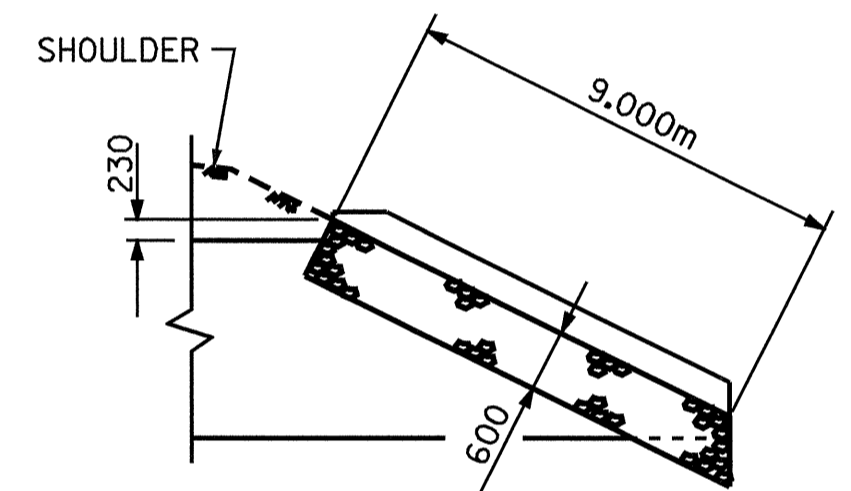
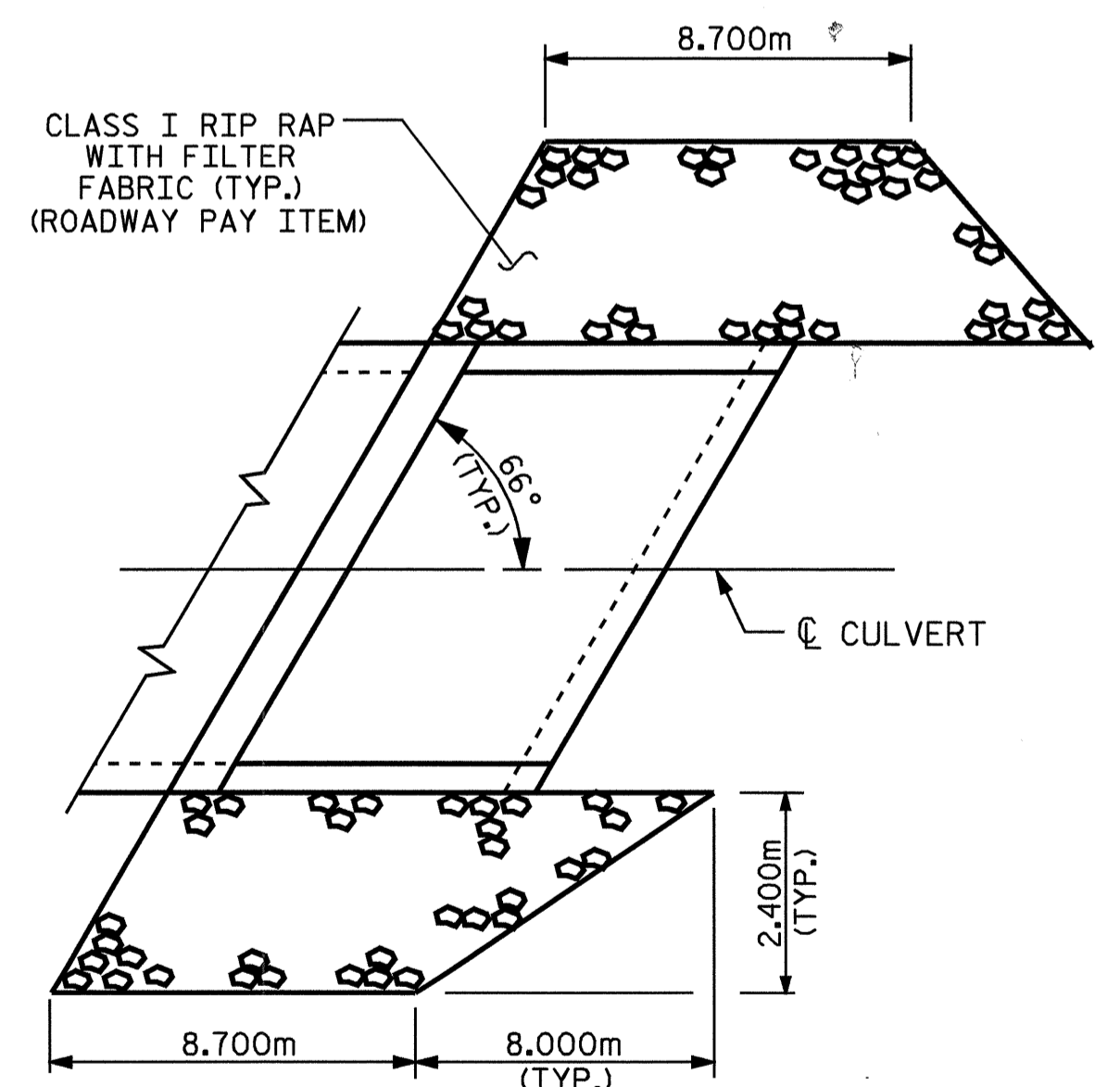


