

INDEX OF SHEETS
SEE SHEET 2 & 3

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED

STATE HIGHWAY IMPROVEMENT

PROJECT NO. : NH 2007(228), ETC.
CSJ 0500-04-118, ETC.
GALVESTON COUNTY
IH 45

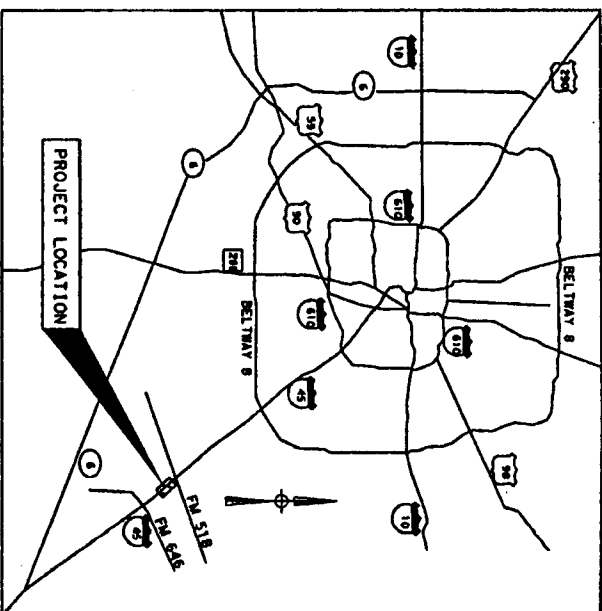
NET LENGTH OF PROJECT =
ROADWAY 9463.37 FT = 1.792 mi
BRIDGE 378.78 FT = 0.071 mi
TOTAL 9842.15 FT = 1.864 mi

LIMITS: IH45 AT SH 96

FOR THE RECONSTRUCTION OF AN INTERCHANGE FACILITY
CONSISTING OF A BRIDGE, GRADING, CONCRETE PAVEMENT,
LIME TREATED SUBGRADE, TRAFFIC CONTROL PLANS, SIGNING,
PAVEMENT MARKINGS, SIGNALS, ILLUMINATION, STORM SEWERS AND OUTFALL

Comp 1
2011

ADT		DESIGN SPEED		PROJECT NO.		SHEET	
IH 45	MAINTAINANCE = 96,900 (2006)	MAINTAINANCE = 70 MPH	STATE	NH 2007(228), ETC.	1	1	1
IH 45	FRIG. RDS = 146,300 (2026)	FRIG. RDS = 45 MPH	STATE				
IH 45	CROSS ROADS = 36,600 (2006)	CROSS ROADS = 45 MPH	TEXAS				
SH 96	PHILLIPS = 20,200 (2006)	PHILLIPS = 30 MPH	COV.				
			SECT.				
			JOB				
			DATE				
			BY				
			DATE				



VICINITY MAP

NTS



Bradley R. Brown
5/10/07

TDLR INSPECTION REQUIRED



Texas Department of Transportation

SUBMITTED FOR LETTING 5/11/07

PROJECT MANAGER
P.N. Nkomo, PE

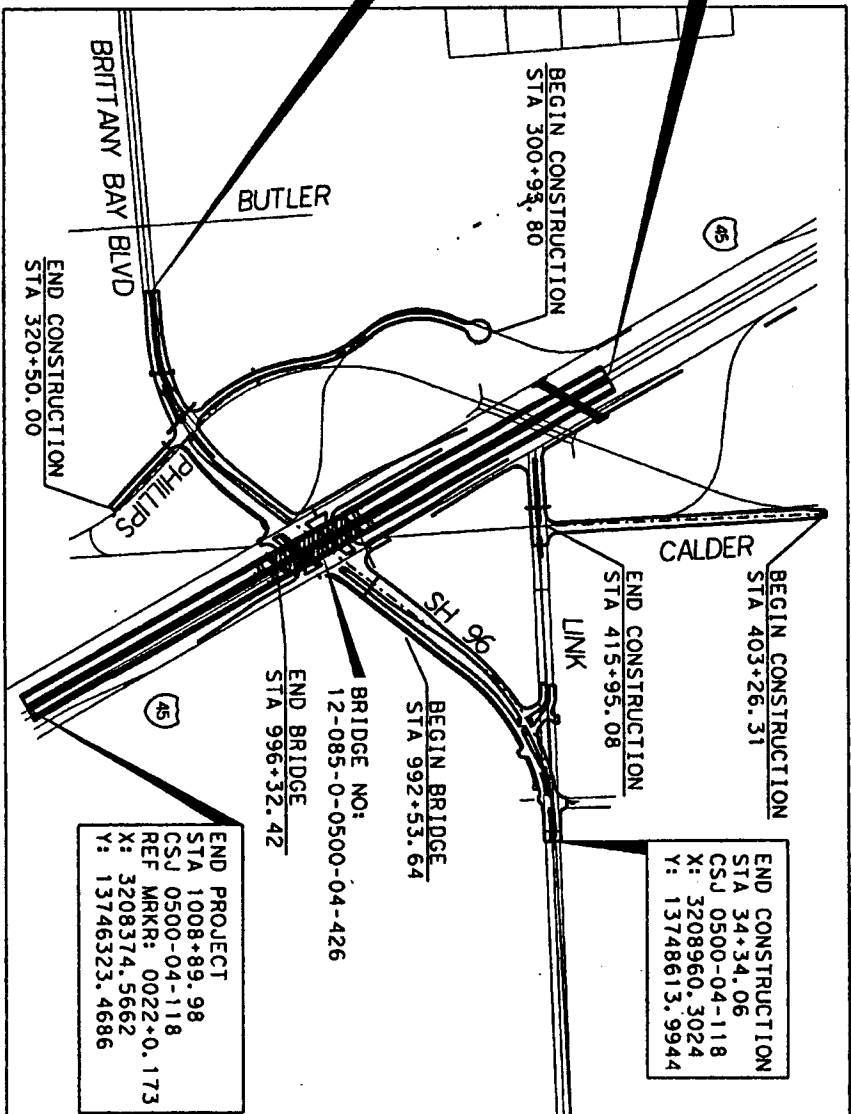
DIRECTOR, TRAFFIC OPERATIONS DIVISION

RECOMMENDED FOR LETTING 5/11/07

CONCURRENCE
for DISTRICT ENGINEER
P.E.

