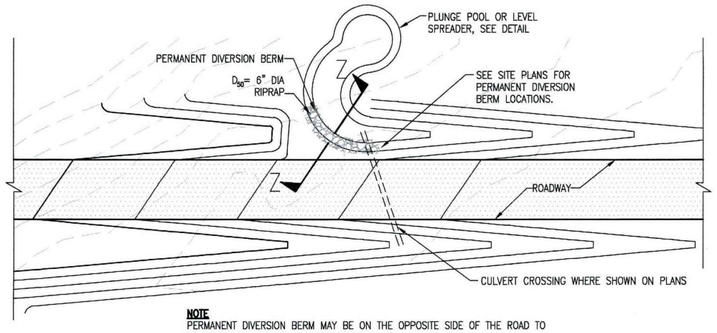
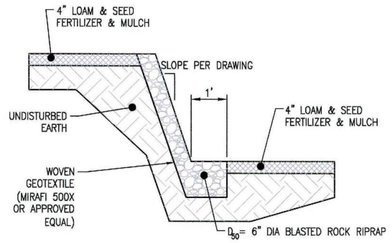


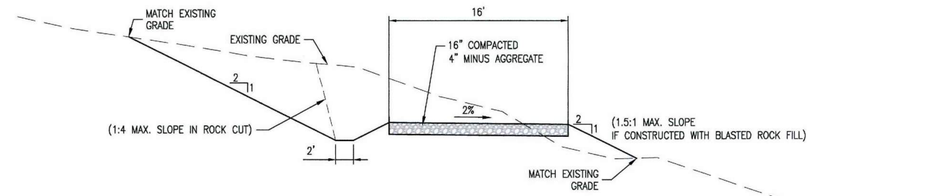
NOTE
PERMANENT DIVERSION BERM MAY BE ON THE OPPOSITE SIDE OF THE ROAD TO DIRECT FLOWS TOWARD A CROSS CULVERT

DITCH TURNOUT DETAIL
NOT TO SCALE



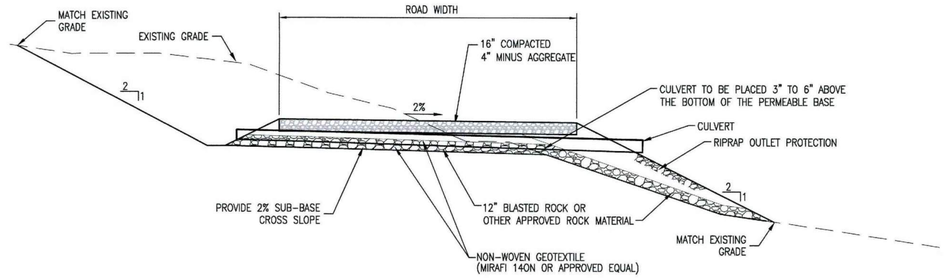
SECTION Z–Z

DIVERSION BERM SECTION DETAIL
NOT TO SCALE

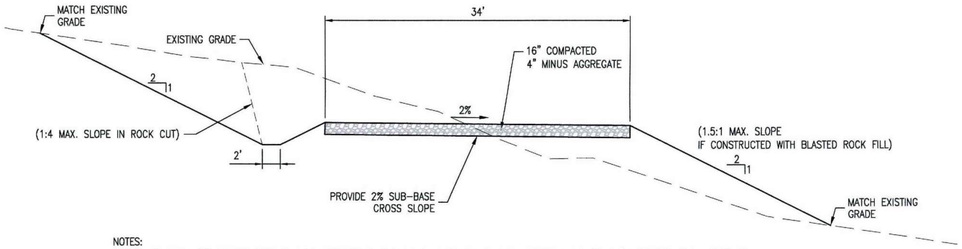


NOTES:
1. DITCHES SHALL BE CONSTRUCTED TO NOT INTERCEPT THE GROUND WATER TABLE. DITCH DEPTH SHALL BE 24" MEASURED FROM EDGE OF ROADWAY, EXCEPT AS APPROVED BY THE ENGINEER.
2. STEEPER ROCK CUT FACES ARE PERMITTED IN AREAS OF ROCK EXCAVATION. SEE TYPICAL CUT SLOPE STABILIZATION DETAIL, SHEET C–20.

TYPICAL ACCESS ROAD SECTION
NOT TO SCALE



TYPICAL PERMEABLE BASE W/ CULVERT SECTION
NOT TO SCALE



NOTES:
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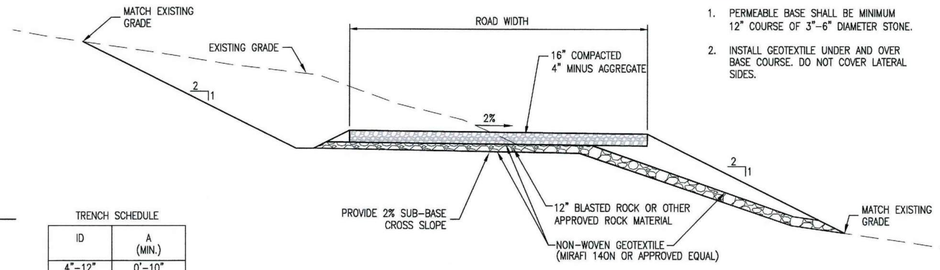
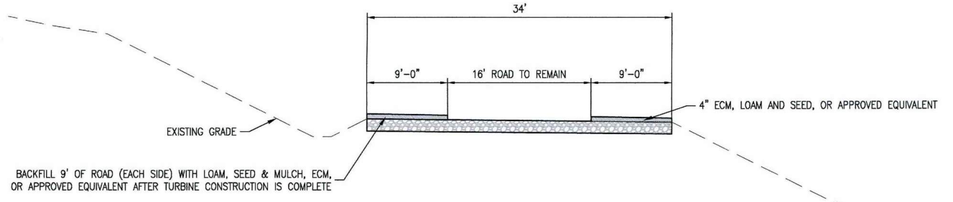
2. STEEPER ROCK CUT FACES ARE PERMITTED IN AREAS OF ROCK EXCAVATION. SEE TYPICAL CUT SLOPE STABILIZATION DETAIL, SHEET C–20.

TYPICAL CRANE PATH SECTION
NOT TO SCALE

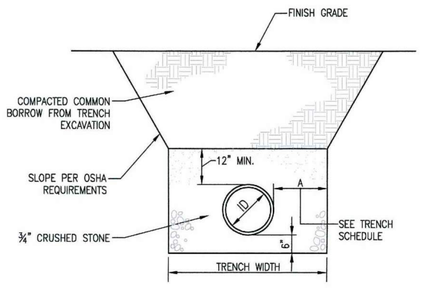


NOTES:
1. PERMEABLE BASE SHALL BE MINIMUM 12" COURSE OF 3"–6" DIAMETER STONE.
2. INSTALL GEOTEXTILE UNDER AND OVER BASE COURSE. DO NOT COVER LATERAL SIDES.

TYPICAL PERMEABLE BASE SECTION
NOT TO SCALE



CRANE PATH RESTORATION DETAIL
NOT TO SCALE

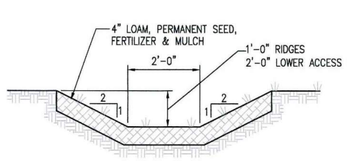


TRENCH SCHEDULE

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

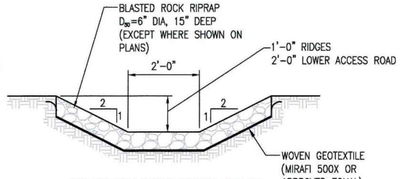
NOTE:
SHORE TRENCH EXCAVATION AS REQUIRED TO MINIMIZE EXCAVATION AND IMPACTS TO ADJACENT UTILITIES STRUCTURES OR PAVEMENT. TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS.

CULVERT TRENCH DETAIL
NOT TO SCALE



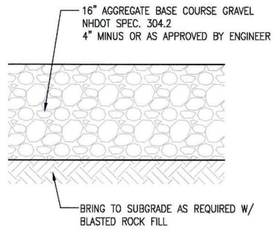
FOR USE WITH SLOPES LESS THAN 8%

TYPICAL VEGETATED DRAINAGE SWALE
NOT TO SCALE



FOR USE WITH SLOPES GREATER THAN 8%

TYPICAL RIPRAP DRAINAGE SWALE
NOT TO SCALE



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

TYPICAL GRAVEL CRANE PAD 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.
3. SEE DRAWING C–23 FOR CULVERT, BUFFER, TREATMENT SWALE, LEVEL SPREADER AND PLUNGE POOL SCHEDULES.

NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
B	ISSUED FOR PERMITTING	5/1/15	PMM	DTB	DTB	8105
A	ISSUED FOR CLIENT REVIEW	4/6/15	PMM	DTB		

STATE OF NEW HAMPSHIRE – DANIEL T BUTLER No. 8105 LICENSED PROFESSIONAL ENGINEER – 11/11

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

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

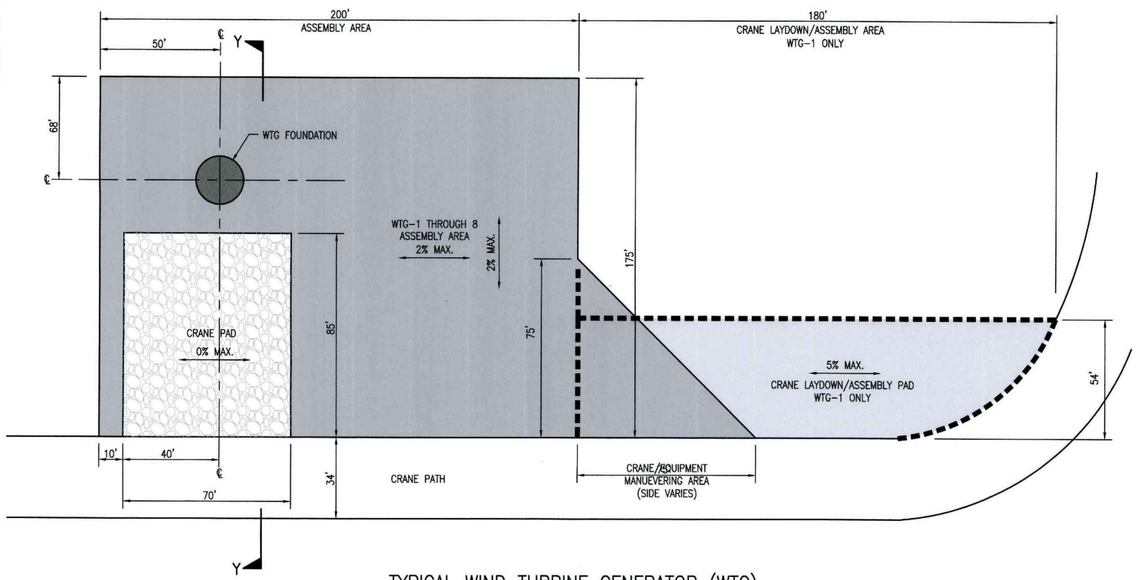
CIVIL DETAILS I

ANTRIM WIND ENERGY, LLC
ANTRIM WINDPARK
ANTRIM NEW HAMPSHIRE

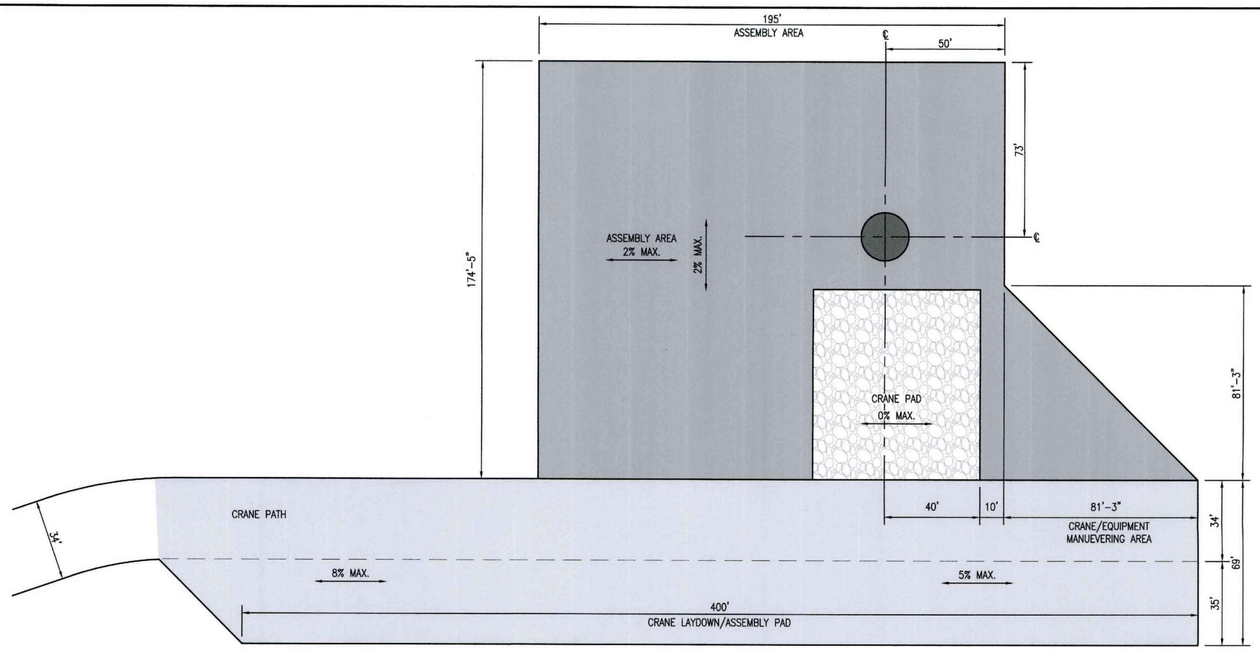
TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 182878
SCALE: AS NOTED DATE: 11–8–11

