ENGINEER

STATE HIGHWAY DEPARTMENT

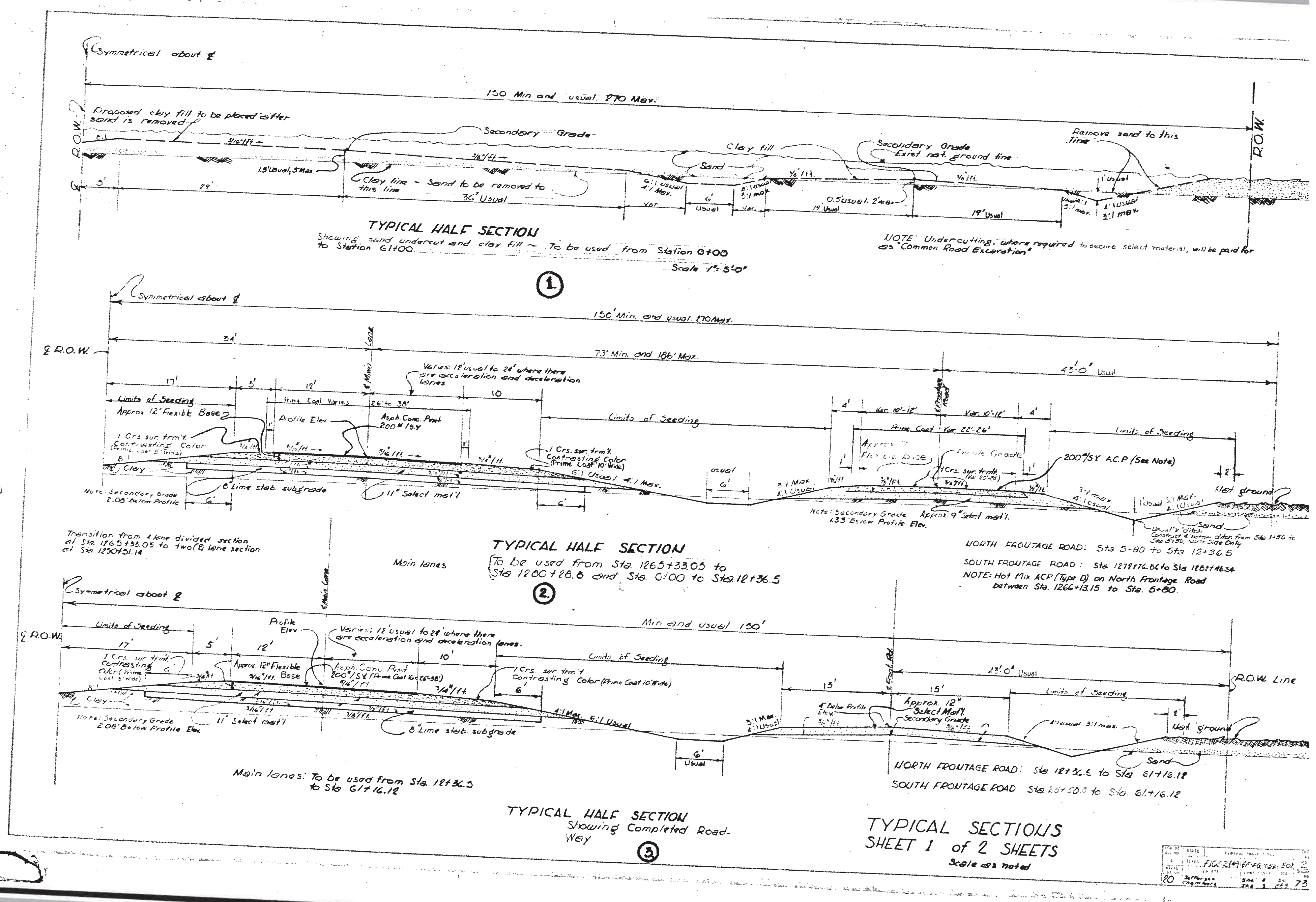
CORRECT: 5-14 59
William A. Potts
RESIDENT ENGINEER

