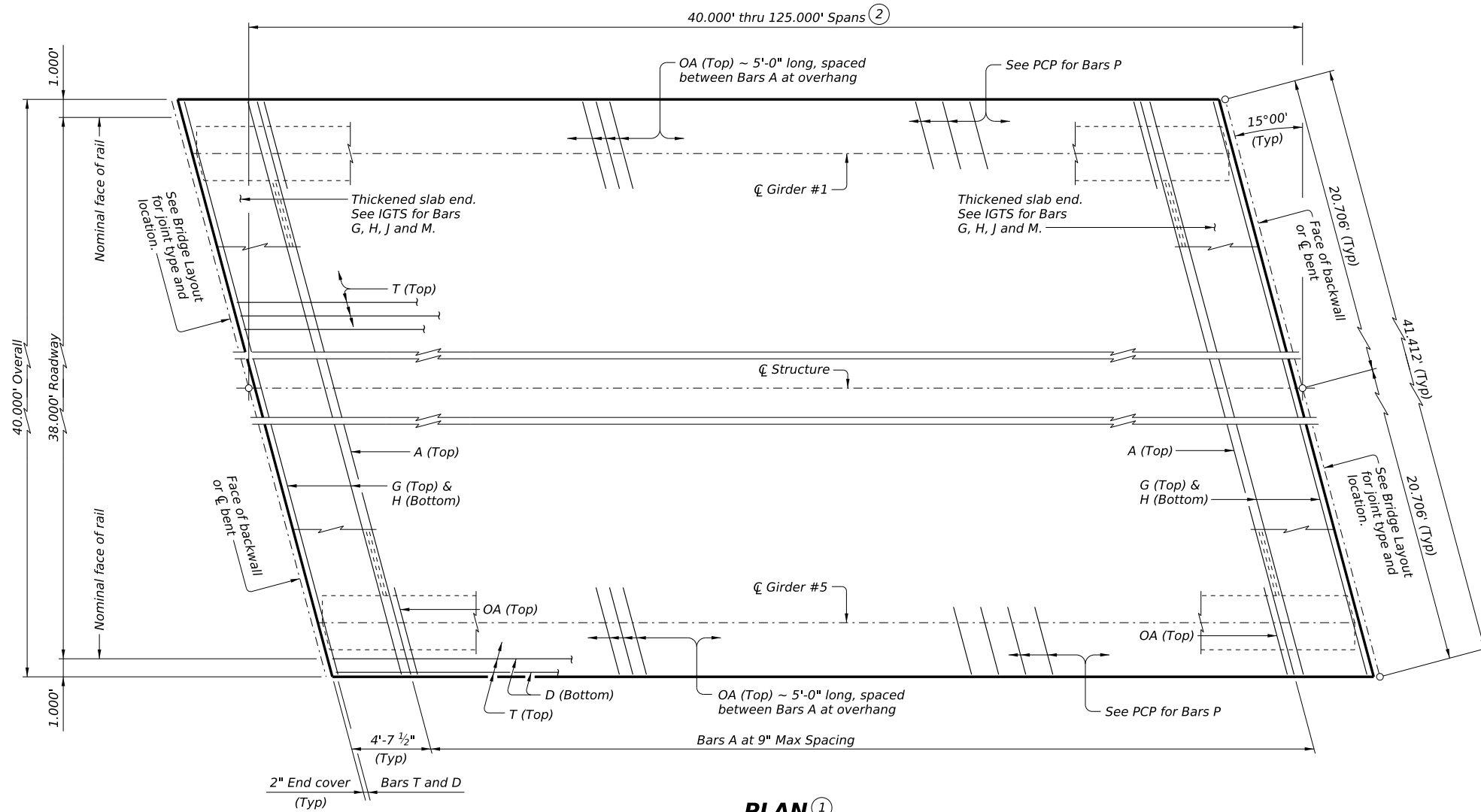


DISCLAIMER: This standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

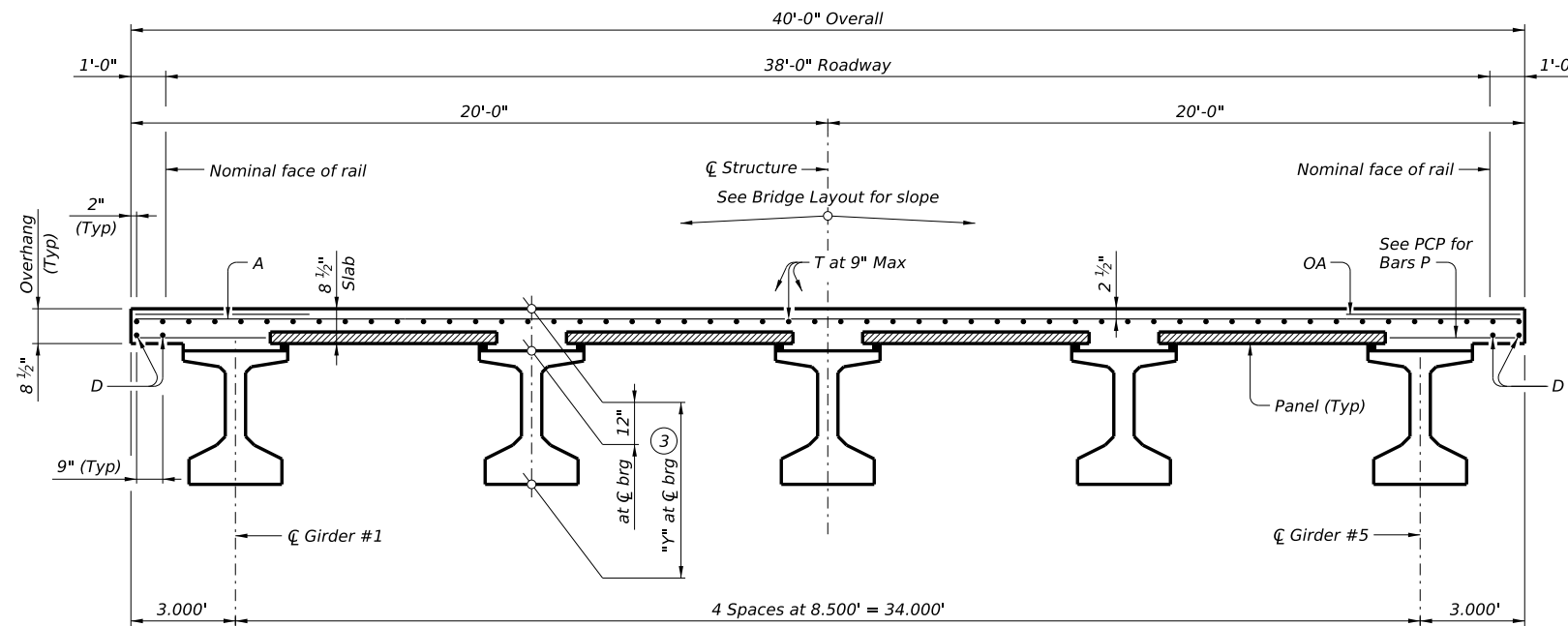
BAR TABLE

BAR	SIZE
A	#4
D	#4
G	#4
H	#4
J	#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 70,000'.
 Type Tx34 for spans lengths 40,000' thru 80,000'.
 Type Tx40 for spans lengths 40,000' thru 95,000'.
 Type Tx46 for spans lengths 40,000' thru 105,000'.
 Type Tx54 for spans lengths 40,000' thru 125,000'.
- ③ "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.