SECTION THRU  
OUTLET WING

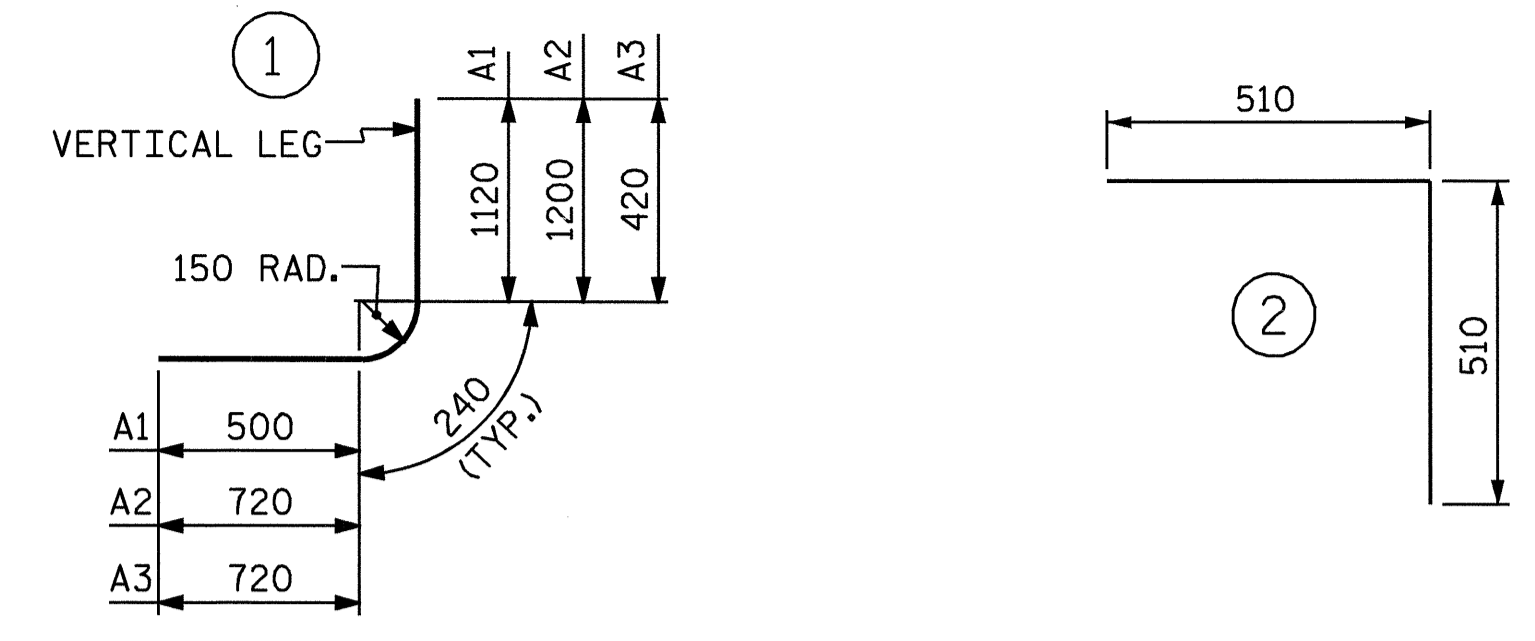


ELEVATION



OUTLET WING  
RIP RAP DETAILS

BAR TYPES



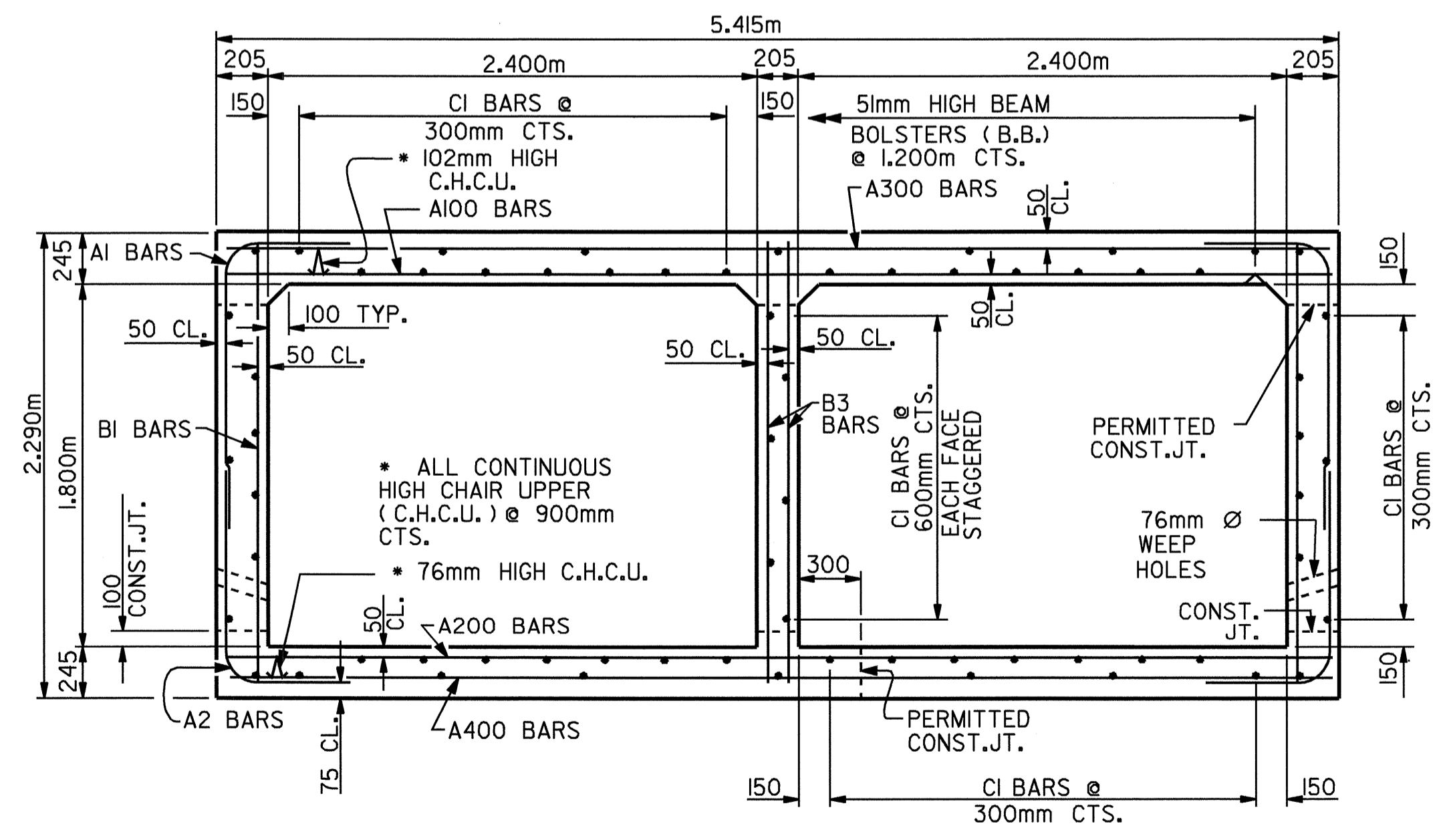
ALL DIMENSIONS ARE OUT TO OUT

SPLICE LENGTH CHART		
BAR SIZE	SPLICE LENGTH	
A200	16	540
A400	22	920
B1	13	540
B3	13	540
C1	13	590

BILL OF MATERIAL

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	SIZE	TYPE	LENGTH	WEIGHT			
A100	276	#16	STR	5260	2253	A300	276	#19	STR	5260	3245	B1	338	#13	STR	2100	706
A101	3	#16	STR	4740	22	A301	3	#19	STR	4740	32	B3	406	#13	STR	2100	847
A102	3	#16	STR	4240	20	A302	3	#19	STR	4240	28	C1	462	#13	STR	7960	3655
A103	3	#16	STR	3740	17	A303	3	#19	STR	3740	25	C2	23	#13	STR	8900	203
A104	3	#16	STR	3220	15	A304	3	#19	STR	3220	22	G1	4	#16	STR	7500	47
A105	3	#16	STR	2720	13	A305	3	#19	STR	2720	18	G2	4	#16	STR	5800	36
A106	3	#16	STR	2200	10	A306	3	#19	STR	2200	15	S1	6	#25	STR	7500	179
A107	3	#16	STR	1700	8	A307	3	#19	STR	1700	11	S2	8	#25	STR	5800	184
A108	3	#16	STR	1200	6	A308	3	#19	STR	1200	8	D1	14	#19	STR	900	28
A109	3	#16	STR	660	3	A309	3	#19	STR	660	4	H1	4	#13	STR	8420	33
A151	2	#16	STR	4440	14	A351	2	#19	STR	4440	20	H2	4	#13	STR	8200	33
