

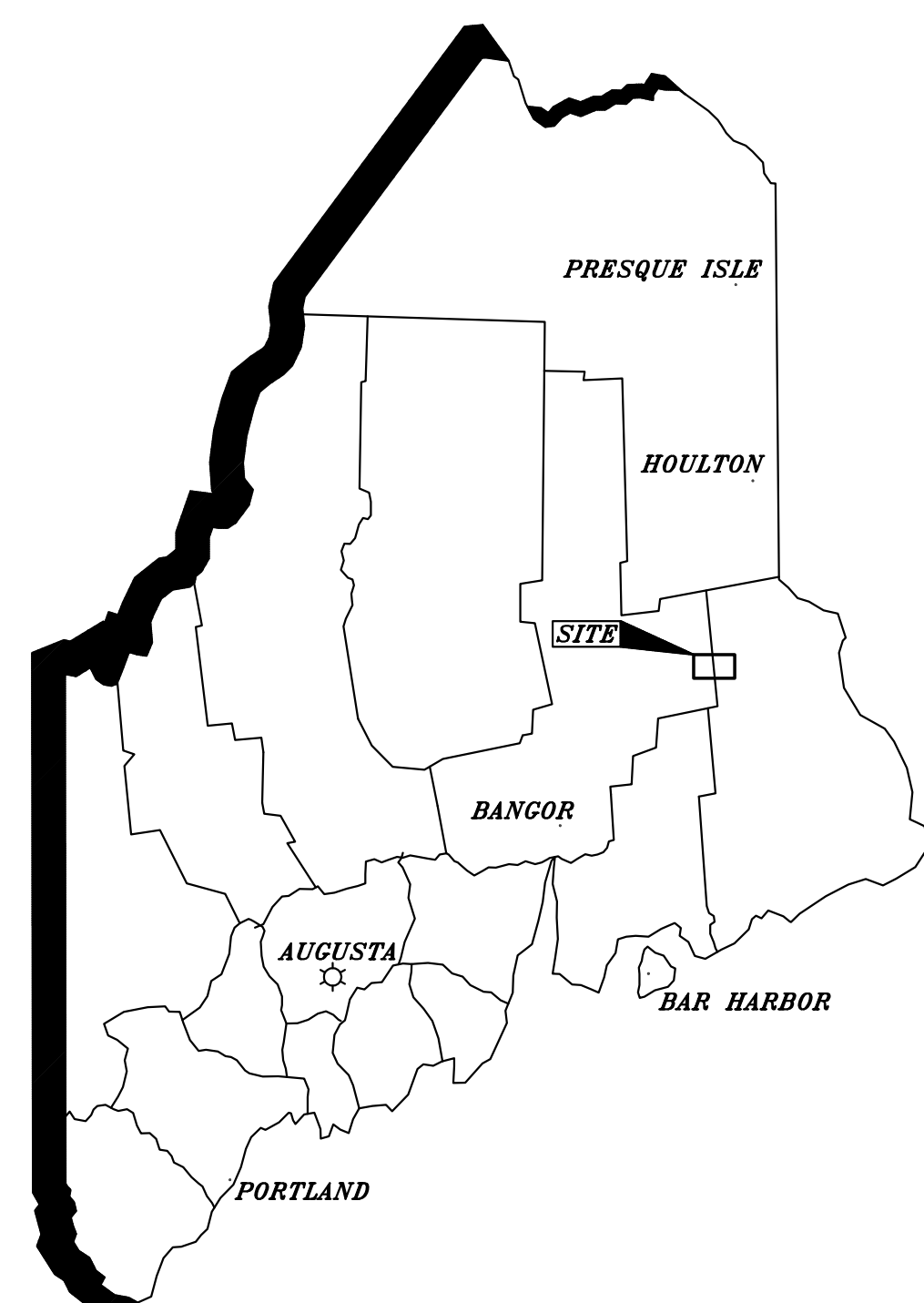
PERMIT DESIGN SUBMITTAL

BOWERS MOUNTAIN WIND PROJECT

CARROLL PLANTATION, PENOBSCOT COUNTY
 KOSSUTH TOWNSHIP, WASHINGTON COUNTY
 PREPARED FOR CHAMPLAIN WIND, LLC

72380E

MARCH 1, 2011
 REVISED MAY 23, 2011



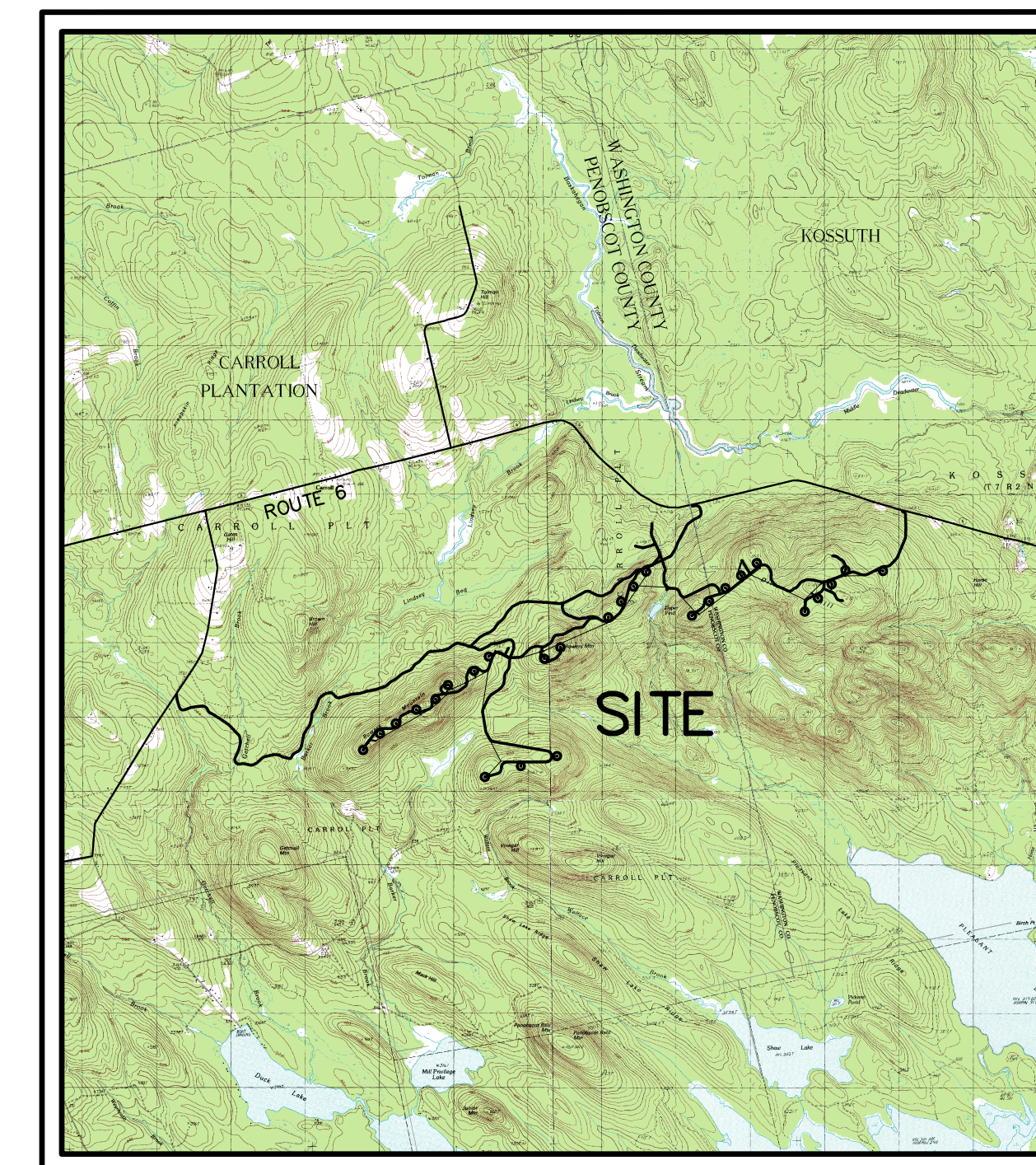
LOCUS MAP

SHEET NO.	DESCRIPTION
0-1	COVER
2-4	SITE INDEX
5	DETAILS
10-11	O&M SITE AND ACCESS PLAN & PROFILE
20-21	DIPPER POND ROAD PLAN & PROFILE
30-31	BASKAHEGAN ACCESS PLAN & PROFILE
100-107	MOOSE ROAD ACCESS PLAN & PROFILE
200-202	BOWERS CRANE PATH PLAN & PROFILE
203-204	SOUTH PEAK ACCESS PLAN & PROFILE
300-301	SOUTH PEAK CRANE PATH PLAN & PROFILE
302-305	DILL HILL WEST ACCESS PLAN & PROFILE
305-306	DILL HILL CRANE PATH PLAN & PROFILE
307	DILL HILL EAST ACCESS PLAN & PROFILE
308	DILL HILL CRANE PATH T23/T24 PLAN & PROFILE
400-401	PERMANENT MET TOWER ACCESS PROFILES
402	STORMWATER INDEX SHEET
500	O&M SUBSTATION EROSION CONTROL PLAN
501	DIPPER POND ROAD EROSION CONTROL PLAN
502-503	BASKAHEGAN ACCESS ROAD EROSION CONTROL PLAN
600-603	MOOSE ROAD ACCESS ROAD
700-702	BOWERS MOUNTAIN EROSION CONTROL PLAN
800-803	SOUTH PEAK EROSION CONTROL PLAN
900-901	DILL HILL EROSION CONTROL PLAN
902-903	STORMWATER PRE DEVELOPMENT DRAINAGE PLAN
904	STORMWATER POST DEVELOPMENT DRAINAGE PLAN
	OVERALL PHOSPHORUS DEVELOPMENT AREA PLAN

DESIGN TEAM:



JAMES W. SEWALL COMPANY / Since 1880
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VICINITY MAP

SEAL



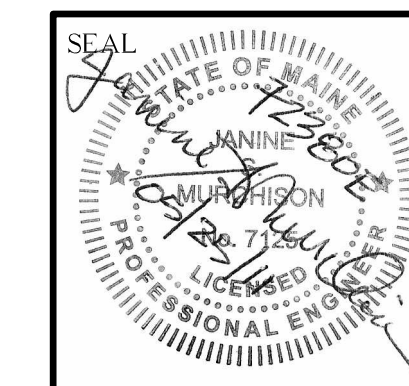
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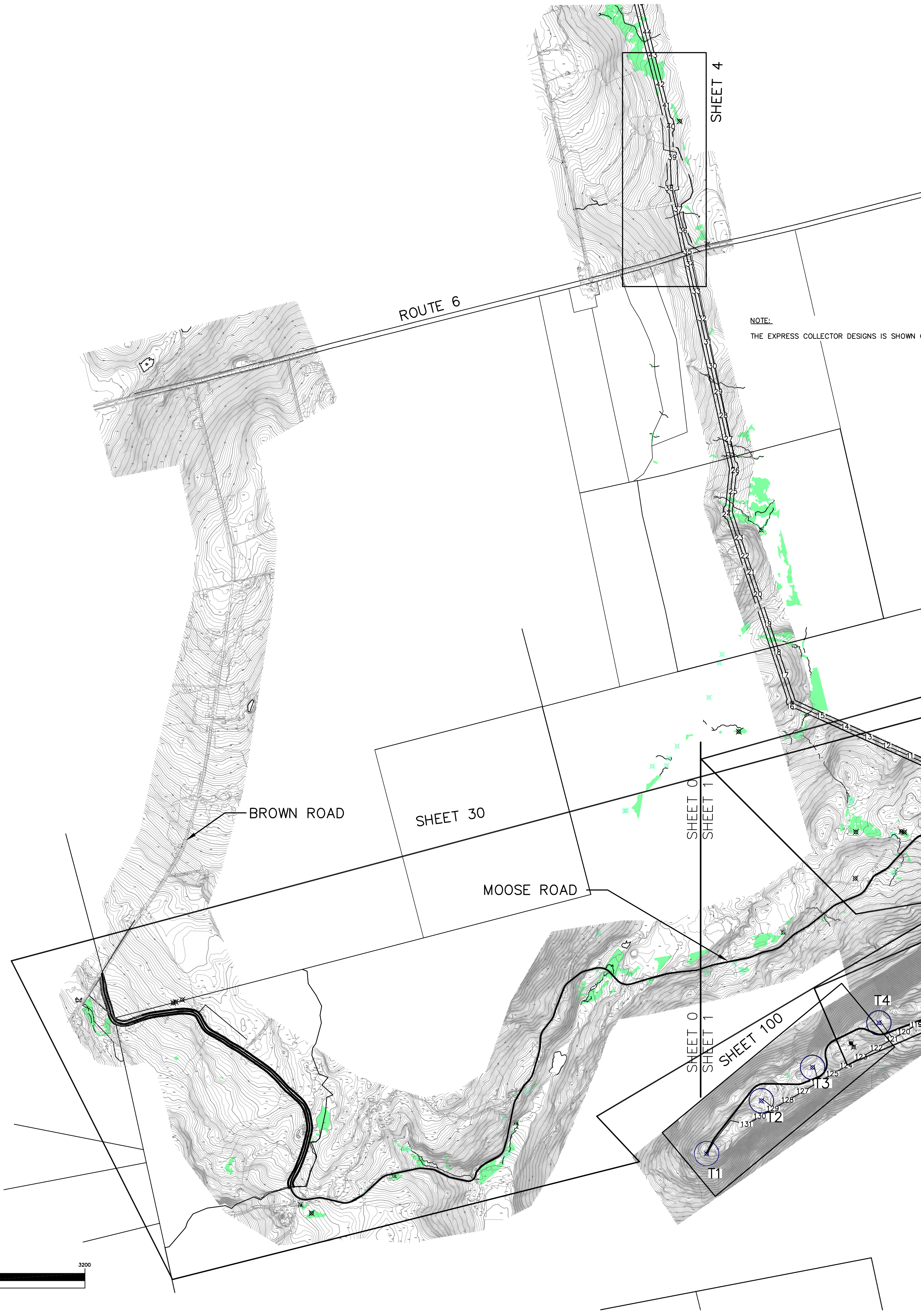
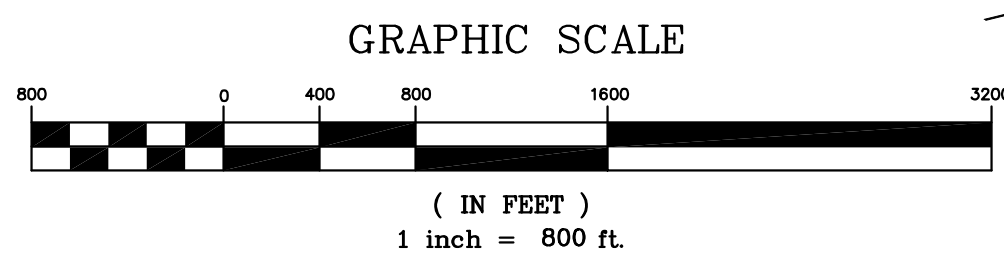
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PRELIMINARY FOR AGENCY REVIEW

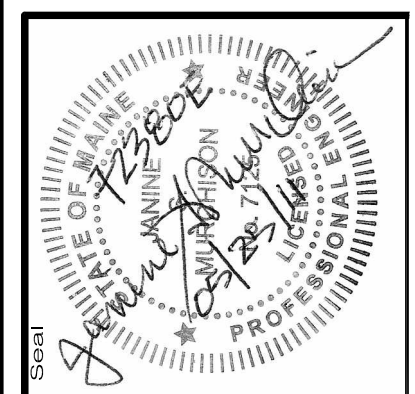


NOTE:
PHOTGRAMMETRIC MAPPING AT 2' CONTOUR INTERVALS.



Drawn By	Description	Date
JSM	ISSUED FOR AGENCY REVIEW	3/7/2011
JCH, JLD	REVISED PER AGENCY COMMENTS	5/12/11

Designed By	JSM
Drawn By	M/T
Date	05/23/2011
Scale	H: 1"=100' V: 1"=50'
Project Location	CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE
Drawing Description	SITE INDEX SHEET
Approved	[Signature]
Checked	[Signature]



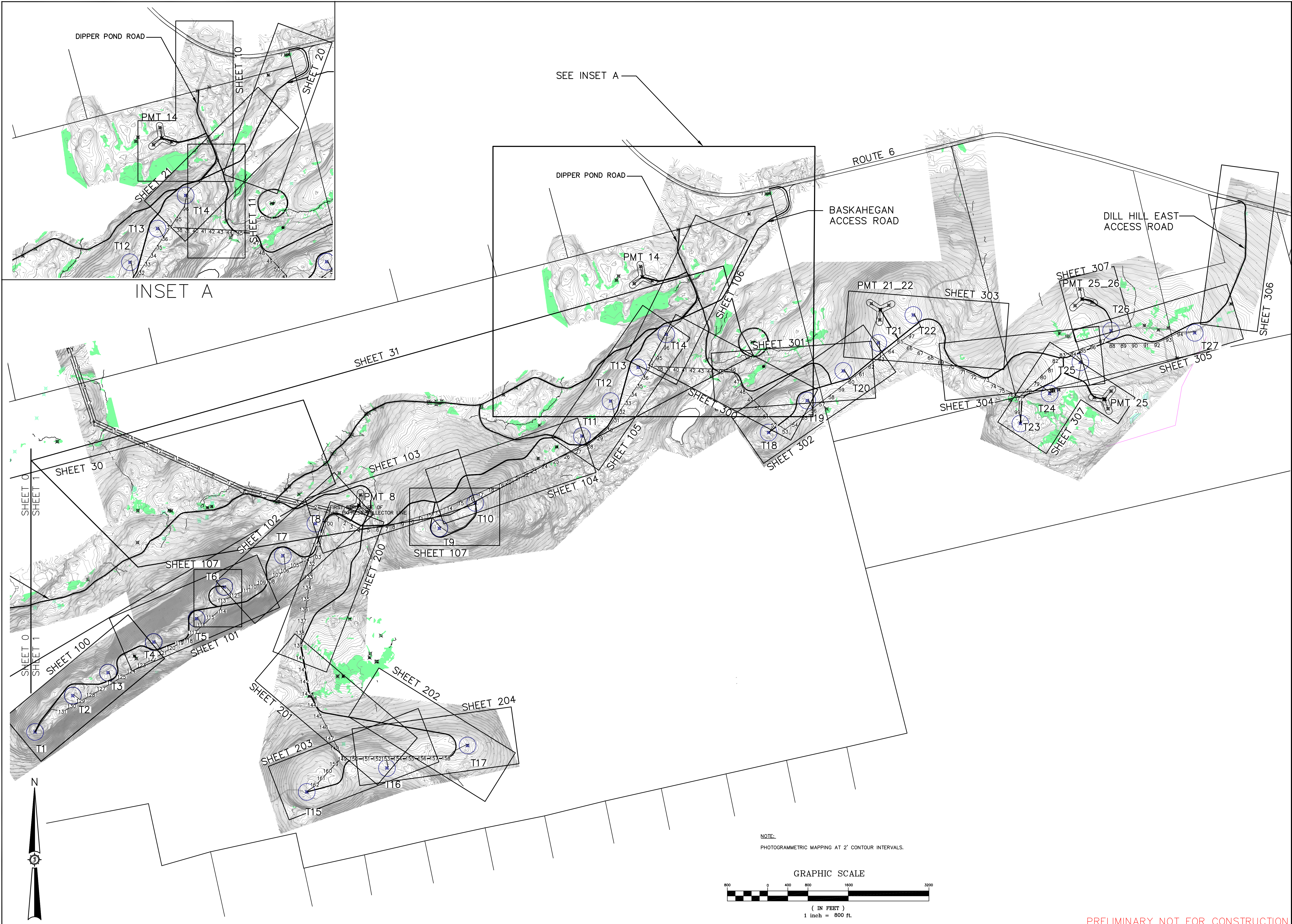
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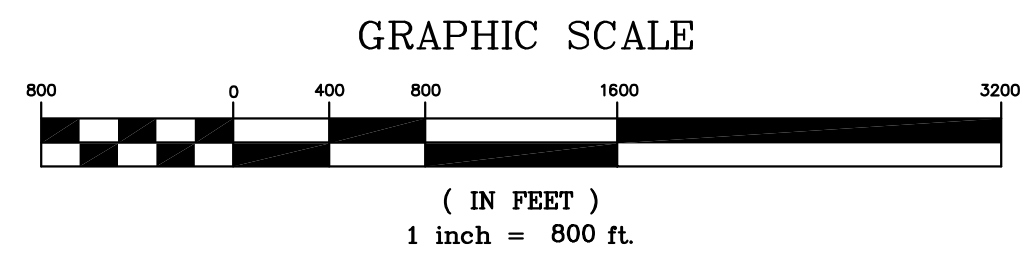
PRELIMINARY NOT FOR CONSTRUCTION



SEE INSET A

INSET A

NOTE:
PHOTOGRAMMETRIC MAPPING AT 2' CONTOUR INTERVALS.



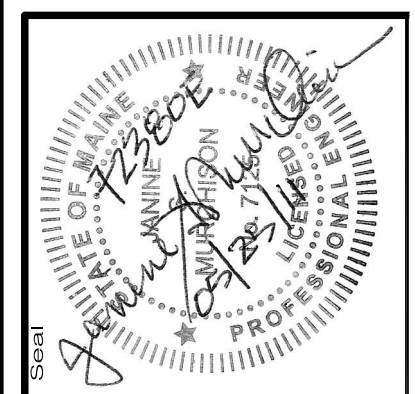
Drawn By	Checked By	Date
JSM	JSM	3/7/2011
JCH, JLD	JCH, JLD	5/12/11

Drawn By	Checked By	Date
JSM	JSM	05/23/2011

Scale: H: 1"=100' V: 1"=50'

Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE

Drawing Description: SITE INDEX SHEET



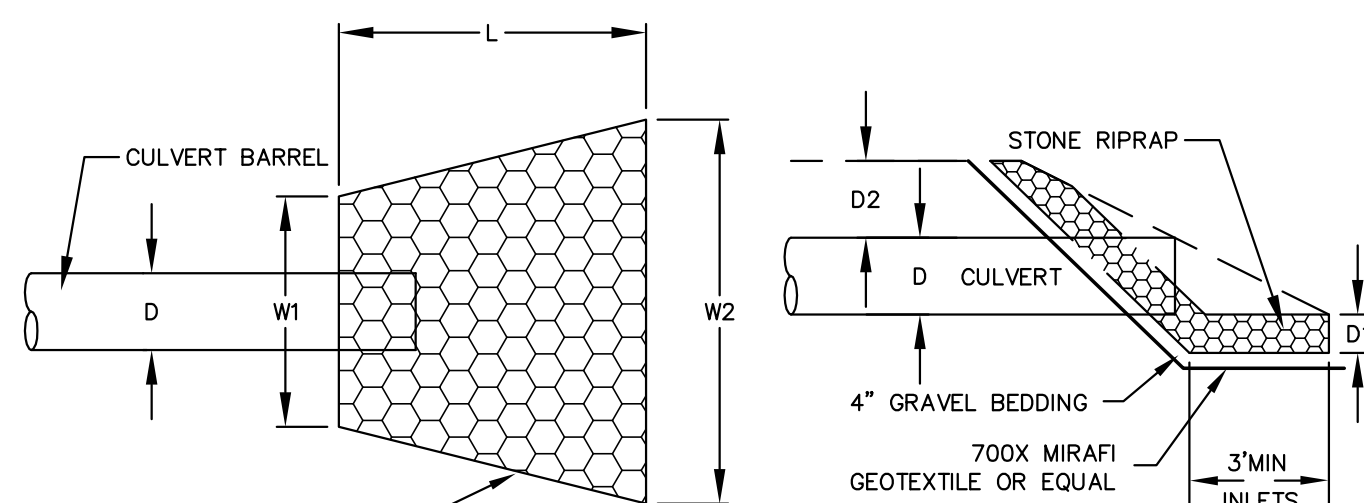
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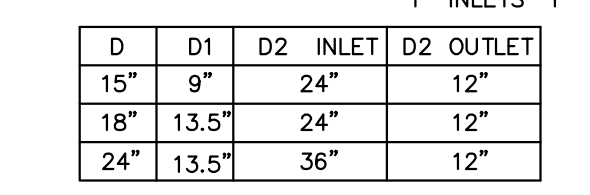


STONE RIPRAP APRON

NOTES:
1. THE RIPRAP APRON SHALL BE CONSTRUCTED WITH NO SLOPE ALONG ITS LENGTH.

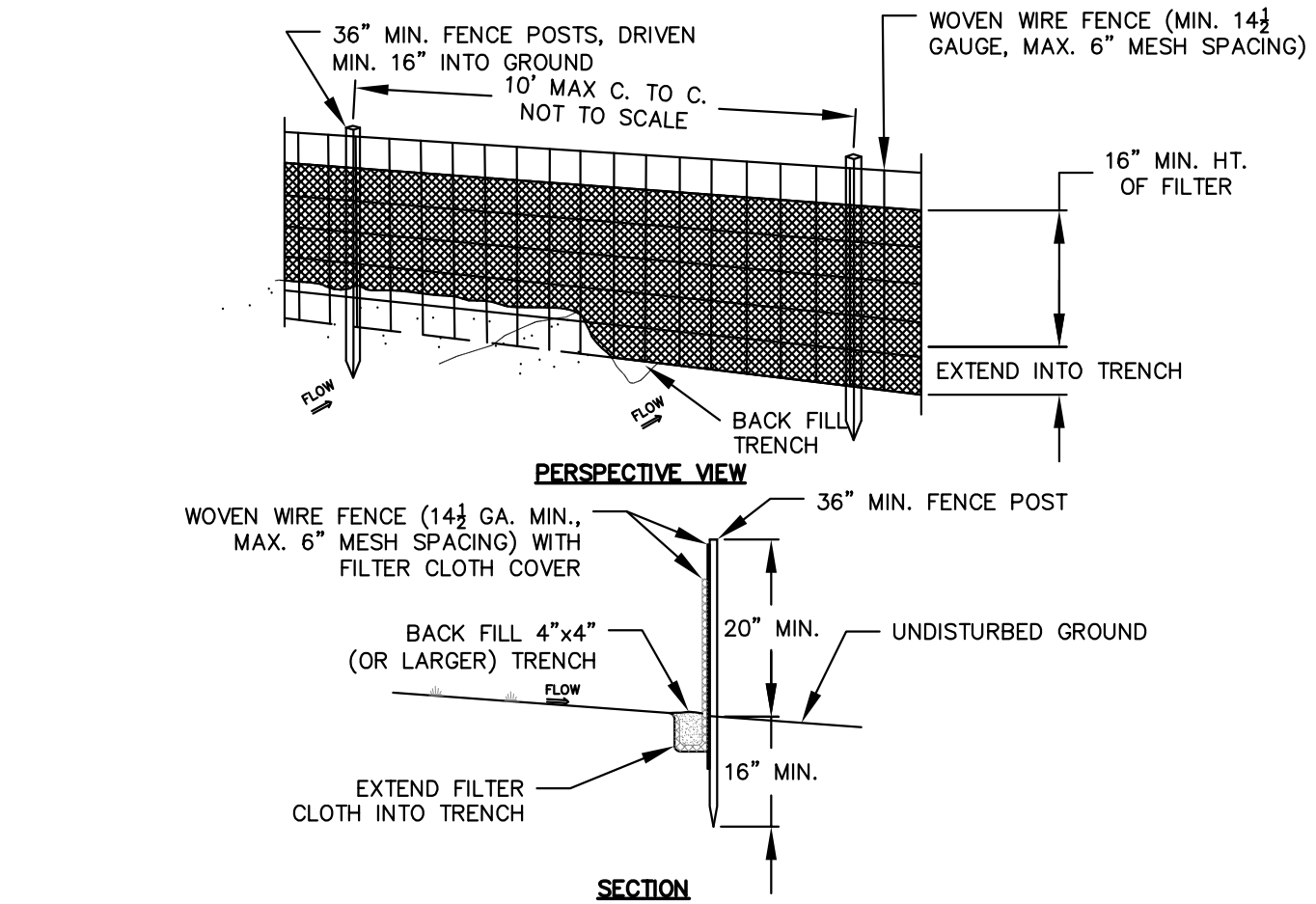
D	W1	W2	L	d50
15"	4'	14'	10'	4"
18"	5'	15'	10'	6"
24"	6'	16'	12'	6"

CULVERT OUTLET DETAIL PLAN VIEW
NOT TO SCALE



CULVERT INLET/OUTLET DETAIL PLAN VIEW
NOT TO SCALE

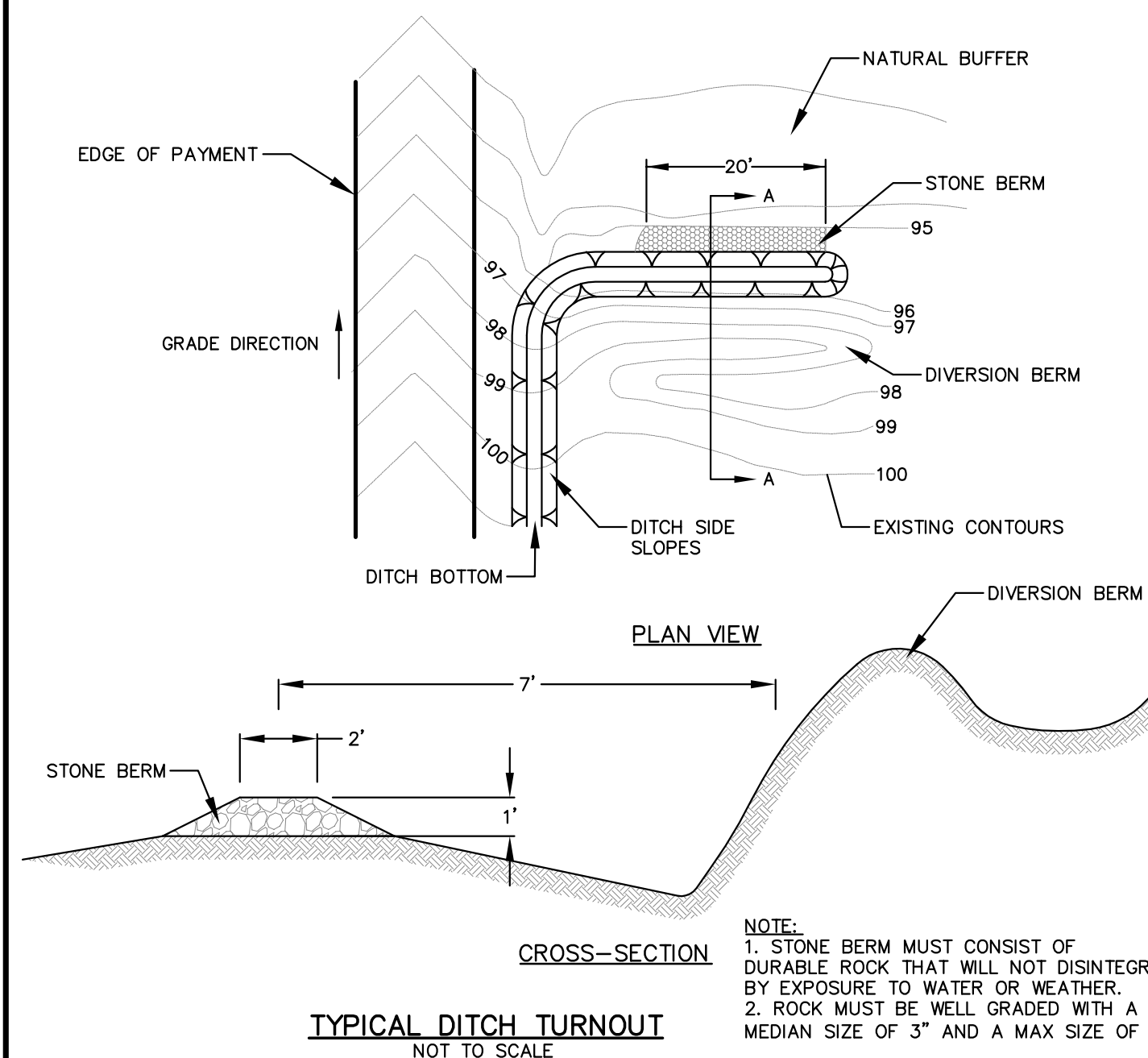
D	D1	D2	D2 INLET	D2 OUTLET
15"	9"	24"	12"	12"
18"	13.5"	24"	12"	12"
24"	13.5"	36"	12"	12"



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

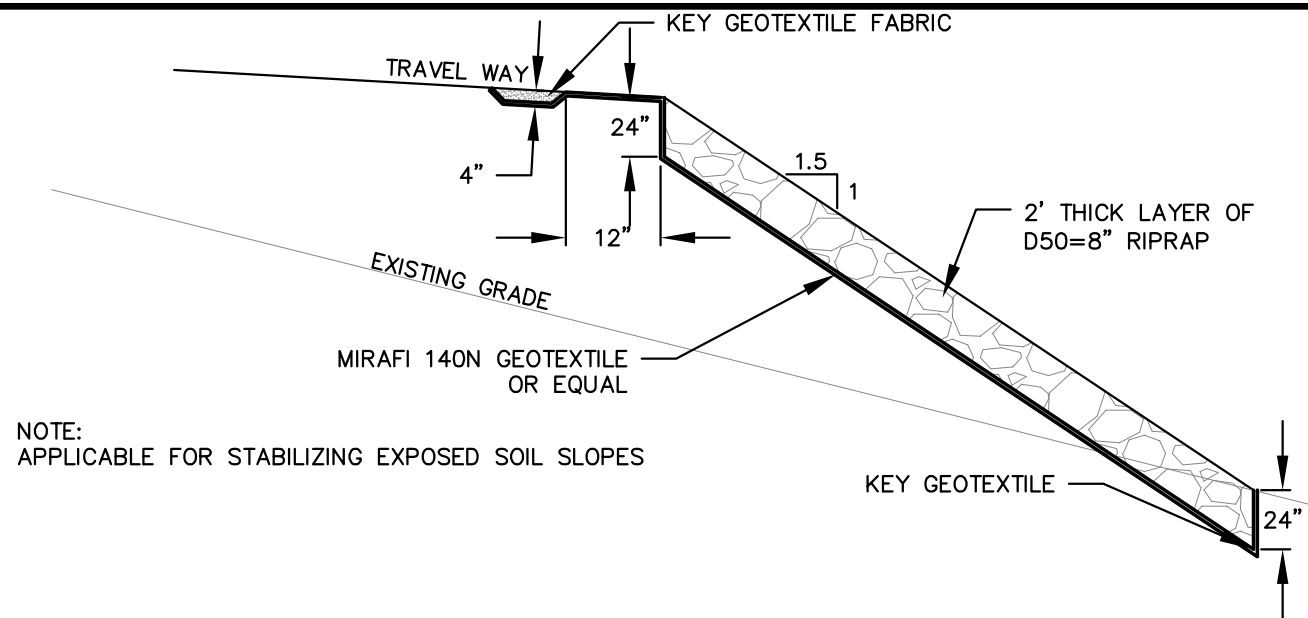
- NOTE: THE CONTRACTOR HAS THE OPTION TO NOT USE WOVEN WIRE MESH IF STAKE SPACERS ARE REDUCED TO 6" O.C.
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP OF MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
 - SILT FENCE SHALL BE INSTALLED ALONG THE CONTOUR.
 - NO MORE THAN 1/4 ACRE OF DRAINAGE AREA FOR EACH 100 FEET OF FENCING.
- POSTS: STEEL EITHER T OR U TYPE 2" HARDWOOD
- FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING
- FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL
- PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE DETAIL
NOT TO SCALE



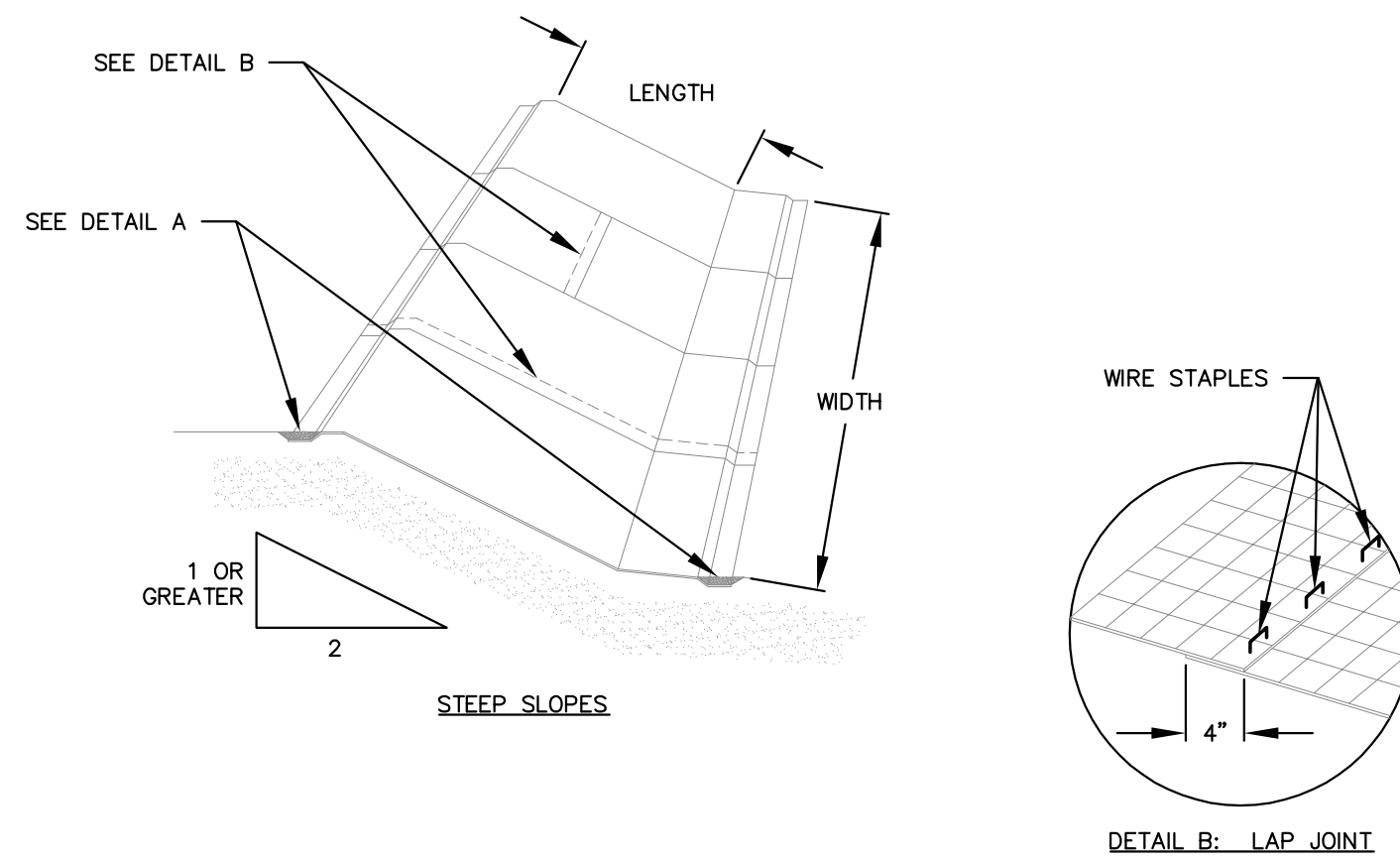
TYPICAL DITCH TURNOUT
NOT TO SCALE

- NOTE:
1. STONE BERM MUST CONSIST OF DURABLE ROCK THAT WILL NOT DISINTEGRATE BY EXPOSURE TO WATER OR WEATHER.
2. ROCK MUST BE WELL GRADED WITH A MEDIAN SIZE OF 3" AND A MAX SIZE OF 6".

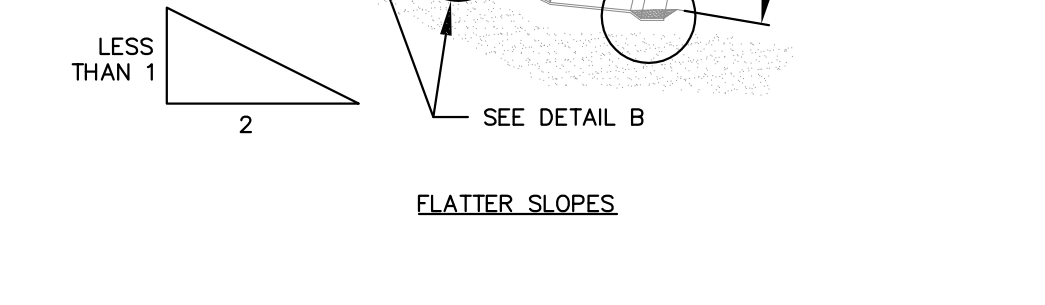
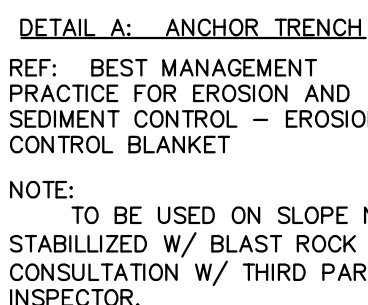
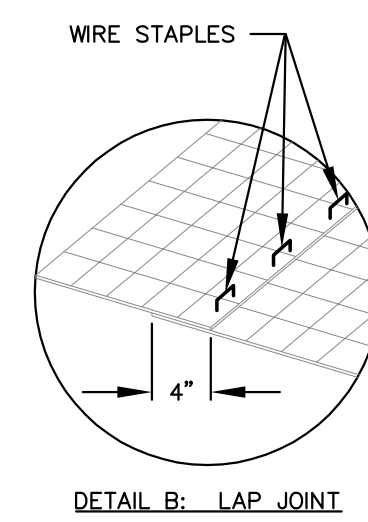


RIPRAP SLOPE PROTECTION DETAIL
NOT TO SCALE

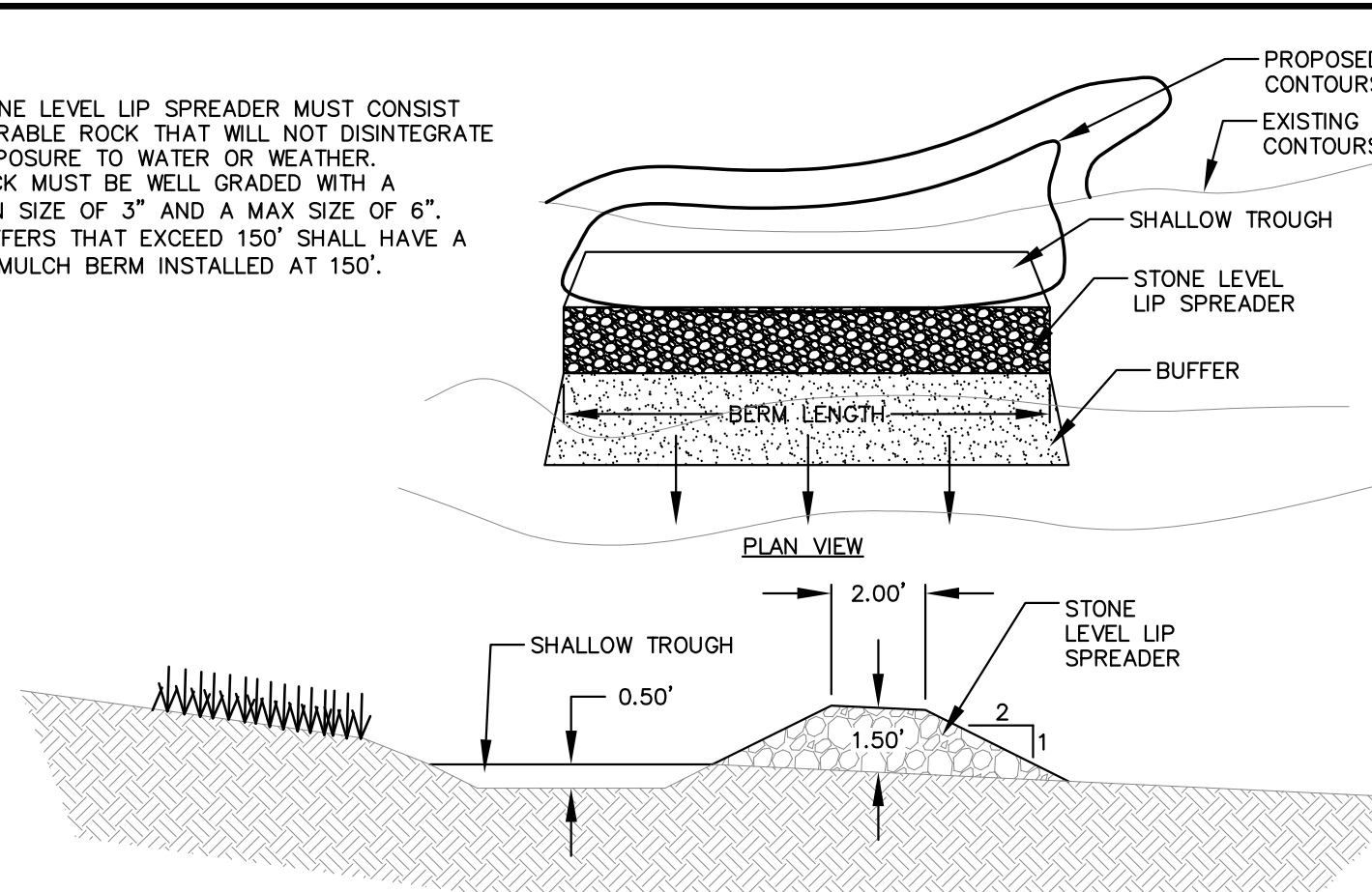
NOTE: APPLICABLE FOR STABILIZING EXPOSED SOIL SLOPES



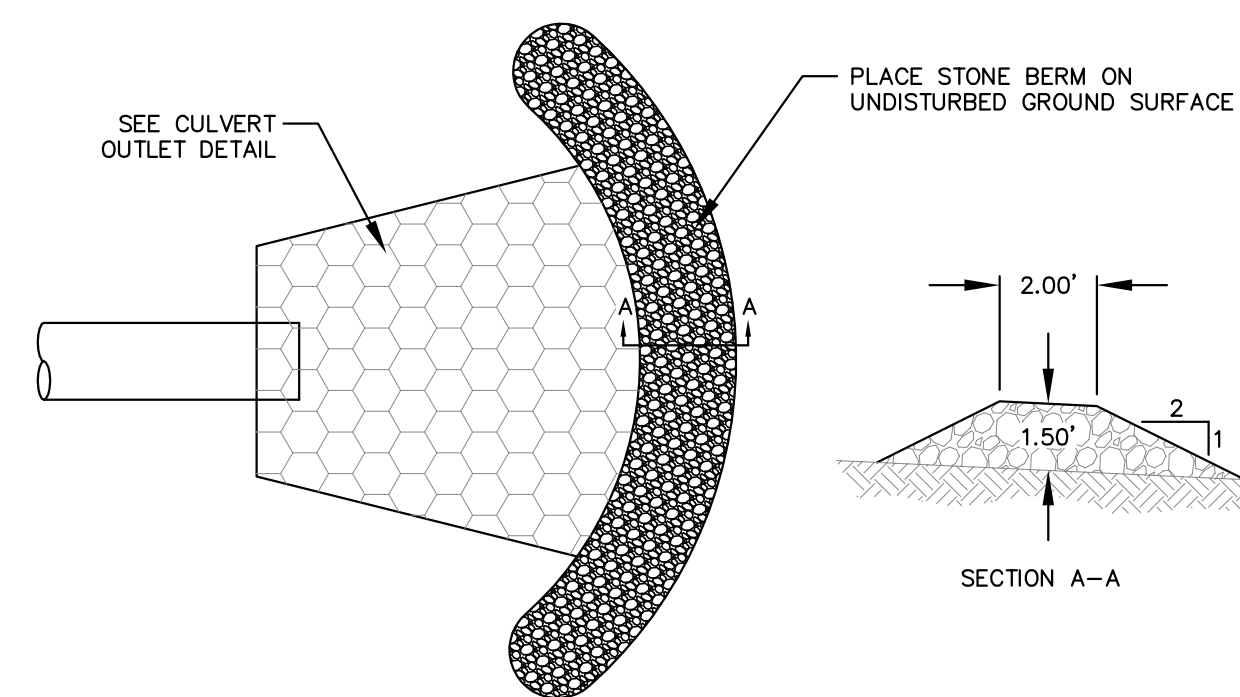
SLOPE APPLICATION-FOR EROSION CONTROL MESH
NOT TO SCALE



- NOTE:
1. STONE LEVEL LIP SPREADER MUST CONSIST OF DURABLE ROCK THAT WILL NOT DISINTEGRATE BY EXPOSURE TO WATER OR WEATHER.
2. ROCK MUST BE WELL GRADED WITH A MEDIAN SIZE OF 3" AND A MAX SIZE OF 6".
3. BUFFERS THAT EXCEED 150' SHALL HAVE A BARK MULCH BERM INSTALLED AT 150'.

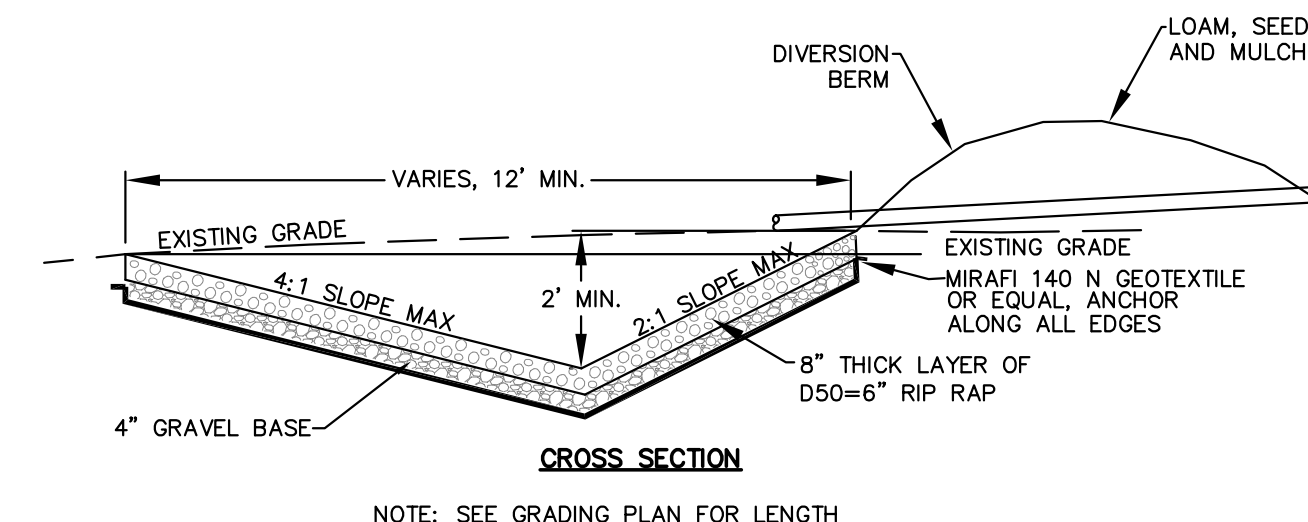


STONED LEVEL LIP SPREADER DETAIL
NOT TO SCALE



ALTERNATE LEVEL SPREADER
NOT TO SCALE

- NOTE:
1. ALTERNATE LEVEL SPREADER SHALL BE UTILIZED FOR CULVERT OUTLETS THAT DO NOT DISCHARGE TO CONCENTRATED FLOW CHANNELS.
2. STONE BERM MUST CONSIST OF DURABLE ROCK THAT WILL NOT DISINTEGRATE BY EXPOSURE TO WATER OR WEATHER.
3. ROCK MUST BE WELL GRADED WITH A MEDIAN SIZE OF 2-3" AND A MAX SIZE OF 6".

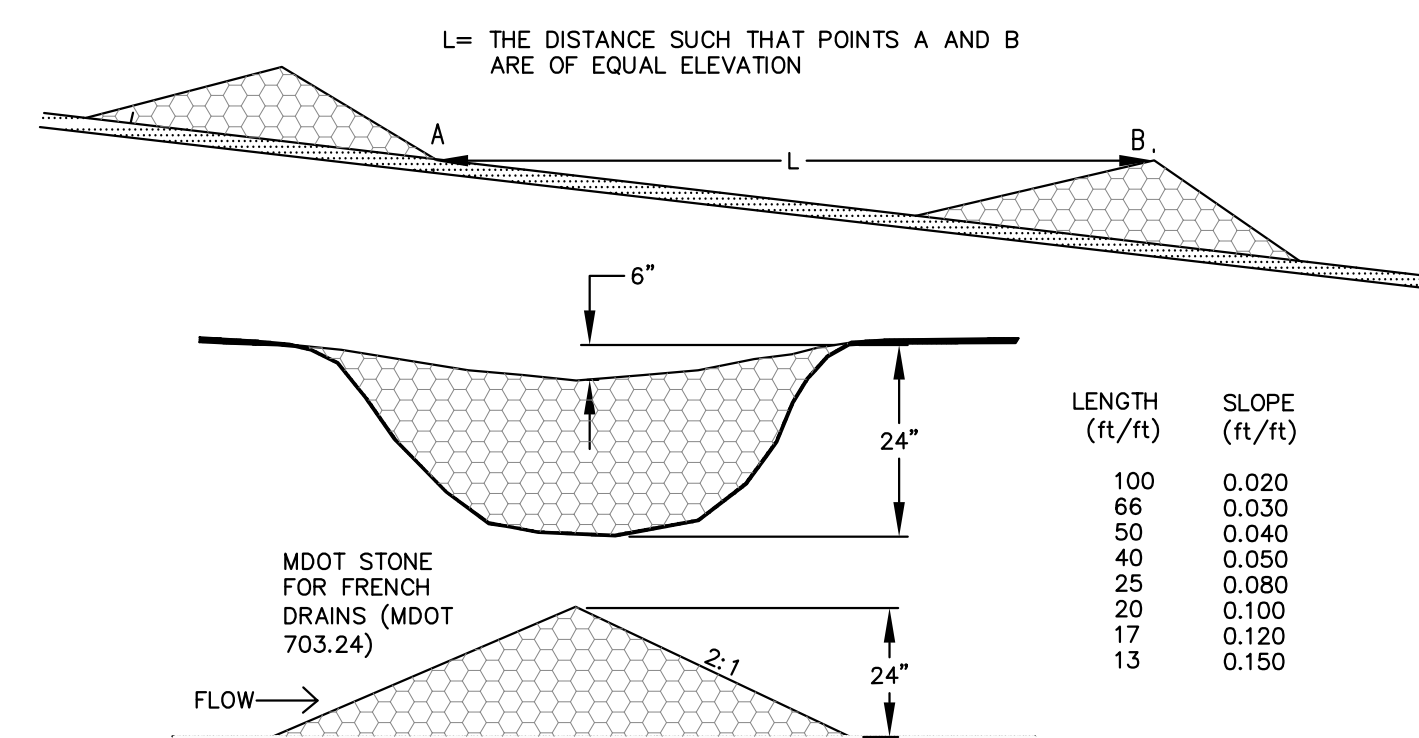


TYPICAL LEVEL SPREADER
NOT TO SCALE

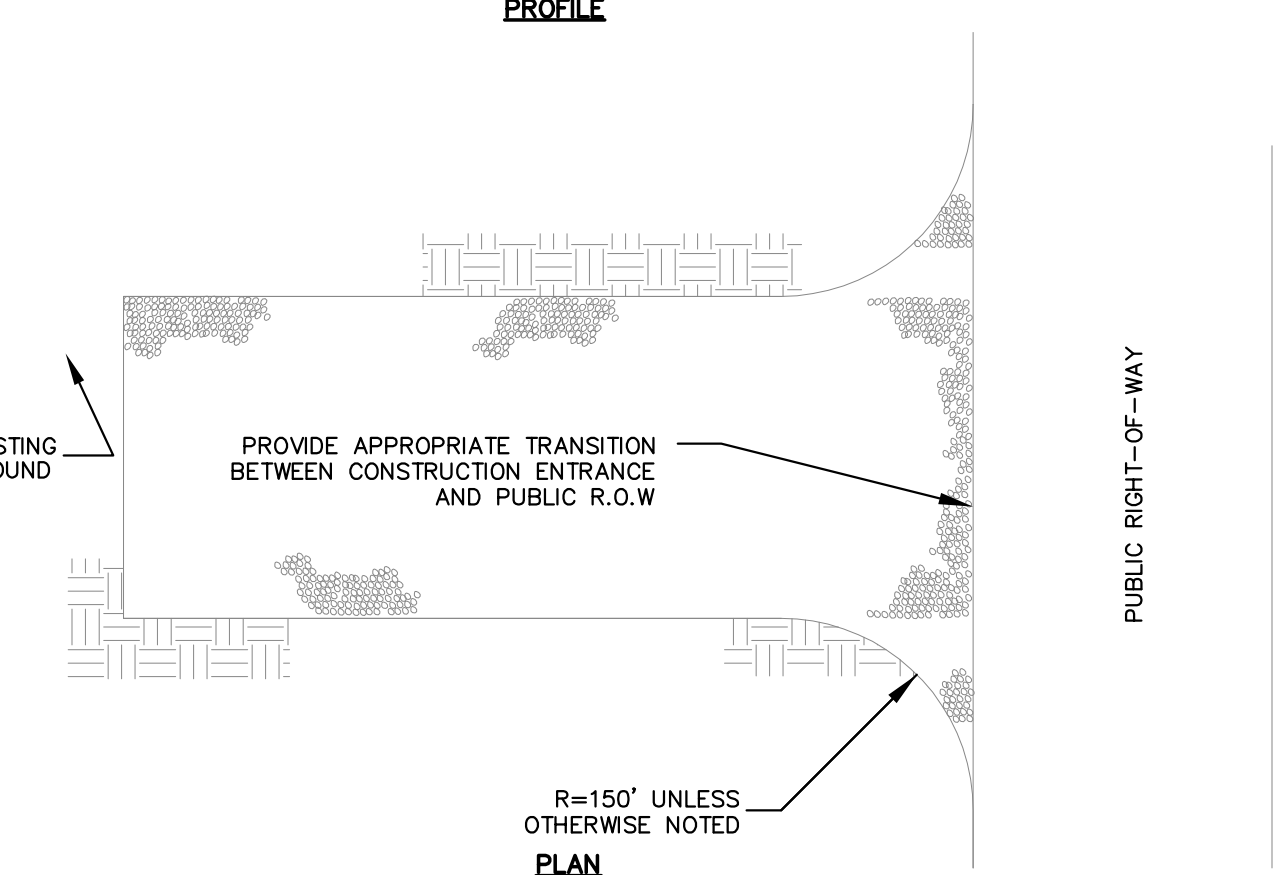
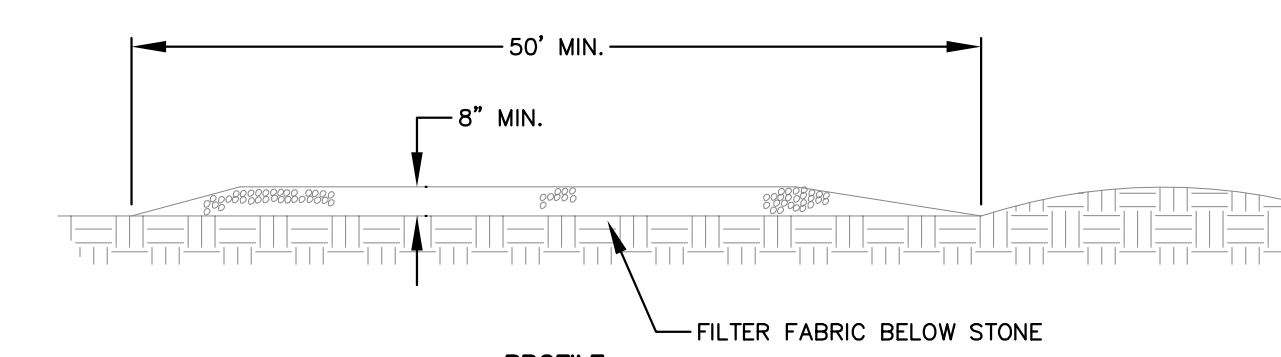
LEVEL SPREADER NOTES

- ALL LEVEL SPREADERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION.
- ALL LEVEL SPREADERS SHALL BE CONSTRUCTED IN A CUT SECTION, I.E. THERE SHALL BE NO EARTH FILL ALONG DOWNSTREAM EDGE.
- ALL LEVEL SPREADERS SHALL BE ALIGNED PARALLEL TO THE EXISTING CONTOURS.
- THE ENTRANCE DITCH TO THE LEVEL SPREADER SHALL HAVE A MAXIMUM GRADE OF 1.0% FOR AT LEAST 50 FEET IMMEDIATELY PRIOR TO ENTERING THE SPREADER.
- THE LEVEL SPREADER SHALL HAVE A LONGITUDINAL GRADE OF 0.0%.

NOTE: EXACT LOCATION OF DAMS TO BE FIELD DETERMINED.

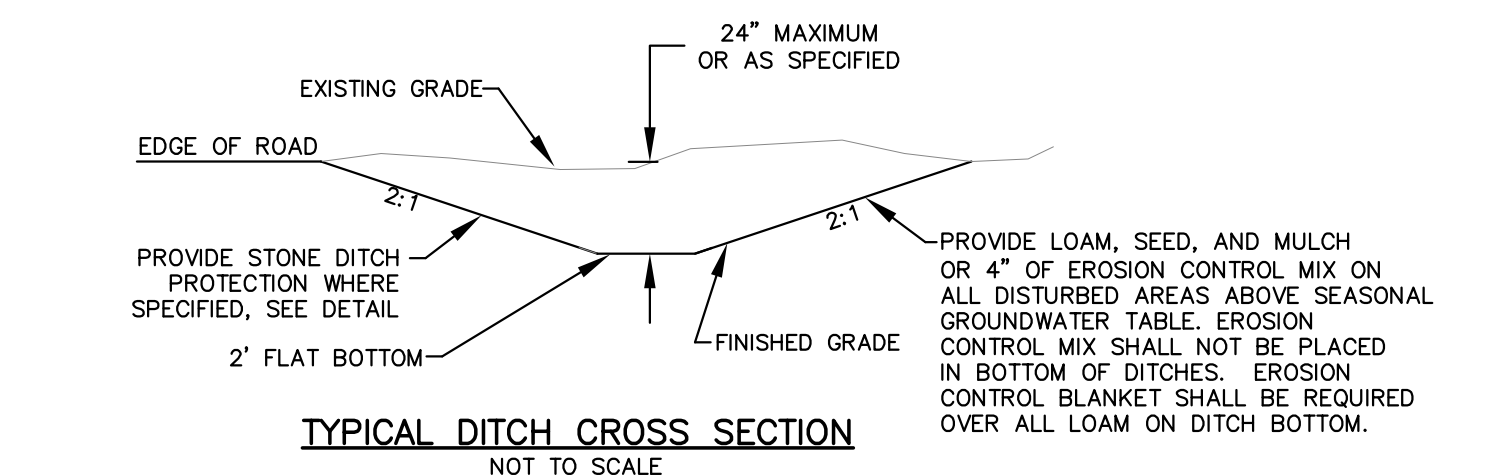


STONE CHECK DAM DETAILS
NOT TO SCALE

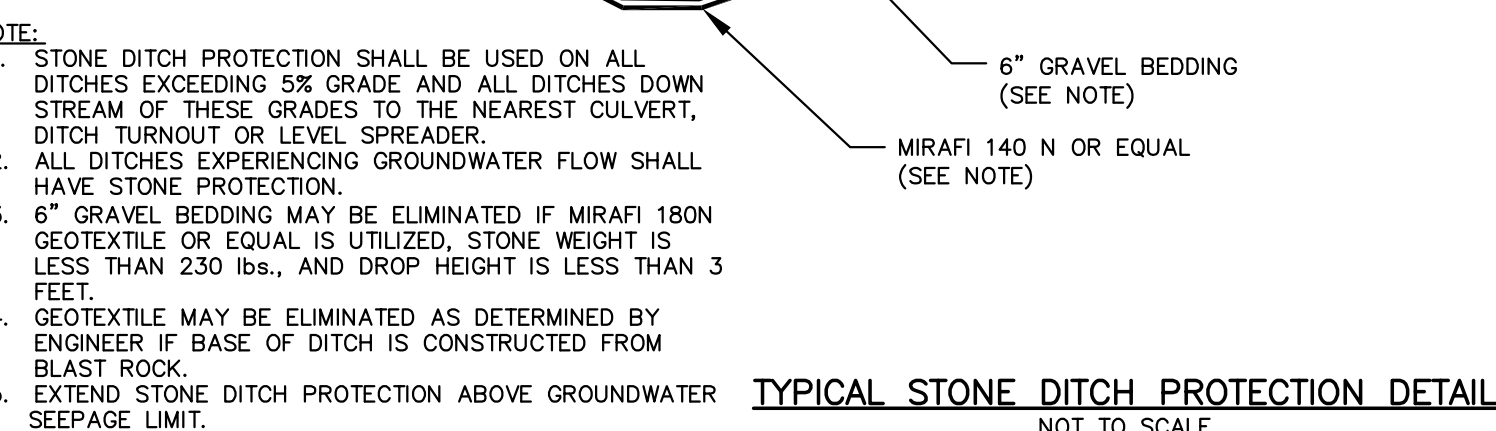


- NOTES:
1. STONE SIZE - AASHTO DESIGNATION M43, SIZE NO. 2 (2 1/2" TO 1 1/2"). USE CRUSHED STONE.
2. LENGTH - AS SHOWN ON GRADING PLAN, MIN. 50 FEET.
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



TYPICAL DITCH CROSS SECTION
NOT TO SCALE



TYPICAL STONE DITCH PROTECTION DETAIL
NOT TO SCALE

- NOTE:
1. STONE DITCH PROTECTION SHALL BE USED ON ALL DITCHES EXCEEDING 5% GRADE AND ALL DITCHES DOWN STREAM OF THESE GRADES TO THE NEAREST CULVERT, DITCH TURNOUT OR LEVEL SPREADER.
2. ALL DITCHES EXPERIENCING GROUNDWATER FLOW SHALL HAVE STONE PROTECTION.
3. 6" GRAVEL BEDDING MAY BE ELIMINATED IF MIRAFI 180N GEOTEXTILE OR EQUAL IS UTILIZED, STONE WEIGHT IS LESS THAN 230 LBS., AND DROP HEIGHT IS LESS THAN 3 FEET.
4. GEOTEXTILE MAY BE ELIMINATED AS DETERMINED BY ENGINEER IF BASE OF DITCH IS CONSTRUCTED FROM BLAST ROCK.
5. EXTEND STONE DITCH PROTECTION ABOVE GROUNDWATER SEEPAGE LIMIT.

COMPOSITION

EROSION CONTROL MIX SHALL BE MANUFACTURED ON OR OFF THE PROJECT SITE SUCH THAT ITS COMPOSITION IS IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL, LAST REVISED 3/2003 OR LATER. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

INSTALLATION:

- THE BARRIER MUST BE PLACED ACROSS THE SLOPE, ALONG THE CONTOUR.
- EXISTING GROUND SHALL BE PREPARED SUCH THAT THE BARRIER MAY LIE NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BARRIER.
- THE BARRIER SHALL BE A MINIMUM OF 1 FOOT HIGH (AS MEASURED ON THE UPHILL SIDE) AND 2 FEET WIDE FOR SLOPES LESS THAN 5% IN GRADE AND SHALL BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.
- EROSION CONTROL MIX MAY BE INSTALLED WHERE SILT FENCE IS ILLUSTRATED ON THE DESIGN PLANS IN AREAS EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM.

EROSION CONTROL MIX BERM
NOT TO SCALE

Project No. 72380E

Drawn By: JSM

Checked By: JSM

Scale: H: 1"=100' V: 1"=50'

Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE

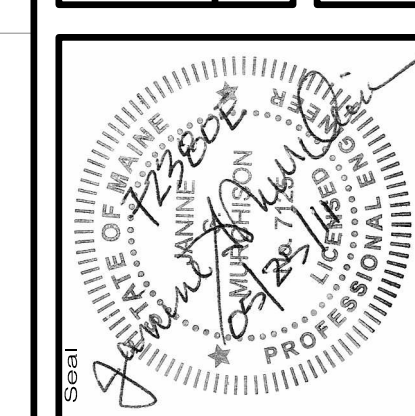
Drawing Description: EROSION CONTROL DETAILS

72380E

on an integrated team of geospatial, engineering, surveying and NATURAL RESOURCE consultants

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Sheet No. 2

GENERAL NOTES & CONSTRUCTION SPECIFICATIONS

- STABILIZATION WILL BE DONE WITHIN 7 DAYS OF GRADING OR WITHIN 30 DAYS OF INITIAL SOIL DISTURBANCE.
- EVERY WEEK AND AFTER PRECIPITATION PRODUCING THE EQUIVALENT OF ONE-HALF INCH OF RAINFALL, THE CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL MEASURES. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVAL OF SEDIMENT FROM SILT FENCES IF SOIL ACCUMULATES TO A DEPTH OF ONE-HALF THE FABRIC HEIGHT.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH "MAINE EROSION & SEDIMENT CONTROL: BEST MANAGEMENT PRACTICES," BY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MEASURES, INCLUDING MATERIALS, CONSTRUCTION, MAINTENANCE AND REMOVAL.
- MECHANICAL STABILIZATION SHALL BE INSTALLED ON ALL SOIL SLOPES WHICH HAVE A SLOPE GREATER THAN 3:1.
- EROSION CONTROL MEASURES SHALL BE INSPECTED ON A MONTHLY BASIS ONCE FINAL STABILIZATION IS COMPLETE, BY THE INSPECTING ENGINEER. THIS INSPECTION IN NO WAY REDUCES OR ELIMINATES THE CONTRACTOR'S RESPONSIBILITY TO ADHERE WITH VERBAL OR WRITTEN REQUIREMENTS OF DEP, ARMY CORPS, EPA, OR OTHER JURISDICTIONAL AGENCIES.
- AFTER EACH INSPECTION OF EROSION CONTROL MEASURES, AN INSPECTION REPORT DETAILING THE SCOPE OF THE INSPECTION, NAME(S) OF PERSONNEL CONDUCTING THE INSPECTION, DATE, MAJOR OBSERVATIONS, AND ACTIONS TAKEN, SHALL BE MADE AND KEPT ON FILE FOR THREE YEARS AFTER THE INSPECTION.

CONSTRUCTION SEQUENCE & PHASING NOTES

PHASE 1: CLEARING OF VEGETATION AND STOCKPILING OF TOPSOIL

- INSTALL EROSION CONTROL MEASURES PRIOR TO SOIL DISTURBANCE.
- FLAG & MARK R.O.W. OF ACCESS ROADS, CRANE PATHS, & COLLECTION LINES, WITH THE OTHER CONSTRUCTION AREAS TO FOLLOW.
- PILE REMAINING SMALL BRUSH IN SPECIFIC LOCATIONS & AT DESIGNATED DISTANCES (40 TO 100 FT. DEPENDING ON FOREST & FOLIAGE DENSITY) FROM ONE ANOTHER WITHIN THE R.O.W.
- EACH BRUSH PILE TO BE CHIPPED.
- CHIPPED MATERIAL TO BE BROADCAST AS AN EPCS MEASURE.
- STUMPS TO BE REMOVED FROM LOCATIONS WHERE STRUCTURES (i.e., TURBINES, SUBSTATION, O&M BUILDING, STORMWATER MANAGEMENT SYSTEMS) ARE TO BE INSTALLED/CONSTRUCTED. STUMPS TO BE CHIPPED ON-SITE & USED AS AN EPCS MEASURE.
- LOW GROWING VEGETATION TO REMAIN, WHERE FEASIBLE (e.g., WITHIN THE OVERHEAD COLLECTION LINE R.O.W.) TO PROVIDE SOIL STABILITY.
- EXISTING TOPSOIL IN AREAS OF DEVELOPMENT TO BE STOCKPILED ON-SITE FOR USE IN FINAL STABILIZATION OF ROAD SHOULDERS, TURBINE CLEARINGS AND LAY DOWN AREAS.
- TOPSOIL STOCKPILE AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. THIS WILL INCLUDE ENCIRCLING DOWNGRADIENT SIDES OF STOCKPILES WITH SILT FENCE AND AN EROSION CONTROL MIX BERM. VELOCITIES SHALL BE LEFT IN A ROUGHENED CONDITION TO REDUCE RUNOFF VELOCITIES AND EROSION.
- STOCKPILES UNDISTURBED MORE THAN 30 DAYS SHALL BE SEED WITH WINTER RYE, OR MULCHED WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR COVERED WITH A 4-INCH LAYER OF EROSION CONTROL MIX.

PHASE 2: CONSTRUCTION OF ACCESS ROADS, CRANE PATHS, & LAY DOWN/STAGING AREAS

- 20'-FT WIDE ACCESS ROADS EXCEPT 16'-FT WIDE ON A PORTION OF DILL HILL & 35'-FT WIDE CRANE PATHS TO BE CONSTRUCTED. USE OF EXISTING/UPGRADED LOGGING ROADS WHERE APPLICABLE.
- SURVEY CREWS TO STAKE THE ROADWAY R.O.W. BOUNDARIES & CENTERLINE TO GUIDE OPERATORS. ADDITIONAL STAKING & MARKING AT LOCATIONS WHERE STORMWATER CONTROL MEASURES WILL BE INSTALLED.
- STAKE PERIMETER OF LAY DOWN/STAGING AREAS.

PHASE 3: CONSTRUCTION OF PERMANENT STORMWATER MANAGEMENT SYSTEMS

- GRADING TO BE CONDUCTED IN ACCORDANCE WITH PERMITTED PERMANENT STORMWATER MANAGEMENT DESIGN.
- ONCE FINAL GRADES ARE ACHIEVED, EXPOSED SOIL SURROUNDING THE STORMWATER MANAGEMENT STRUCTURES TO BE PERMANENTLY STABILIZED WITH LOAM, SEED & MULCH OR WOODWASTE PER GUIDELINES AND SPECIFICATIONS.

PHASE 4: CONSTRUCTION OF CRANE PADS

- CRANE PADS TO BE CONSTRUCTED ONCE TURBINE FOUNDATIONS HAVE BEEN ESTABLISHED.
- AFTER THE SUBGRADE IS ESTABLISHED, CRANE PAD TO BE CONSTRUCTED WITH CRUSHED AGGREGATE, SPREAD & COMPACTED; MINOR GRADE ADJUSTMENTS MAY NEED TO OCCUR, WITH COMPLETION ONCE CRANE PADS MEET DESIGN SPECIFICATIONS.
- CRANE PADS TO REMAIN IN PLACE FOR FUTURE MAINTENANCE & OPERATION.
- EXPOSED SOIL SURROUNDING CRANE PADS & TURBINE FOUNDATIONS TO BE STABILIZED WITH LOAM, SEED OR MULCH WOODWASTE PER GUIDELINES & SPECIFICATIONS.

PHASE 5: CLEAN-UP & FINAL STABILIZATION

- UPON COMPLETION OF CONSTRUCTION ACTIVITIES, ALL WORK AREAS TO BE CLEARED OF CONSTRUCTION DEBRIS & OTHER MATERIALS.
- SPECIFIC CLEAN-UP REQUIREMENTS TO INVOLVE: REMOVAL OF ALL TEMPORARY WORK TRAILERS; REMOVAL OF MATERIAL & EQUIPMENT; DISPOSAL OF ALL RUBBISH RESULTING FROM CLEARING, CONSTRUCTION, & INSTALLATION; ROUGH GRADING & STABILIZATION OF EMBANKMENTS MADE FOR CONSTRUCTION PURPOSES; FILLING OF EXCAVATIONS; & REPAIRING RUTS IN ACCESS ROADS.
- FINAL STABILIZATION TO INVOLVE RESPRADING OF STOCKPILED TOPSOIL MATERIAL & SEEDING OR MULCHING WITH WOODWASTE MULCH ALL AREAS OF DISTURBED SOIL, WHERE FINAL GRADE HAS BEEN ACHIEVED. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE PROJECT PERMITS & OWNERS ENVIRONMENTAL POLICIES & PROCEDURES.
- LAYDOWN AREA SHALL BE ALLOWED TO REVEGETATE WITHIN ONE YEAR. CONTRACTOR SHALL REGRADE AS NECESSARY TO AVOID CONCENTRATED FLOWS.

SPECIFIC MAINTENANCE INSTRUCTION:

- STRAW/HAY BALE BARRIERS, SILT FENCE, FILTER BARRIERS— MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REPLACE W/ TEMPORARY CHECK DAM IF THERE IS UNDERCUTTING AT CENTER OR EDGES, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED. REPLACE DECOMPOSED OR INEFFECTIVE FABRIC IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AFTER EACH STORM. DEPOSITS REMAINING IN PLACE AFTER SILT FENCE OR FILTER FABRIC IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM W/ EXISTING GRADE, PREPARED AND SEED.
- CULVERTS — CULVERTS SHOULD BE CHECKED MONTHLY FOR ACCUMULATION OF DEBRIS. IF NEEDED THEY SHOULD BE DRESSED.
- A STORMWATER MAINTENANCE LOG SHOULD BE MAINTAINED TO DOCUMENT COMPLIANCE WITH THE SUGGESTED SCHEDULE.

WINTER CONSTRUCTION NOTES

- THE WINTER CONSTRUCTION PERIOD SHALL BE FROM NOVEMBER 1 THROUGH APRIL 15.
- WHERE FEASIBLE, A MINIMUM 25'-FT BUFFER SHALL BE MAINTAINED BETWEEN SILT FENCE OR OTHER PERIMETER CONTROLS AND ACCESS ROADS TO ALLOW FOR SNOW CLEARING AND MAINTENANCE.
- DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.
- DRAINAGE STRUCTURES SHALL BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
- ACCEPTABLE OVER-WINTER STABILIZATION SHALL CONSIST OF VEGETATION (MIN. 75% MATURE), MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP OR GRAVEL ROAD BASE.
- EROSION PREVENTION AND SEDIMENT CONTROL MEASURES THAT REQUIRE EARTH DISTURBANCE (e.g., CONSTRUCTION FENCE AND SILT FENCE) SHALL BE INSTALLED PRIOR TO THE GROUND FREEZING. DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS.
- FROM NOVEMBER 1 TO APRIL 15, MULCH SHALL BE INSTALLED AT DOUBLE THE NORMAL RATE. NETTING OR OTHER MEANS APPROVED BY THE ENGINEER SHALL BE USED TO MINIMIZE WIND EROSION OF MULCHING.
- PRIOR TO STABILIZATION, ICE AND SNOW SHALL BE REMOVED TO LESS THAN 1-IN.
- IF VEHICLE TRAFFIC IS ANTICIPATED AROUND STRUCTURES UNDER CONSTRUCTION, THE AREA SHALL BE STABILIZED WITH STONE.
- EXCAVATED FROZEN SOILS SHALL BE STOCKPILED IN LEVEL AREAS AND SHALL NOT BE USED UNTIL THAWED. STOCKPILES SHALL BE ENCIRCLED WITH EROSION CONTROL MIX BERMS.
- EXCAVATION OF SOILS IN SHALLOW GROUNDWATER AREAS SHALL BE MINIMIZED IF AT ALL POSSIBLE DURING WINTER, AND LIMITED TO ONLY THOSE AREAS THAT CAN BE STABILIZED DURING THE SAME DAY.
- TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
 - IF NO PRECIPITATION IS FORECAST WITHIN 24 HOURS AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
 - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS BUILDING FOUNDATIONS AND OPEN UTILITY TRENCHES.
- THE ENGINEER SHALL MAKE NECESSARY ADJUSTMENTS TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND ASSOCIATED EROSION PREVENTION AND SEDIMENT CONTROL MEASURES (e.g., CONSTRUCTION FENCE AND SILT FENCE) TO ACCOMMODATE ANTICIPATED SNOW STORAGE AREAS.
- AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCE, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL COVER. DURING WINTER CONSTRUCTION A DOUBLE ROW OF SEDIMENT BARRIERS SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. NATURAL RESOURCE CROSSINGS SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE.
- STOCKPILES OF SOIL SHALL BE MULCHED FOR OVER-WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4-INCH LAYER OF EROSION CONTROL MIX.
- MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES OR BARE SPOTS.

TEMPORARY SEEDING NOTES

- DISTURBED AREAS TO BE LEFT IN ROUGH GRADED FORM FOR MORE THAN 30 DAYS BUT LESS THAN ONE GROWING SEASON SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED.
- APPLICATION RATES AND MATERIALS USED SHALL BE THE SAME AS FOR PERMANENT SEEDING EXCEPT SEED MIXTURE SHALL BE ANNUAL RYEGRASS.

PERMANENT SEEDING NOTES

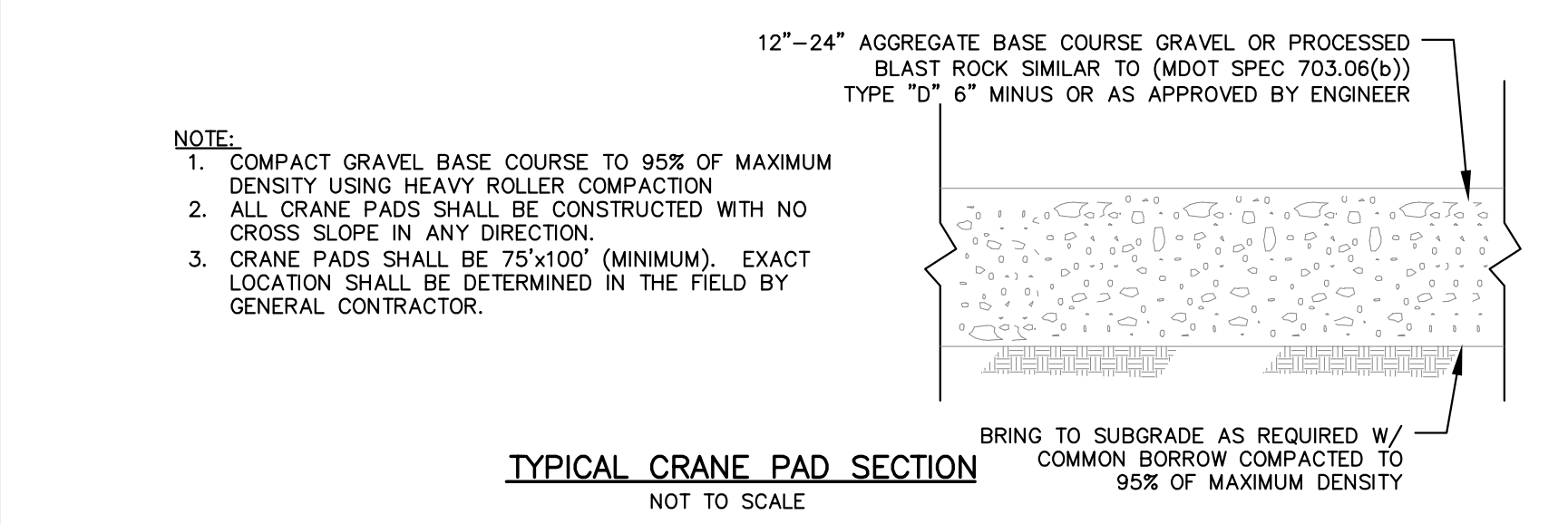
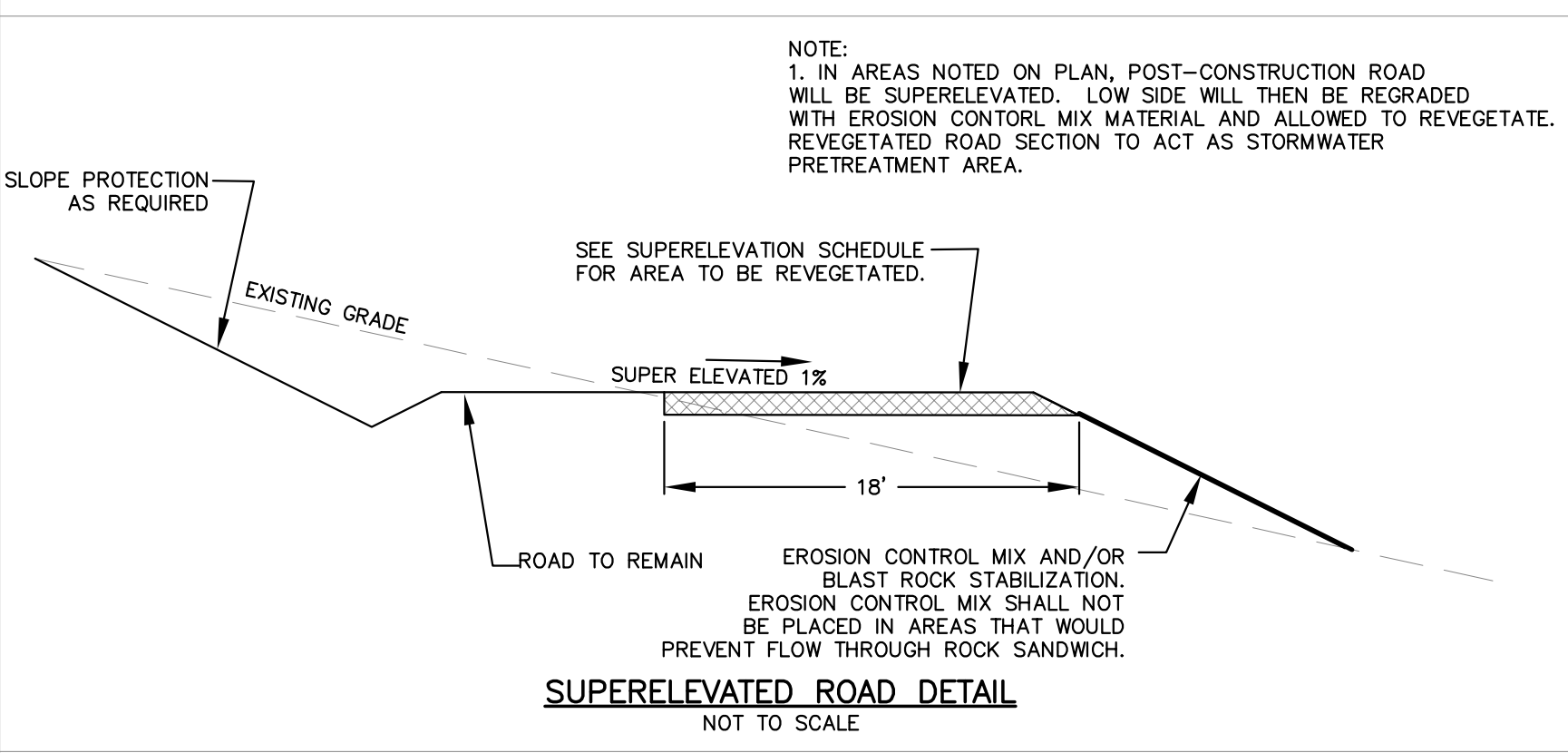
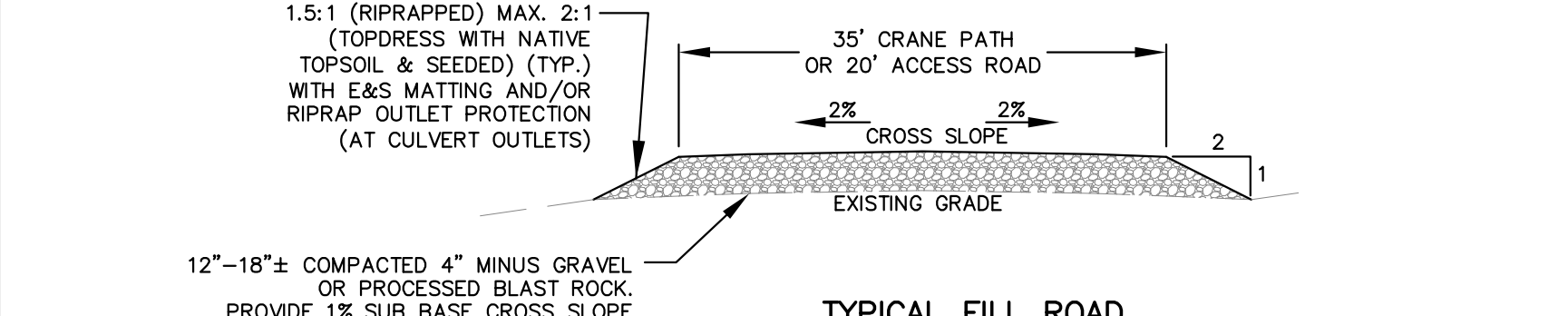
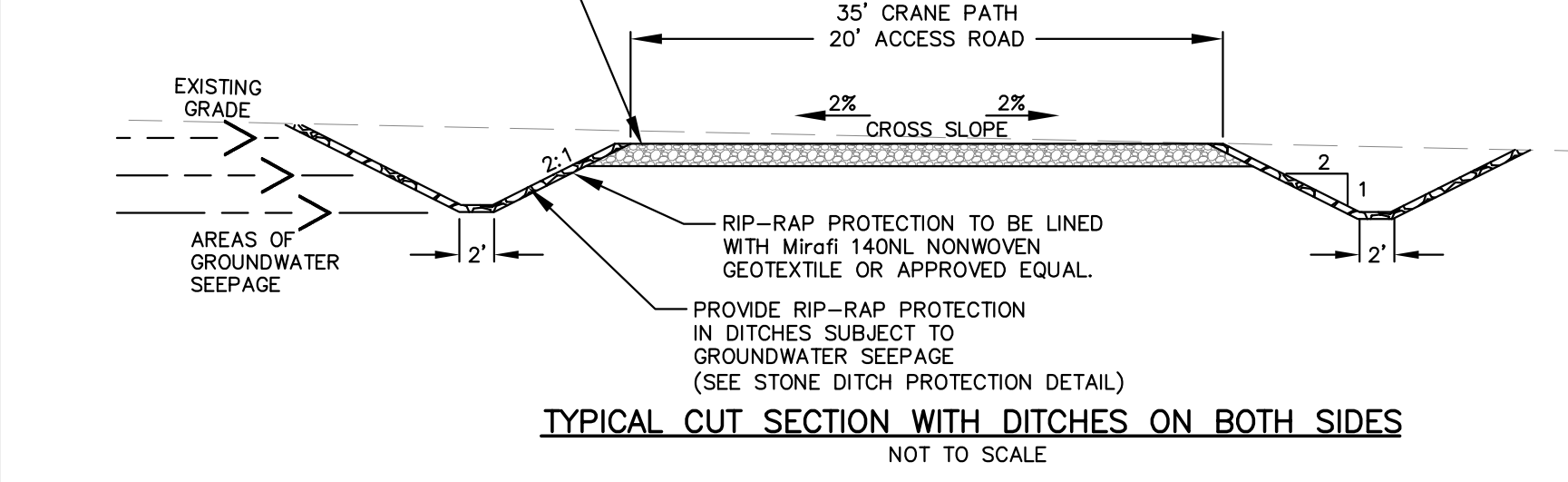
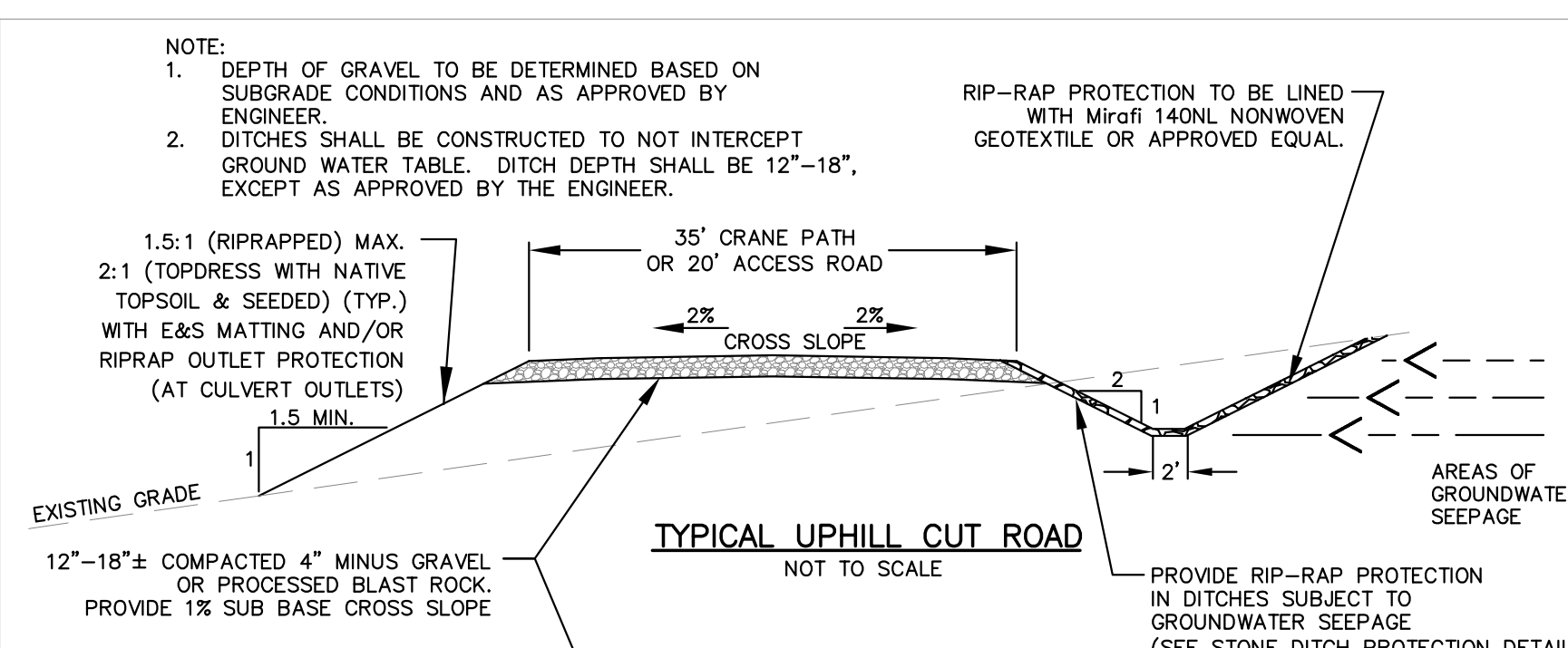
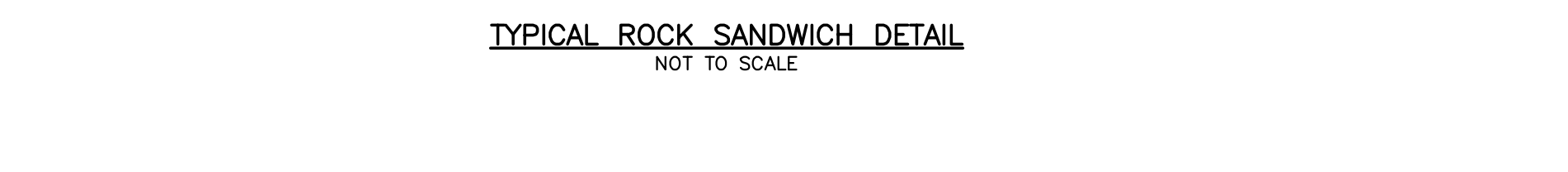
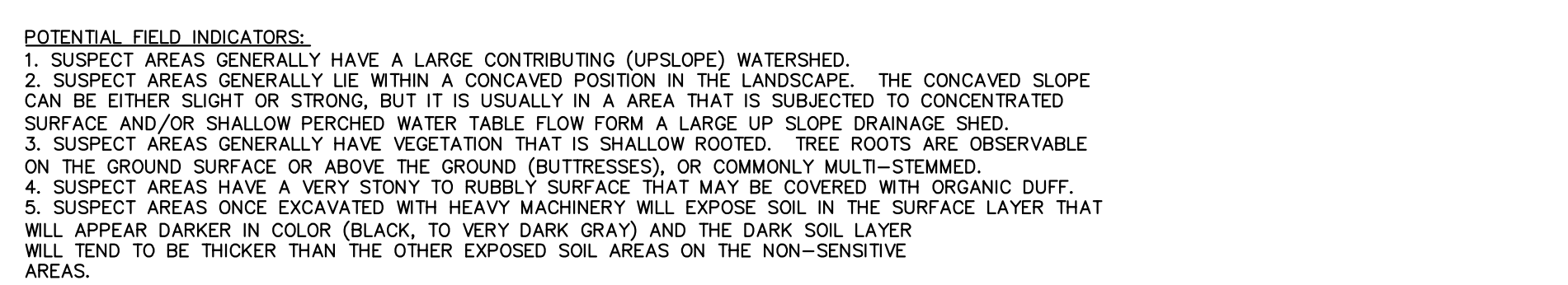
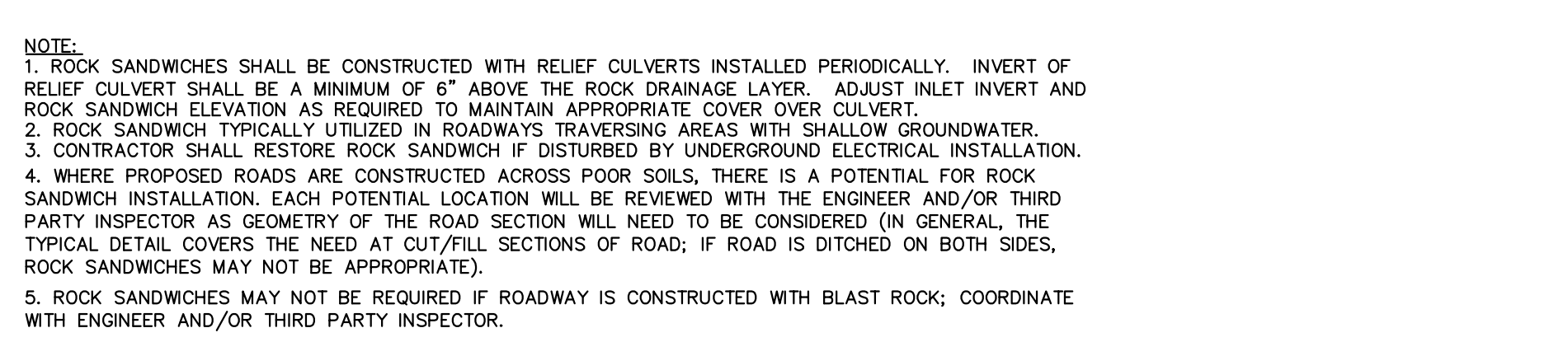
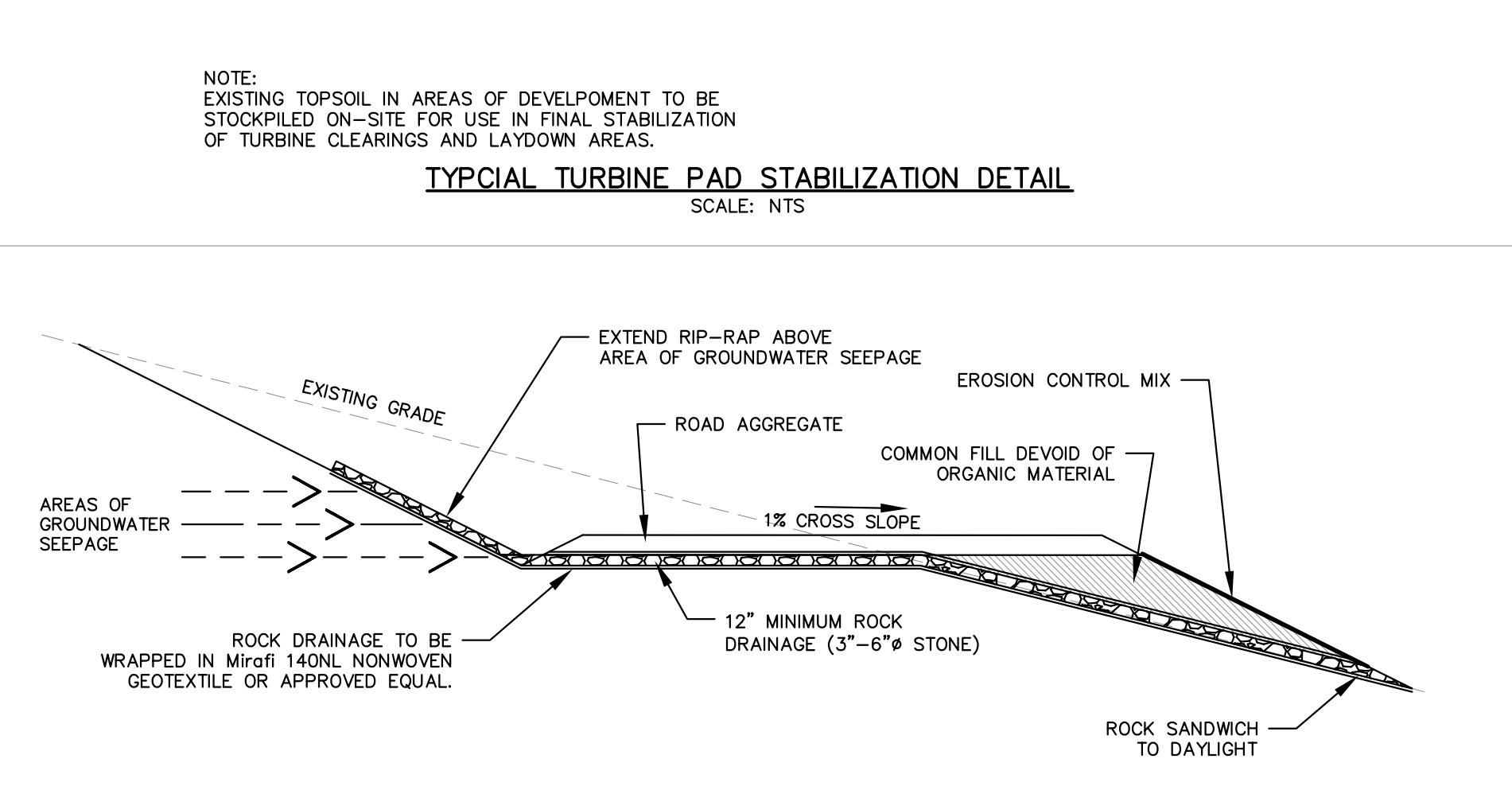
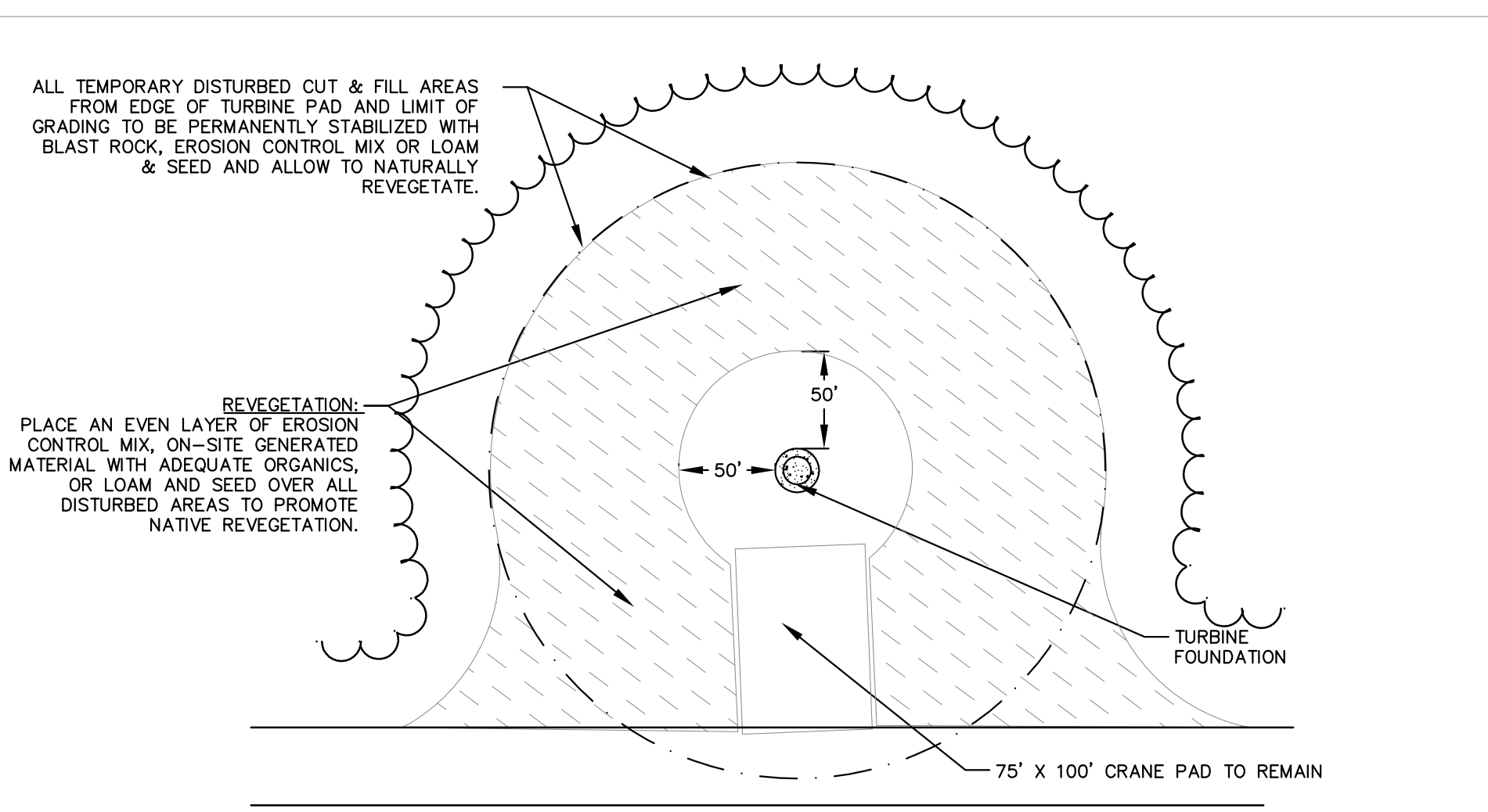
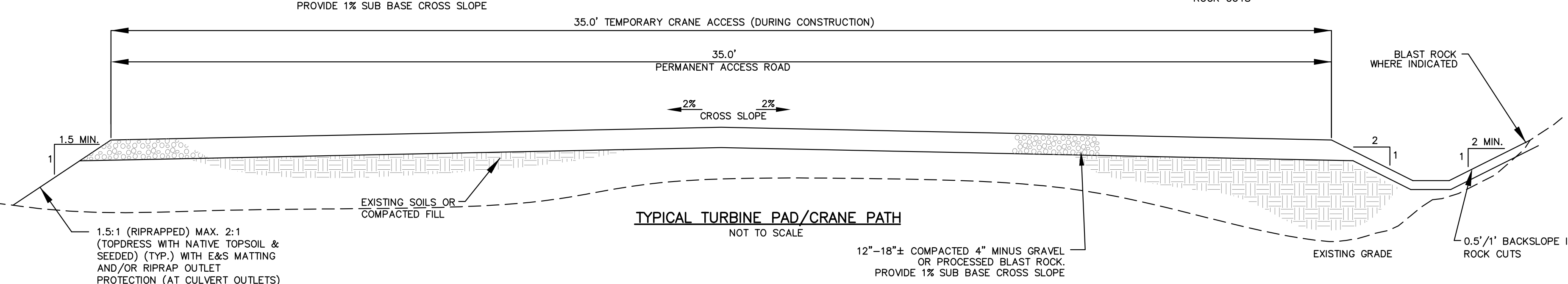
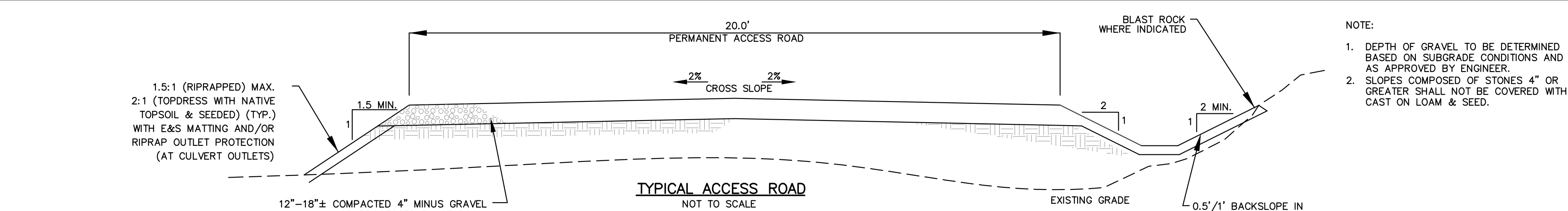
- DURING PERIODS FROM APRIL 15 TO SEPTEMBER 15, DISTURBED AREAS SHALL BE PERMANENTLY SEED WITH CONSERVATION SEED MIX (A MIXTURE OF CREEPING RED FESCUE, REDTOP, TALL FESCUE, CLOVER AND ANNUAL RYE), AT A RATE OF 3.0 LB/1,000 SF.

DORMANT SEEDING NOTES

- DURING PERIODS FROM SEPTEMBER 16 TO NOVEMBER 15, DISTURBED AREAS SHALL BE DORMANT SEED WITH WINTER RYE, 5 LB/1,000 SF. DURING PERIODS BETWEEN NOVEMBER 15 AND APRIL 15, DISTURBED AREAS SHALL BE MULCHED AND IF NECESSARY, STABILIZED WITH EROSION CONTROL MESH.

DEWATERING

- CONTRACTOR SHALL BE AWARE THAT A HIGH WATER TABLE EXISTS AT SEVERAL TURBINE PAD LOCATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY DEWATERING EXCAVATIONS DURING CONSTRUCTION.
- CONTRACTOR SHALL DISPOSE OF PUMPED WATER IN APPROPRIATE MANNER TO AVOID CONCENTRATED FLOWS FROM SITE. THE USE OF SETTLEMENT BASINS OR SEDIMENT CONTROL DEVICES SUCH AS "DIRT BAGS" AND TEMPORARY SEDIMENT BASINS SHALL BE EMPLOYED TO SEPARATE SEDIMENTS FROM DEWATERING ACTIVITIES. PUMPED WATER WILL BE DIRECTED AWAY FROM RESOURCES TO NATURAL BUFFER AREAS OR OTHER ACCEPTABLE STABILIZED AREAS. METHODS OF DEWATERING AND THE SEDIMENT CONTROL DEVICES SHALL BE APPROVED BY THE ENGINEER AND THIRD PARTY INSPECTOR AT EACH LOCATION.
- DURING TEMPORARY DEWATERING ACTIVITIES CONTRACTOR SHALL OUTLET FLOWS TO SEDIMENT CONTROL DEVICES. THESE DEVICES SHALL BE LOCATED ON UNDISTURBED SOILS THAT ARE CAPABLE OF ALLOWING SURFACE INFILTRATION. LOCATIONS FOR ALL OUTLETS OF DEWATERING ACTIVITIES SHALL NOT BE PLACED IN IMMEDIATE VICINITY OF PROTECTED NATURAL RESOURCES.
- PERMANENT DEWATERING REQUIRED FOR FOUNDATION DRAINAGE SHALL OUTLET AS GRADES ALLOW. PERMANENT OUTLETS SHALL BE LOCATED ON UNDISTURBED SOILS THAT ARE CAPABLE OF ALLOWING SURFACE INFILTRATION OR IN NEAREST AVAILABLE ROADSIDE DITCH. PERMANENT OUTLETS LOCATED WITHIN DITCH LINES SHALL BE STABILIZED WITH RIPRAP. PERMANENT OUTLETS LOCATED IN WOODED AREAS SHALL BE STABILIZED WITH RIPRAP FOLLOWED BY A LEVEL SPREADER TO ELIMINATE CONCENTRATED FLOWS.
- IN LOCATIONS WHERE OUTLET REQUIRES THE PLACEMENT OUTSIDE THE DEPICTED CLEARING LIMITS CONTRACTOR SHALL MINIMIZE DISTURBANCE TO SMALLEST EXTENT PRACTICABLE AND SHALL AVOID PROTECTED NATURAL RESOURCES.



NOTE:
1. DEPTH OF GRAVEL TO BE DETERMINED BASED ON SUBGRADE CONDITIONS AND AS APPROVED BY ENGINEER.
2. SLOPES COMPOSED OF STONES 4" OR GREATER SHALL NOT BE COVERED WITH CAST ON LOAM & SEED.

NOTE:
1. DEPTH OF GRAVEL TO BE DETERMINED BASED ON SUBGRADE CONDITIONS AND AS APPROVED BY ENGINEER.
2. DITCHES SHALL BE CONSTRUCTED TO NOT INTERCEPT GROUND WATER TABLE. DITCH DEPTH SHALL BE 12"-18", EXCEPT AS APPROVED BY THE ENGINEER.

NOTE:
1. IN AREAS NOTED ON PLAN, POST-CONSTRUCTION ROAD WILL BE SUPERELEVATED. LOW SIDE WILL THEN BE REGRADED WITH EROSION CONTROL MIX MATERIAL AND ALLOWED TO REVEGETATE. REVEGETATED ROAD SECTION TO ACT AS STORMWATER PRETREATMENT AREA.

NOTE:
1. COMPACT GRAVEL BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. ALL CRANE PADS SHALL BE CONSTRUCTED WITH NO CROSS SLOPE IN ANY DIRECTION.
3. CRANE PADS SHALL BE 75'x100' (MINIMUM). EXACT LOCATION SHALL BE DETERMINED IN THE FIELD BY GENERAL CONTRACTOR.

Drawn By	JSM	Date	3/7/2011
Checked By	JSM	Revised For Agency Review	5/12/11
Designated By	JSM	Revised Per Agency Comments	

BOWERS WIND PROJECT

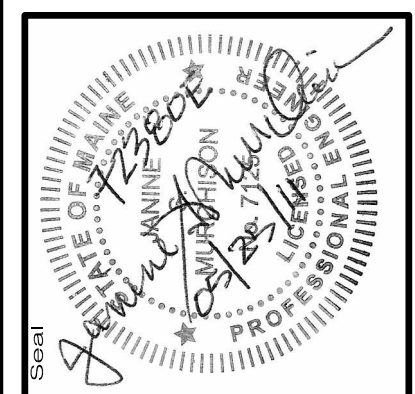
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Checked By: JSM
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Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE

Project No.: 72380E

Approval: [Signature]

EROSION CONTROL DETAILS



72380E

an integrated team of geospatial, engineering, surveying and NATURAL RESOURCE consultants

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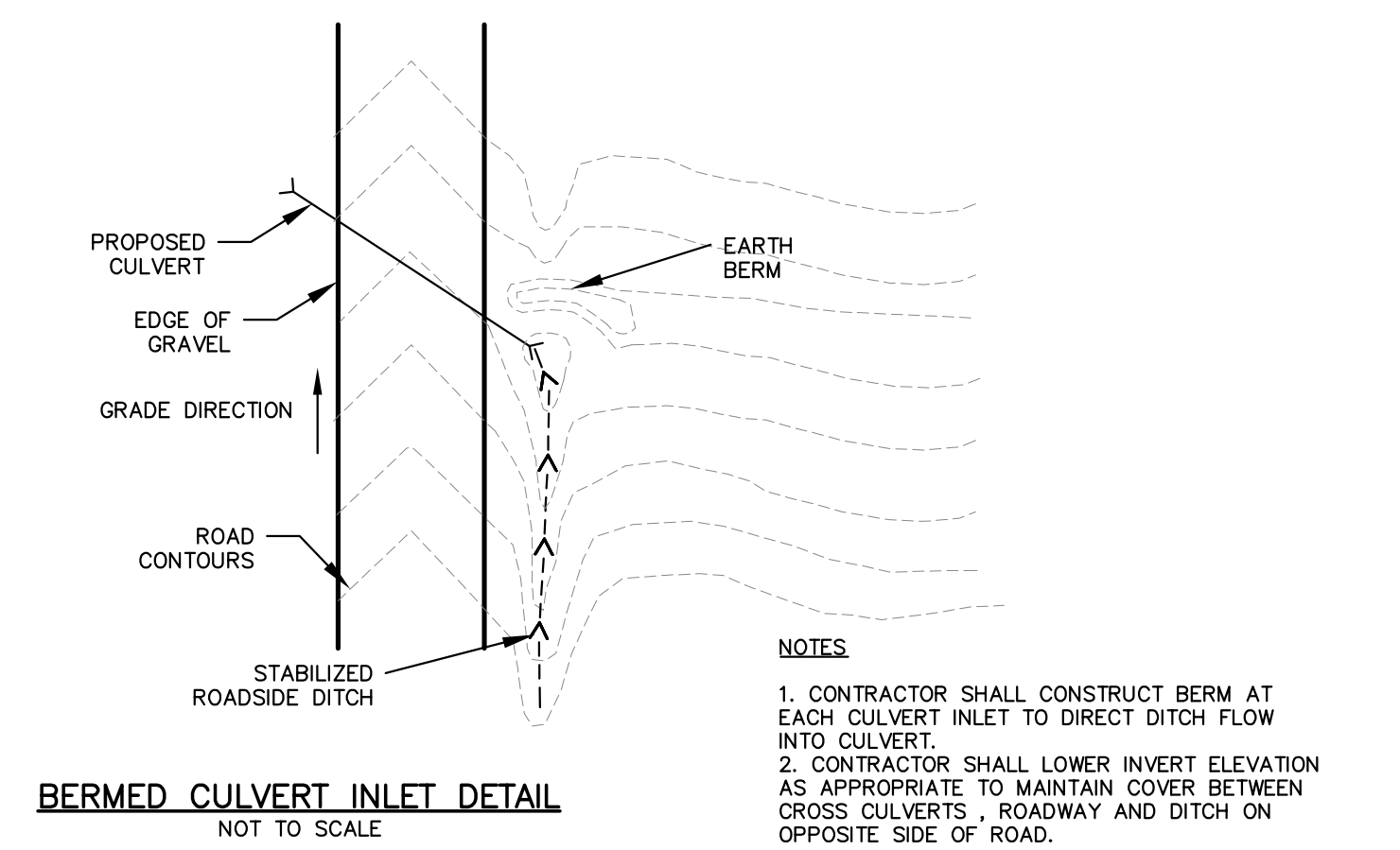
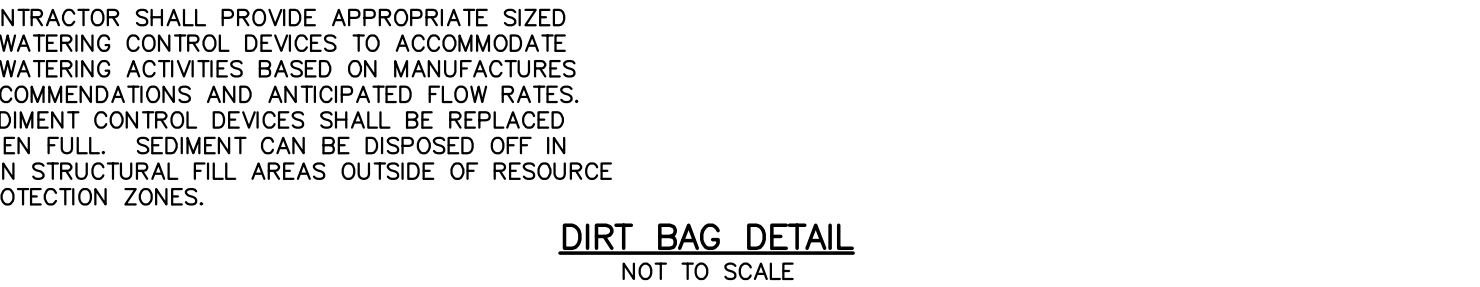
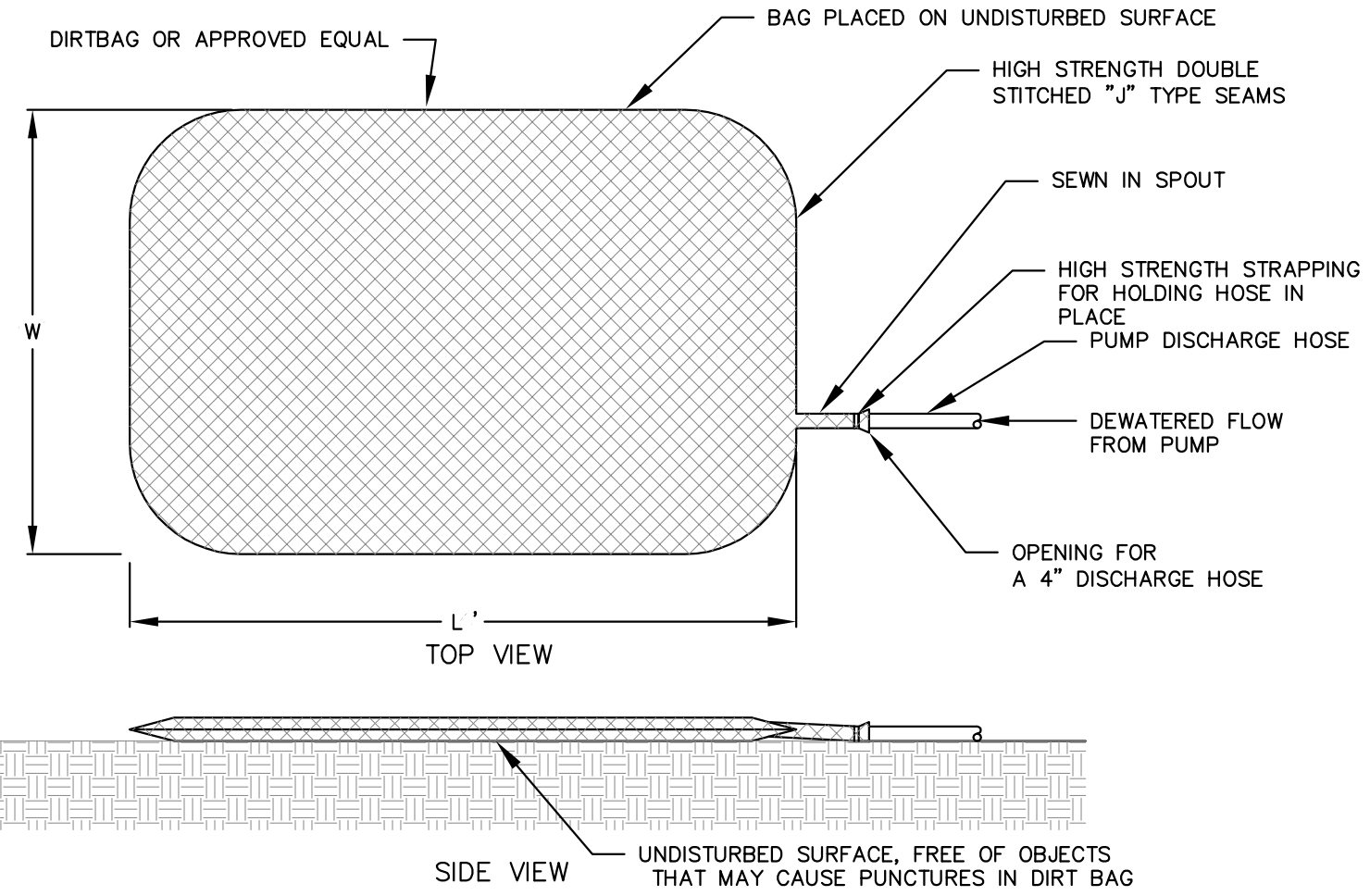
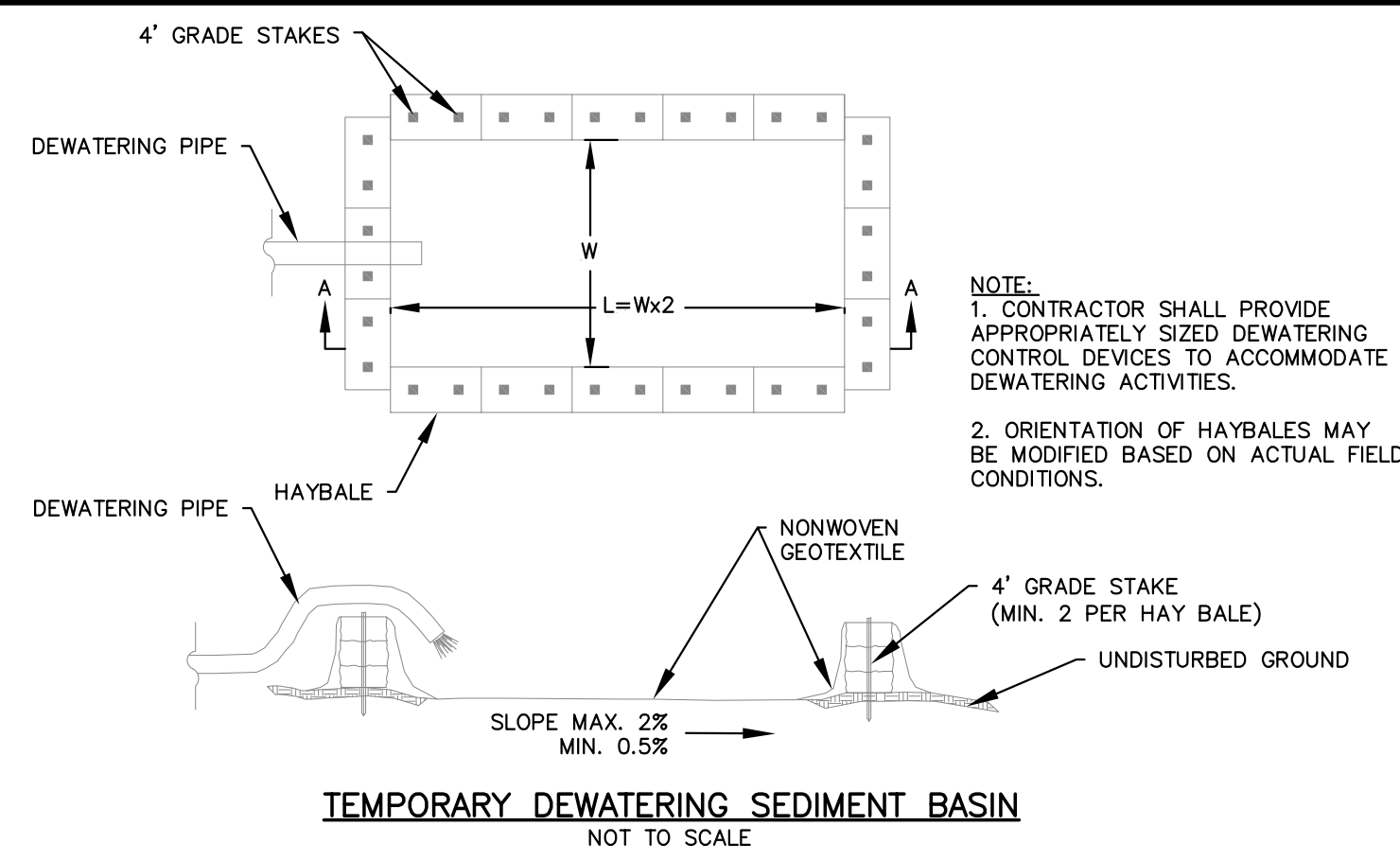
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Phase: PERMIT

Sheet No. 3

PRELIMINARY FOR AGENCY REVIEW

PRELIMINARY NOT FOR CONSTRUCTION



CULVERT SCHEDULE (ALIGNMENT BOWERS MOUNTAIN CRANE PATH)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
1007+00	15	3.10
1016+25	12	0.83
1052+75	12	1.41
1055+75	12	1.73
1058+50	12	1.44
1061+75	12	2.05
1068+25	12	0.60
1078+00	12	0.43
1080+60	12	1.00
1091+00	15	4.60
1093+75	12	1.68
1103+75	12	1.00
1108+25	12	2.27
1113+75	12	1.80
1116+25	15	4.02
1121+25	15	2.90
1123+00	15	2.90
1127+00	12	2.55
1130+00	12	0.73
1135+25	15	1.82
1146+00	12	1.30
1152+50	12	0.50
1169+00	12	2.67

CULVERT SCHEDULE (ALIGNMENT SOUTH PEAK CRANE PATH)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
3008+00	15	2.25
3011+50	12	1.58
3030+50	15	4.00

CULVERT SCHEDULE (ALIGNMENT SOUTH PEAK ACCESS ROAD)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
2003+75	15	4.60
2005+75	12	2.68
2007+50	18	7.33
2011+50	15	2.00
2013+25	15	1.25
2016+50	24	10.26
2018+75	15	3.75
2021+50	15	4.26
2025+24	24	18.70
2028+75	15	4.50
2034+00	24	16.07
2042+50	18	7.26
2045+00	18	7.02
2048+50	15	3.50
2053+50	24	9.42
2057+50	15	4.63
2060+50	12	2.23
2064+50	12	1.35

CULVERT SCHEDULE (ALIGNMENT DILL HILL CRANE PATH)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
107+50	12	2.10
117+00	12	2.61
143+00	12	1.22
145+25	12	1.97
148+75	15	5.34
152+00	15	4.68
163+75	12	2.07
175+25	18	8.32
177+25	12	2.96
188+00	15	4.78
190+75	15	3.65
195+50	30	18.62
208+00	12	0.48
212+00	15	3.32
219+25	24	11.36
223+75	12	0.81
230+00	24	10.47
232+00	12 (3)	8.00

CULVERT SCHEDULE (ALIGNMENT T23 CRANE PATH)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
85+75	30	19.71

CULVERT SCHEDULE (ALIGNMENT T10)

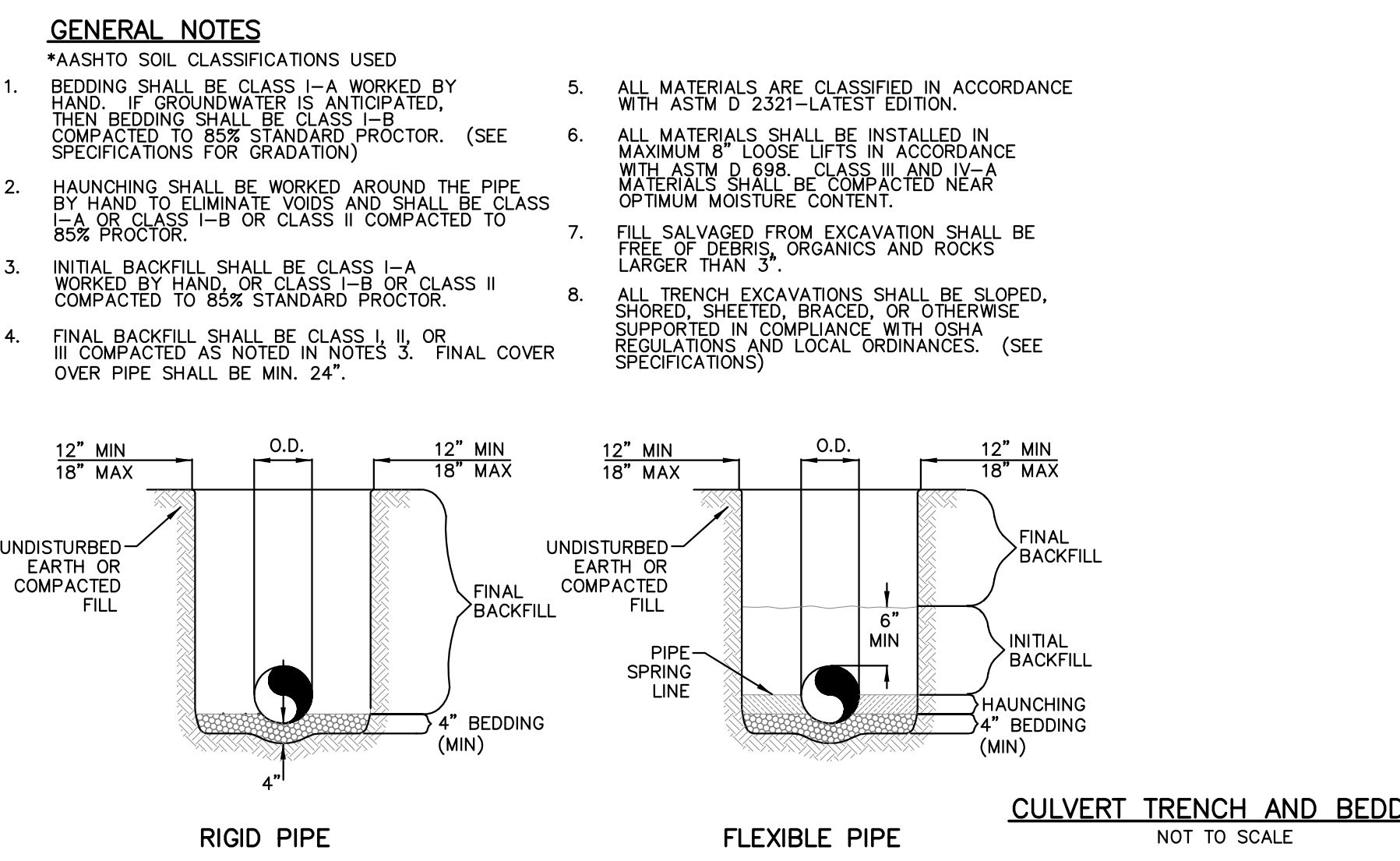
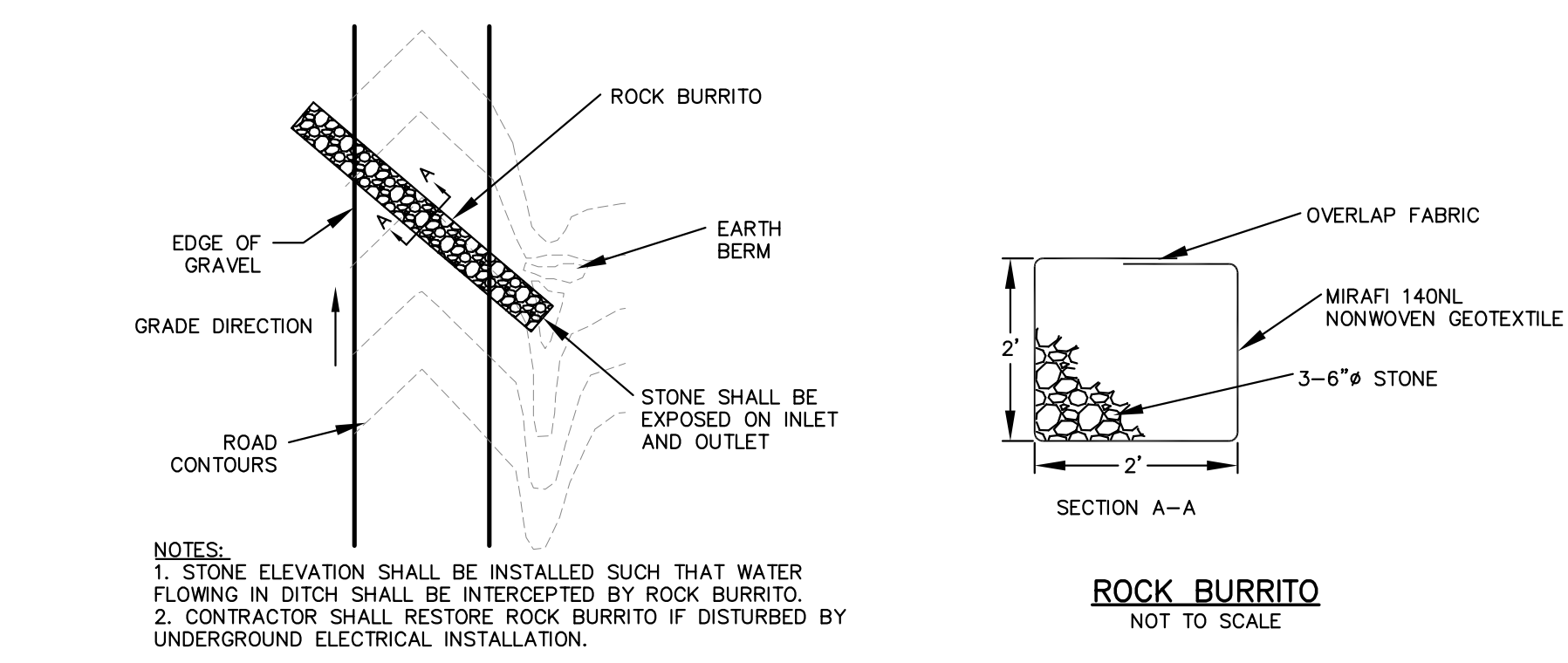
CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
1802+00	12	2.27
1813+25	12	2.50
1815+25	12	0.85

CULVERT SCHEDULE (ALIGNMENT BASKAHEGAN ACCESS ROAD)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
4+00	12	0.55
13+00	12	1.58

CULVERT SCHEDULE (ALIGNMENT DIPPER POND ACCESS ROAD)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
10+00	15	2.50
23+50	12	0.20
24+00	15	4.38
29+50	15	3.65
31+50	30	16.70
37+00	30	18.50
39+25	12	0.15



CULVERT SCHEDULE (ALIGNMENT DILL HILL ACCESS ROAD)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
53+50	15	3.30
58+50	36	27.28
61+75	15	3.28
64+50	15	4.61
67+50	15	3.68
72+50	15	3.51
75+75	12	0.38

CULVERT SCHEDULE (O+M SITE)

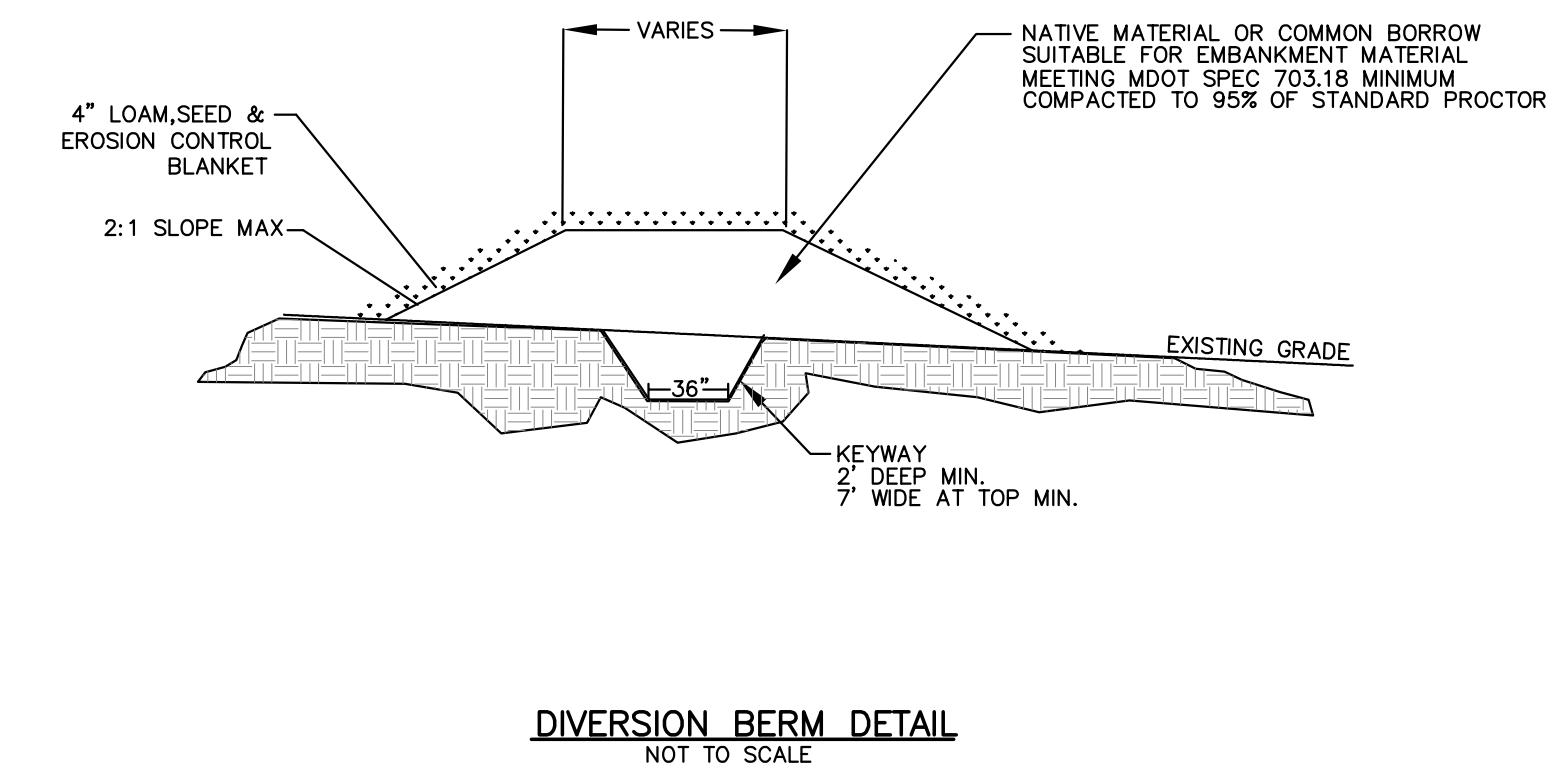
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0+60	18	7.0
5+75	36	47.5
12+60	12	0.16
15+75	24	16.60

CULVERT SCHEDULE (SUBSTATION)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
7+40	30	43.70
14+00	36	50.0

CULVERT SCHEDULE (PMT 14)

CL STATION	SIZE (INCH)	DRAINAGE AREA (ACRE)
0+10	15	4.50
7+00	12	0.40



Revision Log

Date	Revised For	Revised By
3/7/2011	ISSUED FOR AGENCY REVIEW	JSM
5/12/11	REVISED PER AGENCY COMMENTS	JSM

BOWERS WIND PROJECT

Drawn By: JSM
Checked: JSM

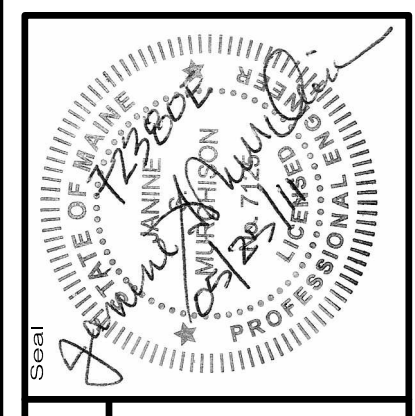
Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE

Scale: H: 1"=100' V: 1"=50'

Project No: 72380E

Sheet: 4

EROSION CONTROL DETAILS



72380E

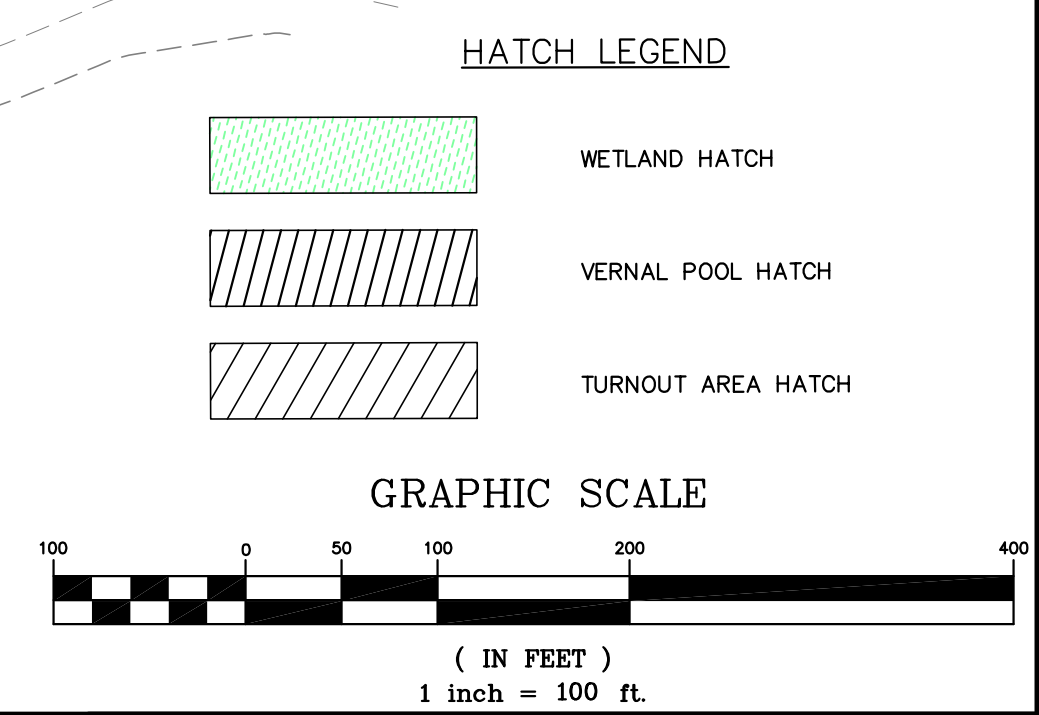
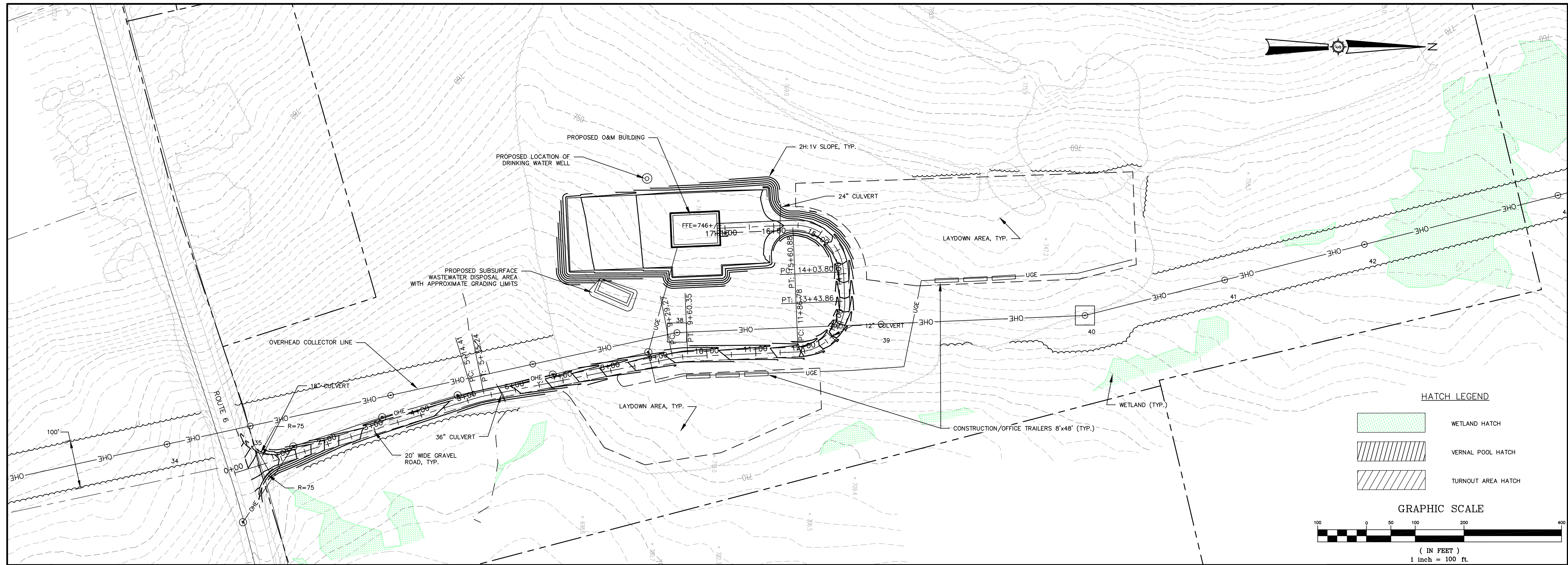
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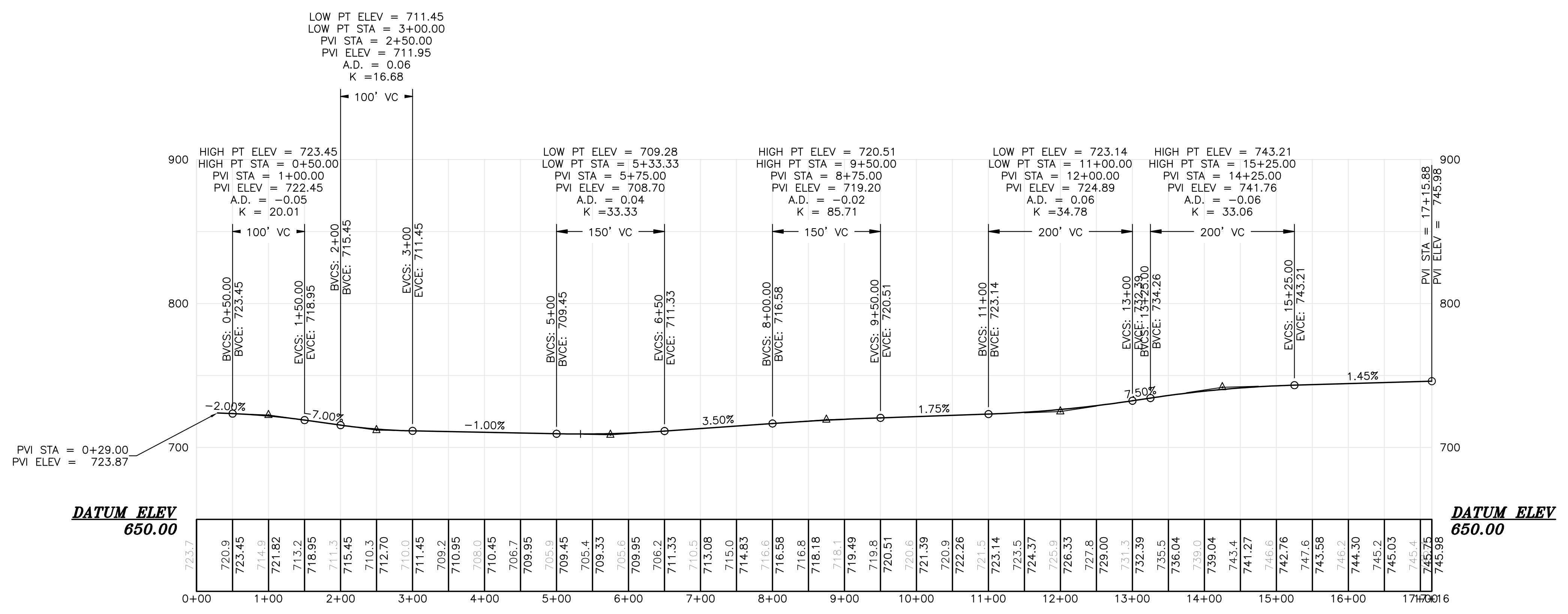
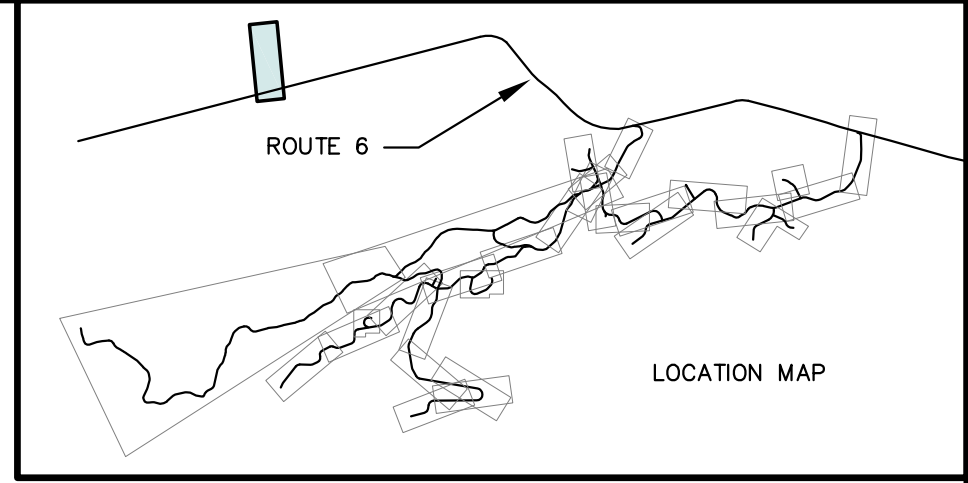
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Sheet No. **4**

PRELIMINARY NOT FOR CONSTRUCTION



O&M - ACCESS ROAD



Date	3/7/2011
Drawn By	JSM
Checked By	JSM
Issue	ISSUED FOR AGENCY REVIEW
Revision	1
Revised By	JCH, JLD
Revised Date	5/12/11
Comments	

BOWERS WIND PROJECT

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Scale: 1" = 100'

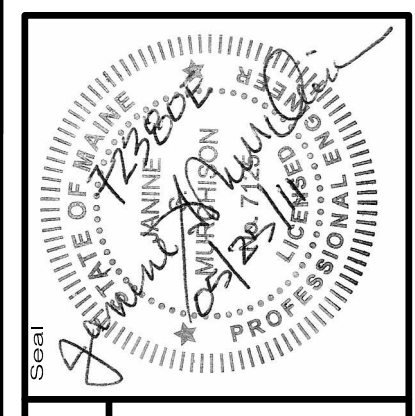
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Project No.: 72380E

Project Name: O&M SITE PLAN AND PROFILE

Project Description: on integrated team of geospatial, engineering, surveying and NATURAL RESOURCE consultants

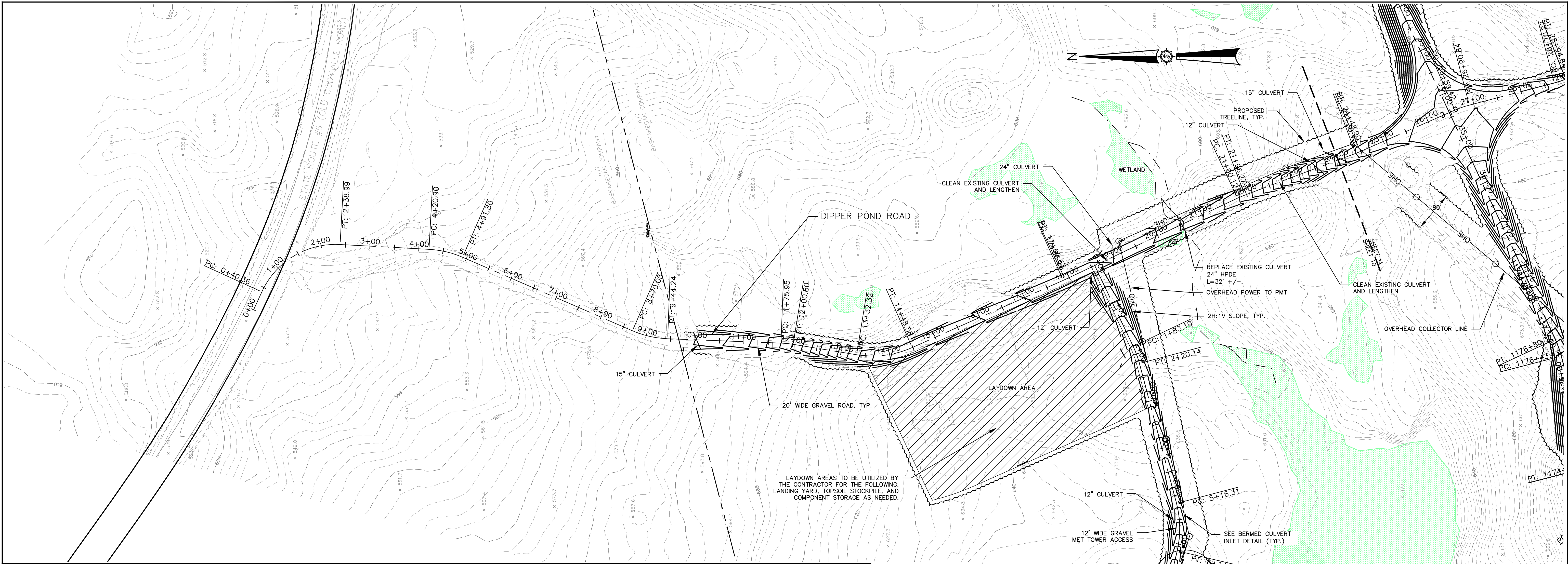
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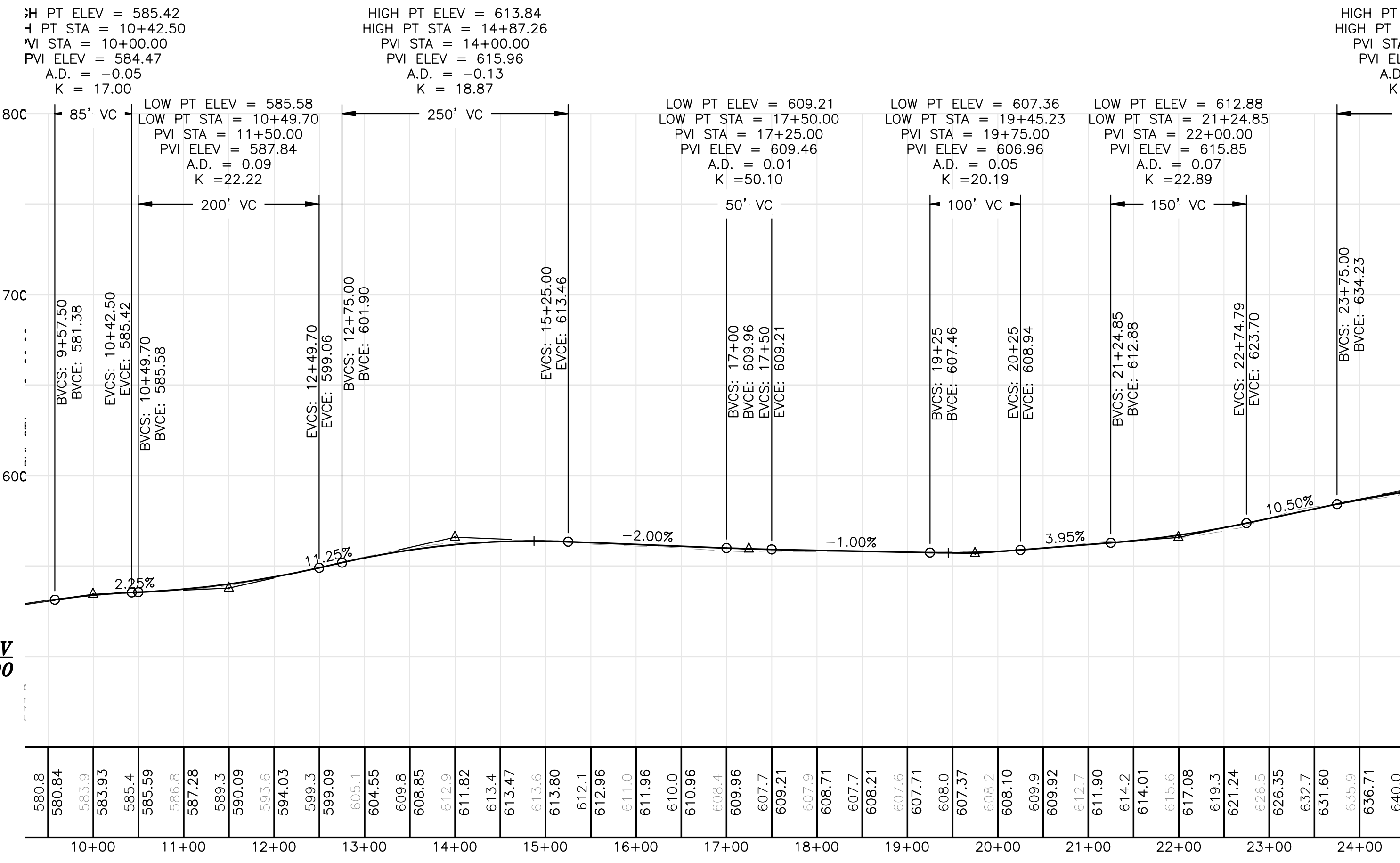
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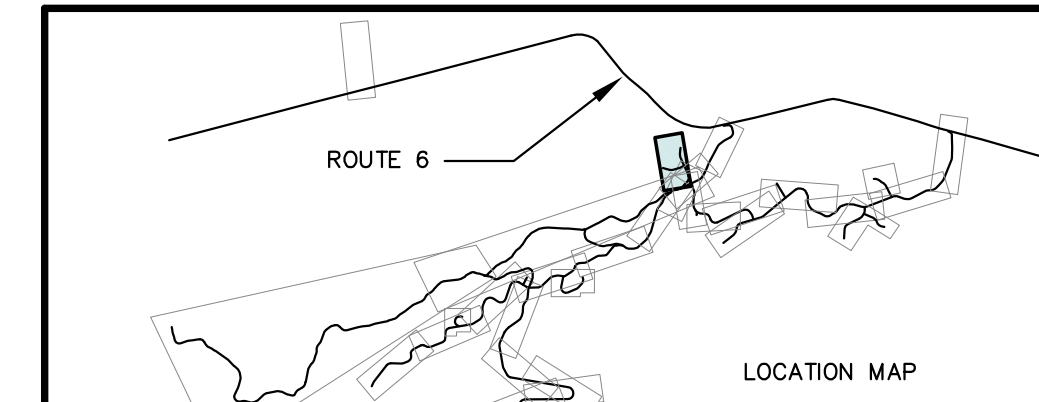
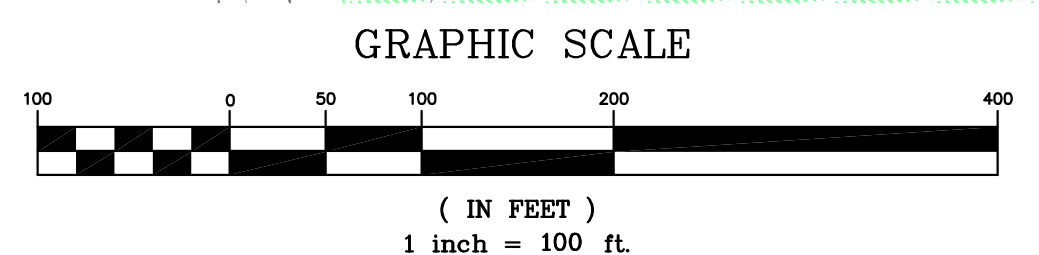
"DIPPER POND" - ROAD
(10+00 TO 24+00)



DATUM ELEV
500.00

HATCH LEGEND

	WETLAND HATCH
	VERNAL POOL HATCH
	TURNOUT / LAYDOWN AREA HATCH



PRELIMINARY NOT FOR CONSTRUCTION

Rev	Date	Description
1	3/7/2011	ISSUED FOR AGENCY REVIEW
2	5/12/11	REVISED PER AGENCY COMMENTS

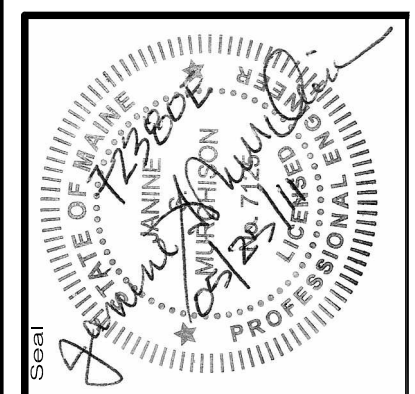
BOWERS WIND PROJECT

Drawn By: JSM
Scale: 1"=100'

Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE

Project No: 72380E

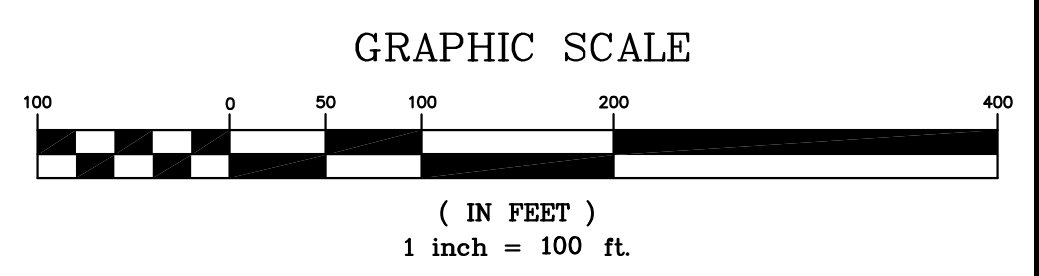
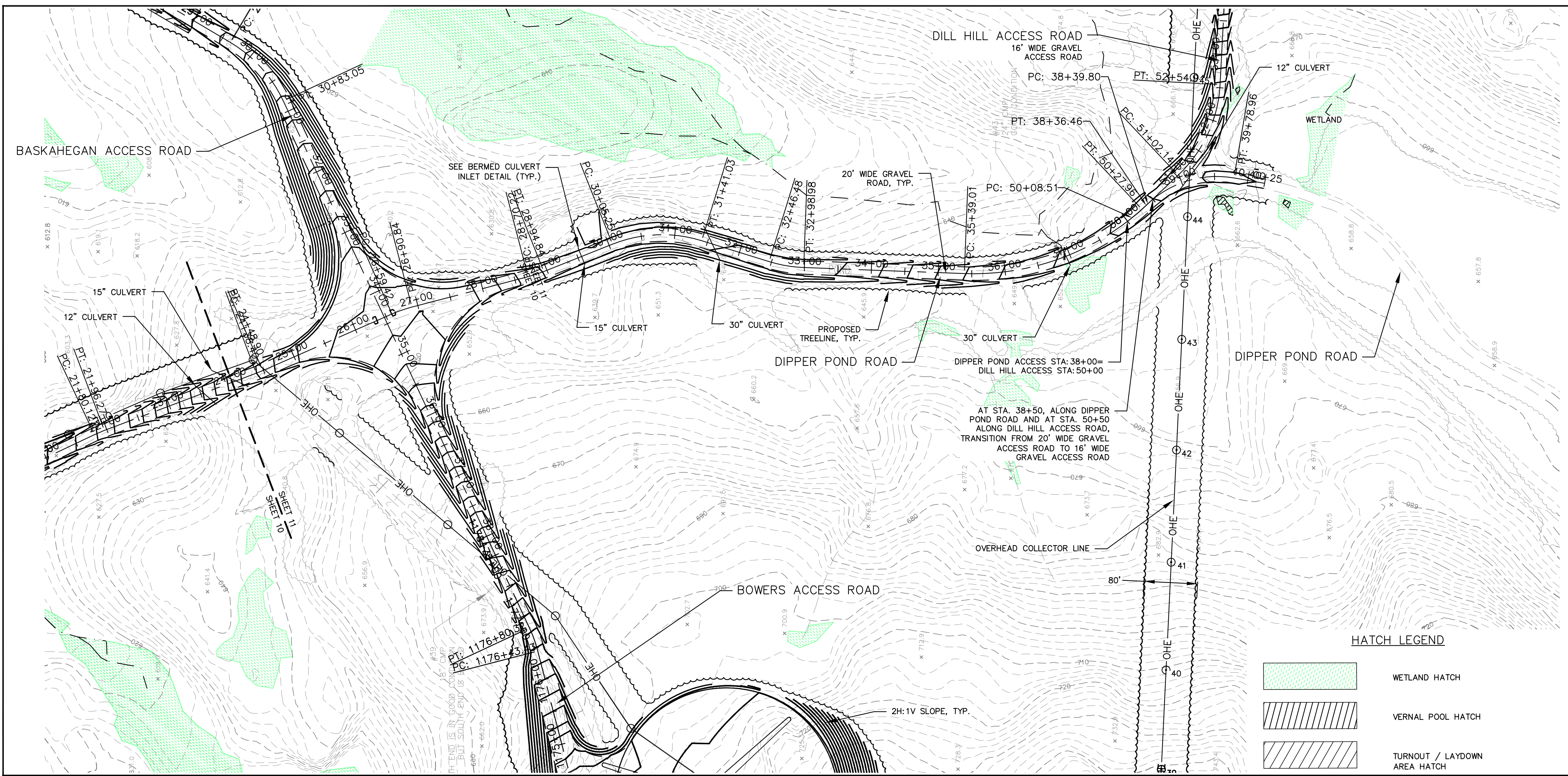
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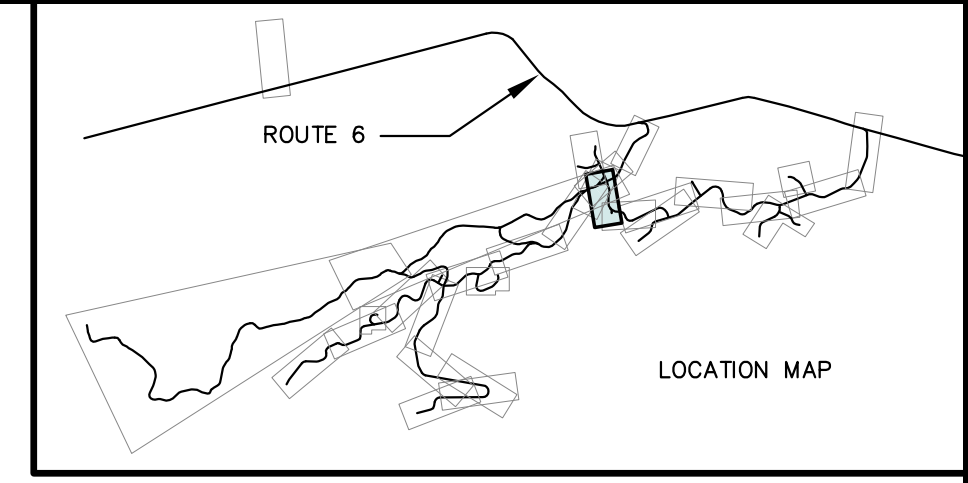
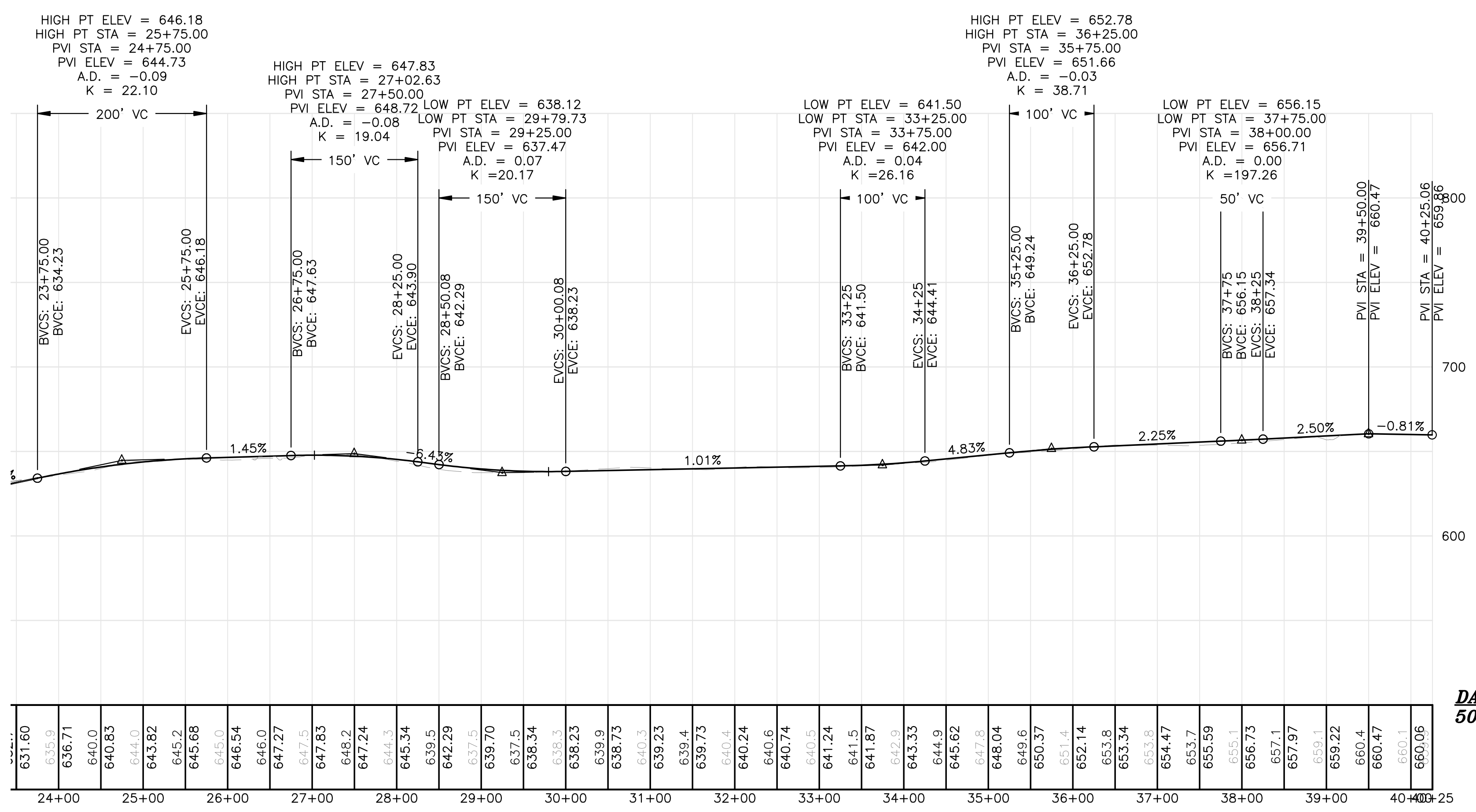
PERMIT



HATCH LEGEND

	WETLAND HATCH
	VERNAL POOL HATCH
	TURNOUT / LAYDOWN AREA HATCH

"DIPPER POND" - ROAD
(24+00 TO 40+25)



Date	Issued For Agency Review	Drawn By	Description
3/7/2011	JSM	MT	ISSUED FOR AGENCY REVIEW
5/12/11	JSM	MT	REVISED PER AGENCY COMMENTS

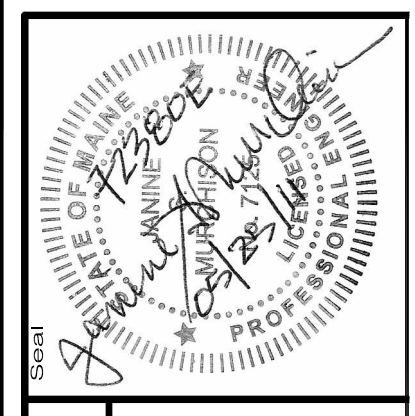
BOWERS WIND PROJECT

Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE

Drawing Description: DIPPER POND ROAD PLAN / PROFILE

Scale: H: 1"=100' V: 1"=50'

Approved: [Signature]



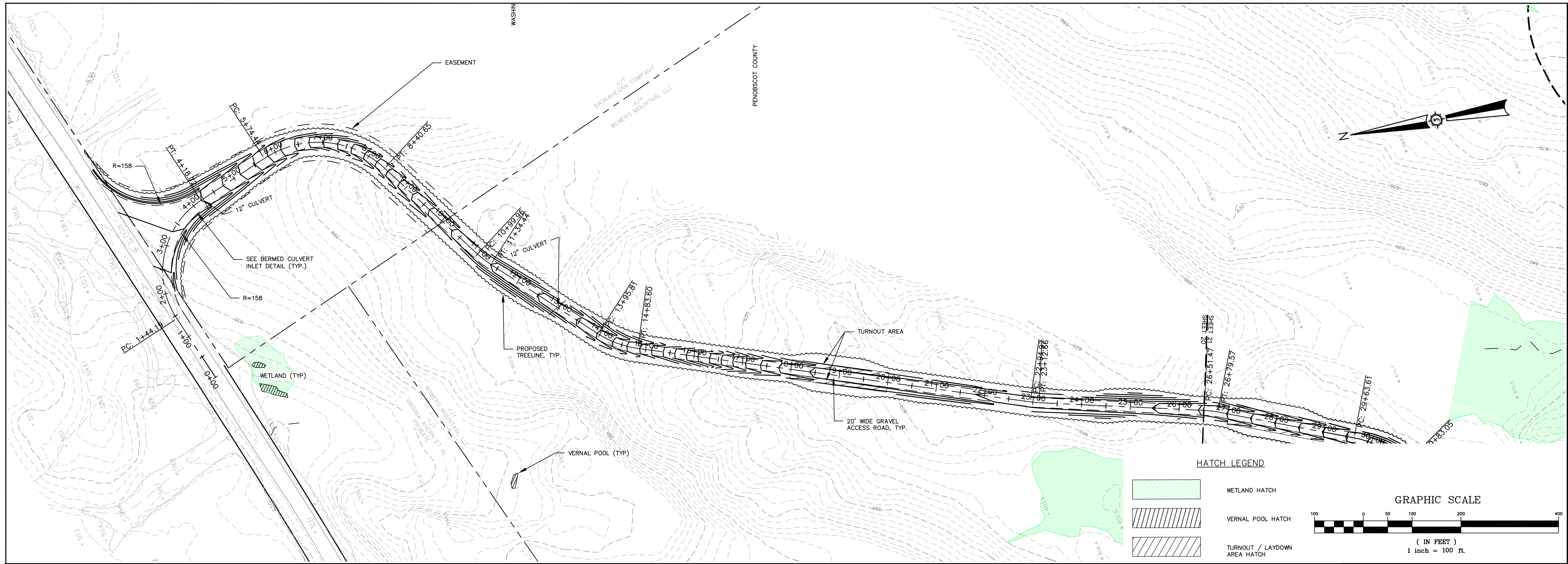
72380E

on integrated team of geospatial, engineering, surveying and NATURAL RESOURCE consultants

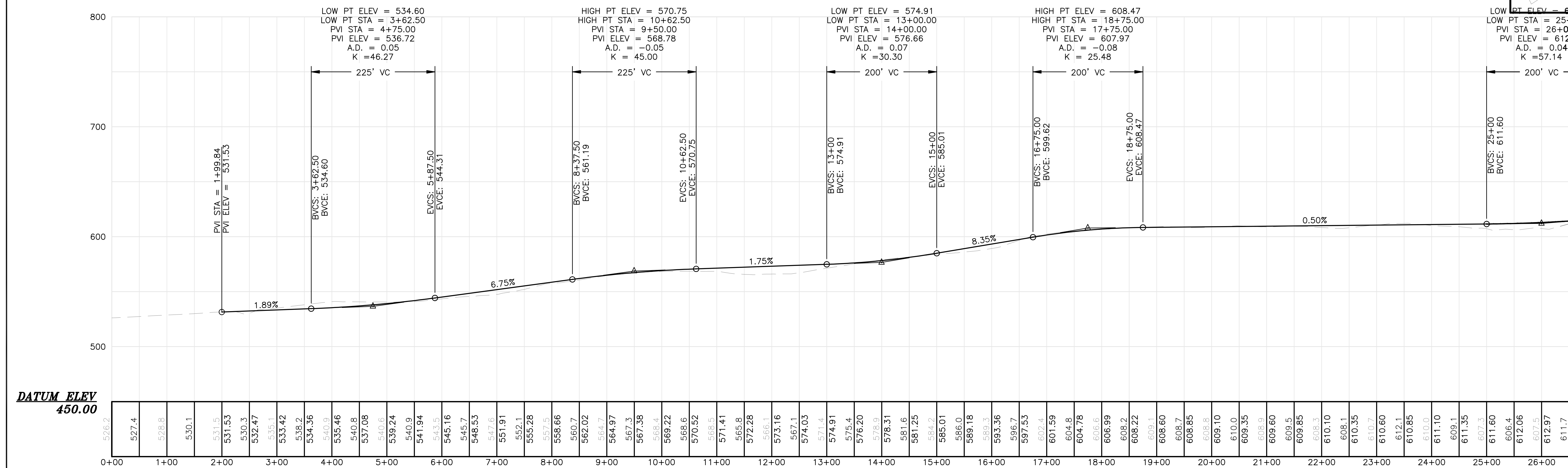
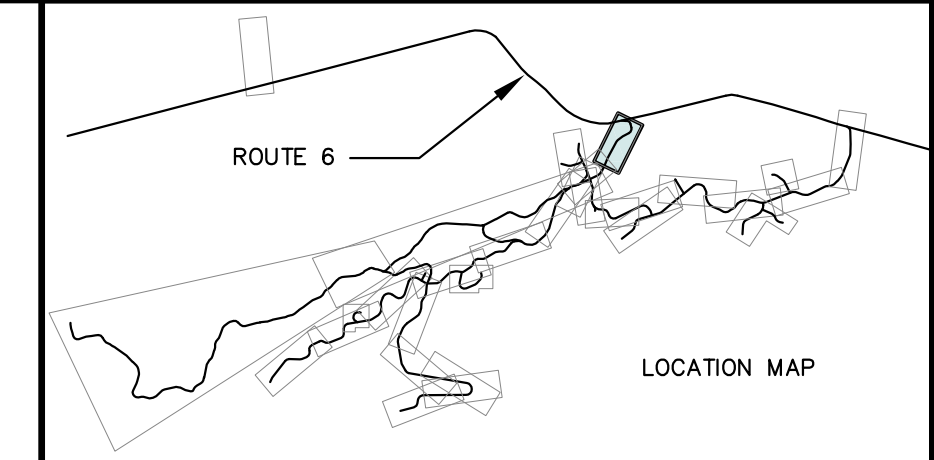
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Sheet No. **11**

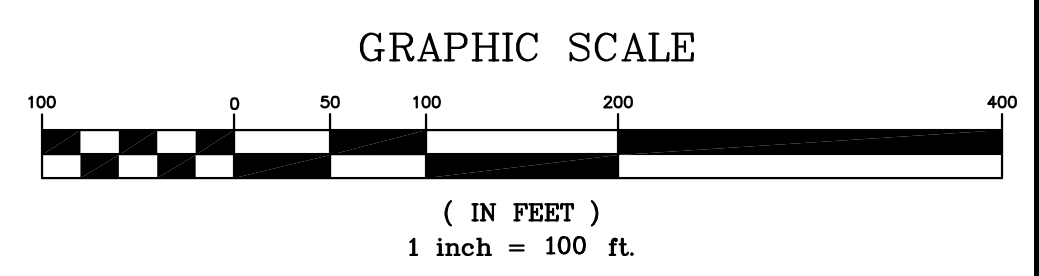


BASKAHEGAN ROAD - ACCESS ROAD
(0+00 TO 26+50 ACCESS ROAD)



HATCH LEGEND

	WETLAND HATCH
	VERNAL POOL HATCH
	TURNOUT / LAYDOWN AREA HATCH



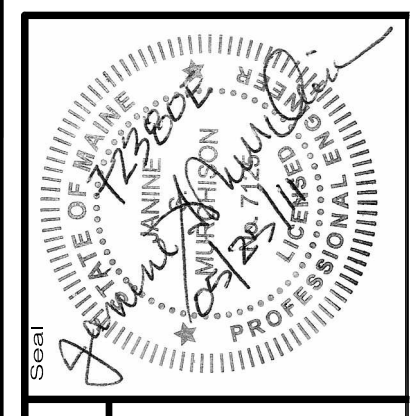
Drawn By	JSM
Checked By	MT
Issue Date	3/7/2011
Revision	5/12/11

BOWERS WIND PROJECT

Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE
 BASKAHEGAN ROAD ACCESS ROAD

Scale: H: 1"=100' V: 1"=50'

Approved: [Signature]

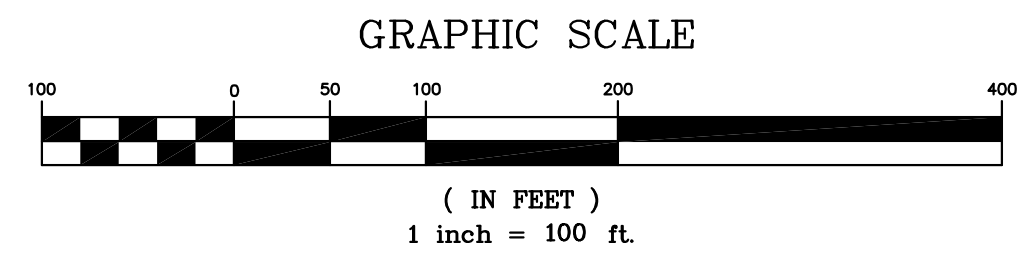
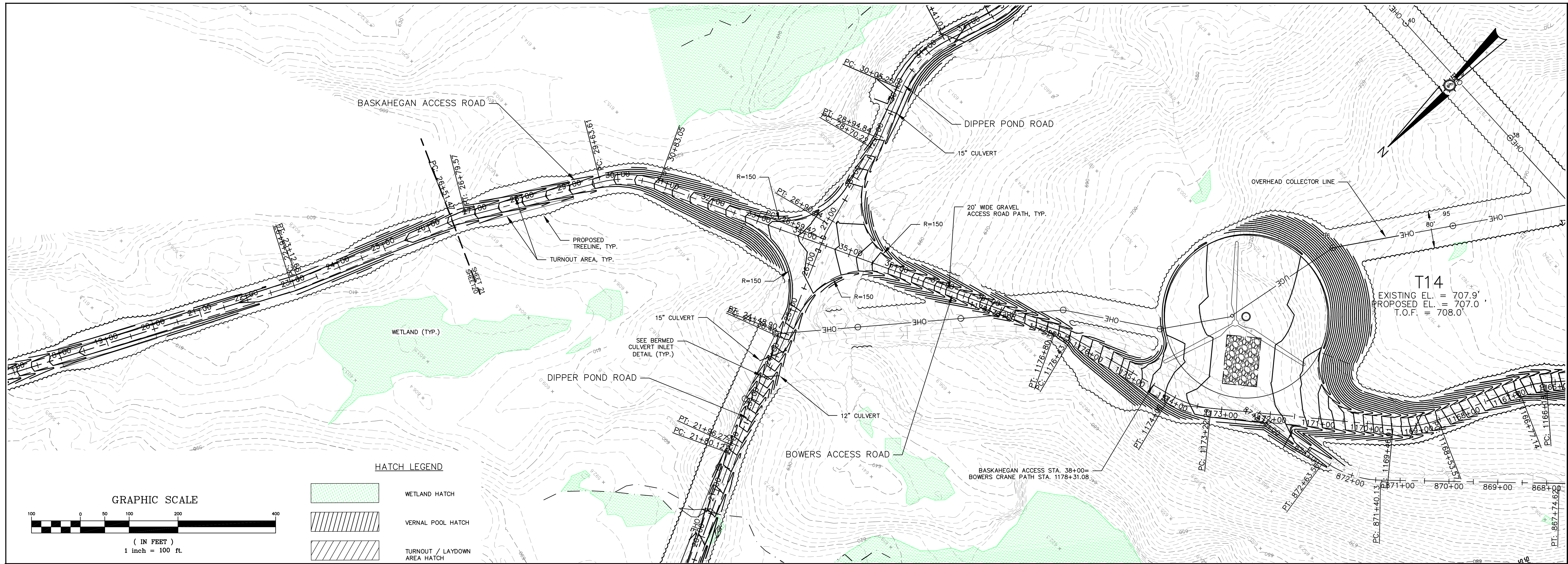


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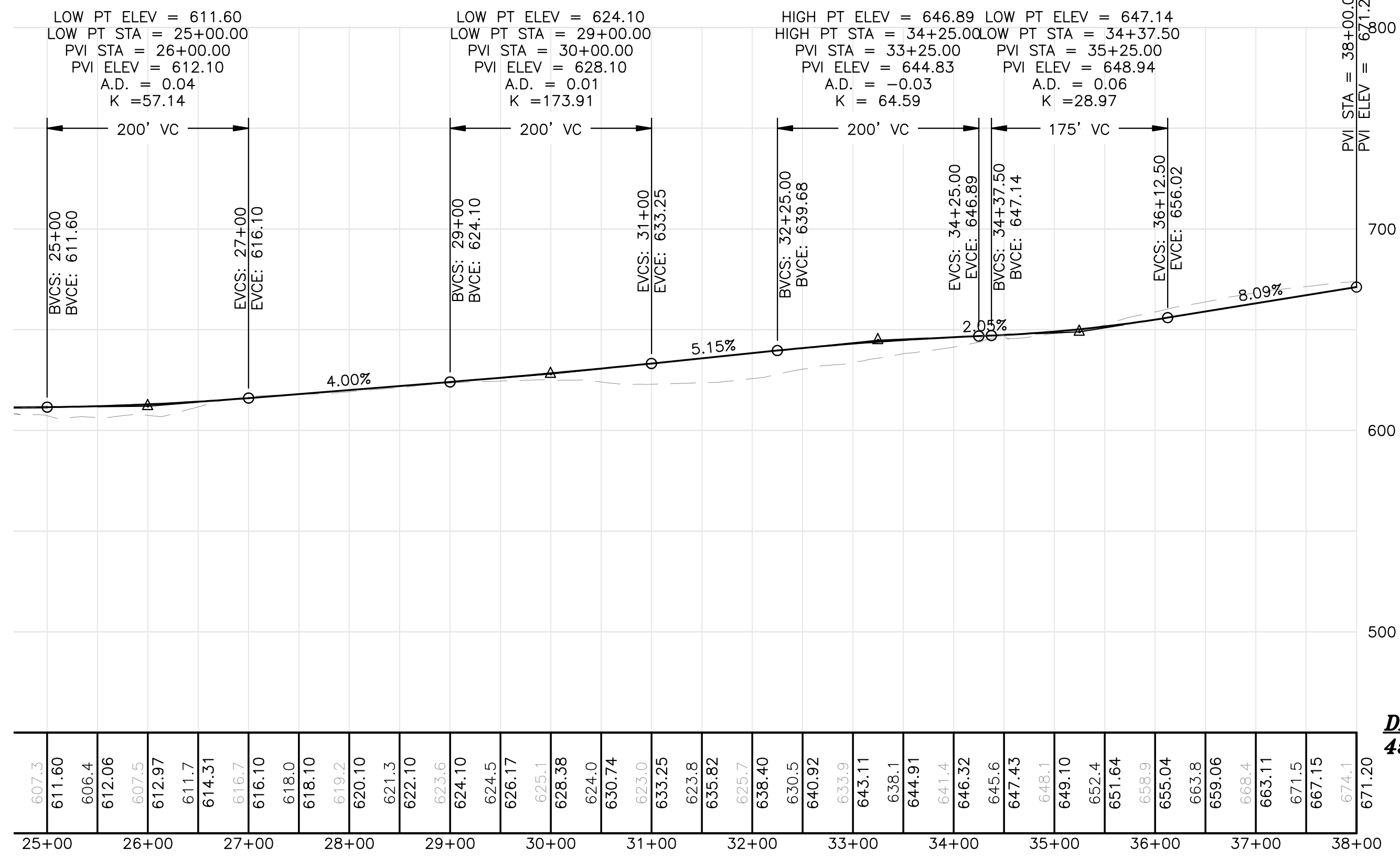
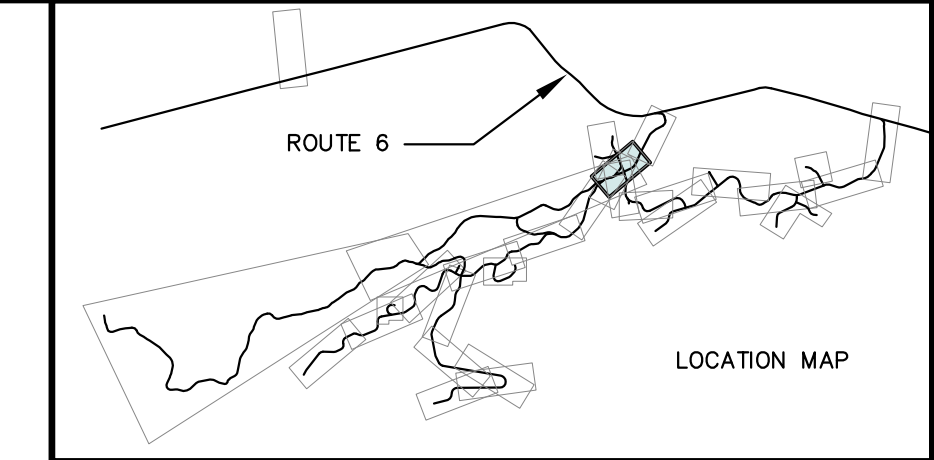
PRELIMINARY NOT FOR CONSTRUCTION



HATCH LEGEND

- WETLAND HATCH
- VERNAL POOL HATCH
- TURNOUT / LAYDOWN AREA HATCH

BASKAHEGAN ROAD - ACCESS ROAD
(26+50 TO 41+80 ACCESS ROAD)

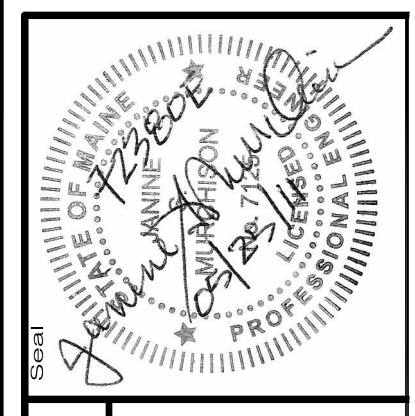


DATUM ELEV
450.00

Issue	3/7/2011
Drawn By	JSM
Checked By	JSM
Scale	1" = 100'
Project	BASKAHEGAN ROAD ACCESS ROAD

BOWERS WIND PROJECT

Development By: JSM
 Drawn By: MT
 Scale: 1" = 100' V1=50'
 Date: 05/23/2011
 Project Location: CARROLL PLANTATION & KOSSUTH TOWNSHIP, MAINE
 Drawing Description: BASKAHEGAN ROAD ACCESS ROAD



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Phase: **PERMIT**

Sheet No. **21**