PLAN ①



TYPICAL TRANSVERSE SECTION
(Showing girder type Tx46)

TABLE OF SECTION DEPTHS

GIRDER TYPE	"Y" AT ζ BRG ③
	Ft/In
Tx28	3'-4"
Tx34	3'-10"
Tx40	4'-4"
Tx46	4'-10"
Tx54	5'-6"

HL93 LOADING

SHEET 1 OF 2



PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 38' ROADWAY 15° SKEW

SIG-38-15

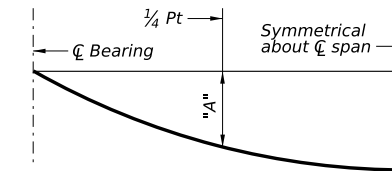
FILE: IG-SIG3815-24.dgn	DN: JMH	CK: NRN	DW: JTR	CK: TAR
© TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-19: Increased "X" and "Y" values				
01-23: Removed PCP/O reference				
11-24: Flipped top mat				
DIST	COUNTY	SHEET NO.		

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.

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	0.009	0.013	40	0.006	0.008	40	0.004	0.005	40	0.003	0.004	40	0.001	0.002
45	0.016	0.022	45	0.009	0.013	45	0.006	0.009	45	0.004	0.006	45	0.003	0.004
50	0.024	0.034	50	0.014	0.020	50	0.009	0.013	50	0.006	0.009	50	0.004	0.006
55	0.036	0.051	55	0.021	0.030	55	0.014	0.020	55	0.009	0.013	55	0.006	0.009
60	0.052	0.073	60	0.031	0.043	60	0.020	0.028	60	0.014	0.019	60	0.009	0.013
65	0.072	0.101	65	0.043	0.060	65	0.028	0.040	65	0.019	0.027	65	0.013	0.018
70	0.098	0.137	70	0.058	0.082	70	0.038	0.054	70	0.026	0.037	70	0.017	0.024
			75	0.078	0.109	75	0.051	0.071	75	0.035	0.049	75	0.023	0.032
			80	0.101	0.142	80	0.066	0.093	80	0.045	0.063	80	0.030	0.042
						85	0.085	0.119	85	0.058	0.081	85	0.038	0.054
						90	0.107	0.150	90	0.073	0.103	90	0.048	0.068
						95	0.134	0.188	95	0.091	0.128	95	0.061	0.085
									100	0.113	0.158	100	0.074	0.104
									105	0.137	0.192	105	0.090	0.127
									110			110	0.110	0.154
									115			115	0.131	0.184
									120			120	0.156	0.219
									125			125	0.184	0.259



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.

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	1,600	197.46	197.50	197.41	3,680
45	1,800	222.46	222.50	222.41	4,140
50	2,000	247.46	247.50	247.41	4,600
55	2,200	272.46	272.50	272.41	5,060
60	2,400	297.46	297.50	297.41	5,520
65	2,600	322.46	322.50	322.41	5,980
70	2,800	347.46	347.50	347.41	6,440
75	3,000	372.46	372.50	372.41	6,900
80	3,200	397.46	397.50	397.41	7,360
85	3,400	422.46	422.50	422.41	7,820
90	3,600	447.46	447.50	447.41	8,280
95	3,800	472.46	472.50	472.41	8,740
100	4,000	497.46	497.50	497.41	9,200
105	4,200	522.46	522.50	522.41	9,660
110	4,400	547.46	547.50	547.41	10,120
115	4,600	572.46	572.50	572.41	10,580
120	4,800	597.46	597.50	597.41	11,040
125	5,000	622.46	622.50	622.41	11,500

- ④ Fabricator will adjust lengths for girder slopes as required.
- ⑤ 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, 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

Bridge Division Standard

PRESTRESSED CONCRETE
 I-GIRDER SPANS
 (TYPE Tx28 THRU Tx54)
 38' ROADWAY 15° SKEW
 SIG-38-15

FILE: IG-SIG3815-24.dgn	DN: JMH	CK: NRN	DW: JTR	CK: TAR
©TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-19: Increased "X" and "Y" values				
01-23: Removed PCP(O) reference				
11-24: Flipped top mat				
DIST	COUNTY			SHEET NO.

DATE: FILE: