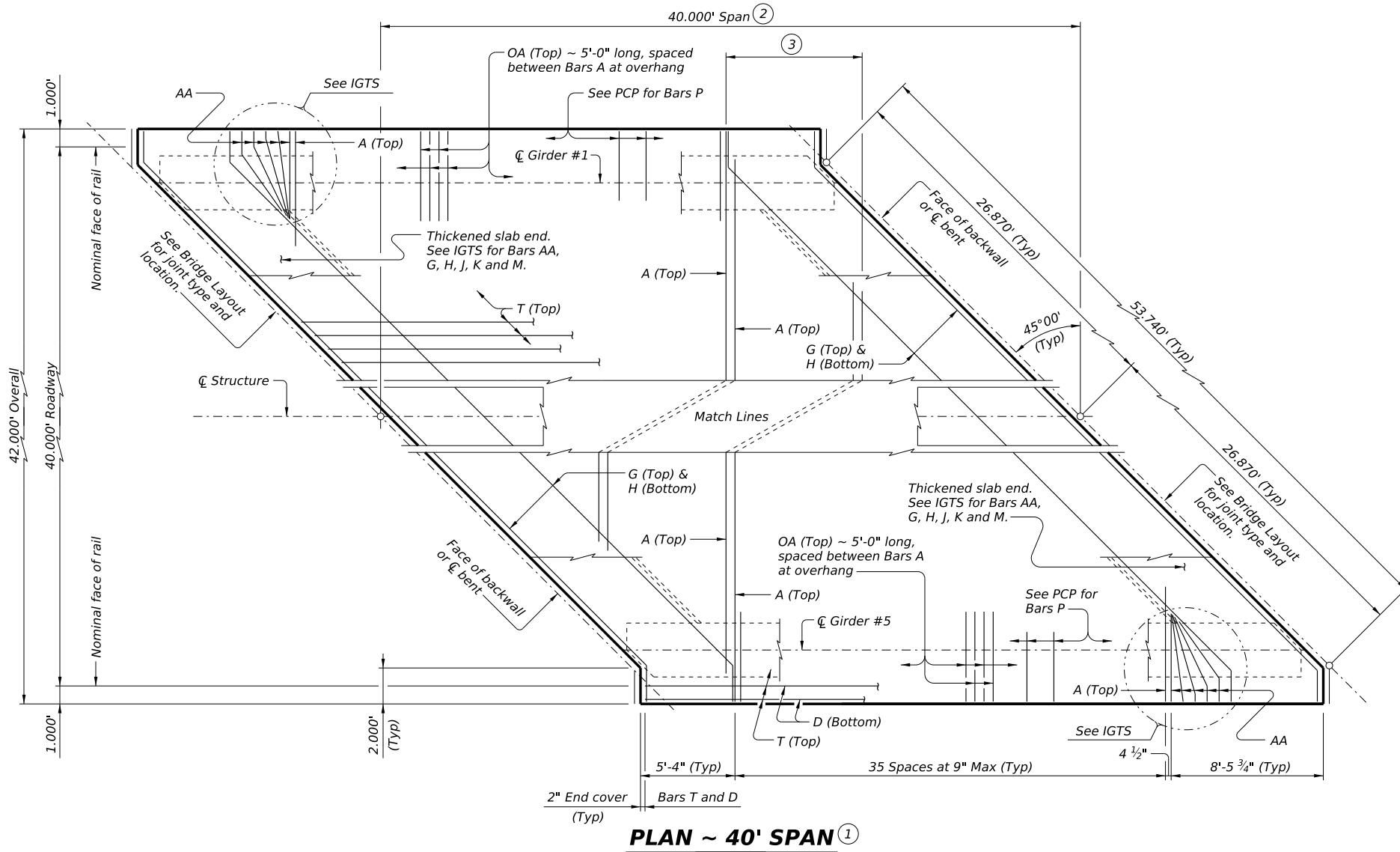


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BAR TABLE	
BAR	SIZE
A	#4
AA	#5
D	#4
G	#4
H	#4
J	#4
K	#4
M	#4
OA	#5
P	#4
T	#4

- ① If multi-span units (with slab continuous over interior bents) are indicated on the Bridge Layout, see standard IGCS for adjustment to slab reinforcement and quantities.
- ② Span lengths for prestressed concrete I-Girder type:  
 Type Tx28 for spans lengths 40.000' thru 65.000'.  
 Type Tx34 for spans lengths 40.000' thru 80.000'.  
 Type Tx40 for spans lengths 40.000' thru 90.000'.  
 Type Tx46 for spans lengths 40.000' thru 105.000'.  
 Type Tx54 for spans lengths 40.000' thru 120.000'.  
 See appropriate "Plan Detail" for span length.
- ③ Bars A (Top) at 9" Max Spacing.
- ④ "Y" value shown is based on theoretical girder camber, dead load deflection from an 8 1/2" concrete slab, a constant roadway grade, and using precast panels (PCP). The Contractor will adjust this value as necessary for any roadway vertical curve.

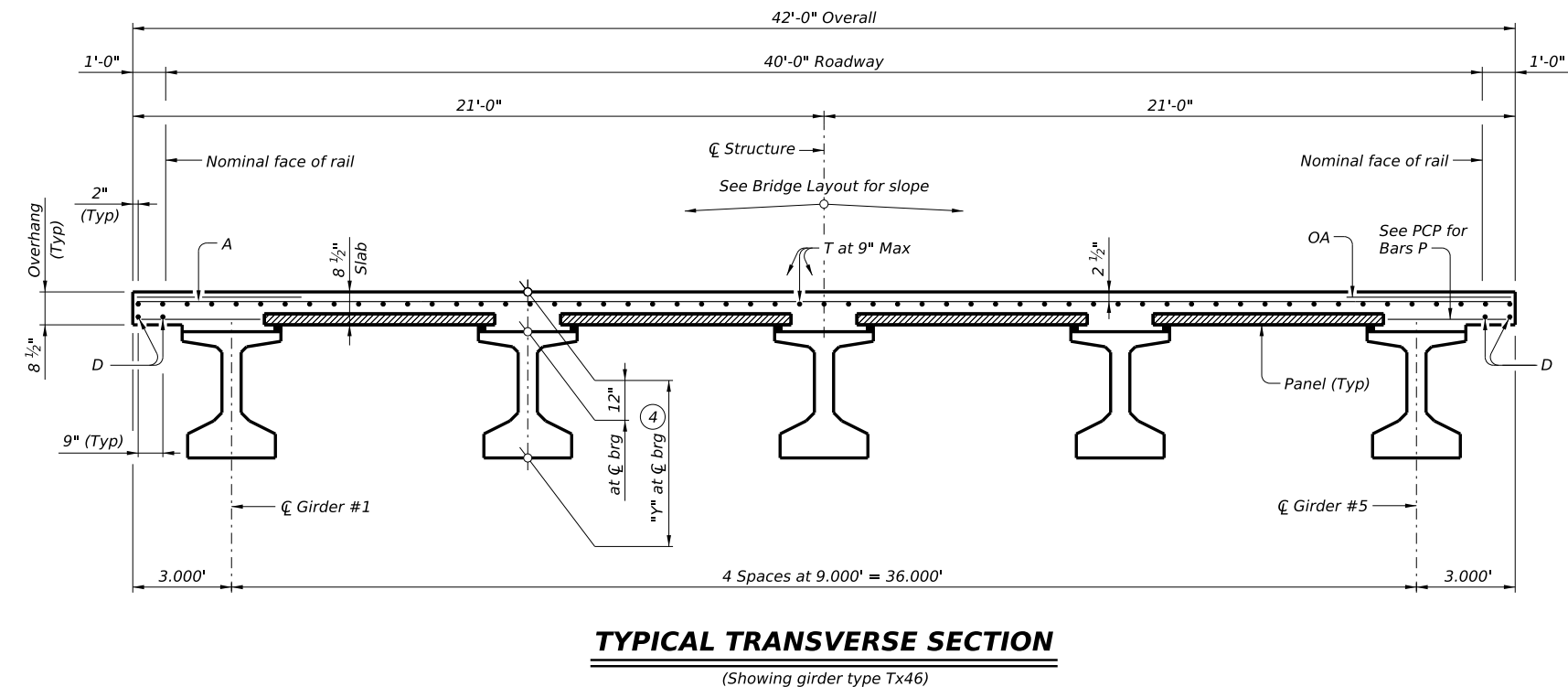


TABLE OF SECTION DEPTHS	
GIRDER TYPE	"Y" AT C BRG ④
	Ft/In
Tx28	3'-4"
Tx34	3'-10"
Tx40	4'-4"
Tx46	4'-10"
Tx54	5'-6"

