

Index 700-041 Span Sign Structure

Design Criteria

AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (LRFDLTS); Structures Manual (SM), Volume 3, FDOT Modifications to LRFDLTS; **Structures Manual (SM)** Introduction, I.6 References; **Structures Design Guidelines (SDG)**; **FDOT Design Manual (FDM)**

Design Assumptions and Limitations

The maximum span length of Span Sign Structures is 220 feet. See the notes on **Index 700-041**, **FDM 230**, **FDM 261**, **Structures Manual (SM)**, Volume 3 and the **SDG** for additional information.

Use **Index 700-041** in conjunction with **Index 700-030** and the **Span Overhead Sign** Mathcad 15 computer program located on the **Structures Design Programs Library** website.

Consider fabrication constraints when reviewing shop drawings. Mill lengths for large tubes (uprights and truss chords) are limited to 35 to 40 feet lengths; therefore, the general fabrication limits noted on **Index 700-041** may not be feasible for larger structures. The following required exceptions have been noted:

- The “three truss panel lengths” minimum cannot be met when panel lengths exceed 10 feet. Fabricator should minimize the number of splices by maximizing mill lengths.
- When the upright post exceeds mill lengths, a complete penetration weld is allowed in the top of the upright, but not within 12 inches of the truss support welds.

Plan Content Requirements

See the **FDM 940**.

Complete the “*Span Sign Structures Data Table*”. Much of the data for inclusion in the table may be found in the **Span Overhead Sign** output. Include Design Wind Speed and soils information.

Span Sign Structures Data Table:

SPAN SIGN STRUCTURES DATA TABLE													Table Date 01-01-11			
SIGN#	STATION	DIMENSIONS			PNLS	MEMBER SIZES						SPLICE				
		A	B	C		D	E	F (CHORD)	G (WEB)	H (LEFT UPRIGHT)	J (RIGHT UPRIGHT)	K (CAMBER)	SA	SB	SC	
		ft	ft	ft		#	in	O. D. x Wall Thk. (in)	Angle (in)	O. D. x Wall Thk. (in)	O. D. x Wall Thk. (in)	in	Angle (in)	#	in	

SPAN SIGN STRUCTURES DATA TABLE (CONT.)																			Table Date 01-01-	
SIGN#	ALTERNATE SPLICE						GUSSET PLATES													
	PA	PB	PC	PD	PE	PF	GA	GB	GC	GD	GE	GF	GG	GH	GJ	GK	GL			
	in	in	in	in	in	#	in	in	ft	in	ft	in	ft	in	ft	in	in			
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SPAN SIGN STRUCTURES DATA TABLE (CONT.)																Table Date 01-01-11
SIGN#	LEFT UPRIGHT CONNECTION								RIGHT UPRIGHT CONNECTION							
	LA	LB	LC	LD	LE	LF	LG	LH	RA	RB	RC	RD	RE	RF	RG	RH
	in	#	in	in	in	in	in	in	in	#	in	in	in	in	in	in

SPAN SIGN STRUCTURES DATA TABLE (CONT.)																		Table Date 01-01-11
SIGN#	LEFT BASE CONNECTION									RIGHT BASE CONNECTION								
	BA	BB	BC	BD	BE	BF	BG	BH	BJ	CA	CB	CC	CD	CE	CF	CG	CH	CJ
	in	#	in	in	ft	in	in	in	in	in	#	in	in	ft	in	in	in	in

SPAN SIGN STRUCTURES DATA TABLE (CONT.)														Table Date 07-01-14		
SIGN#	LEFT DRILLED SHAFT							RIGHT DRILLED SHAFT								
	DA		DB		DC	DD	DE	DF	FA		FB		FC	FD	FE	FF
	ft	in	ft	in	# / size	#	in	in	ft	in	ft	in	# / size	#	in	in

NOTES [Notes Date 7-01-13]:

1. Work these Data Tables with Index 700-041.
2. Design Wind Speed = ___ mph
3. Upright wall thickness given is a minimum dimension.
4. Erection is the Contractor's responsibility.
To facilitate erection, the Contractor should consider using two vertical lift points, each located near a panel point approximately 20 to 25% of the truss length from each end.
5. 'DC' and 'FC' shall include quantity and size of reinforcing steel.

FOUNDATION NOTES [Notes Date 7-01-12]:

1. Design based on Borings taken sealed by _____
2. Assumptions and Values used in design:
Soil Type _____
Soil Layer Thickness = ___ ft.
Soil Friction Angle = ___ deg.
Soil Weight = ___ pcf
Design Water Table is ___ ft. below surface

Payment

Item number	Item Description	Unit Measure
700-4-12C	Overhead Static Sign Structure (F&I, Span)	EA

See ***Standard Plans Instruction*** for ***Index 700-030*** for sign panel.

See the ***BOE*** and ***Specification 700*** for additional information on payment, pay item use and compensation.