C–18

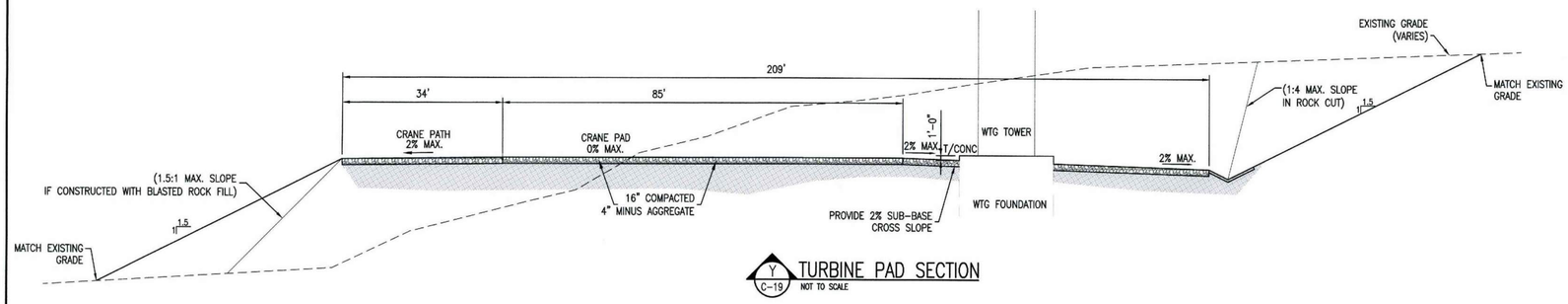
REV. B



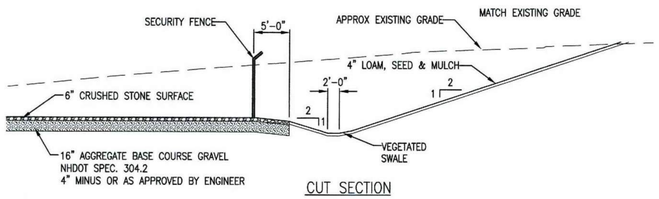
TYPICAL WIND TURBINE GENERATOR (WTG)
TURBINE PAD ASSEMBLY AREA
NOT TO SCALE



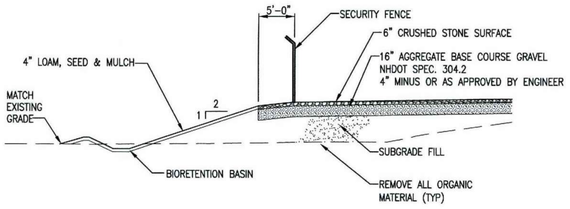
WTG-9 TURBINE PAD & CRANE ASSEMBLY AREA
NOT TO SCALE



Y
C-19
TURBINE PAD SECTION
NOT TO SCALE

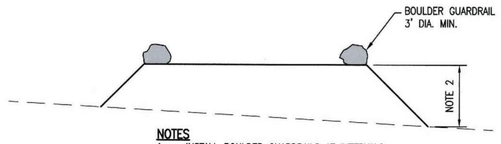


CUT SECTION



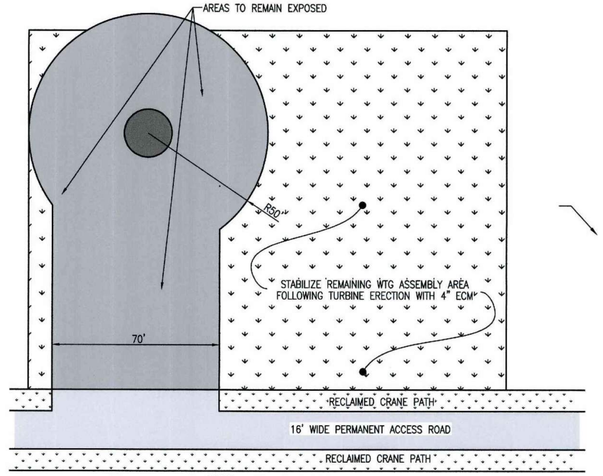
FILL SECTION

TYPICAL SUBSTATION SECTIONS
NOT TO SCALE



NOTES
1. INSTALL BOULDER GUARDRAILS AT INTERVALS NECESSARY TO ACCOMMODATE SAFE TURBINE INSTALLATIONS AS DETERMINED BY THE CONTRACTOR.
2. INSTALL ALONG SECTIONS WITH FILL SLOPES EXCEEDING 6 FEET IN HEIGHT.

BOULDER GUARDRAIL
NOT TO SCALE



NOTE
CRANE LAYDOWN/ASSEMBLY PAD AT WTG-1 AND WTG-9 SHALL ALSO BE RECLAIMED WITH 4" ECM.

TYPICAL RECLAIMED ASSEMBLY AREA
NOT TO SCALE

NOTES:
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3. SEE DRAWING C-23 FOR CULVERT, BUFFER, TREATMENT SWALE, LEVEL SPREADER AND PLUNGE POOL SCHEDULES.

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STATE OF NEW HAMPSHIRE
DANIEL T BUTLER
No. 8105
LICENSED PROFESSIONAL ENGINEER
5/1/15

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

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

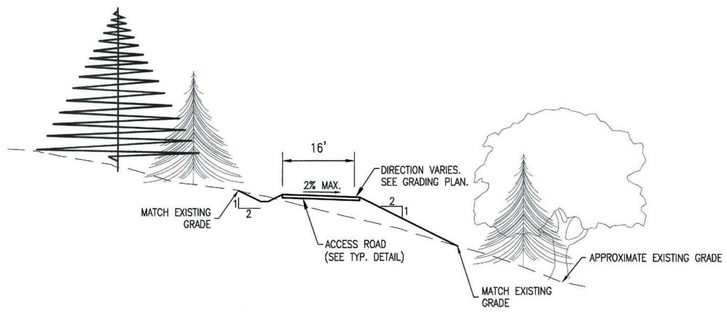
CIVIL DETAILS II

ANTRIM WIND ENERGY, LLC
ANTRIM WINDPARK
ANTRIM NEW HAMPSHIRE

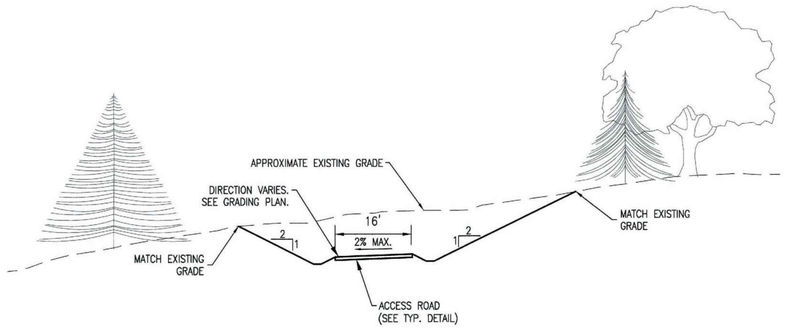
TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330
PROJECT NO: 182878
SCALE: AS NOTED DATE: 11-8-11

C-19

REV. B



A TYPICAL ACCESS ROAD SECTION (CUT/FILL)
NOT TO SCALE



B TYPICAL ACCESS ROAD SECTION (CUT)
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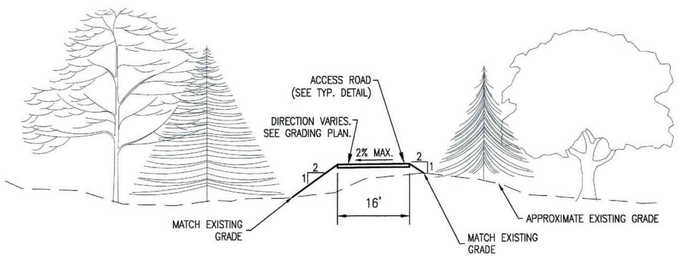

C TYPICAL ACCESS ROAD SECTION (FILL)
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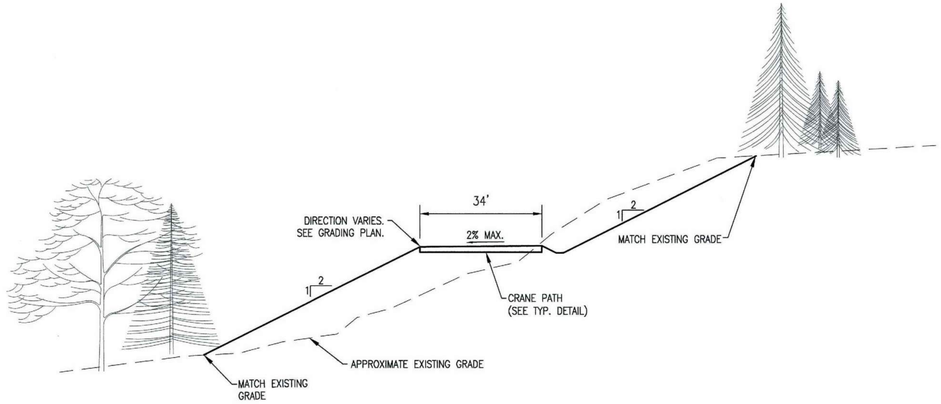
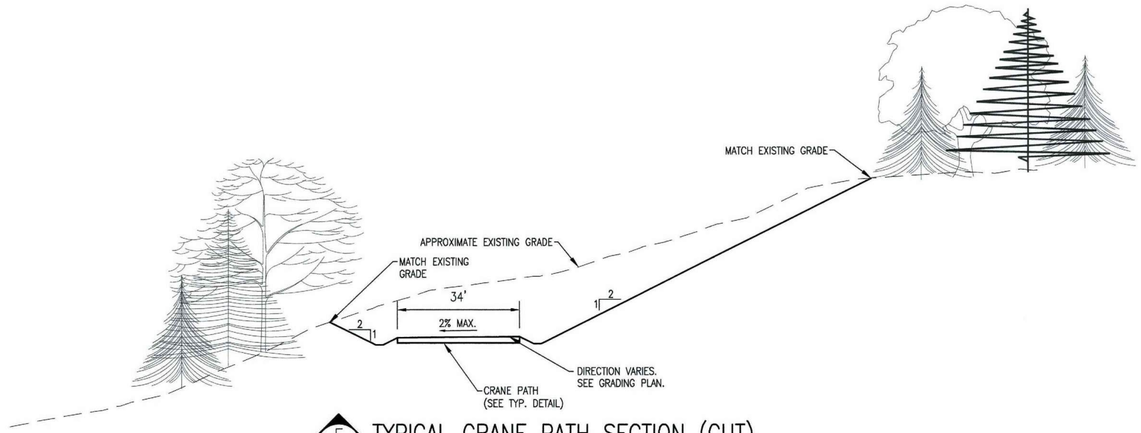
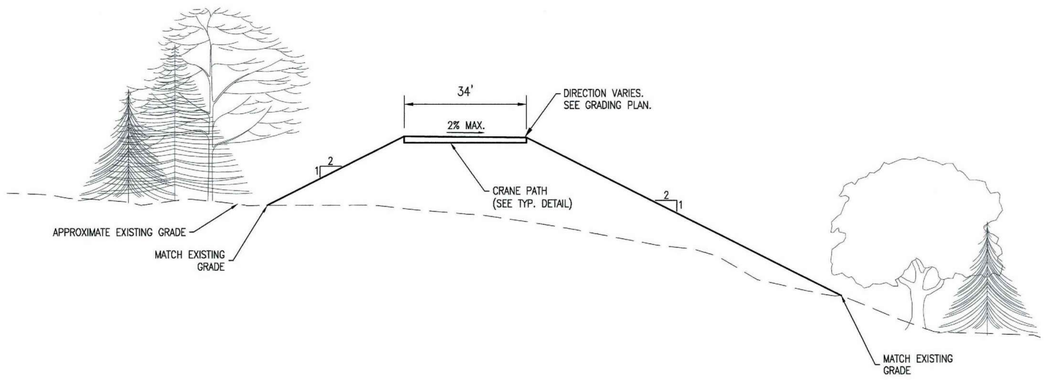


D TYPICAL CRANE PATH SECTION (CUT/FILL)
NOT TO SCALE



E TYPICAL CRANE PATH SECTION (CUT)
NOT TO SCALE



F TYPICAL CRANE PATH SECTION (FILL)
NOT TO SCALE

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STATE OF NEW HAMPSHIRE
DANIEL T BUTLER No. 8105 LICENSED PROFESSIONAL ENGINEER

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

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

CIVIL DETAILS III

ANTRIM WIND ENERGY, LLC
ANTRIM WINDPARK
ANTRIM NEW HAMPSHIRE

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 182878
SCALE: AS NOTED DATE: 11-8-11

C-20

REV. B

MULCH AND SEEDING SPECIFICATIONS

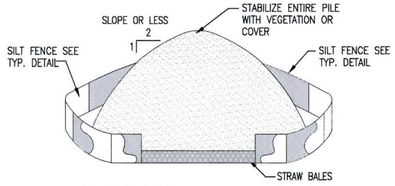
SUMMARY OF TEMPORARY AND PERMANENT MULCH APPLICATION REQUIREMENTS	
TEMPORARY	
WITHIN 100 FEET OF WETLANDS AND WATERBODIES	APPLY HAY AND/OR STRAW MULCH AT A MINIMUM OF 70 LBS/1000 S.F. OF EXPOSED SOIL.* MUST BE DONE WITHIN 48 HOURS OF INITIAL SOIL DISTURBANCE AND BEFORE FORECASTED STORM EVENTS, UNLESS OTHERWISE SPECIFIED. IF FINAL RESTORATION IS NOT SCHEDULED WITHIN 30 DAYS, APPLY ANNUAL RYEGRASS AT 1LB/1000 S.F.
OTHER AREAS OF EXPOSED SOIL WITH SLOPES LESS THAN 8% AND SOILS STOCKPILES	IF NO ACTIVITY IS SCHEDULED WITHIN 30 DAYS, APPLY HAY AND/OR STRAW MULCH AT A MINIMUM OF 70 LBS/1000 S.F. OF EXPOSED SOIL*, UNLESS SPECIFIED OTHERWISE. ECM** MAY BE USED. HAY/STRAW MULCH MAY ALSO BE SUPPLEMENTED BY TEMPORARY SEEDING WITH ANNUAL RYEGRASS AT 1 LB/1000 S.F. FOR AREAS WHERE ADDITIONAL ACTIVITY IS NOT EXPECTED FOR SEVERAL MORE WEEKS. AN EROSION CONTROL BARRIER MUST BE INSTALLED AROUND SOIL STOCKPILES THAT ARE EXPECTED TO REMAIN UNDISTURBED FOR MORE THAN 48 HOURS, OR PRIOR TO A STORM EVENT.
OTHER AREAS OF EXPOSED SOIL WITH SLOPES GREATER THAN 8%	IF FINAL RESTORATION IS NOT SCHEDULED WITHIN 30 DAYS OR PRIOR TO A STORM EVENT, APPLY HAY OR STRAW MULCH AT THE ABOVE RATES.* HAY OR STRAW MUST BE ANCHORED, UNLESS SPECIFIC SITE CONDITIONS DO NOT REQUIRE USE OF ANCHORING. ECM** OR MATTING MAY ALSO BE USED. TEMPORARY SEEDING WITH ANNUAL RYEGRASS AT 1LB/1000 S.F. IS ALSO RECOMMENDED FOR AREAS WHERE FINAL STABILIZATION IS NOT EXPECTED FOR SEVERAL MORE WEEKS.
TEMPORARY SEEDBED PREPARATION	APPLY LIMESTONE AND FERTILIZER (UPLANDS ONLY) ACCORDING TO SOIL TEST DATA. IF SOIL TEST IS NOT POSSIBLE, 10-0-10 FERTILIZER MAY BE APPLIED AT A RATE OF 600 LBS/ACRE AND LIMESTONE AT 3 TONS/ACRE. LOOSEN COMPACTED SOILS.
TEMPORARY SEEDING IN WETLANDS	IF REQUIRED, APPLY ANNUAL RYEGRASS AT A RATE OF 1 LB/1000 S.F. AND COVER WITH STRAW MULCH. DO NOT ADD LIME OR FERTILIZER TO WETLANDS.
FINAL RESTORATION	
PERMANENT MULCHING	ECM CAN BE USED AS A TEMPORARY OR PERMANENT SLOPE REINFORCEMENT AND LEFT TO RE-VEGETATE TO NEAR NATURAL CONDITIONS. IT IS NOT USED WHERE GRASS VEGETATION IS REQUIRED. RE-VEGETATION CAN BE ENHANCED BY SEEDING, WHICH IS ENCOURAGED IF USED AS A PERMANENT STABILIZATION MEASURE. PERMANENT MULCH MUST NOT BE USED IN AREAS OF CONCENTRATED WATER FLOWS AND EVIDENCE OF GROUNDWATER SEEPAGE ON SLOPES MAY REQUIRE THE ECM TO BE REPLACED WITH RIPRAP. • ON SLOPES THAT ARE 3H:1V OR LESS, ECM SHALL BE APPLIED AT A MINIMUM OF 2 INCHES THICK PLUS AN ADDITIONAL ½ INCH PER 20 FEET OF SLOPE UP TO 100 FEET (E.G. 3 INCHES THICK FOR 60 FEET OF SLOPE; 4 INCHES THICK FOR 100 FEET OF SLOPE). • FOR SLOPES BETWEEN 3H:1V AND 2H:1V, ECM WILL BE APPLIED 4 INCHES THICK PLUS AN ADDITIONAL ½ INCH PER 20 FEET OF SLOPE UP TO 100 FEET (E.G. 5 INCHES THICK FOR 60 FEET OF SLOPE; 6 INCHES THICK FOR 100 FEET OF SLOPE) • ECM MUST BE SPREAD EVENLY AND MUST PROVIDE 100 PERCENT SOIL COVERAGE.
PERMANENT RE-VEGETATION	PERMANENT SEEDING SHALL BE USED ON ALL EXPOSED SOIL THAT IS NOT PERMANENTLY STABILIZED BY ROCK, GRAVEL OR ECM. THE FOLLOWING PERMANENT SEEDING MIX SPECIFICATIONS ARE BETWEEN APRIL 16 AND OCTOBER 31, HOWEVER WINTER RYE WILL BE ADDED TO THE PERMANENT SEED MIX AFTER OCTOBER 1. PERMANENT SEEDING IS NOT REQUIRED DURING THE WINTER CONSTRUCTION SEASON, ALTHOUGH DORMANT SEEDING MAY BE PERFORMED (SEE WINTER CONSTRUCTION NOTES SHEET G-2).