RECOMMENDED FOR APPROVAL: 6-11 59
W.E. Simmons
DISTRICT ENGINEER

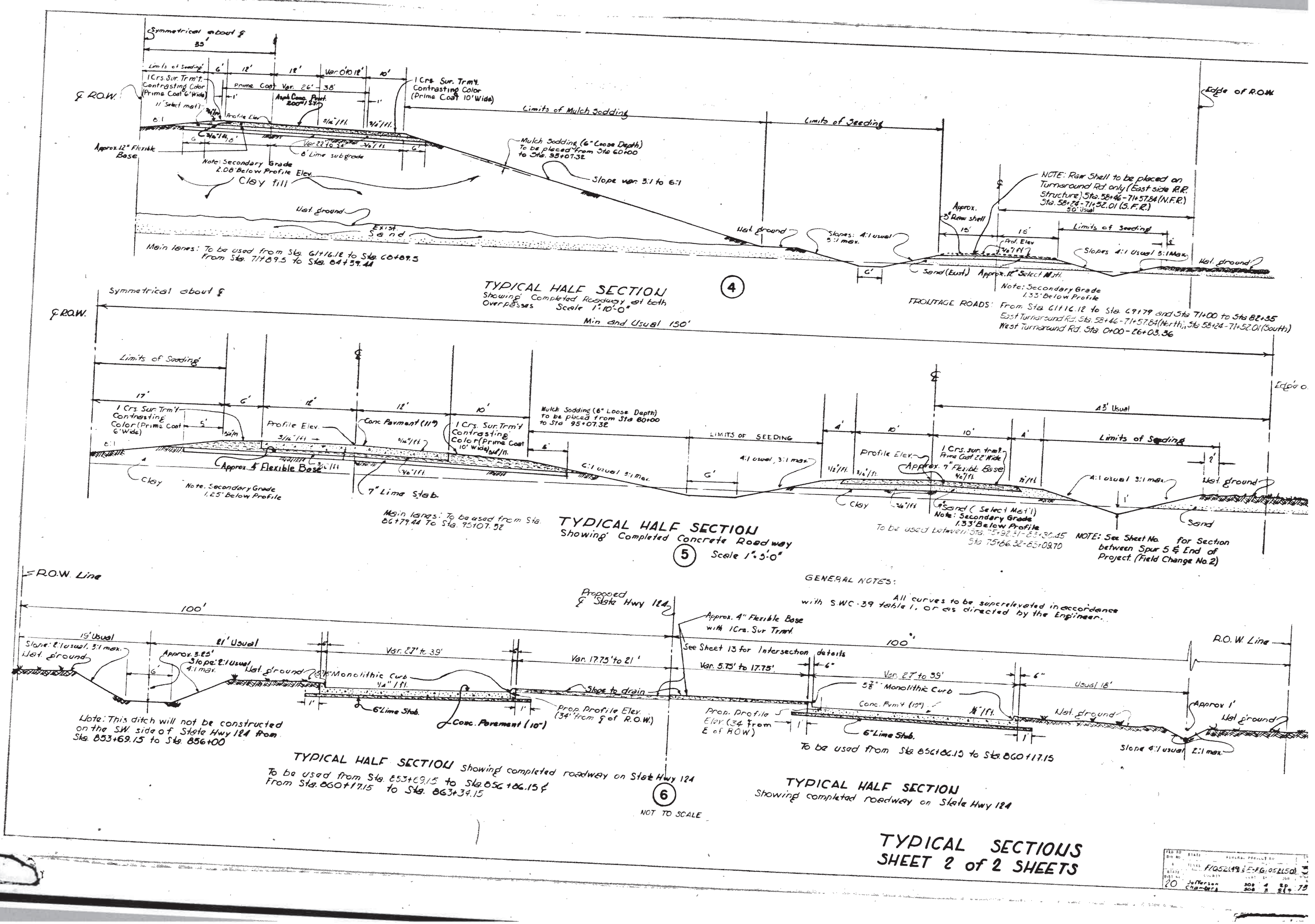
APPROVED:
BRIDGE ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

