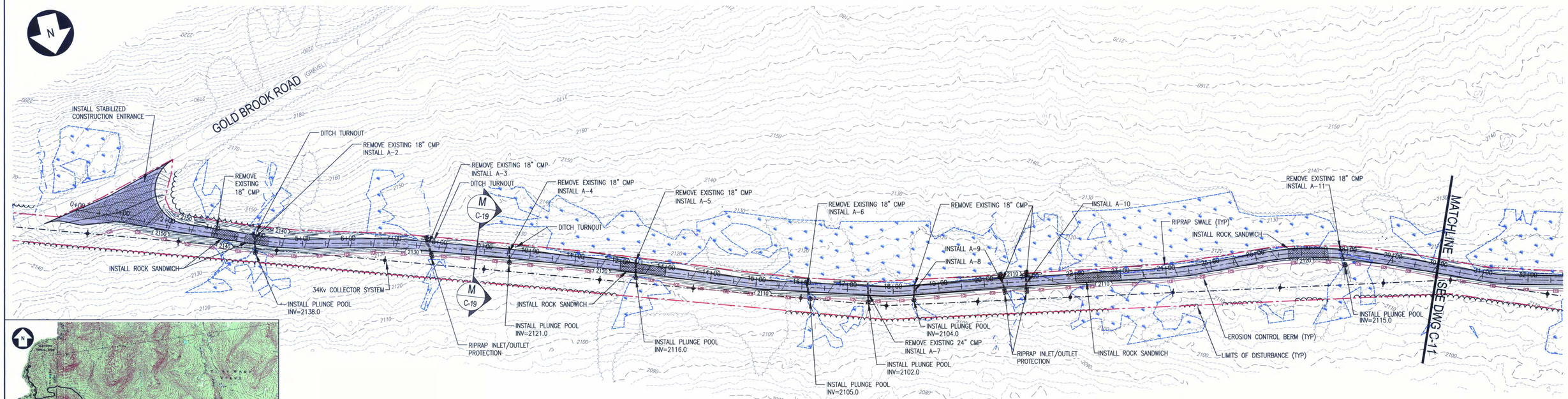
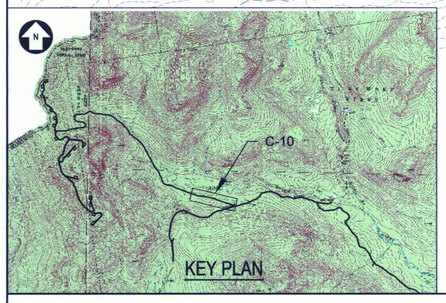
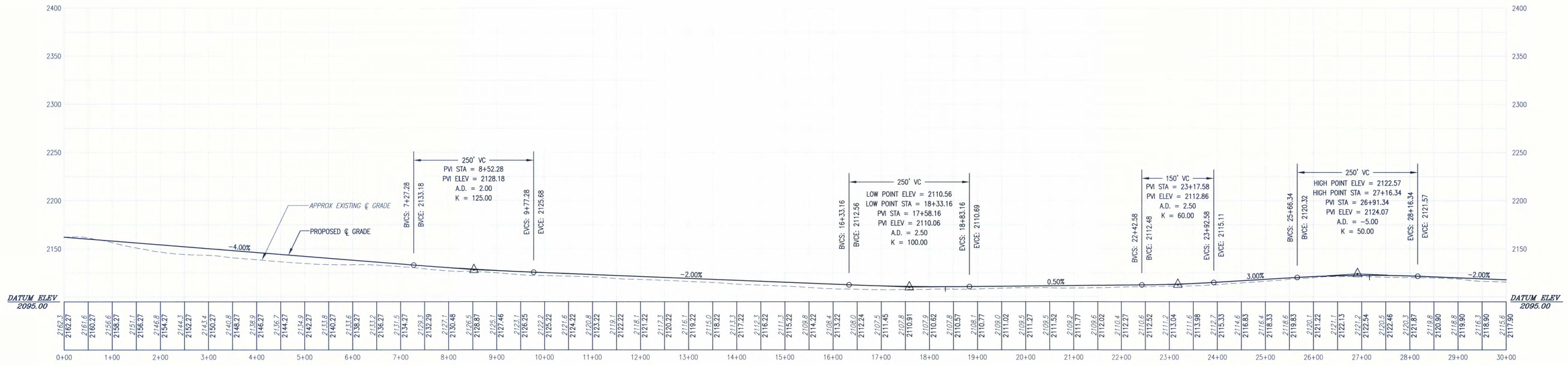




PLAN VIEW
SCALE: 1"=100'



PROFILE: STA 0+00 TO 30+00
SCALE: HORIZ: 1"=100'
VERT: 1"=50'

100 0 100 200 FT
SCALE: 1"=100'

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

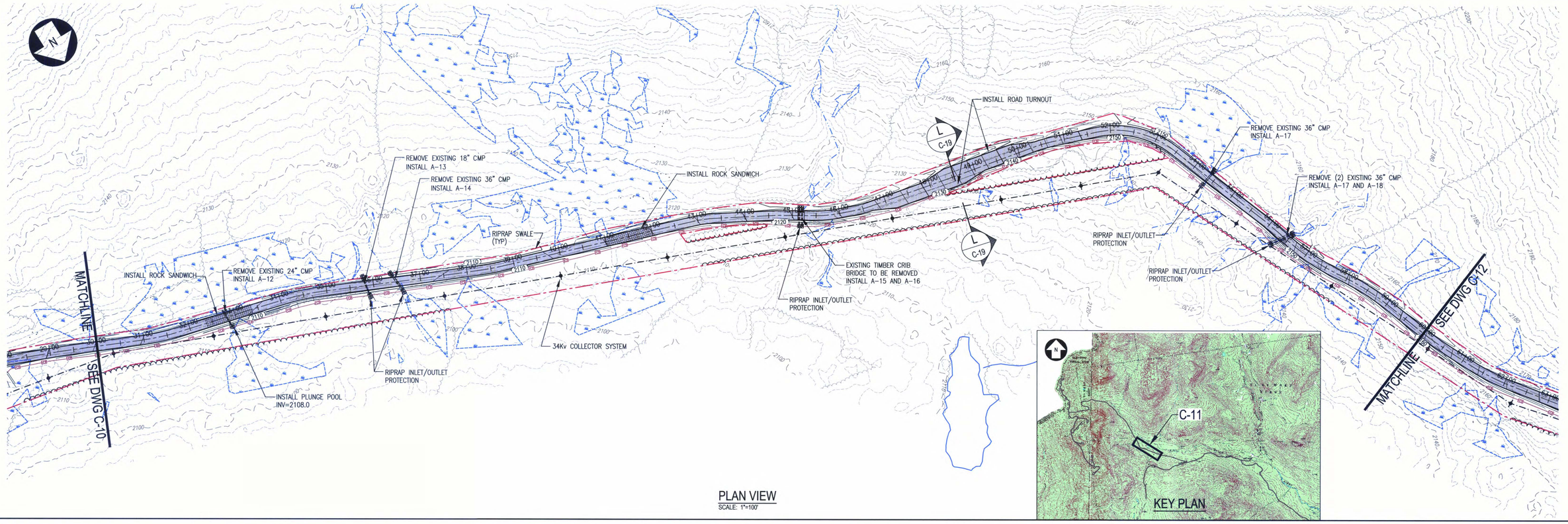
TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

PLAN & PROFILE: ACCESS ROAD
STA 0+00 TO 30+00
TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

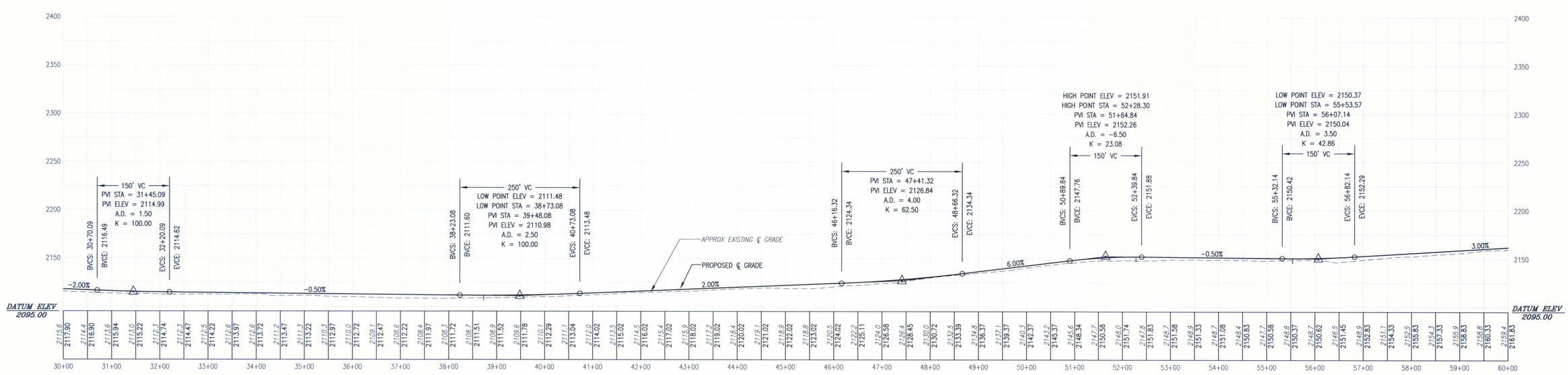
TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO:
SCALE: AS NOTED DATE: 10-8-09

C-10

REV. A



PLAN VIEW
SCALE: 1"=100'



PROFILE: STA 30+00 TO 60+00
SCALE: HORIZ: 1"=100'
VERT: 1"=50'

100 0 100 200 FT
SCALE: 1"=100'

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER No. 6796
LICENSED PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

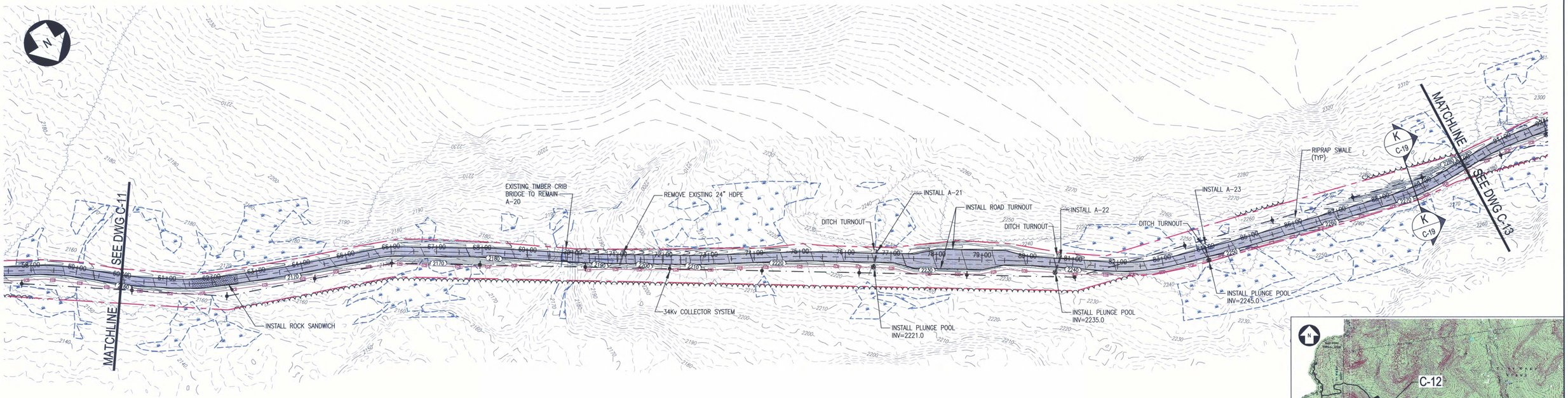
TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

PLAN & PROFILE: ACCESS ROAD
STA 30+00 TO 60+00
TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

