July 6, 2005
Supersedes August 4, 2004

BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

1. Use pen and ink to complete all paper Bids.

2. As a minimum, the following must be received prior to the time of Bid opening:

   For a Paper Bid:
   a) a copy of the Notice to Contractors, b) the completed Acknowledgement of Bid Amendments form, c) the completed Schedule of Items, d) two copies of the completed and signed Contract Offer, Agreement & Award form, e) a Bid Guaranty if required, and f) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

   For an Electronic Bid:
   a) a completed Bid using Expedite® software and submitted via the Bid Express™ web-based service, b) a Bid Guaranty (as described below) or a faxed copy of a Bid Bond if required (with original to be delivered within 72 hours), and c) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

3. Include prices for all required items in the Schedule of Items. ("Zero is not considered a Bid price.")

4. Include a Bid Guaranty (If Required). Acceptable forms are:

   a. a properly completed and signed Bid Bond on the Department's prescribed form (or on a form that does not contain any significant variations from the Department's form as determined by the Department) for 5% of the Bid Amount or

   b. an Official Bank Check, Cashier's Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors.

5. If a paper Bid is to be sent, Federal Express overnight delivery is suggested as the package is delivered directly to the DOT Headquarters Building in Augusta. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

6. Complete the DBE Proposed Utilization form in the proper amounts, and deliver to the Contracts section by 4:30 PM on bid opening day

If you need further information regarding Bid preparation, call the DOT Contracts Section at (207)624-3410.

For complete bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, Revision of December 2002.

January 30, 2004
Supercedes February 11, 2003

NOTICE

The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled, and allow for an electronic downloading of bid packages from our website, while continuing to maintain a planholders list.

Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments, must provide an email address to Diane Barnes or Mike Babb at the MDOT Contracts mailbox at: MDOT.contracts@maine.gov. Each bid package will require a separate request.

Additionally, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids using the Acknowledgement of Bid Amendment Form.

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via http://www.BIDX.com. For information on electronic bidding contact Larry Childs at Larry.Childs@maine.gov.

NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open
PIN:
Town:
Date of Bid Opening:
Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed
PIN:
Town:
Date of Bid Opening:
Name of Contractor:
This should not be much of a change for those of you who use Federal Express or similar services.

Hand-carried Bids may be in one envelope as before, and should be marked with the following infrormation:

Bid Enclosed: Do Not Open
PIN:
Town:
Name of Contractor:

STATE OF MAINE DEPARTMENT OF TRANSPORTATION

Bid Guaranty-Bid Bond Form

KNOW ALL MEN BY THESE PRESENTS THAT_____

_____, of the City/Town of _____and State of_____

as Principal, and _____as Surety, a

Corporation duly organized under the laws of the State of_____and having a usual place of

Business in _____and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of_____,for payment which Principal and Surety bind

themselves, their heirs, executers, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a part herein, to enter into a written contract for the construction of _____

_____

_____and if the Department shall accept said bid and the Principal shall execute and deliver a contract in the form attached hereto (properly completed in accordance with said bid) and shall furnish bonds for this faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full force, and effect.

Signed and sealed this_____day of _____20_____

WITNESS:

_____

_____

_____

WITNESS

_____

_____

_____

PRINCIPAL:

By_____

By:_____

By:_____

SURETY:

By_____

By:_____

Name of Local Agency: _____

SAMPLE

NOTICE

Bidders:

Please use the attached "Request for Information" form when faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required. Questions are to be faxed to the number listed in the Notice to Contractors. This is the only allowable mechanism for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

State of Maine
Department of Transportation

REQUEST FOR INFORMATION

Date _____ Time _____

Information Requested: **PIN:** _____ **Town(s):** _____

_____

_____

_____

_____

_____

_____

_____

_____

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_____

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_____

Request by: _____ **Phone: (_____)**_____
Bid Date: _____ **Fax: (_____)**_____

Complete top portion of form and transmit to the number listed in the Notice to Contractors

RFI No: _____ **RFI received:** _____

Response:_____

_____

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_____

Response By:_____ Date: _____

NOTICE

Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder must submit the Disadvantaged Business Enterprise Proposed Utilization form by close of Business (4:30 P.M.) on Bid day.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form must be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact the Civil Rights Office at (207) 624-3066.

MDOTs DBE Directory of Certified firms can also be obtained at www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php

INSTRUCTIONS FOR PREPARING THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN

The Contractor Shall:

1. Submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan to the Contract's Engineer by 4:30 P.M. on the Bid day.

2. Extend equal opportunity to MDOT certified DBE firms (as listed in MDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone and fax number.

Provide total Bid price, Federal Project Identification Number, and location of the Project work.

In the columns, name each DBE firm to be used, provide the Unit or Item cost of the Work/Product to be provided by the DBE firm, give a brief description of the Work, and the dollar value of the Work.

If no DBE firm is to be utilized, the Contractor must document the reason(s) why no DBE firms are being used. Specific supporting evidence of good faith efforts taken by Contractors to solicit DBE Bidders must be attached. This evidence, as a minimum, includes phone logs, e-mail and/or mail DBE solicitation records, and the documented results of these solicitations.

NOTICE
Maine Department of Transportation
Disadvantaged Business Enterprise Program

Notice is hereby given that in accordance with US DOT regulation 49 CFR Part 26, the Maine Department of Transportation has established a DBE Program for disadvantaged business participation in the federal-aid construction program; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

For FFY 2007 (October 1, 2006 through September 30, 2007), MaineDOT has established a DBE participation goal of 6% as follows: 5% to be achieved through race/gender neutral means, with an additional 1% to be achieved through race/gender conscious contract goals.

Interested parties may view MaineDOT's DBE goal setting methodology for the next 30 days during normal business hours (8-4, M-F) at the Maine Department of Transportation, Office of Civil Rights, 16 State House Station, Augusta ME 04333-0016. Appointments may be scheduled by telephone at (207) 624-3066. The goal setting methodology is also available for viewing on the MaineDOT website: http://www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php.

Comments on the goal will be accepted for 45 days from the date of this notice. Written comments should be addressed to Holly Anderson, Maine Department of Transportation, Civil Rights Office, 16 State House Station, Augusta, Maine 04333-0016 or by e-mail at: holly.anderson@maine.gov.

____ **Original Submission** **Page ___ of ___**

____ **Revision # _____**

MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR
PROPOSED UTILIZATION FORM

Low Bidder must furnish this form to Contracts Section Bid Opening day.

Contractor: _____ Telephone: _____ Ext. _____

Prepared by:_____ Fax: _____

BID PRICE: $_____ BID DATE: _____/_____/_____

FEDERAL PROJECT PIN # _____ PROJECT LOCATION: _____

TOTAL DBE _____ % PARTICIPATION FOR THIS SUBMISSION

WBE•	DBE•	Non DBE	Firm Name	Unit/Item Cost	Unit #	Description of Work & Item Number	Actual $ Value
						Total ›	

Contractors must make a good faith effort to include <u>Certified</u> DBE firms in all aspects of the project. If no DBE firms are to be part of this project, a detailed explanation is required. Attach supporting evidence to the maximum participation of DBEs on this project. This is a requirement. This evidence must include name of firm(s) contacted, date contacted, and outcome of solicitation.

Equal Opportunity Use:

Form received: ___/___/___ Verified by: _____

____ Accepted ____ Rejected _____

cc: ☐ Contracts ☐ Other _____

- **WBEs are non-minority women owned firms certified by MaineDOT**
- **DBEs are male and minority owned firms certified by MaineDOT**

For a complete list of certified firms go to <u>http://www.maine.gov/mdot</u>

Rev. 6/06

MaineDOT's

CIVIL RIGHTS OFFICE

To search for a specific work item, click on the binoculars, type in the word you want to search for and click on find. To go to the next selected item, click on the binoculars with the arrow.

MAINE DEPARTMENT OF TRANSPORTATION

CERTIFIED DISADVANTAGED AND WOMEN BUSINESS ENTERPRISE

DECEMBER 2005

Information is updated on an ongoing basis and can be retrieved by visiting our Website:
www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php

State of Maine

VENDOR FORM

For New Vendors & for Updates on Current Vendors

Special Instructions:

PLEASE PRINT CLEARLY

Return this form to:

*** = MUST BE COMPLETED TO PROCESS**

ONLY ONE NAME/VENDOR PER FORM

New Vendor	Address Change	Multi Address	Name Change	Contact Update	ID # Change

Social Security Number*
Individual or Sole Proprietor

S

Business name in "DBA" field below.

OR

Please fill in ONE.

Federal Taxpayer ID Number*
Corporation

E

Business name in "Name" field below.

This form will affect all transactions with ALL state agencies.