A152	2	#16	STR	3680	11	A352	2	#19	STR	3680	16	H3	4	#13	STR	8060	32
A153	2	#16	STR	2920	9	A353	2	#19	STR	2920	13	H4	4	#13	STR	6740	27
A154	2	#16	STR	2160	7	A354	2	#19	STR	2160	10	H5	4	#13	STR	5420	22
A155	2	#16	STR	1400	4	A355	2	#19	STR	1400	6	H6	4	#13	STR	4100	16
A156	2	#16	STR	640	2	A356	2	#19	STR	640	3	H7	4	#13	STR	2780	11
A200	229	#16	STR	5260	1869	A400	324	#22	STR	5260	5184	H8	4	#13	STR	1460	6
A201	2	#16	STR	4780	15	A401	3	#22	STR	4740	43	K1	9	#13	2	1020	9
A202	2	#16	STR	4300	13	A402	3	#22	STR	4240	39	V1	16	#13	STR	2040	32
A203	2	#16	STR	3800	12	A403	3	#22	STR	3740	34	V2	16	#13	STR	1900	30
A204	2	#16	STR	3360	10	A404	3	#22	STR	3220	29	V3	16	#13	STR	1740	28
A205	2	#16	STR	2880	9	A405	3	#22	STR	2720	25	V4	16	#13	STR	1580	25
A206	2	#16	STR	2380	7	A406	3	#22	STR	2200	20	V5	16	#13	STR	1420	23
A207	2	#16	STR	1900	6	A407	3	#22	STR	1700	16	V6	16	#13	STR	1280	20
A208	2	#16	STR	1420	4	A408	3	#22	STR	1220	11	V7	16	#13	STR	1120	18
A209	2	#16	STR	940	3	A409	3	#22	STR	660	6	V8	16	#13	STR	960	15
A251	1	#16	STR	4680	7	A451	2	#22	STR	4400	27	V9	16	#13	STR	800	13
A252	1	#16	STR	4140	6	A452	2	#22	STR	3680	22	V10	16	#13	STR	660	10
