STATE	FEDERAL AID PROJECT NO.	SHEET NO.
TEXAS	F 417( )	1
COUNTY	STATE CONTROL NO.	HIGHWAY NO.
FAYETTE	0266-01-055	SH 71

FINAL PLANS

7997
02

X OF SHEETS

DESCRIPTION

STANDARD SHEETS (BELOW)

SD
CRCP (B)-89C
BAS-75 (MOD)
CTBI(1)-85
CTB(2)-81
PCTB(1)-83
PCTB(2)-85
GF(TD)-87
BED(OWT)-84
CD-SPR
IL-S IL-H
ILG-S ILG-H RC-C
MC5-1
PC-1
A PC-3 & PC-7
05 RID(1-7)-88
IE(1)
IM(1)
IM(2)
M(1)
M(2)
R(1)
R(2)
W(1)
W(2)
SMD(1-4)
SMD(1-5)
SMD(2)
SMD(B-1)
SMD(B-2)
OMIT
SMD(A-1)
D & OM(1)
D & OM(2)
PM(0)
PM(1)
132 BC(1-7)-88

dard sheets above have been issued by me applicable to this project.

ld L. Justice — Date

STATE OF TEXAS
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

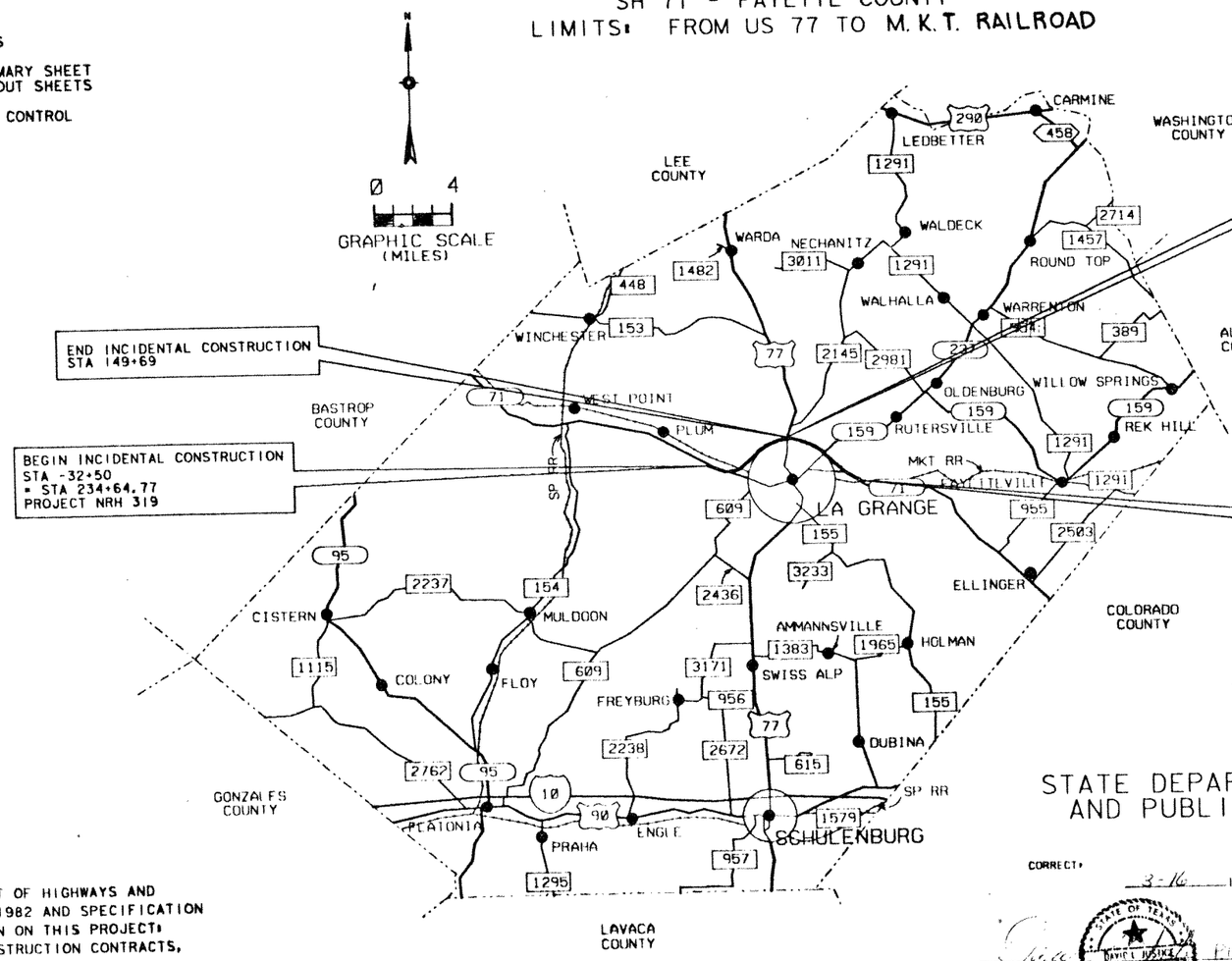
FOR THE CONSTRUCTION OF A NEW LOCATION NON-FREEWAY FACILITY
CONSISTING OF BASE & SURFACING (FOUR LANE BYPASS)
FEDERAL-AID PROJECT MA-F 417(29)

NET LENGTH OF PROJECT = 15938.30 FT. = 3.018 MILES
SH 71 - FAYETTE COUNTY
LIMITS: FROM US 77 TO M.K.T. RAILROAD

DESIGN SPEED = 60 MPH
VPD = 6700

NO EQUATIONS
NO EXCEPTIONS
NO AT-GRADE RAILROAD CROSSINGS

PROJECT CONTROL	ROADWAY FT	ROADWAY MILES	BRIDGES FT	BRIDGES MILES	TOTAL FT	TOTAL MILES
266-01-055	15,283.30	2.894	655.00	0.124	15,938.30	3.018



BEGIN PROJECT MA-F 417(29)
STA 149+69
BEGIN CONTROL 266-01-055
= STA 149+49
PROJECT C265-8-44
CONTROL 265-08-044

END INCIDENTAL CONSTRUCTION
STA 149+69

BEGIN INCIDENTAL CONSTRUCTION
STA -32+50
= STA 234+64.77
PROJECT NRH 319

END PROJECT MA-F 417(29)
STA 309+07.30
END CONTROL 266-01-055
= STA 309+07.30
BEGIN PROJECT C266-01-058
CONTROL 266-01-058

CONTRACTOR NAME: HUNTER INDUSTRIES, INC.
CONTRACTOR ADDRESS: P.O. BOX 13172, AUSTIN, TX.
DATE WORK BEGAN: SEPTEMBER 5, 1989
DATE COMPLETED: JANUARY 15, 1991
DATE OF ACCEPTANCE: JANUARY 15, 1991

LIST OF APPROVED FIELD CHANGES

FIELD CHANGE NO.	DESCRIPTION	LIMITS
1	INSTALL 2-2 LUG TERMINAL ANCHORAGE SYSTEMS	STA 145+00
2	RECLASSIFY 269 LF OF MEDIAN BARRIER RAIL FROM TYPE 2 TO TYPE 3 AT THE US 77 AND LEDBETTER UNDERPASSES. EXTEND THE MEDIAN BARRIER FROM EAST INTERCHANGE EASTWARD TO THE M-K-T RAILROAD OVERPASS.	VARIOUS LOCATIONS
3	CHANGE ITEM 660-003 WINGED CHAN POSTS (1.12 LB) (7.5 FT) TO ITEM 660-007 WINGED CHAN POSTS (1.12 LB) (7.0 FT).	ENTIRE PROJECT
4	ADD 175 LF OF M-B-G-F WITH 2-TERMINAL ANCHOR SECTIONS.	FROM STA 1+[illegible] LT. TO STA 1+[illegible] LT.
5	CHANGE QUANTITY FOR ITEM 3573 PG	ENTIRE PROJECT

CATIONS ADOPTED BY THE STATE DEPARTMENT OF HIGHWAYS AND TRANSPORTATION OF TEXAS, SEPTEMBER 1, 1982 AND SPECIFICATION LISTED AND DATED AS FOLLOWS SHALL GOVERN ON THIS PROJECT: D CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS, HWA 1273 (OCTOBER 1987)

ADE NOTES:
11 BARRICADES AND SIGNS G20-1, G20-2, R20-3,
20-1D SHALL BE PLACED AT SH 71, US 77 AND SH 159 INTERSECTIONS.
CW20-1D AND G20-2 SHALL BE USED AT INTERSECTIONS OF ALL ROADS ENTERING THE PROJECT.
HER SIGNS, BARRICADES, AND OTHER TRAFFIC CONTROL REFER TO TRAFFIC L PLANS, SPECIAL PROVISIONS 'DETOUR, BARRICADES, WARNING SEQUENCE OF WORK, ETC.' AND BC(1-7)-88 STANDARDS.

