ABUTMENT 1

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
4	84	13	700	1A1301	21	150	350	200						105			
6	15	16	3405	1A1601	STR	*											
7	4	16	2400	1A1602	STR												
8	26	16	4855	1A1603	19	▲		4155	700				181		676		
9	20	16	4960	1A1604	STR	▲											
10	2	16	9225	1A1605	STR												
11	10	16	750	1A1606	19			450	300				95		285		
12	18	16	1160	1A1607	17		405	350	405								
13	13	16	2530	1A1608	17		1780	750									
14	13	16	3025	1A1609	19			1975	1050				742		742		
15	5	16	3680	1A1610	STR												
16	14	16	1160	1A1611	17		405	350	405								
18	3	19	2400	1A1901	STR												
20	26	25	5080	1A2501	17		3405	1675									
21	15	25	3650	1A2502	STR	▲											
22	1	25	5675	1A2503	28		750	4175	750				650	700	375	375	
23	1	25	5150	1A2504	28		750	3650	750				744	744	98	98	

WINGWALL 2

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
29	126	13	700	2WW1301	21	150	350	200						105			
31	21	16	3850	2WW1601	STR												
32	21	16	3105	2WW1602	STR	▲											
33	28	16	6125	2WW1603	STR	▲											
34	14	16	7260	2WW1604	19	▲		6125	1135				294		1099		
35	21	16	1160	2WW1605	17		405	350	405								
36	2	16	6505	2WW1606	19			850	5655				2123		5243		
37	20	16	6700	2WW1607	STR	▲											
38	2	16	1985	2WW1608	19	▲		850	1135				294		1096		
40	22	19	3105	2WW1901	STR	*▲											
42	23	25	3650	2WW2501	STR												
44	42	29	5520	2WW2901	17		3845	1675									

ABUTMENT 2

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
103	72	13	700	2A1301	21	150	350	200						105			
105	12	16	3610	2A1601	STR												
106	3	16	2400	2A1602	STR												
107	26	16	3965	2A1603	19	▲		3265	700				350		606		
108	20	16	3510	2A1604	STR	▲											
109	2	16	8850	2A1605	STR												
110	10	16	750	2A1606	19			450	300				95		285		
111	19	16	1160	2A1607	17		405	350	405								
112	13	16	2530	2A1608	17		1780	750									
113	13	16	3025	2A1609	19			1975	1050								
114	5	16	3780	2A1610	STR												
115	10	16	1160	2A1611	17		405	350	405								
117	3	19	2400	2A1901	STR												
119	21	25	5285	2A2501	17		3610	1675									
120	13	25	3650	2A2502	STR	*▲											
121	1	25	5230	2A2503	22		750	3730	750				724	724	194	194	

WINGWALL 3

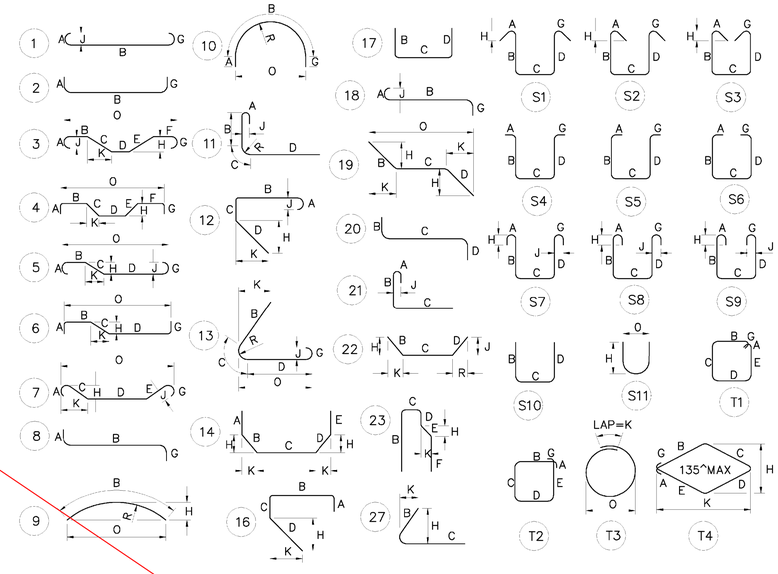
ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
124	21	16	1650	3WW1601	17			650	350	650							
125	2	16	6225	3WW1602	19	▲		975	5250				2144		4791		
126	2	16	6220	3WW1603	19	▲		1015	5205				2127		4753		

WINGWALL 4

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
143	90	13	700	4WW1301	21	150	350	200						105			
145	15	16	3850	4WW1601	STR												
146	15	16	3305	4WW1602	STR	▲											
147	34	16	4305	4WW1603	STR												
148	10	16	4680	4WW1604	19	▲		3880	800				400		693		
149	15	16	1160	4WW1605	17		405	350	405								
150	2	16	4610	4WW1606	19			460	4150				1570		3843		
151	20	16	4820	4WW1607	STR												
152	2	16	1260	4WW1608	19	▲		460	800				400		693		
154	15	19	3305	4WW1901	STR	▲											
160	17	25	3650	4WW2501	STR												
168	29	29	5520	4WW2901	17		3845	1675									

NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENT OF THE "SPECIFICATIONS FOR DEFORMED BILLET–STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M–S1). ALL BARS SHALL BE GRADE 400, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICE SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS ARE TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS ARE TO BE SHOWN ONLY WHEN NECCESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



SEE REVISED SHEET

BAR SIZE DESIGNATION	NOMINAL MASS kg/m	NOMINAL DIMENSIONS ROUND SECTION DIAMETER mm	CROSS SECTIONAL AREA mm²	PERIMETER mm
10	0.560	9.5	71	29.84
13	0.994	12.7	129	39.90
16	1.552	15.9	199	49.95
19	2.235	19.1	284	60.00
22	3.042	22.2	387	69.74
25	3.973	25.4	510	79.80
29	5.060	28.7	645	90.16
32	6.404	32.3	819	101.47
36	7.907	35.8	1006	112.47
43	11.380	43.0	1452	135.09
57	20.240	57.3	2581	180.01

McFarland Johnson

FOREST SERVICE US DEPARTMENT OF AGRIC. USDA

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of RIPTON	Bridge No. BRIDGE #17
Highway No. TH 18	Log Sta.
	Surv. Sta.

TH 18 OVER SOUTH BRANCH MIDDLEBURY RIVER

REINFORCING STEEL SCHEDULE

Designed By W J GAYNOR	Drawn By W J GAYNOR
Checked By Y I LIU Date 8/09	Bridge Design Supervisor R L JOY Date 10/09
PROJECT RIPTON	PROJECT NO. FH 010–1(2)
I.G.C. Info.	
Bridge Sheet No.	Sheet 22 of 26