* MULCH APPLICATION RATES SHALL BE DOUBLED FOR WINTER CONSTRUCTION
**MINIMUM ECM THICKNESS IS 4 INCHES FOR WINTER CONSTRUCTION

PERMANENT SEED MIX SPECIFICATIONS				
	SOIL AMENDMENTS	SEED MIX VARIETIES	SEED RATE, LB/ACRE	MULCH, TONS/ACRE
UPLAND	APPLY GROUND LIMESTONE @ 3 TONS/ACRE	CREEPING RED FESCUE/(PENNLAWN, ENSYLA, WINTERGREEN)	20	1.5-2 (90-100 BALES)
	APPLY 10-20-20 FERTILIZER @ 800 LBS/ACRE	REDTOP/(ANY NATIVE SPECIES)	2	
		TALL FESCUE/(KENTUCKY 31)	20	
WETLAND	NONE	ANNUAL RYEGRASS, IF REQUIRED (ANY NATIVE SPECIES)	40	1.5-2 (90-100 BALES)

- INCREASE SEEDING RATES BY 10% WHEN HYDROSEEDING.
- ADD WINTER RYE TO THE UPLAND MIX AT A RATE OF 120 LB/ACRE AFTER OCTOBER 1.
- SEED OR MULCH WETLANDS ONLY WHERE REQUIRED BY THE EI OR 3PI, OR WHEN RESTORATION OCCURS AFTER OCTOBER 1. TYPICALLY, REPLACING THE ORIGINAL WETLAND SOIL ON THE RESTORED SURFACE WILL PROVIDE AN ADEQUATE SEED BED.
- DO NOT LIME OR FERTILIZE ANY AREAS WITHIN THE WATER BODY BUFFERS OR WETLANDS.
- MULCH WETLANDS WITH WEED-FREE STRAW ONLY.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER MAINTENANCE OF ALL RE-VEGETATED AREAS UNTIL THE PROJECT HAS BEEN COMPLETED AND ACCEPTED. FOLLOWING FINAL SEEDING THE CONTRACTOR WILL INSPECT RESTORED AREAS EVERY 30 DAYS UNTIL 90 PERCENT VEGETATIVE COVER HAS BEEN ESTABLISHED UNLESS ADJACENT, UNDISTURBED AREAS INDICATE THAT ACHIEVING THAT LEVEL OF VEGETATION IN THE AREA IS UNLIKELY. WHERE SEEDED AREAS HAVE BECOME ERODED OR DAMAGED BY CONSTRUCTION OPERATIONS, OR WHERE POOR GERMINATION IS OBSERVED, THE AFFECTED AREAS WILL BE PROMPTLY RE-GRADED, LIMED, FERTILIZED, AND RE-SEEDED AS NEEDED UNTIL THE ABOVE CRITERIA ARE MET. THE CONTRACTOR MAY BE REQUIRED TO RE-SEED DURING THE FOLLOWING SPRING IN ORDER TO ACHIEVE THE REQUIRED VEGETATIVE COVER.



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

GENERAL EROSION CONTROL NOTES

1. INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE SPECIFICATIONS HEREIN. SEE THE DES-APPROVED EROSION AND SEDIMENTATION CONTROL PLAN NARRATIVE FOR ADDITIONAL DETAILS.
2. INSTALL ALL PERIMETER CONTROLS PRIOR TO COMMENCEMENT OF EARTH MOVING ACTIVITIES.
3. PRIOR TO THE INITIATION OF GRADING OPERATIONS, CONSTRUCT AND STABILIZE TEMPORARY DRAINAGE SWALES, CHECK DAMS, AND PLUNGE POOLS AS NEEDED TO EFFECTIVELY CONTROL EROSION AND PREVENT TRANSPORT OF SEDIMENT INTO REGULATED RESOURCES OR OFF-SITE.
4. DRAINAGE CHANNELS SHALL BE STABILIZED PRIOR TO RECEIVING RUNOFF. STABILIZE ROAD DITCHES WITH LOAM, SEED, EROSION CONTROL BLANKETS OR RIPRAP (DEPENDING ON SLOPE) WITHIN 24 HOURS OF FINAL GRADING.
5. INSTALL STONE CHECK DAMS WITHIN 24 HOURS OF ROUGH OR FINISH GRADING ANY SECTION OF DITCH, AS SHOWN ON THE PROJECT PLANS AND AT OTHER LOCATIONS AS NEEDED.
6. ALL ROADWAYS AND CUT/FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. ONCE A WEEK, OR AFTER RAINSTORMS PRODUCING AT LEAST 1/2 INCH OF RAINFALL, WHICHEVER IS MORE FREQUENT, INSPECT ALL AREAS WHERE TEMPORARY NON-STRUCTURAL MEASURES ARE USED. THE INSPECTION SCHEDULE WILL BE INCREASED TO DAILY DURING THE WINTER CONSTRUCTION PERIOD.
8. AFTER GRADING AND PRIOR TO FINAL STABILIZATION PROVIDE PERIODIC APPLICATION OF WATER OR CALCIUM CHLORIDE AS NEEDED TO CONTROL EXCESSIVE DUST.
9. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE AN AREA OF THE SITE IS PERMANENTLY STABILIZED.
10. MONITOR PUBLIC ROADS FOR SIGNS OF MUD TRACKING OR SPILLAGE OF SPOIL MATERIAL. CLEAN ROADWAYS AS NEEDED.

FINAL RESTORATION

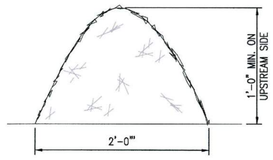
PERMANENT MULCHING

ECM CAN BE USED AS A TEMPORARY OR PERMANENT SLOPE REINFORCEMENT AND LEFT TO REVEGETATE TO NEAR NATURAL CONDITIONS. IT IS NOT USED WHERE GRASS VEGETATION IS REQUIRED. RE-VEGETATION CAN BE ENHANCED BY SEEDING, WHICH IS ENCOURAGED IF USED AS A PERMANENT STABILIZATION MEASURE. PERMANENT MULCH MUST NOT BE USED IN AREAS OF CONCENTRATED WATER FLOWS AND EVIDENCE OF GROUNDWATER SEEPAGE ON SLOPES MAY REQUIRE THE ECM TO BE REPLACED WITH RIPRAP.

- ON SLOPES THAT ARE 3H:1V OR LESS, ECM SHALL BE APPLIED AT A MINIMUM OF 2 INCHES THICK PLUS AN ADDITIONAL 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET (E.G., 3 INCHES THICK FOR 60 FEET OF SLOPE; 4 INCHES THICK FOR 100 FEET OF SLOPE).
- FOR SLOPES BETWEEN 3H:1V AND 2H:1V, ECM WILL BE APPLIED 4 INCHES THICK PLUS AN ADDITIONAL 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET (E.G., 5 INCHES THICK FOR 60 FEET OF SLOPE; 6 INCHES THICK FOR 100 FEET OF SLOPE).
- ECM MUST BE SPREAD EVENLY AND MUST PROVIDE 100 PERCENT SOIL COVERAGE.

