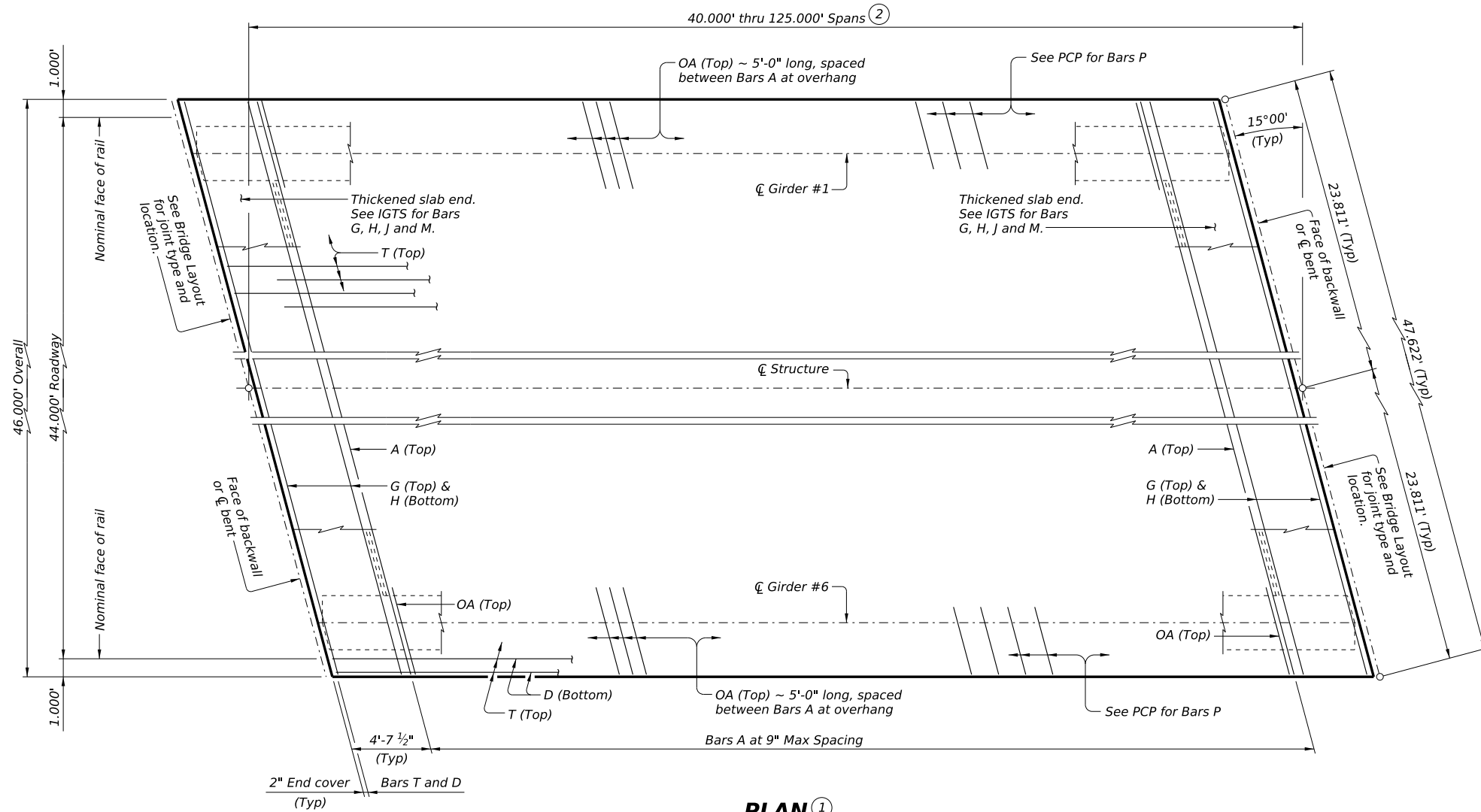


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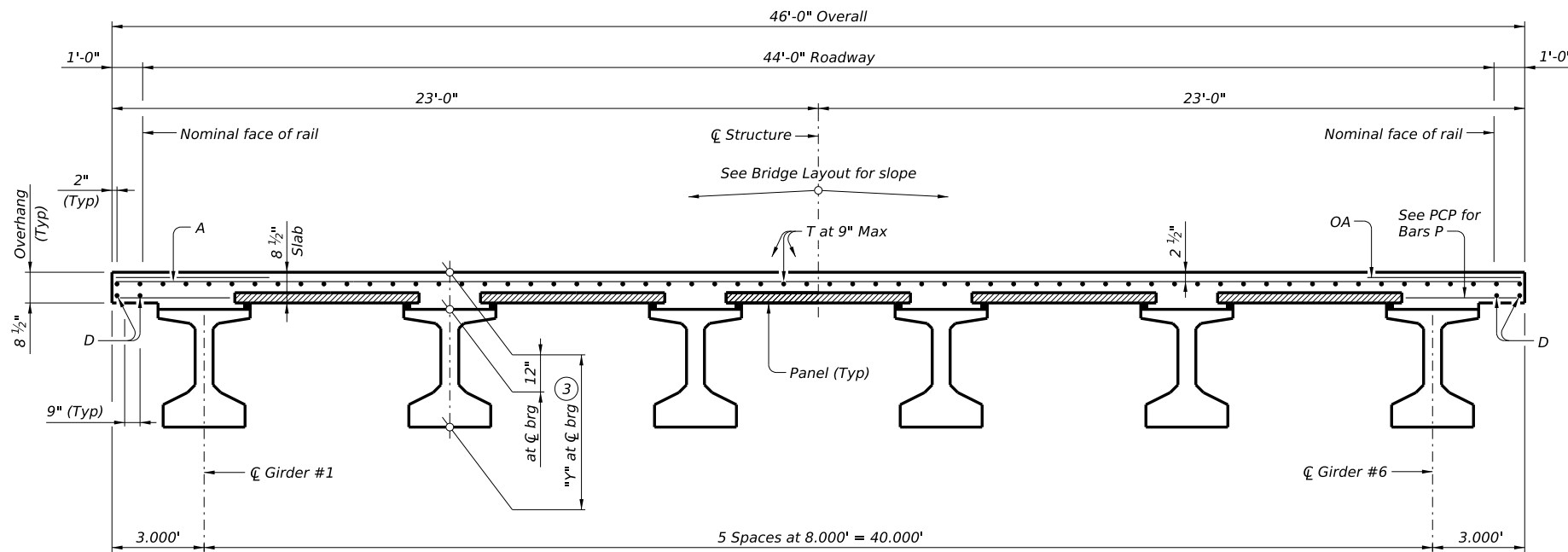


