

GIRDER DIMENSIONS

GIRDER	CL RADIUS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	3638'-0"	173'-2 <sup>5</sup> / <sub>16</sub> "	222'-7 <sup>7</sup> / <sub>8</sub> "	241'-6 <sup>7</sup> / <sub>16</sub> "	183'-10 <sup>5</sup> / <sub>8</sub> "	139'-3 <sup>11</sup> / <sub>16</sub> "	123'-11 <sup>7</sup> / <sub>8</sub> "	49'-2 <sup>7</sup> / <sub>16</sub> "	49'-8 <sup>3</sup> / <sub>8</sub> "	99'-4 <sup>13</sup> / <sub>16</sub> "	73'-6 <sup>11</sup> / <sub>16</sub> "	54'-8 <sup>1</sup> / <sub>16</sub> "	132'-2 <sup>5</sup> / <sub>16</sub> "	54'-8 <sup>1</sup> / <sub>16</sub> "	66'-7 <sup>3</sup> / <sub>16</sub> "	70'-6 <sup>13</sup> / <sub>16</sub> "	46'-8 <sup>5</sup> / <sub>8</sub> "	29'-9 <sup>3</sup> / <sub>16</sub> "	109'-5 <sup>7</sup> / <sub>16</sub> "	29'-8 <sup>1</sup> / <sub>16</sub> "	31'-2 <sup>7</sup> / <sub>16</sub> "	30'-8 <sup>3</sup> / <sub>8</sub> "	49'-6 <sup>11</sup> / <sub>16</sub> "	30'-8 <sup>1</sup> / <sub>16</sub> "	38'-7"	37'-7 <sup>5</sup> / <sub>16</sub> "	37'-8 <sup>1</sup> / <sub>16</sub> "
2	3650'-0"	173'-9 <sup>1</sup> / <sub>4</sub> "	223'-4 <sup>5</sup> / <sub>8</sub> "	242'-4 <sup>1</sup> / <sub>16</sub> "	184'-5 <sup>5</sup> / <sub>16</sub> "	139'-9 <sup>5</sup> / <sub>16</sub> "	124'-4 <sup>7</sup> / <sub>8</sub> "	49'-4 <sup>3</sup> / <sub>8</sub> "	49'-10 <sup>3</sup> / <sub>8</sub> "	99'-8 <sup>11</sup> / <sub>16</sub> "	73'-9 <sup>9</sup> / <sub>16</sub> "	54'-10 <sup>3</sup> / <sub>16</sub> "	132'-7 <sup>11</sup> / <sub>16</sub> "	54'-10 <sup>3</sup> / <sub>16</sub> "	66'-9 <sup>13</sup> / <sub>16</sub> "	70'-9 <sup>11</sup> / <sub>16</sub> "	46'-10 <sup>7</sup> / <sub>16</sub> "	29'-11"	109'-10 <sup>5</sup> / <sub>16</sub> "	29'-10 <sup>3</sup> / <sub>16</sub> "	31'-4 <sup>3</sup> / <sub>8</sub> "	30'-10 <sup>3</sup> / <sub>8</sub> "	49'-9 <sup>9</sup> / <sub>16</sub> "	30'-10 <sup>3</sup> / <sub>16</sub> "	38'-9 <sup>3</sup> / <sub>4</sub> "	37'-9 <sup>5</sup> / <sub>16</sub> "	37'-10 <sup>3</sup> / <sub>16</sub> "
3	3662'-0"	174'-4 <sup>1</sup> / <sub>8</sub> "	224'-1 <sup>7</sup> / <sub>16</sub> "	243'-1 <sup>5</sup> / <sub>8</sub> "	185'-1 <sup>3</sup> / <sub>16</sub> "	140'-2 <sup>5</sup> / <sub>16</sub> "	124'-9 <sup>13</sup> / <sub>16</sub> "	49'-6 <sup>5</sup> / <sub>16</sub> "	50'-0 <sup>5</sup> / <sub>16</sub> "	100'-0 <sup>5</sup> / <sub>8</sub> "	74'-0 <sup>1</sup> / <sub>2</sub> "	55'-0 <sup>3</sup> / <sub>8</sub> "	133'-0 <sup>7</sup> / <sub>8</sub> "	55'-0 <sup>3</sup> / <sub>8</sub> "	67'-0 <sup>7</sup> / <sub>16</sub> "	71'-0 <sup>7</sup> / <sub>16</sub> "	47'-0 <sup>5</sup> / <sub>16</sub> "	30'-0 <sup>3</sup> / <sub>16</sub> "	110'-2 <sup>3</sup> / <sub>4</sub> "	30'-0 <sup>3</sup> / <sub>8</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	31'-0 <sup>5</sup> / <sub>16</sub> "	50'-0 <sup>1</sup> / <sub>2</sub> "	31'-0 <sup>3</sup> / <sub>8</sub> "	39'-0 <sup>7</sup> / <sub>16</sub> "	38'-0 <sup>7</sup> / <sub>16</sub> "	38'-0 <sup>3</sup> / <sub>8</sub> "
4	3674'-0"	174'-11 <sup>1</sup> / <sub>16</sub> "	224'-10 <sup>5</sup> / <sub>16</sub> "	243'-11 <sup>3</sup> / <sub>16</sub> "	185'-8 <sup>1</sup> / <sub>2</sub> "	140'-8 <sup>9</sup> / <sub>16</sub> "	125'-2 <sup>13</sup> / <sub>16</sub> "	49'-8 <sup>1</sup> / <sub>4</sub> "	50'-2 <sup>5</sup> / <sub>16</sub> "	100'-4 <sup>5</sup> / <sub>8</sub> "	74'-3 <sup>3</sup> / <sub>8</sub> "	55'-2 <sup>1</sup> / <sub>2</sub> "	133'-6 <sup>3</sup> / <sub>16</sub> "	55'-2 <sup>1</sup> / <sub>2</sub> "	67'-3 <sup>1</sup> / <sub>16</sub> "	71'-3 <sup>1</sup> / <sub>4</sub> "	47'-2 <sup>3</sup> / <sub>16</sub> "	30'-1 <sup>3</sup> / <sub>8</sub> "	110'-7 <sup>3</sup> / <sub>16</sub> "	30'-2 <sup>9</sup> / <sub>16</sub> "	31'-8 <sup>1</sup> / <sub>4</sub> "	31'-2 <sup>5</sup> / <sub>16</sub> "	50'-3 <sup>3</sup> / <sub>8</sub> "	31'-2 <sup>1</sup> / <sub>2</sub> "	39'-3 <sup>1</sup> / <sub>16</sub> "	38'-3 <sup>1</sup> / <sub>8</sub> "	38'-2 <sup>1</sup> / <sub>2</sub> "
GIRDER	BB	CC	DD	EE	FF	GG	HH																				
1	44'-7 <sup>3</sup> / <sub>16</sub> "	27'-8 <sup>5</sup> / <sub>8</sub> "	12'-9 <sup>13</sup> / <sub>16</sub> "	98'-10 <sup>13</sup> / <sub>16</sub> "	128'-2 <sup>3</sup> / <sub>4</sub> "	121'-3 <sup>1</sup> / <sub>4</sub> "	76'-6 <sup>7</sup> / <sub>16</sub> "																				
2	44'-9 <sup>13</sup> / <sub>16</sub> "	27'-10 <sup>7</sup> / <sub>16</sub> "	12'-11"	99'-2 <sup>3</sup> / <sub>4</sub> "	128'-7 <sup>3</sup> / <sub>4</sub> "	121'-8"	76'-9 <sup>7</sup> / <sub>16</sub> "																				
3	45'-0 <sup>7</sup> / <sub>16</sub> "	28'-0 <sup>5</sup> / <sub>16</sub> "	13'-0 <sup>3</sup> / <sub>16</sub> "	99'-6 <sup>5</sup> / <sub>8</sub> "	129'-0 <sup>7</sup> / <sub>8</sub> "	122'-0 <sup>13</sup> / <sub>16</sub> "	77'-0 <sup>1</sup> / <sub>2</sub> "																				
4	45'-3 <sup>1</sup> / <sub>16</sub> "	28'-2 <sup>3</sup> / <sub>16</sub> "	13'-1 <sup>3</sup> / <sub>8</sub> "	99'-10 <sup>9</sup> / <sub>16</sub> "	129'-5 <sup>7</sup> / <sub>8</sub> "	122'-5 <sup>9</sup> / <sub>16</sub> "	77'-3 <sup>9</sup> / <sub>16</sub> "																				

STUD SPACING DIMENSIONS

GIRDER	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
1	27 SPA. @ 1'-0"	1'-2"	66 SPA. @ 1'-5"	2'-3 <sup>7</sup> / <sub>8</sub> "	2'-8 <sup>7</sup> / <sub>16</sub> "	66 SPA. @ 1'-5"	2'-8 <sup>7</sup> / <sub>16</sub> "	2'-5 <sup>3</sup> / <sub>8</sub> "	63 SPA. @ 1'-6"	2'-5 <sup>3</sup> / <sub>8</sub> "	2'-5 <sup>7</sup> / <sub>8</sub> "	87 SPA. @ 1'-5"	2'-5 <sup>7</sup> / <sub>8</sub> "	2'-4 <sup>3</sup> / <sub>16</sub> "	90 SPA. @ 1'-5"	2'-4 <sup>3</sup> / <sub>16</sub> "	2'-6 <sup>5</sup> / <sub>8</sub> "	82 SPA. @ 1'-5"	2'-6 <sup>5</sup> / <sub>8</sub> "	2'-3 <sup>7</sup> / <sub>16</sub> "
2	15 SPA. @ 1'-2"	11"	69 SPA. @ 1'-6"	2'-5 <sup>7</sup> / <sub>8</sub> "	1'-11 <sup>3</sup> / <sub>8</sub> "	88 SPA. @ 1'-1"	1'-11 <sup>3</sup> / <sub>8</sub> "	2'-7 <sup>3</sup> / <sub>8</sub> "	63 SPA. @ 1'-6"	2'-7 <sup>3</sup> / <sub>8</sub> "	2'-3 <sup>7</sup> / <sub>8</sub> "	93 SPA. @ 1'-4"	2'-3 <sup>7</sup> / <sub>8</sub> "	1'-9 <sup>13</sup> / <sub>16</sub> "	86 SPA. @ 1'-6"	1'-9 <sup>13</sup> / <sub>16</sub> "	2'-4"	108 SPA. @ 1'-1"	2'-4"	2'-3 <sup>5</sup> / <sub>16</sub> "
3	16 SPA. @ 1'-2"	9"	73 SPA. @ 1'-5"	1'-11 <sup>3</sup> / <sub>16</sub> "	2'-1 <sup>5</sup> / <sub>16</sub> "	88 SPA. @ 1'-1"	2'-1 <sup>5</sup> / <sub>16</sub> "	2'-0 <sup>5</sup> / <sub>16</sub> "	64 SPA. @ 1'-6"	2'-0 <sup>5</sup> / <sub>16</sub> "	2'-6 <sup>7</sup> / <sub>16</sub> "	93 SPA. @ 1'-4"	2'-6 <sup>7</sup> / <sub>16</sub> "	2'-0 <sup>7</sup> / <sub>16</sub> "	86 SPA. @ 1'-6"	2'-0 <sup>7</sup> / <sub>16</sub> "	1'-11 <sup>7</sup> / <sub>8</sub> "	109 SPA. @ 1'-1"	1'-11 <sup>7</sup> / <sub>8</sub> "	2'-4 <sup>3</sup> / <sub>4</sub> "
4	27 SPA. @ 1'-0"	1'-2"	67 SPA. @ 1'-5"	2'-1 <sup>3</sup> / <sub>16</sub> "	2'-7 <sup>1</sup> / <sub>4</sub> "	71 SPA. @ 1'-4"	2'-7 <sup>1</sup> / <sub>4</sub> "	2'-8 <sup>13</sup> / <sub>16</sub> "	67 SPA. @ 1'-5"	2'-8 <sup>13</sup> / <sub>16</sub> "	2'-4 <sup>15</sup> / <sub>16</sub> "	88 SPA. @ 1'-5"	2'-4 <sup>15</sup> / <sub>16</sub> "	2'-3 <sup>9</sup> / <sub>16</sub> "	91 SPA. @ 1'-5"	2'-3 <sup>9</sup> / <sub>16</sub> "	2'-5 <sup>5</sup> / <sub>16</sub> "	83 SPA. @ 1'-5"	2'-5 <sup>5</sup> / <sub>16</sub> "	2'-4 <sup>1</sup> / <sub>8</sub> "
GIRDER	S21	S22	S23	S24	S25	S26	S27	S28	S29											
1	44 SPA. @ 1'-6"	2'-3 <sup>7</sup> / <sub>16</sub> "	2'-1 <sup>1</sup> / <sub>4</sub> "	62 SPA. @ 1'-2"	2'-1 <sup>1</sup> / <sub>4</sub> "	1'-9 <sup>13</sup> / <sub>16</sub> "	68 SPA. @ 1'-4"	9"	15 SPA. @ 1'-1"											
2	53 SPA. @ 1'-3"	2'-3 <sup>5</sup> / <sub>16</sub> "	2'-2 <sup>3</sup> / <sub>4</sub> "	62 SPA. @ 1'-2"	2'-2 <sup>3</sup> / <sub>4</sub> "	2'-4 <sup>5</sup> / <sub>16</sub> "	54 SPA. @ 0'-11"	10"	49 SPA. @ 1'-2"											
3	53 SPA. @ 1'-3"	2'-4 <sup>3</sup> / <sub>4</sub> "	1'-9 <sup>1</sup> / <sub>4</sub> "	63 SPA. @ 1'-2"	1'-9 <sup>1</sup> / <sub>4</sub> "	1'-9 <sup>3</sup> / <sub>4</sub> "	55 SPA. @ 0'-11"	10"	49 SPA. @ 1'-2"											
4	47 SPA. @ 1'-5"	2'-4 <sup>1</sup> / <sub>8</sub> "	1'-10 <sup>3</sup> / <sub>4</sub> "	63 SPA. @ 1'-2"	1'-10 <sup>3</sup> / <sub>4</sub> "	1'-10 <sup>3</sup> / <sub>16</sub> "	68 SPA. @ 1'-4"	9"	16 SPA. @ 1'-1"											