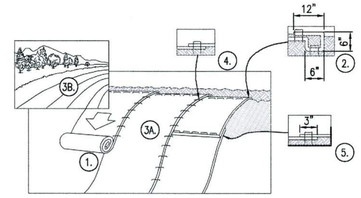
PERMANENT RE-VEGETATION

PERMANENT SEEDING SHALL BE USED ON ALL EXPOSED SOIL THAT IS NOT PERMANENTLY STABILIZED BY ROCK, GRAVEL OR ECM. THE FOLLOWING PERMANENT SEEDING MIX SPECIFICATIONS BETWEEN APRIL 16 AND OCTOBER 31, HOWEVER WINTER RYE WILL BE ADDED TO THE PERMANENT SEED MIX AFTER OCTOBER 1. PERMANENT SEEDING IS NOT REQUIRED DURING THE WINTER CONSTRUCTION SEASON, ALTHOUGH DORMANT SEEDING MAY BE PERFORMED (SEE WINTER CONSTRUCTION NOTES).



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. EROSION CONTROL MIX SHOULD CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES, AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. ECM MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIALS TOXIC TO PLANT GROWTH.
   B. ECM SHALL CONTAIN 25% - 65% ORGANIC MATTER CONTENT (DRY WEIGHT BASIS).
   C. ORGANIC PORTION MUST BE FIBROUS AND ELONGATED.
   D. SCREEN SIZE: 3" - 100% PASSING
      1" - 90% TO 100% PASSING
      3/4" - 70% TO 100% PASSING
      1/4" - 30% TO 75% PASSING
      MIX SHALL NOT CONTAIN LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS.
   E. SOLUBLE SALT CONTENT SHALL BE < 4.0 mmhos/cm
   F. pH - 5.0 TO 8.0
2. INSTALL AND MAINTAIN EROSION CONTROL BERM 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
NOT TO SCALE

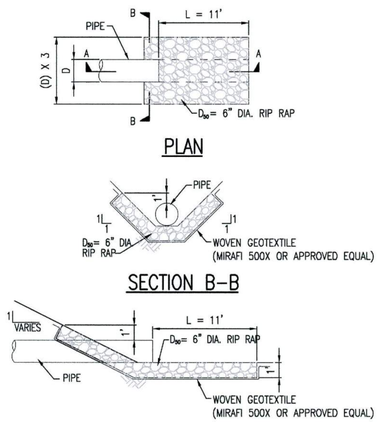


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O- SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE 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.

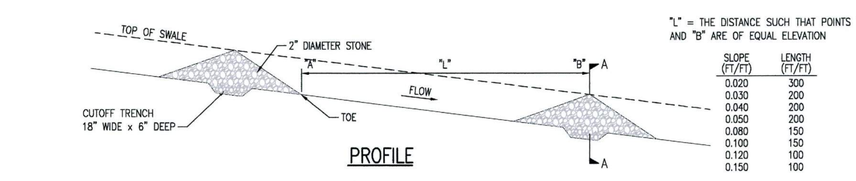
EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE

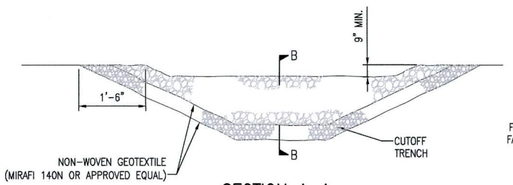


CULVERT INLET/OUTLET PROTECTION
NOT TO SCALE

NOTES:

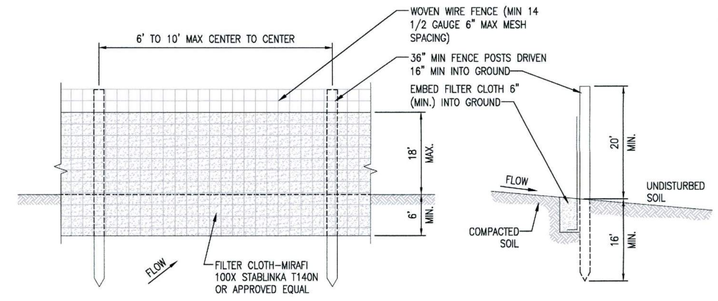
1. SEE DRAWING G-2 FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS.
2. SEE DRAWING G-3 FOR OVERALL PROJECT MAP AND OVERALL PROJECT DRAWING INDEX.
3. SEE DRAWING C-23 FOR CULVERT, BUFFER, TREATMENT SWALE, LEVEL SPREADER AND PLUNGE POOL SCHEDULES.





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

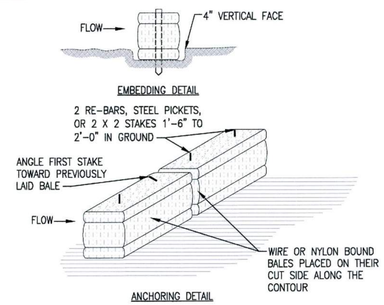
CHECK DAM DETAILS
NOT TO SCALE



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

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.

SILT FENCE DETAIL
NOT TO SCALE



STRAW BALE BARRIER DETAIL
NOT TO SCALE

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
B	ISSUED FOR PERMITTING	5/1/15	PMM	DTB	DTB	8105
A	ISSUED FOR CLIENT REVIEW	4/6/15	PMM	DTB		

NOT FOR CONSTRUCTION

STATE OF NEW HAMPSHIRE · DANIEL T. BUTLER No. 8105 LICENSED PROFESSIONAL ENGINEER

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

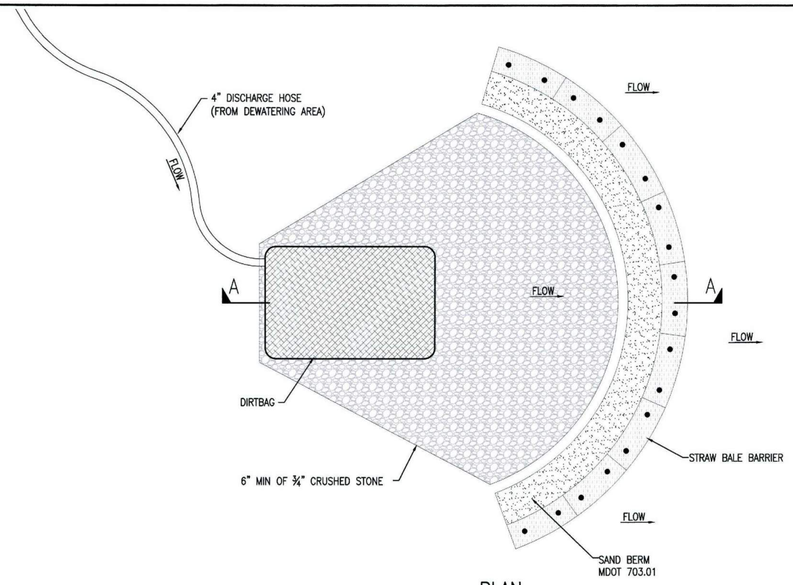
TRC/PMM DESIGNED
TRC/KAV DRAWN
TRC/DTB CHECKED
APPROVED
REVIEWED

EROSION CONTROL NOTES & DETAILS I
ANTRIM WIND ENERGY, LLC
ANTRIM WINDPARK
ANTRIM NEW HAMPSHIRE

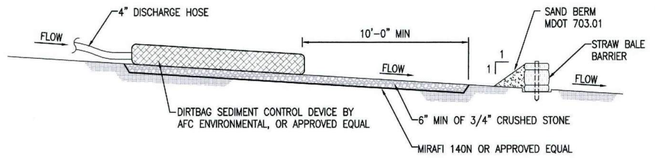
TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 182878
SCALE: AS NOTED DATE: 11-8-11

C-21

REV. B



PLAN



SECTION A–A

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.

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 AS 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 CAPACITY OF THE STRUCTURE TO SETTLE AND FILTER FLOW OR THE VOLUME CAPACITY OF THE STRUCTURE.

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:

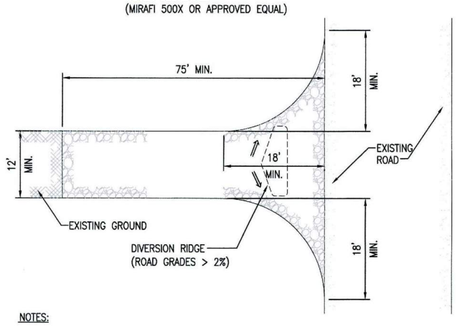
1. DIRT BAG MATERIAL BASED ON PARTICLE SIZE IN DIRTY WATER, I.E. FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON–WOVEN MATERIAL.