APPROVED FOR LETTING 6/1/07

DIRECTOR, DESIGN DIVISION



BEGIN PROJECT
STA 979+67.69
CSJ 0500-04-118
REF MKR: 0022+0.733
X: 3206933.4952
Y: 13748865.7301

BEGIN CONSTRUCTION
STA 3+00.00
CSJ 0500-04-118
X: 3206541.6755
Y: 13746874.7063

BEGIN CONSTRUCTION
STA 403+26.31
END CONSTRUCTION
STA 34+34.06
CSJ 0500-04-118
X: 3208960.3024
Y: 13748613.9944

BEGIN BRIDGE
STA 992+53.64
BRIDGE NO: 12-085-0-0500-04-426
END BRIDGE
STA 996+32.42

END PROJECT
STA 1008+89.98
CSJ 0500-04-118
REF MKR: 0022+0.173
X: 3208374.5662
Y: 13746323.4686

END CONSTRUCTION
STA 320+50.00

PROJECT LOCATION
NTS

COORDINATING AGENCIES

EXCEPTIONS: NONE
EQUATIONS: NONE
RAILROAD CROSSING: NONE

MAYOR - CITY OF LEAGUE CITY

COUNTY GALVESTON PROJ. NO.
HWY. NO. 45 CR LETTING DATE
DATE ACCEPTED

ATTACHMENT NO. 01-06 TO SPECIAL AGREEMENT FOR CONSTRUCTION,
MAINTENANCE AND OPERATION OF CONTINUOUS HIGHWAY
ILLUMINATION SYSTEM WITHIN MUNICIPALITIES, DATED JANUARY 23, 2007.
THE CITY-STATE CONSTRUCTION, MAINTENANCE, AND OPERATION
RESPONSIBILITIES SHALL BE AS HERETOFORE AGREED TO,
ACCEPTED, AND SPECIFIED IN THE AGREEMENT TO WHICH
THESE PLANS ARE MADE A PART.

1. ALL BEARINGS ARE REFERENCED TO
HORIZONTAL DATUM NAD83(1993), TX SOUTH CENTRAL

2. SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF
TRANSPORTATION, JUNE 1, 2004 AND SPECIFICATION ITEMS
LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS
PROJECT. REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID
CONSTRUCTION CONTRACTS (FORM FHWA 1273, MARCH 1994).



N.T.S.


NOTE: RIDE QUALITY PAY SCHEDULE 2
WILL APPLY FOR THIS PROJECT

SHEET 6 OF 9			
FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.	
6		12	
STATE	DIST.	COUNTY	
TEXAS	12	GALVESTON	
CON.	SECT.	JOB	HIGHWAY NO.
0500	04	11B	1H-45

PROPOSED TYPICAL SECTIONS

IH 45 @ SH 96

 **Texas Department of Transportation**
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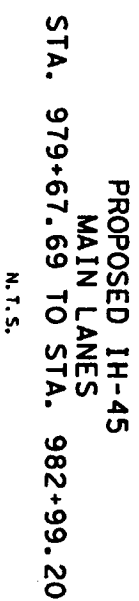
klotz  **associates**

- (A) 13" CRCP
- (B) 1" ASB (BOND BREAKER)
- (C) 6" CTB
- (D) 6" LTS
- (E) 10" CRCP
- (F) 8" JRCF
- (H) 6" JRCF
- (I) TY 11 MONO CURB
- (J) SINGLE SLOPE CONC. TRAFFIC RAIL
- (K) LAW STRIP (4"x2')
- (L) RIP RAP (4 IN)
- (M) BLOCK SOD
- (N) CEN STAB BACKFILL REINF VOLUME
- (O) SINGLE STAB CONC TRAFFIC BARRIER
- TY 2 (42 IN)
- DRILL SEED
- MOUNTABLE CURB

LEGEND

--- EXISTING ROW

••• PROPOSED ROW



**PROPOSED
TYPICAL SECTIONS**

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klotz associates

SHEET 7 OF 9

FILED NO.	PRODUCT NO.		SHEET NO.
DIV. NO.			
6			13
STATE	DIST.	COUNTY	
TEXAS	12	GALVESTON	
CONI.	SECT.	JOB	EMIGRANT NO.
0500	04	118	TH-45

- ① 13" CRCP
- ② 1" ASB (BOND BREAKER)
- ③ 6" CTB
- ④ 6" LTS
- ⑤ 10" CRCP
- ⑥ 8" JRCP
- ⑦ 6" JRCP
- ⑧ TY II MONO CURB
- ⑨ SINGLE SLOPE CONC. TRAFFIC RAIL
- ⑩ MON STRIP (4"x2')
- ⑪ RIP RAP (4 IN)
- ⑫ BLOCK SOD
- ⑬ CGU STAB BACKFILL REINF VOLUME
- ⑭ SINGLE SLOPE CONC TRAFFIC BARRIER
- ⑮ TY 2 (42 IN)
- ⑯ DRILL SEED
- ⑰ MOUNTABLE CURB