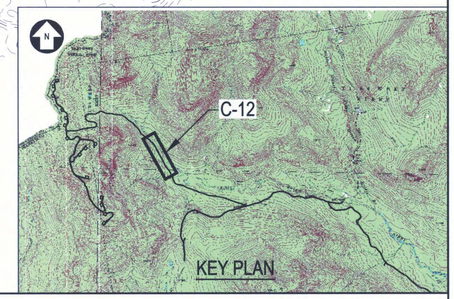
TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-8-09

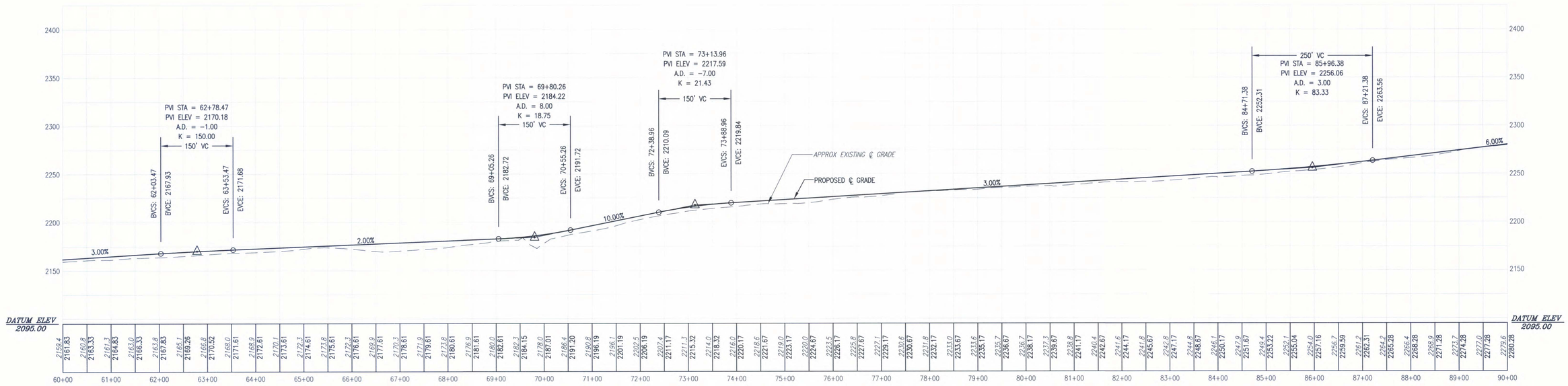
C-11

REV. A



PLAN VIEW
SCALE: 1"=100'





PROFILE: STA 60+00 TO 90+00
SCALE: HORIZ: 1"=100'
VERT: 1"=50'

100 0 100 200 FT
SCALE: 1"=100'

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11/25/09

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

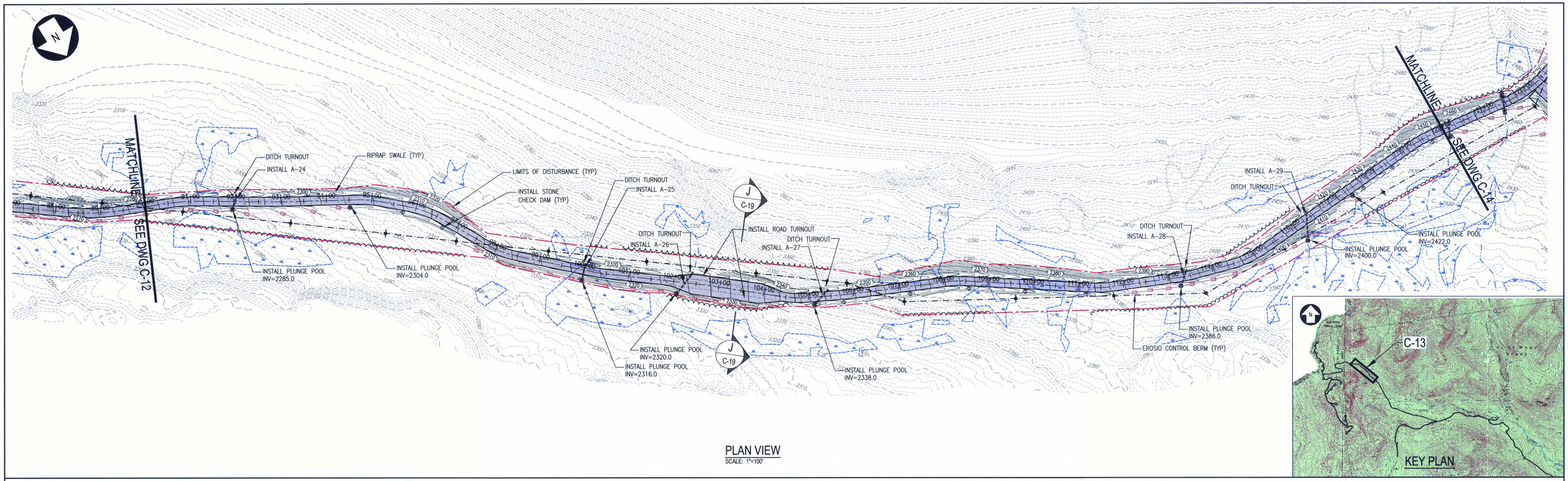
TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

PLAN & PROFILE: ACCESS ROAD
STA 60+00 TO 90+00
TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

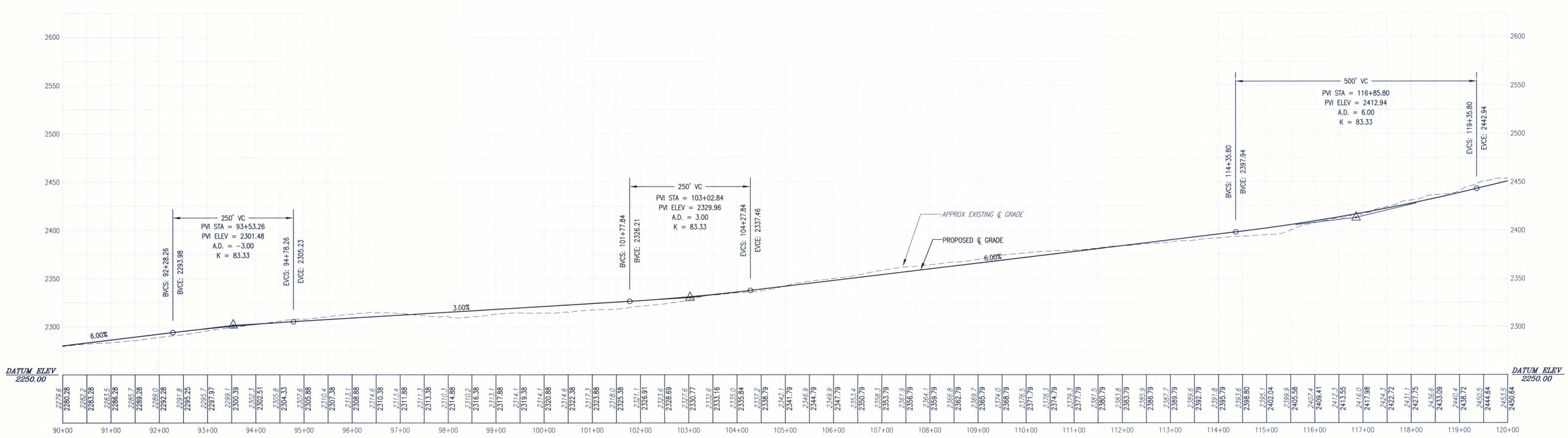
TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-8-09

C-12

REV. A



PLAN VIEW
SCALE: 1"=100'



PROFILE: STA 90+00 TO 120+00
SCALE: HORIZ: 1"=100'
VERT: 1"=50'

100 0 100 200 FT
SCALE: 1"=100'

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED
PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

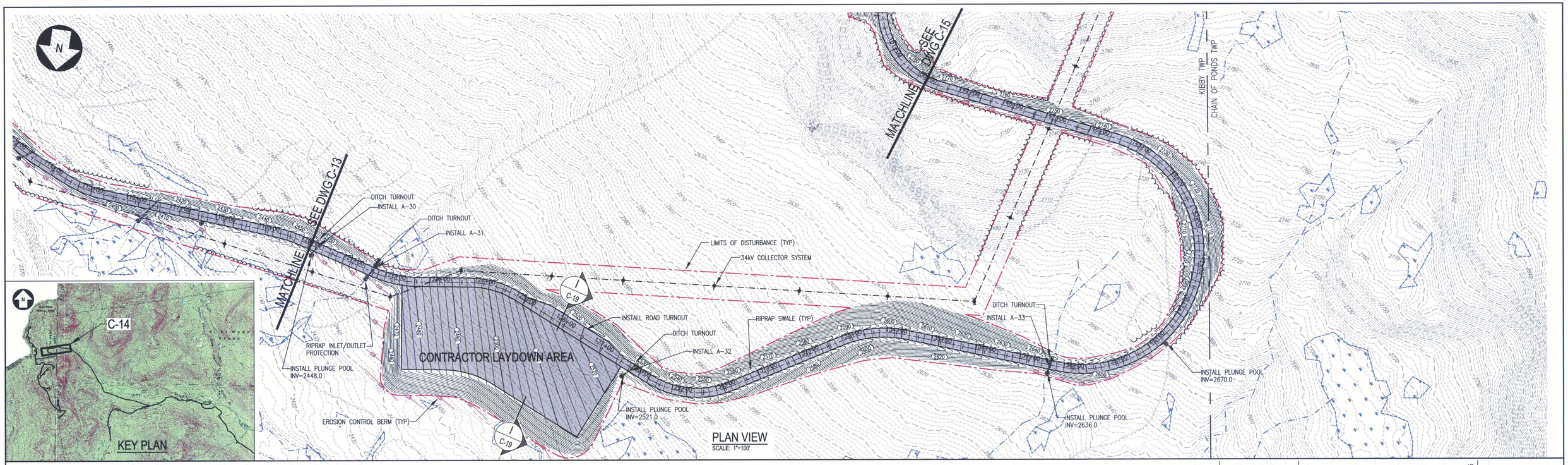
TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

PLAN & PROFILE: ACCESS ROAD
STA 90+00 TO 120+00
TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

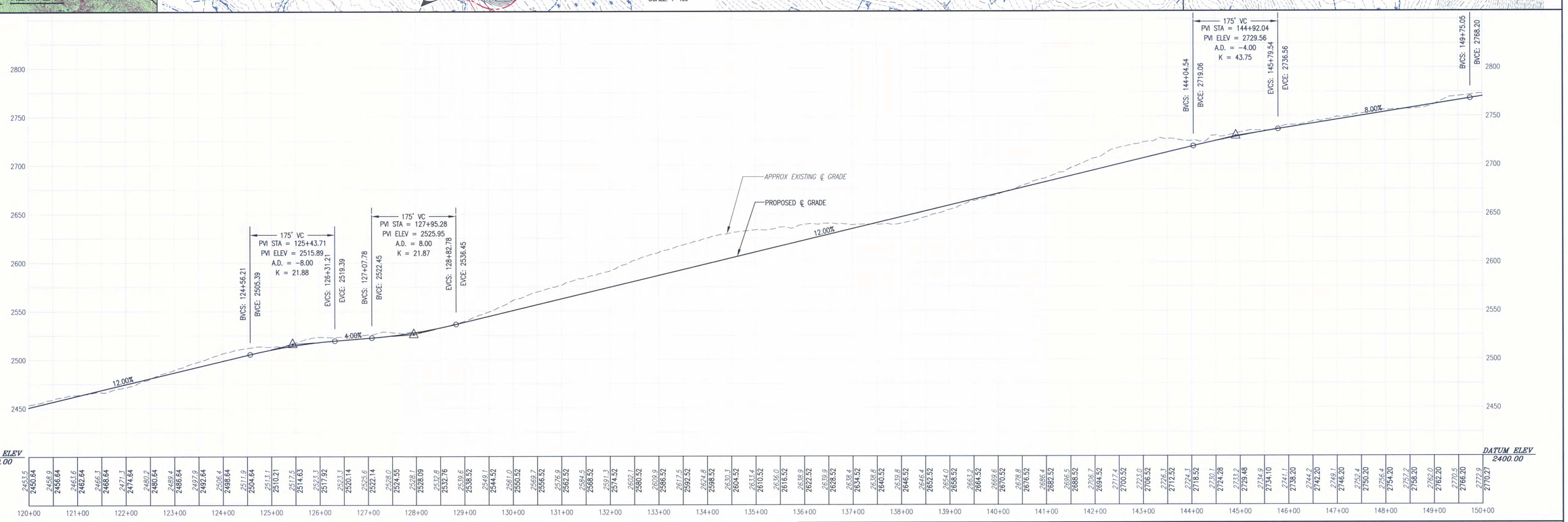
TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
SCALE: AS NOTED
PROJECT NO: 170019
DATE: 10-8-09