LIMITS OF TENSION FLANGES FOR CHARPY V-NOTCH TESTS

GIRDER	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16
1	69'-0"	75'-0"	92'-0"	76'-0"	65'-0"	183'-10 <sup>5</sup> / <sub>8</sub> "	0'-0"	56'-0"	35'-0"	38'-0"	45'-0"	44'-0"	38'-0"	42'-0"	27'-0"	22'-0"
2	64'-0"	67'-0"	85'-0"	70'-0"	60'-0"	89'-0"	55'-0"	51'-0"	35'-0"	39'-0"	45'-0"	44'-0"	38'-0"	44'-0"	27'-0"	22'-0"
3	65'-0"	69'-0"	88'-0"	71'-0"	60'-0"	92'-0"	56'-0"	51'-0"	35'-0"	40'-0"	45'-0"	44'-0"	38'-0"	44'-0"	27'-0"	22'-0"
4	70'-0"	77'-0"	97'-0"	76'-0"	64'-0"	185'-8 <sup>1</sup> / <sub>2</sub> "	0'-0"	55'-0"	35'-0"	39'-0"	45'-0"	44'-0"	38'-0"	43'-0"	27'-0"	22'-0"

GIRDER FLANGE WIDTHS

GIRDER	FLANGE	W1	W2	W3	W4	W5	W6	W7
1 & 4	TOP	24	20	34	28	18	22	18
	BOTTOM	28	26	38	32	24	24	24
2 & 3	TOP	20	18	28	24	18	18	18
	BOTTOM	24	24	32	28	22	22	22

NOTE  
SEE "SUPERSTRUCTURE GIRDER DETAILS - UNIT 1"  
SHEET 1 OF 3 FOR NOTES.



PROJECT NO. U-2579AB  
FORSYTH COUNTY  
 STATION: 60+66.06 -Y15FLYAC-  
 SHEET 2 OF 2

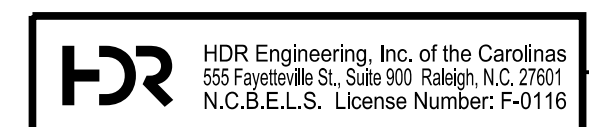
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**SUPERSTRUCTURE  
 GIRDER DETAILS  
 UNIT 2**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1	--	--	3	--	--	144
2	--	--	4	--	--	144

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DES BY: <u>T. ANDREWS</u>	DATE: <u>07/19</u>	DWG BY: <u>T. SAS</u>	DATE: <u>08/19</u>
DES CHK: <u>D. OLDS</u>	DATE: <u>08/19</u>	CHK BY: <u>T. ANDREWS</u>	DATE: <u>10/19</u>



DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED