

TYPICAL SECTION THRU SUPERSTRUCTURE

- NOTES:
1. See Structure Plans General Notes for Topping minimum thickness and cover.
 2. Work this Index with Index D400-300.

SUPERSTRUCTURE TYPICAL SECTION

LAST REVISION
11/01/20

REVISION DESCRIPTION:



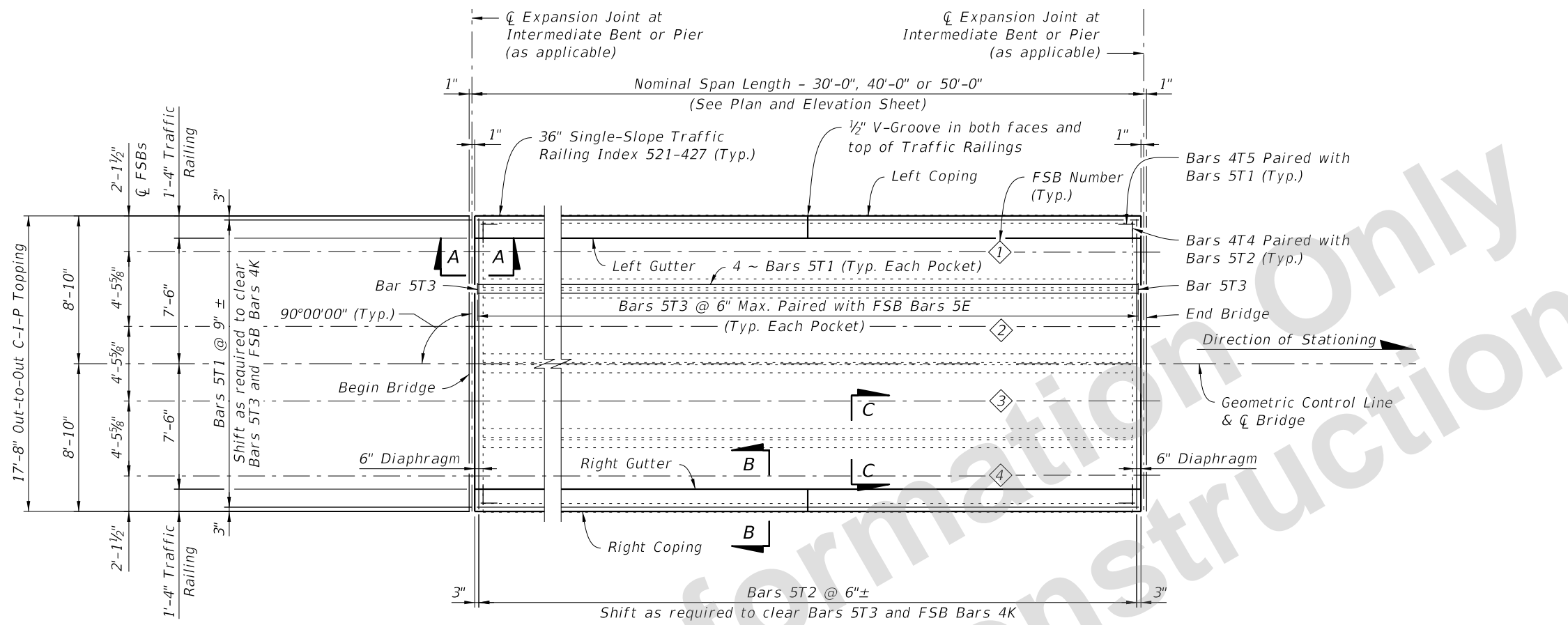
DEVELOPMENTAL
STANDARD PLANS

FSB SUPERSTRUCTURE PACKAGE
15 FT. CLEAR WIDTH

INDEX
D400-315

SHEET
1 of 4

SDATES STIMES



SUPERSTRUCTURE PLAN
(ONE SPAN SHOWN)

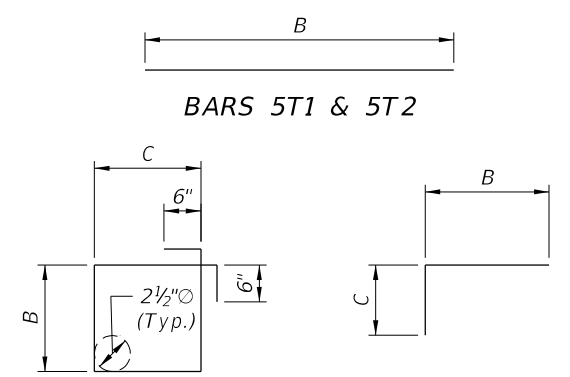
NOTE:
All bar dimensions are out-to-out.