FAYETTE COUNTY

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

CORRECT: 3-16 1992

RESIDENT ENGINEER

RECOMMENDED FOR APPROVAL: 3-22 1989

DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL:

RECOMMENDED FOR APPROVAL:

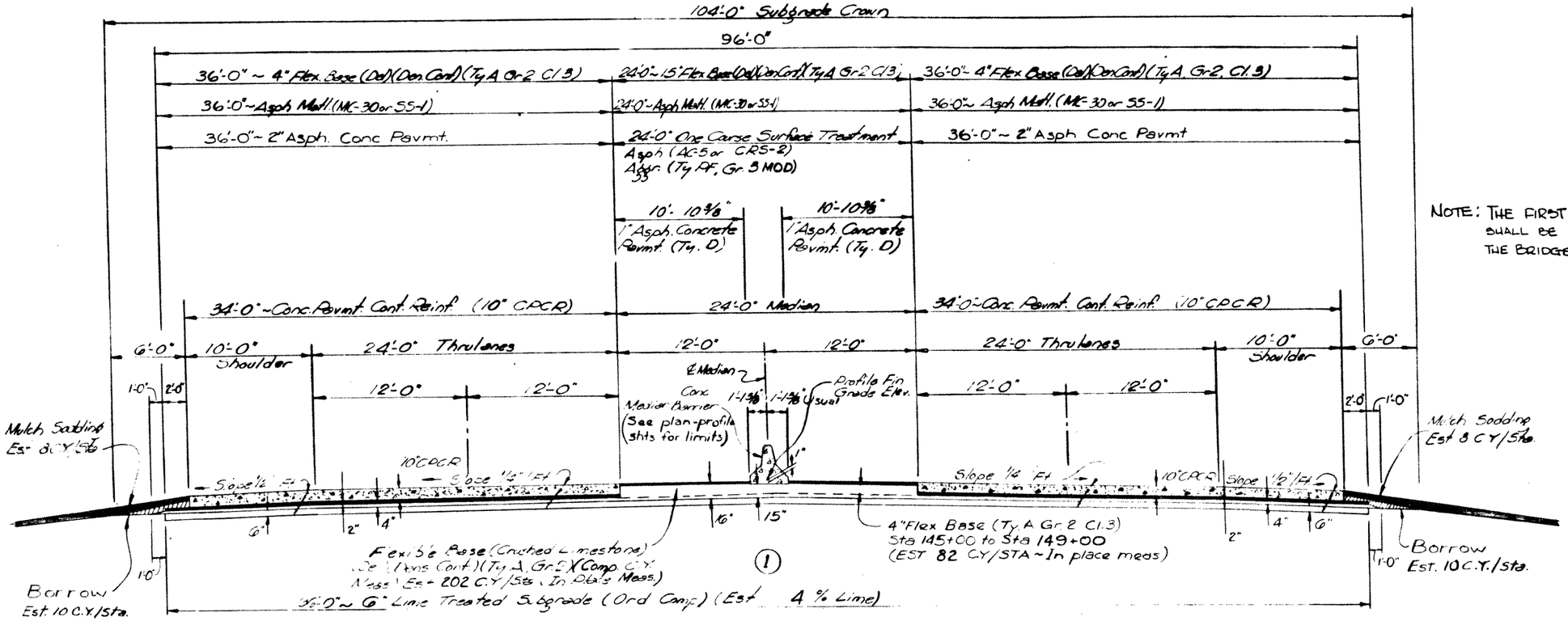
APPROVED FOR LETTING: 5-4-89

FOR CHIEF ENGINEER, HIGHWAY DESIGN

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

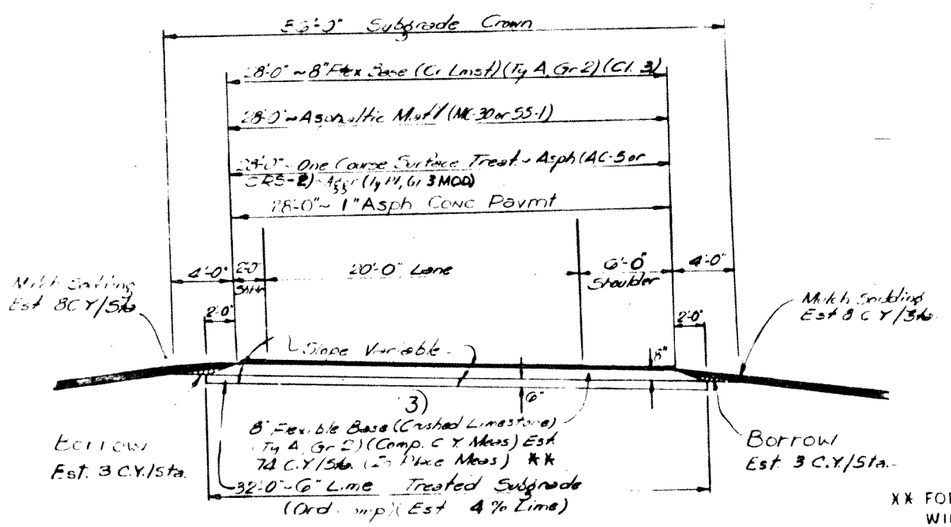
APPROVED:

DIVISION ADMINISTRATOR DATE

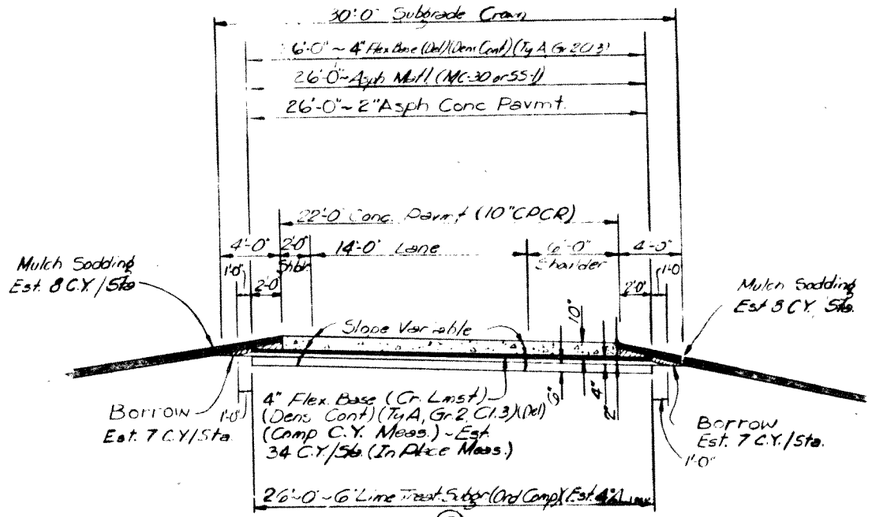


NOTE: THE FIRST LIFT OF FLEX BASE (TY A, GR 2, CL 3) SHALL BE 7" IN DEPTH WITHIN THE LIMITS OF THE BRIDGE APPROACH SLABS.

COMPLETED ROADWAY - 24 FT. MEDIAN
STA. 145+00 TO STA. 293+70



TYPICAL SECTION ~ RAMP TURNAROUND
Occurs Approx. 10 Stations



TYPICAL RAMP SECTION
Occurs Approx. 73 Stations

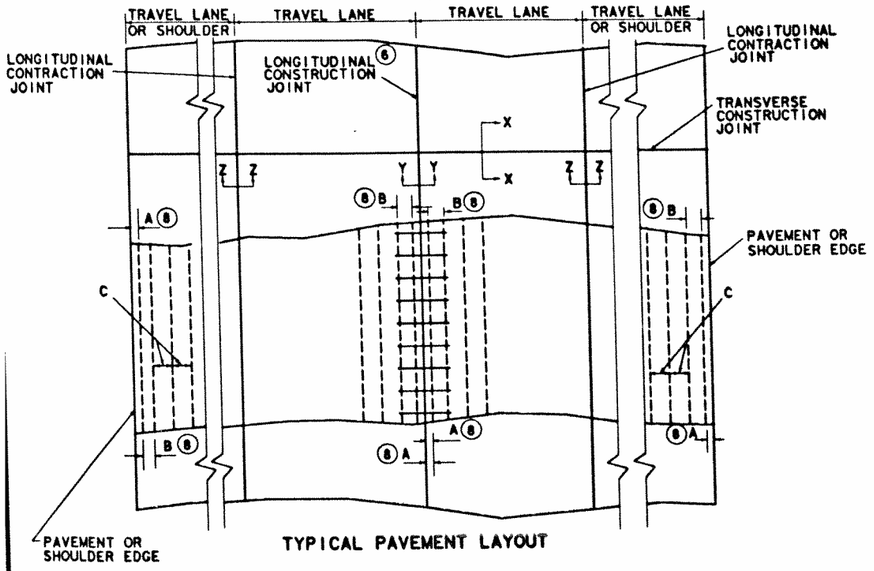
** FOR RAMP I, 8" FLEX BASE MATERIAL WILL BE REPLACED BY MATERIAL PAID UNDER ITEM 252, "SALVAGING AND REPLACING BASE".

TYPICAL CROSS SECTIONS

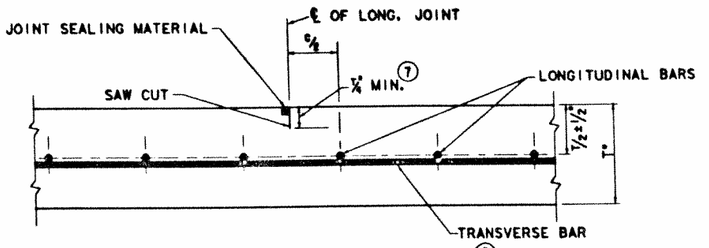
STATE OF TEXAS — DAVID L. JUSTICE — 51512 — REGISTERED PROFESSIONAL ENGINEER

PROJ. NO. INT. NO.	STATE	PROJECT NO.			SHEET NO.
0	TEXAS	[illegible]			2
STATE DIST. NO.	COUNTY	CONT.	SECT	JOB	HIGHWAY NO.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LTC