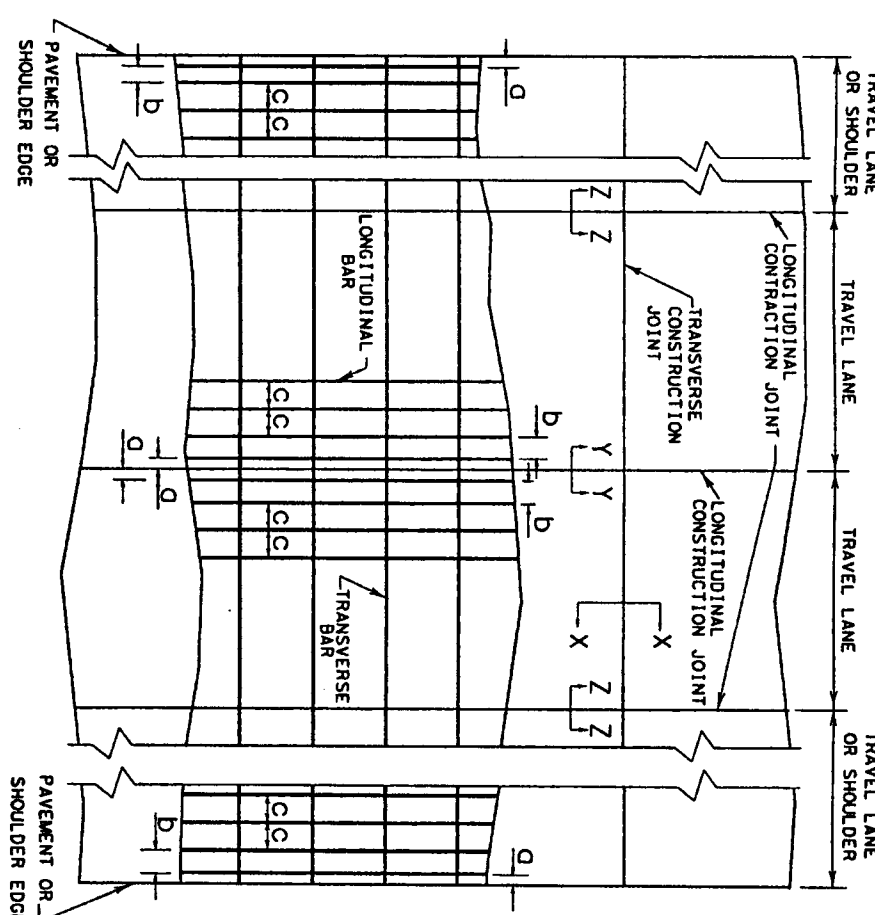
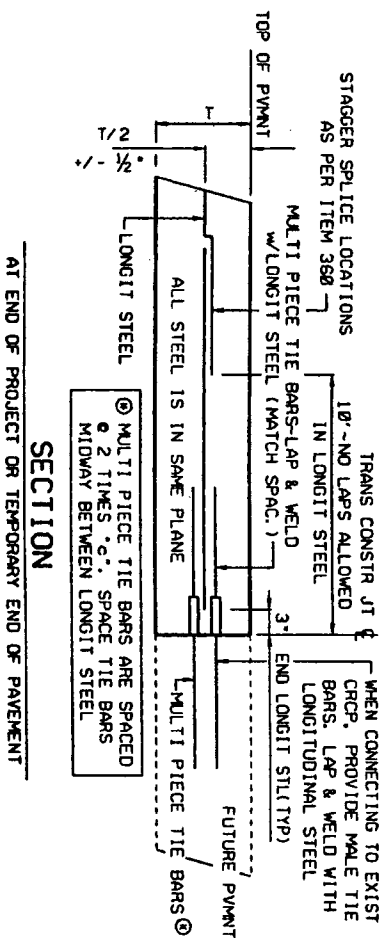
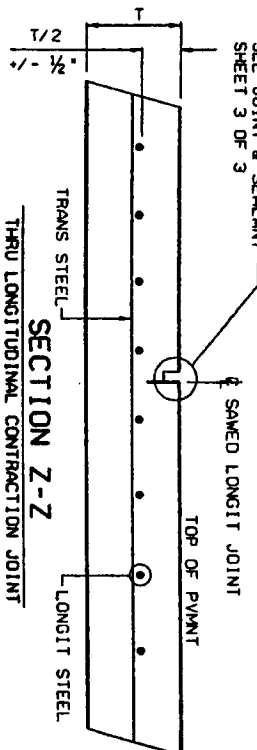
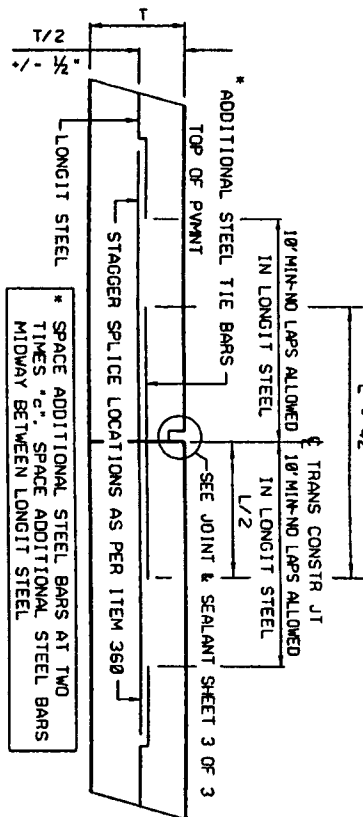
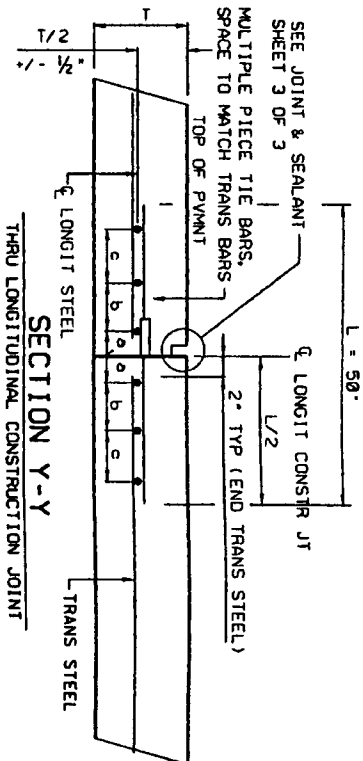