CROSS REFERENCE:
See Index D400-300, Sheet 2 for Sections A-A, B-B and C-C.

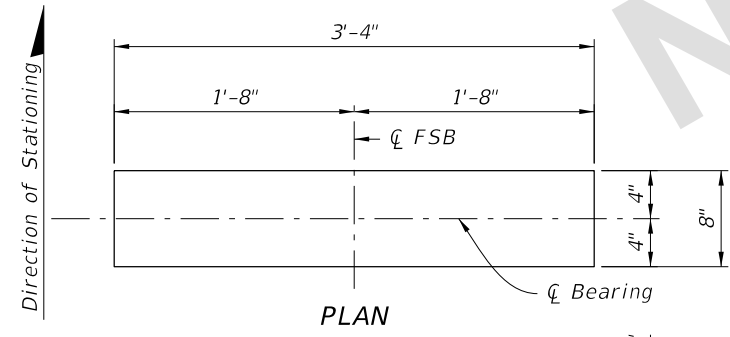
BILL OF REINFORCING STEEL FOR ONE SPAN ONLY

NOMINAL SPAN LENGTH	MARK		LENGTH	NO. OF BARS	B	C
	SIZE	DES				
30'-0"	5	T1	29'-6"	38	29'-6"	
	5	T2	17'-4"	62	17'-4"	
	5	T3	4'-2"	180	9½"	9½"
	4	T4	2'-2"	120	1'-6"	8"
	4	T5	2'-6"	48	1'-6"	1'-0"
40'-0"	5	T1	39'-6"	38	39'-6"	
	5	T2	17'-4"	82	17'-4"	
	5	T3	4'-2"	240	9½"	9½"
	4	T4	2'-2"	160	1'-6"	8"
	4	T5	2'-6"	48	1'-6"	1'-0"
50'-0"	5	T1	49'-6"	38	49'-6"	
	5	T2	17'-4"	102	17'-4"	
	5	T3	4'-7"	300	1'-0"	9½"
	4	T4	2'-5"	200	1'-6"	11"
	4	T5	2'-9"	48	1'-6"	1'-3"

BENDING DIAGRAMS



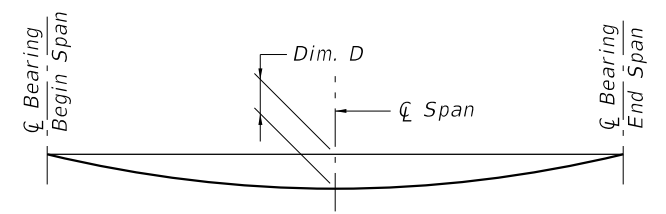
STIRRUP BAR 5T3 **BARS 4T4 & 4T5**



NOTE:
Provide plain elastomeric Bearing Pads with a Shear Modulus G = 110psi and in accordance with Specification Section 932.

FLORIDA SLAB BEAM - CAMBER AND DEFLECTION DATA TABLE

SPAN LENGTH (ft.)	BEAM NO.	NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ 120 DAYS (in.)	DIM D DEAD LOAD DEFLECTION DUE TO TOPPING POUR @ 120 DAYS (in.)
30	1-4	3/8"	1/8"
40	1-4	7/8"	5/8"
50	1-4	1 1/8"	7/8"



DEAD LOAD DEFLECTION DIAGRAM

CAMBER NOTE:

The values given in the table are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the topping casting. If the predicted cambers based on field measurements differ more than ± 1/2" from the theoretical "Net Beam Camber @ 120 Days" shown in the table, propose modified dimensions as required and submit to the Engineer for approval a minimum of 21 days prior to casting topping concrete.

