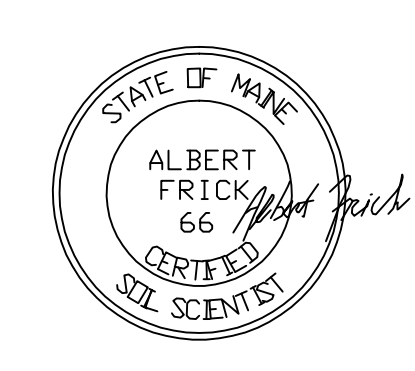
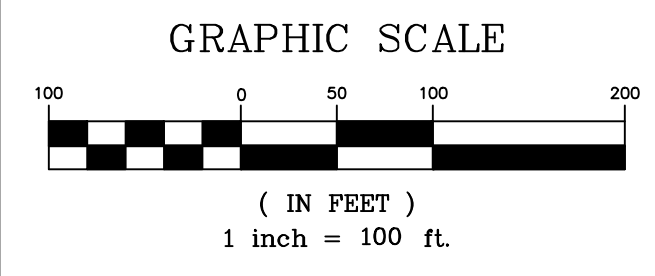


SOILS MAP LEGEND:

- | | | |
|--|---|--|
| SOIL TEST PIT | CULVERT (EXISTING) | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATUTE TOOL BOX OF RECOMMENDED TECHNIQUES) |
| SOIL TEST BORING | LIMITS OF SOIL STUDY CORRIDOR | SLOPE DESIGNATIONS |
| WETLAND AREA (DETERMINATED BY STANTEC) | AREA FOR ROAD ALIGNMENT | A 0-3% |
| SOIL TEST PIT (BY STANTEC) | NRCS SOIL BOUNDARY LINE | B 3-8% |
| BEDROCK OUTCROP (LOCATED BY G.P.S.) | NRCS SOIL NAME | C 8-20% |
| EXISTING MET TOWER | CLASS L SOIL BOUNDARY LINE | D 20%+ |
| POTENTIAL MET TOWER | CLASS L SOIL NAME | E 50%+ (NRCS) |
| WOODS ROAD (EXISTING) | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC LIKE CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) | |
| BRIDGE (EXISTING) | | |
| STREAM | | |
| TRAIL (EXISTING) | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.

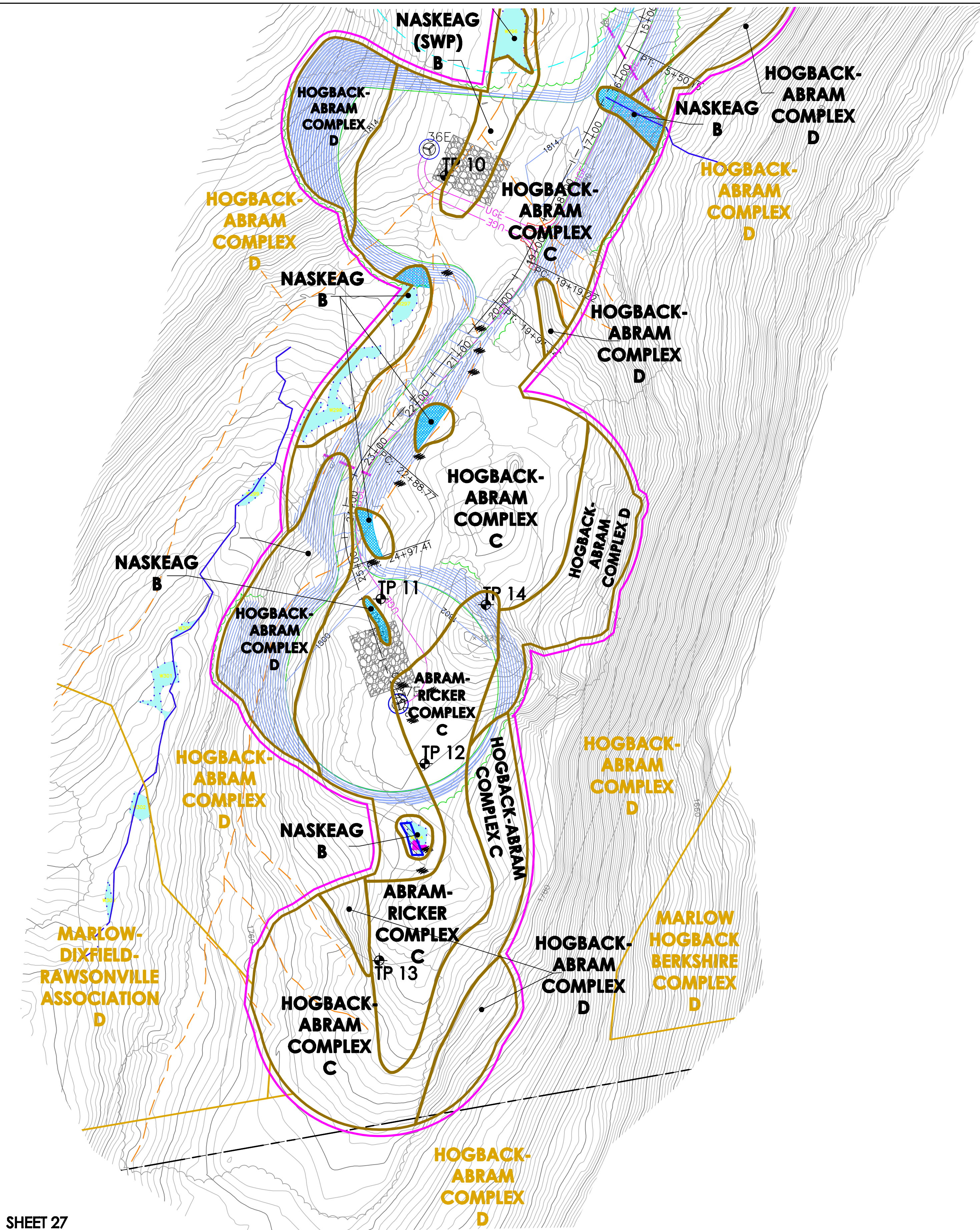


DATE	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
 SHEET 26 of 35

Albert Frick Associates, Inc.
 Soil Scientists & Site Evaluators
 Gorham, Maine 04038

Drawn By: **B.J.** Checked By: **A.F.**
 Date: **10/14/09** Scale: **1" = 100'**



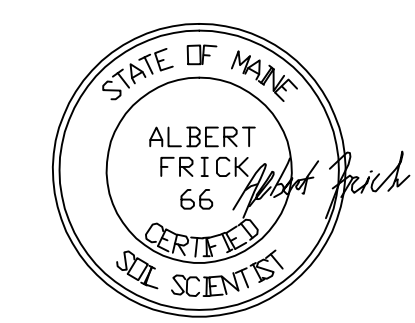
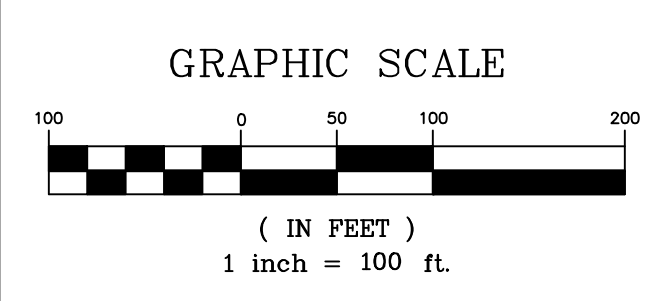
SHEET 27
END

SOILS MAP LEGEND:

- | | | |
|-------------------------------------|--|---|
| SOIL TEST PIT | CULVERT (EXISTING) | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYANIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STANTEC TOOL BOX OF RECOMMENDED TECHNIQUES) |
| SOIL TEST BORING | LIMITS OF SOIL STUDY CORRIDOR | 0-3% |
| WETLAND AREA (DRAINATED BY STANTEC) | AREA FOR ROAD ALIGNMENT | 3-8% |
| SOIL TEST PIT (BY STANTEC) | NRCS SOIL BOUNDARY LINE | 8-20% |
| SOIL TEST PIT (LOCATED BY G.P.S.) | NRCS SOIL NAME | 20%+ |
| BEDROCK OUTCROP (LOCATED BY G.P.S.) | CLASS L SOIL BOUNDARY LINE | 30%+ (NRCS) |
| EXISTING MET TOWER | CLASS L SOIL NAME | |
| POTENTIAL MET TOWER | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYANIC LIKE CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) | |
| WOODS ROAD (EXISTING) | | |
| BRIDGE (EXISTING) | | |
| STREAM | | |
| TRAIL (EXISTING) | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.



DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

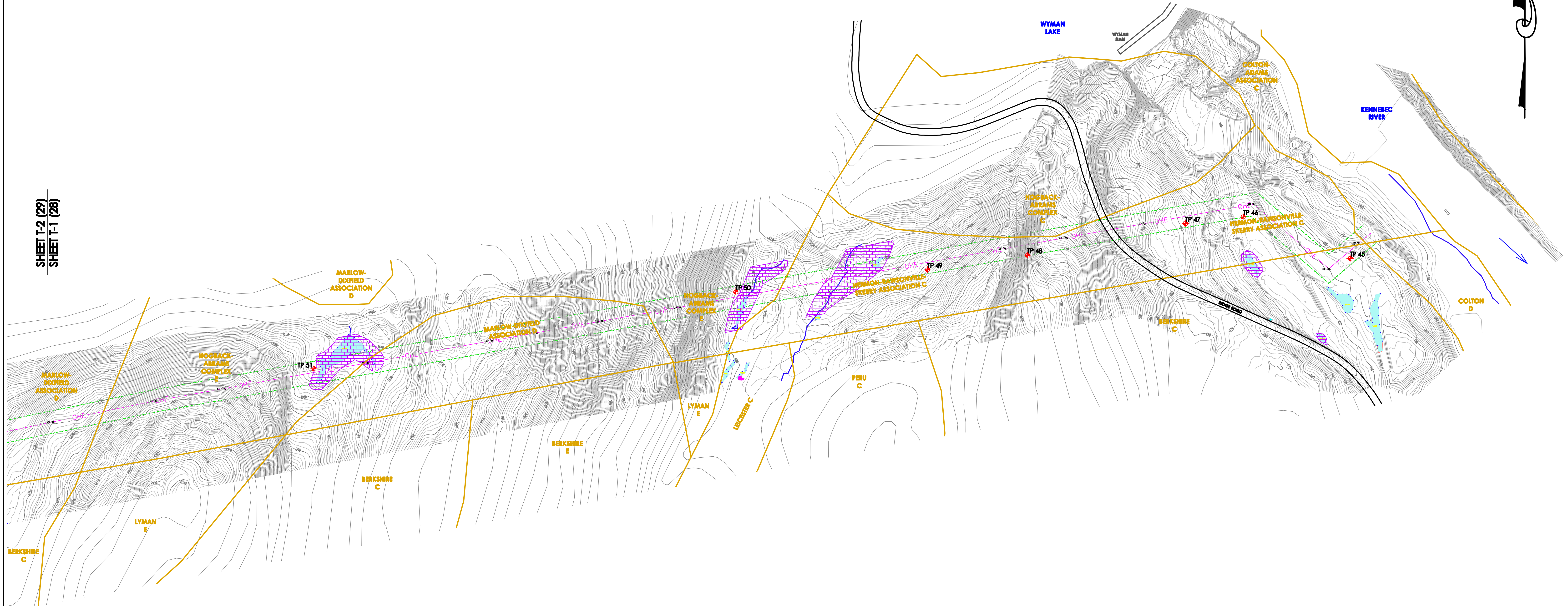
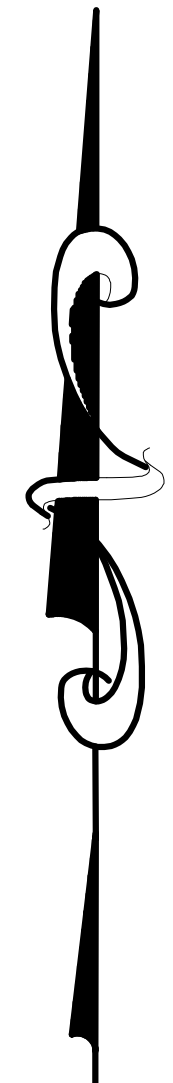
SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
 SHEET 27 of 35

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
 Gorham, Maine 04038

Drawn By: **B.J.** Checked By: **A.F.**

Date: **10/14/09** Scale: **1" = 100'**

SHEET T-2 (29)
SHEET T-1 (28)



SOILS MAP LEGEND:

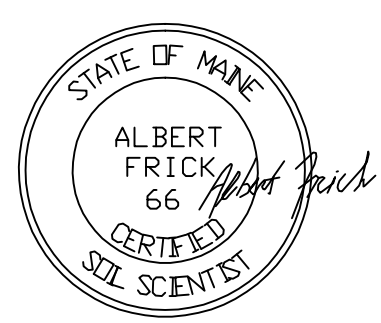
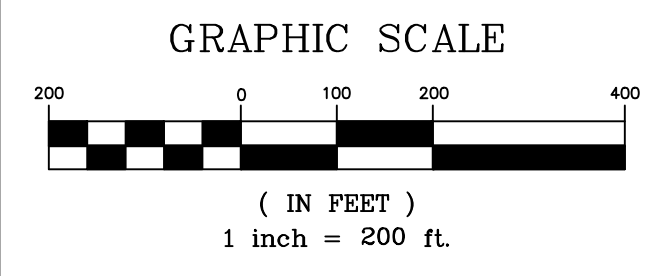
- SOIL TEST PIT
- SOIL TEST BORING
- WETLAND AREA (DELIMITED BY STANTEC)
- SOIL TEST PIT (BY STANTEC)
- BEDROCK OUTCROP (LOCATED BY G.P.S.)
- EXISTING MET TOWER
- POTENTIAL MET TOWER
- WOODS ROAD (EXISTING)
- BRIDGE (EXISTING)
- STREAM
- TRAIL (EXISTING)
- CULVERT (EXISTING)
- LIMITS OF SOIL STUDY CORRIDOR
- AREA FOR ROAD ALIGNMENT
- NRCS SOIL BOUNDARY LINE
- CLASS L SOIL BOUNDARY LINE
- CLASS L SOIL NAME
- AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC LIKE CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION)
- SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATYC TOOL BOX OF RECOMMENDED TECHNIQUES)

SLOPE DESIGNATIONS

- A 0-3%
- B 3-8%
- C 8-20%
- D 20%+
- E 50%+ (NRCS)

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.



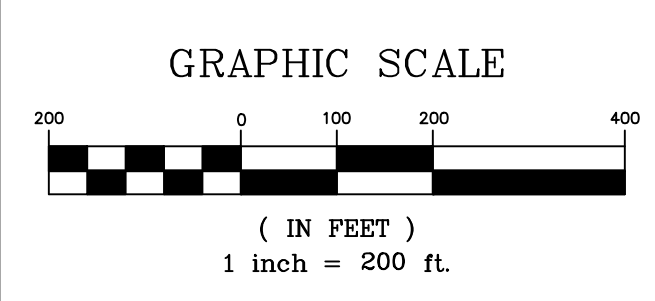
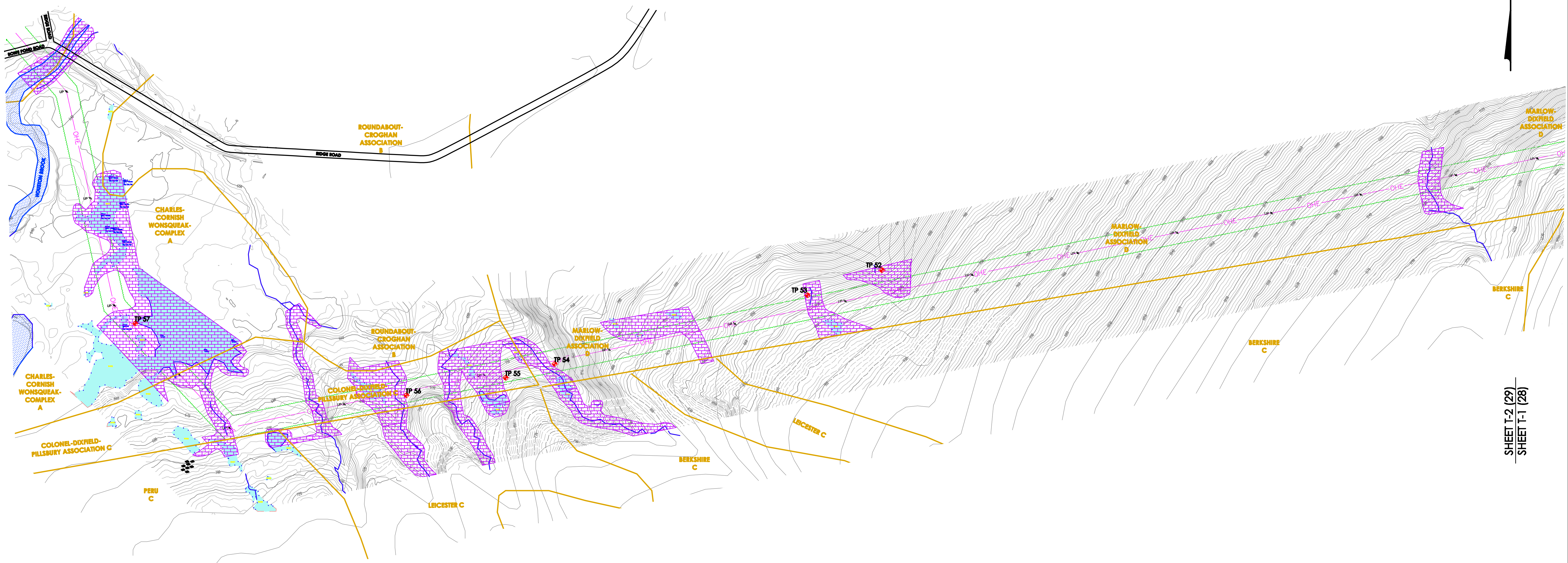
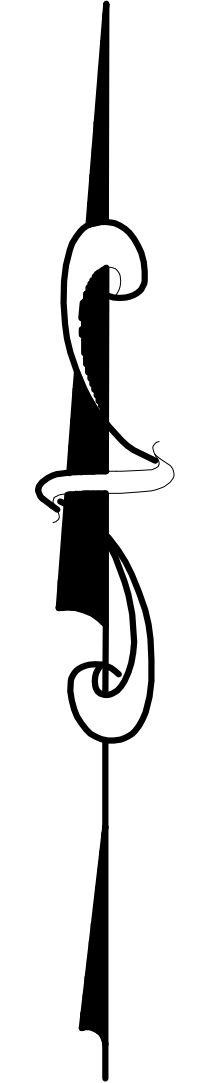
DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-1 (28 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

Drawn By: **B.J.** Checked By: **A.F.**

Date: **10/14/09** Scale: **1" = 200'**



SOILS MAP LEGEND:

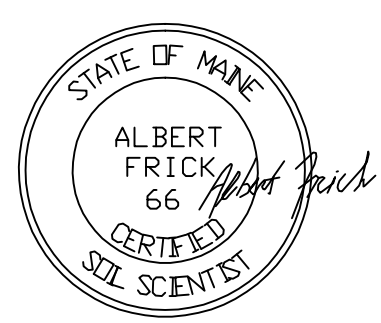
- | | | |
|---------------------------------------|---|---|
| SOIL TEST PIT | CULVERT (EXISTING) | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATIC TOOL BOX OF RECOMMENDED TECHNIQUES) |
| SOIL TEST BORING | LIMITS OF SOIL STUDY CORRIDOR | |
| WETLAND AREA (DELIMITATED BY STANTEC) | AREA FOR ROAD ALIGNMENT | |
| SOIL TEST PIT (BY STANTEC) | NRCS SOIL BOUNDARY LINE | |
| BEDROCK OUTCROP (LOCATED BY G.P.S.) | NRCS SOIL NAME | |
| EXISTING MET TOWER | CLASS L SOIL BOUNDARY LINE | |
| POTENTIAL MET TOWER | CLASS L SOIL NAME | |
| WOODS ROAD (EXISTING) | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC LIKE CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) | |
| BRIDGE (EXISTING) | | |
| STREAM | | |
| TRAIL (EXISTING) | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.