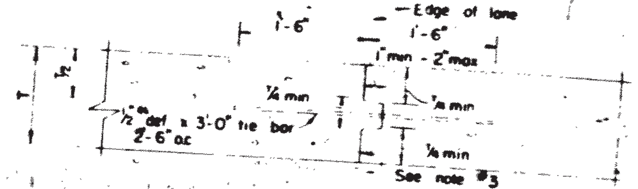
APPROVED:
DIVISION ENGINEER DATE



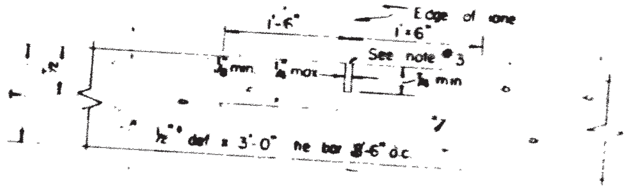
Symmetrical about ℄
150 Min and usual 270 Max.
Proposed clay fill to be placed after sand is removed
R.O.W.
Secondary Grade
3/16"/Ft.
1.5' Usual, 3' Max.
Clay line - Sand to be removed to this line
36' Usual
Clay fill
Sand
6:1 usual 4:1 Max.
6' Usual
3:1 max
Secondary Grade
Exist. nat. ground line
0.5' usual, 2' max
19' Usual
19' Usual
Remove sand to this line
1' Usual
4:1 usual 3:1 max
TYPICAL HALF SECTION
Showing sand undercut and clay fill ~ To be used from Station 0+00 to Station 61+00
Scale 1"=5'-0"
NOTE: Undercutting, where required to secure select material, will be paid for as "Common Road Excavation"
1.
Symmetrical about ℄
150' Min. and usual 270 Max.
℄ R.O.W.
34'
73' Min. and 186' Max.
43'-0" Usual
17'
5'
12'
℄ Main Lane
Varies: 12' usual to 24' where there are acceleration and deceleration lanes
10
Limits of Seeding
Approx. 12" Flexible Base
Prime Coat Varies 26' to 38'
Profile Elev.
Asph. Conc. Pvmt. 200# / SY
1 Crs. sur. trm't. Contrasting Color (Prime Coat 5' Wide)
8:1
Clay
8" Lime stab. subgrade
11" Select mat'l
1 Crs. sur. trm't. Contrasting Color (Prime Coat 10' Wide)
6:1 Usual 4:1 Max.
Note: Secondary Grade 2.08' Below Profile
6'
usual 6'
3:1 Max 4:1 Usual
Limits of Seeding
4'
Var. 10'-12'
℄ Frontage Road
Var. 10'-12'
4'
Prime Coat Var. 22'-26'
Approx. 12" Flexible Base
Profile Grade
1 Crs. sur. trm't.
200#/SY. A.C.P. (See Note)
3:1 max. 4:1 usual
Nat. ground
Sand
Usual V ditch
Approx. 9" Select mat'l.
Note: Secondary Grade 1.33' Below Profile Elev.
Transition from 4 lane divided section at Sta. 1265+33.05 to two (2) lane section at Sta. 1250+51.14
TYPICAL HALF SECTION
Main lanes
To be used from Sta. 1265+33.05 to Sta. 1280+28.8 and Sta. 0+00 to Sta. 12+36.5
2.
NORTH FRONTAGE ROAD: Sta 5+80 to Sta 12+36.5
SOUTH FRONTAGE ROAD: Sta 1272+76.86 to Sta. 1282+46.34
NOTE: Hot Mix ACP (Type D) on North Frontage Road between Sta. 1266+13.15 to Sta. 5+80.
Symmetrical about ℄
℄ R.O.W.
℄ Main Lane
Min and usual 150'
Limits of Seeding
17'
5'
12'
Profile Elev.
Varies: 12' usual to 24' where there are acceleration and deceleration lanes.
10'
1 Crs. sur. trm't. Contrasting Color (Prime Coat 5' Wide)
Approx. 12" Flexible Base
Asph. Conc. Pvmt. 200#/SY (Prime Coat Var. 26'-38')
1 Crs. sur. trm't. Contrasting Color (Prime Coat 10' Wide)
6'
Limits of Seeding
8:1
Clay
Note: Secondary Grade 2.08' Below Profile Elev.
11" Select mat'l
8" Lime stab. subgrade
4:1 Max. 6:1 Usual
6' Usual
3:1 Max. 4:1 Usual
15'
℄ Front. Rd.
15'
43'-0" Usual
R.O.W. Line
Approx. 12" Select Mat'l.
Secondary Grade
Limits of Seeding
4:1 usual 3:1 max.
Nat. ground
Sand
Main lanes: To be used from Sta. 12+36.5 to Sta 61+16.12
NORTH FRONTAGE ROAD: Sta 12+36.5 to Sta 61+16.12
SOUTH FRONTAGE ROAD: Sta 25+50.0 to Sta. 61+16.12
TYPICAL HALF SECTION
Showing Completed Roadway
3.
TYPICAL SECTIONS
SHEET 1 of 2 SHEETS
Scale as noted
Jefferson Chambers
73