SUPERSTRUCTURE PLAN

LAST REVISION 10/01/16	DESCRIPTION:
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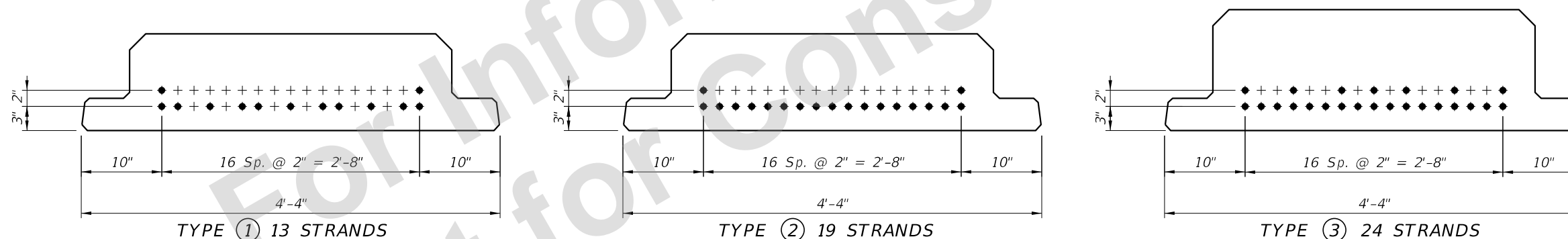
FLORIDA SLAB BEAM - TABLE OF VARIABLES

NOMINAL SPAN LENGTH	LOCATION BEAM NO.	BEAM TYPE	CONCRETE PROPERTIES		STND. PTRN. TYPE	PLAN VIEW CASE		ANGLE θ		BEAM DIMENSIONS*			REINFORCING STEEL																						
			CLASS	STRENGTHS (psi)		END 1	END 2	END 1	END 2	DIM W	DIM L	DIM R	3C		4D1		4D2		4D3		5E1		5E2		6Y1		6Y2		4K		NO. OF BAR SPACES		BAR SPACING*		
				28 Day									Release	NO.	DIM C	DIM D	DIM D	NO.	DIM D	NO.	DIM E	NO.	DIM E	DIM Y	DIM Y	NO.	S1	S2	V1	V2					
30'	1,4	FSB 12x52	VI	8500	6000	1	1	1	90°	90°	4'-4"	28'-10 $\frac{1}{4}$ "	$\frac{1}{4}$ "	31	3'-11 $\frac{1}{2}$ "	2'-2"	2'-2"	24	2'-2"	-	-	57	4'-0 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	84	1	8	1'-6"	1'-6"					
	2,3	FSB 12x52	VI	8500	6000	1	1	1	90°	90°	4'-4"	28'-10 $\frac{1}{4}$ "	$\frac{1}{4}$ "	31	3'-11 $\frac{1}{2}$ "	2'-2"	2'-2"	24	2'-2"	57	4'-2"	-	-	2'-11 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	84	1	8	1'-6"	1'-6"					
40'	1,4	FSB 12x52	VI	8500	6000	2	1	1	90°	90°	4'-4"	38'-10 $\frac{3}{8}$ "	$\frac{3}{8}$ "	41	3'-11 $\frac{1}{2}$ "	2'-2"	2'-2"	32	2'-2"	-	-	77	4'-0 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	156	8	10	6"	1'-6"					
	2,3	FSB 12x52	VI	8500	6000	2	1	1	90°	90°	4'-4"	38'-10 $\frac{3}{8}$ "	$\frac{3}{8}$ "	41	3'-11 $\frac{1}{2}$ "	2'-2"	2'-2"	32	2'-2"	77	4'-2"	-	-	2'-11 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	156	8	10	6"	1'-6"					
50'	1,4	FSB 15x52	VI	8500	6000	3	1	1	90°	90°	4'-4"	48'-10 $\frac{1}{2}$ "	$\frac{1}{2}$ "	51	3'-11 $\frac{1}{2}$ "	2'-2"	2'-2"	44	2'-2"	-	-	97	4'-0 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	148	4	13	1'-0"	1'-6"					
	2,3	FSB 15x52	VI	8500	6000	3	1	1	90°	90°	4'-4"	48'-10 $\frac{1}{2}$ "	$\frac{1}{2}$ "	51	3'-11 $\frac{1}{2}$ "	2'-2"	2'-2"	44	2'-2"	97	4'-2"	-	-	2'-11 $\frac{1}{2}$ "	2'-11 $\frac{1}{2}$ "	148	4	13	1'-0"	1'-6"					

NOTE: Work this sheet with Standard Plans Index 450-450.

DIMENSION NOTES

* All longitudinal slab beam dimensions shown on this sheet with a single asterisk (*) are measured along the top of beam at the centerline. Dimension "R" is calculated at mid-height of the slab beam.



STRAND DESCRIPTION: Use 0.60" Diameter, Grade 270, Low Relaxation Carbon Steel Strands stressed at 44.0 kips each. Area per strand equals 0.217 sq. in.

STRAND DEBONDING LEGEND

● - fully bonded strands.

STRAND PATTERNS

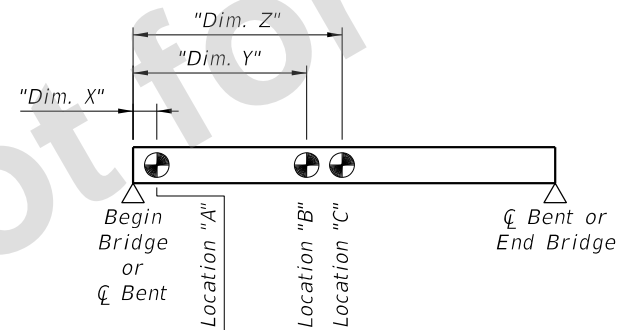
Load Rating Summary Details for Prestressed Concrete Bridges (Flat Slab and Deck/Girder)

Table 2 - LRFR

Span Length (Ft)	Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength) or Stress (Service)					Shear (Strength)					Comments: Interior/exterior beam DF method if other than LRFD. Other appropriate comments
					LL	DC	DW	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension (Ft)	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension (Ft)	
30	Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.40	1.87	N/A	C	13.32	0.65	4.28	N/A	A	1.39	Exterior Beam
		Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.40	2.42	N/A	C	13.32	0.65	5.55	N/A	A	1.39	Exterior Beam
		Service III (Inv)	HL-93	N/A	0.80	1.00	1.00	0.40	1.74	N/A	C	13.32	N/A	N/A	N/A	N/A	N/A	Exterior Beam
	Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.40	2.05	123.07	B	10.54	0.65	3.76	225.87	A	1.39	Exterior Beam
40	Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.33	1.84	N/A	C	18.50	0.62	4.64	N/A	A	4.15	Exterior Beam
		Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.33	2.39	N/A	C	18.50	0.62	6.01	N/A	A	4.15	Exterior Beam
		Service III (Inv)	HL-93	N/A	0.80	1.00	1.00	0.33	1.40	N/A	C	18.50	N/A	N/A	N/A	N/A	N/A	Exterior Beam
	Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.33	1.79	107.26	B	16.99	0.62	4.14	248.64	A	4.15	Exterior Beam
50	Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.30	1.77	N/A	C	22.44	0.59	4.67	N/A	A	1.43	Exterior Beam
		Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.30	2.29	N/A	C	22.44	0.59	6.05	N/A	A	1.43	Exterior Beam
		Service III (Inv)	HL-93	N/A	0.80	1.00	1.00	0.30	1.32	N/A	C	22.92	N/A	N/A	N/A	N/A	N/A	Exterior Beam
	Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.30	1.70	101.85	B	21.49	0.59	4.33	259.60	A	1.43	Exterior Beam

- NOTES:
1. Permit capacity is determined by using the permit vehicle in all lanes.
 2. Service III Design Inventory tensile stress limits = $3\sqrt{f'_c}$.
 3. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? Yes No

Abbreviations:
Inv - Inventory
Op - Operating



RATING LOCATIONS