C-13

REV. A



PLAN VIEW
SCALE: 1"=100'



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2556.52	2576.9	2562.52	2584.5	2568.52	2591.3	2574.52
2602.1	2580.52	2619.9	2586.52	2617.5	2592.52	2624.8
2598.52	2630.3	2604.52	2633.4	2610.52	2636.0	2616.52
2638.9	2622.52	2639.9	2628.52	2638.4	2634.52	2638.8
2640.52	2639.8	2646.52	2646.4	2652.52	2654.0	2658.52
2663.2	2664.52	2669.6	2670.52	2678.8	2676.52	2686.4
2682.52	2696.5	2688.52	2706.7	2694.52	2717.4	2700.52
2723.0	2706.52	2729.3	2712.52	2724.3	2718.52	2730.1
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2744.2	2742.20	2749.1	2746.20	2752.4	2750.20	2756.4
2754.20	2757.2	2758.20	2762.0	2762.20	2770.5	2766.20
2772.9	2770.27					
120+00	121+00	122+00	123+00	124+00	125+00	126+00
127+00	128+00	129+00	130+00	131+00	132+00	133+00
134+00	135+00	136+00	137+00	138+00	139+00	140+00
141+00	142+00	143+00	144+00	145+00	146+00	147+00
148+00	149+00	150+00				

PROFILE: STA 120+00 TO 150+00
SCALE: HORIZ: 1"=100'
VERT: 1"=50'

100 0 100 200 FT
SCALE: 1"=100'

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED
PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

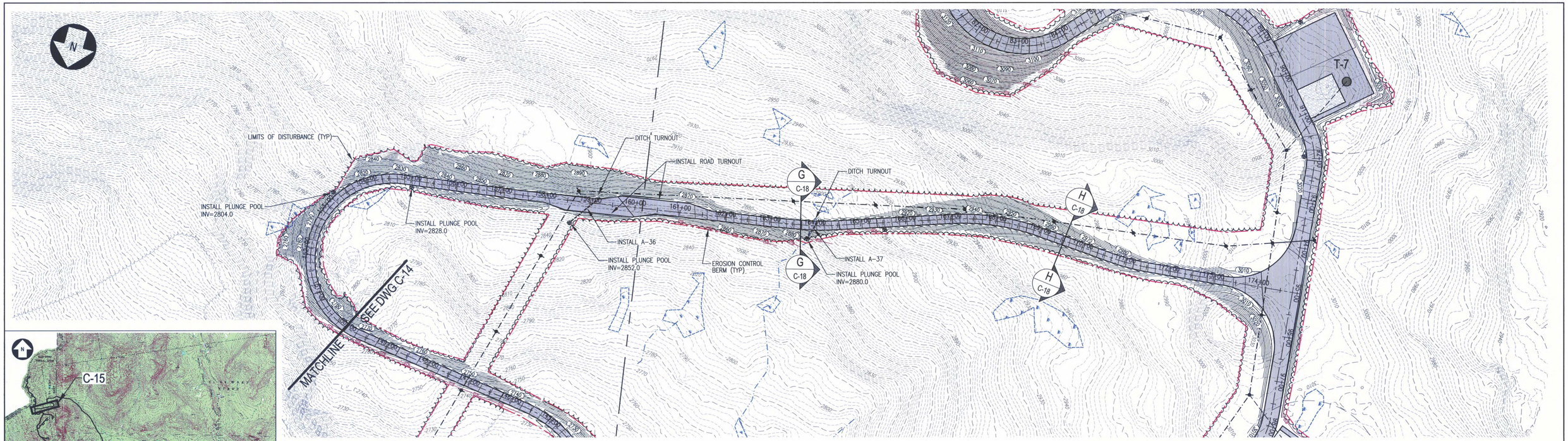
TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
- APPROVED
REVIEWED

PLAN & PROFILE: ACCESS ROAD
STA 120+00 TO 150+00
TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

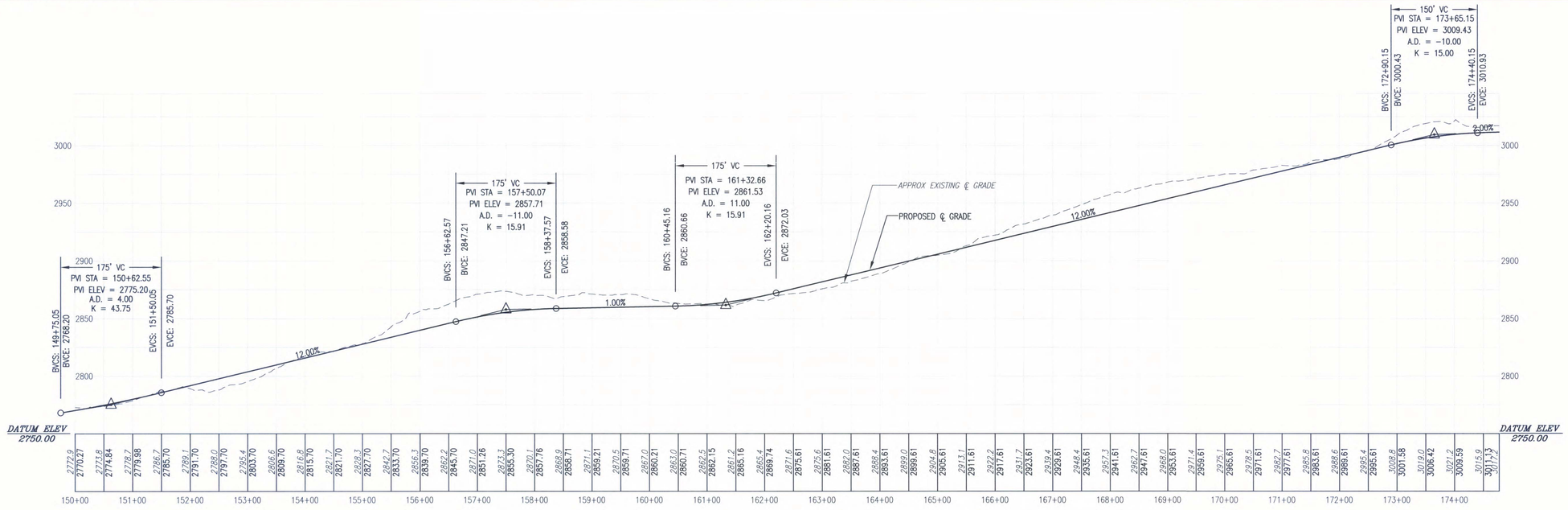
TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-8-09

C-14

REV. A



PLAN VIEW
SCALE: 1"=100'



150+00	151+00	152+00	153+00	154+00	155+00	156+00	157+00	158+00	159+00	160+00	161+00	162+00	163+00	164+00	165+00	166+00	167+00	168+00	169+00	170+00	171+00	172+00	173+00	174+00
2722.9	2774.84	2786.7	2791.70	2797.70	2803.70	2806.6	2809.70	2816.8	2815.70	2821.70	2823.3	2827.70	2842.7	2833.70	2838.70	2862.2	2845.70	2871.0	2851.26	2873.3	2855.30	2870.1	2857.76	2868.9	2858.71	2871.1	2859.21	2870.5	2859.71	2867.0	2860.21	2863.1	2860.71	2862.5	2862.15	2861.2	2865.16	2865.4	2863.74	2871.6	2875.61	2875.6	2881.61	2882.0	2887.61	2892.4	2893.61	2899.0	2899.61	2904.8	2905.61	2913.1	2911.61	2922.2	2917.61	2931.7	2923.61	2939.4	2929.61	2948.4	2935.61	2957.3	2941.61	2967.2	2947.61	2968.0	2953.61	2971.4	2959.61	2975.1	2965.61	2978.5	2971.61	2982.7	2977.61	2985.8	2983.61	2988.6	2989.61	2995.4	2995.61	3008.8	3001.58	3019.0	3006.42	3021.2	3009.59	3015.9	3011.13	3017.2

PROFILE: STA 150+00 TO 174+77
SCALE: HORIZ: 1"=100'
VERT: 1"=50'

100 0 100 200 FT
SCALE: 1"=100'

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER No. 6796
LICENSED PROFESSIONAL ENGINEER
12/3/09

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

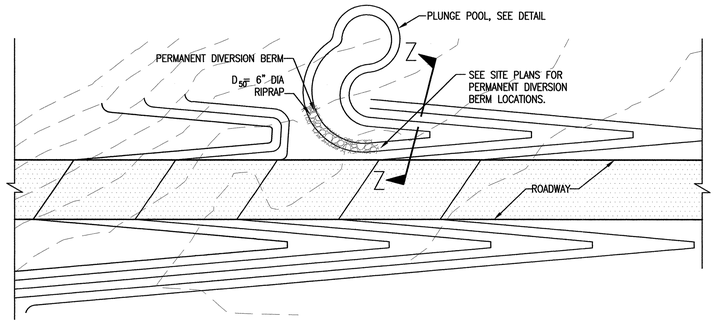
TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

PLAN & PROFILE: ACCESS ROAD
STA 150+00 TO 174+77
TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-8-09

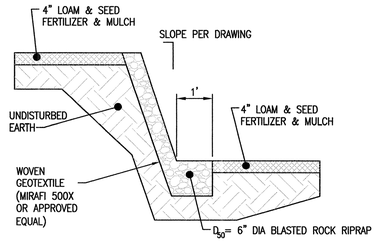
C-15

REV. A



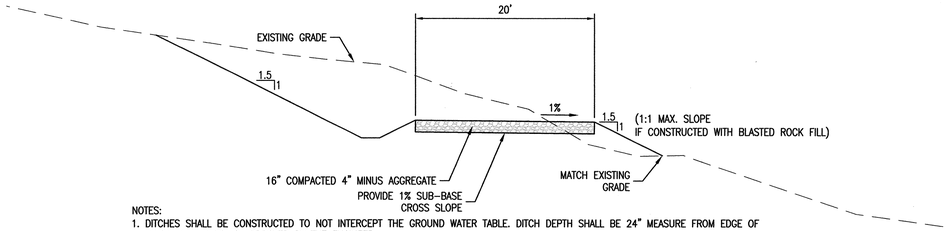
NOTE
PERMANENT DIVERSION BERM MAY BE ON THE OPPOSITE SIDE OF THE ROAD TO DIRECT FLOWS TOWARD A CROSS CULVERT

DITCH TURNOUT DETAIL
NOT TO SCALE



SECTION Z–Z

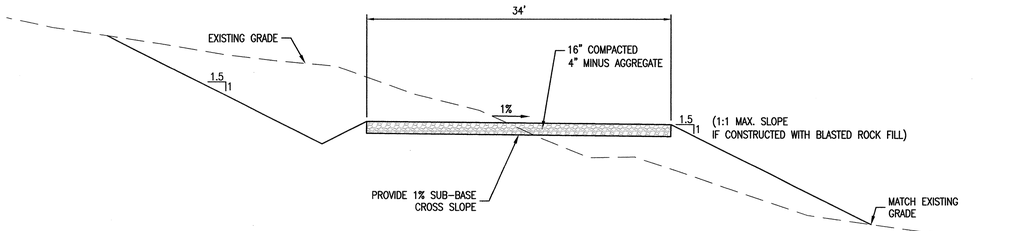
DIVERSION BERM SECTION DETAIL
NOT TO SCALE



NOTES:
1. DITCHES SHALL BE CONSTRUCTED TO NOT INTERCEPT THE GROUND WATER TABLE. DITCH DEPTH SHALL BE 24" MEASURE FROM EDGE OF ROADWAY, EXCEPT AS APPROVED BY THE ENGINEER.

2. 1:4 CUT FACES ARE PERMITTED IN AREAS OF ROCK EXCAVATION.

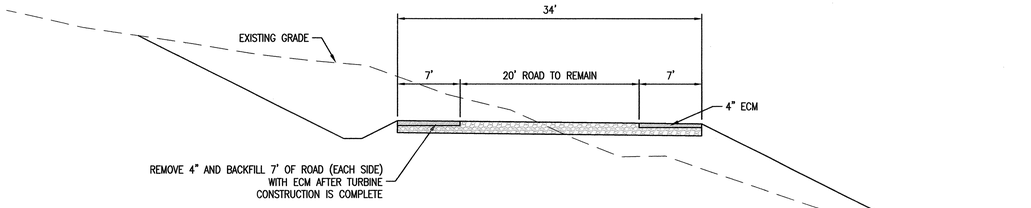
TYPICAL ACCESS ROAD SECTION
NOT TO SCALE



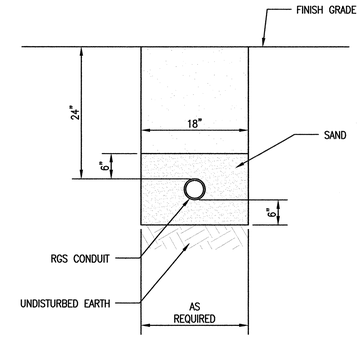
NOTES:
1. DITCHES SHALL BE CONSTRUCTED TO NOT INTERCEPT THE GROUND WATER TABLE. DITCH DEPTH SHALL BE 24" MEASURE FROM EDGE OF ROADWAY, EXCEPT AS APPROVED BY THE ENGINEER.

2. 1:4 CUT FACES ARE PERMITTED IN AREAS OF ROCK EXCAVATION.

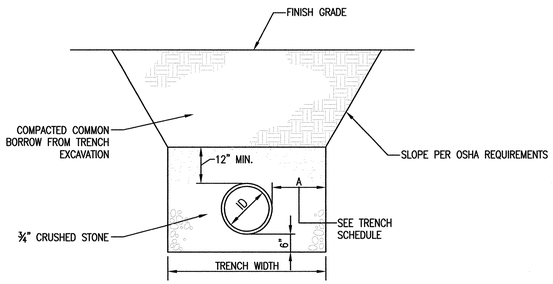
TYPICAL RIDGE ROAD SECTION
NOT TO SCALE



RIDGE ROAD RESTORATION DETAIL
NOT TO SCALE



CONDUIT TRENCH DETAIL
NOT TO SCALE

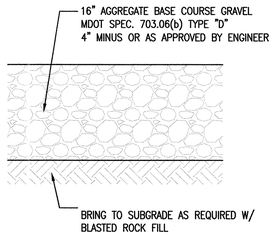


CULVERT TRENCH DETAIL
NOT TO SCALE

TRENCH SCHEDULE

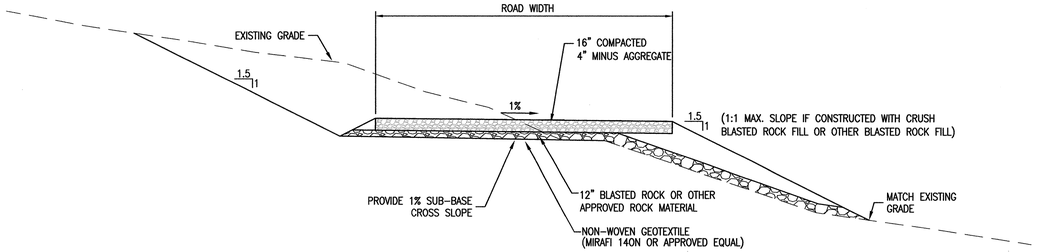
ID	A (MIN.)
4"–12"	0'–10"
15"	0'–10"
18"	0'–10"
24"	0'–6"
30"	0'–6"
36"	0'–6"

NOTE:
SHORE TRENCH EXCAVATION AS REQUIRED TO MINIMIZE EXCAVATION AND IMPACTS TO ADJACENT UTILITIES STRUCTURES OR PAVEMENT. TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS.

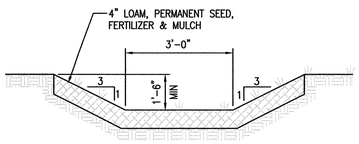


NOTE
1. COMPACT GRAVEL BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.

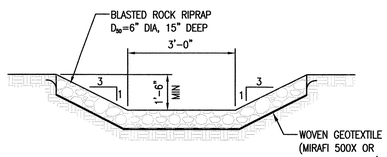
TYPICAL GRAVEL CRANE PAD SECTION
NOT TO SCALE



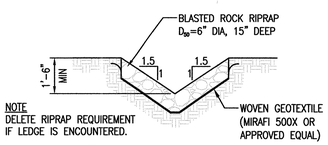
TYPICAL ROCK SANDWICH SECTION
NOT TO SCALE



TYPICAL ACCESS ROAD VEGETATED DRAINAGE SWALE
NOT TO SCALE



TYPICAL ACCESS ROAD RIPRAP DRAINAGE SWALE
NOT TO SCALE



NOTE
DELETE RIPRAP REQUIREMENT IF LEDGE IS ENCOUNTERED.

TYPICAL RIDGE ROAD DRAINAGE SWALE
NOT TO SCALE

NOTES:

1. SEE DRAWING G–2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.

2. SEE DRAWING G–3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

TRC/KAV DESIGNED

TRC/KAV DRAWN

TRC/DTB CHECKED

APPROVED

REVIEWED

CIVIL DETAILS I

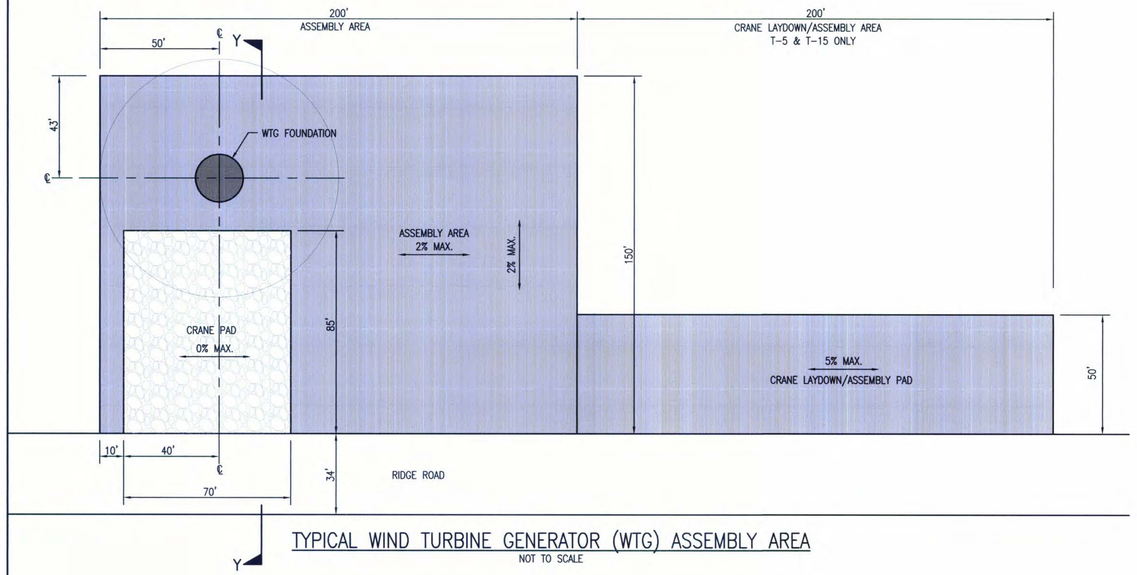
TRANSCANADA

KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10–26–09

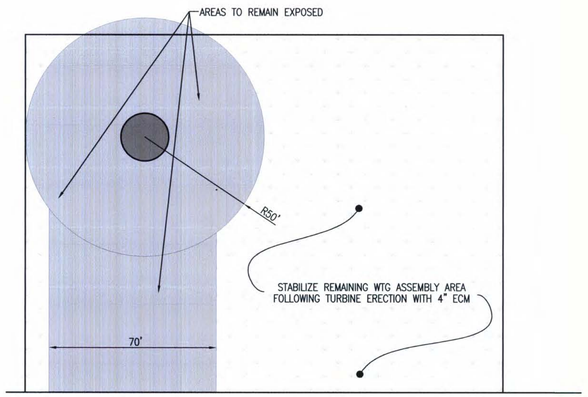
C–16

REV. A



TYPICAL WIND TURBINE GENERATOR (WTG) ASSEMBLY AREA

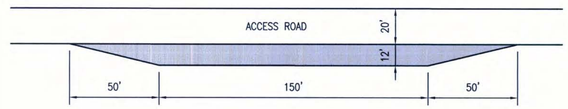
NOT TO SCALE



NOTE
CRANE LAYDOWN/ASSEMBLY PAD AT T-5 AND T-15 SHALL ALSO BE RECLAIMED WITH 4" ECM.

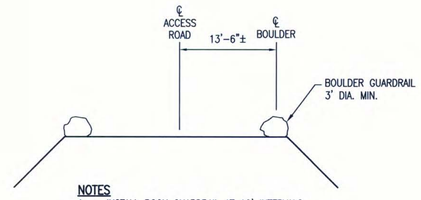
TYPICAL RECLAIMED ASSEMBLY AREA

NOT TO SCALE



TYPICAL TURNOUT DETAIL

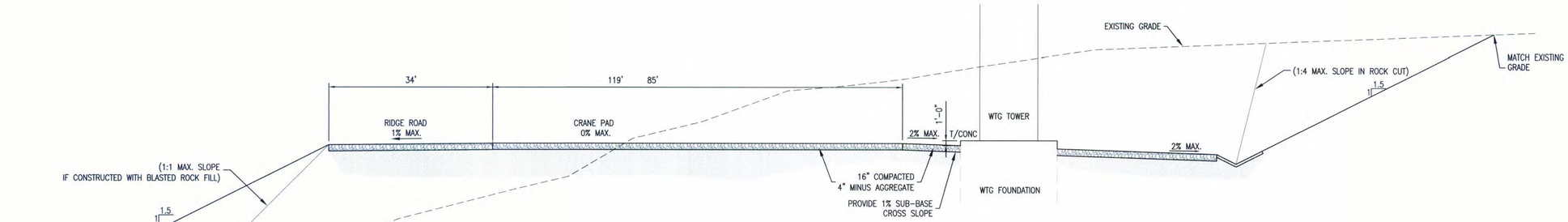
NOT TO SCALE



NOTES
1. INSTALL ROCK GUARDRAIL AT 10' INTERVALS.
2. INSTALL ALONG ALL ACCESS AND RIDGE ROAD SECTIONS WITH FILL SLOPES EXCEEDING 6' IN HEIGHT.