HL93 LOADING SHEET 1 OF 3



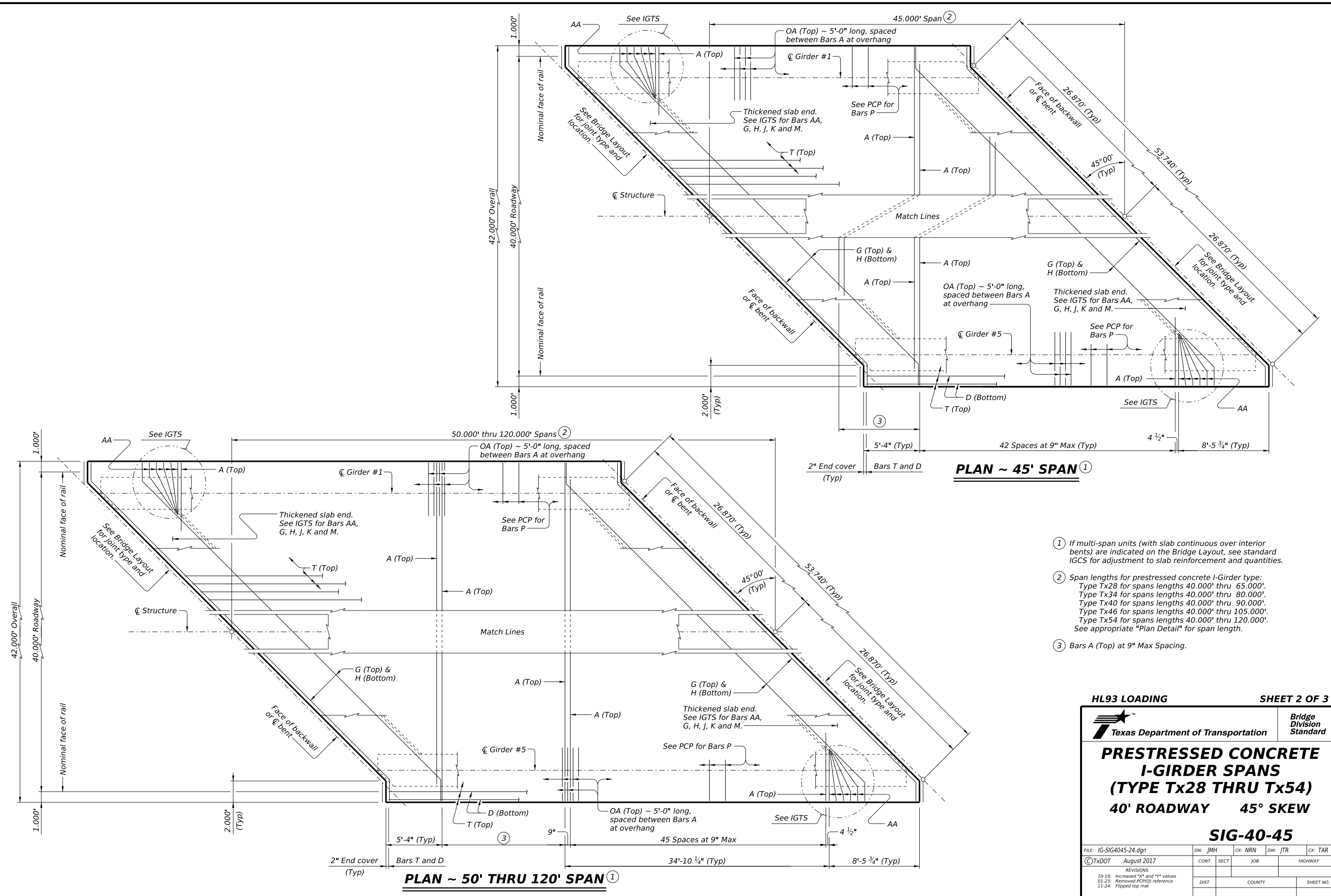
**PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 40' ROADWAY 45° SKEW**

**SIG-40-45**

FILE: IG-SIG4045-24.dgn	DN: JMH	CK: NRM	DW: JTR	CK: TAR
©TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-19: Increased "X" and "Y" values				
01-23: Removed PCP/D reference				
11-24: Flipped top mat				
DIST	COUNTY	SHEET NO.		

DATE: FILE:

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- ① If multi-span units (with slab continuous over interior bents) are indicated on the Bridge Layout, see standard IGCS for adjustment to slab reinforcement and quantities.
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 Type Tx46 for spans lengths 40.000' thru 105.000'.  
 Type Tx54 for spans lengths 40.000' thru 120.000'.  
 See appropriate "Plan Detail" for span length.
- ③ Bars A (Top) at 9" Max Spacing.

HL93 LOADING SHEET 2 OF 3



**PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 40' ROADWAY 45° SKEW**

**SIG-40-45**

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© TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-19: Increased "X" and "Y" values				
01-23: Removed PCP/D reference				
11-24: Flipped top mat				
DIST	COUNTY			SHEET NO.

