

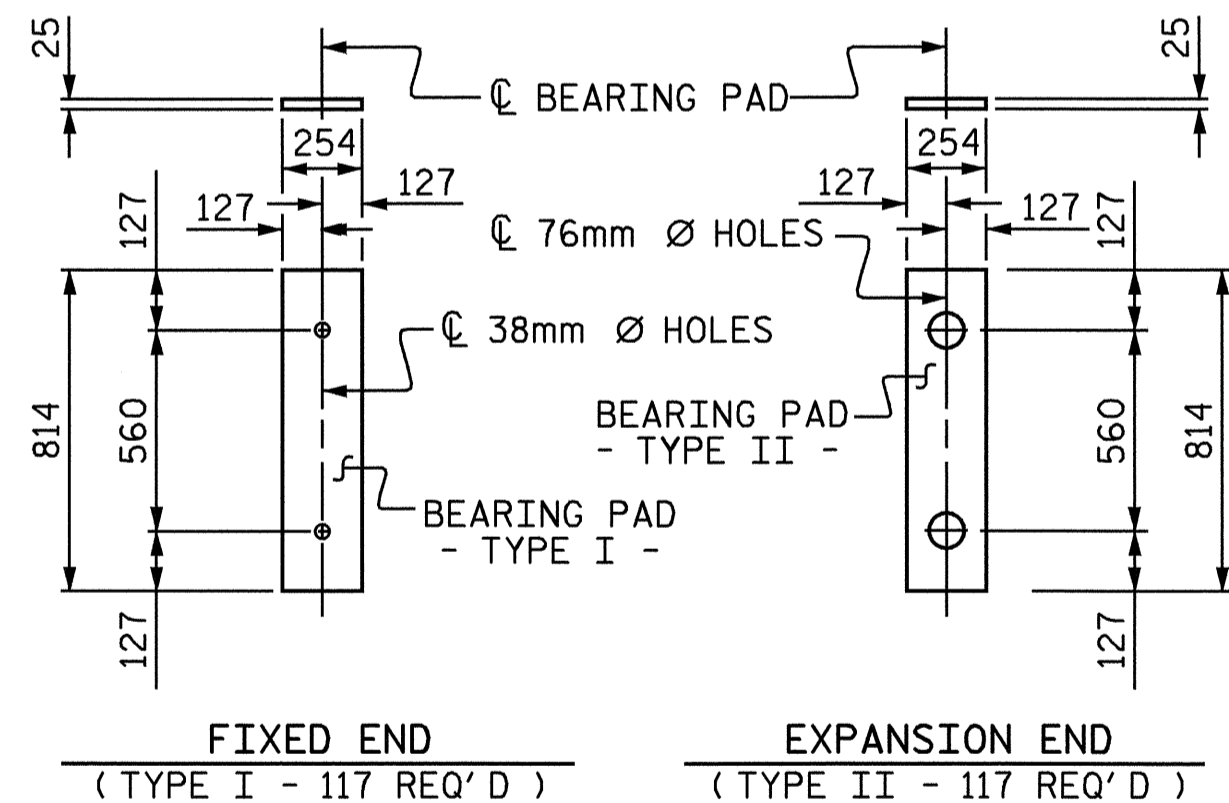
**PIPE DRAIN DETAILS**

SPAN A ONLY

SPANS B THRU H ONLY

**BOX BEAMS REQUIRED**

SPAN A THRU F	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR B.B. (SIDEWALK)	1	22.956m	22.956m
EXTERIOR B.B. (NOT SIDEWALK)	1	22.956m	22.956m
INTERIOR B.B. (SIDEWALK)	2	22.956m	45.912m
INTERIOR B.B. (NOT SIDEWALK)	9	22.956m	206.604m
<b>TOTAL</b>	<b>13</b>		<b>298.428m</b>
<b>TOTAL SPANS A THRU F</b>	<b>78</b>		<b>1790.568m</b>
SPAN G	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR B.B. (SIDEWALK)	1	22.964m	22.964m
EXTERIOR B.B. (NOT SIDEWALK)	1	22.964m	22.964m
INTERIOR B.B. (SIDEWALK)	2	22.964m	45.928m
INTERIOR B.B. (NOT SIDEWALK)	9	22.964m	206.676m
<b>TOTAL SPAN G</b>	<b>13</b>		<b>298.532m</b>
SPAN H	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR B.B. (SIDEWALK)	1	22.987m	22.987m
EXTERIOR B.B. (NOT SIDEWALK)	1	22.987m	22.987m
INTERIOR B.B. (SIDEWALK)	2	22.987m	45.974m
INTERIOR B.B. (NOT SIDEWALK)	9	22.987m	206.883m
<b>TOTAL SPAN H</b>	<b>13</b>		<b>298.831m</b>
SPAN I	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR B.B. (SIDEWALK)	1	12.129m	12.129m
EXTERIOR B.B. (NOT SIDEWALK)	1	12.129m	12.129m
INTERIOR B.B. (SIDEWALK)	2	12.129m	24.258m
INTERIOR B.B. (NOT SIDEWALK)	9	12.129m	109.161m
<b>TOTAL SPAN I</b>	<b>13</b>		<b>157.677m</b>