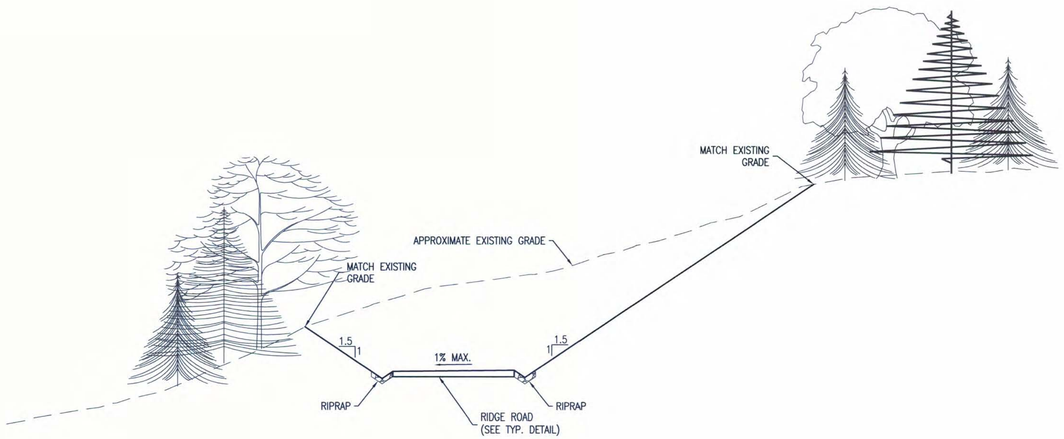
BOULDER GUARDRAIL

NOT TO SCALE



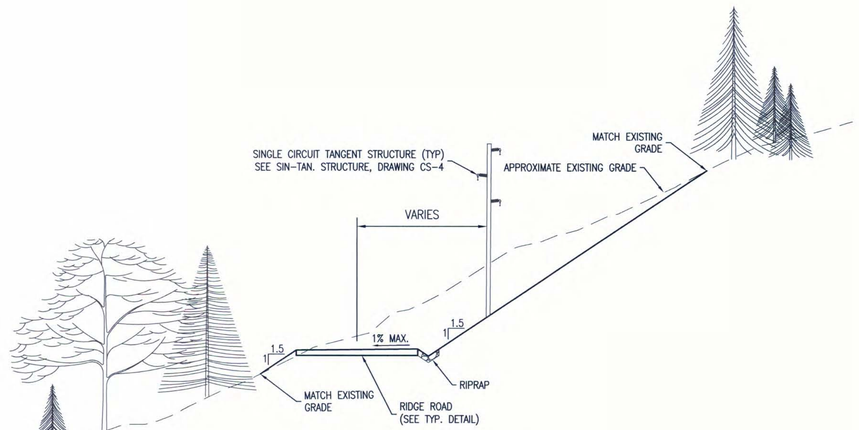
Y C-17 TURBINE PAD SECTION

NOT TO SCALE



A C-1 RIDGE ROAD SECTION

NOT TO SCALE



B C-2 RIDGE ROAD SECTION

NOT TO SCALE

NOTES:

1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED
PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

TRC/KAV DESIGNED

TRC/KAV DRAWN

TRC/DTB CHECKED

APPROVED

REVIEWED

CIVIL DETAILS II

TRANSCANADA

KIBBY EXPANSION WIND POWER PROJECT

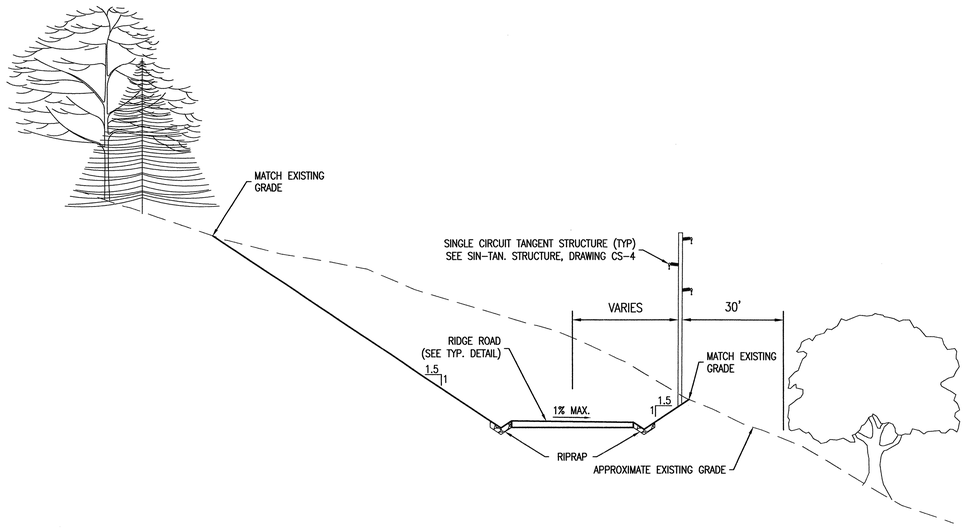
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330 PROJECT NO: 170019

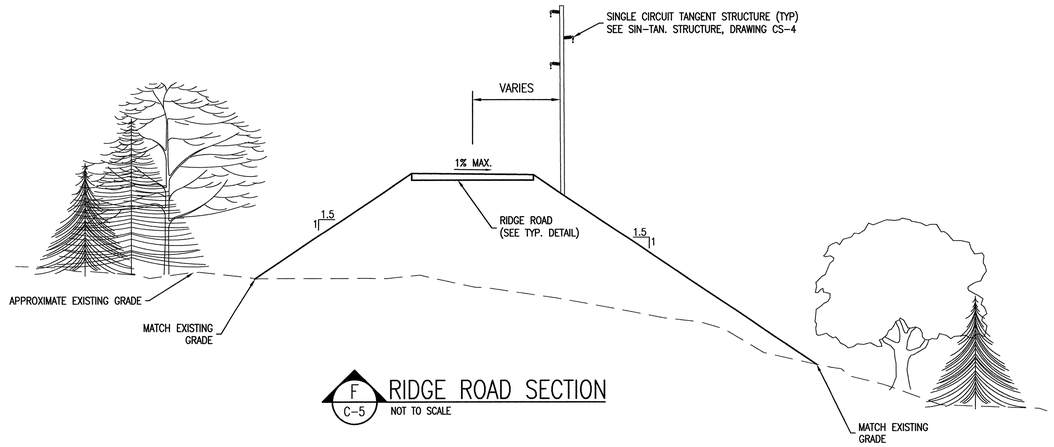
SCALE: AS NOTED DATE: 10-26-09

C-17

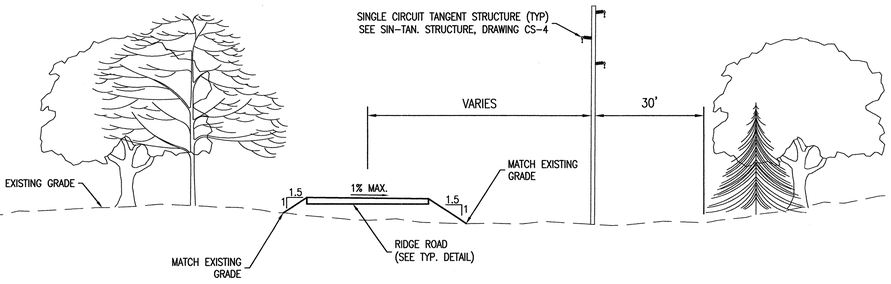
REV. A



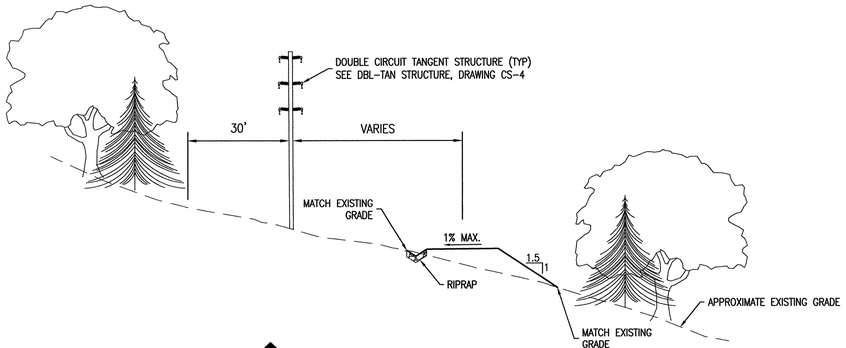
C C-3 RIDGE ROAD SECTION
NOT TO SCALE



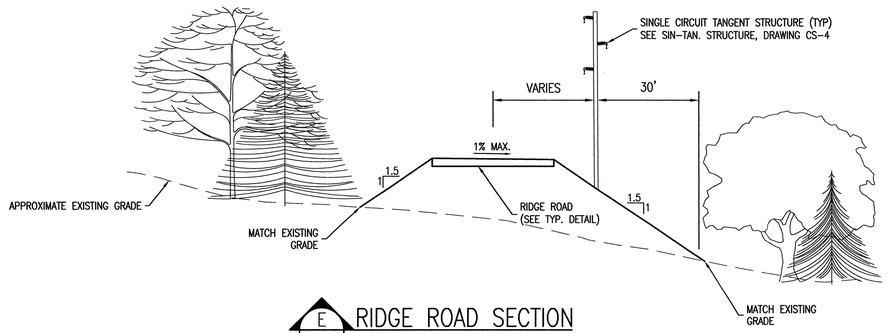
F C-5 RIDGE ROAD SECTION
NOT TO SCALE



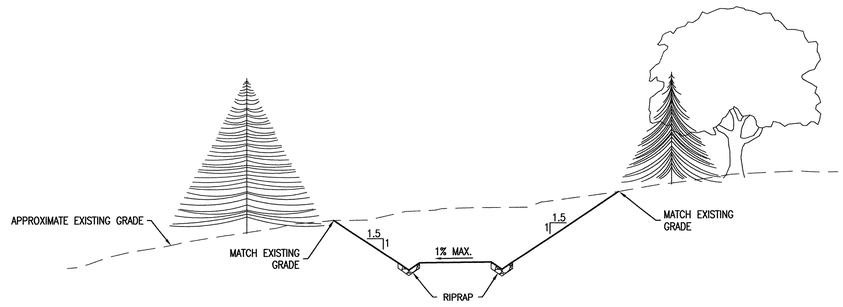
D C-4 RIDGE ROAD SECTION
NOT TO SCALE



G C-15 ACCESS ROAD SECTION
NOT TO SCALE



E C-4 RIDGE ROAD SECTION
NOT TO SCALE



H C-15 ACCESS ROAD SECTION
NOT TO SCALE

NOTES:

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2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

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STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11/25/09

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

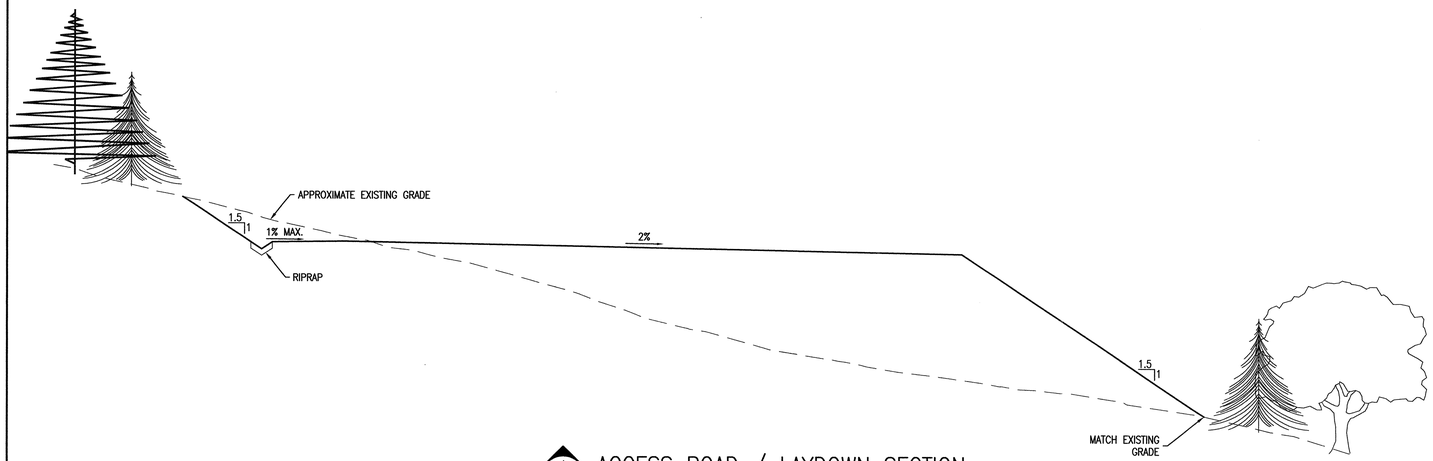
CIVIL DETAILS III

TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

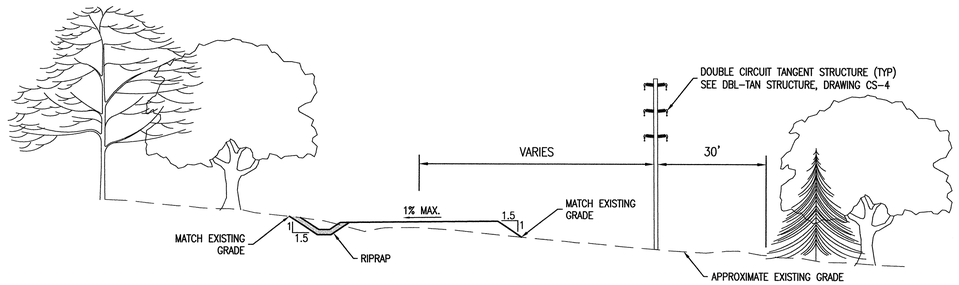
TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-26-09

