

 **Texas Department of Transportation**

FILE:	DN: JMH	CK: ASB	DW:	CK:
©TxDOT	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST		COUNTY	SHEET NO.

DATE:
FILE:

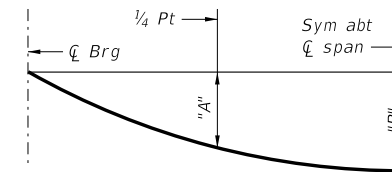
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE: FILE:

TABLE OF DEAD LOAD DEFLECTIONS

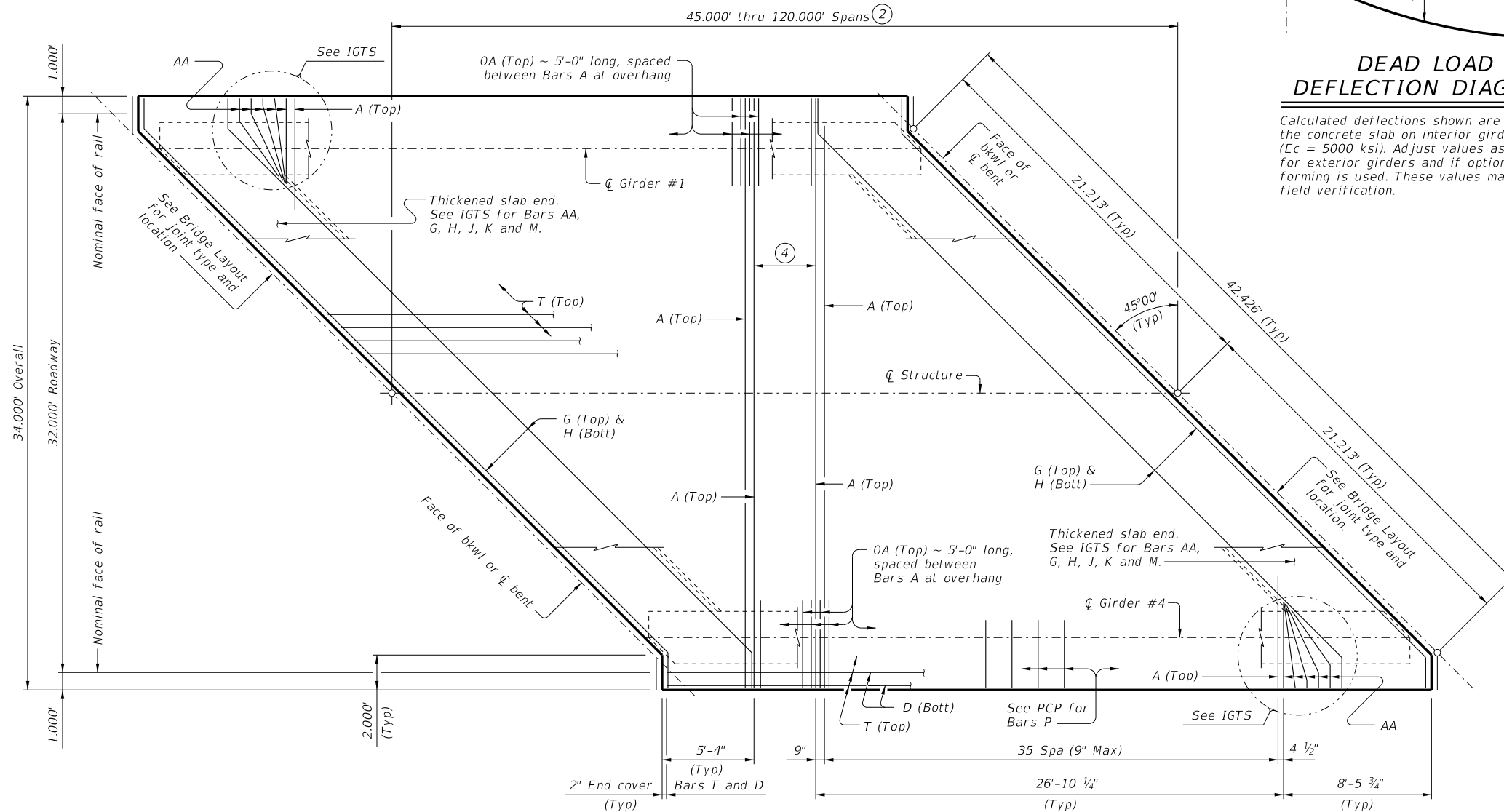
TYPE Tx28 GIRDERS			TYPE Tx34 GIRDERS			TYPE Tx40 GIRDERS			TYPE Tx46 GIRDERS			TYPE Tx54 GIRDERS		
SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"
Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft
40	0.011	0.015	40	0.006	0.009	40	0.004	0.006	40	0.003	0.004	40	0.002	0.003
45	0.017	0.024	45	0.010	0.014	45	0.006	0.009	45	0.004	0.006	45	0.003	0.004
50	0.026	0.037	50	0.016	0.022	50	0.011	0.015	50	0.007	0.010	50	0.005	0.007
55	0.040	0.056	55	0.024	0.033	55	0.016	0.022	55	0.011	0.015	55	0.007	0.010
60	0.057	0.080	60	0.034	0.048	60	0.022	0.031	60	0.015	0.021	60	0.010	0.014
65	0.079	0.111	65	0.047	0.066	65	0.031	0.043	65	0.021	0.030	65	0.014	0.020
			70	0.064	0.090	70	0.042	0.059	70	0.028	0.040	70	0.019	0.027
			75	0.085	0.120	75	0.056	0.078	75	0.038	0.053	75	0.025	0.035
			80	0.111	0.156	80	0.073	0.102	80	0.049	0.069	80	0.033	0.046
						85	0.093	0.131	85	0.063	0.089	85	0.042	0.059
						90	0.118	0.165	90	0.080	0.113	90	0.053	0.074
									95	0.100	0.140	95	0.066	0.093
									100	0.123	0.173	100	0.081	0.114
									105			105	0.100	0.140
									110			110	0.120	0.169
									115			115	0.144	0.202
									120			120	0.172	0.241

- 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 100.000'.
Type Tx54 for spans lengths 40.000' thru 120.000'.
- ④ Bars A (Top) at 9" Max Spacing.



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.



PLAN ~ 45' THRU 120' SPAN ①

TABLE OF ESTIMATED QUANTITIES

SPAN LENGTH	REINF CONCRETE SLAB	Prestressed Concrete Girders			TOTAL REINF STEEL
		ABUT TO INT BT	INT BT TO INT BT	ABUT TO ABUT	
Ft	SF	LF	LF	LF	Lb
40	1,360	157.59	158.00	157.17	3,128
45	1,530	177.59	178.00	177.17	3,519
50	1,700	197.59	198.00	197.17	3,910
55	1,870	217.59	218.00	217.17	4,301
60	2,040	237.59	238.00	237.17	4,692
65	2,210	257.59	258.00	257.17	5,083
70	2,380	277.59	278.00	277.17	5,474
75	2,550	297.59	298.00	297.17	5,865
80	2,720	317.59	318.00	317.17	6,256
85	2,890	337.59	338.00	337.17	6,647
90	3,060	357.59	358.00	357.17	7,038
95	3,230	377.59	378.00	377.17	7,429
100	3,400	397.59	398.00	397.17	7,820
105	3,570	417.59	418.00	417.17	8,211
110	3,740	437.59	438.00	437.17	8,602
115	3,910	457.59	458.00	457.17	8,993
120	4,080	477.59	478.00	477.17	9,384

- 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 S concrete ($f'_c = 4,000$ psi).
Provide Class S (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 2 OF 2

Texas Department of Transportation
PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54)
32' ROADWAY 45° SKEW
SIG-32-45

FILE: IG-SIG3245-23.dgn	DN: JMH	CK: ASB	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.	DIST	COUNTY		SHEET NO.