NEW:*	**OLD:**
Remit to Address: Individual or Business Name.	Old number:
Name*	Name
DBA or C/O	DBA or C/O
Address*	Address
Tel #*	Tel #

	Is this the same name on your Social Security card?	Acct #	
	If not, have you told Social Security about your name change?	Provider #	

Signature*

Contact Name

Print Name or Title

Accounts Receivable Contact Name

Date* (within 3 months)

Phone # if Different or for Contact Info

Vendor Indicators: Enter Y (Yes) For All Categories Listed Below That Apply To This Vendor

Dealer:		Manufacturer:		Factory Rep:	
Jobber:		Retailer:		Commodity:	
Individual:		Partnership:		Incorporated:	
Minority:		Small Business:		In-State:	

Information on State Agency Submitting Vendor Form

State Agency* & SHS #

Contact Person Name & Title*

Telephone #*

Send to: Maine Department of Transportation/ Contracts 16 SHS, Augusta, ME 04333-0014 Attn: Pat Brown

May-04

INSTRUCTIONS FOR COMPLETING VENDOR FORM

1. **Print Clearly**
2. **All sections marked with an * must be completed for processing**
3. **Send completed form to requesting State agency OR remit to address at bottom of form.**
4. **Do NOT send by Fax. Only originals will be accepted.**

FIELDS	**INFORMATION NEEDED FOR FIELD**
Special Instructions	*Instructions to Vendor from Agency requesting information.*
Return to	*The location of agency where the form is to be mailed back to. If none use address at bottom of form.*
Boxes above SSN/EIN Fields	Please check mark all that apply to the vendor. If other, please specify. If it's a new vendor only one will apply: "New Vendor"
Social Security Number	Individuals, individuals "doing business as", and individuals without a Federal Taxpayer ID #. Use if not using EIN
Federal Taxpayer ID Number*	Businesses or professionals providing services. (ID # needs to be use for REMITTANCE purposes.) Use if not using SSN
New	Current Information
Old	Old information (If another ID# had been used please put it next to "OLD")
Name	Individual's Name or Business Name. ONLY ONE name per a form.
DBA or C/O	"Doing business as" or "In Care Of"
Address	REMITTANCE ADDRESS - Street Address OR PO Box (one or the other)
Tel #	Phone Number of individual or business
Signature	Individual or authorized representative of individual or authorized representative of the business
Date	Current Date (no more than 3 months old)
Contact Name	Contact person at business
Accounts Receivable Contact Name	Contact person at business for accounts receivables.
Phone #	Phone for Act Rec Contact
Vendor Indicators	Indicate all that apply for the vendor, as needed
Agency Info	For Agency personnel submitting the form. Contact info incase of questions.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
NOTICE TO CONTRACTORS

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for Highway Reconstruction in the towns of Gilead / Bethel" will be received from contractors at the Reception Desk, Maine DOT Building, Child Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on July 25, 2007 , and at that time and place publicly opened and read. Bids will be accepted from contractors prequalified by the Department of Transportation for Highway Construction projects. All other Bids may be rejected. MDOT provides the option of electronic bidding. We now accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening. During this transition, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.

Description: Maine Federal Aid Project No. HP-9184(300)X, PIN. 9184.30

Location: In Oxford County, project is located on US. Rte.2 from approx. 1.74 miles west of Pleasant River Bridge and extends easterly 1.9 miles.

Outline of Work: Grading, drainage, base, hot mix asphalt, construction of Pleasant River Bridge, retaining walls, guardrail, curb, plantings, and other incidental work.

The basis of award will be Section 0001 with chosen pavement alternate.

For general information regarding Bidding and Contracting procedures, contact Scott Bickford at (207)624-3410. Our webpage at http://www.maine.gov/mdot/contractor-consultant-information/contractor_cons.php contains a copy of the schedule of items, Plan Holders List, written portions of bid amendments (not drawings), and bid results. For Project-specific information fax all questions to **Project Manager** Jim Ferguson at (207)624-3431. Questions received after 12:00 noon of Monday prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. Hearing impaired persons may call the Telecommunication Device for the Deaf at (207) 624-3007.

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine and at the Department of Transportation's Regional Office in Dixfield. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207)624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Full size plans $160.00 ($169.00 by mail). Half size plans $80.00 ($84.00 by mail), Bid Book $10 ($13 by mail), Single Sheets $2, payment in advance, all non-refundable.

Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of $175,000.00 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price $10 [$13 by mail], and Standard Details, Revision of December 2002, price $20 [$25 by mail] Standard Detail updates found at http://www.maine.gov/mdot/contractor-consultant-information/contractor_cons.php

The right is hereby reserved to the MDOT to reject any or all Bids.

Augusta, Maine
July 3, 2007

STATE OF MAINE
Joyce Noel
KENNETH L. SWEENEY P.E.
DEPUTY CHIEF ENGINEER
6997
LICENSED
PROFESSIONAL ENGINEER

Joyce Noel for KLS PE

SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each Project under Advertisement, Amendments are located at http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, to incorporate them into their Bid Package, and to reference the Amendment number and the date on the form below. The Maine DOT will not post Bid Amendments any later than noon the day before Bid opening without individually notifying all the planholders.

Amendment Number	Date

The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package.

CONTRACTOR

_____
Date

_____
Signature of authorized representative

_____
(Name and Title Printed)

Gilead / Bethel
9184.30
May 23, 2007

DISADVANTAGE/WOMEN BUSINESS ENTERPRISE
UTILIZATION BID PROPOSAL

This bid assurance identifies the certified D/WBE firms which the bidder intends to use in meeting the D/WBE goal of this project.

Bidders who do not comply accordingly will find their bid rejected.

Provide in the space below the name and a brief description of the work or bid item(s) to be completed by the D/WBE. Bidders are reminded that the more detailed Pre-Signature Compliance Review form is required by close of business on bid opening day. It is to be presented to the Civil Rights Office, DOT Building. Completed DBE Proposed Utilization Forms may be faxed to 624-3431 ATTENTION, Civil Rights, but must be received prior to close of business.

D/WBE **5** % goal

Name of D/WBE	Description of participation

Projected Cost of the Above _____

*Signature_____Date_____

*Signature indicates statement of intended utilization is accurate and reflects the bidder's good faith efforts.

September 28, 2005
Supersedes June 1, 1988

SPECIAL PROVISON
Required Participation by
DISADVANTAGED BUSINESS ENTERPRISE

The goal of work to be performed by Disadvantaged Business Enterprises for this contract is found on the DBE Utilization Bid Proposal sheets immediately following the Schedule of Items. For the purpose of this Special Provision, Disadvantage Business Enterprises are those which are so certified by the Civil Rights Office prior to the performance of the DBE on this contract.

Compliance with this Special Provision may be fulfilled by Disadvantaged Business Enterprise as either:

A sole prime contractor,
A member of a joint venture, may count towards commitment only the percentage of the ownership and control of the DBE partner in the joint venture,
An approved subcontractor,
An owner-operator of construction equipment.
A renter of construction equipment to a prime or subcontractor,
A consultant,
A regular dealer of materials and/or equipment but only 60 percent of expenditures to DBE suppliers may be counted toward the commitment unless the supplier is also the manufacturer,
Any combination of the above.

In determining compliance with the Special Provision the total creditable dollars paid to the Disadvantaged Business Enterprise shall be subtracted from the amount stated in the DBE Utilization Bid Proposal. The Contractor shall maintain records of payment in a form acceptable to that Office before requesting retent from the Contracts Section.

Failure by the Contractor to achieve the stated DBE goal, or more of this Contract performed by Disadvantaged Business Enterprise will result in the reduction in Contract payments by the amount determined by subtracting the resulting dollar value of work actually creditable to Disadvantaged Business Enterprise unless MDOT, Civil Rights Office waives requirement because the Contractor has demonstrated a good faith effort to meet the contract goal in accordance with the following standards;

1. Whether the Contractor attended any pre-bid meetings that were scheduled by the MDOT to inform DBE's of subcontracting opportunities;

2. Whether the Contractor advertised in general circulation, trade association, and minority/women's focus media concerning the subcontracting opportunities;

3. Whether the Contractor provided written notice to a reasonable number of specific DBE's that their interest in the contract is being solicited:

4. Whether the Contractor followed up on initial solicitation of interest by directly contacting DBE's to determine with certainty whether the DBE's were interested;

5. Whether the Contractor selected portions of the work to be performed by DBE's in order to increase the likelihood of meeting the DBE goals;

6. Whether the Contractor provided interested DBE's with adequate information about the plans, specifications and requirements of the Contract:

7. Whether the Contractor negotiated in good faith with interested DBE's, not rejecting DBE's as unqualified without sound reasons based on a thorough investigation of their capabilities;

8. Whether the Contractor made efforts to assist interested DBE's in obtaining bonding or insurance, or made efforts to provide DBE's with other appropriate technical/financial assistance required by the MDOT or contractor;

9. Whether the Contractor effectively used the services of available minority/women's community organizations, minority/women's contractors' groups; local, state and federal minority/women's business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBE's;

10. Quarterly reports of actual dollars paid to DBE's on this project will be submitted to the Civil Rights Office by the end of the first week of January, April, July and October for the period covering the proceeding three months considered Federal Fiscal year quarters. The reports will be submitted directly on forms provided by that office. Failure to submit the form by the deadline may result in a withholding of approval of partial payment estimates by the Resident;

11. Any substitution of the named DBE firm(s) or the approved activity of the said firm(s) from that firm or activity and in the pre-contract signature compliance review form must be approved by Contract Modification which must be submitted by the Resident to the Civil Rights Office.

The following are acceptable reasons for approval of such a change order:

The DBE defaults or is over-extended:
The MDOT deletes portions of the work to be performed by the DBE.

It is not intended that the ability to negotiate a more advantageous contract with another sub-contractor be considered a valid basis for such a change in the DBE utilization once the pre-contract review has been passed. This Special Provision is in addition to all other Equal Employment Opportunity requirements of this contract. The Contractor must report the use of any bona-fide DBE.