SLOPE DESIGNATIONS

A	0 - 3%
B	3 - 8%
C	8 - 20%
D	20%+
E	50%+ (NRCS)



DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-2 (29 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

Drawn By: B.J.	Checked By: A.F.
Date: 10/14/09	Scale: 1" = 200'

COLONEL-DIXFIELD-PILLSBURY ASSOCIATION C

COLONEL-DIXFIELD-PILLSBURY ASSOCIATION C

HERMON-RAWSONVILLE-SKERRY ASSOCIATION C

COLONEL-DIXFIELD-PILLSBURY ASSOCIATION C

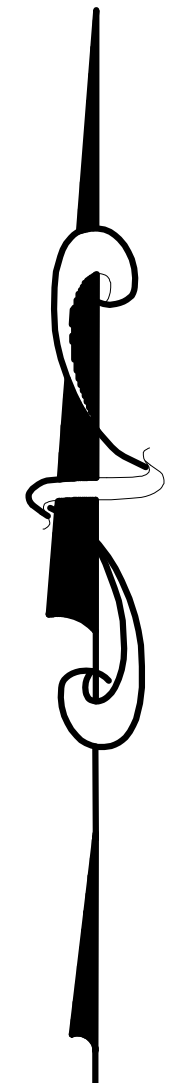
COLONEL-PILLSBURY-DIXFIELD ASSOCIATION B

PILLSBURY-PEACHAM ASSOCIATION B

CHARLES-CORNISH WONSQUEAK-COMPLEX A

CHARLES-CORNISH WONSQUEAK-COMPLEX A

CHARLES-CORNISH WONSQUEAK-COMPLEX A



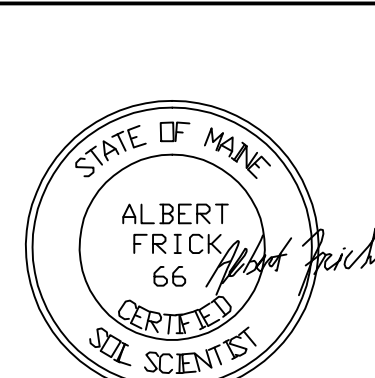
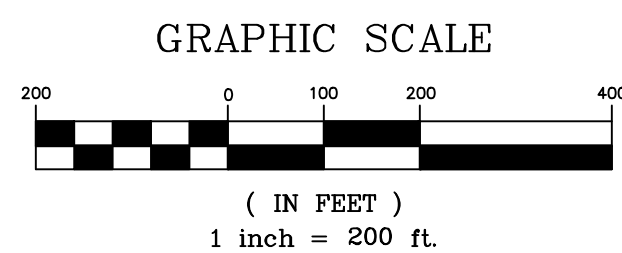
SOILS MAP LEGEND:

- | | | | | | |
|--|--------------------------------------|--|---|--|---|
| | SOIL TEST PIT | | CULVERT (EXISTING) | | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATIC TOOL BOX OF RECOMMENDED TECHNIQUES) |
| | SOIL TEST BORING | | LIMITS OF SOIL STUDY CORRIDOR | | AREA FOR ROAD ALIGNMENT |
| | WETLAND AREA (DELINEATED BY STANTEC) | | NRCS SOIL BOUNDARY LINE | | NRCS SOIL NAME |
| | SOIL TEST PIT (BY STANTEC) | | CLASS L SOIL BOUNDARY LINE | | CLASS L SOIL NAME |
| | BEDROCK OUTCROP (LOCATED BY G.P.S.) | | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC LIKE CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) | | A 0-3% |
| | EXISTING MET TOWER | | B 3-8% | | C 8-20% |
| | POTENTIAL MET TOWER | | D 20%+ | | E 30%+ (NRCS) |
| | WOODS ROAD (EXISTING) | | | | |
| | BRIDGE (EXISTING) | | | | |
| | STREAM | | | | |
| | TRAIL (EXISTING) | | | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

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SHEET T-3 (30)
SHEET T-2 (29)

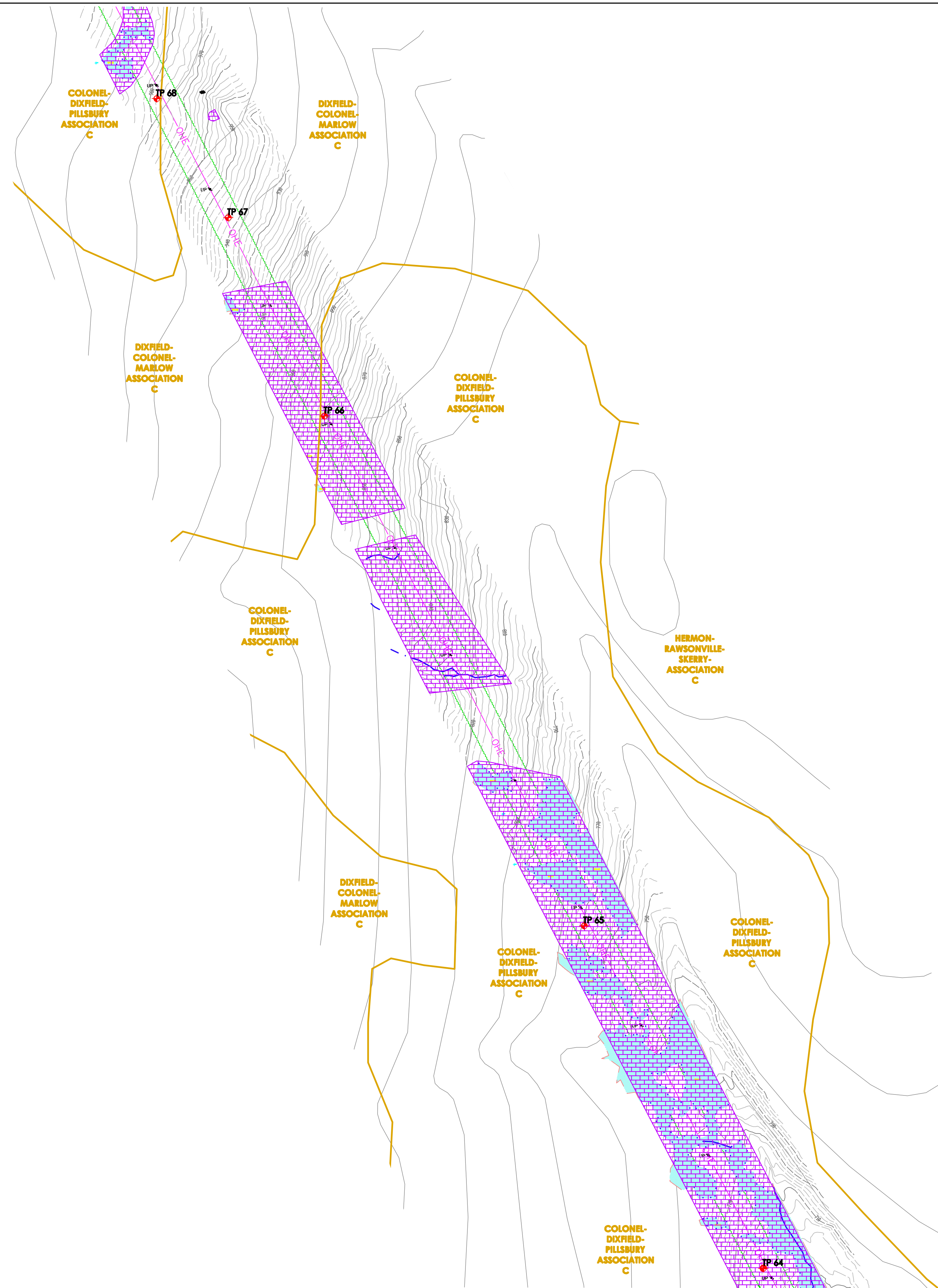


DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
 SHEET T-3 (30 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
 Gorham, Maine 04038

Drawn By: B.J.	Checked By: A.F.
Date: 10/14/09	Scale: 1" = 200'



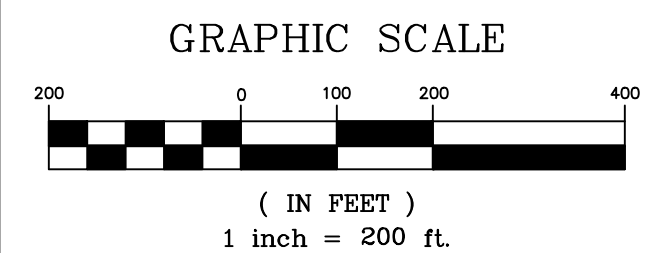
SHEET T-4 (31)
SHEET T-3 (30)

SOILS MAP LEGEND:

- | | | |
|--------------------------------------|---|---|
| SOIL TEST PIT | CULVERT (EXISTING) | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATYC TOOL BOX OF RECOMMENDED TECHNIQUES) |
| SOIL TEST BORING | LIMITS OF SOIL STUDY CORRIDOR | SOIL DESIGNATIONS |
| WETLAND AREA (DELINEATED BY STANTEC) | AREA FOR ROAD ALIGNMENT | A 0-3% |
| SOIL TEST PIT (BY STANTEC) | NRCS SOIL BOUNDARY LINE | B 3-8% |
| BEDROCK OUTCROP (LOCATED BY G.P.S.) | NRCS SOIL NAME | C 8-20% |
| EXISTING MET TOWER | CLASS L SOIL BOUNDARY LINE | D 20%+ |
| POTENTIAL MET TOWER | CLASS L SOIL NAME | E 30%+ (NRCS) |
| WOODS ROAD (EXISTING) | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC LIKE CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) | |
| BRIDGE (EXISTING) | | |
| STREAM | | |
| TRAIL (EXISTING) | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS. CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.



DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-4 (31 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

Drawn By: B.J.	Checked By: A.F.
Date: 10/14/09	Scale: 1" = 200'



SHEET T-5 (32)
SHEET T-4 (31)

SOILS MAP LEGEND:

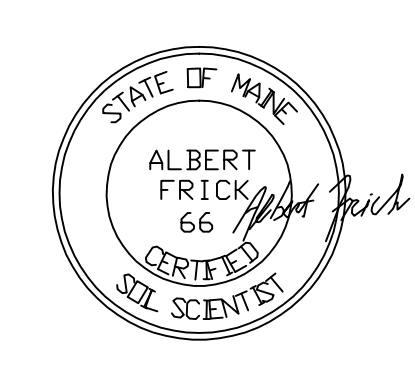
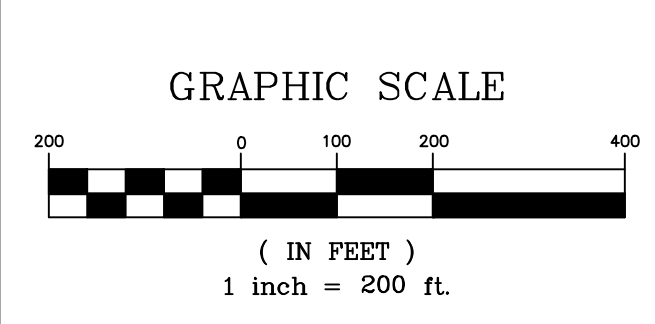
- | | | |
|-------------------------------------|-------------------------------------|--|
| SOIL TEST PIT | CULVERT (EXISTING) | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATTEC TOOL BOX OF RECOMMENDED TECHNIQUES) |
| SOIL TEST BORING | LIMITS OF SOIL STUDY CORRIDOR | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC "LKE" CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) |
| SOIL TEST PIT (BY STANTEC) | AREA FOR ROAD ALIGNMENT | |
| SOIL TEST PIT (LOCATED BY G.P.S.) | NRCS SOIL BOUNDARY LINE | |
| BEDROCK OUTCROP (LOCATED BY G.P.S.) | NRCS SOIL NAME | |
| EXISTING MET TOWER | CLASS L SOIL BOUNDARY LINE | |
| POTENTIAL MET TOWER | CLASS L SOIL NAME | |
| WOODS ROAD (EXISTING) | AREA RECOMMENDED FOR CROSS-DRAINAGE | |
| BRIDGE (EXISTING) | | |
| STREAM | | |
| TRAIL (EXISTING) | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.

SLOPE DESIGNATIONS

A	0-3%
B	3-8%
C	8-20%
D	20%+
E	30%+ (NRCS)



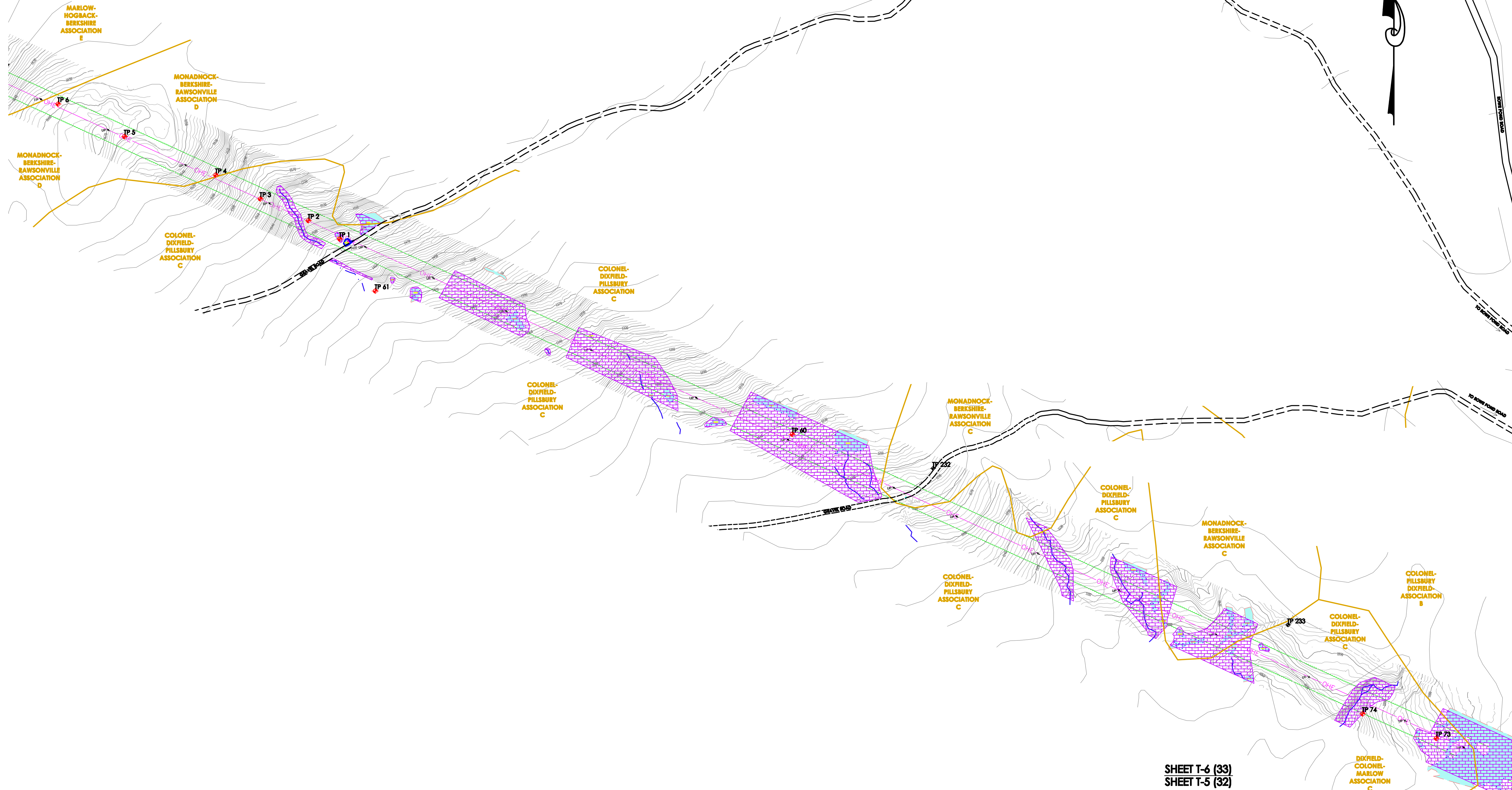
DATE	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-5 (32 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

Drawn By: **B.J.** Checked By: **A.F.**

Date: **10/14/09** Scale: **1" = 200'**



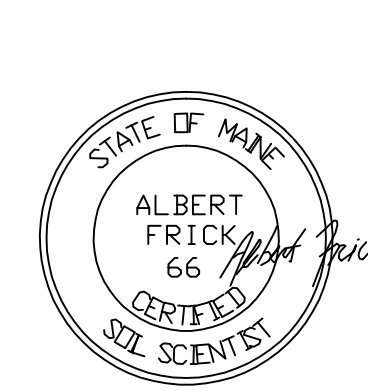
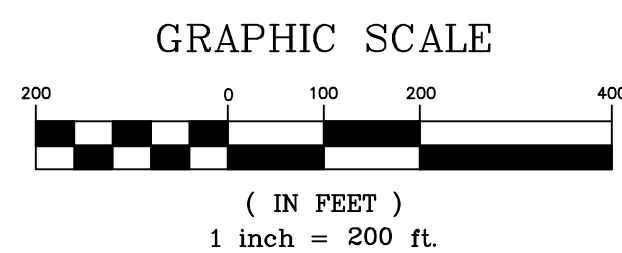
SHEET T-6 (33)
SHEET T-5 (32)

SOILS MAP LEGEND:

- | | | |
|-------------------------------------|---|---|
| SOIL TEST PIT | CULVERT (EXISTING) | SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYAQUIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATIC TOOL BOX OF RECOMMENDED TECHNIQUES) |
| SOIL TEST BORING | LIMITS OF SOIL STUDY CORRIDOR | SLOPE DESIGNATIONS |
| SOIL TEST PIT (BY STANTEC) | AREA FOR ROAD ALIGNMENT | A 0-3% |
| SOIL TEST PIT (BY STANTEC) | NRCS SOIL BOUNDARY LINE | B 3-8% |
| BEDROCK OUTCROP (LOCATED BY G.P.S.) | NRCS SOIL NAME | C 8-20% |
| EXISTING MET TOWER | CLASS L SOIL BOUNDARY LINE | D 20%+ |
| POTENTIAL MET TOWER | CLASS L SOIL NAME | E 30%+ (NRCS) |
| WOODS ROAD (EXISTING) | AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYAQUIC "LIKE" CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION) | |
| BRIDGE (EXISTING) | | |
| STREAM | | |
| TRAIL (EXISTING) | | |

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.



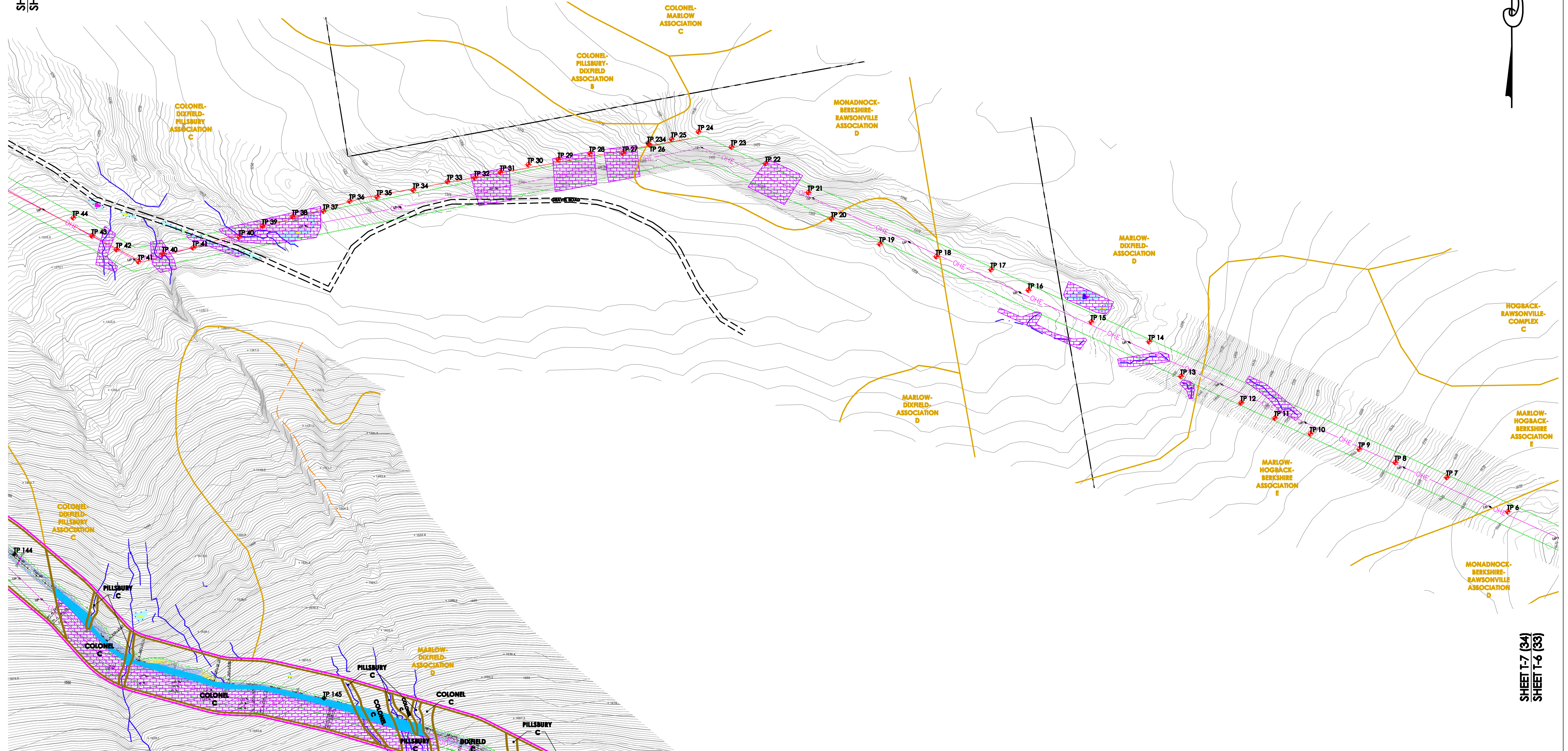
DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-6 (33 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

Drawn By: **B.J.** Checked By: **A.F.**

Date: **10/14/09** Scale: **1" = 200'**



SOILS MAP LEGEND:

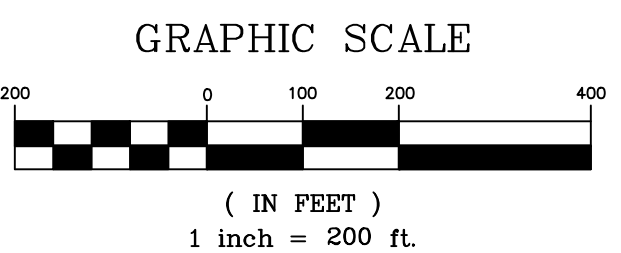
- SOIL TEST PIT
- SOIL TEST BORING
- WETLAND AREA (DETERMINED BY STANTEC)
- SOIL TEST PIT (BY STANTEC)
- BEDROCK OUTCROP (LOCATED BY G.P.S.)
- EXISTING MET TOWER
- POTENTIAL MET TOWER
- WOODS ROAD (EXISTING)
- BRIDGE (EXISTING)
- STREAM
- TRAIL (EXISTING)
- CULVERT (EXISTING)
- LIMITS OF SOIL STUDY CORRIDOR AREA FOR ROAD ALIGNMENT
- NRCS SOIL BOUNDARY LINE
- NRCS SOIL NAME
- CLASS L SOIL BOUNDARY LINE
- CLASS L SOIL NAME
- AREA RECOMMENDED FOR CROSS-DRAINAGE (OXYGIC "L" CONDITION, VERY POORLY TO SOMEWHAT POORLY AND/OR NATURAL SWALE AREA. SUBJECT TO SURFACE AND/OR PERCHED GROUNDWATER FLOW DURING SPRING MELT AND TIMES OF HEAVY PRECIPITATION)
- SOIL AREA IN TRANSMISSION LINE CORRIDOR WHICH EXHIBIT EITHER SOMEWHAT POORLY TO POORLY DRAINED CONDITIONS, OXYGIC CONDITIONS, OR WATER COURSES WHERE SPECIAL CONSIDERATION FOR SOIL DISTURBANCE SHOULD BE EXERCISED IF PROPOSED CONSTRUCTION IS DONE DURING UNFROZEN GROUND CONDITIONS, OR DURING WET SOIL CONDITIONS (SEE STATYC TOOL BOX OF RECOMMENDED TECHNIQUES)

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOILS SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.

SLOPE DESIGNATIONS

A	0 - 3%
B	3 - 8%
C	8 - 20%
D	20%+
E	50%+ (NRCS)



DATE:	REVISIONS:
12/9/10	UPDATED SOILS MAP PER REVISED ALIGNMENT

SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-7 (34 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

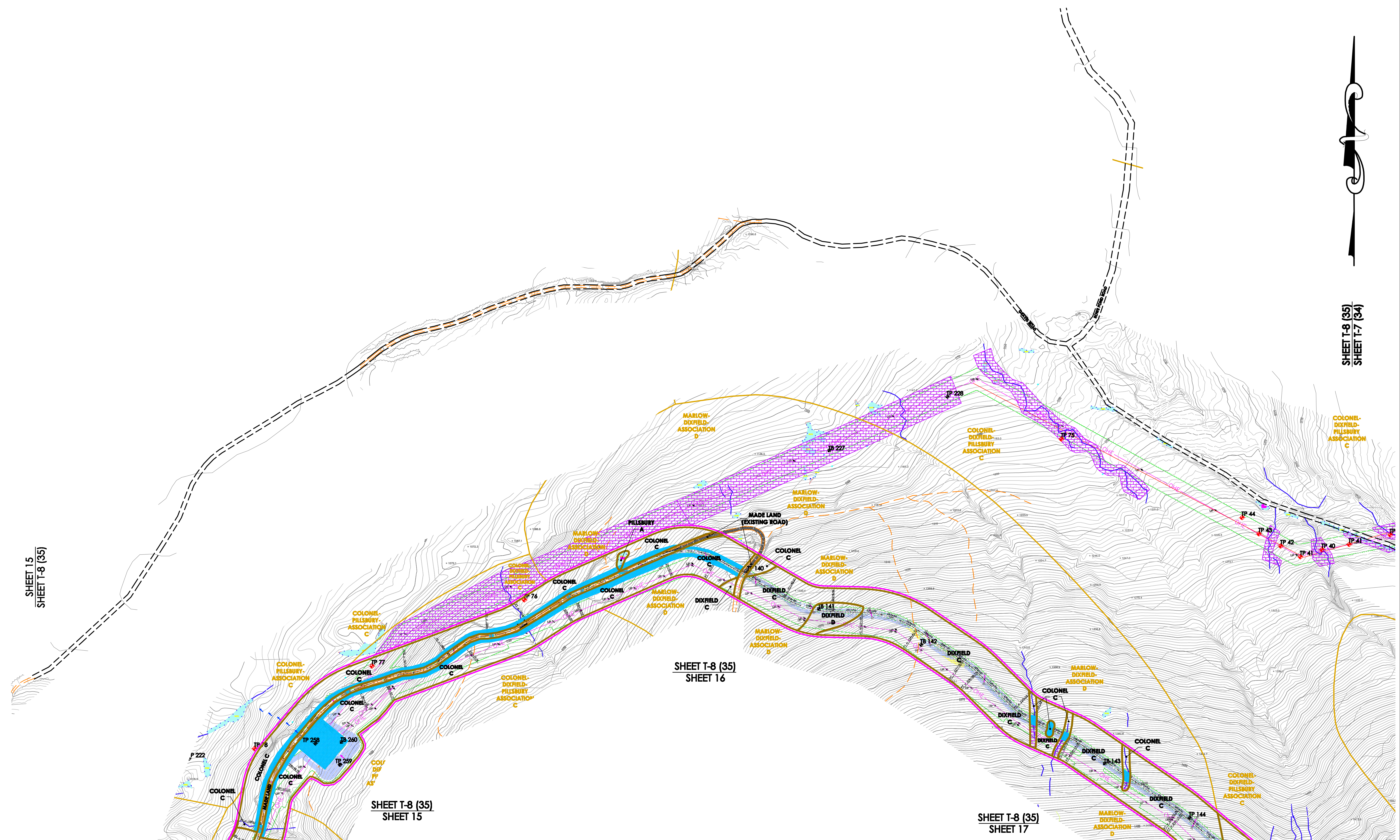
Drawn By: **B.J.** Checked By: **A.F.**

Date: **10/14/09** Scale: **1" = 200'**



SHEET T-8 (35)
SHEET T-7 (34)

SHEET 15
SHEET T-8 (35)



SHEET T-8 (35)
SHEET 16

SHEET T-8 (35)
SHEET 15

SHEET T-8 (35)
SHEET 17

SOILS MAP LEGEND:

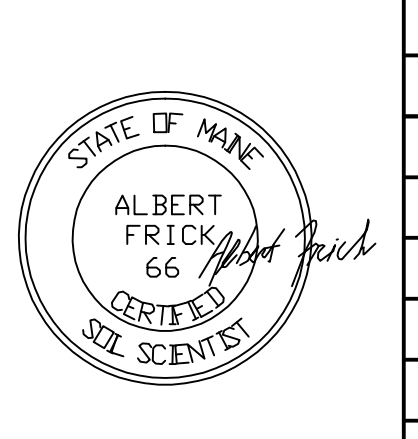
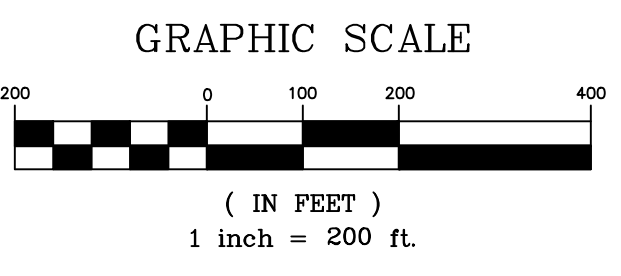
- SOIL TEST PIT
- SOIL TEST BORING
- WETLAND AREA (DETERMINED BY STANTEC)
- SOIL TEST PIT (BY STANTEC)
- BEDROCK OUTCROP (LOCATED BY G.P.S.)
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- NRCS SOIL NAME
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- CLASS L SOIL NAME
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SLOPE DESIGNATIONS

- A 0-3%
- B 3-8%
- C 8-20%
- D 20%+
- E 20%+ (NRCS)

NOTE: SEE ACCOMPANYING SOIL NARRATIVE REPORT, DATED DECEMBER 14, 2010

THE ACCOMPANYING SOIL SURVEYS (CLASS "L" IN THE AREA OF THE PROPOSED TURBINE SITES AND PROPOSED ACCESS ROADS, CLASS "B" IN THE AREA OF THE PROPOSED O&M BUILDING SITE, AND CLASS "D" MODIFIED FOR THE PROPOSED TRANSMISSION LINE.) SOIL PROFILE DESCRIPTIONS AND SOIL NARRATIVE REPORT WERE DONE IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, FEBRUARY 1995, AS AMENDED AND PREPARED BY ALBERT FRICK ASSOCIATES, SOIL SCIENTIST, SEALING THE PLANS AND REPORT.



DATE:	REVISIONS:
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SOILS MAP
HIGHLAND WIND, LLC
HIGHLAND WIND PROJECT
HIGHLAND PLANTATION & PLEASANT HILL PLANTATION, ME
SHEET T-8 (35 of 35)

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
Gorham, Maine 04038

Drawn By: **B.J.** Checked By: **A.F.**

Date: **10/14/09** Scale: **1" = 200'**

Appendix 13-2

STORMWATER QUALITY SUMMARY BY WATERSHED

<u>Carabassett Watershed (#7)</u>			
West	Impervious Area	2.600303	Total Treatment= 84.11%
	%Treated	84.11%	

<u>Gilman Pond Watershed (#2,3,4,5,6)</u>			
		Phos Budget=	22.059 lb P/yr
Connector	Impervious Area	9.5768	
	%Treated	74.16%	
	Phos Export	10.3175	
East	Impervious Area	7.3420	
	%Treated	79.63%	
	Phos Export	6.2063	
West	Impervious Area	6.8201	Total Treatment= 77.69%
	%Treated	80.57%	Total WS Phos Ex= 22.0575
	Phos Export	5.5337	

<u>Kennebec (#1)</u>			
East	Impervious Area	9.204284	
	%Treated	74.64%	
West	Impervious Area	4.634114	Total Treatment= 75.45%
	%Treated	77.08%	

Project Name **HIGHLAND PLANTATION** BA=Buffer Adjacent to Small Imp BR=Roadside buffer
 Project Number **66060E** BL=Buffer w/level spreader DB=Detention basin
 Date **10/13/2009** BD=Buffer w/ditch turnout WP=Wet pond
 Done by **JEC** USF=Underdrain Soil Filter INF=Infiltration

QUALITY CALCULATIONS FOR NON LINEAR PORTION

Total NEW LINEAR impervious area for project= 2123213 sf = 48.74 acres
 Total NEW LINEAR landscaped area for project= 0 sf = 0.00 acres
 Total NEW LINEAR area of project= 2123213 sf = 48.74 acres
 Total NEW NONLIN impervious area for project= 52411 sf = 1.20 acres
 Total NEW NONLIN landscaped area for project= 17771 sf = 0.41 acres
 Total NEW NONLINEAR area of project= 70182 sf = 1.61 acres

Total impervious area for project= 2175624 sq ft = 49.95 acres
Total developed area for project= 2193395 sq ft = 50.35 acres
Total imp+landscaped area= 2193395 =Total linear+nonlinear area= 2193395 sq ft

Subcatchment #	BMP Type & #	NONLinear Area		Description If Applicable
		Imp (sf)	Land (sf)	
6A	USF1	15457	11248	Back part of O&M (buildings)
6B	USF2	34313	2949	Front part of O&M (parking lot)
TOTAL		49770	14197	

SUMMARY FOR THE NONLINEAR PORTION OF THE PROJECT

IMP Area Required area to be treated (sf)= 49790.45
Total NONLIN IMP Area Being Treated (sf)= 49770 95.0% >=95%
 DEVEL Area Required area to be treated (sf)= 56145.60
Total NONLIN DEVEL Area Being Treated (sf)= 63967 91.14% >=80%
 NONLinear Area Not Being Treated (sf)= 6215

Project Name **HIGHLAND PLANTATION** BA=Buffer Adjacent to Small Imp BR=Roadside buffer BRS=Roadside Buffer with Rock Sandwich
 Project Number **66060E** BL=Buffer w/level spreader DB=Detention basin
 Date **11/22/2010** BD=Buffer w/ditch turnout WP=Wet pond
 Done by **JAO** USF=Underdrain Soil Filter INF=Infiltration

Total Impervious Area for the Access Rd = 9.58 Acres Width of road during Construction (ft) = 16
 % of Project Treated for the Access Rd = 74.16% >= 75% Permanent width of road (ft)= 16

QUALITY CALCULATIONS FOR LINEAR PORTION-ACCESS RD

Gilman Pond (#3,#4,#5) Phosphorous Requirement Watershed per acre phosphorus budget (Appendix C): PAPB 0.038 # P/acre/year Total ac of devel. parcel: TA 585.5 acres Existing impervious area (Pre 1980) EIA _B 0 acres NWI wetland acreage: WA 0 acres Existing impervious area (post 1980) EIA _A 5 acres Steep slope acreage: SA 0 acres Project acreage: A = TA - (WA + SA + EIA _B + EIA _A) A 580.5 acres Project Phos Budget: PPB = P x A PPB 22.059 lbs P/year											
1=no tx, 0.4=buffer											
Roadway Alignment and/or Turbine Site	Station to Station		Right (R) Left (L) Both (B)	BMP No.	Watershed	BMP type Forest/Meadow	Imp. Area (acres)	Treatment Factor	Export Coefficient	Pre-Treatment lbs P/Year	Post Treatment lbs P/year
CONNECTOR STUE	0	150	B	WBL39	5	MEADOW	0.055	0.4	1.75	0.096419	0.0385675
CONNECTOR	75	350	B	CBR25	5	MEADOW	0.101	0.4	1.75	0.176768	0.0707071
CONNECTOR	350	1340	B	CBR26	5	FOREST	0.364	0.4	1.75	0.636364	0.2545455
CONNECTOR	1340	1475	B		5	FOREST	0.050	1	1.75	0.086777	0.0867769
CONNECTOR	1475	1830	B	CBRS2	5	FOREST	0.130	0.4	1.75	0.228191	0.0912764
CONNECTOR	1830	1860	B		5	FOREST	0.011	1	1.75	0.019284	0.0192837
CONNECTOR	1860	2025	B	CBRS3	5	FOREST	0.061	0.4	1.75	0.106061	0.0424242
CONNECTOR	2025	2100	B		5	FOREST	0.028	1	1.75	0.048209	0.0482094
CONNECTOR	2100	2500	B	CBR4	4	FOREST	0.147	0.4	1.75	0.257117	0.1028466
CONNECTOR	2500	3000	B	CBR5	4	FOREST	0.184	0.4	1.75	0.321396	0.1285583
CONNECTOR	3000	3875	B	CBRS4	4	FOREST	0.321	0.4	1.75	0.562443	0.224977
CONNECTOR	3875	3925	B		4	FOREST	0.018	1	1.75	0.03214	0.0321396
CONNECTOR	3925	4100	B	CBRS5	4	FOREST	0.064	0.4	1.75	0.112489	0.0449954
CONNECTOR	4100	4125	B		4	FOREST	0.009	1	1.75	0.01607	0.0160698
CONNECTOR	4125	4610	B	CBR6	4	FOREST	0.178	0.4	1.75	0.311754	0.1247016
CONNECTOR	4610	4700	B		4	FOREST	0.033	1	1.75	0.057851	0.0578512
CONNECTOR	4700	4900	B	CBRS6	4	FOREST	0.073	0.4	1.75	0.128558	0.0514233
CONNECTOR	4900	5000	B		4	FOREST	0.037	1	1.75	0.064279	0.0642792
CONNECTOR	5000	5305	B	CBR7	4	FOREST	0.112	0.4	1.75	0.196051	0.0784206
CONNECTOR	5305	5355	B		4	FOREST	0.018	1	1.75	0.03214	0.0321396
CONNECTOR	5355	5390	B	CBR7	4	FOREST	0.013	0.4	1.75	0.022498	0.0089991
CONNECTOR	5390	5480	B		4	FOREST	0.033	1	1.75	0.057851	0.0578512
CONNECTOR	5480	5610	B	CBR25	4	FOREST	0.048	0.4	1.75	0.083563	0.0334252
CONNECTOR	5610	5685	B		4	FOREST	0.028	1	1.75	0.048209	0.0482094
CONNECTOR	5685	6100	B	CBR26	4	FOREST	0.152	0.4	1.75	0.266758	0.1067034

CONNECTOR	6100	6300	L	CBD5	4	FOREST	0.073	0.4	1.75	0.128558	0.0514233
CONNECTOR	6100	6300	R	CBD6	4	FOREST	0.073	0.4	1.75	0.128558	0.0514233
CONNECTOR	6300	6700	B	CBR8	4	FOREST	0.147	0.4	1.75	0.257117	0.1028466
CONNECTOR	6700	7150	B		4	FOREST	0.165	1	1.75	0.289256	0.2892562
CONNECTOR	7150	7350	B	CBD27	4	FOREST	0.073	0.4	1.75	0.128558	0.0514233
CONNECTOR	7350	7575	B	CBD28	4	FOREST	0.083	0.4	1.75	0.144628	0.0578512
CONNECTOR	7575	7900	L	CBD9	4	FOREST	0.119	0.4	1.75	0.208907	0.0835629
CONNECTOR	7575	7900	R	CBD8	4	FOREST	0.119	0.4	1.75	0.208907	0.0835629
CONNECTOR	7900	8000	B		4	FOREST	0.037	1	1.75	0.064279	0.0642792
CONNECTOR	8000	8400	B	CBD29	4	FOREST	0.147	0.4	1.75	0.257117	0.1028466
CONNECTOR	8400	8725	B	CBD31	4	FOREST	0.079	0.4	1.75	0.13825	0.0553
CONNECTOR	8725	8890	B	CBR10	4	FOREST	0.024	0.4	1.75	0.042	0.0168
CONNECTOR	8890	9600	B	CBD12	4	FOREST	0.075	0.4	1.75	0.13125	0.0525
CONNECTOR	9600	9900	B	CBD13	4	FOREST	0.053	0.4	1.75	0.09275	0.0371
CONNECTOR	9900	10200	b		4	FOREST	0.045	1	1.75	0.07875	0.07875
CONNECTOR	10200	10350	B	CBD32	4	FOREST	0.043	0.4	1.75	0.07525	0.0301
CONNECTOR	10350	10800	B	CBD14	4	FOREST	0.063	0.4	1.75	0.11025	0.0441
CONNECTOR	10800	11045	B	CBD15	4	FOREST	0.020	0.4	1.75	0.035	0.014
CONNECTOR	11045	11500	B		4	FOREST	0.074	1	1.75	0.1295	0.1295
CONNECTOR	11500	11870	B	CBD34	4	FOREST	0.107	0.4	1.75	0.18725	0.0749
CONNECTOR	11870	11950	B	CBR27	4	FOREST	0.009	0.4	1.75	0.01575	0.0063
CONNECTOR	11950	12300	B		4	FOREST	0.034	1	1.75	0.0595	0.0595
CONNECTOR	12300	12550	B	CBL12	4	FOREST	0.028	0.4	1.75	0.049	0.0196
CONNECTOR	12550	12700	B		4	FOREST	0.015	1	1.75	0.02625	0.02625
CONNECTOR	12700	12875	B	CBR28	4	MEADOW	0.024	0.4	1.75	0.042	0.0168
CONNECTOR	12875	13500	B	CBD17	4	FOREST	0.120	0.4	1.75	0.21	0.084
CONNECTOR	13500	14000	B	CBR29	4	FOREST	0.110	0.4	1.75	0.1925	0.077
CONNECTOR	14000	14110	B	CBD35	4	FOREST	0.015	0.4	1.75	0.02625	0.0105
CONNECTOR	14110	14175	B		4	FOREST	0.011	1	1.75	0.01925	0.01925
CONNECTOR	14175	14300	B	CBD36	4	FOREST	0.015	0.4	1.75	0.02625	0.0105
CONNECTOR	14300	14375	B		4	FOREST	0.006	1	1.75	0.0105	0.0105
CONNECTOR	14375	14475	B	CBR30	4	FOREST	0.017	0.4	1.75	0.02975	0.0119
CONNECTOR	14475	14775	B		4	FOREST	0.083	1	1.75	0.14525	0.14525
CONNECTOR	14775	15025	B	CBD37	4	FOREST	0.031	0.4	1.75	0.05425	0.0217
CONNECTOR	15025	15100	B		4	FOREST	0.008	1	1.75	0.014	0.014
CONNECTOR	15100	15600	B	CBR15	4	FOREST	0.156	0.4	1.75	0.273	0.1092
CONNECTOR	15600	15830	B	CBR16	4	FOREST	0.084	0.4	1.75	0.147842	0.0591368
CONNECTOR	15830	16150	B	CBD21	4	FOREST	0.132	0.4	1.75	0.231	0.0924
CONNECTOR	16150	17250	B		4	FOREST	0.317	1	1.75	0.55475	0.55475
CONNECTOR	17250	17450	B	CBR31	4	FOREST	0.064	0.4	1.75	0.112	0.0448
CONNECTOR	17450	17890	B	CBD24	4	FOREST	0.070	0.4	1.75	0.1225	0.049
CONNECTOR	17890	18575	B	CBR18	4	MEADOW	0.129	0.4	1.75	0.22575	0.0903
CONNECTOR	18575	18625	B		4	FOREST	0.008	1	1.75	0.014	0.014
CONNECTOR	18625	19050	B	CBR19	4	MEADOW	0.099	0.4	1.75	0.17325	0.0693
CONNECTOR	19050	20325	B	CBR20	4	MEADOW	0.452	0.4	1.75	0.791	0.3164
CONNECTOR	20325	20375	B		4	MEADOW	0.008	1	1.75	0.014	0.014

CONNECTOR	20375	20890	B	CBR21	3	MEADOW	0.083	0.4	1.75	0.14525	0.0581
CONNECTOR	20890	21075	B		3	MEADOW	0.003	1	1.75	0.00525	0.00525
CONNECTOR	21075	21925	B	CBR32	3	MEADOW	0.286	0.4	1.75	0.5005	0.2002
CONNECTOR	21925	22625	B	CBR22	3	FOREST	0.257	0.4	1.75	0.449954	0.1799816
CONNECTOR	22625	23125	B	CBRS7	3	FOREST	0.184	0.4	1.75	0.321396	0.1285583
CONNECTOR	23125	23180	B		3	FOREST	0.020	1	1.75	0.035354	0.0353535
CONNECTOR	23180	23325	B	CBRS7	3	FOREST	0.053	0.4	1.75	0.093205	0.0372819
CONNECTOR	23325	23360	B		3	FOREST	0.013	1	1.75	0.022498	0.0224977
CONNECTOR	23360	23680	B	CBRS7	3	FOREST	0.118	0.4	1.75	0.205693	0.0822773
CONNECTOR	23680	23700	B		3	FOREST	0.007	1	1.75	0.012856	0.0128558
CONNECTOR	23700	24400	B	CBRS7	3	FOREST	0.257	0.4	1.75	0.449954	0.1799816
CONNECTOR	24400	24500	B	CBR23	3	FOREST	0.037	0.4	1.75	0.064279	0.0257117
CONNECTOR	24500	24540	B		3	FOREST	0.015	1	1.75	0.025712	0.0257117
CONNECTOR	24540	24730	B	CBRS8	3	FOREST	0.070	0.4	1.75	0.12213	0.0488522
CONNECTOR	24730	24825	B		3	FOREST	0.035	1	1.75	0.061065	0.0610652
CONNECTOR	24825	25050	B	CBRS9	3	FOREST	0.083	0.4	1.75	0.144628	0.0578512
CONNECTOR	25050	25195	B		3	FOREST	0.053	1	1.75	0.093205	0.0932048
CONNECTOR	25195	25410	B	CBRS10	3	FOREST	0.079	0.4	1.75	0.1382	0.0552801
CONNECTOR	25410	25750	B	CBR24	3	FOREST	0.125	0.4	1.75	0.218549	0.0874197
CONNECTOR	25750	25780	B		3	FOREST	0.011	1	1.75	0.019284	0.0192837
CONNECTOR	25780	25930	B	CBRS11	3	FOREST	0.055	0.4	1.75	0.096419	0.0385675
CONNECTOR	25930	26090	B		3	FOREST	0.059	1	1.75	0.102847	0.1028466
CONNECTOR	26090	27425	B	CBRS12	3	FOREST	0.490	0.4	1.75	0.858127	0.3432507
CONNECTOR	27425	27475	Both (B)		3	FOREST	0.018	1	1.75	0.03214	0.0321396
CONNECTOR	27475	27590	Both (B)	CBRS13	3	FOREST	0.042	0.4	1.75	0.073921	0.0295684
CONNECTOR	27590	27700	Both (B)		3	FOREST	0.040	1	1.75	0.070707	0.0707071
CONNECTOR	27700	27750	Both (B)	CBRS14	3	FOREST	0.018	0.4	1.75	0.03214	0.0128558
CONNECTOR	27750	27960	Both (B)		3	FOREST	0.077	1	1.75	0.134986	0.1349862
CONNECTOR	27960	28030	Both (B)	CBRS15	3	FOREST	0.026	0.4	1.75	0.044995	0.0179982
CONNECTOR	28030	28100	Both (B)		3	FOREST	0.026	1	1.75	0.044995	0.0449954
CONNECTOR	28100	28185	Both (B)	CBRS16	3	FOREST	0.031	0.4	1.75	0.054637	0.0218549
CONNECTOR	28185	28325	Both (B)		3	FOREST	0.051	1	1.75	0.089991	0.0899908
CONNECTOR	28325	28500	Both (B)	CBRS17	3	FOREST	0.064	0.4	1.75	0.112489	0.0449954
Access	0	710	B		6	Forest	0.225	1	1.75	0.39375	0.39375
Access	710	875	B	ABRS1	6	FOREST	0.057	0.4	1.75	0.09975	0.0399
Access	875	1620	B		6	MEADOW	0.010	1	1.75	0.0175	0.0175
Access	1620	2000	B	ABR1	6	MEADOW	0.054	0.4	1.75	0.0945	0.0378
Access	2000	2175	B		6	FOREST	0.023	1	1.75	0.04025	0.04025
Access	2175	2610	B	ABRS2	6	MEADOW	0.121	0.4	1.75	0.21175	0.0847
Access	2610	2700	B		6	FOREST	0.033	1	1.75	0.057851	0.0578512
Access	2700	3200	B	ABR2	6	FOREST	0.184	0.4	1.75	0.321396	0.1285583
ACCESS	3200	3500	B		6	FOREST	0.110	1	1.75	0.192837	0.1928375
Access	3500	3800	B	ABRS5	6	FOREST	0.110	0.4	1.75	0.192837	0.077135
Access	3800	4000	B		6	FOREST	0.073	1	1.75	0.128558	0.1285583
Access	4000	4250	B	ABRS6	6	FOREST	0.092	0.4	1.75	0.160698	0.0642792
ACCESS	4250	4300	B	ABRS7	6	FOREST	0.018	0.4	1.75	0.03214	0.0128558
ACCESS	4300	5250	B		6	FOREST	0.349	1	1.75	0.610652	0.610652
ACCESS	5250	5450	B	ABD1	6	FOREST	0.073	0.4	1.75	0.128558	0.0514233

Project Name **HIGHLAND PLANTATION** BA=Buffer Adjacent to Small Imp BR=Roadside buffer BRS=Roadside Buffer with Rock Sandw
 Project Number **66060E** BL=Buffer w/level spreader DB=Detention basin
 Date **11/22/2010** BD=Buffer w/ditch turnout WP=Wet pond
 Done by **JAO** USF=Underdrain Soil Filter INF=Infiltration

Total Impervious Area for the East = 16.55 Acres Width of road during Construction (ft) = 34
 Percent of Project Treated for the East = 76.85% >= 75% Permanent width of road (ft)= 16

QUALITY CALCULATIONS FOR LINEAR PORTION-EAST

Gilman Pond (#2) Phosphorous Requirement Watershed per acre phosphorus budget (Appendix C): PAPB 0.038 # P/acre/year Total ac of devel. parcel: TA 585.5 acres Existing impervious area (Pre 1980) EIA _B 0 acres NWI wetland acreage: WA 0 acres Existing impervious area (post 1980) EIA _A 5 acres Steep slope acreage: SA 0 acres Project acreage: A = TA - (WA + SA + EIA _B + EIA _A) A 580.5 acres Project Phos Budget: PPB = P x A PPB 22.059 lbs P/year												
1=no tx, 0.4=buffer												
Roadway Alignment and/or Turbine Site	Station to Station		Right (R) Left (L) Both (B)	BMP No.	Watershed	BMP type Forest/Meadow	Imp. Area (acres)	Treatment Factor	Export Coefficient	Pre-Treatment lbs P/Year	Post Treatment lbs P/year	
E31	4650	4850	B	EBRS7	2	FOREST	0.073	0.4	1.75	0.128558	0.0514233	
E31	4850	5125	B		2		0.101	1	1.75	0.176768	0.1767677	
TURBINE 22E			B	EBR7	2	FOREST	0.190	0.4	1.25	0.2375	0.095	
TURBINE 23E			B	EBR9	2	FOREST	0.190	0.4	1.25	0.2375	0.095	
TURBINE 25E			B	EB33	2	MEADOW	0.095	0.4	1.25	0.11875	0.0475	
E36	0	800	B		2		0.294	1	1.75	0.514233	0.5142332	
E36	800	1400	B	EBL40	2	FOREST	0.220	0.4	1.75	0.385675	0.15427	
E36	1400	2225	B		2		0.303	1	1.75	0.530303	0.530303	
E36	2225	3125	B	EBL16	2	FOREST	0.331	0.4	1.75	0.578512	0.231405	
E36	3125	3350	B		2		0.083	1	1.75	0.144628	0.1446281	
TURBINE 26E			B	NONE	2		0.095	1	1.25	0.11875	0.11875	
E36	3350	3905	B	EBRS10	2	MEADOW	0.204	0.4	1.75	0.356749	0.1426997	
E36	3905	4300	B	EBL20	2	FOREST	0.145	0.4	1.75	0.253903	0.1015611	
TURBINE 27E			B	EBR15	2	MEADOW	0.190	0.4	1.25	0.2375	0.095	
E36	4300	4850	B	EBL43	2	FOREST	0.140	0.4	1.75	0.245	0.098	
E36	4850	5105	B	EBL39	2	FOREST	0.094	0.4	1.75	0.163912	0.0655647	
TURBINE 28E			B	EBRS11	2	FOREST	0.190	0.4	1.25	0.2375	0.095	
E37	2600	2700	B	EBR19	2	FOREST	0.037	0.4	1.75	0.064279	0.0257117	
TURBINE 29E			B	EBR20	2	MEADOW	0.095	0.4	1.25	0.11875	0.0475	
E43	400	600	B	EBL24	2	FOREST	0.073	0.4	1.75	0.128558	0.0514233	
E43	600	950	B	EBL41	2	FOREST	0.129	0.4	1.75	0.224977	0.0899908	
E43	950	1060	B		2		0.040	1	1.75	0.070707	0.0707071	
E43	1060	1450	B	EBRS16	2	FOREST	0.143	0.4	1.75	0.250689	0.1002755	
E43	1450	1600	B		2		0.055	1	1.75	0.096419	0.0964187	
E43	1600	1800	B	EBRS17	2	FOREST	0.073	0.4	1.75	0.128558	0.0514233	
E43	1800	2150	B		2		0.129	1	1.75	0.224977	0.224977	
E43	2150	2525	B	EBRS18	2	MEADOW	0.138	0.4	1.75	0.241047	0.0964187	
E43	2525	3615	B	EBR21	2	FOREST	0.400	0.4	1.75	0.700643	0.2802571	
TURBINE 30E			B	EBR22	2	FOREST	0.095	0.4	1.25	0.11875	0.0475	

E43	3615	3650	B		2		0.070	1	1.75	0.1225	0.1225
E43	3650	3900	B	EBD2	2	FOREST	0.092	0.4	1.75	0.160698	0.0642792
E43	3900	5050	B	EBR24	2	MEADOW	0.422	0.4	1.75	0.73921	0.2956841
TURBINE 31E			B	EBR25	2	FOREST	0.095	0.4	1.25	0.11875	0.0475
TURBINE 32E			B	EB40	2	FOREST	0.190	0.4	1.25	0.2375	0.095
E43	5800	6250	B	EBR27	2	FOREST	0.020	0.4	1.75	0.035	0.014
E43	6250	7525	B	EBRS21	2	FOREST	0.468	0.4	1.75	0.819559	0.3278237
E43	7525	7725	B		2		0.073	1	1.75	0.128558	0.1285583
E43	7725	8950	B	EBRS22	2	FOREST	0.450	0.4	1.75	0.78742	0.3149679
E43	8950	9007	B		2		0.021	1	1.75	0.036639	0.0366391
TURBINE 34E			B	EBRS23	2	MEADOW	0.190	0.4	1.25	0.2375	0.095
E47	175	850	B	EBS29	2	FOREST	0.248	0.4	1.75	0.433884	0.1735537
E47	850	950	B		2		0.037	1	1.75	0.064279	0.0642792
TURBINE 35E			B	B43	2	FOREST	0.190	0.4	1.25	0.2375	0.095
E46	2000	2500	B		2		0.184	1	1.75	0.321396	0.3213958
MET TOWER E40	0	40	B		2		0.011	1	1.75	0.019284	0.0192837
MET TOWER E40	40	215	B	EBR53	2	FOREST	0.048	0.4	1.75	0.084366	0.0337466
MET TOWER E41	0	45	B	EBRS21	2	FOREST	0.012	0.4	1.75	0.021694	0.0086777
MET TOWER E41	45	680	B	EBR54	2	FOREST	0.175	0.4	1.75	0.021694	0.0086777
										0	0
Total Impervious							7.342	acres		11.66153	6.2063

22.059 <= 6.2063
79.63% Treatment

Kennebec River (#1)
General Requirement (75% Treatment)

1=no tx, 0.4=buffer

Roadway Alignment and/or Turbine Site	Station to Station		Right (R) Left (L) Both (B)	BMP No.	Watershed	BMP type Forest/Meadow	Imp. Area (acres)	Treatment Factor
TURBINE 19E			B	EBR1	1	FOREST	0.190	0.4
E31	250	700	B	EBR2	1	FOREST	0.165	0.4
E31	700	900	B	EBRS1	1	FOREST	0.073	0.4
E31	900	950	B	EBR3	1	FOREST	0.018	0.4
E31	950	1025	B		1		0.028	1
E31	1025	1125	B	EBR3	1	FOREST	0.037	0.4
E31	1125	1250	B		1		0.046	1
E31	1250	1750	B	EBL3	1	FOREST	0.184	0.4
E31	1750	2250	B		1		0.184	1
E31	2250	2500	B	EBR5	1	FOREST	0.092	0.4
TURBINE 20E			B		1		0.190	1
E31	3100	3300	B	EBL6	1	FOREST	0.073	0.4
E31	3300	3520	B		1		0.081	1
E31	3520	4000	B	EBRS5	1	FOREST	0.176	0.4
E31	4000	4350	B	EBR6	1	FOREST	0.129	0.4
E31	4350	4500	B	EBRS6	1	FOREST	0.055	0.4
E31	4500	4650	B		1		0.055	1
TURBINE 21E			B	EBR5	1	FOREST	0.190	0.4
E31	2475	3100	B	EBL6	1	FOREST	0.230	0.4
E33	150	200	B	EBRS8	1	FOREST	0.018	0.4

E33	200	350	B		1		0.055	1
E33	350	800	B	EBRS9	1	FOREST	0.165	0.4
E33	800	1025	B	EBD3	1	FOREST	0.083	0.4
E33	1025	1125	B		1		0.037	1
E33	1125	1500	B	EBR8	1	FOREST	0.138	0.4
E31	5125	5150	B	EBR10	1	FOREST	0.009	0.4
E33	1500	1800	B	EBR10	1	FOREST	0.110	0.4
E33	1800	2050	B	EBL15	1	FOREST	0.092	0.4
E33	2050	2240	B		1		0.070	1
E33	2240	2380	B	EBR11	1	FOREST	0.051	0.4
TURBINE 24E			B	EBRS8	1	FOREST	0.190	0.4
E33	2380	2400	B		1		0.007	1
E33	2400	2680	B	EBR12	1	FOREST	0.103	0.4
E33	2680	2750	B		1		0.026	1
E33	2750	2900	B	EBR13	1	FOREST	0.055	0.4
E33	2900	3050	B		1		0.055	1
TURBINE 25E			B	EB33	1	MEADOW	0.095	0.4
TURBINE 26E			B	NONE	1		0.095	1
E36	5105	5400	B	EBL39	1	FOREST	0.108	0.4
E36	5400	5500	B		1		0.037	1
E36	5500	5800	B	EBR16	1	MEADOW	0.110	0.4
E36	5800	5990	B	EBR17	1	MEADOW	0.070	0.4
E37	0	425	B		1		0.156	1
E37	425	550	B	EBR18	1	MEADOW	0.046	0.4
E37	550	700	B		1		0.055	1
E37	700	850	B	EBRS12	1	FOREST	0.055	0.4
E37	850	1250	B		1		0.147	1
E37	1250	1315	B	EBL24	1	FOREST	0.024	0.4
E43	0	400	B	EBL24	1	FOREST	0.147	0.4
E37	1315	2050	B	EBRS14	1	FOREST	0.270	0.4
E37	2050	2200	B		1		0.055	1
E37	2200	2600	B	EBR19	1	FOREST	0.147	0.4
TURBINE 29E			B	EBR20	1	FOREST	0.095	0.4
TURBINE 30E			B	EBR22	1	FOREST	0.095	0.4
TURBINE 31E			B	EBR25	1	FOREST	0.095	0.4
E43	5050	5400	B	EBR26	1	MEADOW	0.129	0.4
E43	5400	5675	B		1		0.101	1
E43	5675	5800	B	EBR27	1	MEADOW	0.046	0.4
TURBINE 33E			B	EBR28	1	FOREST	0.190	0.4
E47	950	1150	B	EBD6	1	FOREST	0.073	0.4
E47	1150	1500	B	EBRS24	1	FOREST	0.129	0.4
E47	1500	1750	B		1		0.092	1
E47	1750	2225	B	EBR31	1	MEADOW	0.174	0.4
E47	2225	2800	B	EBRS26	1	MEADOW	0.211	0.4
E47	2800	3300	B	EBD4	1	FOREST	0.184	0.4
E47	3300	3400	B		1		0.037	1
E47	3400	3750	B	EBRS28	1	FOREST	0.129	0.4
E47	3750	3850	B		1		0.037	1
E47	3850	4300	B	EBRS29	1	FOREST	0.165	0.4
E47	4300	4600	B	EBR33	1	FOREST	0.110	0.4
E47	4600	4920	B		1		0.118	1
E47	4920	5430	B	EBR34	1	FOREST	0.187	0.4

E47 STUB ROAD	100	400	B	EBL36	1	MEADOW	0.110	0.4
TURBINE 39E			B	EBR35	1	MEADOW	0.190	0.4
E47	5430	5875	B	EBL38	1	MEADOW	0.163	0.4
TURBINE 38E			B	EBR36	1	MEADOW	0.190	0.4
E46	100	350	B		1		0.092	1
E46	350	600	B	EBL36	1	MEADOW	0.092	0.4
E46	600	975	B	EBRS31	1	FOREST	0.138	0.4
E46	975	1150	B		1		0.064	1
E46	1150	1600	B	EBR37	1	FOREST	0.165	0.4
TURBINE 36E			B	NONE	1	FOREST	0.190	1
E46	1600	1700	B		1		0.037	1
E46	1700	2000	B	EBR39	1	FOREST	0.110	0.4
TURBINE 37E			B	NONE	1	FOREST	0.190	1

Total Impervious **9.204** acres

74.64% Treatment >= 75%

Project Name **HIGHLAND PLANTATION** BA=Buffer Adjacent to Small Imp BR=Roadside buffer BRS=Roadside Buffer with Rock Sandwich
 Project Number **66060E** BL=Buffer w/level spreader DB=Detention basin
 Date **11/22/2010** BD=Buffer w/ditch turnout WP=Wet pond
 Done by **JAO** USF=Underdrain Soil Filter INF=Infiltration

Total Impervious Area for the West = 14.05 Acres Width of road during Construction (ft) = 34
 Percent of Project Treated for the West = **80.07%** >= 75% Permanent width of road (ft)= 16

QUALITY CALCULATIONS FOR LINEAR PORTION-WEST

Gilman Pond (#4, #5, & #6) Phosphorous Requirement Watershed per acre phosphorus budget (Appendix C): PAB 0.038 # P/acre/year Total ac of devel. parcel: TA 585.5 acres Existing impervious area (Pre 1980) EIA _B 0 acres NWI wetland acreage: WA 0 acres Existing impervious area (post 1980) EIA _A 5 acres Steep slope acreage: SA 0 acres Project acreage: A = TA - (WA + SA + EIA _B + EIA _A) A 580.5 acres Project Phos Budget: PPB = P x A PPB 22.059 lbs P/year											
1=no tx, 0.4=buffer											
Roadway Alignment and/or Turbine Site	Station to Station		Right (R) Left (L) Both (B)	BMP No.	Watershed	BMP type Forest/Meadow	Imp. Area (acres)	Treatment Factor	Export Coefficient	Pre-Treatment lbs P/Year	Post Treatment lbs P/year
W2	2850	3050	B	DT2	GILMAN	FOREST	0.073	0.4	1.75	0.1286	0.0514
W2	2500	2850	B	BL7	GILMAN	FOREST	0.129	0.4	1.75	0.2250	0.0900
W2	2350	2500	B	NONE	GILMAN		0.055	1	1.75	0.0964	0.0964
W2	1900	2350	B	RB6	GILMAN	FOREST	0.165	0.4	1.75	0.2893	0.1157
W2	1800	1900	B	NONE	GILMAN		0.037	1	1.75	0.0643	0.0643
W2	1600	1800	B	RB7	GILMAN	FOREST	0.073	0.4	1.75	0.1286	0.0514
W11	3025	3550	B	RB12	GILMAN	FOREST	0.193	0.4	1.75	0.3375	0.1350
W11	3550	3675	B	NONE	GILMAN		0.046	1	1.75	0.0803	0.0803
W11	3675	4000	B	RB13	GILMAN	FOREST	0.119	0.4	1.75	0.2089	0.0836
W11	4000	4050	B	NONE	GILMAN		0.018	1	1.75	0.0321	0.0321
W11	4050	4400	B	RB14	GILMAN	FOREST	0.129	0.4	1.75	0.2250	0.0900
W11	4400	4650	B	BL11	GILMAN	FOREST	0.092	0.4	1.75	0.1607	0.0643
W12	0	250	B	BL11	GILMAN	FOREST	0.092	0.4	1.75	0.1607	0.0643
W11	4650	4950	B	BL12	GILMAN	FOREST	0.110	0.4	1.75	0.1928	0.0771
TURBINE10W				B10	GILMAN	FOREST	0.190	0.4	1.25	0.2375	0.0950
TURBINE 12W				B12	GILMAN	FOREST	0.190	0.4	1.25	0.2375	0.0950
W11	4950	5600	B	NONE	GILMAN		0.239	1	1.75	0.4178	0.4178
W11	5600	6200	B	BL14	GILMAN	FOREST	0.220	0.4	1.75	0.3857	0.1543
TURBINE 11W				B11	GILMAN	FOREST	0.190	0.4	1.25	0.2375	0.0950
W18	0	100	B	BL12	GILMAN	FOREST	0.037	0.4	1.75	0.0643	0.0257
W18	100	175	B	NONE	GILMAN		0.028	1	1.75	0.0482	0.0482
W18	175	575	B	RB15	GILMAN	FOREST	0.147	0.4	1.75	0.2571	0.1028
W18	575	800	B	NONE	GILMAN		0.083	1	1.75	0.1446	0.1446
W18	800	1300	B	BL15	GILMAN	FOREST	0.184	0.4	1.75	0.3214	0.1286
W18	1300	1650	B	BL16	GILMAN	FOREST	0.129	0.4	1.75	0.2250	0.0900
W18	1650	1750	B	NONE	GILMAN		0.037	1	1.75	0.0643	0.0643
W18	1750	2250	B	RB16	GILMAN	FOREST	0.184	0.4	1.75	0.3214	0.1286
TURBINE 13W				BL15	GILMAN	FOREST	0.095	0.4	1.25	0.1188	0.0475
TURBINE 13W				NONE	GILMAN	FOREST	0.095	1	1.25	0.1188	0.1188
W18	2250	2600	B	BL17	GILMAN	FOREST	0.129	0.4	1.75	0.2250	0.0900

TURBINE 5W				B5	CARRAB	FOREST	0.190	0.4
W7	500	1550	B	RB22	CARRAB	FOREST	0.386	0.4
TURBINE 6W				B6	CARRAB	FOREST	0.190	0.4
MET TOWER 5W	0	445	12	BL21	CARRAB	FOREST	0.123	0.4
MET TOWER 5W	0	365	12	RB23	CARRAB	FOREST	0.101	0.4

Total Impervious 2.600 acres

84.11% Treatment >= 75%

Kennebec River (#1)
General Requirement (75% Treatment)

1=no tx, 0.4=buffer

Roadway Alignment and/or Turbine Site	Station to Station		Right (R) Left (L) Both (B)	BMP No.	Watershed	BMP type Forest/Meadow	Imp. Area (acres)	Treatment Factor
W1	1850	2250	B	BL1	KENNEBEC	FOREST	0.147	0.4
W1	1550	1850	B	BL2	KENNEBEC	FOREST	0.110	0.4
W1	970	1550	B	RB1	KENNEBEC	FOREST	0.213	0.4
TURBINE 2W				B2	KENNEBEC	FOREST	0.190	0.4
W2	8800	8925	B	B2	KENNEBEC	FOREST	0.046	0.4
W2	8550	8800	B	NONE	KENNEBEC		0.092	1
W2	8450	8550	B	RB2	KENNEBEC	FOREST	0.037	0.4
TURBINE 3W				B3	KENNEBEC	FOREST	0.190	0.4
TURBINE 4W				B4	KENNEBEC	FOREST	0.190	0.4
W2	4800	5800	B	RB4	KENNEBEC	FOREST	0.367	0.4
W2	4450	4800	B	BL6	KENNEBEC	FOREST	0.129	0.4
W2	3050	4450	B	RB5	KENNEBEC	FOREST	0.514	0.4
TURBINE 8W				B8	KENNEBEC	FOREST	0.190	0.4
TURBINE 9W				NONE	KENNEBEC	FOREST	0.190	1
W2	1500	1600	B	NONE	KENNEBEC		0.037	1
W2	1150	1500	B	BL8	KENNEBEC	FOREST	0.129	0.4
W2	500	1150	B	NONE	KENNEBEC		0.239	1
W2	75	500	B	RB8	KENNEBEC	FOREST	0.156	0.4
W2	0	75	B	BL9	KENNEBEC	FOREST	0.028	0.4
W11	0	400	B	BL9	KENNEBEC	FOREST	0.147	0.4
W11	400	600	B	NONE	KENNEBEC		0.073	1
W11	600	850	B	RB9	KENNEBEC	FOREST	0.092	0.4
W11	850	1050	B	NONE	KENNEBEC		0.073	1
W11	1050	1475	B	RB10	KENNEBEC	FOREST	0.156	0.4
W11	1475	1550	B	NONE	KENNEBEC		0.028	1
W11	1550	2600	B	RB11	KENNEBEC	FOREST	0.386	0.4
W10	200	700	B	NONE	KENNEBEC		0.184	1
W11	2600	3025	B	WBL39	KENNEBEC	FOREST	0.156	0.4
W7	100	500	B	NONE	KENNEBEC		0.147	1

Total Impervious 4.634 acres

77.08% Treatment >= 75%

Project Name **HIGHLAND PLANTATION**
 Project Number **66060E**
 Date **10/8/2010**
 Done by **JAO**

BR=Roadside Buffer
 Imp=Impervious area
 C1=Loamy Sand or Sandy Loam
 C2=Silt Loam, Clay Loam or Silty Clay Loam
 L=Length
 W=Width
 B=Buffer
 Land=Landscaped Area

REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFER ADJACENT TO DOWN HILL SIDE OF ROAD~
ACCESS RD

# of Travel Ways to Buffer	Length of Flow Forest	Length of Flow Meadow
1	35	50
2	55	80

* Buffer slopes may not exceed 20%

** Buffers may not be located in a wetland

*** Roadside slopes may be included in a meadow buffer if the slope is less than 4:1 **and** if the soils allow infiltration

Alignment	BMP Type & # ("BR-52")	# of Travel Ways (1 or 2)	Buffer Type (Forest or Meadow)	Buffer Slope	Length of Buffer (ft)
CONNECTOR	CBRS2	2	FOREST	17%	55
CONNECTOR	CBRS3	2	FOREST	18%	55
CONNECTOR	CBRS4	2	FOREST	18%	55
CONNECTOR	CBRS5	2	FOREST	17%	55
CONNECTOR	CBRS6	2	FOREST	18%	55
CONNECTOR	CBRS7	2	FOREST	19%	55
CONNECTOR	CBRS8	2	FOREST	23%	55
CONNECTOR	CBRS9	2	FOREST	22%	55
CONNECTOR	CBRS10	2	FOREST	18%	55
CONNECTOR	CBRS11	2	FOREST	20%	55
CONNECTOR	CBRS12	2	FOREST	19%	55
CONNECTOR	CBRS13	2	FOREST	26%	55
CONNECTOR	CBRS14	2	FOREST	19%	55
CONNECTOR	CBRS15	2	FOREST	26%	55
CONNECTOR	CBRS16	2	FOREST	20%	55
CONNECTOR	CBRS17	2	FOREST	22%	55
Access	ABRS1	2	FOREST	20%	55
Access	ABRS2	2	MEADOW	15%	80
Access	ABRS5	2	FOREST	20%	55
Access	ABRS6	2	FOREST	16%	55
ACCESS	ABRS7	2	FOREST	12%	55
Access	ABRS8	2	FOREST	18%	55

Project Name **HIGHLAND PLANTATION** BR=Roadside Buffer L=Length
 Project Number **66060E** Imp=Impervious area W=Width
 Date **10/8/2010** C1=Loamy Sand or Sandy Loam B=Buffer
 Done by **JAO** C2=Silt Loam, Clay Loam or Silty Clay Loam Land=Landscaped Area

REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFER ADJACENT TO DOWN HILL SIDE OF ROAD~
ACCESS RD

# of Travel Ways to Buffer	Length of Flow Forest	Length of Flow Meadow
1	35	50
2	55	80

- * Buffer slopes may not exceed 20%
- ** Buffers may not be located in a wetland
- *** Roadside slopes may be included in a meadow buffer if the slope is less than 4:1 **and** if the soils allow infiltration

Alignment	BMP Type & # ("BR-52")	# of Travel Ways (1 or 2)	Buffer Type (Forest or Meadow)	Buffer Slope	Length of Buffer (ft)
CONNECTOR	CBR4	2	FOREST	16%	55
CONNECTOR	CBR5	2	FOREST	12%	55
CONNECTOR	CBR6	2	FOREST	14%	55
CONNECTOR	CBR7	2	FOREST	16%	55
CONNECTOR	CBR8	2	FOREST	8%	55
CONNECTOR	CBR10	2	FOREST	12%	55
CONNECTOR	CBR15	2	FOREST	4%	55
CONNECTOR	CBR16	2	FOREST	8%	55
CONNECTOR	CBR18	2	MEADOW	12%	80
CONNECTOR	CBR19	2	MEADOW	14%	80
CONNECTOR	CBR20	2	MEADOW	20%	80
CONNECTOR	CBR21	2	MEADOW	10%	80
CONNECTOR	CBR22	2	FOREST	16%	55
CONNECTOR	CBR23	2	FOREST	22%	55
CONNECTOR	CBR24	2	FOREST	18%	55
CONNECTOR	CBR25	2	MEADOW	8%	80
CONNECTOR	CBR26	2	FOREST	22%	55
CONNECTOR	CBR27	2	FOREST	10%	55
CONNECTOR	CBR28	2	MEADOW	8%	80
CONNECTOR	CBR29	2	FOREST	10%	55
CONNECTOR	CBR30	2	FOREST	18%	55
CONNECTOR	CBR31	2	FOREST	10%	55
CONNECTOR	CBR32	2	MEADOW	16%	80
Access	ABR1	2	MEADOW	16%	80
Access	ABR2	2	FOREST	13%	55
Access	ABR3	2	FOREST	3%	55
MET TOWER E28	CBR33	1	FOREST	22%	35

Project Name **HIGHLAND PLANTATION**
 Project Number **66060E**
 Date **10/8/2010**
 Done by **JEC**

BR=Roadside Buffer
 Imp=Impervious area
 C1=Loamy Sand or Sandy Loam
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 L=Length
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REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFER ADJACENT TO DOWN HILL SIDE OF ROAD~
EAST

# of Travel Ways to Buffer	Length of Flow Forest	Length of Flow Meadow
1	35	50
2	55	80

* Buffer slopes may not exceed 20%

** Buffers may not be located in a wetland

*** Roadside slopes may be included in a meadow buffer if the slope is less than 4:1 **and** if the soils allow infiltration

Alignment	BMP Type & # ("BR-52")	# of Travel Ways (1 or 2)	Buffer Type (Forest or Meadow)	Buffer Slope	Length of Buffer (ft)
E3	EBR1	2	FOREST	15%	55
E31	EBR2	2	FOREST	15%	55
E31	EBR3	2	FOREST	15%	55
E31	EBR5	2	FOREST	15%	55
E31	EBR6	2	FOREST	15%	55
TURBINE 22E	EBR7	2	FOREST	15%	55
E33	EBR8	2	FOREST	15%	55
TURBINE 23E	EBR9	2	FOREST	15%	55
E31	EBR10	2	FOREST	15%	55
E33	EBR11	2	FOREST	15%	55
E33	EBR12	2	FOREST	15%	55
E33	EBR13	2	FOREST	15%	55
TURBINE 27E	EBR15	2	MEADOW	15%	80
E36	EBR16	2	MEADOW	15%	80
E36	EBR17	2	MEADOW	15%	80
E37	EBR18	2	MEADOW	15%	80
E37	EBR19	2	FOREST	15%	55
TURBINE 29E	EBR20	2	MEADOW	15%	55
E43	EBR21	2	FOREST	15%	55
TURBINE 30E	EBR22	2	FOREST	15%	55
E43	EBR24	2	MEADOW	15%	80
TURBINE 31E	EBR25	2	FOREST	15%	55
E43	EBR26	2	MEADOW	15%	80
E43	EBR27	2	FOREST	15%	55
TURBINE 33E	EBR28	2	FOREST	15%	55
E47	EBR33	2	FOREST	15%	55
E47	EBR34	2	FOREST	15%	55

TURBINE 39E	EBR35	2	MEADOW	15%	80
TURBINE 38E	EBR36	2	MEADOW	15%	80
E46	EBR37	2	FOREST	15%	55
E46	EBR39	2	FOREST	15%	55
MET TOWER E40	EBR53	2	FOREST	14%	55

Project Name **HIGHLAND PLANTATION**
 Project Number **66060E**
 Date **10/8/2010**
 Done by **JAO**

BR=Roadside Buffer
 Imp=Impervious area
 C1=Loamy Sand or Sandy Loam
 C2=Silt Loam, Clay Loam or Silty Clay Loam
 L=Length
 W=Width
 B=Buffer
 Land=Landscaped Area

REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFER ADJACENT TO DOWN HILL SIDE OF ROAD~
WEST

# of Travel Ways to Buffer	Length of Flow Forest	Length of Flow Meadow
1	35	50
2	55	80

* Buffer slopes may not exceed 20%

** Buffers may not be located in a wetland

*** Roadside slopes may be included in a meadow buffer if the slope is less than 4:1 **and** if the soils allow infiltration

Alignment	BMP Type & # ("BR-52")	# of Travel Ways (1 or 2)	Buffer Type (Forest or Meadow)	Buffer Slope	Length of Buffer (ft)
W1	RB1	2	FOREST	20%	55
W2	RB2	2	FOREST	12%	55
W2	RB3	2	FOREST	18%	55
W2	RB4	2	FOREST	11%	55
W2	RB5	2	FOREST	25%	55
W2	RB6	2	FOREST	14%	55
W2	RB7	2	FOREST	8%	55
W2	RB8	2	FOREST	25%	55
W11	RB9	2	FOREST	11%	55
W11	RB10	2	FOREST	20%	55
W11	RB11	2	FOREST	25%	55
W11	RB12	2	FOREST	25%	55
W11	RB13	2	FOREST	25%	55
W11	RB14	2	FOREST	20%	55
W18	RB15	2	FOREST	20%	55
W18	RB16	2	FOREST	25%	55
W18	RB17	2	FOREST	25%	55
W18	RB18	2	FOREST	27%	55
W18	RB19*	2	FOREST	25%	73
W18	RB20*	2	FOREST	25%	73
W18	RB21*	2	FOREST	22%	73
W7	RB22	2	FOREST	14%	55

*Have a treatment factor of 0.3

Project Name **HIGHLAND PLANTATION** BL=Buffer with a Level Lip Spre L=Length
 Project Number **66060E** Imp=Impervious area W=Width
 Date **10/8/2010** Land=Landscaped Area B=Buffer
 Done by **JAO** C1=Loamy Sand or Sandy Loar C2=Silt Loam, Clay Loam or Silty Clay Loam

REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFERS WITH LEVEL LIP SPREADERS~
ACCESS RD

0-8% Buffer Slope

Soils	Length of Flow Thru Buffer (ft)	Berm L for Forested Buffer(ft)		Berm L for Meadow Buffer(ft)	
		Per acre Imp	Per acre Land	Per acre Imp	Per acre Land
A	75	75	25	125	35
	100	65	20	75	25
	150	50	15	60	20
B	75	100	30	150	45
	100	80	25	100	30
	150	65	20	75	25
C1	75	125	35	150	45
	100	100	30	125	35
	150	75	25	100	30
C2	100	150	45	200	60
	150	100	30	150	45
D	150	150	45	200	60

9-15% Buffer Slope

Soils	Length of Flow Thru Buffer (ft)	Berm L for Forested Buffer(ft)		Berm L for Meadow Buffer(ft)	
		Per acre Imp	Per acre Land	Per acre Imp	Per acre Land
A	75	90	30	150	42
	100	78	24	90	30

	150	60	18	72	24
B	75	120	36	180	54
	100	96	30	120	36
	150	78	24	90	30
C1	75	150	42	180	54
	100	120	36	150	42
	150	90	30	120	36
C2	100	180	54	240	72
	150	120	36	180	54
D	150	180	54	240	72

Alignment	BMP Type & # ("BL-52")	Imp (acres)	Buffer Type (forest/meadow)	Soil Type	Buffer Slope	from table	from table	Length of Berm (ft)
						Length of Buffer (ft)	L of Berm per ac. imp	
CONNECTOR	CBL12	0.028	FOREST	D	17%	150	180	5
Access	ABL4	0.044	FOREST	D	21%	150	180	8
CONNECTOR	CBD9	0.119	FOREST	D	10%	150	180	21
CONNECTOR	CBD8	0.119	FOREST	D	13%	150	180	21
CONNECTOR	CBD29	0.147	FOREST	D	7%	150	150	22
CONNECTOR	CBD12	0.075	FOREST	D	8%	150	150	11
CONNECTOR	CBD13	0.053	FOREST	D	4%	150	150	8
CONNECTOR	CBD32	0.043	FOREST	D	4%	150	150	6
CONNECTOR	CBD14	0.063	FOREST	D	5%	150	150	9
CONNECTOR	CBD15	0.020	FOREST	D	6%	150	150	3
CONNECTOR	CBD17	0.120	FOREST	D	8%	150	150	18
CONNECTOR	CBD21	0.132	FOREST	D	3%	150	150	20
CONNECTOR	CBD24	0.070	FOREST	D	11%	150	180	13
Substation Main	CBD25	0.076	FOREST	D	9%	150	180	14
Substation Main	CBD26	0.076	Forest	D	11%	150	180	14
CONNECTOR	CBD28	0.083	FOREST	D	8%	150	150	12
CONNECTOR	CBD31	0.079	FOREST	D	15%	150	180	14
CONNECTOR	CBD34	0.107	FOREST	D	15%	150	180	19
CONNECTOR	CBD37	0.031	FOREST	D	7%	150	150	5

Project Name **HIGHLAND PLANTATION** BL=Buffer with a Level Lip Spre L=Length
 Project Number **66060E** Imp=Impervious area W=Width
 Date **10/8/2010** Land=Landscaped Area B=Buffer
 Done by **JEC** C1=Loamy Sand or Sandy Loar C2=Silt Loam, Clay Loam or Silty Clay Loam

REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFERS WITH LEVEL LIP SPREADERS~
EAST

0-8% Buffer Slope

Soils	Length of Flow Thru Buffer (ft)	Berm L for Forested Buffer(ft)		Berm L for Meadow Buffer(ft)	
		Per acre Imp	Per acre Land	Per acre Imp	Per acre Land
A	75	75	25	125	35
	100	65	20	75	25
	150	50	15	60	20
B	75	100	30	150	45
	100	80	25	100	30
	150	65	20	75	25
C1	75	125	35	150	45
	100	100	30	125	35
	150	75	25	100	30
C2	100	150	45	200	60
	150	100	30	150	45
D	150	150	45	200	60

9-15% Buffer Slope

Soils	Length of Flow Thru Buffer (ft)	Berm L for Forested Buffer(ft)		Berm L for Meadow Buffer(ft)	
		Per acre Imp	Per acre Land	Per acre Imp	Per acre Land
A	75	90	30	150	42
	100	78	24	90	30

	150	60	18	72	24
B	75	120	36	180	54
	100	96	30	120	36
	150	78	24	90	30
C1	75	150	42	180	54
	100	120	36	150	42
	150	90	30	120	36
C2	100	180	54	240	72
	150	120	36	180	54
D	150	180	54	240	72

Alignment	BMP Type & # ("BL-52")	Imp (acres)	Buffer Type (forest/meadow)	Soil Type	*Buffer Slope	from table	from table	Length of Berm (ft)
						Length of Buffer (ft)	L of Berm per ac. imp	
E31	EBL3	0.349	FOREST	D	6%	150	150	52
E31	EBL6	0.303	FOREST	D	15%	150	180	55
E33	EBL15	0.232	FOREST	D	15%	150	180	42
E36	EBL16	0.331	FOREST	D	23%	150	180	60
E36	EBL20	0.145	FOREST	D	23%	150	180	26
E43	EBL24	0.220	FOREST	D	8%	150	180	40
E47 STUB ROAD	EBL36	0.146	MEADOW	D	19%	150	180	26
E47	EBL38	0.163	MEADOW	D	21%	150	240	39
E36	EBL39	0.202	FOREST	D	20%	150	180	36
E47	EBR31	0.174	MEADOW	D	15%	150	180	31
E47	EBRS26	0.211	MEADOW	D	17%	150	180	38
E47	EBD4	0.184	FOREST	D	20%	150	180	33
E43	EBR27	0.066	FOREST	D	14%	150	180	12
E36	EBL40	0.220	FOREST	D	24%	150	180	40
E43	EBL41	0.129	FOREST	D	12%	150	180	23
E36	EBL43	0.140	FOREST	D	20%	150	180	25
E43	EBD2	0.092	FOREST	D	10%	150	180	17
E33	EBD3	0.083	FOREST	D	24%	150	180	15
TURBINE 19E	EBR1	0.190	FOREST	D	22%	150	180	34

Project Name **HIGHLAND PLANTATION** BL=Buffer with a Level Lip Spre L=Length
 Project Number **66060E** Imp=Impervious area W=Width
 Date **10/8/2010** Land=Landscaped Area B=Buffer
 Done by **JAO** C1=Loamy Sand or Sandy Loar C2=Silt Loam, Clay Loam or Silty Clay Loam

REQUIRED BUFFER FLOW PATH LENGTHS
~BUFFERS WITH LEVEL LIP SPREADERS~
WEST

0-8% Buffer Slope

Soils	Length of Flow Thru Buffer (ft)	Berm L for Forested Buffer(ft)		Berm L for Meadow Buffer(ft)	
		Per acre Imp	Per acre Land	Per acre Imp	Per acre Land
A	75	75	25	125	35
	100	65	20	75	25
	150	50	15	60	20
B	75	100	30	150	45
	100	80	25	100	30
	150	65	20	75	25
C1	75	125	35	150	45
	100	100	30	125	35
	150	75	25	100	30
C2	100	150	45	200	60
	150	100	30	150	45
D	150	150	45	200	60

9-15% Buffer Slope

Soils	Length of Flow Thru Buffer (ft)	Berm L for Forested Buffer(ft)		Berm L for Meadow Buffer(ft)	
		Per acre Imp	Per acre Land	Per acre Imp	Per acre Land
A	75	90	30	150	42
	100	78	24	90	30
	150	60	18	72	24

Project Name **HIGHLAND PLANTATION** BD=Buffer with Ditch Turnouts L=Length
 Project Number **66060E** Imp=Impervious area W=Width
 Date **10/8/2010** Land=Landscaped Area B=Buffer
 Done by **JAO** C1=Loamy Sand or Sandy Loam C2=Silt Loam, Clay Loam or Silty Clay Loam

REQUIRED BUFFER FLOW PATH LENGTHS
~DITCH TURNOUTS TO BUFFERS~
ACCESS RD

Soils	Length of Road and Ditch	0-8% Buffer Slope		8-15% Buffer Slope	
		length of Flow	length of Flow	Length of Flow	Length of Flow
		Forest	Meadow	Forest	Meadow
A	200	50	70	60	84
	300	50	85	60	102
	400	60	100	72	120
B	200	50	70	60	84
	300	50	85	60	102
	400	60	100	72	120
C1	200	60	100	72	120
	300	75	120	90	144
	400	100	N/A	120	N/A
C2	200	75	120	90	144
	300	100	N/A	120	N/A
	400				
D	200	100	150	120	180

Alignment	BMP Type & # ("BD-52")	Station to Station		Length of Road (ft)	Buffer Type (forest or meadow)	Soil Type	Buffer Slope 0-15%	Length of Buffer (ft)
CONNECTOR	CBD5	6100	6300	200	FOREST	D	12%	120
CONNECTOR	CBD6	6100	6300	200	FOREST	D	13%	120
ACCESS	ABD1	5250	5450	200	FOREST	D	12%	120
CONNECTOR	CBD35	14000	14110	110	FOREST	D	17%	120
CONNECTOR	CBD36	14175	14300	125	FOREST	D	12%	120
CONNECTOR	CBD27	7150	7350	200	FOREST	D	5%	100

Project Name **HIGHLAND PLANTATION** BD=Buffer with Ditch Turnouts
 Project Number **66060E** Imp=Impervious area
 Date **10/8/2010** Land=Landscaped Area
 Done by **JAO** C1=Loamy Sand or Sandy Loam

L=Length
 W=Width
 B=Buffer
 C2=Silt Loam, Clay Loam or Silty Clay Loam

REQUIRED BUFFER FLOW PATH LENGTHS
 ~DITCH TURNOUTS TO BUFFERS~
EAST

Soils	Length of Road and Ditch	0-8% Buffer Slope		8-15% Buffer Slope	
		Length of Flow Forest	Length of Flow Meadow	Length of Flow Forest	Length of Flow Meadow
A	200	50	70	60	84
	300	50	85	60	102
	400	60	100	72	120
B	200	50	70	60	84
	300	50	85	60	102
	400	60	100	72	120
C1	200	60	100	72	120
	300	75	120	90	144
	400	100	N/A	120	N/A
C2	200	75	120	90	144
	300	100	N/A	120	N/A
	400				
D	200	100	150	120	180

Alignment	BMP Type & # ("BD-52")	Station to Station		Length of Road (ft)	Buffer Type (forest or meadow)	Soil Type	Buffer Slope 0-15%	Length of Buffer (ft)
E47	EBD6	950	1150	200	FOREST	D	28%	120

from table

Project Name **HIGHLAND PLANTATION**
 Project Number **66060E**
 Date **10/13/2009**
 Done by **JEC**

BIORETENTION CELL OR UNDERDRAIN SOIL FILTER CALCULATIONS

USF1

Subcatchment #	BMP Type & #	Imp (sf)	Land (sf)	Volume req'd (cubic feet)	Pretreated (yes or no)	Vol req'd, 25% Red. For pretreat	Sediment Pre-Treat V(cft)	L of Pre-Treat A*	Sizing Starting Point			
									Depth of Cell (in)	Area of cell (sq ft)	L of Cell (ft)	W of Cell (ft)
6A	USF1	26705	11248	2600.35	no	N/A	N/A	N/A	18	1733.57	40	43.34
TOTAL		26705	11248									

*Length of pretreatment trough is based on an 8" deep trough with 3:1 side slopes (overall width 4')

SOIL FILTER ELEVATIONS

1476	Top of Berm
6	Spillway Height (6in min)
1475.50	Top of Spillway/Storage
1474.00	Top of Soil Filter Media
1472.50	Bottom Soil Filter Media
14	Depth of Gravel (in)
1471.33	Bottom of Gravel/USF
1471.67	Underdrain Elevation
6	Underdrain Diameter (in)
4	Underdrain Cover (Min 4")

STORAGE CALCULATIONS

Elevation	Area	Volume
1474.00	1655	0
1474.5	1824	869.75
1475	2001	956.25
1475.5	2185	1046.50
Cumm. Storage		2872.50

must be > or =
2600

USF2

Subcatchment #	BMP Type & #	Imp (sf)	Land (sf)	Volume req'd (cubic feet)	Pretreated (yes or no)	Vol req'd, 25% Red. For pretreat	Sediment Pre-Treat V(cft)	L of Pre-Treat A*	Sizing Starting Point			
									Depth of Cell (in)	Area of cell (sq ft)	L of Cell (ft)	W of Cell (ft)
6B	USF2	37262	2949	3203.47	no	N/A	N/A	N/A	18	2135.64	100	21.36
TOTAL		37262	2949									

*Length of pretreatment trough is based on an 8" deep trough with 3:1 side slopes (overall width 4')

SOIL FILTER ELEVATIONS

1474	Top of Berm
6	Spillway Height (6in min)
1473.50	Top of Spillway/Storage
1472.00	Top of Soil Filter Media
1470.50	Bottom Soil Filter Media
14	Depth of Gravel (in)
1469.33	Bottom of Gravel/USF
1469.67	Underdrain Elevation
6	Underdrain Diameter (in)
4	Underdrain Cover (Min 4")

STORAGE CALCULATIONS

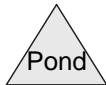
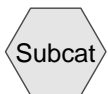
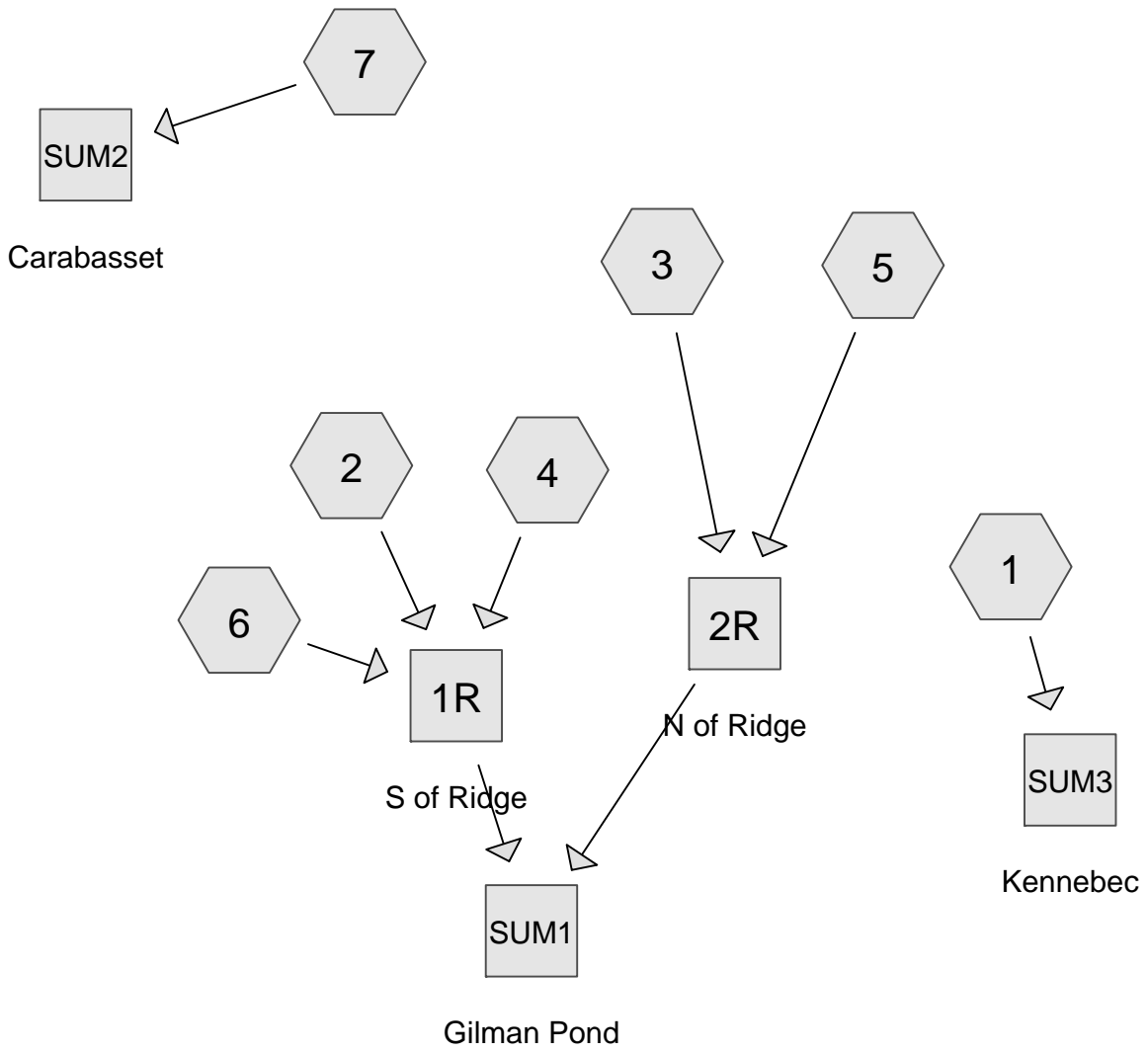
Elevation	Area	Volume
1472.00	1879	0
1472.5	2177	1014.00
1473	2482	1164.75
1473.5	2792	1318.50
Cumm. Storage		3497.25

must be > or =
3203

Project Name **HIGHLAND PLANTATION**
 Project Number **66060E**
 Date **11/22/2010**
 Done by **JAO**

Pre & Post Development Summary

	Subcatchment		Flow (cfs) from Hydrocad		
	Property Line	#	2-year	10-year	25-year
PRE	SUM1 Gilman	2,3,4,5,6	1523.02	3526.68	4465.29
POST	SUM1 Gilman	2,3,4,5,6,6A,6B,6C	1695.23	3892.68	4919.85
	CHANGE		172.21	366.00	454.56
	Percent Increase		11.31%	10.38%	10.18%
PRE	SUM2 Carabasset	7	159.81	367.78	465.04
POST	SUM2 Carabasset	7	170.88	393.08	496.71
	CHANGE		11.07	25.30	31.67
	Percent Increase		6.93%	6.88%	6.81%
PRE	SUM3 Kennebec	1	550.07	1227.69	1541.73
POST	SUM3 Kennebec	1	561.48	1251.55	1571.23
	CHANGE		11.41	23.86	29.50
	Percent Increase		2.07%	1.94%	1.91%



Summary for Subcatchment 1:

Runoff = 550.07 cfs @ 12.17 hrs, Volume= 41.983 af, Depth> 0.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
20,651,957	77	Woods, Good, HSG D
5,912,444	80	Pasture/grassland/range, Good, HSG D
26,564,401	78	Weighted Average
26,564,401		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
8.4	1,204	0.2300	2.40		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	380	0.1100	18.37	551.23	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040 Mountain streams
0.0	37	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.6	839	0.1600	22.16	664.81	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
22.7	2,560	Total			

Summary for Subcatchment 2:

Runoff = 420.43 cfs @ 12.17 hrs, Volume= 32.267 af, Depth> 0.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
16,025,652	77	Woods, Good, HSG D
4,393,019	80	Pasture/grassland/range, Good, HSG D
20,418,671	78	Weighted Average
20,418,671		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
10.1	1,327	0.1900	2.18		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	177	0.1500	16.92	338.40	Parabolic Channel, W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.040
0.3	397	0.1900	19.46	778.60	Parabolic Channel, W=30.00' D=2.00' Area=40.0 sf Perim=30.4' n= 0.040
22.9	2,001	Total			

Summary for Subcatchment 3:

Runoff = 305.38 cfs @ 12.22 hrs, Volume= 26.153 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
17,171,473	77	Woods, Good, HSG D
451,393	80	Pasture/grassland/range, Good, HSG D
17,622,866	77	Weighted Average
17,622,866		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
13.2	1,721	0.1900	2.18		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.3	1,852	0.1800	23.50	705.14	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
26.8	3,673	Total			

Summary for Subcatchment 4:

Runoff = 351.83 cfs @ 12.73 hrs, Volume= 55.057 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
36,544,807	77	Woods, Good, HSG D
1,269,597	80	Pasture/grassland/range, Good, HSG D
37,814,404	77	Weighted Average
37,814,404		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.8	100	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
9.6	1,316	0.2100	2.29		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
15.1	1,760	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.0	2,278	0.1200	19.19	575.74	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
1.3	1,140	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
2.1	1,968	0.0500	15.32	1,021.44	Parabolic Channel, W=25.00' D=4.00' Area=66.7 sf Perim=26.6' n= 0.040
1.8	1,852	0.0500	17.41	1,451.17	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.9	1,594	0.1300	28.08	2,339.95	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
63.6	12,008	Total			

Summary for Subcatchment 5:

Runoff = 268.45 cfs @ 12.19 hrs, Volume= 21.281 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
13,334,100	77	Woods, Good, HSG D
984,488	80	Pasture/grassland/range, Good, HSG D
14,318,588	77	Weighted Average
14,318,588		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
11.0	1,400	0.1800	2.12		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.4	680	0.2800	29.32	879.46	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
23.7	2,180	Total			

Summary for Subcatchment 6:

Runoff = 425.72 cfs @ 12.22 hrs, Volume= 36.246 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
23,089,323	77	Woods, Good, HSG D
1,332,873	80	Pasture/grassland/range, Good, HSG D
24,422,196	77	Weighted Average
24,422,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
10.7	1,663	0.2700	2.60		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.8	1,016	0.1300	19.98	599.25	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
26.6	2,779	Total			

Summary for Subcatchment 7:

Runoff = 159.81 cfs @ 12.22 hrs, Volume= 13.427 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
8,892,859	77	Woods, Good, HSG D
151,166	80	Pasture/grassland/range, Good, HSG D
9,044,025	77	Weighted Average
9,044,025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	100	0.1200	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
14.6	1,522	0.1200	1.73		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
26.0	1,622	Total			

Summary for Reach 1R: S of Ridge

Inflow Area = 1,897.504 ac, 0.00% Impervious, Inflow Depth > 0.78" for 2 YR event

Inflow = 953.32 cfs @ 12.22 hrs, Volume= 123.571 af

Outflow = 953.32 cfs @ 12.22 hrs, Volume= 123.571 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: N of Ridge

Inflow Area = 733.275 ac, 0.00% Impervious, Inflow Depth > 0.78" for 2 YR event
Inflow = 570.72 cfs @ 12.21 hrs, Volume= 47.433 af
Outflow = 570.72 cfs @ 12.21 hrs, Volume= 47.433 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

2010-11-23 Predev jao

Prepared by James Sewall Co.

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Type II 24-hr 2 YR Rainfall=2.70"

Printed 11/23/2010

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Summary for Reach SUM1: Gilman Pond

Inflow Area = 2,630.779 ac, 0.00% Impervious, Inflow Depth > 0.78" for 2 YR event

Inflow = 1,523.02 cfs @ 12.21 hrs, Volume= 171.004 af

Outflow = 1,523.02 cfs @ 12.21 hrs, Volume= 171.004 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM2: Carabasset

Inflow Area = 207.622 ac, 0.00% Impervious, Inflow Depth > 0.78" for 2 YR event
Inflow = 159.81 cfs @ 12.22 hrs, Volume= 13.427 af
Outflow = 159.81 cfs @ 12.22 hrs, Volume= 13.427 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM3: Kennebec

Inflow Area = 609.835 ac, 0.00% Impervious, Inflow Depth > 0.83" for 2 YR event
Inflow = 550.07 cfs @ 12.17 hrs, Volume= 41.983 af
Outflow = 550.07 cfs @ 12.17 hrs, Volume= 41.983 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1:

Runoff = 1,227.69 cfs @ 12.16 hrs, Volume= 91.265 af, Depth> 1.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
20,651,957	77	Woods, Good, HSG D
5,912,444	80	Pasture/grassland/range, Good, HSG D
26,564,401	78	Weighted Average
26,564,401		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
8.4	1,204	0.2300	2.40		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	380	0.1100	18.37	551.23	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040 Mountain streams
0.0	37	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.6	839	0.1600	22.16	664.81	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
22.7	2,560	Total			

Summary for Subcatchment 2:

Runoff = 938.67 cfs @ 12.16 hrs, Volume= 70.145 af, Depth> 1.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
16,025,652	77	Woods, Good, HSG D
4,393,019	80	Pasture/grassland/range, Good, HSG D
20,418,671	78	Weighted Average
20,418,671		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
10.1	1,327	0.1900	2.18		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	177	0.1500	16.92	338.40	Parabolic Channel, W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.040
0.3	397	0.1900	19.46	778.60	Parabolic Channel, W=30.00' D=2.00' Area=40.0 sf Perim=30.4' n= 0.040
22.9	2,001	Total			

Summary for Subcatchment 3:

Runoff = 703.55 cfs @ 12.21 hrs, Volume= 57.982 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
17,171,473	77	Woods, Good, HSG D
451,393	80	Pasture/grassland/range, Good, HSG D
17,622,866	77	Weighted Average
17,622,866		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
13.2	1,721	0.1900	2.18		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.3	1,852	0.1800	23.50	705.14	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
26.8	3,673	Total			

Summary for Subcatchment 4:

Runoff = 821.62 cfs @ 12.68 hrs, Volume= 122.453 af, Depth> 1.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
36,544,807	77	Woods, Good, HSG D
1,269,597	80	Pasture/grassland/range, Good, HSG D
37,814,404	77	Weighted Average
37,814,404		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.8	100	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
9.6	1,316	0.2100	2.29		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
15.1	1,760	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.0	2,278	0.1200	19.19	575.74	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
1.3	1,140	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
2.1	1,968	0.0500	15.32	1,021.44	Parabolic Channel, W=25.00' D=4.00' Area=66.7 sf Perim=26.6' n= 0.040
1.8	1,852	0.0500	17.41	1,451.17	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.9	1,594	0.1300	28.08	2,339.95	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
63.6	12,008	Total			

Summary for Subcatchment 5:

Runoff = 617.43 cfs @ 12.17 hrs, Volume= 47.169 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
13,334,100	77	Woods, Good, HSG D
984,488	80	Pasture/grassland/range, Good, HSG D
14,318,588	77	Weighted Average
14,318,588		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
11.0	1,400	0.1800	2.12		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.4	680	0.2800	29.32	879.46	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
23.7	2,180	Total			

Summary for Subcatchment 6:

Runoff = 980.37 cfs @ 12.21 hrs, Volume= 80.359 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
23,089,323	77	Woods, Good, HSG D
1,332,873	80	Pasture/grassland/range, Good, HSG D
24,422,196	77	Weighted Average
24,422,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
10.7	1,663	0.2700	2.60		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.8	1,016	0.1300	19.98	599.25	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
26.6	2,779	Total			

Summary for Subcatchment 7:

Runoff = 367.78 cfs @ 12.20 hrs, Volume= 29.766 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
8,892,859	77	Woods, Good, HSG D
151,166	80	Pasture/grassland/range, Good, HSG D
9,044,025	77	Weighted Average
9,044,025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	100	0.1200	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
14.6	1,522	0.1200	1.73		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
26.0	1,622	Total			

Summary for Reach 1R: S of Ridge

Inflow Area = 1,897.504 ac, 0.00% Impervious, Inflow Depth > 1.73" for 10 YR event

Inflow = 2,216.97 cfs @ 12.21 hrs, Volume= 272.957 af

Outflow = 2,216.97 cfs @ 12.21 hrs, Volume= 272.957 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: N of Ridge

Inflow Area = 733.275 ac, 0.00% Impervious, Inflow Depth > 1.72" for 10 YR event

Inflow = 1,312.64 cfs @ 12.19 hrs, Volume= 105.151 af

Outflow = 1,312.64 cfs @ 12.19 hrs, Volume= 105.151 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM1: Gilman Pond

Inflow Area = 2,630.779 ac, 0.00% Impervious, Inflow Depth > 1.72" for 10 YR event

Inflow = 3,526.68 cfs @ 12.20 hrs, Volume= 378.108 af

Outflow = 3,526.68 cfs @ 12.20 hrs, Volume= 378.108 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM2: Carabasset

Inflow Area = 207.622 ac, 0.00% Impervious, Inflow Depth > 1.72" for 10 YR event
Inflow = 367.78 cfs @ 12.20 hrs, Volume= 29.766 af
Outflow = 367.78 cfs @ 12.20 hrs, Volume= 29.766 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM3: Kennebec

Inflow Area = 609.835 ac, 0.00% Impervious, Inflow Depth > 1.80" for 10 YR event

Inflow = 1,227.69 cfs @ 12.16 hrs, Volume= 91.265 af

Outflow = 1,227.69 cfs @ 12.16 hrs, Volume= 91.265 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1:

Runoff = 1,541.73 cfs @ 12.16 hrs, Volume= 114.581 af, Depth> 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
20,651,957	77	Woods, Good, HSG D
5,912,444	80	Pasture/grassland/range, Good, HSG D
26,564,401	78	Weighted Average
26,564,401		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
8.4	1,204	0.2300	2.40		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	380	0.1100	18.37	551.23	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040 Mountain streams
0.0	37	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.6	839	0.1600	22.16	664.81	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
22.7	2,560	Total			

Summary for Subcatchment 2:

Runoff = 1,178.88 cfs @ 12.16 hrs, Volume= 88.066 af, Depth> 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
16,025,652	77	Woods, Good, HSG D
4,393,019	80	Pasture/grassland/range, Good, HSG D
20,418,671	78	Weighted Average
20,418,671		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
10.1	1,327	0.1900	2.18		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	177	0.1500	16.92	338.40	Parabolic Channel, W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.040
0.3	397	0.1900	19.46	778.60	Parabolic Channel, W=30.00' D=2.00' Area=40.0 sf Perim=30.4' n= 0.040
22.9	2,001	Total			

Summary for Subcatchment 3:

Runoff = 889.79 cfs @ 12.21 hrs, Volume= 73.148 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
17,171,473	77	Woods, Good, HSG D
451,393	80	Pasture/grassland/range, Good, HSG D
17,622,866	77	Weighted Average
17,622,866		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
13.2	1,721	0.1900	2.18		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.3	1,852	0.1800	23.50	705.14	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
26.8	3,673	Total			

Summary for Subcatchment 4:

Runoff = 1,044.34 cfs @ 12.67 hrs, Volume= 154.603 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
36,544,807	77	Woods, Good, HSG D
1,269,597	80	Pasture/grassland/range, Good, HSG D
37,814,404	77	Weighted Average
37,814,404		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.8	100	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
9.6	1,316	0.2100	2.29		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
15.1	1,760	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.0	2,278	0.1200	19.19	575.74	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
1.3	1,140	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
2.1	1,968	0.0500	15.32	1,021.44	Parabolic Channel, W=25.00' D=4.00' Area=66.7 sf Perim=26.6' n= 0.040
1.8	1,852	0.0500	17.41	1,451.17	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.9	1,594	0.1300	28.08	2,339.95	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
63.6	12,008	Total			

Summary for Subcatchment 5:

Runoff = 780.32 cfs @ 12.17 hrs, Volume= 59.503 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
13,334,100	77	Woods, Good, HSG D
984,488	80	Pasture/grassland/range, Good, HSG D
14,318,588	77	Weighted Average
14,318,588		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
11.0	1,400	0.1800	2.12		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.4	680	0.2800	29.32	879.46	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
23.7	2,180	Total			

Summary for Subcatchment 6:

Runoff = 1,239.77 cfs @ 12.21 hrs, Volume= 101.378 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
23,089,323	77	Woods, Good, HSG D
1,332,873	80	Pasture/grassland/range, Good, HSG D
24,422,196	77	Weighted Average
24,422,196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
10.7	1,663	0.2700	2.60		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.8	1,016	0.1300	19.98	599.25	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
26.6	2,779	Total			

Summary for Subcatchment 7:

Runoff = 465.04 cfs @ 12.20 hrs, Volume= 37.551 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
8,892,859	77	Woods, Good, HSG D
151,166	80	Pasture/grassland/range, Good, HSG D
9,044,025	77	Weighted Average
9,044,025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	100	0.1200	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
14.6	1,522	0.1200	1.73		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
26.0	1,622	Total			

Summary for Reach 1R: S of Ridge

Inflow Area = 1,897.504 ac, 0.00% Impervious, Inflow Depth > 2.18" for 25 YR event

Inflow = 2,809.61 cfs @ 12.21 hrs, Volume= 344.047 af

Outflow = 2,809.61 cfs @ 12.21 hrs, Volume= 344.047 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: N of Ridge

Inflow Area = 733.275 ac, 0.00% Impervious, Inflow Depth > 2.17" for 25 YR event
Inflow = 1,659.55 cfs @ 12.19 hrs, Volume= 132.651 af
Outflow = 1,659.55 cfs @ 12.19 hrs, Volume= 132.651 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM1: Gilman Pond

Inflow Area = 2,630.779 ac, 0.00% Impervious, Inflow Depth > 2.17" for 25 YR event

Inflow = 4,465.29 cfs @ 12.20 hrs, Volume= 476.698 af

Outflow = 4,465.29 cfs @ 12.20 hrs, Volume= 476.698 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM2: Carabasset

Inflow Area = 207.622 ac, 0.00% Impervious, Inflow Depth > 2.17" for 25 YR event
Inflow = 465.04 cfs @ 12.20 hrs, Volume= 37.551 af
Outflow = 465.04 cfs @ 12.20 hrs, Volume= 37.551 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

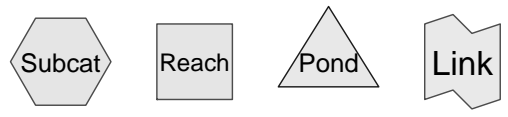
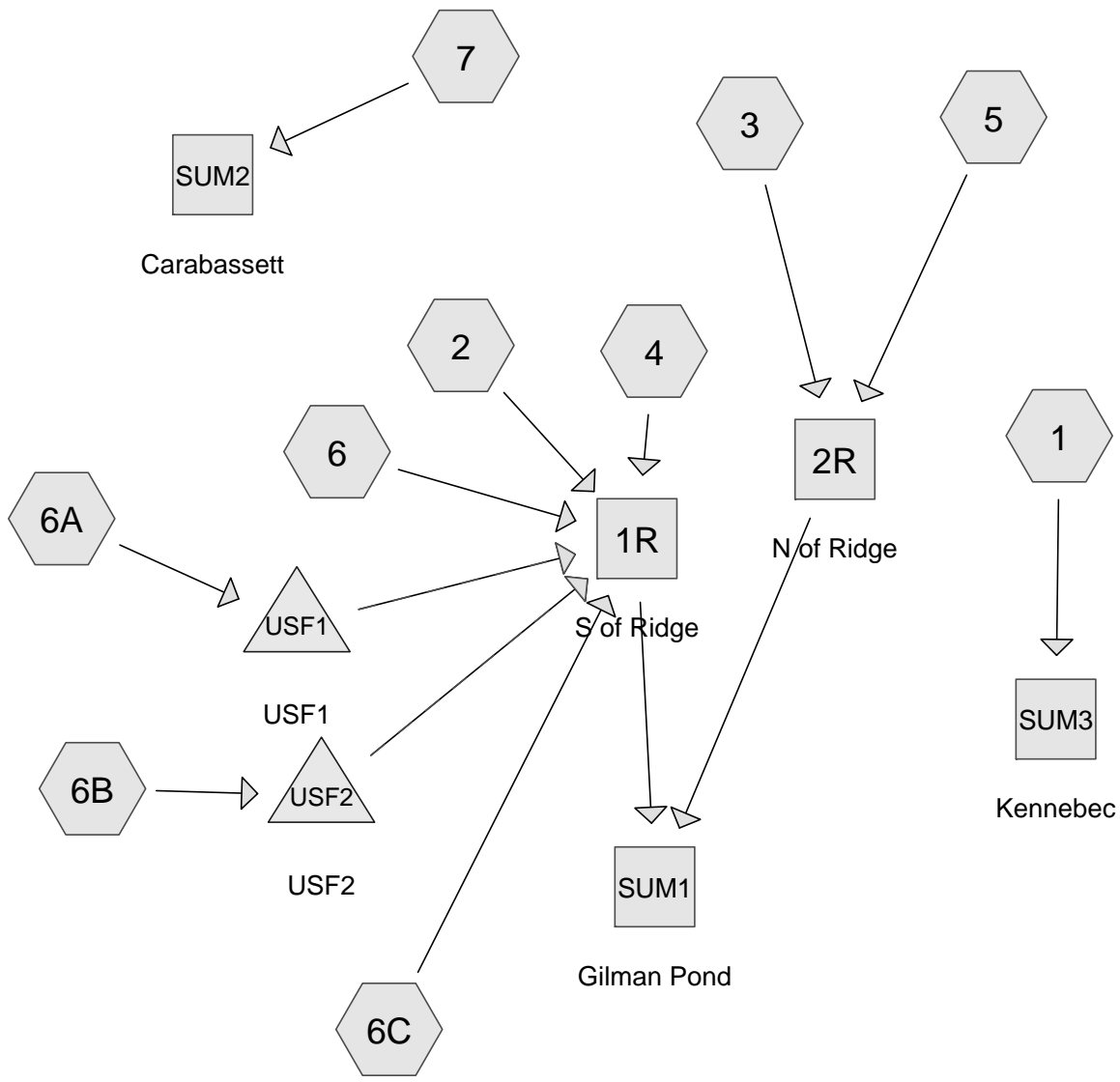
Summary for Reach SUM3: Kennebec

Inflow Area = 609.835 ac, 0.00% Impervious, Inflow Depth > 2.25" for 25 YR event

Inflow = 1,541.73 cfs @ 12.16 hrs, Volume= 114.581 af

Outflow = 1,541.73 cfs @ 12.16 hrs, Volume= 114.581 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



Drainage Diagram for 2010-11-23 Postdev jao
 Prepared by James Sewall Co., Printed 11/23/2010
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Summary for Subcatchment 1:

Runoff = 561.48 cfs @ 12.16 hrs, Volume= 41.996 af, Depth> 0.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
18,301,555	77	Woods, Good, HSG D
8,063,939	80	Pasture/grassland/range, Good, HSG D
198,907	91	Gravel roads, HSG D
26,564,401	78	Weighted Average
26,564,401		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
7.7	1,107	0.2300	2.40		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	380	0.1100	18.37	551.23	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040 Mountain streams
0.0	37	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.6	839	0.1600	22.16	664.81	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
22.0	2,463	Total			

Summary for Subcatchment 2:

Runoff = 496.31 cfs @ 12.11 hrs, Volume= 32.336 af, Depth> 0.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
11,794,676	77	Woods, Good, HSG D
5,671,078	80	Pasture/grassland/range, Good, HSG D
421,872	91	Gravel roads, HSG D
2,523,074	73	Brush, Good, HSG D
20,410,700	78	Weighted Average
20,410,700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.1300	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
3.4	426	0.1700	2.06		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.1	55	0.0700	0.80	7.99	Channel Flow, Area= 10.0 sf Perim= 21.0' r= 0.48' n= 0.300
0.3	363	0.2200	20.49	409.82	Parabolic Channel, W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.040
0.6	458	0.1200	12.92	129.17	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=2.00' Z= 2.0 '/' Top.W=9.00' n= 0.040 Earth, cobble bottom, clean sides
0.0	75	0.2000	28.80	50.89	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	884	0.1400	16.71	668.34	Parabolic Channel, W=30.00' D=2.00' Area=40.0 sf Perim=30.4' n= 0.040
17.4	2,361	Total			

Summary for Subcatchment 3:

Runoff = 354.45 cfs @ 12.16 hrs, Volume= 26.222 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
15,146,426	77	Woods, Good, HSG D
440,366	80	Pasture/grassland/range, Good, HSG D
211,820	91	Gravel roads, HSG D
1,824,254	73	Brush, Good, HSG D
17,622,866	77	Weighted Average
17,622,866		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
6.6	816	0.1700	2.06		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	227	0.1100	12.37	123.67	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=2.00' Z= 2.0 '/' Top.W=9.00' n= 0.040
0.1	90	0.0400	12.88	22.76	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.7	196	0.0700	4.72	62.99	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.6	887	0.2300	26.57	797.08	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.1	65	0.1200	19.75	24.24	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	900	0.2100	25.39	761.64	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
21.3	3,281	Total			

Summary for Subcatchment 4:

Runoff = 347.95 cfs @ 12.72 hrs, Volume= 55.027 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
32,546,920	77	Woods, Good, HSG D
1,235,533	80	Pasture/grassland/range, Good, HSG D
482,992	91	Gravel roads, HSG D
3,548,856	73	Brush, Good, HSG D
37,814,301	77	Weighted Average
37,814,301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.8	100	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
9.6	1,316	0.2100	2.29		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	1,686	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.0	50	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
1.4	1,315	0.0800	15.67	470.09	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.0	50	0.1200	22.31	39.42	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	936	0.1000	17.52	525.58	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.2	131	0.0200	9.49	506.20	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
1.0	36	0.0400	0.60	6.04	Channel Flow, Area= 10.0 sf Perim= 21.0' r= 0.48' n= 0.300
1.1	969	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
0.0	60	0.1000	20.36	35.99	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
2.0	1,817	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
0.1	50	0.0400	12.88	22.76	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
1.8	1,880	0.0500	17.41	1,451.17	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.2	159	0.0400	15.58	1,297.97	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.1	80	0.1000	20.36	35.99	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	1,356	0.1000	24.63	2,052.27	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
64.6	11,991	Total			

Summary for Subcatchment 5:

Runoff = 295.62 cfs @ 12.13 hrs, Volume= 20.670 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
11,184,862	77	Woods, Good, HSG D
551,682	80	Pasture/grassland/range, Good, HSG D
174,572	91	Gravel roads, HSG D
1,967,577	73	Brush, Good, HSG D
13,878,693	77	Weighted Average
13,878,693		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
4.7	509	0.1300	1.80		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	62	0.0600	15.77	27.87	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.4	100	0.0700	4.72	62.99	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
1.4	725	0.2400	8.75	116.63	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.4	680	0.2800	29.32	879.46	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
19.3	2,176	Total			

Summary for Subcatchment 6:

Runoff = 490.93 cfs @ 12.16 hrs, Volume= 36.225 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
20,988,878	77	Woods, Good, HSG D
1,323,336	80	Pasture/grassland/range, Good, HSG D
197,632	91	Gravel roads, HSG D
1,834,763	73	Brush, Good, HSG D
24,344,609	77	Weighted Average
24,344,609		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
3.3	300	0.0900	1.50		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	70	0.0600	15.77	27.87	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.1	100	0.2600	11.93	238.67	Channel Flow, Area= 20.0 sf Perim= 40.0' r= 0.50' n= 0.040
1.5	952	0.3600	10.71	142.84	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.1	76	0.0200	9.11	16.09	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.1	82	0.2700	9.28	123.70	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.9	1,032	0.1300	19.98	599.25	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
21.2	2,712	Total			

Summary for Subcatchment 6A:

Runoff = 2.08 cfs @ 11.95 hrs, Volume= 0.092 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
9,053	98	Roofs, HSG D
6,404	91	Gravel roads, HSG D
11,248	80	>75% Grass cover, Good, HSG D
3,423	98	Water Surface, 0% imp, HSG D
30,128	90	Weighted Average
21,075		69.95% Pervious Area
9,053		30.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 6B:

Runoff = 2.97 cfs @ 11.95 hrs, Volume= 0.132 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
34,313	91	Gravel roads, HSG D
2,949	80	>75% Grass cover, Good, HSG D
3,977	98	Water Surface, HSG D
41,239	91	Weighted Average
37,262		90.36% Pervious Area
3,977		9.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 6C:

Runoff = 0.34 cfs @ 11.96 hrs, Volume= 0.015 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
2,641	91	Gravel roads, HSG D
3,574	80	>75% Grass cover, Good, HSG D
6,215	85	Weighted Average
6,215		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 7:

Runoff = 170.88 cfs @ 12.18 hrs, Volume= 13.406 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 2 YR Rainfall=2.70"

Area (sf)	CN	Description
7,713,535	77	Woods, Good, HSG D
151,166	80	Pasture/grassland/range, Good, HSG D
113,256	91	Gravel roads, HSG D
1,040,280	73	Brush, Good, HSG D
9,018,237	77	Weighted Average
9,018,237		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
8.2	740	0.0900	1.50		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.3	840	Total			

Summary for Reach 1R: S of Ridge

Inflow Area = 1,897.318 ac, 0.02% Impervious, Inflow Depth > 0.78" for 2 YR event

Inflow = 1,047.53 cfs @ 12.14 hrs, Volume= 123.812 af

Outflow = 1,047.53 cfs @ 12.14 hrs, Volume= 123.812 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: N of Ridge

Inflow Area = 723.176 ac, 0.00% Impervious, Inflow Depth > 0.78" for 2 YR event

Inflow = 647.98 cfs @ 12.15 hrs, Volume= 46.892 af

Outflow = 647.98 cfs @ 12.15 hrs, Volume= 46.892 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

2010-11-23 Postdev jao

Prepared by James Sewall Co.

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Type II 24-hr 2 YR Rainfall=2.70"

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Summary for Reach SUM1: Gilman Pond

Inflow Area = 2,620.495 ac, 0.01% Impervious, Inflow Depth > 0.78" for 2 YR event

Inflow = 1,695.23 cfs @ 12.14 hrs, Volume= 170.704 af

Outflow = 1,695.23 cfs @ 12.14 hrs, Volume= 170.704 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM2: Carabassett

Inflow Area = 207.030 ac, 0.00% Impervious, Inflow Depth > 0.78" for 2 YR event
Inflow = 170.88 cfs @ 12.18 hrs, Volume= 13.406 af
Outflow = 170.88 cfs @ 12.18 hrs, Volume= 13.406 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM3: Kennebec

Inflow Area = 609.835 ac, 0.00% Impervious, Inflow Depth > 0.83" for 2 YR event
Inflow = 561.48 cfs @ 12.16 hrs, Volume= 41.996 af
Outflow = 561.48 cfs @ 12.16 hrs, Volume= 41.996 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond USF1: USF1

Inflow Area = 0.692 ac, 30.05% Impervious, Inflow Depth > 1.59" for 2 YR event
 Inflow = 2.08 cfs @ 11.95 hrs, Volume= 0.092 af
 Outflow = 1.11 cfs @ 12.05 hrs, Volume= 0.085 af, Atten= 47%, Lag= 5.5 min
 Primary = 1.11 cfs @ 12.05 hrs, Volume= 0.085 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 1,473.30' @ 12.05 hrs Surf.Area= 1,655 sf Storage= 1,170 cf

Plug-Flow detention time= 49.0 min calculated for 0.085 af (93% of inflow)
 Center-of-Mass det. time= 23.9 min (795.6 - 771.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,471.33'	4,402 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,471.33	1,655	0.0	0	0
1,472.49	1,655	40.0	768	768
1,472.50	1,655	30.0	5	773
1,473.99	1,655	30.0	740	1,513
1,474.00	1,655	100.0	17	1,529
1,474.50	1,824	100.0	870	2,399
1,475.00	2,001	100.0	956	3,355
1,475.50	2,185	100.0	1,047	4,402

Device	Routing	Invert	Outlet Devices
#1	Primary	1,471.67'	6.0" Round Culvert L= 84.0' CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 1,469.67' S= 0.0238 '/ Cc= 0.900 n= 0.010
#2	Secondary	1,475.50'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.11 cfs @ 12.05 hrs HW=1,473.29' (Free Discharge)
 ↑1=Culvert (Inlet Controls 1.11 cfs @ 5.64 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,471.33' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond USF2: USF2

Inflow Area = 0.947 ac, 9.64% Impervious, Inflow Depth > 1.67" for 2 YR event
 Inflow = 2.97 cfs @ 11.95 hrs, Volume= 0.132 af
 Outflow = 1.37 cfs @ 12.06 hrs, Volume= 0.124 af, Atten= 54%, Lag= 6.3 min
 Primary = 1.37 cfs @ 12.06 hrs, Volume= 0.124 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 1,472.01' @ 12.06 hrs Surf.Area= 1,886 sf Storage= 1,759 cf

Plug-Flow detention time= 46.2 min calculated for 0.124 af (94% of inflow)
 Center-of-Mass det. time= 24.6 min (792.5 - 767.9)

Volume	Invert	Avail.Storage	Storage Description	
#1	1,469.33'	5,233 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,469.33	1,879	0.0	0	0
1,470.49	1,879	40.0	872	872
1,470.50	1,879	30.0	6	877
1,471.99	1,879	30.0	840	1,717
1,472.00	1,879	100.0	19	1,736
1,472.50	2,177	100.0	1,014	2,750
1,473.00	2,482	100.0	1,165	3,915
1,473.50	2,792	100.0	1,319	5,233

Device	Routing	Invert	Outlet Devices
#1	Primary	1,469.67'	6.0" Round Culvert L= 44.0' CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 1,467.00' S= 0.0607 ' /' Cc= 0.900 n= 0.010
#2	Secondary	1,473.50'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.36 cfs @ 12.06 hrs HW=1,472.00' (Free Discharge)
 ↖1=Culvert (Inlet Controls 1.36 cfs @ 6.94 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,469.33' (Free Discharge)
 ↖2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Subcatchment 1:

Runoff = 1,251.55 cfs @ 12.15 hrs, Volume= 91.289 af, Depth> 1.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
18,301,555	77	Woods, Good, HSG D
8,063,939	80	Pasture/grassland/range, Good, HSG D
198,907	91	Gravel roads, HSG D
26,564,401	78	Weighted Average
26,564,401		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
7.7	1,107	0.2300	2.40		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	380	0.1100	18.37	551.23	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040 Mountain streams
0.0	37	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.6	839	0.1600	22.16	664.81	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
22.0	2,463	Total			

Summary for Subcatchment 2:

Runoff = 1,098.53 cfs @ 12.10 hrs, Volume= 70.267 af, Depth> 1.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
11,794,676	77	Woods, Good, HSG D
5,671,078	80	Pasture/grassland/range, Good, HSG D
421,872	91	Gravel roads, HSG D
2,523,074	73	Brush, Good, HSG D
20,410,700	78	Weighted Average
20,410,700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.1300	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
3.4	426	0.1700	2.06		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.1	55	0.0700	0.80	7.99	Channel Flow, Area= 10.0 sf Perim= 21.0' r= 0.48' n= 0.300
0.3	363	0.2200	20.49	409.82	Parabolic Channel, W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.040
0.6	458	0.1200	12.92	129.17	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=2.00' Z= 2.0 ' Top.W=9.00' n= 0.040 Earth, cobble bottom, clean sides
0.0	75	0.2000	28.80	50.89	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	884	0.1400	16.71	668.34	Parabolic Channel, W=30.00' D=2.00' Area=40.0 sf Perim=30.4' n= 0.040
17.4	2,361	Total			