Symmetrical about ℄
35'
Limits of Seeding
6'
12'
12'
Var. 0' to 12'
10'
1 Crs. Sur. Trm't. Contrasting Color (Prime Coat 6' Wide)
Prime Coat Var. 26' - 38'
Asph. Conc. Pvmt.
1 Crs. Sur. Trm't. Contrasting Color (Prime Coat 10' Wide)
℄ R.O.W.
Edge of R.O.W.
11' Select mat'l
Profile Elev.
Limits of Mulch Sodding
Limits of Seeding
Approx. 12" Flexible Base
Var. 22' to 34'
8" Lime subgrade
Note: Secondary Grade 2.08' Below Profile Elev.
Clay fill
Mulch Sodding (6" Loose Depth) To be placed from Sta. 60+00 to Sta. 95+07.32
Slope var. 3:1 to 6:1
NOTE: Raw Shell to be placed on Turnaround Rd. only (East side R.R. Structure) Sta. 58+46 - 71+57.84 (N.F.R.) Sta. 58+24 - 71+52.01 (S.F.R.)
50' Usual
Approx. 5" Raw shell
15'
15'
Limits of Seeding
Prof. Elev.
Nat. ground
Exist. Sand
Slopes: 4:1 usual 3:1 max.
Slopes 4:1 Usual 3:1 Max.
Nat. ground
Main lanes: To be used from Sta. 61+16.12 to Sta. 68+89.5 From Sta. 71+89.5 to Sta. 84+39.44
6'
Sand (Exist.)
Approx. 12" Select Mat'l.
TYPICAL HALF SECTION
Showing Completed Roadway at both Overpasses Scale 1"=10'-0"
4
Note: Secondary Grade 1.33' Below Profile
FRONTAGE ROADS: From Sta. 61+16.12 to Sta. 69+79 and Sta. 71+00 to Sta. 82+35
East Turnaround Rd. Sta. 58+46 - 71+57.84 (North); Sta. 58+24 - 71+52.01 (South)
West Turnaround Rd. Sta. 0+00 - 26+03.36
Symmetrical about ℄
℄ R.O.W.
Min and Usual 150'
Limits of Seeding
17'
6'
12'
12'
10'
1 Crs. Sur. Trm't Contrasting Color (Prime Coat 6' Wide)
Profile Elev.
Conc. Pavement (11")
1 Crs. Sur. Trm't Contrasting Color (Prime Coat 10' Wide)
Mulch Sodding (6" Loose Depth) to be placed from Sta 60+00 to Sta 95+07.32
Edge of
43' Usual
LIMITS OF SEEDING
4'
10'
10'
4'
Limits of Seeding
Profile Elev.
1 Crs. sur. trm't Prime Coat 22' Wide
Approx. 7" Flexible Base
Approx. 4" Flexible Base
7" Lime Stab.
Clay
Note: Secondary Grade 1.25' Below Profile
4:1 usual, 3:1 max.
6'
Clay
Sand (Select Mat'l)
Note: Secondary Grade 1.33' Below Profile
4:1 usual 3:1 max.
Nat. ground
Sand
Main lanes: To be used from Sta. 86+79.44 To Sta. 95+07.32
TYPICAL HALF SECTION
Showing Completed Concrete Roadway
5
Scale 1"=5'-0"
NOTE: See Sheet No. for Section between Spur 5 & End of Project. (Field Change No. 2)
R.O.W. Line
GENERAL NOTES:
All curves to be superelevated in accordance with S.W.C.-39 table 1, or as directed by the Engineer.
100'
Proposed ℄ State Hwy 124
Approx. 4" Flexible Base with 1 Crs. Sur. Trm't.
See Sheet 13 for Intersection details
19' Usual
21' Usual
Var. 27' to 39'
Var. 17.75' to 21'
Var. 5.75' to 17.75'
100'
R.O.W. Line
Slope 2:1 usual, 3:1 max.
Nat. ground
Approx. 3.25'
Slope 2:1 Usual 4:1 max.
6'
Nat. ground
6" Monolithic Curb
Slope to drain
5 7/8" Monolithic Curb
Var. 27' to 39'
6"
Usual 18'
Conc. Pvm't (10")
Nat. ground
Approx 1'
Nat. ground
6" Lime Stab.
Conc. Pavement (10")
Prop. Profile Elev. (34' from ℄ of R.O.W.)
Prop. Profile Elev. (34' from ℄ of ROW)
6" Lime Stab.
Slope 4:1 usual 2:1 max.
Note: This ditch will not be constructed on the S.W. side of State Hwy 124 from Sta. 853+69.15 to Sta. 856+00
To be used from Sta. 856+86.15 to Sta. 860+17.15
TYPICAL HALF SECTION Showing completed roadway on State Hwy 124
To be used from Sta. 853+69.15 to Sta. 856+86.15 & From Sta. 860+17.15 to Sta. 863+34.15
6
NOT TO SCALE
TYPICAL HALF SECTION
Showing completed roadway on State Hwy 124
TYPICAL SECTIONS
SHEET 2 of 2 SHEETS
20
Jefferson
Chambers