C-18

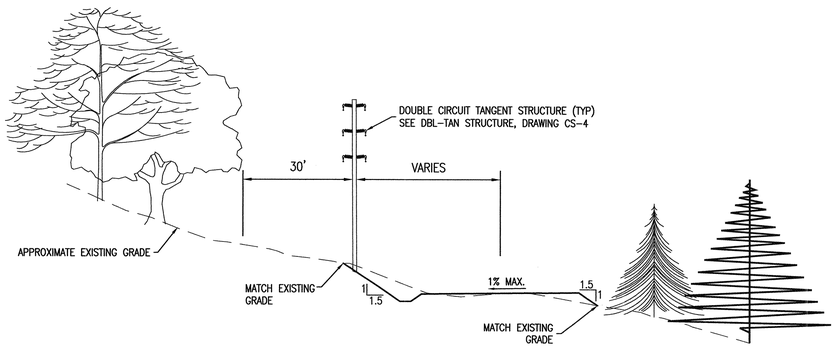
REV. A



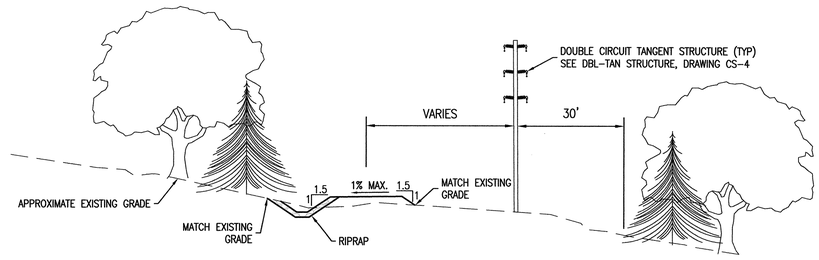
I C-14 ACCESS ROAD / LAYDOWN SECTION
NOT TO SCALE



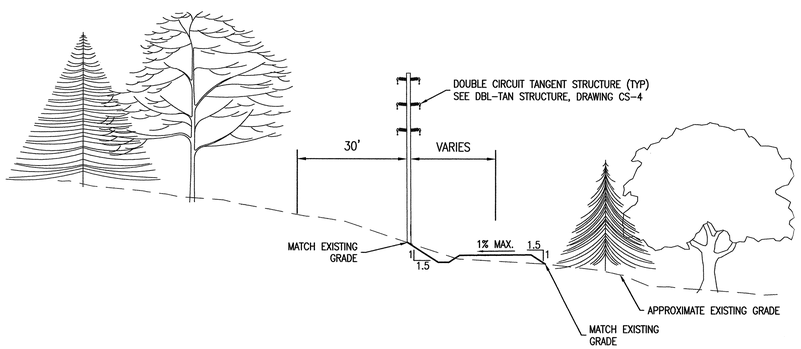
L C-11 ACCESS ROAD SECTION
NOT TO SCALE



J C-13 ACCESS ROAD SECTION
NOT TO SCALE



M C-10 ACCESS ROAD SECTION
NOT TO SCALE



K C-12 ACCESS ROAD SECTION
NOT TO SCALE

NOTES:

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2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

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STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11-7-09

CLIENT APPROVAL	
APPROVED BY	
COMPANY	
DATE	
REVIEWED	

TRC/KAV	DESIGNED
TRC/KAV	DRAWN
TRC/DTB	CHECKED
	APPROVED

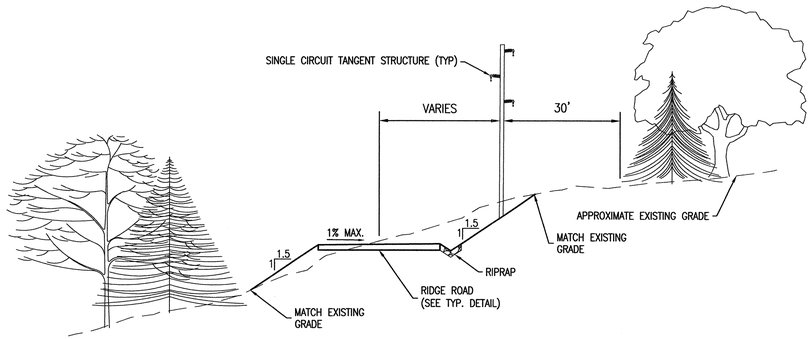
CIVIL DETAILS IV

TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

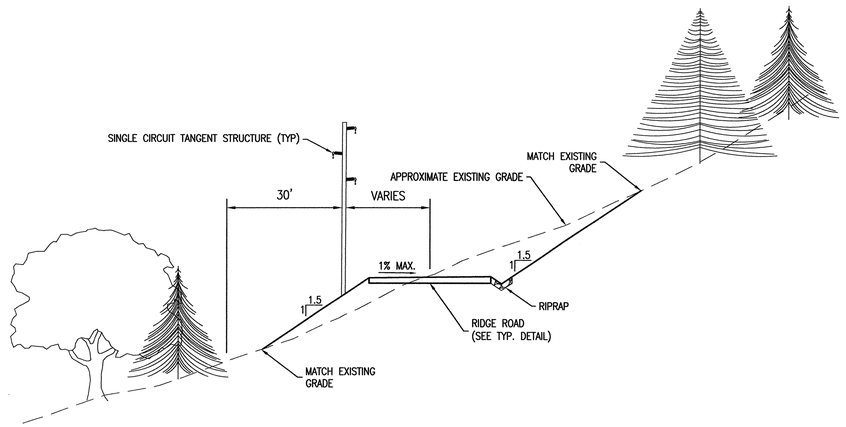
TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-26-09

C-19

REV. A



Q C-7 SPUR ROAD SECTION
NOT TO SCALE



R C-2 RIDGE ROAD SECTION
NOT TO SCALE

CULVERT SCHEDULE				
NUMBER	SIZE	LENGTH	INV. IN	INV. OUT
A-2	30" HDPE	45	2141.5	2138
A-3	30" HDPE	35	2127.3	2124
A-4	24" HDPE	35	2132	2121
A-5	18" HDPE	38	2118	2116
A-6	24" HDPE	40	2107	2105
A-7	24" HDPE	40	2105	2102
A-8	24" HDPE	40	2106	2104
A-9	36" HDPE	35	2106	2105
A-10	36" HDPE	35	2106	2105
A-11	(2)-36" HDPE	48	2117	2115
A-12	24" HDPE	42	2111	2108
A-13	49X33 CMP ARCH	40	2107	2105.5
A-14	49X33 CMP ARCH	40	2107	2105.5
A-15	64X43 CMP ARCH	35	2116	2114
A-16	64X43 CMP ARCH	35	2116	2114
A-17	36" HDPE	36	2146	2145
A-18	64X43 CMP ARCH	50	2145	2143
A-19	64X43 CMP ARCH	50	2145	2143
A-20	NOT REPLACING	EXISTING BRIDGE		
A-21	36" HDPE	38	2223	2221
A-22	18" HDPE	38	2237	2235
A-23	24" HDPE	35	2246	2245
A-24	30" HDPE	36	2287.5	2285
A-25	18" HDPE	40	2318	2316
A-26	18" HDPE	62	2324	2320
A-27	36" HDPE	46	2338.5	2338
A-28	18" HDPE	40	2388	2386
A-29	24" HDPE	65	2409	2400
A-30	18" HDPE	40	2450	2448
A-31	36" HDPE	35	2463	2462
A-32	18" HDPE	48	2523	2521
A-33	18" HDPE	35	2638	2636
A-36	30" HDPE	82	2856	2852
A-37	36" HDPE	48	2890	2878

CULVERT SCHEDULE				
NUMBER	SIZE	LENGTH	INV. IN	INV. OUT
R-38	18" HDPE	76	3186	3183
R-39	18" HDPE	60	3306	3305
R-40	18" HDPE	72	3265	3258
R-41	18" HDPE	70	3211	3194
R-43	18" HDPE	54	3180	3174
R-44	18" HDPE	50	3185	3178
R-45	24" HDPE	58	3198	3190
R-46	18" HDPE	56	3228	3220
R-47	18" HDPE	65	3261	3248
R-48	18" HDPE	72	3283	3272
R-49	18" HDPE	52	3270	3264
R-50	24" HDPE	60	3256	3246
R-51	24" HDPE	85	3266	3262
R-52	18" HDPE	62	3241	3232
R-53	18" HDPE	68	3135	3134
R-54	18" HDPE	82	2485	2970
R-55	24" HDPE	85	2970	2952
R-56	18" HDPE	75	2987	2986
R-57	18" HDPE	62	3047	3036
R-58	18" HDPE	60	3100	3098
R-59	18" HDPE	44	3320	3318
R-60	18" HDPE	50	3280	3272
R-61	24" HDPE	115	3137	3136
R-62	18" HDPE	48	3156.5	3152
R-63	18" HDPE	48	3340	3340
R-64	24" HDPE	52	3184	3182

NOTES:

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STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED
PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL

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DATE

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CIVIL DETAILS V

TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10-26-09

C-20

REV. A

MULCH AND SEEDING SPECIFICATIONS

SUMMARY OF TEMPORARY AND PERMANENT MULCH APPLICATION REQUIREMENTS

CONDITION	TIMING	MULCH TYPE[1,2]	APPLICATION RATES
TEMPORARY			
	IF NO ACTIVITY IN EXPOSED AREAS FOR 7 DAYS, OR PRIOR TO A STORM EVENT	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 2000 LB./ACRES
ALL DISTRIBUTED AREAS OF THE CONSTRUCTION WORKSPACE	APPLY MULCH TO ALL EXPOSED AREAS IF NO ACTIVITY OCCURS WITHIN 30 DAYS. APPLY MULCH AND TEMPORARY SEEDING SOONER WHEN IT CAN BE ANTICIPATED THAT ACTIVITY IS NOT GOING TO OCCUR WITHIN 30 DAYS.	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 2000 LB./ACRES [3]
ALL WORK AREAS EXPOSED ARE TO BE MULCHED DAILY EACH TIME SOIL IS DISTURBED	NOVEMBER 1 – APRIL 15	STRAW MULCH OR WOOD FIBER MULCH	3 TONS/ACRES 2000 LB./ACRES
PERMANENT			
ON ALL EXPOSED AREAS AFTER SEEDING TO STABILIZE THE SOIL SURFACE	PERMANENT GRASS AND/OR LEGUME SEEDING COVERED BY HAY OR STRAW MULCH ON ALL AREAS THAT HAVE BEEN RESTORED TO FINAL GRADE. THIS DOES NOT APPLY TO AREAS STABILIZED BY OTHER MEANS SUCH AS JUTE MATTING OR PERMANENT EROSION CONTROL MIX.	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 1500 LB./ACRES[4] 2000 LB./ACRES
WOOD CHIP APPLICATION AREAS	PERMANENT GRASS AND/OR LEGUME SEEDING COVERED BY HAY OR STRAW MULCH ON ALL AREAS THAT HAVE BEEN RESTORED TO FINAL GRADE. THIS DOES NOT APPLY TO AREAS STABILIZED BY OTHER MEANS SUCH AS JUTE MATTING OR PERMANENT EROSION CONTROL MIX.	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRES 1500 LB./ACRES[4] 2000 LB./ACRES

NOTES:
1. STRAW AND HAY MULCH MAY BE USED INTERCHANGEABLY, EXCEPT IN WETLAND AREAS WHERE STRAW MULCH WILL BE REQUIRED.
2. DOUBLE RATE OF WOOD FIBER MULCH WHEN USED IN CRITICAL AREAS.
3. STRAW, HAY, OR HYDROMULCH (WOOD FIBER OR PAPER MULCH AS APPROPRIATE) WILL PROVIDE 90 PERCENT GROUND COVERAGE
4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON. ON SLOPES >30 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT ESTABLISHED WELL, ADDITIONAL HAY MULCH WILL BE ADDED AS A WINTERIZING MEASURE.