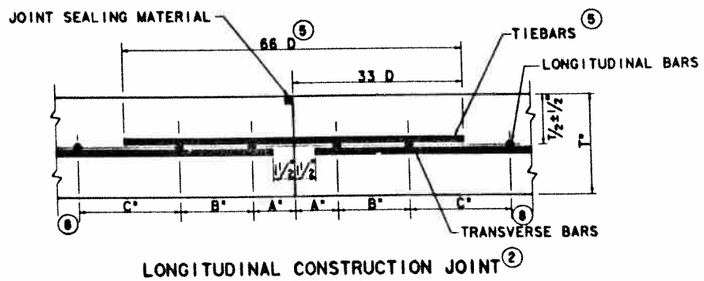


TYPICAL PAVEMENT LAYOUT



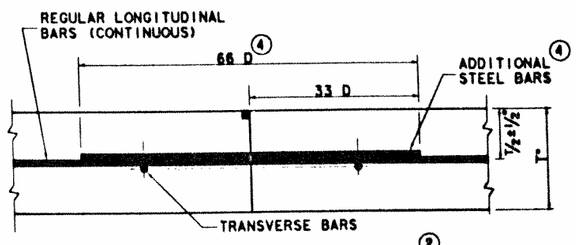
LONGITUDINAL CONTRACTION JOINT ②

SECTION Z - Z



LONGITUDINAL CONSTRUCTION JOINT ②

SECTION Y -Y



TRANSVERSE CONSTRUCTION JOINT ②

SECTION X - X

T (IN.)	LONG. BAR SIZE	SPACING C (IN.)	TRANSVERSE STEEL REQUIREMENTS ③ FOR GIVEN PAVEMENT WIDTHS (FT)						
			≤ 40	41-50	51-60	61-70	71-80	81-90	91-100
8	5	9	#4@ 36"	#4@ 29"	#5@ 37"	#5@ 32"	#5@ 28"	#6@ 35"	#6@ 32"
9	5	7.5	#4@ 32"	#4@ 26"	#5@ 33"	#5@ 28"	#6@ 35"	#6@ 31"	#6@ 28"
10	6	8.5	#4@ 29"	#5@ 36"	#5@ 30"	#6@ 36"	#6@ 32"	#6@ 28"	#6@ 25"
11	6	7	#4@ 26"	#5@ 32"	#5@ 27"	#6@ 33"	#6@ 29"	#6@ 26"	#6@ 23"
12	6	6	#5@ 37"	#5@ 30"	#6@ 35"	#6@ 30"	#6@ 26"	#6@ 23"	#6@ 21"
② 13	6	10.5	#4@ 36"	#4@ 35"	#4@ 30"	#4@ 25"	#5@ 34"	#5@ 31"	#5@ 27"
② 14	6	9.5	#4@ 36"	#4@ 33"	#4@ 27"	#5@ 36"	#5@ 32"	#5@ 28"	#6@ 36"
② 15	6	8.5	#4@ 36"	#4@ 31"	#4@ 26"	#5@ 34"	#5@ 30"	#6@ 38"	#6@ 34"

FOOTNOTES:

② FOR PAVEMENTS 13" OR GREATER IN THICKNESS, TWO LAYERS OF LONGITUDINAL AND TRANSVERSE STEEL SHALL BE USED. WHEN THE 'DOUBLE STRIKE-OFF' PROCEDURE IS NOT USED CHAIRS WILL BE REQUIRED TO SUPPORT BOTH LAYERS OF STEEL, AS SHOWN IN THE TABLE ABOVE. THE SPACINGS SHOWN FOR THESE THICKNESSES ARE FOR EACH LAYER.

③ TRANSVERSE STEEL MUST BE INCREASED AS PAVEMENTS WIDEN. PAVEMENT WIDTH SHALL BE MEASURED AT RIGHT ANGLES TO THE CENTERLINE AND SHALL INCLUDE ALL MAINLANES, CONNECTORS, RAMPS AND CONCRETE SHOULDERS THAT ARE TIED TOGETHER. WHERE WIDTHS EXCEED 100', ADDITIONAL TRANSVERSE STEEL WILL BE REQUIRED, UNLESS A "FREE" (NON-REINFORCED) LONGITUDINAL JOINT IS SHOWN ELSEWHERE IN THE PLANS. WHERE THE CENTER MEDIAN IS TO BE PAVED WITH CRCP AND A MEDIAN BARRIER IS PROVIDED, THE "FREE" (NON-REINFORCED) LONGITUDINAL JOINT WILL BE PLACED UNDER THE BARRIER.

④ ADDITIONAL STEEL AT THE TRANSVERSE CONSTRUCTION JOINTS SHALL BE BARS OF EQUAL DIAMETER, AND A SPACING OF DOUBLE THAT SPECIFIED FOR THE LONGITUDINAL STEEL OF THE GIVEN THICKNESS. THE LENGTH OF THE BARS SHALL BE 66 TIMES THE BAR DIAMETER ("D").

⑤ TRANSVERSE TIEBARS AT THE LONGITUDINAL CONSTRUCTION JOINTS SHALL BE BARS OF EQUAL DIAMETER AND SPACING TO THOSE SPECIFIED FOR THE TRANSVERSE STEEL OF THE GIVEN THICKNESS. THE LENGTH OF THE BARS SHALL BE 66 TIMES THE BAR DIAMETER ("D").

⑥ PAVEMENT WIDTHS IN EXCESS OF 16' SHALL BE PROVIDED WITH A LONGITUDINAL JOINT (SECTION Z-Z OR Y-Y). THESE JOINTS SHALL BE LOCATED WITHIN 6" OF THE LANE LINES UNLESS SHOWN ELSEWHERE ON THE PLANS.

⑦ IF SILICEOUS GRAVEL IS USED AS A COARSE AGGREGATE, THE SAW CUT DEPTH FOR LONGITUDINAL CONTRACTION JOINTS SHALL BE T/3.

⑧ THE NUMBER OF BARS REQUIRED FOR THE VARIOUS PLACEMENT WIDTHS (INDICATED IN THE TABLE) INCLUDES BARS AT "B" SPACING ON BOTH SIDES WITH AN OVERHANG "A".
"A" SPACING SHALL BE BETWEEN 3" AND 4".
"B" SPACING SHALL BE BETWEEN 3" AND 9".
THE TWO SPACINGS COMBINED ("A" AND "B"), LOCATED AT BOTH LONGITUDINAL EDGES OF THE CONCRETE PLACEMENT, SHALL PROVIDE FOR THE REMAINING SPACE AND STEEL LOCATION TO ROUND OUT THE PLACEMENT WIDTH.

GENERAL NOTES

1. NO EXPANSION JOINTS WILL BE USED EXCEPT AT STRUCTURE ENDS OR FIXED OBJECTS AS SHOWN ELSEWHERE IN THE PLANS.
2. LONGITUDINAL AND TRANSVERSE BARS SHALL BE DEFORMED STEEL CONFORMING TO ASTM A-615 OR ASTM A-616 (GRADE 60) AS NOTED IN THE STANDARD SPECIFICATIONS.
3. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCEMENT, REFER TO THE GOVERNING SPECIFICATIONS FOR "CONCRETE PAVEMENT".
4. DETAILS AS TO PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
5. WITHIN ANY AREA BOUNDED BY TWO FEET OF PAVEMENT LENGTH MEASURED PARALLEL TO THE CENTERLINE AND TWELVE FEET OF PAVEMENT WIDTH MEASURED PERPENDICULAR TO THE PAVEMENT CENTERLINE, NOT OVER 33% OF THE REGULAR LONGITUDINAL STEEL SHALL BE SPLICED.
6. THE LONGITUDINAL STEEL SHALL BE PLACED AT THE VERTICAL SLAB CENTER WITH A TOLERANCE OF 1/2 INCH. TRANSVERSE STEEL SHALL BE PLACED DIRECTLY ABOVE OR BELOW THE LONGITUDINAL STEEL.
7. SPLICES SHALL BE A MINIMUM OF 33 TIMES THE NOMINAL STEEL DIAMETER ("D").
8. BARS THAT REQUIRE BENDING SHALL BE GRADE 40 STEEL CONFORMING TO REQUIREMENTS OF ASTM DESIGNATION A 615. SPACINGS FOR GRADE 40 STEEL SHALL BE 2/3 OF THAT SPECIFIED FOR GRADE 60 STEEL.
9. THE REGULAR LONGITUDINAL STEEL AT TRANSVERSE CONSTRUCTION JOINTS SHALL EXTEND A MINIMUM OF FOUR FEET ON EITHER SIDE OF THE JOINT.
10. VIBRATION WITH HAND-MANIPULATED MECHANICAL VIBRATORS WILL BE REQUIRED ADJACENT TO ALL TRANSVERSE CONSTRUCTION JOINTS.
11. THE CHAIRS USED TO SUPPORT THE STEEL SHALL BE OF SUFFICIENT STRUCTURAL QUALITY AND NUMBER TO HOLD THE STEEL MAT WITHIN THE PLACEMENT HEIGHT TOLERANCES. CHAIRS SHALL BE OF A TYPE APPROVED BY THE ENGINEER.
12. WITH THE APPROVAL OF THE ENGINEER, MULTIPLE PIECE TIEBARS (THREADED COUPLING OR OTHER ADEQUATE DEVICE) MAY BE USED TO FACILITATE CONSTRUCTION PROVIDED THE SYSTEM DEVELOPS A FORCE EQUAL TO 1-1/2 TIMES THE MINIMUM YIELD STRENGTH OF THE TIEBAR SHOWN. THE SPACING FOR THE SYSTEM SHALL BE LESS THAN OR EQUAL TO THAT OF THE TIEBARS SHOWN.
13. JOINT, GROOVE AND SEAL DETAILS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
14. LONGITUDINAL AND TRANSVERSE STEEL SPACING SHALL NOT VARY MORE THAN ONE-TWELFTH OF THE SPACING SHOWN HEREON.
15. IF WIDTHS OCCUR THAT ARE OTHER THAN THE TYPICAL WIDTHS SHOWN, INDIVIDUAL BARS OF THE SIZE SPECIFIED HEREON MAY BE ADDED OR REMOVED TO OBTAIN THE APPROPRIATE WIDTH. SPACING REQUIREMENTS SHALL NOT BE EXCEEDED, HOWEVER.
16. WHEN MACHINE-PLACING OF STEEL REINFORCEMENT IS USED, THE USE OF CHAIRS SHALL NOT BE REQUIRED, AND THE TRANSVERSE STEEL MAY BE PLACED ABOVE OR BELOW THE LONGITUDINAL STEEL.

CHAIR SIZES (In.) ② FOR TWO LAYER STEEL PLACEMENT		
T (In.)	TOP STEEL	BOTTOM STEEL
13	6.5	3
14	7.5	4
15	8	4.5

SPACING C (In.)	NUMBER OF BARS ⑧ REQUIRED FOR VARIOUS TYPICAL PLACEMENT WIDTHS (ft.)						
	12	16	22	24	27	34	38
6	24	32	44	48	54	68	76
7	21	27	38	41	46	58	65
7.5	19	26	35	38	43	54	61
8.5	17	23	31	34	38	48	54
9	16	21	29	32	36	45	51
9.5	15	20	28	30	34	43	48
10.5	14	18	25	27	31	39	43

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

CONCRETE PAVEMENT DETAILS

CONTINUOUSLY REINFORCED STEEL BARS

CRCP(B)-89C

85

REVISIONS	FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
	6	TEXAS	MA-F 417(2)				85
	STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB		HIGHWAY NO.
	12	FAYETTE	766	1	55		SH 71
							A-17

STA. 149+69
= END INCIDENTAL CONST.
STA. 149+69
BEG. PROJECT MA-F 417(29)
CONT 266-01-055

BEGIN CONC. MED. BAR
STA. 141+00

BEGIN CONC. PAVMT.
STA. 145+00

2-2 LUG TERMINAL
ANCHORAGE SYSTEMS

N 57° 25' 43" E

PC 154+95.61

MEDIAN DRAIN (13) SMD LENGTH 20 L.F.

MEDIAN DRAIN (14) SMD LENGTH 15 L.F.

MEDIAN DRAIN (15) SMD LENGTH 16 L.F.

MEDIAN DRAIN (16) SMD LENGTH 20 L.F.

PI STA 163+37.19 (G)
DELTA= 32° 44' 32.04" Rt.
D= 2° 0' 0.00"
T=841.58
L=1637.11
R=2864.79

STA 6+23.70
(ON C/L LEDBETTER RD)

STA 14+89.10
(ON C/L LEDBETTER RD)

N 20° 03' 16" E

PC 157+47

N 80° 40' 25" E

S 80° 34' 50" E

CONSTRUCTED DURING UNIT I CONTRACT

LEDBETTER ROAD OVERPASS

STA 166+50, 333.82' RT
(C/L MEDIAN)

805 L.F. CONC MED BAR TY2
67 L.F. CONC MED BAR TY3
179 L.F. 20 L.F.
47 C.Y. BORROW RT.
47 C.Y. BORROW LT.
38 C.Y. MUL. SOD MED RT.
38 C.Y. MUL. SOD MED LT.
162 C.Y. 162 C.Y.
1372 L.F. 15 L.F.
203 C.Y. 203 C.Y.
153 L.F. 15 L.F.
455 L.F. 20 L.F.

203	C.Y.	
203	C.Y.	
162	C.Y.	
162	C.Y.	
1827	L.F.	
70	L.F.	
205	L.F.	

INCIDENTAL CONSTRUCTION

BORROW	RT.	47. C.Y.
BORROW	LT.	47. C.Y.
MUL. SOD	M/L	38. C.Y.
MUL. SOD	M/L	38. C.Y.
CONC MED BAR TY2		805 L.F.
CONC MED BAR TY3		67. L.F.

STA. 149+69
END INCIDENTAL CONSTRUCTION

= STA. 149+69
BEG. PROJECT MA-F 417(29)
CONT. 266-01-055

7068 %

350
340
330
320
300

315.30 316.01 316.72 317.42 318.13 318.84 319.54 320.25 320.96 321.67 322.37 323.08 323.79 324.49 325.20 325.91 326.61 327.32 328.03 328.73 329.29

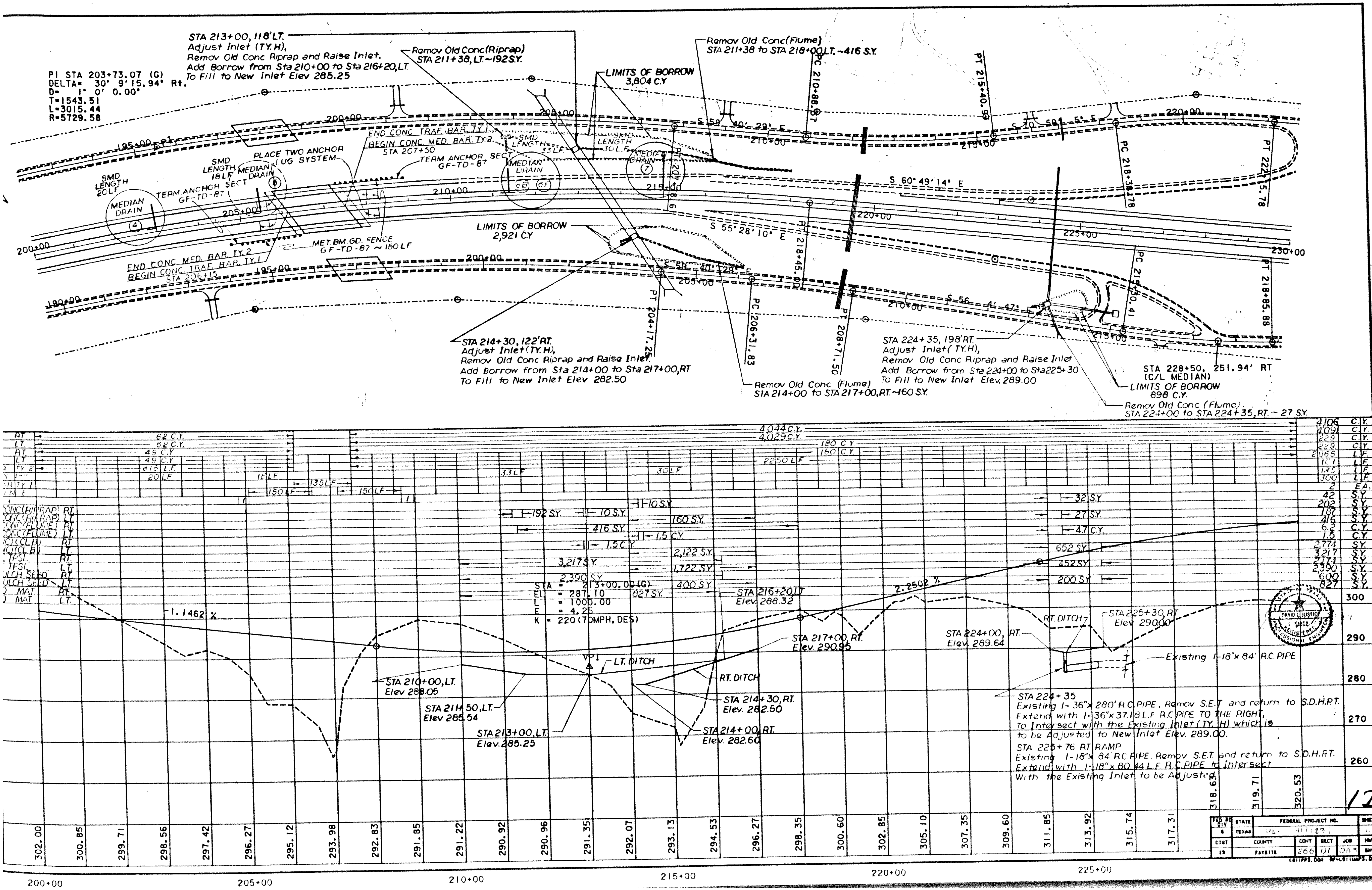
140+00 145+00 150+00 155+00 160+00 165+00

STATE OF TEXAS
DAVID L. JUSTICE
51610
REGISTERED
PROFESSIONAL ENGINEER

10 101

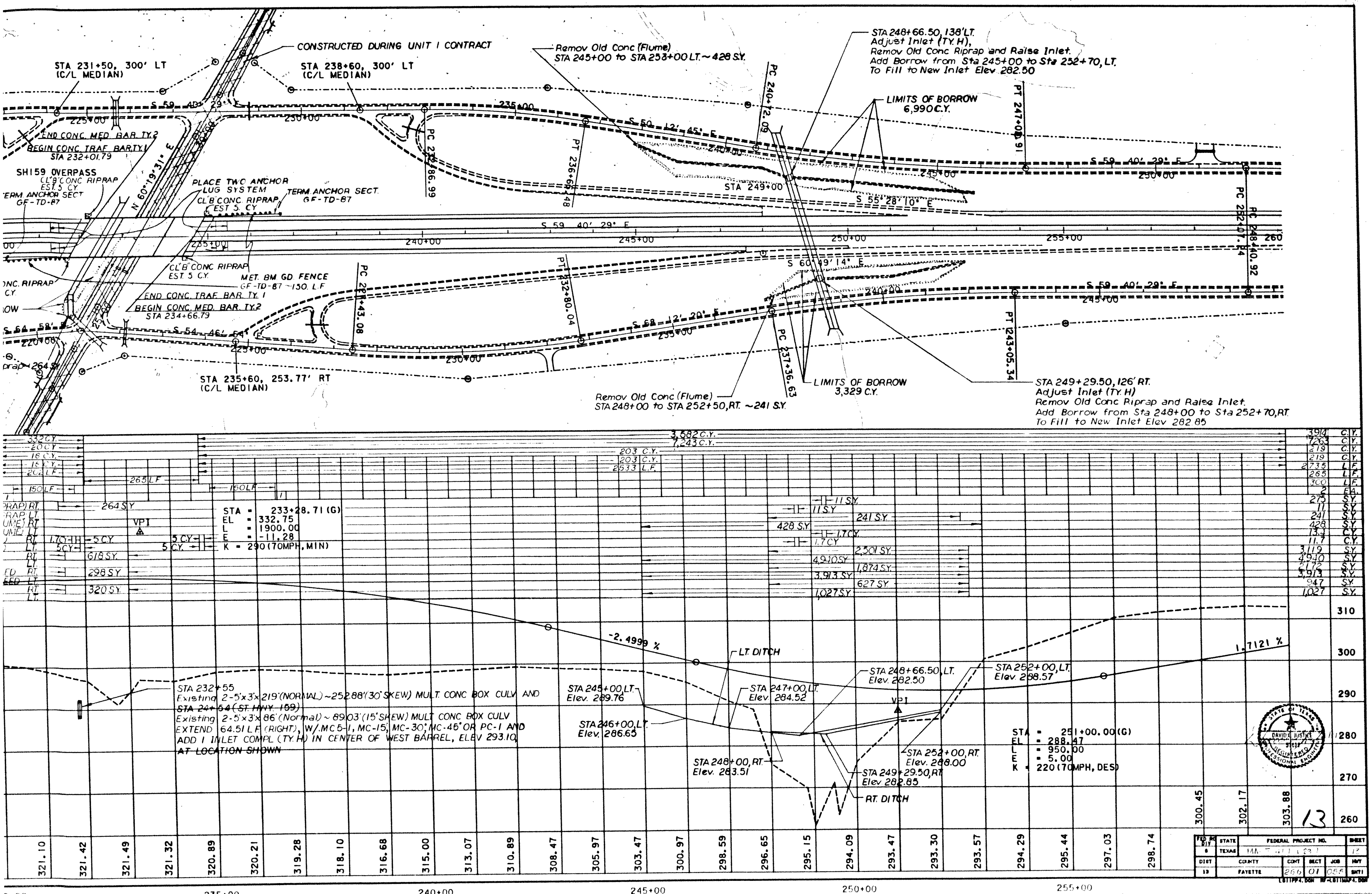
FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.				SHEET NO.
6	TEXAS	MA-417(29)				17
DIST	COUNTY	CONT	SECT	JOB	HWY	
13	FAYETTE	266	01	055	BMTI	

L81TPPT.DGN RF-L81MAPT.DGN



FED RD DIV	STATE	FEDERAL PROJECT NO.			SHEET
6	TEXAS	[illegible]			[illegible]
DIST	COUNTY	CONT	SECT	JOB	HWY
13	FAYETTE	266	01	055	SH71

LG11PP3.DGN RF-LG11MAP3.DGN



CONSTRUCTED DURING UNIT I CONTRACT
STA 231+50, 300' LT (C/L MEDIAN)
STA 238+60, 300' LT (C/L MEDIAN)
Remov Old Conc (Flume) STA 245+00 to STA 253+00 LT. ~ 428 S.Y.
STA 248+66.50, 138' LT. Adjust Inlet (TY. H), Remov Old Conc Riprap and Raise Inlet. Add Borrow from Sta 245+00 to Sta 252+70, LT. To Fill to New Inlet Elev 282.50
LIMITS OF BORROW 6,990 C.Y.
PC 240+72.09
PT 247+00.91
S 59° 40' 29" E
S 50° 12' 45" E
S 55° 28' 10" E
S 60° 49' 14" E
S 68° 12' 20" E
S 54° 46' 54" E
S 64° 58' E
N 60° 19' 31" E
PC 236+86.99
PT 236+69.48
STA 249+00
PC 252+07.84
PC 248+40.92
END CONC. MED. BAR. TY. 2
BEGIN CONC. TRAF. BAR. TY. I
STA 232+01.79
SH159 OVERPASS
CL 'B' CONC RIPRAP EST. 5 CY
TERM. ANCHOR SECT GF-TD-87
PLACE TWO ANCHOR LUG SYSTEM
CL 'B' CONC. RIPRAP EST. 5 CY
TERM. ANCHOR SECT. GF-TD-87
CL 'B' CONC RIPRAP EST. 5 CY
MET. BM. GD. FENCE GF-TD-87 ~ 150 L.F.
END CONC. TRAF. BAR. TY. I
BEGIN CONC. MED. BAR. TY. 2
STA 234+66.79
PC 228+43.08
PT 232+80.04
PC 237+36.63
PT 243+05.34
STA 235+60, 253.77' RT (C/L MEDIAN)
Remov Old Conc (Flume) STA 248+00 to STA 252+50, RT. ~ 241 S.Y.
LIMITS OF BORROW 3,329 C.Y.
STA 249+29.50, 126' RT. Adjust Inlet (TY. H) Remov Old Conc Riprap and Raise Inlet. Add Borrow from Sta 248+00 to Sta 252+70, RT. To Fill to New Inlet Elev 282.85
225+00
230+00
235+00
240+00
245+00
250+00
255+00
260
332 C.Y.
20 C.Y.
16 C.Y.
16 C.Y.
202 L.F.
150 L.F.
265 L.F.
150 L.F.
3,582 C.Y.
7,243 C.Y.
203 C.Y.
203 C.Y.
2533 L.F.
264 S.Y.
1.70 C.Y.
5 C.Y.
5 C.Y.
5 C.Y.
5 C.Y.
618 S.Y.
298 S.Y.
320 S.Y.
11 S.Y.
11 S.Y.
241 S.Y.
428 S.Y.
1.7 C.Y.
1.7 C.Y.
2,501 S.Y.
4,940 S.Y.
1,874 S.Y.
3,913 S.Y.
627 S.Y.
1,027 S.Y.
3914 C.Y.
7263 C.Y.
219 C.Y.
219 C.Y.
2735 L.F.
265 L.F.
300 L.F.
2 EA.
275 S.Y.
11 S.Y.
241 S.Y.
428 S.Y.
13.4 C.Y.
11.7 C.Y.
3,119 S.Y.
4,940 S.Y.
2,172 S.Y.
3,913 S.Y.
947 S.Y.
1,027 S.Y.
VPI
STA = 233+28.71 (G)
EL = 332.75
L = 1900.00
E = -11.28
K = 290 (70MPH, MIN)
-2.4999 %
1.7121 %
LT. DITCH
RT. DITCH
STA 232+55
Existing 2-5'x3'x 219' (NORMAL) ~ 252.88' (30° SKEW) MULT. CONC BOX CULV AND
STA 24+54 (ST. HWY. 159)
Existing 2-5'x3'x 86' (Normal) ~ 89.03' (15° SKEW) MULT CONC BOX CULV
EXTEND 64.51 L.F. (RIGHT), W/. MC 5-1, MC-15, MC-30, MC-45 OR PC-1 AND
ADD 1 INLET COMPL (TY. H) IN CENTER OF WEST BARREL, ELEV 293.10,
AT LOCATION SHOWN
STA 245+00, LT. Elev. 289.76
STA 246+00, LT. Elev. 286.65
STA 247+00, LT. Elev. 284.52
STA 248+66.50, LT. Elev. 282.50
STA 252+00, LT. Elev. 288.57
STA 248+00, RT. Elev. 283.51
STA 249+29.50, RT. Elev. 282.85
STA 252+00, RT. Elev. 288.00
VPI
STA = 251+00.00 (G)
EL = 288.47
L = 950.00
E = 5.00
K = 220 (70MPH, DES)
310
300
290
280
270
260
321.10
321.42
321.49
321.32
320.89
320.21
319.28
318.10
316.68
315.00
313.07
310.89
308.47
305.97
303.47
300.97
298.59
296.65
295.15
294.09
293.47
293.30
293.57
294.29
295.44
297.03
298.74
300.45
302.17
303.88
STATE OF TEXAS DAVID C. JUSTICE 51612 REGISTERED PROFESSIONAL ENGINEER
13
FED. RD. DIV. 6
STATE TEXAS
FEDERAL PROJECT NO. [illegible]
SHEET 12
DIST 13
COUNTY FAYETTE
CONT 266
SECT 01
JOB 055
HWY
L811PP4.DGN RF-L811MAP4.DGN

ED DURING UNIT I CONTRACT

STA 14+95.61
(ON CONNECTION RD)

STA 293+20, 300.00' LT
(C/L MEDIAN)

STA 298+14.80, 288.11' LT
(C/L MEDIAN)

STA 294+50, 275.33' RT
(C/L MEDIAN)

STA 288+69

S 56° 29' 47" E

PC 294+62.07

PT 297+63.47

WESTBOUND THRU-LANE
PI STA 298+72.27 (E)
DELTA= 8° 35' 45.48" Lt.
D= 2° 30' 0.00"
T=172.24
L=343.84
R=2291.83

S 64° 30' 13" E

PC 293+00.03

PT 305+43.87

PT 305+26.33

S 59° 53' 14" E

S 65° 14' 18" E

S 55° 29' 47" E

S 61° 31' 21" E

EAST INTERCHANGE

MET BM GD FENCE
GF-TD-87 ~150 L.F.