LONGITUDINAL JOINTS

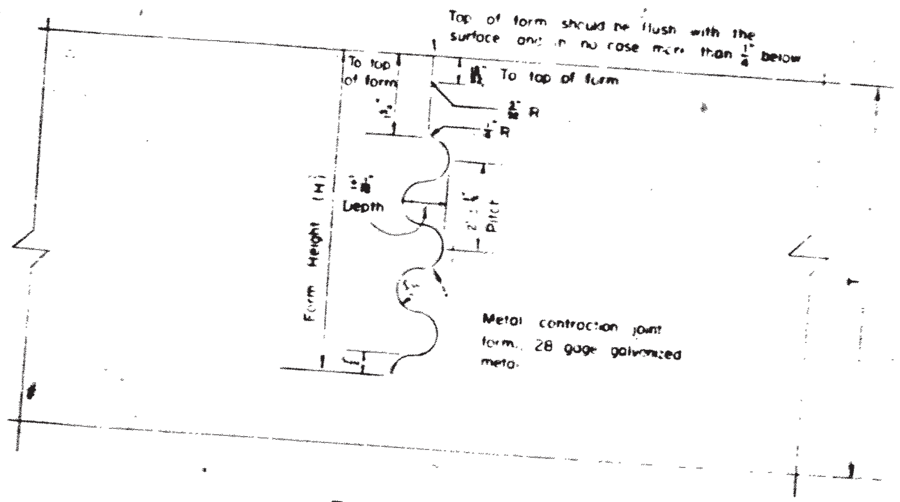


TYPE 1

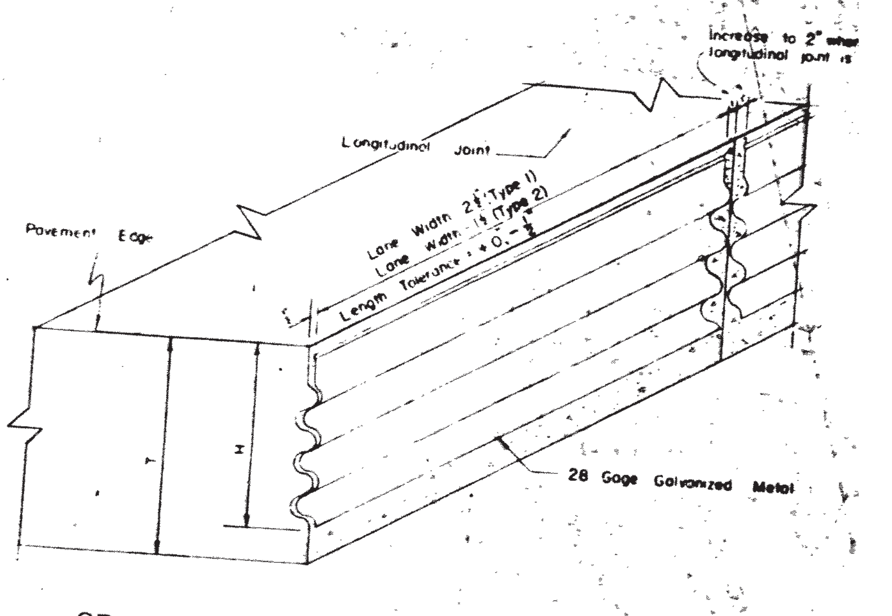


TYPE 2

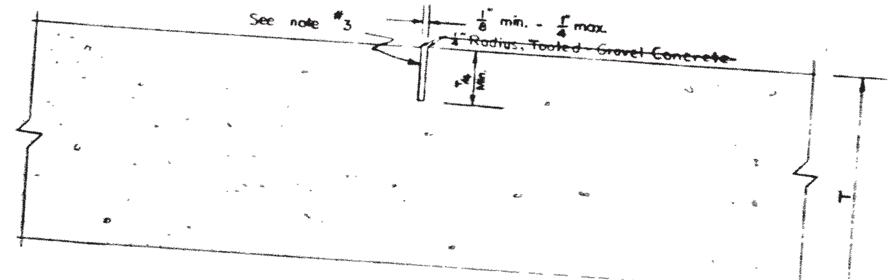
TRANSVERSE CONTRACTION JOINTS



TYPE A



OBLIQUE SECTION SHOWING METAL CONTRACTION JOINT FORM IN PLACE