TABLE NO. 1 LONGITUDINAL STEEL

SLAB THICKNESS AND BAR SIZE	REGULAR STEEL BARS	FIRST SPACING FROM JOINT OR FREE EDGE	SECOND SPACING FROM JOINT OR FREE EDGE	ADDITIONAL STEEL BARS REQUIRED FOR TRANSVERSE CONSTRUCTION JOINT
1' MIN-NO LAPS ALLOWED	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)
8	6	3 TO 4	3 TO 4	3 TO 4
9	6	3 TO 4	3 TO 4	3 TO 4
10	6	3 TO 4	3 TO 4	3 TO 4
11	6	3 TO 4	3 TO 4	3 TO 4
12	6	3 TO 4	3 TO 4	3 TO 4
13	6	3 TO 4	3 TO 4	3 TO 4

TABLE NO. 2 TRANSVERSE STEEL

SLAB THICKNESS AND BAR SIZE	TRANSVERSE STEEL BARS	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)
8	6	3	3	3	3	3	3	3	3
9	6	3	3	3	3	3	3	3	3
10	6	3	3	3	3	3	3	3	3
11	6	3	3	3	3	3	3	3	3
12	6	3	3	3	3	3	3	3	3
13	6	3	3	3	3	3	3	3	3

TABLE NO. 3 QUICK REFERENCE LONGITUDINAL STEEL

SPACE REQ'D FOR VARIOUS TYPICAL PAVEMENT WIDTHS (FT)	MINIMUM NUMBER OF BARS
12	12
14	14
16	16
18	18
20	20
22	22
24	24
26	26
28	28
30	30
32	32
34	34
36	36
38	38
40	40
42	42
44	44
46	46
48	48
50	50
52	52
54	54
56	56
58	58
60	60
62	62
64	64
66	66
68	68
70	70
72	72
74	74
76	76
78	78
80	80
82	82
84	84
86	86
88	88
90	90
92	92
94	94
96	96
98	98
100	100

1. USE COARSE AGGREGATE TO PRODUCE CONCRETE WITH A COEFFICIENT OF THERMAL EXPANSION (COTE) LESS THAN 6.0x10⁻⁶ in./in./°F PRIOR TO CONSTRUCTION. SUBMIT TEST SPECIMENS TO TxDOT, CONSTRUCTION DIVISION, FOR AGGREGATE ACCEPTANCE. PROVIDE SAMPLES OR TEST SPECIMENS AS DIRECTED. TxDOT CONSTRUCTION DIVISION WILL PERFORM THE TESTING. TEST RESULTS ARE FINAL. TESTING IS REQUIRED FOR NATURALLY OCCURRING AGGREGATES.
2. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE SHOWN ELSEWHERE IN THE PLANS.
3. LONGITUDINAL AND TRANSVERSE REINFORCING STEEL SHALL BE #6 DEFORMED STEEL BARS CONFORMING TO ASTM A 615 (GRADE 60) OR ASTM A 996 (GRADE 60).
4. THE DETAIL FOR THE JOINT SEALANT AND RESERVOIR IS SHOWN ON SHEET 3 OF 3. AVOID SAWED JOINTS IN WHEEL PATH.
5. PAVEMENT WIDTHS OF MORE THAN 15 FT. SHALL HAVE A LONGITUDINAL JOINT (SECTION Z-Z OR Y-Y). THESE JOINTS SHALL BE LOCATED WITHIN 6 IN. OF THE LANE LINE UNLESS THE JOINT LOCATION IS SHOWN ELSEWHERE ON THE PLANS.
6. THE SAW CUT DEPTH FOR THE LONGITUDINAL JOINT SHALL BE MINIMUM OF ONE THIRD THE SLAB THICKNESS. IT MAY BE MINIMUM OF ONE FOURTH THE SLAB THICKNESS WHEN CRUSHED LIMESTONE IS USED AS THE COARSE AGGREGATE.
7. REINFORCING STEEL SPLICES SHALL BE A MINIMUM OF 25 IN.
8. MULTIPLE PIECE TIEBARS SHALL BE USED AT LONGITUDINAL CONSTRUCTION JOINTS UNLESS OTHERWISE SPECIFIED IN THE PLANS. THE TIEBARS SHALL BE #6 BARS. THE TIEBAR SPACING SHALL BE EQUAL TO THE TRANSVERSE BAR SPACING.
9. STEEL BAR PLACEMENT TOLERANCE SHALL BE +/- 1 IN. HORIZONTALLY AND +/- 0.5 IN. VERTICALLY. THE AVERAGE BAR SPACINGS SHALL CONFORM TO TABLE NO. 1 AND TABLE NO. 2.
10. MISSING OR DAMAGED TIEBARS SHALL BE REPLACED BY DRILLING AND EPOXY GROUTING AT THE CONTRACTOR'S EXPENSE.
11. AT TRANSVERSE CONSTRUCTION JOINTS, THE ADDITIONAL STEEL BARS SHALL BE PLACED APPROXIMATELY MIDWAY BETWEEN THE LONGITUDINAL STEEL BARS.
12. CONSOLIDATION WITH HAND-MANIPULATED MECHANICAL VIBRATORS IS REQUIRED ADJACENT TO ALL TRANSVERSE CONSTRUCTION JOINTS.
13. OBTAIN THE ENGINEER'S WRITTEN APPROVAL, IF THE CONCRETE DESIGN USES MORE THAN 5.5 SACKS/CY.
14. DOWELS AND TIE BARS - DOWELS ARE ONE INCH MINIMUM DIAMETER. ENSURE DOWELS ARE FREE OF GREASE AND ARE EPOXY COATED. DO NOT SHEAR CUT DOWELS DURING FABRICATION. PROVIDE TIE BARS PER ITEM 360. FURNISH MULTI-PIECE TIE BARS AND DOWELS WITH STOP COUPLINGS AND WITH THREADS ON THE BARS.
15. USE CHAIRS OF SUFFICIENT STRUCTURAL QUALITY AND NUMBER TO SUPPORT THE MAT TO THE VERTICAL TOLERANCES. CHAIRS WILL BE APPROVED BY THE ENGINEER AND DO NOT REQUIRE GALVANIZING. MAXIMUM CHAIR SPACING IS 30" TRANSVERSELY AND 48" LONGITUDINALLY. WHEN USING THE HARDIE CHAIR-LOK SYSTEM, THE CHAIR SPACING MAY BE EVENLY SPACED INTO A DIAMOND OR SQUARE PATTERN - DO NOT EXCEED 1.67 SY PER CHAIR NOR 60" LONGITUDINAL SPACING.
16. MECHANICALLY PLACING REINFORCING STEEL IS NOT ALLOWED. NO BARS, DOWELS OR TIE BARS MAY BE VIBRATED INTO POSITION.
17. WHERE DIFFERENT THICKNESS PAVEMENTS MEET, TRANSITION OVER A DISTANCE OF 10'. PLACE REINFORCING STEEL WITHIN THE THICKER SECTION THE SAME AS IN THE THICKER PAVEMENT.
18. PERFORM WELDING PER ITEM 448. FURNISH WELDABLE REBAR PER ITEM 440.