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, WETLAND OR OTHER REGULATED RESOURCES.

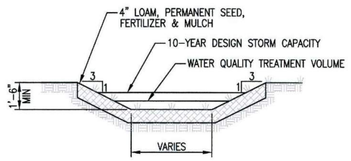
TYPICAL DEWATERING OPERATION
NOT TO SCALE



NOTES:

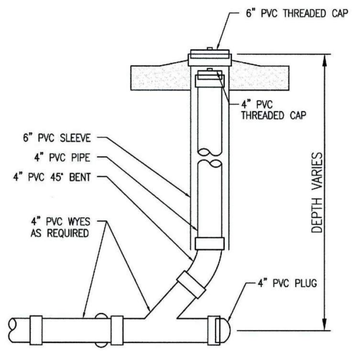
1. STONE SIZE – USE 2" STONE.
2. LENGTH – NOT LESS THAN 75 FEET.
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MIN. BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY–FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. WOVEN GEOTEXTILE – WILL BE PLACED 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

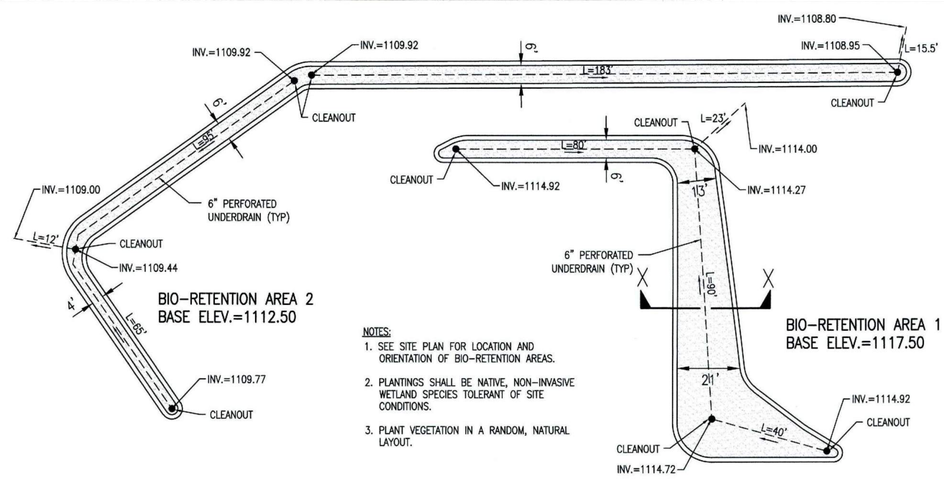


NOTE:
SEE PERMANENT SEED MIX SPECIFICATION, SHEET C–21.

TREATMENT SWALE
NOT TO SCALE

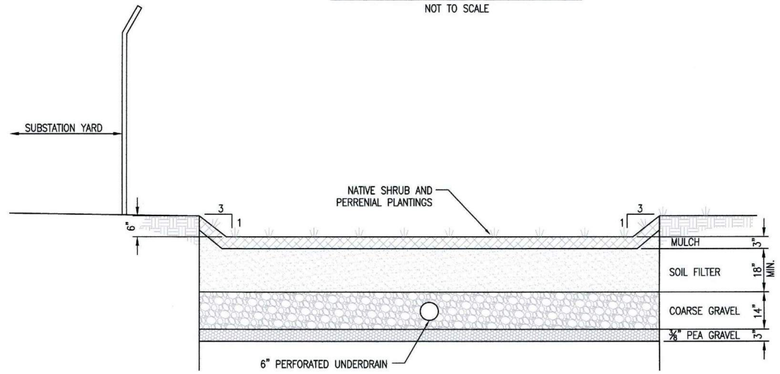


BIO–RETENTION UNDERDRAIN
TYPICAL CLEANOUT
NOT TO SCALE



NOTES:
1. SEE SITE PLAN FOR LOCATION AND ORIENTATION OF BIO–RETENTION AREAS.
2. PLANTINGS SHALL BE NATIVE, NON–INVASIVE WETLAND SPECIES TOLERANT OF SITE CONDITIONS.
3. PLANT VEGETATION IN A RANDOM, NATURAL LAYOUT.

BIO–RETENTION AREA DETAIL
NOT TO SCALE



SECTION X–X
NOT TO SCALE

BIO–RETENTION FILTER MEDIA

COMPONENT MATERIAL	PERCENT MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C–33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

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.
3. SEE DRAWING C–23 FOR CULVERT, BUFFER, TREATMENT SWALE, LEVEL SPREADER AND PLUNGE POOL SCHEDULES.

NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
B	ISSUED FOR PERMITTING	5/1/15	PMM	DTB	DTB	8105
A	ISSUED FOR CLIENT REVIEW	4/6/15	PMM	DTB		

STATE OF NEW HAMPSHIRE – DANIEL T BUTLER No. 8105 LICENSED PROFESSIONAL ENGINEER – 5/1/15

CLIENT APPROVAL
APPROVED BY
COMPANY
DATE

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

EROSION CONTROL
NOTES & DETAILS II
ANTRIM WIND ENERGY, LLC
ANTRIM WINDPARK
ANTRIM NEW HAMPSHIRE

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
SCALE: AS NOTED PROJECT NO: 182878 DATE: 11–8–11

C–22

REV. B

LEVEL SPREADER SCHEDULE

ID #	LENGTH (A)	INVERT (B)	DEPTH (C)
LS-1	30'	1138.5	12"
LS-2	30'	1166.5	12"
LS-3	30'	1258.5	12"
LS-4	35'	1306.0	12"
LS-5	30'	1410.5	12"
LS-6	40'	1656.5	12"
LS-7	25'	1678.5	12"

TREATMENT SWALE SCHEDULE

ID #	LENGTH (FT)	BASE WIDTH (FT)	LONG. SLOPE (FT/FT)
SW-1	150	3	0.0075
SW-2	130	3	0.005
SW-3	130	3	0.010
SW-4	125	3	0.0075
SW-5	120	3	0.005
SW-6	120	4	0.0075
SW-7	120	3	0.0075
SW-8	135	3	0.0075
SW-9	120	3	0.0075
SW-10	135	3	0.0075
SW-11	125	3	0.005

BUFFER SIZING SCHEDULE

ID #	AVG. SLOPE	LENGTH (FT)	BUFFER TYPE
B-1	11%	115	DITCH TURN-OUT
B-2	10%	50	ROADWAY
B-3	10%	50	ROADWAY
B-4	15%	120	DITCH TURN-OUT
B-5	12%	75	ROADWAY
B-6	11%	185	DITCH TURN-OUT
B-7	22%	75	ROADWAY
B-8	16%	75	ROADWAY
B-9	9%	135	DITCH TURN-OUT
B-10	8%	75	ROADWAY
B-11	11%	135	DITCH TURN-OUT
B-12	15%	50	ROADWAY
WTG-5A	3%	120	SMALL AREA
WTG-5B	6%	110	SMALL AREA
B-13	25%	75	ROADWAY
B-14	12%	75	ROADWAY
B-15	15%	50	ROADWAY
B-16	25%	75	ROADWAY
B-17	25%	75	ROADWAY
WTG-8	12%	50	SMALL AREA
B-18	20%	50	ROADWAY
B-19	20%	50	ROADWAY
B-20	9%	50	ROADWAY
B-21	30%	75	ROADWAY
WTG-9	3%	120	SMALL AREA
B-22	3%	50	ROADWAY
WTG-2	5%	120	SMALL AREA