CL'B' CONC RIPRAP
EST 5 CY

TEMM ANCHOR SECT
GF-TD-87

CONSTRUCTED DURING UNIT I CONTRACT

CONSTRUCTED DURING UNIT I CONTRACT

MKT RXR OVERPASS

STA 309+07.30

STA 315+67.30

CONSTRUCTED DURING UNIT I CONTRACT

STA 309+07.30
END PROJECT MA-F 417(29)
END CONT. 266-01-055
=STA 309+07.30
BEG PROJECT C266-1-58
CONT. 266-01-058

PI STA 299+54.36 (G)
DELTA= 8° 35' 45.48" Lt.
D= 0° 45' 0.00"
T=574.14
L=1146.13
R=7639.44

EASTBOUND THRU-LANE
PI STA 299+46.69 (C)
DELTA= 8° 04' 30.37" Lt.
D= 2° 30' 0.00"
T=161.77
L=323.00
R=2291.83

37	C.Y.
37	C.Y.
30	C.Y.
30	C.Y.
370	L.F.
255	L.F.
300	L.F.
2	EA.
10	C.Y.

WESTBOUND THRU-LANE PROF GR 12' LT.
STA = 293+00.00(E)
EL = 303.09

EASTBOUND THRU-LANE PROF GR 24' RT.
STA = 293+00.00(C)
EL = 302.84

STA = 298+01.74(C)
EL = 299.00
L = 250.00
E = -1.13
K = 540(70MPH, DES)

STA = 305+03.12(E)
EL = 293.83
L = 570.00
E = 2.69
K = 150(70MPH, MIN)

STA = 305+42.97(C)
EL = 290.13
L = 500.00
E = 2.66
K = 120(60MPH, MIN)

EASTBOUND THRU-LANE
STA = 308+72.04(C)
EL = 300.18

STA = 314+86.00(E)
EL = 323.32
L = 850.00
E = -3.40
K = 230(65MPH, MIN)

1161. L.F.

150 L.F. | 255 L.F. | 150 L.F.

75 L.F.

10 C.Y.

-.7653 %

-.7697 %

-1.1967 %

3.0004 %

3.0541 %

VPI

WESTBOUND LANES

EASTBOUND LANES

STA.309+07.30
END PROJECT MA-F 417(29)
END CONT 266-01-055
=STA 309+07.30
BEG. PROJECT C266-1-58
CONT. 266-01-058

304.88 304.11 303.34 303.84 303.09 302.07 302.32 301.31 301.55 300.54 300.78 299.77 300.01 298.88 299.24 297.82 298.47 296.63 297.70 295.43 296.93 294.23 296.16 293.04 295.62 292.33 295.72 292.47 296.48 293.45 297.91 295.29 299.99 297.98 302.74 305.74 308.74 311.71 314.38 316.66 318.58 320.11 321.27 322.05 322.46 322.49 322.29

295+00 300+00 305+00 310+00 315+00

310 300 290 280 270 260 250

DAVID JUSTICE 91612 REGISTERED PROFESSIONAL ENGINEER

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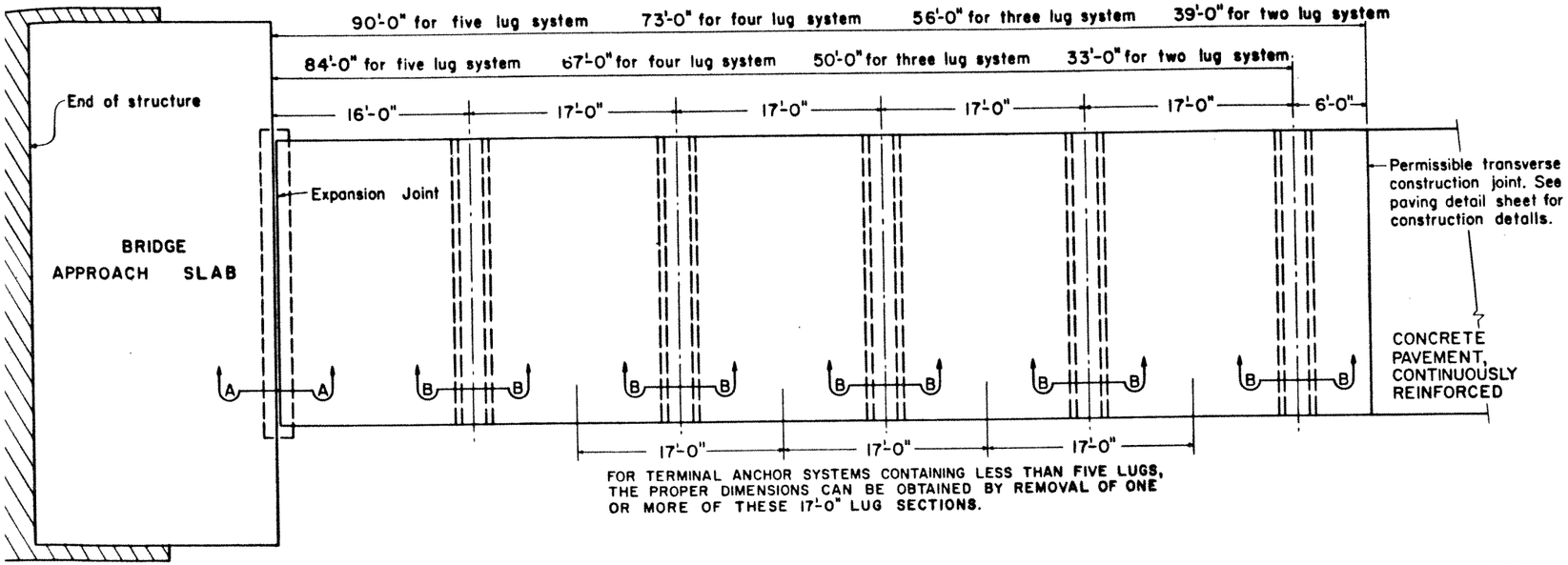
FED. RD. DIV.	STATE	FEDERAL PROJECT NO.	SHEET
6	TEXAS	MA-F 417(29)	
DIST	COUNTY	CONT SECT JOB	HWY
13	FAYETTE	C266 01 055	SHT.

L&TIPPS.DGN RF-L&TMAPS.DGN



FOR TERMINAL ANCHOR SYSTEMS CONTAINING LESS THAN FIVE LUGS, THE PROPER DIMENSIONS CAN BE OBTAINED BY REMOVAL OF ONE OR MORE OF THESE 17'-0" LUG SECTIONS.

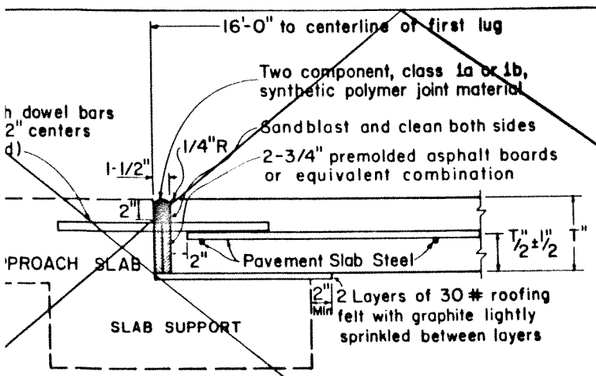
GENERAL NOTES

1. THE DETAILS OF THE BRIDGE APPROACH SLAB ARE SHOWN ELSEWHERE IN THE PLANS.
2. THE LOCATIONS OF THE TERMINAL ANCHORAGE SYSTEMS AND NUMBER OF LUGS PER SYSTEM SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
3. DETAILS AS TO PAVEMENT SLAB WIDTH, THICKNESS, AND CROWN CROSS-SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
4. THE CONCRETE PAVEMENT SLAB SHALL CONTINUE ACROSS THE ANCHOR LUGS AS SHOWN. ALL REQUIREMENTS AS TO CONSTRUCTION, MEASUREMENT, AND PAYMENT FOR THE PAVEMENT SLABS SHALL BE MADE UNDER THE ITEM "CONCRETE PAVEMENT (CONTINUOUSLY REINFORCED)".
5. ~~REINFORCING STEEL THAT IS NOT A PART OF THE STANDARD PAVEMENT SLAB REINFORCEMENT SHALL BE OF THE SIZE AND SPACING NOTED HEREON AND SHALL BE PAID FOR UNDER THE ITEM "TERMINAL ANCHORAGE (CONCRETE PAVEMENT)". STEEL CONFORMING TO ASTM DESIGNATION: A-615, GRADE 40, OR ANY GRADE OF REINFORCING STEEL APPROVED UNDER THIS ITEM WILL BE PERMITTED~~
6. SPLICES IN STEEL CONFORMING TO ASTM DESIGNATION: A-615, GRADE 40, SHALL BE A MINIMUM OF 20 TIMES THE DIAMETER OF THE BAR. SPLICES IN OTHER GRADES OF STEEL SHALL BE AS NOTED ON THE PAVING DETAIL THAT PERMITS ITS USE.
7. DETAILS OF LONGITUDINAL JOINTS (TRANSVERSE JOINTS, IF NECESSARY) AND REQUIRED JOINT SEALS ARE SHOWN ON THE APPROPRIATE PAVING DETAIL SHEET.
8. TRANSVERSE CONSTRUCTION JOINTS WILL NOT BE PERMITTED WITHIN THE LIMITS OF THE ANCHOR LUGS EXCEPT IN AN EMERGENCY STOPPAGE OF THE CONCRETE PLACEMENT AND WITH THE APPROVAL OF THE ENGINEER.
9. THE PERMISSIBLE TRANSVERSE CONSTRUCTION JOINT SHALL BE AS DETAILED ON THE PAVEMENT DETAIL SHEET, BUT MAY BE DELETED IF THE CONTRACTOR ELECTS TO PLACE THE ENTIRE PAVEMENT SLAB IN A SINGLE OPERATION.
10. ~~EXCAVATION FOR, AND CONCRETE USED IN THE ANCHOR LUG SHALL BE PAID FOR UNDER THE ITEM "TERMINAL ANCHORAGE (CONCRETE PAVEMENT)".~~
11. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCING STEEL, REFER TO THE ITEM "TERMINAL ANCHORAGE (CONCRETE PAVEMENT)".
12. DIMENSIONS SHOWN FOR THE SEAT OF THE PREFORMED COMPRESSION SEAL MAY BE MODIFIED TO MORE EFFECTIVELY ACCOMMODATE THE SEAL APPROVED BY THE ENGINEER AND FURNISHED BY THE CONTRACTOR PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER FOR THIS MODIFICATION.
13. IN THE PLANE OF THE STEEL PARALLEL TO THE NEAREST SURFACE OF CONCRETE, BARS SHALL NOT VARY FROM PLAN PLACEMENT BY MORE THAN ONE-TWELFTH OF THE SPACING BETWEEN BARS.
14. CONCRETE AND REINFORCING STEEL UTILIZED TO CONSTRUCT THE SLAB SUPPORT SHALL BE SUBSIDARY TO ITEM 366, CONCRETE PAVEMENT (CONTINUOUSLY REINFORCED). SEE 4" EXPANSION JOINT DETAIL SHEET.

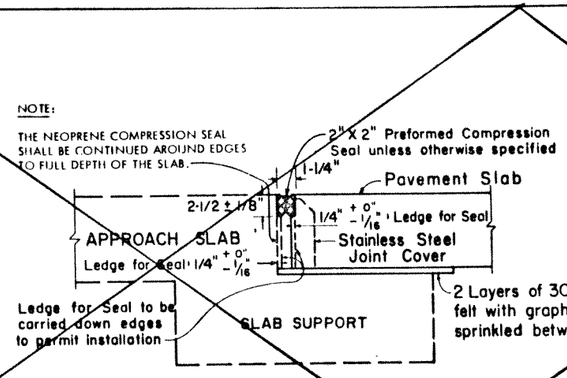
MATERIAL	ESTIMATING QUANTITIES FOR ANCHOR LUG	
	24 FOOT LENGTH	PER FOOT OF LENGTH
EXCAVATION AND CONCRETE (CU. YD.)	5.56	0.23148
STEEL (LBS)	653	27.369*

* SUBTRACT FOUR LBS. FROM TOTAL TO ALLOW FOR EDGE COVER

DOWEL BARS SHALL BE SUBSIDARY TO OTHER BID ITEMS

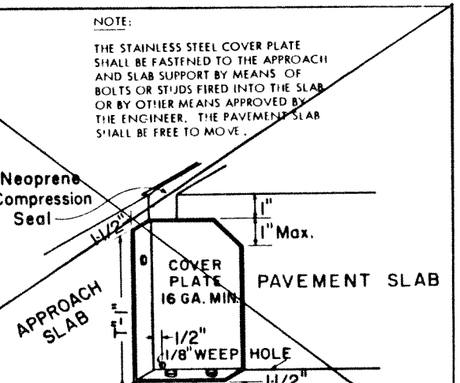


EXPANSION JOINT, METHOD B

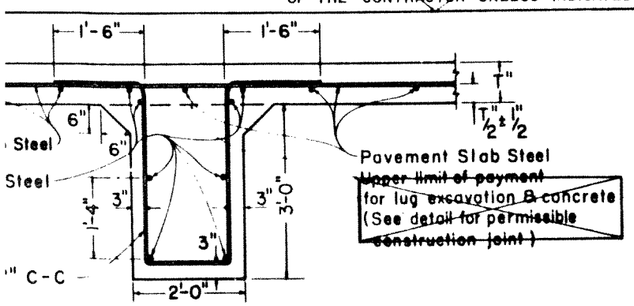


EXPANSION JOINT, METHOD A

DOWEL BARS AND STEEL PLACEMENT SAME AS SHOWN IN METHOD B

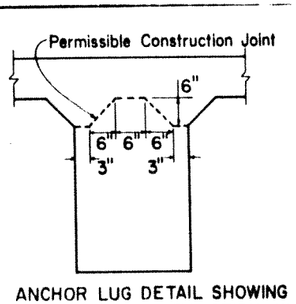


STAINLESS STEEL JOINT COVER PLATE



ANCHOR LUG DETAIL

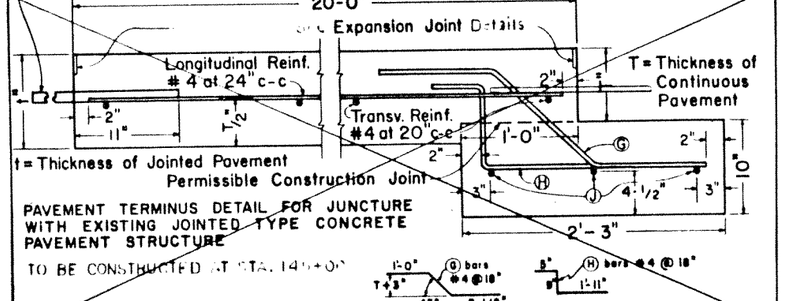
SECTION B-B

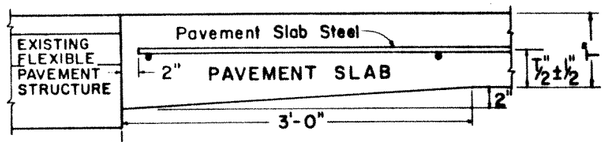


ANCHOR LUG DETAIL SHOWING PERMISSIBLE CONSTRUCTION JOINT

SECTION A-A

EXPANSION JOINT, METHOD A OR B SHALL BE USED AT THE OPTION OF THE CONTRACTOR UNLESS INDICATED ELSEWHERE IN THE PLANS





PAVEMENT TERMINUS DETAIL FOR JUNCTURE WITH EXISTING FLEXIBLE TYPE PAVEMENT STRUCTURE

Proposed Project Terminus (STA 17+00)

DAVID L. AUSTIN 51612 REGISTERED PROFESSIONAL ENGINEER

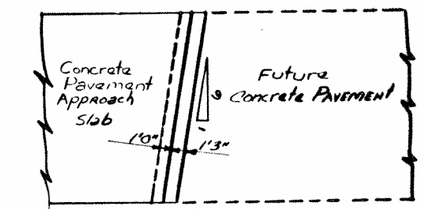
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

TERMINAL ANCHORAGE FOR CONCRETE PAVEMENT CONTINUOUSLY REINFORCED TA(CPCR)-83 (MOD)

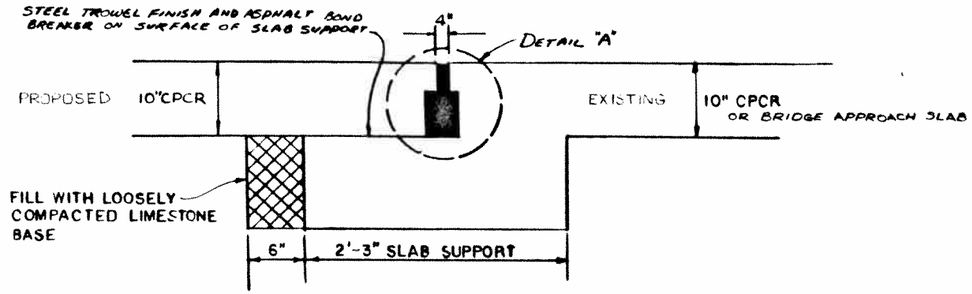
28

FILE NO.	DRAWING NO.	DATE	FED. ROAD DIV. NO.	STATE	PROJECT NO.	SHEET NO.
DN:	ORIGINAL		6	TEXAS	MLF 411 (22)	28
CK:	REVISED		STATE DIST. NO.	COUNTY	CONT. SECT. JOB	HIGHWAY NO.
DW:	REVISED		13	FAYETTE		SH 71
CK:						

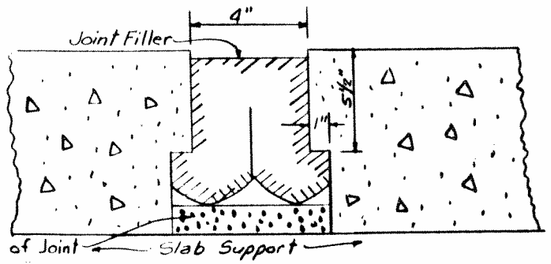
EIC



LAYOUT JOINT & SLAB SUPPORT TO BE CONSTRUCTED AT STA 145+00 TEMPORARY TERMINUS

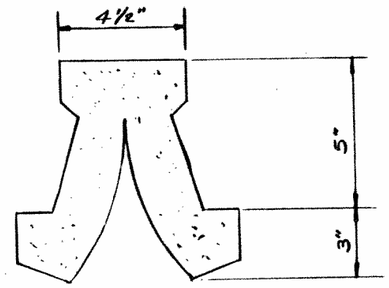


NOTE - LIMESTONE BASE AND PRESSURE RELIEF JOINT MATERIAL REQUIRED FOR THIS INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS.



DETAIL "A"

PRESSURE RELIEF JOINT FILLER IS TO BE INSERTED INTO JOINT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WITH TOP TO BE ½" BELOW PAVEMENT SURFACE



SECTION

PRESSURE RELIEF JOINT FILLER

4" EXPANSION JOINT DETAIL

STATE OF TEXAS
DAVID L. JUSTICE
51612
REGISTERED
PROFESSIONAL ENGINEER

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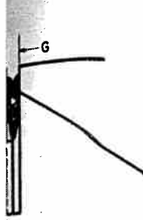
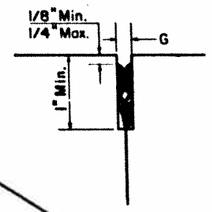
FHWA REGION DIV. NO.	STATE	PROJECT NO.	SHEET NO.
6	TEXAS	MAF 81-1 (22)	23
STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
13	Fayette	2m	01	06	SH 71

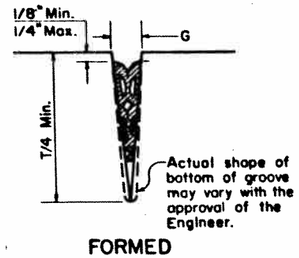


OVED
AL JOINT
L-1 or L-2)

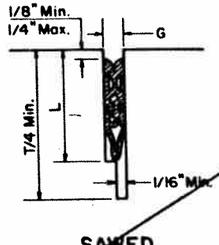


LONGITUDINAL
CONSTRUCTION JOINT
(TYPE L-2)

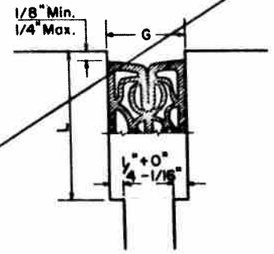
ITUDINAL JOINT SEALS



FORMED
CONTRACTION
JOINT
(TYPES FC-1 or FC-2)

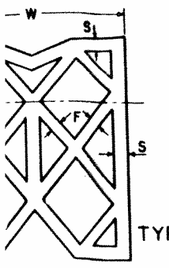


SAWED
CONTRACTION
JOINT
(TYPES SC-1 or SC-2)

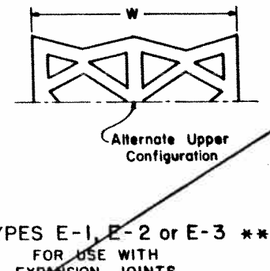


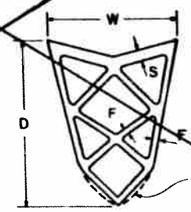
EXPANSION
JOINT
(TYPES E-1, E-2 or E-3)

TRANSVERSE JOINT SEALS

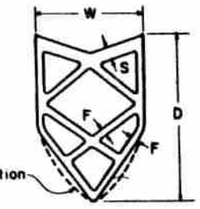


TYPES E-1, E-2 or E-3 **
FOR USE WITH
EXPANSION JOINTS





TYPES FC-1 or FC-2 **
FOR USE WITH
FORMED GROOVES



TYPES SC-1 or SC-2 **
FOR USE WITH
SAWED GROOVES

PREFORMED COMPRESSION SEAL TYPES

** See General Note No. 6

METHOD A: PREFORMED COMPRESSION SEALS

T	JOINT GROOVE		MINIMUM JOINT SEAL SIZE TO BE USED [2]							SEAL DESIGNATION & TYPE
	WIDTH G (In.)	DEPTH L (In.)	WIDTH W (In.)	DEPTH D (In.)	MAX. WID LAT COMP.	THICK. S (In.)	TOLER [3] S (In.)	THICK. F (In.)	TOLER [3] F (In.)	
DINAL T	$\frac{1}{8}$ +1/16 -0	7/8	5/16	5/8	1/8	0.040	-0.005	0.040	-0.005	L-1
	$\frac{1}{4} \pm \frac{1}{32}$	1	7/16	23/32	7/32	0.062	-0.005	0.040	-0.005	L-2
RANS-NTRAC-OINT	$\frac{1}{4}$ +1/16 -0	1-1/2	11/16	1-1/8	1/4	0.080	-0.012	0.040	-0.009	SC-1
	$\frac{3}{8}$ +1/16 -0	1-3/4	13/16	1-1/8	5/16	0.080	-0.012	0.040	-0.009	SC-2
RANS-NTRAC-OINT	3/8	N/A	13/16	1-1/8	5/16	0.080	-0.012	0.040	-0.009	FC-1
	5/8	N/A	1-1/4	1-1/2	5/8	0.080	-0.012	0.080	-0.012	FC-2
SION TS	1 *	2-1/8	1-5/8	1-5/8	7/8	0.094	-0.016	0.080	-0.012	E-1
	1-1/4 *	2-3/4	2	2	1	0.125	-0.016	0.110	-0.016	E-2
	1-5/8 *	3-3/8	2-1/2	2-3/4	1-1/4	0.187	-0.016	0.125	-0.016	E-3

** 6

VE WIDTH IS FOR SUMMER CONCRETE PLACEMENT. WHEN CONCRETE IS PLACED DURING THE ASON, THIS GROOVE SHALL BE INCREASED 1/8".

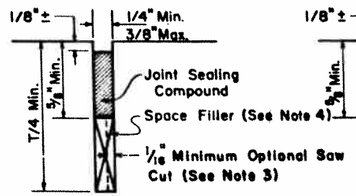
ALL VARIATIONS IN SEAL SIZES, THIS DIMENSION MAY HAVE TO BE MODIFIED SLIGHTLY TO OPER INSTALLATION. THIS DIMENSION IS APPLICABLE ONLY WHEN A STEPPED GROOVE IS A- NOT APPLICABLE.

ENSIONS ARE MINIMUM DIMENSIONS. DIMENSIONS GREATER THAN THOSE SHOWN MAY BE PROVED BY THE ENGINEER AND IF THEY PERMIT INSTALLATION IN A WORKMANLIKE MANNER TRA EXPENSE TO THE STATE.

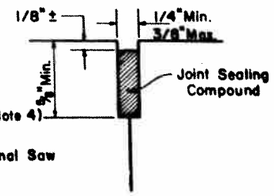
IMUM TOLERANCES ARE SHOWN. ANY REASONABLE OVERSIZE WILL BE ACCEPTED PROVIDED STALLATION IS POSSIBLE.

GENERAL NOTES FOR METHOD "A"

1. A SAMPLE OF EACH SIZE AND TYPE OF SEAL PROPOSED FOR USE SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. THE SEALS SHOWN AS METHOD "A" OR METHOD "B" MAY BE USED AT ANY JOINT REQUIRING A SEAL, HOWEVER, THE SAME SEAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
3. LONGITUDINAL JOINTS SHALL BE SAWED STRAIGHT AND TRUE TO LINE AS DETAILED IN THE STANDARD SPECIFICATIONS.
4. TRANSVERSE JOINTS MAY BE SAWED OR FORMED AND SHALL BE PLACED AS SHOWN ELSEWHERE IN THE PLANS.
5. THE SEALS DESIGNATED L-1 AND L-2 SHALL HAVE A CONFIGURATION SIMILAR TO THE TYPE FC OR SC.
6. OTHER INTERIOR CONFIGURATIONS MAY BE USED PROVIDED THE MATERIAL MEETS ALL OF THE REQUIREMENTS OF THE SPECIFICATIONS AND AS OTHERWISE SHOWN HEREON OR ELSEWHERE IN THE PLANS. THE NUMBER OF INTERIOR CELLS AND/OR THE THICKNESS OF THE EXTERIOR AND INTERIOR WALLS SHALL BE SUCH AS TO PROVIDE AN ADEQUATE COMPRESSIVE FORCE TO MAINTAIN A POSITIVE SEAL.
7. UNLESS OTHERWISE SPECIFIED, THE SIDES OF THE FORMED CONTRACTION JOINT MAY BE FORMED PARALLEL, BUT IF SO FORMED, THE SEAL SHALL BE AN APPROPRIATE TYPE SC SEAL APPROVED BY THE ENGINEER.
8. UNLESS THE GROOVE AND SEAL COMBINATION IS SPECIFICALLY DESIGNATED ELSEWHERE IN THE PLANS, ANY GROOVE AND SEAL COMBINATION SHOWN IN THE TABLE FOR A PARTICULAR TYPE JOINT MAY BE USED, BUT MUST BE APPROVED BY THE ENGINEER.
9. SEE EXPANSION JOINT DETAIL FOR TRANSVERSE EXPANSION JOINTS.



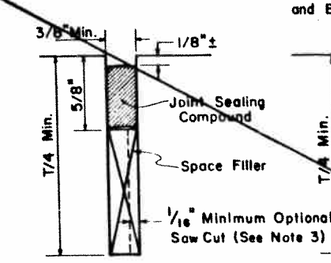
GROOVED
LONGITUDINAL JOINT



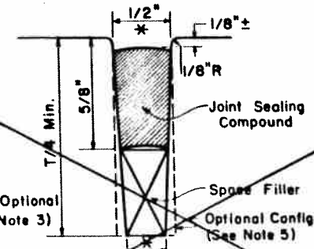
LONGITUDINAL
CONSTRUCTION JOINT

LONGITUDINAL JOINT SEALS

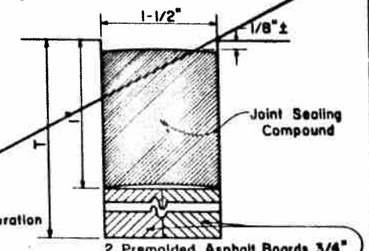
* For Joint Spacing Less Than 20' The Top and Bottom Dimension Shall Be Reduced 1/8".



SAWED
CONTRACTION JOINT



FORMED
CONTRACTION JOINT
(Joint Spacing Greater Than 20')



EXPANSION JOINT

TRANSVERSE JOINT SEALS

METHOD B: JOINT SEALING COMPOUND

GENERAL NOTES FOR METHOD "B"

1. LONGITUDINAL JOINTS MAY BE SAWED OR FORMED AS DETAILED IN THE STANDARD SPECIFICATIONS.
2. TRANSVERSE JOINTS MAY BE SAWED OR FORMED AND SHALL BE PLACED AS SHOWN ELSEWHERE IN THE PLANS.
3. A SUITABLE SPACE FILLER SHALL BE USED WHERE SHOWN AND THE JOINT SEAL COMPOUND POURED TO THE DEPTH INDICATED EXCEPT THAT IF THE MINIMUM SAW CUT IS USED, THE SPACE FILLER MAY BE DELETED.
4. AT THE OPTION OF THE CONTRACTOR, THE SPACE FILLER MAY BE OMITTED IN THE LONGITUDINAL JOINT ONLY AND THE JOINT SEALING COMPOUND POURED FULL DEPTH.
5. UNLESS OTHERWISE SPECIFIED THE SIDES OF THE FORMED CONTRACTION JOINT MAY BE FORMED PARALLEL AT THE OPTION OF THE CONTRACTOR.
6. UNLESS OTHERWISE SHOWN IN THE PLANS, EITHER METHOD "A" OR METHOD "B" MAY BE USED.

STATE OF TEXAS
DAVID L. JUSTICE
51612
REGISTERED
PROFESSIONAL ENGINEER

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

CONCRETE PAVING DETAILS
JOINT SEALS
JS-75 (MOD)

30

CN	DRAWING	DATE	RECORD DIV NO	STATE	PROJECT NO			SHEET NO.
CK DN	ORIGINAL		6	TEXAS	STP-E 413(2)			0
DW	REVISED		STATE DISTRICT	COUNTY	CONT	SECT	JOB	HIGHWAY NO
CK DW	REVISED		13	Fayette	666	01	055	SH 71
CK TB								

ETC