GENERAL NOTES

CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

CRCP

Texas Department of Transportation
 Houston District
 SHEET 1 OF 3
 12007 APRIL 2007
 12
 0500 04 118 1H-45

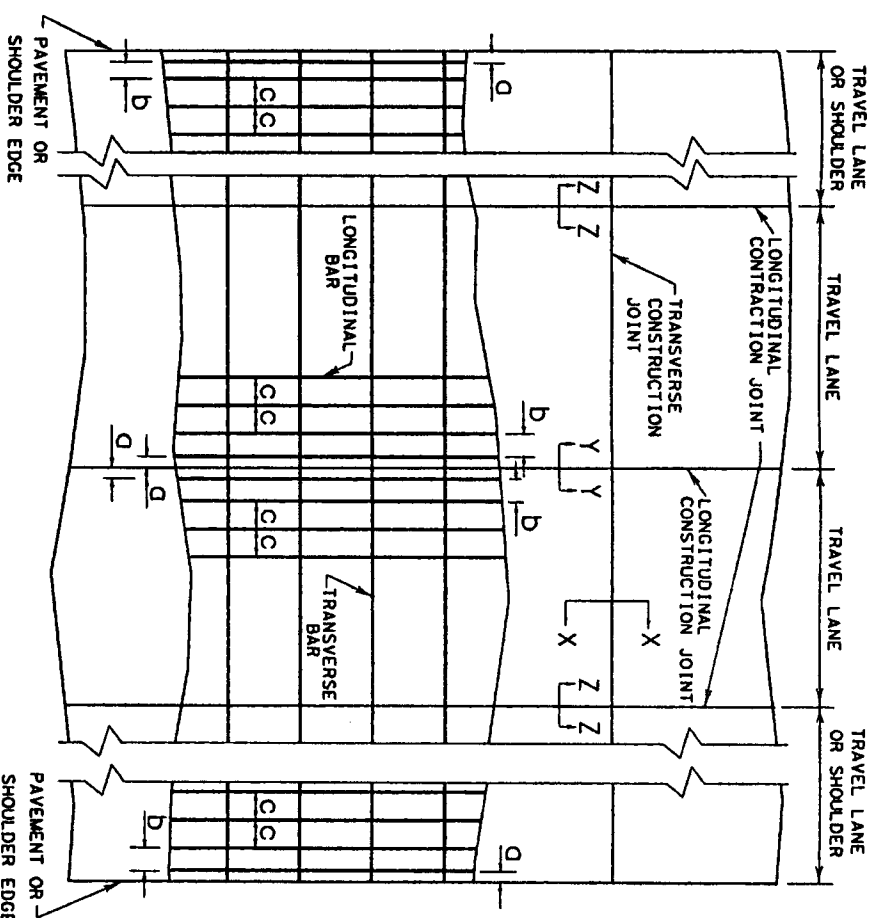
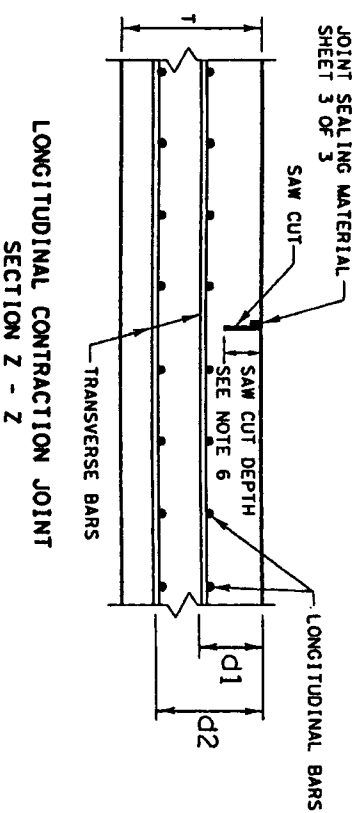
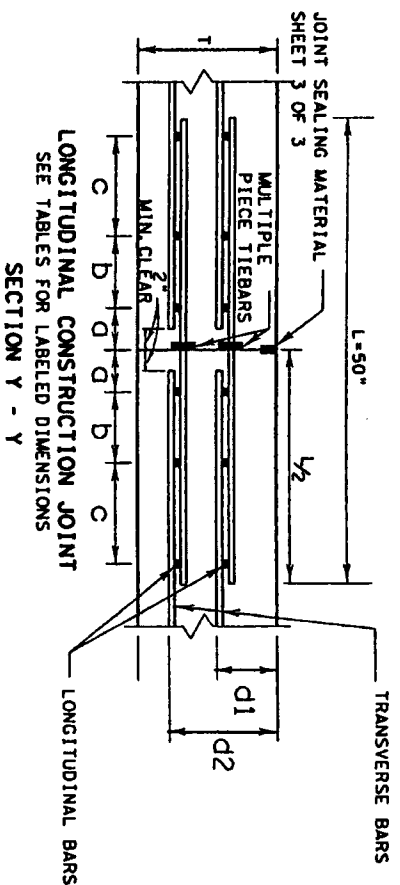
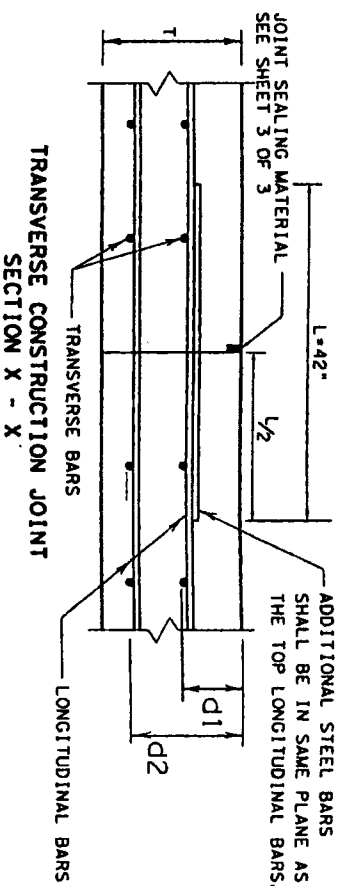