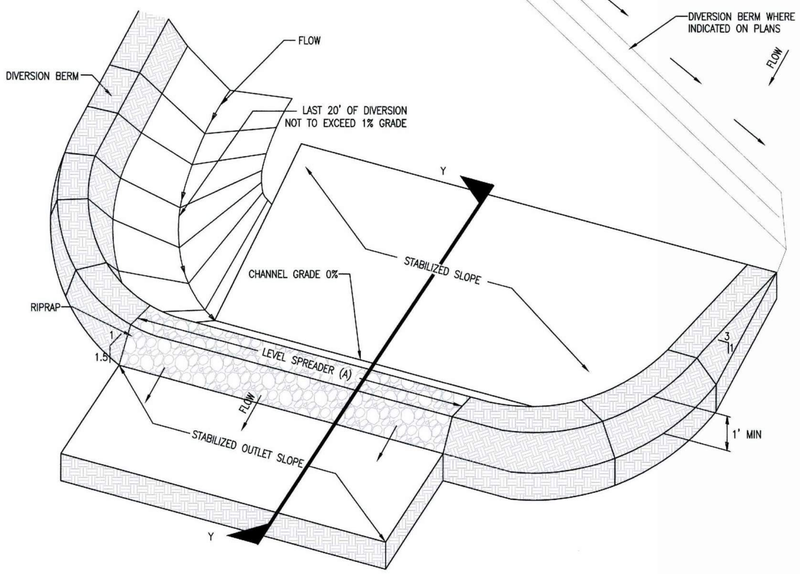
CULVERT SIZING SCHEDULE

CULVERT ID #	STATION	CULVERT DIAMETER (IN)	LENGTH (FT)	INVERT	
				IN	OUT
SD-1	0+40	24	90	1042.00	1041.25
SD-2	2+30	15	28	1064.00	1063.25
SD-3	9+00	15	30	1122.00	1121.75
SD-3A	S/S	15	38	1120.00	1119.80
SD-4*	18+75	BOX	35		
SD-5	24+60	18	38	1262.00	1260.00
SD-6	41+75	24	62	1422.00	1420.25
SD-7	45+00	12	60	1453.00	1451.50
SD-8	46+00	12	52	1465.00	1463.50
SD-9	47+00	12	48	1477.00	1475.60
SD-10	48+00	12	48	1489.00	1487.60
SD-11	49+00	12	50	1501.00	1499.60
SD-12	53+75	12	50	1557.50	1556.50
SD-13	54+50	12	48	1567.00	1565.50
SD-14	55+50	12	58	1579.00	1577.40
SD-15	56+50	12	53	1590.00	1589.50
SD-16	57+50	15	50	1602.00	1599.50
SD-17	63+50	15	53	1675.00	1670.00
SD-18	74+75	36	80	1638.00	1628.00
SD-19	86+00	15	64	1680.60	1680.00
SD-20	93+10	36	65	1701.00	1700.00
SD-21	128+00	15	43	1563.00	1562.00
SD-22	131+50	12	50	1605.00	1604.00
SD-23	132+50	12	46	1617.00	1616.00
SD-24	137+00	15	46	1671.00	1670.00
SD-25	3+10 (SPUR)	15	50	1679.00	1676.00
SD-26	152+91	36	70	1600.00	1597.00

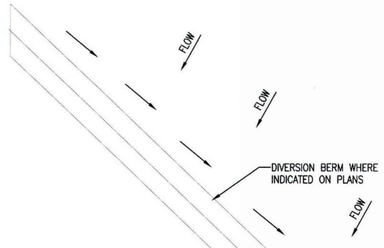
*SD-4 – CONCRETE BOX CULVERT 10'W X 2'H

PLUNGE POOL SCHEDULE

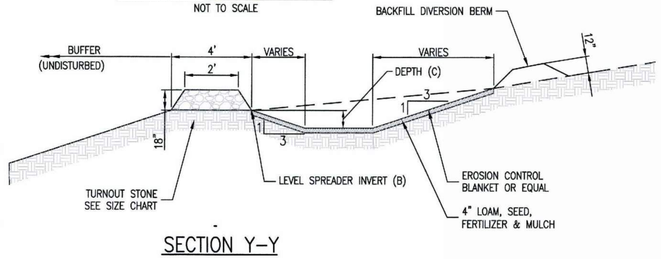
ID #	INLET TYPE	INLET DIA. (IN)	ELEVATION (A)	ELEVATION (B)
P-1	DITCH	24	1117.00	1116.00
P-2	DITCH	24	1353.00	1352.00
P-3	DITCH	24	1417.00	1416.00
P-4	DITCH	36	1410.00	1408.00
P-5	CULVERT	12	1451.00	1450.00
P-6	CULVERT	12	1463.00	1762.00
P-7	CULVERT	12	1475.00	1474.00
P-8	CULVERT	12	1487.00	1486.00
P-9	CULVERT	12	1499.00	1498.00
P-10	CULVERT	12	1556.00	1555.00
P-11	CULVERT	12	1565.00	1564.00
P-12	CULVERT	12	1577.00	1576.00
P-13	CULVERT	12	1589.00	1588.00
P-14	CULVERT	15	1599.00	1597.75
P-15	CULVERT	15	1668.00	1666.75
P-16	CULVERT	36	1627.00	1625.00
P-17	DITCH	24	1677.75	1676.75
P-18	DITCH	24	1681.50	1680.50
P-19	CULVERT	15	1679.50	1676.75
P-20	CULVERT	36	1700.00	1698.75
P-21	DITCH	24	1714.00	1713.00
P-22	DITCH	24	1505.00	1504.00
P-23	DITCH	24	1471.00	1469.00
P-24	CULVERT	15	1560.00	1558.75
P-25	CULVERT	12	1603.00	1602.00
P-26	CULVERT	12	1612.00	1611.00
P-27	CULVERT	15	1669.00	1667.75
P-28	CULVERT	15	1675.00	1673.75
P-29	CULVERT	12	1706.00	1705.00
P-30	CULVERT	12	1707.00	1706.00



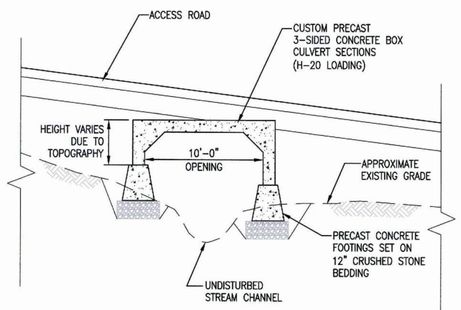
LEVEL SPREADER DETAIL
NOT TO SCALE



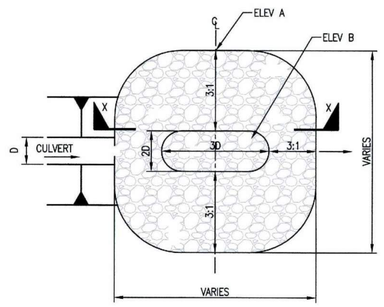
TURNOUT STONE SIZE	
SIEVE DESIGNATION	% PASSING BY WEIGHT
12 IN.	100
6 IN.	84-100
3 IN.	68-83
1 IN.	42-55
No. 4	8-12



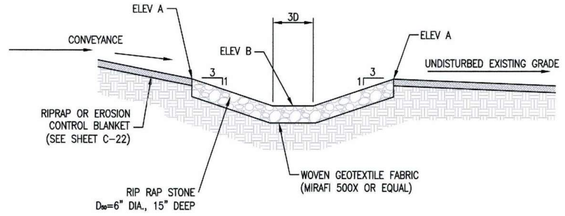
SECTION Y-Y



BOX CULVERT
NOT TO SCALE



PLAN



SECTION X-X

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.

NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY	CK	P.E. STAMPED BY	P.E. No.
B	ISSUED FOR PERMITTING	5/1/15	PMM	DTB	DTB	8105
A	ISSUED FOR CLIENT REVIEW	4/6/15	PMM	DTB		

DANIEL T BUTLER No. 8105 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

TRC/PMM DESIGNED

TRC/KAV DRAWN

TRC/DTB CHECKED

APPROVED

REVIEWED

CULVERT / BUFFER / TREATMENT SWALE / LEVEL SPREADER / PLUNGE POOL SCHEDULES
ANTRIM WIND ENERGY, LLC
ANTRIM WINDPARK
ANTRIM NEW HAMPSHIRE

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 182878
SCALE: AS NOTED DATE: 11-8-11

C-23

REV. B