**ELASTOMERIC BEARING DETAILS**

**GROOVING BRIDGE FLOORS**

BRIDGE DECK 1542.4 SQ.METER

**CLASS AA CONCRETE (FOR CONCRETE WEARING SURFACE)**

( CU. METER )  
\* CONCRETE WEARING SURFACE 299.6

\* PAID FOR BY THE SQ. METER PRICE FOR "CONCRETE WEARING SURFACE." (1725.9 SQ. METERS)

**BILL OF MATERIAL FOR SIDEWALK**

BAR	NO. BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPANS A THRU C	SPANS D THRU F	SPANS G THRU I					
*B3	81	81		162	#13	STR	8220	1324
*B4			63	63	#13	STR	8840	554
*S8	309	309	260	878	#16	3	1380	1880
* EPOXY COATED REINFORCING STEEL								3758 kg.
CLASS AA CONCRETE								158.3 CU. METER

DRAWN BY : T.A. HARRIS DATE : 7/28/04  
CHECKED BY : K.P. SEDAI DATE : 8/17/04

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TAHarris

**SPANS A THRU H**

**BILL OF MATERIAL FOR ONE BOX BEAM UNIT**

BAR	NO.	SIZE	TYPE	EXTERIOR UNIT (SIDEWALK)		EXTERIOR UNIT (NOT SIDEWALK)		INTERIOR UNIT (SIDEWALK)		INTERIOR UNIT (NOT SIDEWALK)	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#16	1	1540	24	1540	24	1540	24	1540	24
A2	8	#13	1	1700	14	1700	14	1700	14	1700	14
A3	10	#13	5	900	9	900	9	900	9	900	9
B1	12	#16	STR	11780	219	11780	219	11780	219	11780	219
D1	12	#13	7	2120	25	2120	25	2120	25	2120	25
D2	24	#13	1	1220	29	1220	29	1220	29	1220	29
D3	8	#13	STR	800	6	800	6	800	6	800	6
D4	12	#13	7	1860	22	1860	22	1860	22	1860	22
S1	62	#13	1	2080	128	2080	128	2080	128	2080	128
S2	62	#13	1	2000	123	2000	123	2000	123	2000	123
S3	46	#13	2	1780	81	1780	81	1780	81	1780	81
S4	107	#13	1	1220	130	1220	130	1220	130	1220	130
*S5	149	#13	3			1200	178				
*S6	4	#13	3			1480	6				
*S7	11	#13	4	2120	23			2120	23		
REINFORCING STEEL (SPAN A)				kg.	788		788		788		788
REINFORCING STEEL (SPANS B THRU H)				kg.	785		785		785		785
* EPOXY COATED REINFORCING STEEL				kg.	23		184		23		0
41.4 MPa CONCRETE				CU. METER	10.2		10.2		10.1		10.1
12.70mm Ø L.R. STRANDS				No.	28		28		28		28