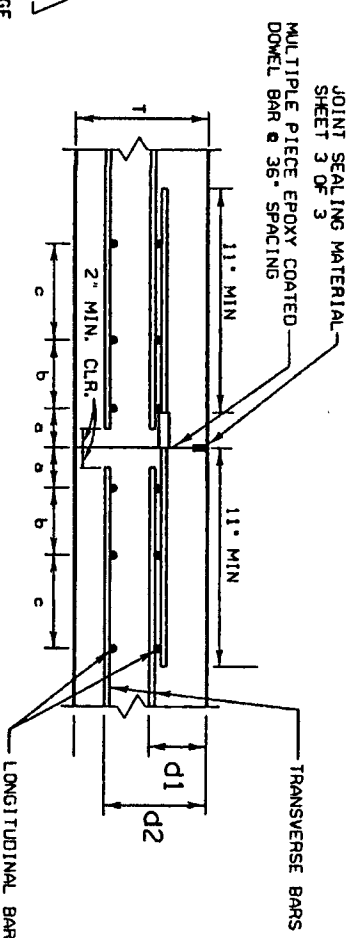
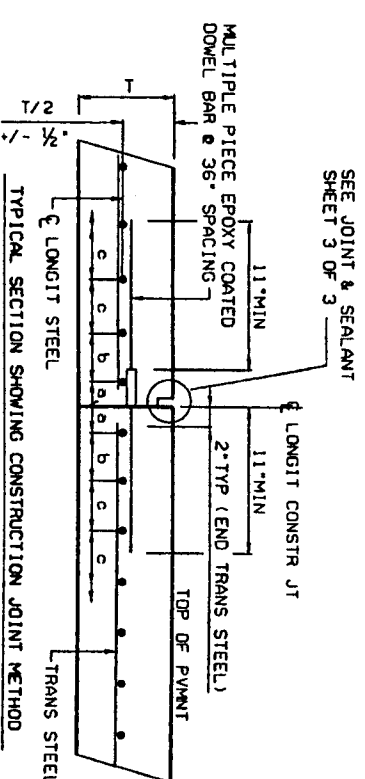
TABLE NO. 1 LONGITUDINAL STEEL					
SLAB THICKNESS AND BAR SIZE	REGULAR STEEL BARS	FIRST SPACING AT EDGE OR JOINT	SECOND SPACING FROM EDGE OR JOINT	ADDITIONAL STEEL BARS AT TRANSVERSE CONST. JOINT	ADDITIONAL STEEL LENGTH L (IN.)
T (IN.)	BAR SIZE	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)
14	#6	9.5	3 TO 4	3 TO 9.5	9.5
15	#6	8.5	3 TO 4	3 TO 8.5	8.5
					42