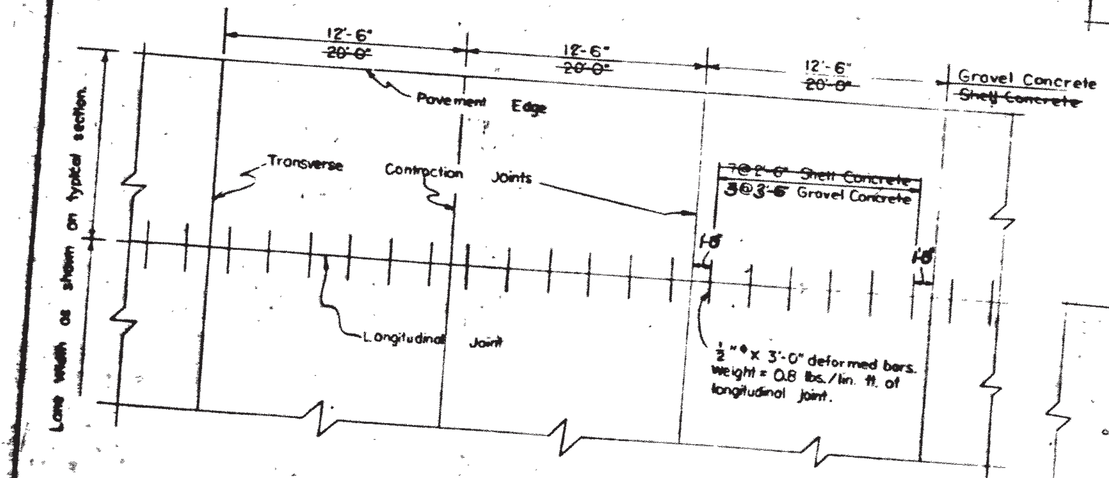


TYPE B

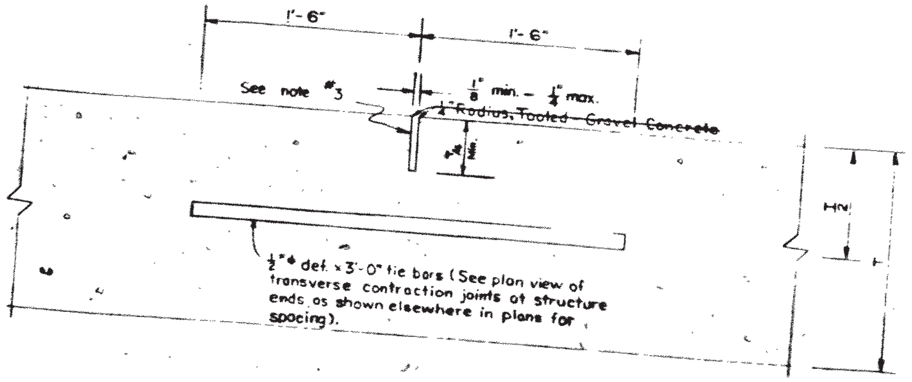
TABLE OF FORM HEIGHTS (H)

SLAB THICKNESS (T)(in.)	6	7	8	9	10	11	12
FORM HEIGHT (H) (in.)	5¼	5¼	5¼	6¼	7¼	8¼	9¼

The values shown above are minimum heights.