DATE: FILE:

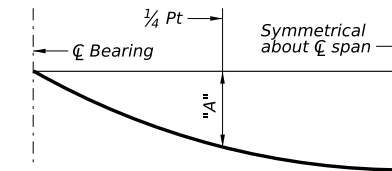
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### TABLE OF DEAD LOAD DEFLECTIONS

TYPE Tx28 GIRDERS			TYPE Tx34 GIRDERS			TYPE Tx40 GIRDERS			TYPE Tx46 GIRDERS			TYPE Tx54 GIRDERS		
SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"
Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft
40	0.010	0.014	40	0.006	0.008	40	0.004	0.006	40	0.003	0.004	40	0.001	0.002
45	0.016	0.023	45	0.010	0.014	45	0.006	0.009	45	0.004	0.006	45	0.003	0.004
50	0.026	0.036	50	0.016	0.022	50	0.010	0.014	50	0.007	0.010	50	0.004	0.006
55	0.038	0.054	55	0.023	0.032	55	0.015	0.021	55	0.010	0.014	55	0.006	0.009
60	0.055	0.077	60	0.033	0.046	60	0.021	0.030	60	0.014	0.020	60	0.010	0.014
65	0.076	0.107	65	0.046	0.064	65	0.030	0.042	65	0.021	0.029	65	0.014	0.019
			70	0.062	0.087	70	0.041	0.057	70	0.028	0.039	70	0.019	0.026
			75	0.082	0.115	75	0.053	0.075	75	0.036	0.051	75	0.024	0.034
			80	0.107	0.150	80	0.070	0.098	80	0.048	0.067	80	0.031	0.044
						85	0.090	0.126	85	0.061	0.086	85	0.041	0.057
						90	0.113	0.159	90	0.078	0.109	90	0.051	0.072
									95	0.096	0.135	95	0.063	0.089
									100	0.119	0.167	100	0.078	0.110
									105	0.145	0.204	105	0.096	0.135
									110			110	0.116	0.163
									115			115	0.139	0.195
									120			120	0.165	0.232

### TABLE OF ESTIMATED QUANTITIES

SPAN LENGTH	REINF CONCRETE SLAB	Prestressed Concrete Girders			TOTAL REINF STEEL (6)
		ABUT TO INT BT (5)	INT BT TO INT BT (5)	ABUT TO ABUT (5)	
Ft	SF	LF	LF	LF	Lb
40	1,680	196.98	197.50	196.46	3,864
45	1,890	221.98	222.50	221.46	4,347
50	2,100	246.98	247.50	246.46	4,830
55	2,310	271.98	272.50	271.46	5,313
60	2,520	296.98	297.50	296.46	5,796
65	2,730	321.98	322.50	321.46	6,279
70	2,940	346.98	347.50	346.46	6,762
75	3,150	371.98	372.50	371.46	7,245
80	3,360	396.98	397.50	396.46	7,728
85	3,570	421.98	422.50	421.46	8,211
90	3,780	446.98	447.50	446.46	8,694
95	3,990	471.98	472.50	471.46	9,177
100	4,200	496.98	497.50	496.46	9,660
105	4,410	521.98	522.50	521.46	10,143
110	4,620	546.98	547.50	546.46	10,626
115	4,830	571.98	572.50	571.46	11,109
120	5,040	596.98	597.50	596.46	11,592



#### DEAD LOAD DEFLECTION DIAGRAM

Calculated deflections shown are due to the concrete slab on interior girders only ( $E_c = 5000$  ksi). Adjust values as required for exterior girders and if optional slab forming is used. These values may require field verification.

- (5) Fabricator will adjust lengths for girder slopes as required.
- (6) Reinforcing steel weight is calculated using an approximate factor of 2.3 lbs/SF.

#### MATERIAL NOTES:

Provide Class 5 concrete ( $f'_c = 4,000$  psi).  
 Provide Class 5 (HPC) concrete if shown elsewhere in the plans.  
 Provide Grade 60 reinforcing steel.  
 Provide bar laps, where required, as follows:  
 Uncoated ~ #4 = 1'-7"  
 Epoxy coated ~ #4 = 2'-5"  
 Deformed welded wire reinforcement (WWR) (ASTM A1064) of equal size and spacing may be substituted for Bars A, AA, D, OA, P or T unless noted otherwise.

#### GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.  
 Multi-span units, with slab continuous over interior bents, may be formed with the details shown on this sheet and the I-Girder Continuous Slab Detail (IGCS) standard.  
 See I-Girder Thickened Slab End Details (IGTS) standard for details and quantity adjustments.  
 See Prestressed Concrete Panels (PCP) standard and Prestressed Concrete Panel Fabrication Details (PCP-FAB) standard for panel details not shown.  
 See I-Girder Miscellaneous Slab Details (IGMS) standard for miscellaneous details.  
 See applicable rail details for rail anchorage in slab.  
 See Permanent Metal Deck Forms (PMDf) standard for details and quantity adjustments if this option is used.  
 This standard is drawn showing right forward skew, see Bridge Layout for actual skew direction.  
 This standard does not support the use of transition bents.

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING

SHEET 3 OF 3



## PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54)

40' ROADWAY 45° SKEW

### SIG-40-45

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