TABLE NO. 2 TRANSVERSE STEEL									
PAVEMENT WIDTH (PW) : DISTANCE IN FT. BETWEEN DOWEL JOINTS OR FROM A FREE EDGE TO A DOWEL JOINT TO A FREE EDGE, OR FROM A FREE EDGE TO A FREE EDGE									
SLAB THICKNESS AND BAR SIZE	PW	PW	PW	PW	PW	PW	PW	PW	PW
T (IN.)	BAR SIZE	SPACING (FT.)	SPACING (FT.)	SPACING (FT.)	SPACING (FT.)	SPACING (FT.)	SPACING (FT.)	SPACING (FT.)	SPACING (FT.)
14	#6	3	3	3	3	3	2.5	2.5	2.5
15	#6	3	3	3	3	2.5	2.5	2.5	2

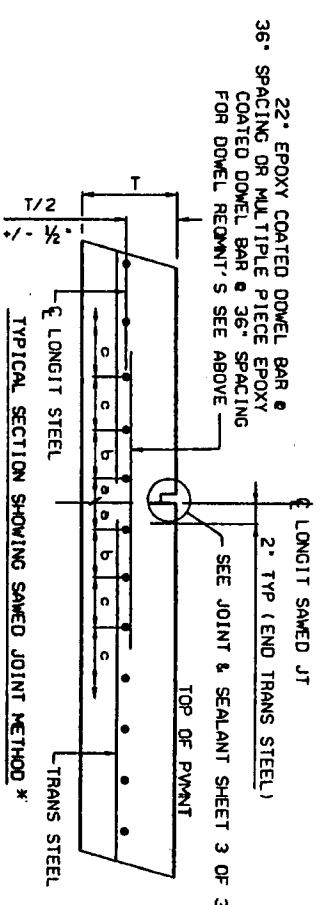
TABLE NO. 3 TWO LAYER STEEL PLACEMENT SPECIFICATIONS OF DIMENSIONS			
THICKNESS T (IN.)	d1 (IN.)	d2 (IN.)	
14	5.5	9.5	
15	6.0	10.0	

LONGITUDINAL DOWEL JOINT DETAILS

LOCATE WHERE SHOWN IN THE PLANS OR AS APPROVED. CONTRACTOR MAY USE EITHER METHOD



TYPICAL SECTION SHOWING CONSTRUCTION JOINT METHOD DOUBLE MAT STEEL



* FOR DOUBLE MAT STEEL, PROVIDE 22" EPOXY COATED DOWEL BAR @ 36" SPACING AT THE ELEVATION OF TOP LAYER OF STEEL.

Texas Department of Transportation
Houston District

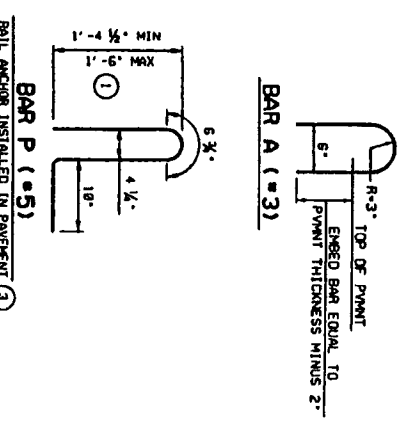
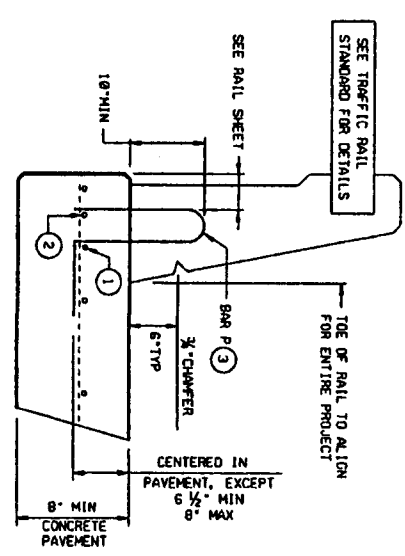
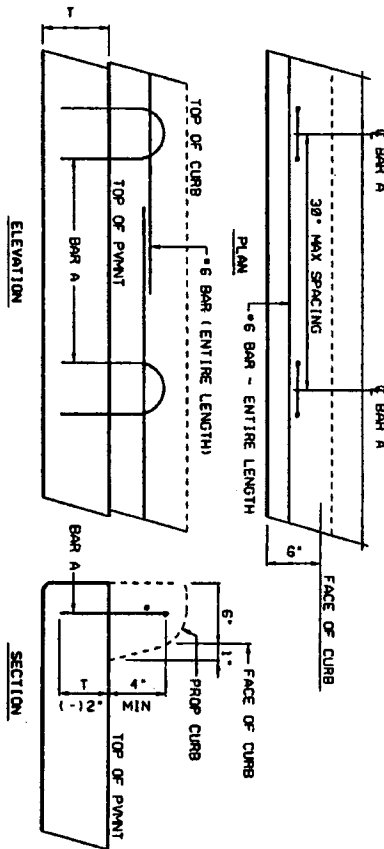
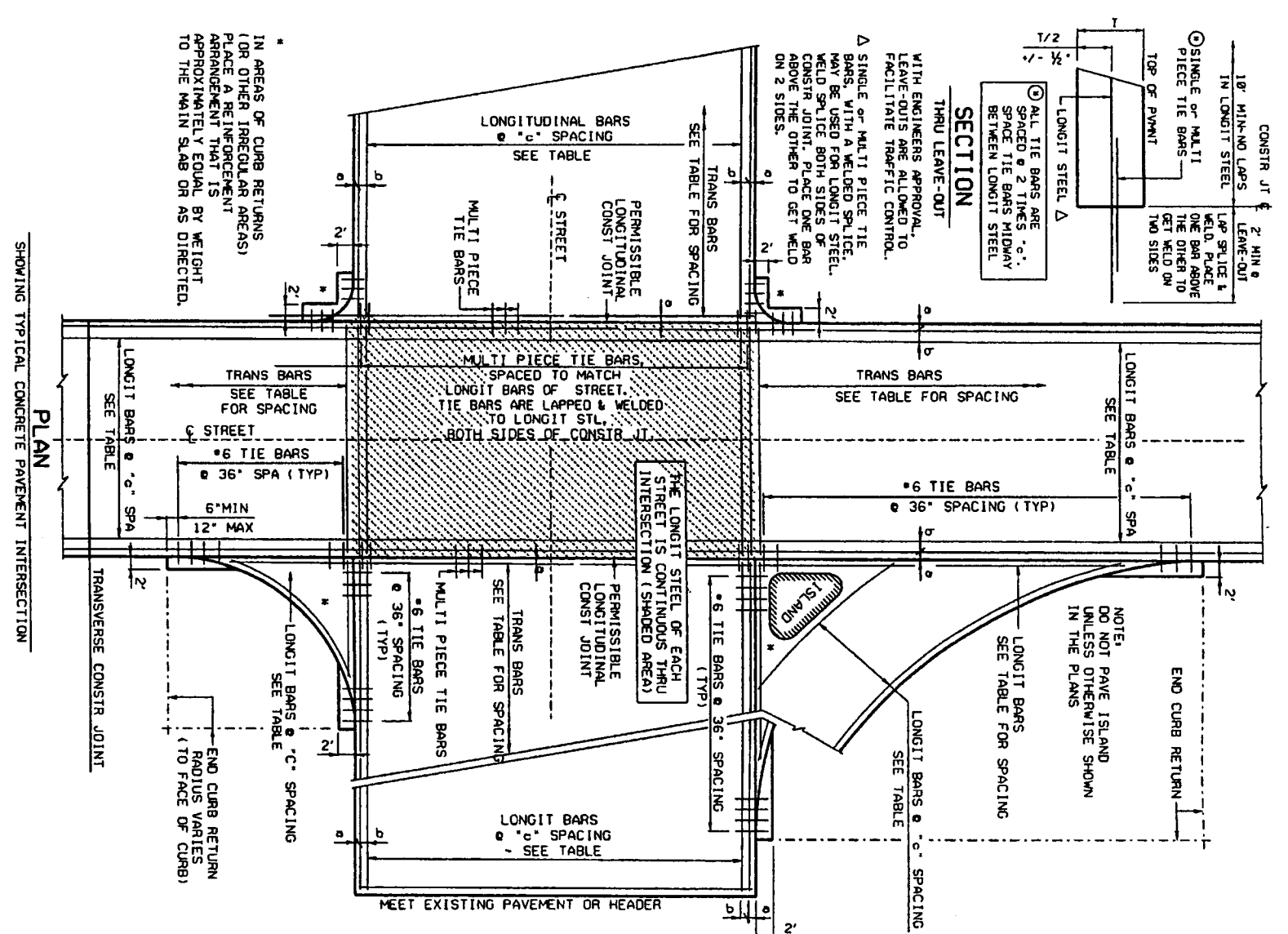
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