PLAN VIEW OF LONGITUDINAL AND TRANSVERSE CONTRACTION JOINTS



TYPE C

General Notes:

1. Crown, pavement width, and pavement thickness shall be as shown on typical sections elsewhere in plans. Where more than … are shown on the typical sections, the Type 1 longitudinal joint shall be used as a construction joint. ~~unless a "Traveling Form P… being used in lieu of stationary side forms as provided in the Specifications, in which case the Type 2 longitudinal joint… used as a construction joint.~~
2. The use of Types A & B transverse contraction joints is optional except at headers and structure ends. Type C transverse co… Joints shall be provided at all headers and at all structure ends as shown elsewhere in plans. Other means of load tra… may be used when approved by the Engineer.
3. The weakened plane in Types 1,2,A,B,& C shall be true to line, vertical, and of depth shown. For Types 2,B,&C, the weakened pl… be formed by (a) sawing by an approved machine, or (b) an asphalt board strip held in an approved continuous metal shield and … continuously in a groove cut in the concrete by an approved mechanical device operating in advance of the longit… float, or (c) an asphalt impregnated felt, or (d) any alternate method which, prior to its use, has been approved by the Engineer… the weakened plane is formed by sawing with an approved machine it shall be sealed with rubber joint compound~~, except… Shell concrete is used, in which case the joint shall be filled with an inert material just prior to surfacing~~. The minimum … of the weakened plane as shown in Types 2, B, & C does not apply to (b) and (c) above.
4. Type 1 longitudinal joint may be formed by a metal form, wood form, or other means, which prior to its use, has been approved by the Engi…
5. The Contractor will be required to vibrate the concrete adjacent to the form to the extent necessary that all corrugations are fi… concrete. Over vibration shall be avoided in all cases.
6. Tie bars shall be secured parallel to the pavement surface and perpendicular to the weakened plane by a bar chair or accurately pl… position on the screeded concrete by means of an approved template and forced to the proper position with suitable tool, … other means, which prior to its use, has been approved by the Engineer.
7. When work is stopped due to breakdown or other cause, concrete shall be removed beyond last contraction joint in place and header ins…
8. Where monolithic curb is specified, the joint in the curb shall coincide with pavement joints and be formed by any means which, pri… its use, has been approved by the Engineer.
9. On two lane pavements where circular or parabolic crown is specified, the Metal Contraction Joint Form shall be placed with ends fl… with pavement surface. Cutting crown in top of form is not necessary.
10. Unless otherwise specified by the Engineer, the minimum length of Metal Contraction Joint Form shall be lane width minus 1½". Where shorter … are permitted, they shall be held together by any means which holds adjoining sheets in line and which is approved by the Engineer.
11. Expansion joints shall be provided only at structure ends as shown elsewhere in plans.

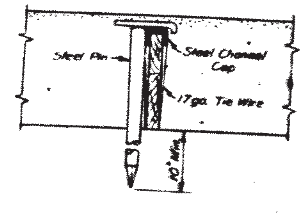
TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT CONTRACTION DESIGN

CPCD-57 MOD.

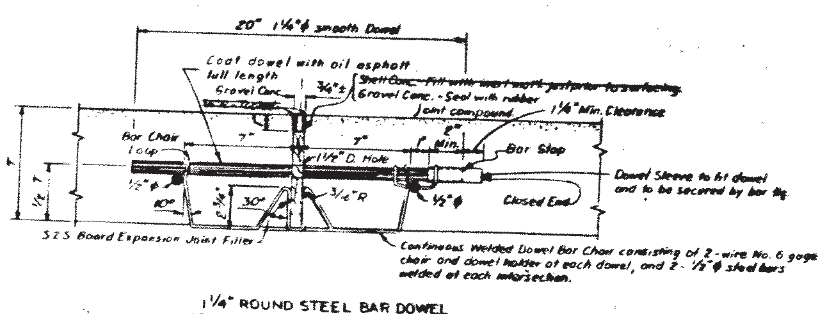
	DRAWING	DATE
	ORIGINAL	12-57
	Modified District 20	8-58

STATE: 20 TEXAS



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 3/4" x 3/4" 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 filling joint.



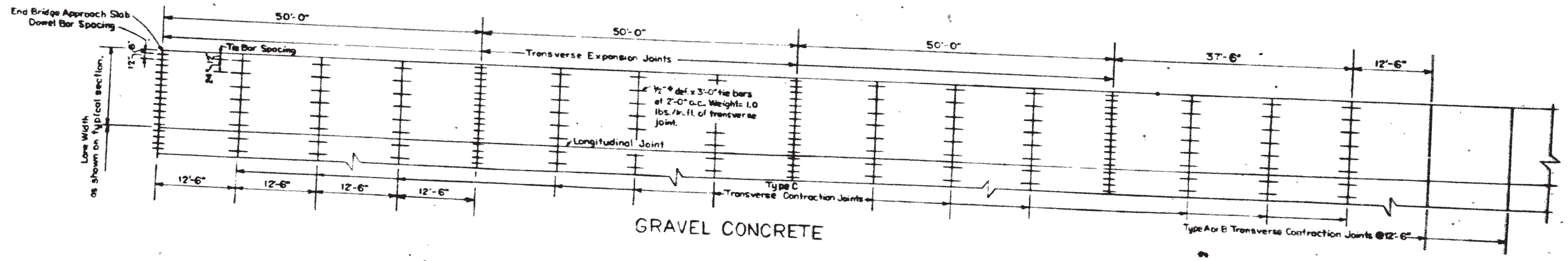
1¼" ROUND STEEL BAR DOWEL
(See plan view for spacing of dowels)

TRANSVERSE EXPANSION JOINT

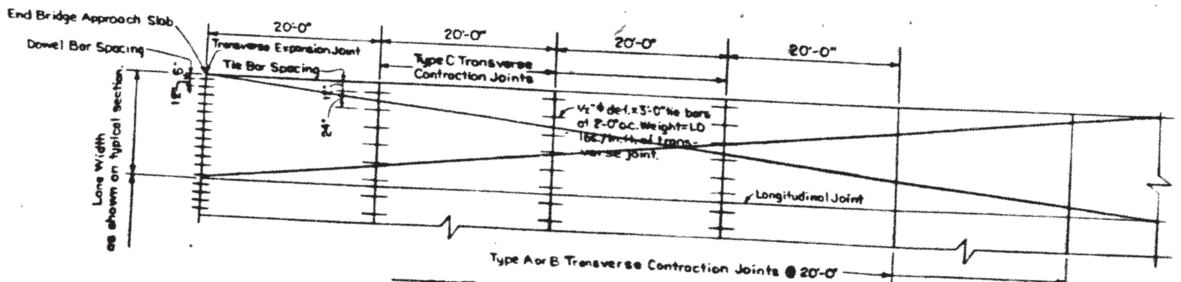
The Contractor shall hold and save the State, its officers, its agents, and its employees harmless to liability of any nature or kind, including costs and expenses, for or on account of any patent or unpatented invention, article or appliance manufactured or used in accordance with the details of these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

GENERAL NOTES

1. If the Contractor desires to use any other alternate device, he shall, prior to its use, secure its approval by the Engineer.
2. Dowels shall be secured parallel to the pavement surface and center line.
3. 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." ~~or "Shell Concrete Base"~~. No direct payment will be made for any material, bar chair, steel, or any other device shown, nor for its installation.



GRAVEL CONCRETE



~~SHELL CONCRETE~~

PLAN VIEW OF TRANSVERSE
EXPANSION & CONTRACTION
JOINTS AT STRUCTURE ENDS

Note: For details of Types A, B, & C transverse contraction joints see CPCD-57 MOD. standard.

CONCRETE PAVEMENT
EXPANSION JOINT DETAILS AND
JOINT LAYOUT AT STRUCTURE ENDS

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.			SHEET NO.
6	TEXAS	F 1053(49)			55
STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	
20	Chambers	[illegible]	3	8	75