PLAN 1

- 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 85,000'.
 Type Tx40 for spans lengths 40,000' thru 95,000'.
 Type Tx46 for spans lengths 40,000' thru 110,000'.
 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.

BAR TABLE

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



TYPICAL TRANSVERSE SECTION
(Showing girder type Tx46)

TABLE OF SECTION DEPTHS

GIRDER TYPE	"Y" AT ϕ 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) 44' ROADWAY 15° SKEW

SIG-44-15

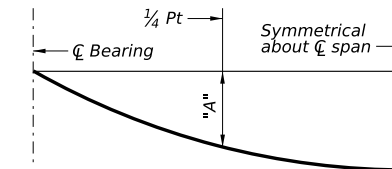
FILE: IG-SIG4415-24.dgn	DN: JMH	CK: NRN	DW: JTR	CK: TAR
©TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-19: Increased "X" and "Y" values				
01-23: Removed PCP(D) reference				
11-24: Flipped top mat				
DIST	COUNTY	SHEET NO.		

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	0.009	0.013	40	0.006	0.008	40	0.004	0.005	40	0.002	0.003	40	0.001	0.002
45	0.015	0.021	45	0.009	0.012	45	0.006	0.008	45	0.004	0.006	45	0.003	0.004
50	0.023	0.032	50	0.014	0.019	50	0.009	0.013	50	0.006	0.009	50	0.004	0.006
55	0.034	0.048	55	0.020	0.028	55	0.014	0.019	55	0.009	0.013	55	0.006	0.008
60	0.048	0.068	60	0.029	0.041	60	0.019	0.027	60	0.013	0.018	60	0.009	0.012
65	0.068	0.095	65	0.041	0.057	65	0.026	0.037	65	0.018	0.025	65	0.012	0.017
70	0.092	0.129	70	0.055	0.077	70	0.036	0.050	70	0.024	0.034	70	0.016	0.023
			75	0.073	0.102	75	0.048	0.067	75	0.033	0.046	75	0.021	0.030
			80	0.095	0.134	80	0.062	0.087	80	0.043	0.060	80	0.028	0.039
			85	0.122	0.171	85	0.080	0.112	85	0.054	0.076	85	0.036	0.050
						90	0.101	0.142	90	0.068	0.096	90	0.046	0.064
						95	0.126	0.177	95	0.085	0.120	95	0.057	0.080
									100	0.105	0.148	100	0.070	0.098
									105	0.129	0.181	105	0.085	0.120
									110	0.156	0.219	110	0.103	0.145
									115			115	0.123	0.173
									120			120	0.147	0.206
									125			125	0.173	0.243



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 (5)
		ABUT TO INT BT (4)	INT BT TO INT BT (4)	ABUT TO ABUT (4)	
Ft	SF	LF	LF	LF	Lb
40	1,840	236.95	237.00	236.89	4,232
45	2,070	266.95	267.00	266.89	4,761
50	2,300	296.95	297.00	296.89	5,290
55	2,530	326.95	327.00	326.89	5,819
60	2,760	356.95	357.00	356.89	6,348
65	2,990	386.95	387.00	386.89	6,877
70	3,220	416.95	417.00	416.89	7,406
75	3,450	446.95	447.00	446.89	7,935
80	3,680	476.95	477.00	476.89	8,464
85	3,910	506.95	507.00	506.89	8,993
90	4,140	536.95	537.00	536.89	9,522
95	4,370	566.95	567.00	566.89	10,051
100	4,600	596.95	597.00	596.89	10,580
105	4,830	626.95	627.00	626.89	11,109
110	5,060	656.95	657.00	656.89	11,638
115	5,290	686.95	687.00	686.89	12,167
120	5,520	716.95	717.00	716.89	12,696
125	5,750	746.95	747.00	746.89	13,225

- (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 (PMD) 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



PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 44' ROADWAY 15° SKEW

SIG-44-15

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