A253	1	#16	STR	3580	6	A453	2	#22	STR	2920	18	V11	16	#13	STR	500	8
A254	1	#16	STR	3040	5	A454	2	#22	STR	2160	13	V12	20	#13	STR	300	6
A255	1	#16	STR	2520	4	A455	2	#22	STR	1400	9						
A256	1	#16	STR	1980	3	A456	2	#22	STR	640	4						
A257	1	#16	STR	1440	2												
A258	1	#16	STR	880	1	A1	598	#13	1	1860	1106						
						A2	658	#19	1	2160	3177						
						A3	38	#19	1	1380	117						

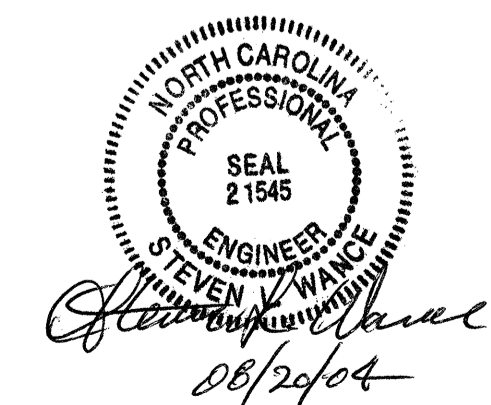
REINFORCING STEEL = 24,074 Kg  
CLASS A CONCRETE  
BARREL & OUTLET WINGS 204.9m<sup>3</sup>  
1 HEADWALL 0.7m<sup>3</sup>  
1 END CURTAIN WALL 0.5m<sup>3</sup>  
TOTAL 206.1m<sup>3</sup>



RIGHT ANGLE SECTION OF BARREL  
THERE ARE 66 "C" BARS IN SECTION OF BARREL.

PROJECT NO. R-513BA  
ROBESON COUNTY  
STATION: 14+19.671 -RPB-

SHEET 4 OF 5  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
DOUBLE 2.400m X 1.800m  
CONCRETE BOX CULVERT



ASSEMBLED BY : N. Q. TRAN DATE : 2-15-03  
CHECKED BY : SWANCePE DATE : 08-06-04  
DRAWN BY : EEM 6/97  
CHECKED BY : ARB 7/97

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	C - 8	
1			3			TOTAL SHEETS	
2			4			24	