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 PROJECT ITEMS					
0010	201.11 CLEARING	5.000 HA				
0020	201.23 REMOVING SINGLE TREE TOP ONLY	4.000 EA				
0030	201.24 REMOVING STUMP	4.000 EA				
0040	202.08 REMOVING BUILDING NO.: 1	LUMP	LUMP			
0050	202.15 REMOVING MANHOLE OR CATCH BASIN	1.000 EA				
0060	202.19 REMOVING EXISTING BRIDGE	LUMP	LUMP			
0070	202.203 PAVEMENT BUTT JOINTS	280.000 M2				
0080	203.21 ROCK EXCAVATION	19800.000 M3				
0090	203.212 SPECIAL PERIMETER CONTROL BLASTING	3950.000 M				
0100	203.24 COMMON BORROW	100.000 M3				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	203.242 DIRTY BORROW	1550.000 M3				
0120	203.25 GRANULAR BORROW	1450.000 M3				
0130	203.25 GRANULAR BORROW UNDERWATER BACKFILL	420.000 M3				
0140	206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE	25.000 M3				
0150	206.07 STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES	25.000 M3				
0160	403.208 HOT MIX ASPHALT 12.5 MM, SURFACE	3800.000 MG				
0170	403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS)	95.000 MG				
0180	403.210 HOT MIX ASPHALT 9.5 MM NOMINAL MAX SIZE	76.000 MG				
0190	403.213 HOT MIX ASPHALT 12.5 MM, BASE	4000.000 MG				
0200	501.231 DYNAMIC LOADING TEST	2.000 EA				
0210	501.46 STEEL H-BEAM PILES 109 KG/M, DELIVERED	320.000 M				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	501.461 STEEL H-BEAM PILES 109 KG/M, IN PLACE	320.000 M				
0230	501.90 PILE TIPS	12.000 EA				
0240	501.91 PILE SPLICES	12.000 EA				
0250	501.92 PILE DRIVING EQUIPMENT MOBILIZATION	LUMP	LUMP			
0260	502.219 STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	LUMP	LUMP			
0270	502.26 STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES	LUMP	LUMP			
0280	502.31 STRUCTURAL CONCRETE APPROACH SLABS	LUMP	LUMP			
0290	502.49 STRUCTURAL CONCRETE CURBS AND SIDEWALKS	LUMP	LUMP			
0300	502.57 ANNULAR SPACE GROUTING	11.000 M3				
0310	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED	25000.000 KG				
0320	503.13 REINFORCING STEEL, PLACING	25000.000 KG				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0330	504.702 STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED	LUMP	LUMP			
0340	504.71 STRUCTURAL STEEL ERECTION	LUMP	LUMP			
0350	504.908 ROCK DOWELS	560.000 M				
0360	505.08 SHEAR CONNECTORS	LUMP	LUMP			
0370	507.0811 STEEL BRIDGE RAILING, 2 BAR	LUMP	LUMP			
0380	508.14 HIGH PERFORMANCE WATERPROOFING MEMBRANE	LUMP	LUMP			
0390	511.07 COFFERDAM: ABUT. #1	LUMP	LUMP			
0400	511.07 COFFERDAM: ABUT. #2	LUMP	LUMP			
0410	514.06 CURING BOX FOR CONCRETE CYLINDERS	1.000 EA				
0420	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES	LUMP	LUMP			
0430	526.301 TEMPORARY CONCRETE BARRIER TYPE I	LUMP	LUMP			

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0440	526.34 PERMANENT CONCRETE TRANSITION BARRIER	4.000 EA				
0450	527.34 WORK ZONE CRASH CUSHIONS	2.000 UN				
0460	603.159 300 MM CULVERT PIPE OPTION III	38.000 M				
0470	603.16 375 MM CULVERT PIPE OPTION I	34.000 M				
0480	603.17 450 MM CULVERT PIPE OPTION I	46.000 M				
0490	603.175 450 MM RCP CLASS III	120.000 M				
0500	603.1752 450 MM RCP CLASS IV	52.000 M				
0510	603.1753 450 MM RCP CLASS V	13.000 M				
0520	603.179 450 MM CULVERT PIPE OPTION III	7.000 M				
0530	603.19 600 MM CULVERT PIPE OPTION I	37.000 M				
0540	603.195 600 MM RCP CLASS III	76.000 M				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0550	603.205 750 MM REINFORCED CONCRETE PIPE CLASS III	21.000 M				
0560	603.215 900 MM REINFORCED CONCRETE PIPE CLASS III	16.000 M				
0570	603.2152 900 MM RCP CLASS V	7.000 M				
0580	603.221 1050 MM CORRUGATED METAL PIPE	49.000 M				
0590	603.2891 2400 MM RCP CLASS III W/ FISH WEIRS	20.000 M				
0600	603.76 300 MM INLET GRATE UNIT	1.000 EA				
0610	604.092 CATCH BASIN TYPE B1-C	5.000 EA				
0620	604.097 1800 MM CATCH BASIN TYPE B1-C	4.000 EA				
0630	604.23 STEP	12.000 EA				
0640	604.243 CATCH BASIN TYPE F3-C	1.000 EA				
0650	605.09 150 MM UNDERDRAIN TYPE B	210.000 M				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0660	605.11 300 MM UNDERDRAIN TYPE C	100.000 M				
0670	606.1721 BRIDGE TRANSITION - TYPE 1	4.000 EA				
0680	606.23 GUARDRAIL TYPE 3C - SINGLE RAIL	2350.000 M				
0690	606.232 GUARDRAIL TYPE 3C - OVER 4.5 M RADIUS	39.000 M				
0700	606.265 TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	5.000 EA				
0710	606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	19.000 EA				
0720	606.363 GUARDRAIL REMOVE AND DISPOSE	810.000 M				
0730	606.43 TEMPORARY SGL BEAM GR	300.000 M				
0740	606.79 GUARDRAIL 350 FLARED TERMINAL	6.000 EA				
0750	609.31 CURB TYPE 3	1150.000 M				
0760	610.07 STONE FILL	70.000 M3				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0770	610.08 PLAIN RIPRAP	8643.000 M3				
0780	610.18 STONE DITCH PROTECTION	390.000 M3				
0790	610.210 STREAM CHANNEL ROCKS	10.000 M3				
0800	610.211 STREAM CHANNEL GRAVEL	20.000 M3				
0810	613.319 EROSION CONTROL BLANKET	6500.000 M2				
0820	618.1401 SEEDING METHOD NUMBER 2 - PLAN QUANTITY	310.000 UN				
0830	619.1201 MULCH - PLAN QUANTITY	310.000 UN				
0840	619.1401 EROSION CONTROL MIX	1500.000 M3				
0850	620.54 STABILIZATION GEOTEXTILE	300.000 M2				
0860	620.604 GEOCELL CONFINEMENT SYSTEM	3500.000 M2				
0870	621.531 DECIDUOUS SHRUBS (300 MM - 450 MM CALIBER) GROUP A	400.000 EA				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0880	621.546 DECIDUOUS SHRUBS (600 MM - 900 MM) GROUP A	50.000 EA				
0890	621.80 ESTABLISHMENT PERIOD	LUMP	LUMP			
0900	625.142 75 MM PIPE SLEEVE	25.000 M				
0910	627.711 WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE (PLAN QUANTITY)	11000.000 M				
0920	627.75 WHITE OR YELLOW PAVEMENT AND CURB MARKING	6.000 M2				
0930	627.76 TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	LUMP	LUMP			
0940	627.77 REMOVING PAVEMENT MARKINGS	360.000 M2				
0950	629.05 HAND LABOR, STRAIGHT TIME	100.000 HR				
0960	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	24.000 HR				
0970	631.11 AIR TOOL (INCLUDING OPERATOR)	24.000 HR				
0980	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	24.000 HR				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0990	631.13 BULLDOZER (INCLUDING OPERATOR)	24.000 HR				
1000	631.14 GRADER (INCLUDING OPERATOR)	24.000 HR				
1010	631.171 TRUCK - SMALL (INCLUDING OPERATOR)	24.000 HR				
1020	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	24.000 HR				
1030	631.20 STUMP CHIPPER (INCLUDING OPERATOR)	8.000 HR				
1040	631.22 FRONT END LOADER (INCLUDING OPERATOR)	24.000 HR				
1050	631.221 SMALL FRONT-END LOADER (INCLUDING OPERATOR)	24.000 HR				
1060	631.32 CULVERT CLEANER (INCLUDING OPERATOR)	8.000 HR				
1070	635.31 PREFABRICATED CONCRETE BLOCK GRAVITY WALL	130.000 M2				
1080	636.30 MSE RETAINING WALL	1370.000 M2				
1090	636.412 SLOPE STABILIZATION WALL FACING	1150.000 M2				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1100	636.70 LARGE BLOCK STABILIZATION RING NET	75.000 M2				
1110	643.72 TEMPORARY TRAFFIC SIGNAL	LUMP	LUMP			
1120	652.31 TYPE I BARRICADE	10.000 EA				
1130	652.311 TYPE II BARRICADE	10.000 EA				
1140	652.33 DRUM	100.000 EA				
1150	652.34 CONE	200.000 EA				
1160	652.35 CONSTRUCTION SIGNS	50.000 M2				
1170	652.36 MAINTENANCE OF TRAFFIC CONTROL DEVICES	390.000 CD				
1180	652.38 FLAGGER	12000.000 HR				
1190	652.41 PORTABLE - CHANGEABLE MESSAGE SIGN	2.000 EA				
1200	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP	LUMP			

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1210	658.20 ACRYLIC LATEX COLOR FINISH, GREEN	10.000 M2				
1220	659.10 MOBILIZATION	LUMP	LUMP			
1230	660.21 ON-THE-JOB TRAINING (BID)	6000.000 HR				
	SECTION 0001 TOTAL					.

SECTION 0002 PAVEMENT ALT.1
ALT GROUP A1

1240	203.20 COMMON EXCAVATION	112000.000 M3				
1250	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	37100.000 M3				
1260	310.23 PLANT MIX RECYCLED ASPHALT PAVEMENT - 75 MM DEPTH	35000.000 M2				
1270	403.207 HOT MIX ASPHALT 19.0 MM NOMINAL MAX SIZE	3600.000 MG				
1280	409.15 BITUMINOUS TACK COAT APPLIED	9350.000 L				
	SECTION 0002 TOTAL					.

SECTION 0003 PAVEMENT ALT.2
ALT GROUP A2

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1290	203.20 COMMON EXCAVATION	117000.000 M3				
1300	304.09 AGGREGATE BASE COURSE - CRUSHED	5250.000 M3				
1310	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	30700.000 M3				
1320	403.207 HOT MIX ASPHALT 19.0 MM NOMINAL MAX SIZE	6000.000 MG				
1330	409.15 BITUMINOUS TACK COAT APPLIED	6550.000 L				
	SECTION 0003 TOTAL					.

SECTION 0004 PAVEMENT ALT.3
ALT GROUP A3

1340	203.20 COMMON EXCAVATION	117000.000 M3				
1350	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	28600.000 M3				
1360	304.1311 DENSE-GRADED CRUSHED AGGREGATE BASE	7000.000 M3				
1370	403.207 HOT MIX ASPHALT 19.0 MM NOMINAL MAX SIZE	4800.000 MG				

CONTRACT ID: 009184.30 PROJECT(S): HP-9184(300)E

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1380	409.15 BITUMINOUS TACK COAT APPLIED	6550.000 L				
	SECTION 0004 TOTAL					
	TOTAL BID W/ CHOSEN ALTERNATE					

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and _____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____ _____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. **9184.30**, for **Highway Reconstruction** in the towns of **Gilead and Bethel**, County of **Oxford**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **August 14, 2009.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

Section 0001 $_____

Section 0002 $_____

Section 0003 $_____

Section 0004 $_____

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN 9184.30 - Highway Reconstruction - in the towns of Gilead and Bethel**, State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	_____
Date	(Signature of Legally Authorized Representative of the Contractor)
_____	_____
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted for (see checked boxes):

Section 0001 ❑
Section 0002 ❑
Section 0003 ❑
Section 0004 ❑

Contract Amount: _____

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____	_____
Date	By: David A. Cole, Commissioner
_____	
Witness	

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and _____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____ _____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. **9184.30**, for **Highway Reconstruction** in the towns of **Gilead and Bethel**, County of **Oxford**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **August 14, 2009.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

Section 0001 $_____

Section 0002 $_____

Section 0003 $_____

Section 0004 $_____

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN 9184.30 - Highway Reconstruction - in the towns of Gilead and Bethel**, State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	_____
Date	(Signature of Legally Authorized Representative of the Contractor)
_____	_____
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted for (see checked boxes):

Section 0001 ❑
Section 0002 ❑
Section 0003 ❑
Section 0004 ❑

Contract Amount: _____

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____	_____
Date	By: David A. Cole, Commissioner
_____	
Witness	

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and **(Name of the firm bidding the job)** a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at **(address of the firm bidding the job)**

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

SAMPLE

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. **1224.00**, for the **Hot Mix Asphalt Overlay** in the town/city of **West Eastport**, County of **Washington**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **November 15**, 2003**.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is **(Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents)** **$ (repeat bid here in numerical terms, such as $102.10)** Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

SAMPLE

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN 1234.00 West Eastport, Hot Mix Asphalt Overlay,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

SAMPLE

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	**(Sign Here)**_____
Date	(Signature of Legally Authorized Representative of the Contractor)
____(**Witness Sign Here)**_____	**(Print Name Here)**_____
Witness	(Name and Title Printed)

SAMPLE

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____	_____
Date	By: David A. Cole, Commissioner

_____
(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ _____ **and the State of** _____, as principal, and…….....,
a corporation duly organized under the laws of the State of ..... and having a usual place of business ....,
as Surety, are held and firmly bound unto the Treasurer of the State of Maine in the sum of _____ **and 00/100 Dollars ($)**, to be paid said Treasurer of the State of Maine or his successors in office, for which payment well and truly to be made, Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly and faithfully performs the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the State of Maine.

Signed and sealed this ..... day of ....., 20….. .

WITNESSES:	SIGNATURES:
	CONTRACTOR:
Signature.....	.....….....
Print Name Legibly	Print Name Legibly ...…….....
	SURETY:
Signature	.....…….....
Print Name Legibly	Print Name Legibly .....
SURETY ADDRESS:	NAME OF LOCAL AGENCY:
.....	ADDRESS .....
.....	...…….....
.....	.....…….....
TELEPHONE.....	.....…….....

SAMPLE

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ _____ **and the State of** _____, as principal, and.....….....
a corporation duly organized under the laws of the State of ..... and having a usual place of business in .....……., as Surety, are held and firmly bound unto the Treasurer of the State of Maine for the use and benefit of claimants as herein below defined, in the sum of _____ **and 00/100 Dollars ($)** for the payment whereof Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly satisfies all claims and demands incurred for all labor and material, used or required by him in connection with the work contemplated by said Contract, and fully reimburses the obligee for all outlay and expense which the obligee may incur in making good any default of said Principal, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material or both, used or reasonably required for use in the performance of the contract.

Signed and sealed this ..... day of ...……....., 20 ... .

WITNESS:	SIGNATURES:
	CONTRACTOR:
Signature…….....	.....….....
Print Name Legibly .....……..	Print Name Legibly ….....
	SURETY:
Signature.....	...….....
Print Name Legibly	Print Name Legibly ….....
SURETY ADDRESS:	NAME OF LOCAL AGENCY:
...….....	ADDRESS ….....
.....	…….....….....
TELEPHONE	…….....….....

SAMPLE

SPECIAL PROVISION
SECTION 102.3
EXAMINATION OF DOCUMENTS, SITE AND OTHER INFORMATION
(Geotechnical Information)

Geotechnical Information pertaining to this project has been collected and assembled. Bidders and Contractors are obligated to examine and, if necessary, obtain geotechnical information. Geotechnical Information is available at the Maine Department of Transportation office on Child Street, Augusta, Maine. Geotechnical Information will be provided to interested parties who request this information. Requests for this information should be directed to the Project Manager as outlined in the "Notice to Contractors".

The Department shall not be responsible for Bidder's and Contractor's interpretations of, or estimates or conclusions drawn from, the Geotechnical Information. Data provided may not be representative of the subsurface conditions between the boring locations.

This section does not diminish the duties imposed upon parties in Section 102 or in any other sections.

GENERAL DECISION: **ME20070009** 06/15/2007 ME9

Date: June 15, 2007
General Decision Number: **ME20070009** 06/15/2007

Superseded General Decision Number: ME20030009

State: Maine

Construction Type: Highway

Counties: Aroostook, Franklin, Hancock, Kennebec, Knox, Lincoln, Oxford, Piscataquis, Sagadahoc, Somerset, Waldo and York Counties in Maine.

HIGHWAY CONSTRUCTION PROJECTS excluding major bridging (for example: bascule, suspension and spandrel arch bridges; those bridging waters presently navigating or to be navigatable; and those involving marine construction in any degree); tunnels, building structures in rest area projects and railroad construction.

Modification Number	Publication Date
0	02/09/2007
1	06/15/2007

* ENGI0004-015 04/01/2007

	Rates	Fringes
Power equipment operators:		
Pavers	$ 17.58	8.30
Rollers	$ 17.58	8.30

SUME2000-008 10/24/2000

	Rates	Fringes
Carpenter	$ 11.60	1.51
Ironworkers:		
Structural	$ 12.03	1.58
Laborers:		
Drillers	$ 10.00	2.50
Flaggers	$ 6.00	
Guardrail Installers	$ 7.92	
Landscape	$ 7.87	.16
Line Stripper	$ 8.69	.23
Pipelayers	$ 9.21	2.31
Rakers	$ 9.00	1.51
Sign Erectors	$ 10.00	
Unskilled	$ 8.66	1.38
Wheelman	$ 8.50	.43
Power equipment operators:		
Backhoes	$ 11.87	2.05
Bulldozers	$ 12.33	2.88
Cranes	$ 14.06	1.75

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     Excavators.................$ 12.38            2.48
     Graders....................$ 13.06            3.73
     Loaders....................$ 11.41            2.87
     Mechanics..................$ 13.18            2.57

Truck drivers:
     Dump.......................$  9.35            3.10
     Tri axle...................$  8.70            1.18
     Two axle...................$  8.56            2.19
-----------------------------------------------------------------

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.
=================================================================

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

-----------------------------------------------------------------

In the listing above, the "SU" designation means that rates
listed under the identifier do not reflect collectively
bargained wage and fringe benefit rates.  Other designations
indicate unions whose rates have been determined to be
prevailing.

-----------------------------------------------------------------

            WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can
be:

*  an existing published wage determination
*  a survey underlying a wage determination
*  a Wage and Hour Division letter setting forth a position on
   a wage determination matter
*  a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests
for summaries of surveys, should be with the Wage and Hour
Regional Office for the area in which the survey was conducted
because those Regional Offices have responsibility for the
Davis-Bacon survey program. If the response from this initial
contact is not satisfactory, then the process described in 2.)
and 3.) should be followed.

With regard to any other matter not yet ripe for the formal
process described here, initial contact should be with the
Branch of Construction Wage Determinations.  Write to:

        Branch of Construction Wage Determinations
        Wage and Hour Division
        U.S. Department of Labor
        200 Constitution Avenue, N.W.
        Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an
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interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SPECIAL PROVISIONS
SECTION 104
Utilities

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications **is** required.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known utilities or railroads having facilities presently located within the limits of this project or intending to install facilities during project construction

.

Overview:

Utility/Railroad	Aerial	Underground	Railroad
St. Lawrence & Atlantic Railroad Co.			X
Central Maine Power Company	X		
Oxford West Telephone Company	X	X	
Portland Natural Gas Transmission System		X	
Portland Pipeline Corporation		X	

SPECIAL NOTE TO CONTRACTOR

Temporary aerial utility adjustments are anticipated at this time. If other temporary or permanent utility relocation or adjustment becomes necessary, sufficient time will be allowed, prior to construction, for all affected utility companies to redesign a new system, order materials, and accomplish the required work.

All utility crossings over highways will provide not less than 20 feet vertical clearance over existing ground in cut or over finished grade in fill, during construction of this project

Manholes, valve boxes, service connections, and similar incidental utility plant are to be adjusted in cooperation with work being done by the contractor.

Unless otherwise provided, utilities will not be required to make underground installations in frozen ground.

Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The Department

cannot certify the level of accuracy of this data. Underground facilities indicated on the topographic sheets (plan views) have been collected from historical records and/or on-site designations provided by the respective utility companies. Underground facilities indicated on the cross-sections have been carried over from the plan view data and may also include further approximations of the elevations (depths) based upon straight-line interpolation from the nearest manholes, gate valves, or test pits.

Any times and dates mentioned are estimates only and are dependent upon favorable weather, working conditions, and freedom from emergencies. The contractors shall have no claim against the Department if they are exceeded.

Utility working days are based on Monday through Friday, conditions permitting. Times are estimated on the basis of a single crew for each utility.

All adjustments are to be made by the respective utility/railroad unless otherwise specified herein.

All clearing and tree removal which is part of this contract in areas where utilities are involved must be completed by the Contractor before the utilities can relocate their facilities.
In all cases, the utilities shall be advised well in advance (generally three weeks) before work, dependent upon other work to be done by the Contractor, in any particular area, is to be commenced by them.

Fire hydrants shall not be disturbed until all necessary work has been accomplished to provide proper fire protection.

Aerial

Central Maine Power Company

Central Maine Power Company (CMP) has aerial electrical conductors along this project. CMP will be setting approximately 67 new poles and installing new conductors. The estimate for setting new poles and installing new conductors and removing the old poles and conductors is 55 working days. CMP will notify Oxford Networks just as soon as the pole sets and line work is completed. Contact Gary Crabtree at (207) 791-8025 (office) or 831-0295(cell) for any questions regarding this utility.

Pole #	Existing Station	Left/ Right		Existing Offset	Proposed Station	Left/ Right		Proposed Offset	Comments
		LT	RT			LT	RT		
80S					9+360.3	X		12.8m	Set new pole
80	9+359.4		X	7.4m	Same		X	7.4m	To remain for now

79.1	9+419.9	X		5.6m	9+419.9	X		9.0m	Set new pole and remove existing pole
79	9+434.8		X	9.1m	9+414.5		X	12.8m	Set new pole and remove existing pole.
78 1/2					9+478.9		X	13.0m	Set new pole
78	9+514.7		X	10.0m	9+544.0		X	12.8m	Set new pole and remove existing pole
77	9+595.8		X	7.6m	9+591.7	X		12.8m	Set new pole and remove existing pole.
76	9+673.3		X	0.3m	9+659.0	X		12.8m	Set new pole, remove existing pole.
75	9+760.6	X		6.0m	9+726.6	X		12.8m	Set new pole and remove existing pole
74 1/2					9+790.4	X		12.8m	Set new pole
74	9+848.7		X	6.4m	9+854.1	X		12.8m	Set new pole and remove existing pole
73	9+934.2		X	7.9m	9+922.9	X		12.8m	Set new pole, and remove existing pole
72 1/2					9+991.2	X		12.8m	Set new pole
72	10+009.2		X	6.7m	10+059.9	X		12.8m	Set new pole and remove existing pole
71S					10+128.2		X	12.8m	Set new pole
71	10+077.8	X		1.5m	10+128.5	X		9.0m	Set new pole
70	10+154.0	X		1.1m	10+197.1	X		9.0m	Set new pole and remove existing pole
69	10+240.3	X		1.0m	10+265.5	X		9.0m	Set new pole and remove existing pole
68	10+319.4	X		1.0m	10+334.3	X		9.0m	Set new pole and remove existing pole

67	Pole not on plans				10+380.9		X	12.8m	Set new pole and remove existing pole
66 1/2					10+438.8		X	12.9m	Set new pole
66P B					10+498.4		X	19.0m	Push brace for pole 66
66	10+473.9	X		8.3m	10+498.4		X	15.5m	Set new pole and remove existing pole
65	Pole not on plans				10+560.0		X	12.8m	Set new pole and remove existing pole
64	Pole not on plans				10+606.9	X		8.5m	Set new pole and remove existing pole
63	10+657.9	X		11.7m	10+674.7	X		9.0m	Set new pole and remove existing pole
62	10+733.0	X		11.4m	10+741.8	X		9.0m	Set new pole and remove existing pole
61	10+799.4	X		7.0m	10+809.1	X		8.0m	Set new pole and remove existing pole
60	10+874.1		X	1.4m	10+868.0	X		15.0m	Set new pole and remove existing pole
59	10+941.3	X		7.4m	10+935.6	X		12.8m	Set new pole and remove existing pole
58	11+009.3	X		22.1m	11+001.9	X		12.8m	Set new pole and remove existing pole
57	11+084.7	X		18.om	11+068.1	X		12.8m	Set new pole and remove existing pole
56	11+142.9	X		7.3m	11+135.0	X		12.8m	Set new pole and remove existing pole
55	11+205.4	X		5.0m	11+191.5		X	8.0m	Set new pole and remove existing pole
54 1/2					11+260.1	X		8.5m m	Set new pole

54	Pole not on plans				11+328.1	X		8.0m	Set new pole and remove existing pole
53	11+387.3	X		9.1m	11+395.5	X		8.0m	Set new pole and remove existing pole
52	11+457.6	X		1.3m	11+464.0	X		8.0m	Set new pole and remove existing pole
51	11+539.1		X	1.8m	11+529.9	X		9.0m	Set new pole and remove existing pole
50S	11+616.4		X	14.6m					Eliminate and remove existing pole
50	11+620.0		X	1.4 m	11+598.7	X		12.8m	Set new pole and remove existing pole
49	11+710.0	X		3.7m	11+667.9	X		12.8m	Set new pole and remove existing pole
48	11+783.7	X		8.1m	11+737.1	X		8.0m	Set new pole and remove existing pole
47 1/2					11+801.1	X		12.2m	Set new pole
47	11+865.1	X		7.3m	11+865.1	X		12.7m	Set new pole and remove existing pole
46	11+973.8	X		11.0m	11+941.0	X		12.8m	Set new pole and remove existing pole
45	12+017.8	X		6.4m	12+016.6	X		12.8m	Set new pole and remove existing pole
44 1/2					12+092.2	X		12.8m	Set new pole
44S	12+122.8		X	5.2m					Eliminate and remove pole
44	12+124.3	X		6.4m	12+167.7	X		12.8m	Set new pole and remove existing pole
43S	12+215.5	X		0.3m					Eliminate and remove pole

43	12+219.1	X		16.6m	12+229.6		X	12.8m	Set new pole and remove existing pole
42	12+292.2	X		36.0m	12+288.7		X	12.8m	Set new pole and remove existing pole
41 1/2					12+352.6		X	12.8m	Set new pole
41	12+406.1	X		48.5m	12+406.1		X	12.8m	Set new pole and remove existing pole
40	12+449.4	X		28.6m	12+460.0		X	12.8m	Set new pole and remove existing pole
39	12+508.6	X		36.2m	12+508.6		X	12.8m	Set new pole and remove existing pole
38 1/2					12+549.4		X	12.8m	Set new pole
38	12+576.2	X		32.4m	12+580.0	X		8.0m	Set new pole and remove existing pole
38S					12+579.1		X	9.1m	Set new pole
37	12+626.7	X		11.0m	12+626.7	X		8.0m	Set new pole and remove existing pole
36	12+672.4	X		13.1m	12+681.2	X		8.0m	Set new pole and remove existing pole
35	12+718.2	X		14.7m	12+735.4	X		9.0m	Set new pole and remove existing pole
34	12+762.9	X		26.9m	12+788.8	X		12.8m	Set new pole and remove existing pole
33	12+806.3	X		19.7m					Eliminate and remove existing pole
32	12+846.2	X		12.3m	12+841.6	X		12.8m	Set new pole and remove existing pole
31	12+887.4	X		9.7m	12+886.6	X		9.0m	Set new pole and remove existing pole

New Flemming Road

38 1/2					9+12.5		X	6.0m	Set new pole
1					1000+066.3	X		6.4m	Set new pole
2					1000+114.7		X	6.5m	Set new pole
2					1000+114.7	X		6.6m	Set new pole

Oxford Networks
Oxford Networks has aerial & buried cable within the limits of this project. These cables are comprised of both copper and fiber optic cable. Oxford Networks plans on installing new cable on the CMP poles after CMP has completed their work. Oxford Networks estimates 20 working days to run new cable and remove the existing pedestals. Oxford Networksrequires five (5) working days notice before the contractor starts construction. Contact Brent Hadley at 207-462-2754.

Underground

Portland Pipeline Corporation
The Portland Pipeline Corporation has an underground pipeline within the limits of this project. The pipeline crosses The U.S Rte 2 baseline at about station 12+00. The Portland Pipeline requires five (5) working days notice before the contractor starts construction in this area. Contact Sheldon Rice at 207-583-2311.

Portland natural Gass transmission System (PNGTS)
PNGTS has an underground pipeline crossing U.S Rte 2 at about Station 12+00. PNGTS requires five (5) working days notice before the contractor starts construction in this area. Contact Steve Engel at 207-892-0781.

Railroad

St Lawrence & Atlantic Railroad Company

St. Lawrence & Atlantic Railroad Company has facilities running along the length of this project.
St. Lawrence & Atlantic Railroad Company will not allow any vehicle, including the contractors' equipment, to stop, park, or be stored within 7.63 meters (25 feet) each side of the railroad tracks.
The Contractors attention is directed to the Protection of Railroad and Traffic Structures (PRTS) section of the special Provisions located in the Departments Proposal Book.
All electrical conductors or span wires over the railroad tracks will be no less than 7.30 meters (24 feet) above the rails. The St. Lawrence & Atlantic Railroad company requires

five (5) working days notice before the contractor starts construction in and around the tracks. Contact Paul Boisvenue at (514) 773-0180 for any questions regarding this utility.

CONTRACTOR

It is the responsibility of the contractor to layout all of the proposed utility facilities in the field prior to the start of construction.

BLASTING

In addition to any other notice which might be required, the Contractor shall notify an authorized representative of each utility having plant close to the site no later than 3.00 P.M. on the Working day (Monday through Friday) before he intends to blast. Notice shall state the approximate time of the blast. The St. Lawrence & Atlantic Railroad may require longer notification before blasting can occur around their facilities.

MAINTAINING UTILITY LOCATION MARKINGS

The contractor will be responsible for maintaining the aerial and buried utility markings following the initial locating by the appropriate utility or their designated representative.

UTILITY SIGNING

Any utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. Any utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. Any utility or contractor working within the construction limits shall meet all State and municipal rules and regulations concerning traffic control. All work areas shall be signed, lighted, and traffic flaggers employed as determined by field conditions. All traffic controls shall be in accordance with the latest addition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

DIG SAFE

The contractor will be responsible for determining the presence of underground utility facilities prior to commencing any excavation and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title & 3360-A Maine “Dig Safe” System. Phone 1-888-344-7233.

SAFE PRACTICES AROUND UTILITY FACILITIES

The contractor will be responsible for complying with M.R.S.A. Title 35-A, Chapter7-A-sections 751-761 Overhead High- Voltage Line Safety Act. Prior to commencing any

work that may come within ten (10) feet of any aerial electrical line; the Contractor shall notify the aerial utilities as per Section 757 of the above act.

NOTE: Any clearing, tree removal or tree trimming required within ten (10) feet of the electrical conductors must be done by a qualified contractor. A list of tree removal contractors qualified to remove trees or limbs within ten (10) feet of any electrical conductors may be obtained from the power company.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

SPECIAL SPECIFICATION

PROTECTION OF RAILROAD TRAFFIC AND STRUCTURES

INSTRUCTIONS: These instructions are not a part of the Special Specifications.

The Special Specification for the Protection of Railroad Traffic and Structures is, by Department policy, to be made a part of the highway contract documents for any project where work is to be done by the Contractor on or adjacent to the right of way of a railroad.

The Railroad is to complete the shaded areas on the form, the Department is to complete all other information. Where the information requested does not adequately describe the situation, that portion of the specification is to be revised as necessary. The limits of work to be established by the Department under "Inspection" will be no nearer the track than the limits specified by the Railroad.

This PRTS form was revised in December 2000. The modifications were primarily minor format changes, however, there was one clarification of content: wherever the word "days" was previously used, the term "calendar days" is now used. There were no other changes to the content of the document.

SPECIAL PROVISION
PROTECTION OF RAILROAD TRAFFIC AND STRUCTURES

1. GENERAL REQUIREMENTS

Part of the work required by the Contract will be performed within a railroad right of way and/or adjacent to the tracks, telephone, telegraph, signal and electric supply lines of a railroad or railroads. The Contractor agrees to perform all such work in compliance with all of the terms of this Special Provision and all safety rules, regulations, or standards applicable to the Railroad. The Contractor shall be fully responsible for all damages arising from his failure to comply with the requirements of this Special Provision. The Contractor shall be deemed to have included all costs in the unit prices of the Schedule of Prices and the Proposal.

2. AMOUNT OF RAILROAD WORK

The estimated amount of work to be done within 15.24 Meters (50 feet) of the track of the **St. Lawrence and Atlantic Railroad Company** is **40%** of the contract.

3. NUMBER OF TRAINS AND TRAIN SPEED

The Contractor is notified that a maximum speed of **65** kph (**40** mph) will be considered as prevailing for the operation of trains of the Railroad at this project and that the approximate number of trains per day at this project is **2**.

4. PRIORITY OF RAILROAD OPERATIONS

The train movements of the Railroad, and its lessees, and licensees shall have absolute priority over the performance of the Construction Project within the railroad right of way. The Contractor hereby agrees that the hours and times of work within the Railroad right of way must be coordinated through the Railroad and that such hours and times are subject to change without prior notice to the Contractor, unless other prior arrangements have been made through the Railroad.

5. AUTHORITY OF RAILROAD TO STOP WORK

If the Contractor fails to comply with the safety terms of this Special Provision, or if the Chief Engineer of the Railroad determines that the Contractor is using unsafe practices that threaten the safety of rail traffic, rail workers, or the general public, the Railroad shall have the right to immediately order the Contractor to cease work and vacate the Railroad's property. The Railroad agrees to confirm any cessation of work in writing by delivering to the Department's Construction Manager a completed Stop Work Order form attached as Exhibit A within 24 hours of giving any such order.

6. ENTRY UPON RAILROAD PROPERTY

The Railroad hereby agrees to permit the Contractor, together with their subcontractors, suppliers, consultants and engineers (the "Contractor"), to enter upon the Railroad property for the purpose of performing the Construction Project, PROVIDED THAT the Contractor complies with all of the terms of this Special Provision and all safety requirements and directions of the Chief Engineer of the Railroad, or his authorized representative (the "Railroad's Chief Engineer").

7. NOTICE REQUIRED BEFORE ENTRY

The Contractor shall give written notice to the Railroad's Chief Engineer at least **5** calendar day(s) in advance of the time it proposes to do work within the limits of the Railroad right-of-way or perform operations that may create a Hazard as specified by this Special Provision. The Contractor shall give such notice regardless of whether the work may also be within the limits of a public highway.

8. HAZARDS

The Contractor shall assess to its own satisfaction hazards which may be caused by its operations. At a minimum, the Contractor agrees that the following shall constitute Hazards.

An operating track shall be considered fouled and subject to hazard when any object is brought nearer than **7.62** meters (**25.00** feet) to the gauge line of the near rail of the track.

A signal line or communication line shall be considered fouled and subject to hazard when any object is brought nearer than **7.62** meters (**25.00** feet) to any wire or cable.

An electric supply line shall be considered fouled and subject to hazard when any object is brought nearer than **7.62** meters (**25.00** feet) to any wire of the line.

Cranes, trucks, power shovels or any other equipment shall be considered as fouling and subjecting to hazard a track, signal line, communication or electric supply line when working in such position that failure of equipment, with or without load, could foul the track, signal line, communication or electric supply line.

Railroad operation will be considered subject to hazard when explosives are used in the vicinity of railroad premises, or during the driving or pulling of sheeting for any footing adjacent to a track, or when erecting structural steel adjacent to a track, or when performing work under, across or adjacent to a track, or when operations involve, swinging booms or chutes that could in any way come nearer then **15.24** meters (**50.00** feet) to the gauge line of the near rail of the track, or when erection or removal of staging, false work or forms fouls a track or wire line.

None of the operations specified as a Hazard above shall be carried on during the approach or passing of a train or without permission from the Railroad's Chief Engineer and the presence of a railroad inspector/flagman, unless other prior arrangements have been made through the Railroad.

9. MINIMUM CLEARANCES

During the construction of staging, false work or forms, the Contractor shall at all times maintain a minimum vertical clearance of **7.00** meters (**23.00** feet) above the top of high rail and a minimum side clearance of **2.75** meters (**9.00** feet) from the gauge line of the near rail where track is tangent. Additional side clearance must be maintained where track is on a curve.

10. WORK PLAN SUBMITTAL AND APPROVAL

The Contractor shall submit in writing to the Railroad's Chief Engineer or duly authorized representative, and the Departments Railroad Property Manager or his appointed representative, at least **5** calendar day(s) in advance of the start of the project, an outline of his plan for work within the Railroad right of way including contemplated method(s) of construction. This plan must meet with the approval of the Railroad's Chief Engineer and the Department's Railroad Property Manager in every respect. If the Contractor contemplates the use of "on the track equipment", it should so state and obtain from the Railroad the conditions pertaining to such operations. All Railroad costs included in this operation will be borne by the Contractor. In a like manner, any of the Contractor's equipment or material on cars for this project shall be handled in conformance with existing traffic rules with all costs borne by the Contractor.

Prior to submitting his Proposal, the Contractor shall have ascertained from the Railroad and from the Department's Railroad Property Manager or his appointed representative, all information relating to its requirements and regulations and all costs in connection with compliance thereto.