MULCH ANCHORING REQUIREMENTS

ON SLOPES GREATER THAN 3 PER CENT, HAY OR STRAW MULCH WILL BE FIRMLY ANCHORED INTO THE SOIL UTILIZING ONE OF THE FOLLOWING METHODS:
–CRIMPING WITH A STRAIGHT OR NOTCHED MULCH CRIMPING TOOL (FARM DISCS WILL NOT BE ALLOWED);
–TRACK WALKING WITH DEEP–CLEATED EQUIPMENT OPERATING UP AND DOWN THE SLOPE (MULCH CRIMPED PERPENDICULAR TO THE SLOPE) ON SLOPES <25 PERCENT;
–APPLICATION OF MULCH NETTING;
–APPLICATION OF 500 LB./ACRE OF WOOD FIBER MULCH OVER STRAW/HAY MULCH; AND
–COMMERCIALLY AVAILABLE TACKIFIERS (EXCEPT WITHIN 100 FEET OF WATERBODIES OR WETLANDS).

SEED MIX SPECIFICATIONS

SEED MIX NAME	SEED MIX COMPONENTS	LB./ACRE [1]
TEMPORARY SEED MIX	ANNUAL RYEGRASS	40
PERMANENT UPLAND SEED MIX	REDTOP CREEPING RED FESCUE TALL FESCUE BIRDSFOOT TREFOIL	4 40 40 16
WOODCHIP APPLICATION SEED MIX	CREEPING RED FESCUE REDTOP TALL FESCUE CROWNVETCH	20 4 30 30
WETLAND SEED MIX	ANNUAL RYEGRASS	40
SUPPLEMENTAL WINTER SEED MIX[2]	WINTER RYEGRASS	120

NOTES:
1. INCREASE SEEDING RATES 10% WHEN HYDROSEEDING
2. WINTER RYE WILL BE ADDED TO PERMANENT UPLAND MIX AT A RATE OF 120 LB./ACRE BETWEEN OCTOBER 1 AND APRIL 15

SUMMARY OF SEEDING REQUIREMENTS

CONDITION	TIMING[1,2]	SEED MIX
TEMPORARY SEEDING [3]	TEMPORARY SEED BETWEEN APRIL 15 AND OCTOBER 1 ONLY. DISTURBED AREAS OR SPOIL STOCKPILES WILL BE SEEDED IMMEDIATELY IF FURTHER DISTURBANCE IS NOT EXPECTED FOR 30 DAYS OR MORE.	ANNUAL RYEGRASS
PERMANENT SEEDING [3,4]		
UPLAND PORTIONS OF THE CONSTRUCTION AREA	DISTURBED AREA WILL BE SEEDED WITHIN 6 DAYS OF FINAL GRADING.	PERMANENT UPLAND MIX
SLOPES > 3:1	DISTURBED AREA WILL BE SEEDED IMMEDIATELY AFTER SEEDBED PREPARATION.	PERMANENT UPLAND MIX
WETLANDS	DISTURBED WETLANDS WILL BE SEEDED WITHIN 6 DAYS OF FINAL GRADING.	ANNUAL RYEGRASS
WOODCHIP APPLICATION AREAS	DISTURBED AREA WILL BE SEEDED WITHIN 6 DAYS OF FINAL GRADING.	WOODCHIP APPLICATION SEED MIX
WINTER DORMANT SEEDING	DORMANT SEED BETWEEN OCTOBER 1 AND APRIL 15 ONLY. NO SEEDING WILL OCCUR IF SNOW DEPTHS EXCEED 1 INCH.	PERMANENT UPLAND MIX PLUS WINTER RYEGRASS

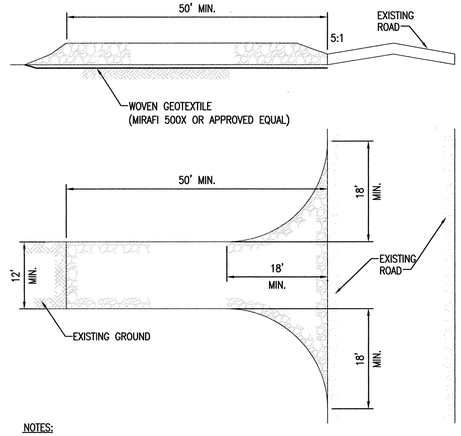
NOTES:
1. WEATHER CONDITIONS PERMITTING.
2. AREAS THAT DO NOT SUCCESSFULLY REVEGETATE WITHIN APPROPRIATE PERIOD OF TIME WILL BE RESEEDED AS NECCESSARY.
3. LOOSEN COMPACTED SOIL TO A MINIMUM DEPTH OF 4 INCHES.
4. TOP DRESS WITH 6 INCHES LOAM, AS NEEDED.

FERTILIZER AND LIMESTONE REQUIREMENTS.

IN GENERAL, FERTILIZER AND LIME APPLICATION RATES WILL FOLLOW THE GUIDELINES IDENTIFIED BELOW UNLESS SITE SPECIFIC SOIL TESTS IDENTIFY THE NEED FOR ALTERNATIVE FERTILIZER/LIME APPLICATION RATES. FERTILIZER WILL BE APPLIED TO UPLAND AREAS PRIOR TO SEEDING AT A RATE OF 800 POUNDS PER ACRE USING 10–20–20 (N–P205–K20) OR EQUIVALENT. GROUND LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) WILL BE APPLIED AT A RATE OF 3 TONS PER ACRE. AN EQUIVALENT MIXTURE OF FERTILIZER AND LIME MAY BE APPLIED USING THE HYDROSEEDING METHOD. NO LIME OR FERTILIZER WILL BE APPLIED TO WETLANDS.

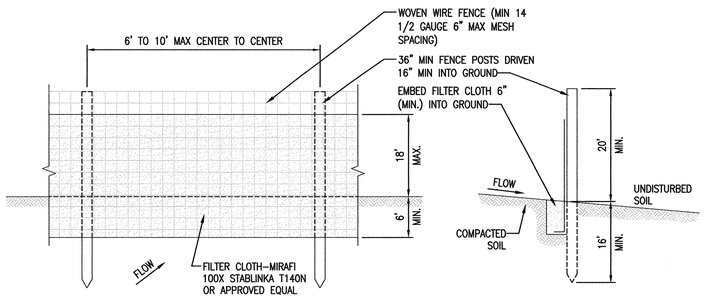
EROSION CONTROL NOTES

1. INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE MORE STRINGENT REQUIREMENTS OF THE CONTRACT DOCUMENTS, THE MAINE EROSION CONTROL AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION BEST MANAGEMENT PRACTICES (2003), AND THE MAINE DEP WINTER CONSTRUCTION GUIDELINES (1999). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.
2. CONCURRENT WITH INITIATING GRADING OPERATIONS, CONSTRUCT AND STABILIZE TEMPORARY DRAINAGE SWALES, DIVERSION BERMS, CHECK DAMS, AND PLUNGE POOLS. CONSTRUCT CULVERTS WITH TEMPORARY INLET AND OUTLET STRUCTURES TO MINIMIZE SEDIMENT AND TURBIDITY.
3. ACCESS ROAD SLOPES (STA 0+00 TO 145+00): WITHIN 24 HOURS OF BRINGING SLOPES TO FINAL GRADE, PERMANENTLY STABILIZE USING THE FOLLOWING APPROVED TECHNIQUES:
   A. NON–LEDGE CUT SLOPES LESS THAN 2H:1V SHALL BE STABILIZED WITH LOAM AND SEED OR ECM; CUT SLOPES EQUAL TO OR STEEPER THAN 2H:1V SHALL BE STABILIZED WITH BLASTED ROCK RIPRAP.
   B. FILL SLOPES CONSTRUCTED OF SOIL MATERIALS LESS THAN 2H:1V SHALL BE STABILIZED WITH LOAM AND SEED OR ECM; FILL SLOPES CONSTRUCTED OF SOIL MATERIALS AT SLOPES EQUAL TO OR STEEPER THAN 2H:1V SHALL BE STABILIZED WITH BLASTED ROCK RIPRAP.
   C. STABILIZATION OF SLOPES CONSTRUCTED OF BLASTED ROCK FILL IS NOT REQUIRED.
4. ACCESS ROAD DITCHES: WITHIN 24 HOURS OF BRINGING DITCHES TO FINAL GRADE, STABILIZE USING LOAM AND SEED OR BLASTED ROCK RIPRAP AS INDICATED.
5. RIDGE ROAD SLOPES (STA 145+00 TO END): WITHIN 24 HOURS OF BRINGING SLOPES TO FINAL GRADE, PERMANENTLY STABILIZE USING THE FOLLOWING APPROVED TECHNIQUES:
   A. NON–LEDGE CUT SLOPES LESS THAN 2H:1V SHALL BE STABILIZED WITH ECM; CUT SLOPES EQUAL TO OR STEEPER THAN 2H:1V SHALL BE STABILIZED WITH BLASTED ROCK RIPRAP.
   B. FILL SLOPES CONSTRUCTED OF SOIL MATERIALS LESS THAN 2H:1V SHALL BE STABILIZED WITH ECM; FILL SLOPES CONSTRUCTED OF SOIL MATERIALS AT SLOPES EQUAL TO OR STEEPER THAN 2H:1V SHALL BE STABILIZED WITH BLASTED ROCK RIPRAP.
   C. STABILIZATION OF SLOPES CONSTRUCTED OF BLASTED ROCK FILL IS NOT REQUIRED.
6. RIDGE ROAD DITCHES: WITHIN 24 HOURS OF BRINGING DITCHES TO FINAL GRADE, STABILIZE USING RIPRAP AS INDICATED.
7. INSTALL STONE CHECK DAMS WITHIN 24 HOURS OF FORMING, SHAPING OR ROUGH GRADING ANY SECTION OF DITCH. CHECK DAMS SHALL BE SPACED AS INDICATED BY THE CONTRACT DOCUMENTS AND REFERENCED STATE GUIDELINES.
8. AFTER GRADING AND PRIOR TO FINAL STABILIZATION PROVIDE PERIODIC APPLICATION OF WATER AND/OR CALCIUM CHLORIDE FOR DUST CONTROL. REPEAT TREATMENT AS NEEDED TO LIMIT WIND EROSION AND CONTROL DUST.
9. IN AREAS OF ACTIVE CONSTRUCTION, INSPECT AND REPAIR EROSION CONTROL MEASURES DAILY; OTHERWISE WEEKLY. WITHIN 24 HOURS OF A RAINFALL OF ½ INCH OR GREATER INSPECT ALL EROSION CONTROL MEASURES AND REPAIR AS NEEDED. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BARRIER.
10. MONITOR PUBLIC ROADS FOR SIGNS OF TRACKING OR SPILLING OF SPOIL MATERIAL. CLEAN ROADWAYS AS NEEDED.
11. COMPLETE FINAL GRADING AND STABILIZATION OF EARTHEN STRUCTURES SUCH AS DIVERSION BERMS, PLUNGE POOLS, AND DITCHES THAT WILL CONTROL RUNOFF.
12. REMOVE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ONCE THE SITE IS PERMANENTLY STABILIZED.