**SPAN I**

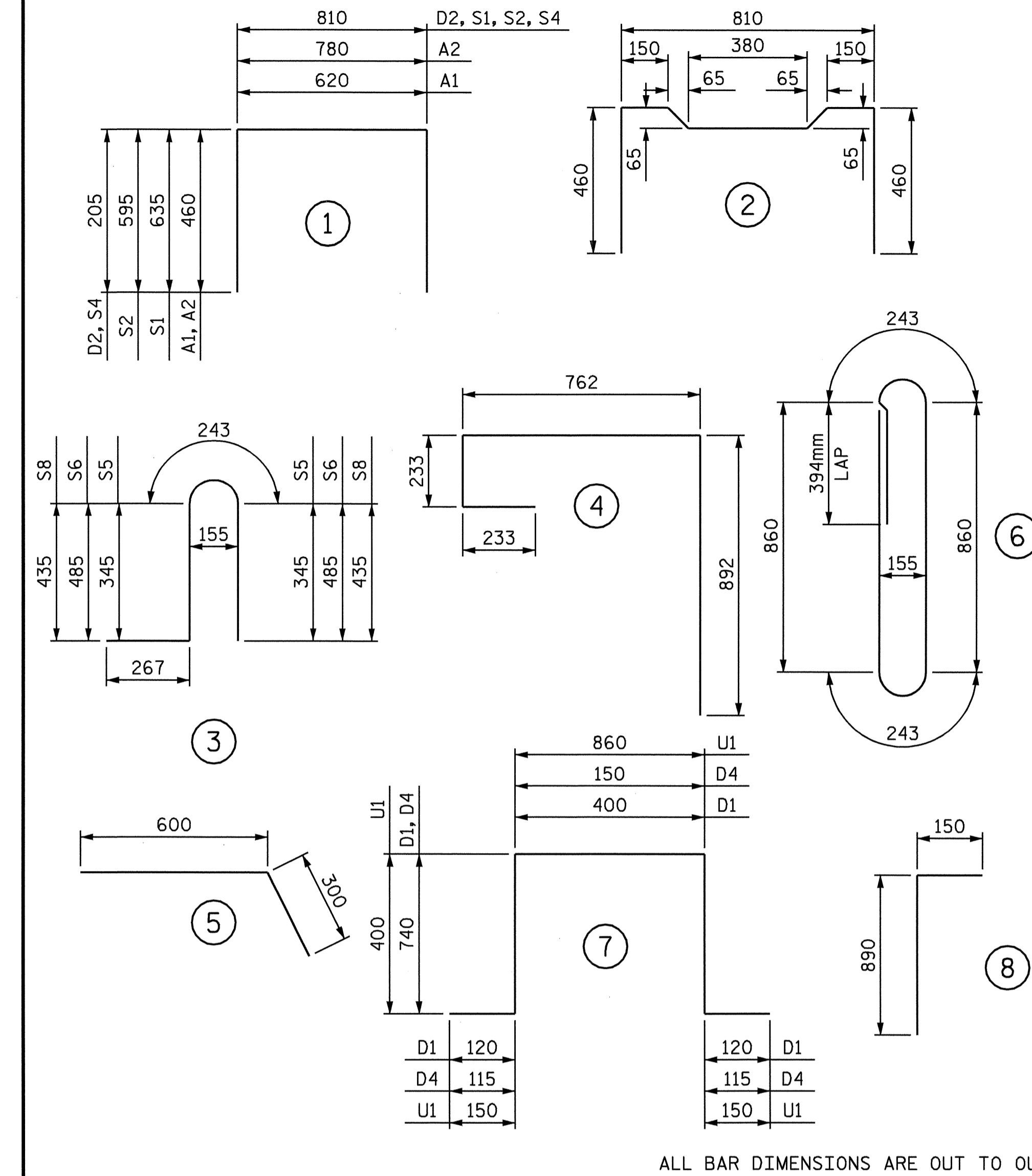
**BILL OF MATERIAL FOR ONE BOX BEAM UNIT**

BAR	NO.	SIZE	TYPE	EXTERIOR UNIT (SIDEWALK)		EXTERIOR UNIT (NOT SIDEWALK)		INTERIOR UNIT (SIDEWALK)		INTERIOR UNIT (NOT SIDEWALK)	
				LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#16	1	1540	24	1540	24	1540	24	1540	24
A2	8	#13	1	1700	14	1700	14	1700	14	1700	14
A3	10	#13	5	900	9	900	9	900	9	900	9
B2	12	#16	STR	6360	118	6360	118	6360	118	6360	118
D1	6	#13	7	2120	13	2120	13	2120	13	2120	13
D2	12	#13	1	1220	15	1220	15	1220	15	1220	15
D3	4	#13	STR	800	3	800	3	800	3	800	3
S1	38	#13	1	2080	79	2080	79	2080	79	2080	79
S2	38	#13	1	2000	76	2000	76	2000	76	2000	76
S3	22	#13	2	1780	39	1780	39	1780	39	1780	39
S4	59	#13	1	1220	72	1220	72	1220	72	1220	72
*S5	76	#13	3			1200	91				
*S6	4	#13	3			1480	6				
*S7	6	#13	4	2120	13			2120	13		
REINFORCING STEEL				kg.	462		462		462		462
* EPOXY COATED REINFORCING STEEL				kg.	13		101		13		0
34.5 MPa CONCRETE				CU. METER	5.7		5.7		5.7		5.7
12.70mm Ø L.R. STRANDS				No.	10		10		10		10

**BILL OF MATERIAL FOR CLASSIC CONCRETE BRIDGE RAIL**

BAR	NO. BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPANS B THRU H	SPAN I					
*B5	8	8		64	#22	STR	11360	2212
*B6	8	8		64	#16	STR	11360	1128
*B7			4	4	#22	STR	12020	146
*B8			4	4	#16	STR	12020	75
*S9	201	200	107	1708	#16	6	2600	6892
*U1	12	8	8	76	#16	7	1960	231
*V1	12	8	8	76	#16	8	1040	123
* EPOXY COATED REINFORCING STEEL								10807 kg.
CLASS AA CONCRETE								89.1 CU. METER
TOTAL LENGTH OF CLASSIC CONCRETE BRIDGE RAIL								391.718 METERS

**BAR TYPES**



**GRADE 270 STRANDS**

	12.70mm Ø L. R.
AREA (mm <sup>2</sup> )	98.71
ULTIMATE STRENGTH (KN PER STRAND)	183.7
APPLIED PRESTRESS (KN PER STRAND)	137.8

**SPLICE CHART**

B1, B2	660
B3, B4	540



PROJECT NO. **B-2583**  
**MADISON** COUNTY  
STATION: **12+21.750 -L-**

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**B-II 914  
PRESTRESSED CONCRETE  
BOX BEAM  
BILL OF MATERIAL**

REVISIONS						SHEET NO. S-39
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 112
2			4			