Summary for Subcatchment 3:

Runoff = 810.56 cfs @ 12.15 hrs, Volume= 58.110 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
15,146,426	77	Woods, Good, HSG D
440,366	80	Pasture/grassland/range, Good, HSG D
211,820	91	Gravel roads, HSG D
1,824,254	73	Brush, Good, HSG D
17,622,866	77	Weighted Average
17,622,866		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
6.6	816	0.1700	2.06		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	227	0.1100	12.37	123.67	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=2.00' Z= 2.0 '/' Top.W=9.00' n= 0.040
0.1	90	0.0400	12.88	22.76	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.7	196	0.0700	4.72	62.99	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.6	887	0.2300	26.57	797.08	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.1	65	0.1200	19.75	24.24	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	900	0.2100	25.39	761.64	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
21.3	3,281	Total			

Summary for Subcatchment 4:

Runoff = 813.38 cfs @ 12.70 hrs, Volume= 122.396 af, Depth> 1.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
32,546,920	77	Woods, Good, HSG D
1,235,533	80	Pasture/grassland/range, Good, HSG D
482,992	91	Gravel roads, HSG D
3,548,856	73	Brush, Good, HSG D
37,814,301	77	Weighted Average
37,814,301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.8	100	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
9.6	1,316	0.2100	2.29		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	1,686	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.0	50	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
1.4	1,315	0.0800	15.67	470.09	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.0	50	0.1200	22.31	39.42	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	936	0.1000	17.52	525.58	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.2	131	0.0200	9.49	506.20	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
1.0	36	0.0400	0.60	6.04	Channel Flow, Area= 10.0 sf Perim= 21.0' r= 0.48' n= 0.300
1.1	969	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
0.0	60	0.1000	20.36	35.99	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
2.0	1,817	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
0.1	50	0.0400	12.88	22.76	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
1.8	1,880	0.0500	17.41	1,451.17	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.2	159	0.0400	15.58	1,297.97	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.1	80	0.1000	20.36	35.99	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	1,356	0.1000	24.63	2,052.27	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
64.6	11,991	Total			

Summary for Subcatchment 5:

Runoff = 675.84 cfs @ 12.12 hrs, Volume= 45.800 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
11,184,862	77	Woods, Good, HSG D
551,682	80	Pasture/grassland/range, Good, HSG D
174,572	91	Gravel roads, HSG D
1,967,577	73	Brush, Good, HSG D
13,878,693	77	Weighted Average
13,878,693		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
4.7	509	0.1300	1.80		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	62	0.0600	15.77	27.87	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.4	100	0.0700	4.72	62.99	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
1.4	725	0.2400	8.75	116.63	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.4	680	0.2800	29.32	879.46	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
19.3	2,176	Total			

Summary for Subcatchment 6:

Runoff = 1,122.53 cfs @ 12.15 hrs, Volume= 80.277 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
20,988,878	77	Woods, Good, HSG D
1,323,336	80	Pasture/grassland/range, Good, HSG D
197,632	91	Gravel roads, HSG D
1,834,763	73	Brush, Good, HSG D
24,344,609	77	Weighted Average
24,344,609		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
3.3	300	0.0900	1.50		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	70	0.0600	15.77	27.87	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.1	100	0.2600	11.93	238.67	Channel Flow, Area= 20.0 sf Perim= 40.0' r= 0.50' n= 0.040
1.5	952	0.3600	10.71	142.84	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.1	76	0.0200	9.11	16.09	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.1	82	0.2700	9.28	123.70	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.9	1,032	0.1300	19.98	599.25	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
21.2	2,712	Total			

Summary for Subcatchment 6A:

Runoff = 3.56 cfs @ 11.95 hrs, Volume= 0.163 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
9,053	98	Roofs, HSG D
6,404	91	Gravel roads, HSG D
11,248	80	>75% Grass cover, Good, HSG D
3,423	98	Water Surface, 0% imp, HSG D
30,128	90	Weighted Average
21,075		69.95% Pervious Area
9,053		30.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 6B:

Runoff = 4.99 cfs @ 11.95 hrs, Volume= 0.230 af, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
34,313	91	Gravel roads, HSG D
2,949	80	>75% Grass cover, Good, HSG D
3,977	98	Water Surface, HSG D
41,239	91	Weighted Average
37,262		90.36% Pervious Area
3,977		9.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 6C:

Runoff = 0.64 cfs @ 11.96 hrs, Volume= 0.028 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
2,641	91	Gravel roads, HSG D
3,574	80	>75% Grass cover, Good, HSG D
6,215	85	Weighted Average
6,215		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 7:

Runoff = 393.08 cfs @ 12.17 hrs, Volume= 29.713 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 10 YR Rainfall=4.10"

Area (sf)	CN	Description
7,713,535	77	Woods, Good, HSG D
151,166	80	Pasture/grassland/range, Good, HSG D
113,256	91	Gravel roads, HSG D
1,040,280	73	Brush, Good, HSG D
9,018,237	77	Weighted Average
9,018,237		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
8.2	740	0.0900	1.50		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.3	840	Total			

Summary for Reach 1R: S of Ridge

Inflow Area = 1,897.318 ac, 0.02% Impervious, Inflow Depth > 1.73" for 10 YR event

Inflow = 2,413.20 cfs @ 12.13 hrs, Volume= 273.346 af

Outflow = 2,413.20 cfs @ 12.13 hrs, Volume= 273.346 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: N of Ridge

Inflow Area = 723.176 ac, 0.00% Impervious, Inflow Depth > 1.72" for 10 YR event
Inflow = 1,479.86 cfs @ 12.14 hrs, Volume= 103.909 af
Outflow = 1,479.86 cfs @ 12.14 hrs, Volume= 103.909 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM1: Gilman Pond

Inflow Area = 2,620.495 ac, 0.01% Impervious, Inflow Depth > 1.73" for 10 YR event

Inflow = 3,892.68 cfs @ 12.13 hrs, Volume= 377.256 af

Outflow = 3,892.68 cfs @ 12.13 hrs, Volume= 377.256 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM2: Carabassett

Inflow Area = 207.030 ac, 0.00% Impervious, Inflow Depth > 1.72" for 10 YR event
Inflow = 393.08 cfs @ 12.17 hrs, Volume= 29.713 af
Outflow = 393.08 cfs @ 12.17 hrs, Volume= 29.713 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM3: Kennebec

Inflow Area = 609.835 ac, 0.00% Impervious, Inflow Depth > 1.80" for 10 YR event
Inflow = 1,251.55 cfs @ 12.15 hrs, Volume= 91.289 af
Outflow = 1,251.55 cfs @ 12.15 hrs, Volume= 91.289 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond USF1: USF1

Inflow Area = 0.692 ac, 30.05% Impervious, Inflow Depth > 2.82" for 10 YR event
 Inflow = 3.56 cfs @ 11.95 hrs, Volume= 0.163 af
 Outflow = 1.38 cfs @ 12.07 hrs, Volume= 0.156 af, Atten= 61%, Lag= 6.9 min
 Primary = 1.38 cfs @ 12.07 hrs, Volume= 0.156 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 1,474.33' @ 12.07 hrs Surf.Area= 1,765 sf Storage= 2,087 cf

Plug-Flow detention time= 40.3 min calculated for 0.155 af (95% of inflow)
 Center-of-Mass det. time= 23.7 min (782.2 - 758.4)

Volume	Invert	Avail.Storage	Storage Description	
#1	1,471.33'	4,402 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,471.33	1,655	0.0	0	0
1,472.49	1,655	40.0	768	768
1,472.50	1,655	30.0	5	773
1,473.99	1,655	30.0	740	1,513
1,474.00	1,655	100.0	17	1,529
1,474.50	1,824	100.0	870	2,399
1,475.00	2,001	100.0	956	3,355
1,475.50	2,185	100.0	1,047	4,402

Device	Routing	Invert	Outlet Devices
#1	Primary	1,471.67'	6.0" Round Culvert L= 84.0' CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 1,469.67' S= 0.0238 '/ Cc= 0.900 n= 0.010
#2	Secondary	1,475.50'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.38 cfs @ 12.07 hrs HW=1,474.31' (Free Discharge)
 ↑1=Culvert (Barrel Controls 1.38 cfs @ 7.01 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,471.33' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond USF2: USF2

Inflow Area = 0.947 ac, 9.64% Impervious, Inflow Depth > 2.92" for 10 YR event
 Inflow = 4.99 cfs @ 11.95 hrs, Volume= 0.230 af
 Outflow = 1.58 cfs @ 12.08 hrs, Volume= 0.222 af, Atten= 68%, Lag= 7.8 min
 Primary = 1.58 cfs @ 12.08 hrs, Volume= 0.222 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 1,472.70' @ 12.08 hrs Surf.Area= 2,296 sf Storage= 3,188 cf

Plug-Flow detention time= 40.2 min calculated for 0.222 af (96% of inflow)
 Center-of-Mass det. time= 25.9 min (781.1 - 755.2)

Volume	Invert	Avail.Storage	Storage Description	
#1	1,469.33'	5,233 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,469.33	1,879	0.0	0	0
1,470.49	1,879	40.0	872	872
1,470.50	1,879	30.0	6	877
1,471.99	1,879	30.0	840	1,717
1,472.00	1,879	100.0	19	1,736
1,472.50	2,177	100.0	1,014	2,750
1,473.00	2,482	100.0	1,165	3,915
1,473.50	2,792	100.0	1,319	5,233

Device	Routing	Invert	Outlet Devices
#1	Primary	1,469.67'	6.0" Round Culvert L= 44.0' CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 1,467.00' S= 0.0607 ' /' Cc= 0.900 n= 0.010
#2	Secondary	1,473.50'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.57 cfs @ 12.08 hrs HW=1,472.69' (Free Discharge)
 ↑1=Culvert (Inlet Controls 1.57 cfs @ 8.01 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,469.33' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Subcatchment 1:

Runoff = 1,571.23 cfs @ 12.15 hrs, Volume= 114.610 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
18,301,555	77	Woods, Good, HSG D
8,063,939	80	Pasture/grassland/range, Good, HSG D
198,907	91	Gravel roads, HSG D
26,564,401	78	Weighted Average
26,564,401		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
7.7	1,107	0.2300	2.40		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	380	0.1100	18.37	551.23	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040 Mountain streams
0.0	37	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.6	839	0.1600	22.16	664.81	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
22.0	2,463	Total			

Summary for Subcatchment 2:

Runoff = 1,376.86 cfs @ 12.10 hrs, Volume= 88.210 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
11,794,676	77	Woods, Good, HSG D
5,671,078	80	Pasture/grassland/range, Good, HSG D
421,872	91	Gravel roads, HSG D
2,523,074	73	Brush, Good, HSG D
20,410,700	78	Weighted Average
20,410,700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.1300	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
3.4	426	0.1700	2.06		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.1	55	0.0700	0.80	7.99	Channel Flow, Area= 10.0 sf Perim= 21.0' r= 0.48' n= 0.300
0.3	363	0.2200	20.49	409.82	Parabolic Channel, W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.040
0.6	458	0.1200	12.92	129.17	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=2.00' Z= 2.0 ' Top.W=9.00' n= 0.040 Earth, cobble bottom, clean sides
0.0	75	0.2000	28.80	50.89	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	884	0.1400	16.71	668.34	Parabolic Channel, W=30.00' D=2.00' Area=40.0 sf Perim=30.4' n= 0.040
17.4	2,361	Total			

Summary for Subcatchment 3:

Runoff = 1,023.42 cfs @ 12.15 hrs, Volume= 73.302 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
15,146,426	77	Woods, Good, HSG D
440,366	80	Pasture/grassland/range, Good, HSG D
211,820	91	Gravel roads, HSG D
1,824,254	73	Brush, Good, HSG D
17,622,866	77	Weighted Average
17,622,866		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
6.6	816	0.1700	2.06		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.3	227	0.1100	12.37	123.67	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=2.00' Z= 2.0 '/' Top.W=9.00' n= 0.040
0.1	90	0.0400	12.88	22.76	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.7	196	0.0700	4.72	62.99	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.6	887	0.2300	26.57	797.08	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.1	65	0.1200	19.75	24.24	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	900	0.2100	25.39	761.64	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
21.3	3,281	Total			

Summary for Subcatchment 4:

Runoff = 1,032.16 cfs @ 12.70 hrs, Volume= 154.535 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
32,546,920	77	Woods, Good, HSG D
1,235,533	80	Pasture/grassland/range, Good, HSG D
482,992	91	Gravel roads, HSG D
3,548,856	73	Brush, Good, HSG D
37,814,301	77	Weighted Average
37,814,301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.8	100	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
9.6	1,316	0.2100	2.29		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	1,686	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.0	50	0.0800	18.21	32.19	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
1.4	1,315	0.0800	15.67	470.09	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.0	50	0.1200	22.31	39.42	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	936	0.1000	17.52	525.58	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
0.2	131	0.0200	9.49	506.20	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
1.0	36	0.0400	0.60	6.04	Channel Flow, Area= 10.0 sf Perim= 21.0' r= 0.48' n= 0.300
1.1	969	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
0.0	60	0.1000	20.36	35.99	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
2.0	1,817	0.0500	15.01	800.37	Parabolic Channel, W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.040
0.1	50	0.0400	12.88	22.76	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
1.8	1,880	0.0500	17.41	1,451.17	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.2	159	0.0400	15.58	1,297.97	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
0.1	80	0.1000	20.36	35.99	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.9	1,356	0.1000	24.63	2,052.27	Parabolic Channel, W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.040
64.6	11,991	Total			

Summary for Subcatchment 5:

Runoff = 852.93 cfs @ 12.12 hrs, Volume= 57.771 af, Depth> 2.18"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
11,184,862	77	Woods, Good, HSG D
551,682	80	Pasture/grassland/range, Good, HSG D
174,572	91	Gravel roads, HSG D
1,967,577	73	Brush, Good, HSG D
13,878,693	77	Weighted Average
13,878,693		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1000	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
4.7	509	0.1300	1.80		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	62	0.0600	15.77	27.87	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.4	100	0.0700	4.72	62.99	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
1.4	725	0.2400	8.75	116.63	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.4	680	0.2800	29.32	879.46	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
19.3	2,176	Total			

Summary for Subcatchment 6:

Runoff = 1,417.28 cfs @ 12.14 hrs, Volume= 101.264 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
20,988,878	77	Woods, Good, HSG D
1,323,336	80	Pasture/grassland/range, Good, HSG D
197,632	91	Gravel roads, HSG D
1,834,763	73	Brush, Good, HSG D
24,344,609	77	Weighted Average
24,344,609		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
3.3	300	0.0900	1.50		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	70	0.0600	15.77	27.87	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.1	100	0.2600	11.93	238.67	Channel Flow, Area= 20.0 sf Perim= 40.0' r= 0.50' n= 0.040
1.5	952	0.3600	10.71	142.84	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.1	76	0.0200	9.11	16.09	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
0.1	82	0.2700	9.28	123.70	Parabolic Channel, W=40.00' D=0.50' Area=13.3 sf Perim=40.0' n= 0.040
0.9	1,032	0.1300	19.98	599.25	Parabolic Channel, W=15.00' D=3.00' Area=30.0 sf Perim=16.5' n= 0.040
21.2	2,712	Total			

Summary for Subcatchment 6A:

Runoff = 4.19 cfs @ 11.95 hrs, Volume= 0.194 af, Depth> 3.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
9,053	98	Roofs, HSG D
6,404	91	Gravel roads, HSG D
11,248	80	>75% Grass cover, Good, HSG D
3,423	98	Water Surface, 0% imp, HSG D
30,128	90	Weighted Average
21,075		69.95% Pervious Area
9,053		30.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 6B:

Runoff = 5.85 cfs @ 11.95 hrs, Volume= 0.273 af, Depth> 3.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
34,313	91	Gravel roads, HSG D
2,949	80	>75% Grass cover, Good, HSG D
3,977	98	Water Surface, HSG D
41,239	91	Weighted Average
37,262		90.36% Pervious Area
3,977		9.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 6C:

Runoff = 0.77 cfs @ 11.95 hrs, Volume= 0.034 af, Depth> 2.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
2,641	91	Gravel roads, HSG D
3,574	80	>75% Grass cover, Good, HSG D
6,215	85	Weighted Average
6,215		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 7:

Runoff = 496.71 cfs @ 12.17 hrs, Volume= 37.483 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type II 24-hr 25 YR Rainfall=4.70"

Area (sf)	CN	Description
7,713,535	77	Woods, Good, HSG D
151,166	80	Pasture/grassland/range, Good, HSG D
113,256	91	Gravel roads, HSG D
1,040,280	73	Brush, Good, HSG D
9,018,237	77	Weighted Average
9,018,237		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0600	0.11		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.70"
8.2	740	0.0900	1.50		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.3	840	Total			

Summary for Reach 1R: S of Ridge

Inflow Area = 1,897.318 ac, 0.02% Impervious, Inflow Depth > 2.18" for 25 YR event

Inflow = 3,052.28 cfs @ 12.13 hrs, Volume= 344.495 af

Outflow = 3,052.28 cfs @ 12.13 hrs, Volume= 344.495 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: N of Ridge

Inflow Area = 723.176 ac, 0.00% Impervious, Inflow Depth > 2.17" for 25 YR event

Inflow = 1,868.00 cfs @ 12.13 hrs, Volume= 131.073 af

Outflow = 1,868.00 cfs @ 12.13 hrs, Volume= 131.073 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM1: Gilman Pond

Inflow Area = 2,620.495 ac, 0.01% Impervious, Inflow Depth > 2.18" for 25 YR event

Inflow = 4,919.85 cfs @ 12.13 hrs, Volume= 475.567 af

Outflow = 4,919.85 cfs @ 12.13 hrs, Volume= 475.567 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM2: Carabassett

Inflow Area = 207.030 ac, 0.00% Impervious, Inflow Depth > 2.17" for 25 YR event
Inflow = 496.71 cfs @ 12.17 hrs, Volume= 37.483 af
Outflow = 496.71 cfs @ 12.17 hrs, Volume= 37.483 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach SUM3: Kennebec

Inflow Area = 609.835 ac, 0.00% Impervious, Inflow Depth > 2.26" for 25 YR event

Inflow = 1,571.23 cfs @ 12.15 hrs, Volume= 114.610 af

Outflow = 1,571.23 cfs @ 12.15 hrs, Volume= 114.610 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond USF1: USF1

Inflow Area = 0.692 ac, 30.05% Impervious, Inflow Depth > 3.36" for 25 YR event
 Inflow = 4.19 cfs @ 11.95 hrs, Volume= 0.194 af
 Outflow = 1.42 cfs @ 12.07 hrs, Volume= 0.187 af, Atten= 66%, Lag= 7.3 min
 Primary = 1.42 cfs @ 12.07 hrs, Volume= 0.187 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 1,474.59' @ 12.07 hrs Surf.Area= 1,855 sf Storage= 2,559 cf

Plug-Flow detention time= 38.8 min calculated for 0.187 af (96% of inflow)
 Center-of-Mass det. time= 24.2 min (778.8 - 754.7)

Volume	Invert	Avail.Storage	Storage Description	
#1	1,471.33'	4,402 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,471.33	1,655	0.0	0	0
1,472.49	1,655	40.0	768	768
1,472.50	1,655	30.0	5	773
1,473.99	1,655	30.0	740	1,513
1,474.00	1,655	100.0	17	1,529
1,474.50	1,824	100.0	870	2,399
1,475.00	2,001	100.0	956	3,355
1,475.50	2,185	100.0	1,047	4,402

Device	Routing	Invert	Outlet Devices
#1	Primary	1,471.67'	6.0" Round Culvert L= 84.0' CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 1,469.67' S= 0.0238 '/ Cc= 0.900 n= 0.010
#2	Secondary	1,475.50'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.42 cfs @ 12.07 hrs HW=1,474.57' (Free Discharge)
 ↖1=Culvert (Barrel Controls 1.42 cfs @ 7.22 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,471.33' (Free Discharge)
 ↖2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond USF2: USF2

Inflow Area = 0.947 ac, 9.64% Impervious, Inflow Depth > 3.46" for 25 YR event
 Inflow = 5.85 cfs @ 11.95 hrs, Volume= 0.273 af
 Outflow = 1.65 cfs @ 12.09 hrs, Volume= 0.265 af, Atten= 72%, Lag= 8.4 min
 Primary = 1.65 cfs @ 12.09 hrs, Volume= 0.265 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 1,472.98' @ 12.09 hrs Surf.Area= 2,472 sf Storage= 3,875 cf

Plug-Flow detention time= 39.4 min calculated for 0.264 af (97% of inflow)
 Center-of-Mass det. time= 26.9 min (778.6 - 751.7)

Volume	Invert	Avail.Storage	Storage Description	
#1	1,469.33'	5,233 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,469.33	1,879	0.0	0	0
1,470.49	1,879	40.0	872	872
1,470.50	1,879	30.0	6	877
1,471.99	1,879	30.0	840	1,717
1,472.00	1,879	100.0	19	1,736
1,472.50	2,177	100.0	1,014	2,750
1,473.00	2,482	100.0	1,165	3,915
1,473.50	2,792	100.0	1,319	5,233

Device	Routing	Invert	Outlet Devices
#1	Primary	1,469.67'	6.0" Round Culvert L= 44.0' CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 1,467.00' S= 0.0607 ' /' Cc= 0.900 n= 0.010
#2	Secondary	1,473.50'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.65 cfs @ 12.09 hrs HW=1,472.98' (Free Discharge)
 ↑1=Culvert (Inlet Controls 1.65 cfs @ 8.42 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,469.33' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)