CRCP

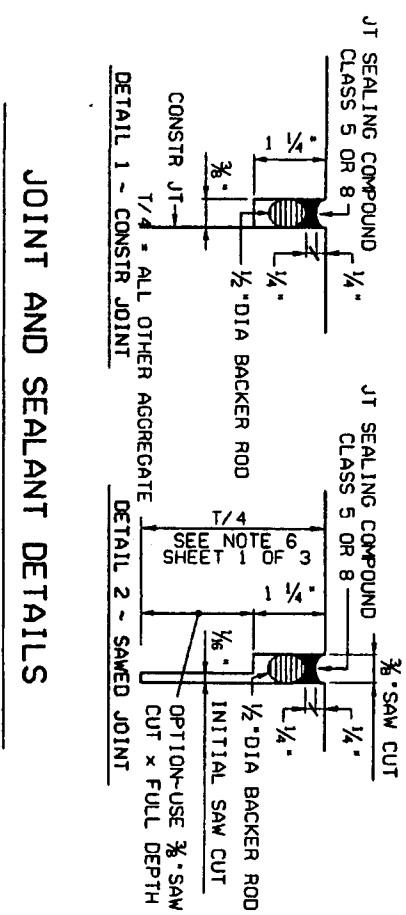
12007 APRIL 2007

REVISION	DATE	BY	CHKD	APPD
12				

CALVESTON 0500 04 118 1H-45



- 1 AS AN AID IN SUPPORTING REINFORCEMENT, ADDITIONAL LONGITUDINAL BARS MAY BE USED IN THE SLAB WITH THE APPROVAL OF THE ENGINEER. FURNISH SUCH BARS AT NO EXPENSE TO THE DEPARTMENT.
- 2 LONGITUDINAL SLAB BAR MAY BE ADJUSTED Laterally 3' +/- TO TIE REINFORCING.
- 3 ANCHORAGE BAR SHOWN IS FOR AN SSTR OR T501 RAIL. SEE RAILING DETAIL SHEET FOR SPACING OF BAR P. FOR OTHER RAIL TYPES SEE RAILING DETAIL SHEET.



Continuously Reinforced Concrete Pavement

CRCP

Texas Department of Transportation
Houston District

SHEET 3 OF 3

DATE	BY	CHKD	APP'D
12/12/01	J. L. B.	J. L. B.	J. L. B.
12/12/01	J. L. B.	J. L. B.	J. L. B.
12/12/01	J. L. B.	J. L. B.	J. L. B.

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