NOTES:
1. STONE SIZE – USE 2" STONE.
2. LENGTH – NOT LESS THAN 50 FEET.
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MIN. BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY–FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. WOVEN GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



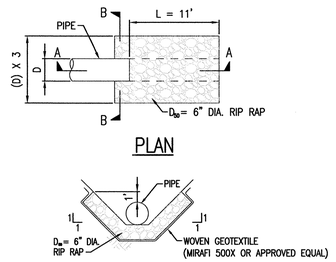
ELEVATION

SECTION

1. WOVEN WIRE FENCE TO BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BUILD–UP REACHES ⅓ THE HEIGHT OF THE FENCE.

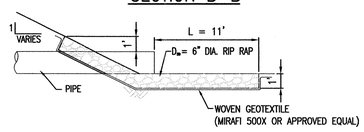
POSTS:	STEEL "T" OR "U" TYPE OR 2" HARDWOOD.
FENCE:	WOVEN WIRE. 14 ½ GA 6" MAX MESH OPENING.
FILTER CLOTH:	FILTER X, MIRAFI 100X. STABLINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT:	ENVIROFENCE OR APPROVED EQUAL

SILT FENCE DETAIL
NOT TO SCALE



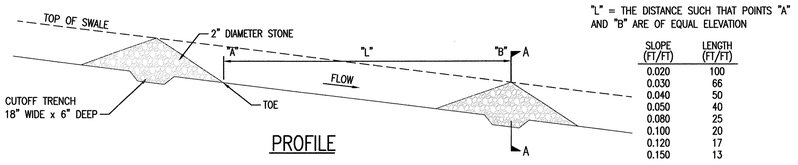
PLAN

SECTION B–B



SECTION A–A

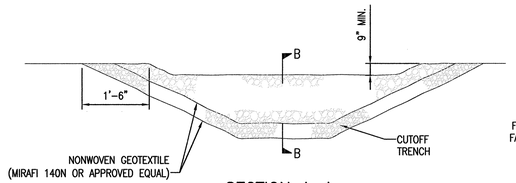
CULVERT INLET/OUTLET PROTECTION
NOT TO SCALE



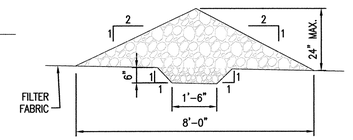
"L" = THE DISTANCE SUCH THAT POINTS "A" AND "B" ARE OF EQUAL ELEVATION

SLOPE (FT/FT)	LENGTH (FT/FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

PROFILE



SECTION A–A



SECTION B–B

NOTE: INSTALL WHERE INDICATED ON SITE GRADING PLAN AND AS NEEDED BY SPACING REQUIREMENTS.

CHECK DAM DETAILS
NOT TO SCALE

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O– SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH.
   ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
   APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL.
   SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"–5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE

NOTES:

1. SEE DRAWING G–2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G–3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
A	ISSUED FOR PERMITTING	11/18/09	KAV	DTB	DTB	6796

STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

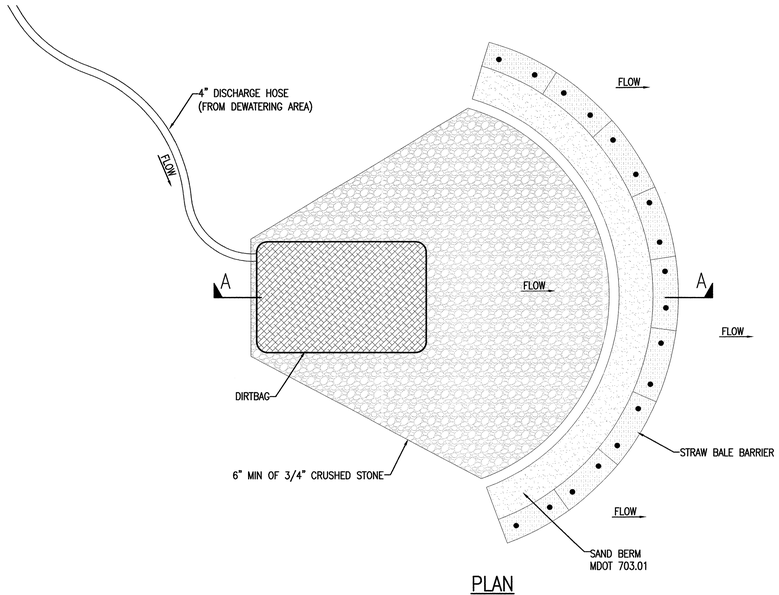
EROSION CONTROL DETAILS I

TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

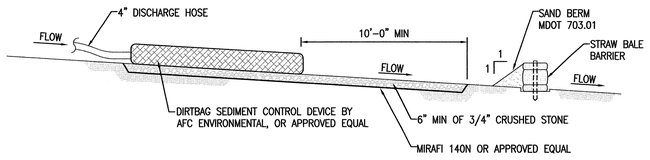
TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10–26–09

C–21

REV. A



PLAN



SECTION A–A

DEWATERING OPERATION

NOT TO SCALE

DEWATERING NOTES

1. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND OPERATE ALL CHANNELS, SUMPS, AND ALL OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS NEEDED TO DIVERT STREAM FLOW AND OTHER SURFACE WATER THROUGH OR AROUND THE CONSTRUCTION SITE. CONTROL OF SURFACE WATER SHALL BE CONTINUOUS DURING THE PERIOD THAT DAMAGE TO CONSTRUCTION WORK COULD OCCUR.

2. OPEN EXCAVATIONS SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER AND MUDDY CONDITIONS AS NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL DRAINS, SUMPS AND ALL OTHER EQUIPMENT REQUIRED TO PROPERLY DEWATER THE SITE. DEWATERING SYSTEMS THAT CAUSE A LOSS OF SOIL FINES FROM THE FOUNDATION AREAS WILL NOT BE PERMITTED.

3. INSTALL DIVERSION DITCHES OR BERMS IF NECESSARY TO MINIMIZE THE AMOUNT OF CLEAN STORMWATER RUNOFF ALLOWED INTO THE EXCAVATED AREA.

4. REMOVAL OF WATER FROM THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED SO THAT EROSION AND THE TRANSPORTING OF SEDIMENT AND OTHER POLLUTANTS ARE MINIMIZED.

5. DISCHARGE DEWATERING EFFLUENT TO STABILIZED AREAS ONLY: DISCHARGE SHALL BE IN SHEET FLOW.

6. DEWATERING IN PERIODS OF INTENSE, HEAVY RAIN, WHEN THE INFILTRATIVE CAPACITY OF THE SOIL IS EXCEEDED, SHALL BE AVOIDED.

7. FLOW TO THE SEDIMENT REMOVAL STRUCTURE MAY NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR THE STRUCTURE'S VOLUME CAPACITY.

8. WHEN TEMPORARY WORKS ARE NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE AND RETURN THE AREA TO A CONDITION SIMILAR TO THAT WHICH EXISTED BEFORE CONSTRUCTION. AREAS WHERE TEMPORARY WORKS WERE LOCATED SHALL BE GRADED FOR SIGHTLY APPEARANCE WITH NO OBSTRUCTION TO NATURAL SURFACE WATER FLOWS OR THE PROPER FUNCTIONING AND ACCESS TO THE WORKS OF IMPROVEMENT INSTALLED. THE CONTRACTOR SHALL EXERCISE EXTREME CARE DURING THE REMOVAL STAGES TO MINIMIZE THE LOSS OF SOIL SEDIMENT AND DEBRIS THAT WAS TRAPPED DURING CONSTRUCTION.

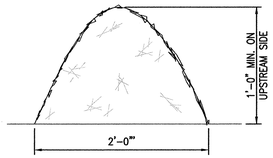
DEWATERING DETAIL NOTES:

1. DIRT BAG MATERIAL BASED ON PARTICLE SIZE IN DIRTY WATER, I.E. FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON–WOVEN MATERIAL.

2. DO NOT OVER PRESSURIZE DIRT BAG OR USE BEYOND CAPACITY.

3. DOWNGRADIENT RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION, E.G. FOREST FLOOR OR COARSE GRAVEL/STONE.

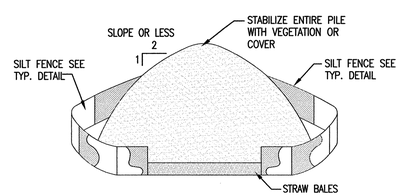
4. DISCHARGE NOT PERMITTED WITHIN 75' OF A STREAM OR WETLAND.



1. EROSION CONTROL MIX: SHALL CONSIST OF SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, FRAGMENTED WOOD AND SOIL GENERATED FROM ONSITE CLEARING, STUMPING GRUBBING AND STUMP GRINDING OPERATIONS. THE MIX SHALL CONFORM TO THE FOLLOWING:
   A. pH – 5.0 TO 8.0.
   B. SCREEN SIZE: 6" – 100% PASSING
      ¾" – 70% TO 85% PASSING
      MIX SHALL NOT CONTAIN LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS.
   C. ORGANIC MATERIAL 20% – 100% (DRY WEIGHT BASIS) ORGANIC PORTION MUST BE FIBROUS AND ELONGATED.
   D. SOLUBLE SALTS SHALL BE < 4.0 mmhos/cm
2. INSTALL AND MAINTAIN ECB AND OTHER EROSION CONTROL BARRIERS ALONG THE DOWNHILL LIMIT OF WORK, AS SHOWN ON THE DRAWINGS. BARRIER LOCATIONS MAY BE ADJUSTED IN THE FIELD BASED ON SITE CONDITIONS AS DETERMINED BY THE ENGINEER.

EROSION CONTROL BERM (ECB)

NOT TO SCALE

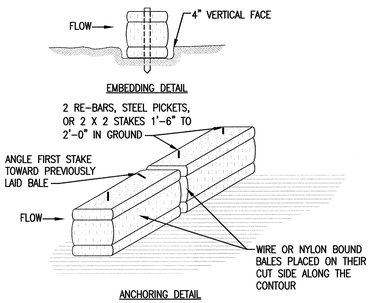


INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

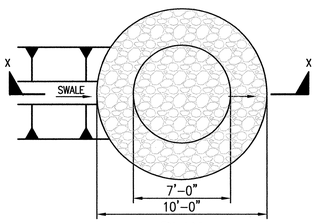
TOPSOIL STOCKPILE

NOT TO SCALE

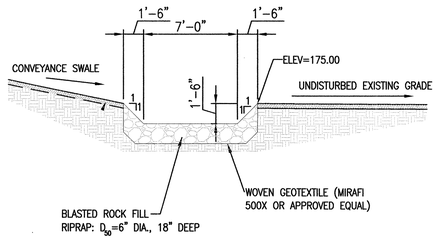


STRAW BALE BARRIER DETAIL

NOT TO SCALE



PLAN



SECTION X–X

NOTE: PLUNGE POOL NOT REQUIRED IF DISCHARGE IS OVER BLASTED ROCK FILL

PLUNGE POOL

NOT TO SCALE

NOTES:

1. SEE DRAWING G–2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G–3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.

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STATE OF MAINE
DANIEL T. BUTLER
No. 6796
LICENSED PROFESSIONAL ENGINEER
11/23/09

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

TRC/KAV DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

EROSION CONTROL DETAILS II

TRANSCANADA
KIBBY EXPANSION WIND POWER PROJECT
CHAIN OF PONDS & KIBBY TOWNSHIPS MAINE

TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 170019
SCALE: AS NOTED DATE: 10–26–09

C–22

REV. A