11. EXCAVATIONS

Before excavation for footings adjacent to tracks and/or within the Railroad's right-of-way may commence, whether or not also within the limits of a public highway, plans and calculations for such excavations, prepared by a Professional Engineer authorized to practice in Maine, shall be submitted to the Railroad's Chief Engineer for review and approval. Unless other prior arrangements have been made, the Railroad's Chief Engineer shall have **4** week(s) to perform such review and approval and issue a written permission to proceed with the excavation. No excavation shall proceed without such permission.

At a minimum, excavations must utilize proper bracing, shoring, sheeting or other support as determined by the Railroad's Chief Engineer, to support the tracks with railroad traffic. Open excavation shall be suitably planked over when construction operations are not in progress, the location of any wires, conduits, pipes, cables or other railroad facilities below the surface of the ground. Damage to any such facilities caused by the failure of the Contractor to ascertain the location of such facilities or by failure to use due care to avoid injury to such facilities shall be at the expense of the Contractor.

12. EQUIPMENT

Equipment of the Contractor shall be in such condition so as to prevent failure that would cause delay in the operation of trains or damage to railroad facilities. Equipment shall not be placed or put in operation adjacent to a track without first obtaining permission of the Railroad. The Railroad agrees that such permission shall not be unreasonably withheld.

13. RAILROAD SERVICES - GENERALLY

When work is to be performed within the Railroad's right-of-way, the Railroad shall provide the services, equipment and materials provided in this Special Provision including, but not limited to, engineering, flagging, inspection, signal protection and/or relocation, and restoration or replacement of the Railroad's track structure of ballast. Further, if the Railroad's Chief Engineer determines that the Contractor's operations do not comply with all of the safety requirements of this Special Provision and all safety requirements and directions of said Chief Engineer, the Railroad will employ the necessary qualified employees to protect its trains and other facilities. The Contractor shall pay to the Railroad the cost for performing all Railroad Services unless said costs are to be paid by the Department as specified in this Special Provision.

14. INSPECTION / FLAGGING

The Railroad shall furnish and assign all inspectors / flaggers for general inspection purposes of general protection of railroad property and operations during construction as the Railroad's Chief Engineer determines are necessary to preserve safety.

(a) Responsibility for Cost. The Department will bear the cost of flagging or inspection (including travel time) or any combination thereof up to **44** man days of said flagging or inspection. If, in the opinion of the Railroad's Chief Engineer, further services of a flagger or inspector will be required due to the operations of the Contractor, the services will be furnished and the cost thereof (salary, expenses, insurance, taxes and vacation allowance, etc.) shall be paid to the Railroad by the Department, and will be recovered by the Department from the Contractor.

(b) Terms. The minimum hours per day for the Railroad employees engaged in inspection flagging services shall be eight (8) hours. Time at rates for straight time, overtime or for deadheading starts in accordance with established practices in effect in the territory in which the project is located. Information as to these practices should be obtained from the Railroad's Chief Engineer.

The Contractor shall notify the Railroad's Chief Engineer and the Chief Engineer of the Department in writing **5** calendar day(s) before beginning, resuming or suspending work within **15.24** meters (**50.00** feet) of the track, so that an inspector may be provided or removed in accordance with the requirements of this Special Provision. An inspector may be removed upon **2** calendar day(s) notice. Failure to give notice of intent to suspend work shall be cause of charge to the Contractor the cost of inspection during the period when work is suspended.

(c) Estimated Cost. The following is an estimate of the cost per day of inspection/flagging necessary for this project. The rates shown include all overhead charges, travel time, deadheading and personal expenses.

Date of estimate **4/30/2007.**

Estimated daily rate for four (4) consecutive hours Monday-Friday (straight time): **$237.00**

Estimated daily rate for four (4) consecutive hours Saturday, Sunday, Holiday (overtime): **$298.40**

Estimated rate for hours worked in excess of eight (8) hours in any one day: **$45.76**

Rates charged will be those in effect at the time of the performing the inspection/ flagging which may be different than the rates used at the date of the Estimate. The Railroad agrees to notify the Department if rates used to calculate the above estimates change before the date of bids are received for this Contract.

(d) Definitions.

Man day (M.D.) - eight (8) consecutive hours or any portion thereof.

Overtime - Each additional hour or fraction thereof consecutive to and beyond the standard man day will count as 3/16 of a man day.

Standard Man day - Eight (8) consecutive hour, Monday - Friday between the hours of **7** a.m. to **3** p.m. unless otherwise noted and agreed to by all parties.

Travel Time - Time required by flagger and/or inspector to commute between his or her point of headquarters to the project site. This time shall not be charged used in determining available man days.

15. OTHER CONTRACTOR RESPONSIBILITIES

The restoring and resurfacing of tracks, if disturbed due to Contractor's operations, shall be at the expense of the Contractor.

Any other changes made or services furnished by the Railroad as a result of the Contractor will be at the Contractor's expense.

16. EXTRA-CONTRACT SERVICES

Temporary and permanent changes of tracks and telephone, signal and electric supply lines made necessary by or to clear the permanent work of the Contractor as shown on the construction plans and included in the Railroad force account as recollectable from the State will be made or caused to be made by the Railroad without expense to the Contractor.

17. INDEMNIFICATION

Where work is being performed over, under, across or adjacent to Railroad premises, the Contractor shall defend, indemnify and save harmless the Railroad and the Maine Department of Transportation from and against any and all loss, cost, damage, claims, suits, demands, or liability for damages for personal injury including death and for damage to property, which may arise from or out of the operations conducted under his contract, occurring by reason of any act or omission of the Contractor, his agents, servants or employees, or by reason of any act or omission of any subcontractor, his agents, servants or employees.

18. INSURANCE

In addition to any other forms of insurance or bonds required under the terms of the Contract, the Contractor will be required to procure and maintain, at its sole cost and expense, the following insurance coverages naming the Railroad as an insured.

(a) Railroad Protective Liability Insurance with limits not less than **$2,000,000.00** per single occurrence and **$6,000,;000.00** per aggregate total occurrences.

(b) Comprehensive General Liability Insurance protecting against liability from bodily injury or property damage arising out of the Construction Project with limits of not less than **$2,000,000.00** per single occurrence and **$6,000,000.00** per aggregate total occurrences.

(c) Workers Compensation and Occupational Disease Insurance, as required by law.

(d) Automobile Liability Insurance covering all motor vehicles used about or in connection with the Construction Project.

If any part of the work is sublet, these insurance coverages shall be provided by or on behalf of the subcontractors to cover their operations

Each policy shall carry an endorsement covering the “save harmless” clause in favor of the Railroad and the Maine Department of Transportation, as set forth in the paragraph, “Responsibility for Damage Claims”.

If blasting is to be done in the vicinity of the Railroad, the insurance policies shall include such coverage.

The policies shall be in force before any work is done on the project and shall remain in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the State and the Railroad.

Before any work is done on the project, the Department of Transportation and the Railroad's Chief Engineer shall be furnished certificates of each policy. Further, the original policy of the Comprehensive General Liability Insurance and the Railroad Protective Liability Insurance shall be furnished to the Railroad's Chief Engineer and a duplicate shall be furnished to the Department of Transportation.

The policy or policies of the Railroad’s protective public liability and property damage liability shall be written by a Company authorized to do business in the State of Maine, and shall be signed by the President and Secretary of the Insurance Company and shall be countersigned by an authorized representative of the Company.

19. **ROADWAY WORKER SAFETY REGULATION**

Notice to all Contractors/Subcontractors and individuals must be aware of the Federal Roadway Worker Safety Regulation, CFR 49, Part 214(c). They may be required to comply with this regulation. Any requirements for them to comply will be discussed at the pre-construction utility meeting.

Town: **Bethel - GileadTown Name}**
Project/PIN: **HP-9184(300) / {9184.30}**
7/2/07

EXHIBIT A
ORIGINAL TO CONTRACTOR

MDOT/RAILROAD STOP WORK ORDER

Section A - Contractor	Town
	DOT Railroad Project #
Railroad Name	Location
	Notice #
DESCRIPTION OF SAFETY HAZARD/REASON FOR ORDER	
Standard Violated	RAC (Risk Assessment Code) **N/R**
Railroad Official (Flagger/Inspector) Name Signature	Date
SECTION B - ACTION TAKEN:	

cc: MDOT - R.E. or Inspector
MDOT - Utility Section
MDOT - Construction Division
Railroad - Chief Engineer

Ver: 12/2000

1. Risk Assessment. Each identified/validated hazard shall be assigned a Risk Assessment Code (RAC) by the Safety Office. The RAC represents the degree of risk associated with the deficiency and combines the elements of hazard severity and mishap probability. The RAC is derived as follows:

a. Hazard Severity. The hazard severity is an assessment of the worst potential consequence: Defined by degree of injury, occupational illness, or property damage, which is likely to occur as a result of a deficiency. Hazard severity categories shall be assigned by roman numeral according to the following criteria.

(1) Category I - Catastrophic: The hazard may cause death or loss of a facility.

(2) Category II - Critical: May cause severe injury, severe occupational illness, or major property damage.

(3) Category III - Marginal: May cause minor injury, minor occupational illness, or minor property damage.

(4) Category IV - Negligible: Probably would not affect personnel safety or health, but is nevertheless in violation of a NAVOSH standard.

b. Mishap Probability. The mishap probability is the probability that a hazard will result in a mishap, based on an assessment of such factors as location, exposure in terms of cycles or hours of operation, and affected population. Mishap probability shall be assigned an Arabic letter according to the following criteria:

(1) Sub-category A - Likely to occur immediately or within a short period of time.

(2) Sub-category B - Probably will occur in time.

(3) Sub-category C - May occur in time.

(4) Sub-category D - Unlikely to occur.

c. Risk Assessment Code. The RAC is an expression of risk which combines the elements of hazard severity and mishap probability. Using the matrix shown below, the RAC is expressed as a single Arabic number that can be used to help determine hazard abatement priorities.

	Mishap Probability					RAC
		A	B	C	D	1 - Critical
Hazard Severity	I	1	1	2	3	2 - Serious
	II	1	2	3	4	3 - Moderate
	III	2	3	4	5	4 - Minor
	IV	3	4	5	5	5 - Negligible

Personal Property/Sign Inventory
Gilead-Bethel 009184.30

Item / Parcel	Name	Station	Type	Location of Item			Item Removed	Date Written Notice Sent		Comments
				Existing ROW	In Take Area	Grading Area		90 Day	30 Day	
(24-2)3	Weston C Knightly	11 + 080± Rt	Truck Sign		X			5/14/2007		
(24-3)3	Weston C Knightly	11 + 480± Lt	Truck sign		X			5/14/2007		

OK to leave	Being worked on
Move or Relocate	Item Moved

Form RA-61
Revised 12/12/06

SPECIAL PROVISION 105
CONSTRUCTION AREA

A Construction Area located in the **Towns of Gilead / Bethel** has been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

(a) The section of highway under construction beginning at Sta. 9+417.000 and ending at Sta. 12+920.000 of the construction centerline plus approaches.

(b) (US.Rte.2) The section of highway under construction beginning at Sta. 9+417.000 and ending at Sta. 12+920.000 of the new construction centerline plus approaches.

Per 29-A § 2382 (7) MRSA, the MDOT may "*issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:*

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

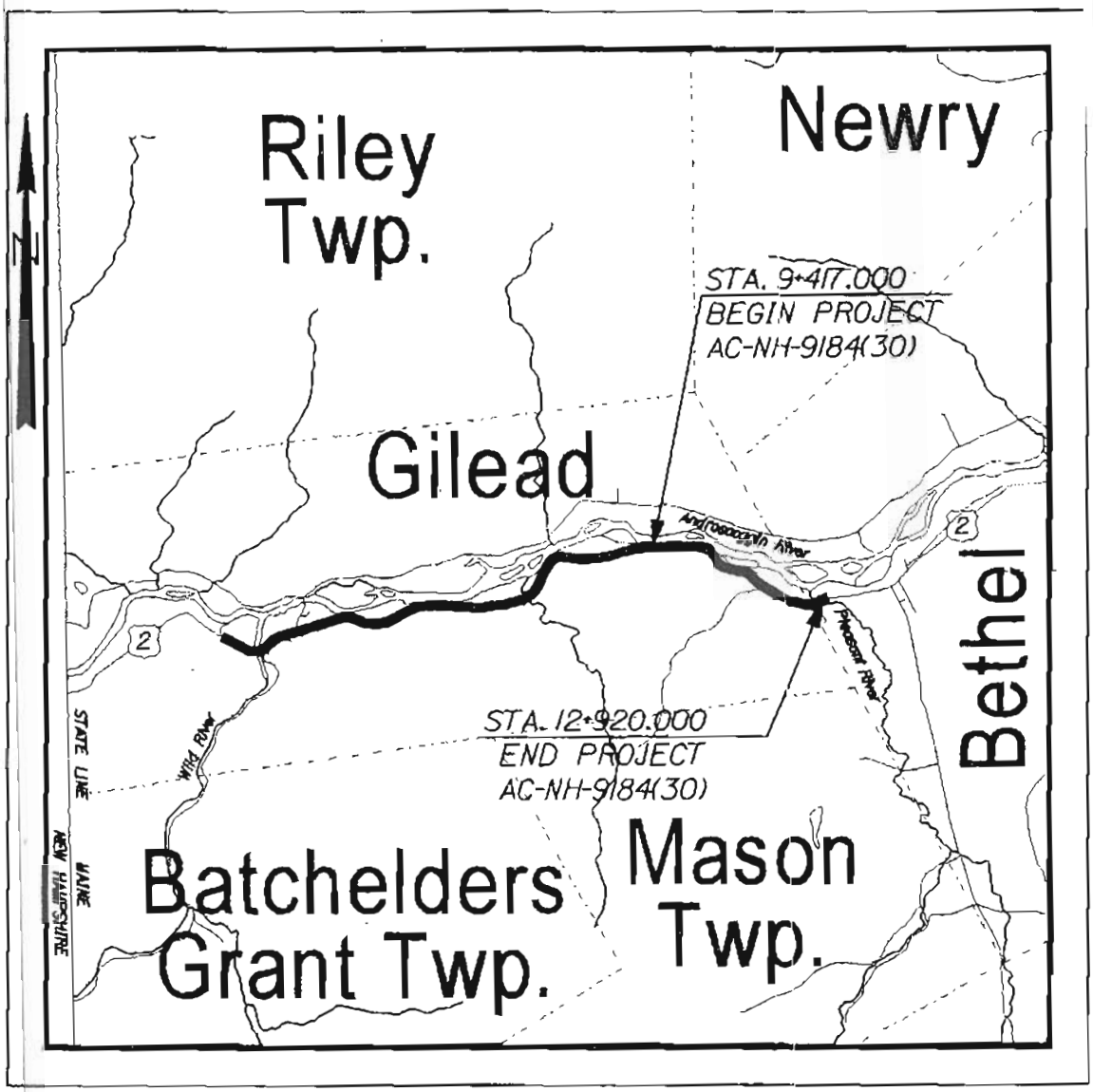
C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section."

The Municipal Officers for the **Towns of Gilead / Bethel** agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the "Construction Area".

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.



LOCATION MAP

2 0 2 4

Scale in Kilometers

DATE: 24 APR 2007 FILENAME: o:\1541-40\cm\Gap\Construction Contract 30\G30_TP01.dgn

SPECIAL PROVISION 105
OVERLIMIT PERMITS

Title 29-A § 2382 MRSA Overlimit Movement Permits.

1. Overlimit movement permits issued by State. The Secretary of State, acting under guidelines and advice of the Commissioner of Transportation, may grant permits to move nondivisible objects having a length, width, height or weight greater than specified in this Title over a way or bridge maintained by the Department of Transportation

2. Permit fee. The Secretary of State, with the advice of the Commissioner of Transportation, may set the fee for single trip permits, at not less than $6, nor more than $30, based on weight, height, length and width. The Secretary of State may, by rule, implement fees that have been set by the Commissioner of Transportation for multiple trip, long-term overweight movement permits. Rules established pursuant to this section are routine technical rules pursuant to Title 5, chapter 375, subchapter II-A.

3. County and municipal permits. A county commissioner or municipal officer may grant a permit, for a reasonable fee, for travel over a way or bridge maintained by that county or municipality

4. Permits for weight. A vehicle granted a permit for excess weight must first be registered for the maximum gross vehicle weight allowed for that vehicle.

5. Special mobile equipment. The Secretary of State may grant a permit, for no more than one year, to move pneumatic-tire equipment under its own power, including Class A and Class B special mobile equipment, over ways and bridges maintained by the Department of Transportation. The fee for that permit is $15 for each 30-day period.

6. Scope of permit. A permit is limited to the particular vehicle or object to be moved, the trailer or semitrailer hauling the overlimit object and particular ways and bridges.

7. Construction permits. A permit for a stated period of time may be issued for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section.

8. Gross vehicle weight permits. The following may grant permits to operate a vehicle having a gross vehicle weight exceeding the prescribed limit:

A. The Secretary of State, with the consent of the Department of Transportation, for state and state aid highways and bridges within city or compact village limits;

B. Municipal officers, for all other ways and bridges within that city and compact village limits; and

C. The county commissioners, for county roads and bridges located in unorganized territory.

9. Pilot vehicles. The following restrictions apply to pilot vehicles.

A. Pilot vehicles required by a permit must be equipped with warning lights and signs as required by the Secretary of State with the advice of the Department of Transportation.

B. Warning lights may be operated and lettering on the signs may be visible on a pilot vehicle only while it is escorting a vehicle with a permit on a public way.

With the advice of the Commissioner of Transportation and the Chief of the State Police, the Secretary of State shall establish rules for the operation of pilot vehicles.

9-A. Police escort. A person may not operate a single vehicle or a combination of vehicles of 125 feet or more in length or 16 feet or more in width on a public way unless the vehicle or combination of vehicles is accompanied by a police escort. The Secretary of State, with the advice of the Commissioner of Transportation, may require a police escort for vehicles of lesser dimensions.

A. The Bureau of State Police shall establish a fee for state police escorts to defray the costs of providing a police escort. A county sheriff or municipal police department may establish a fee to defray the costs of providing police escorts.

B. The Bureau of State Police shall provide a police escort if a request is made by a permittee. A county sheriff or municipal police department may refuse a permittee's request for a police escort.

C. A vehicle or combination of vehicles for which a police escort is required must be accompanied by a state police escort when operating on the interstate highway system.

10. Taxes paid. A permit for a mobile home may not be granted unless the applicant provides reasonable assurance that all property taxes, sewage disposal charges and drain and sewer assessments applicable to the mobile home, including those for the current tax year, have been paid or that the mobile home is exempt from those taxes. A municipality may waive the requirement that those taxes be paid before the issuance of a permit if the mobile home is to be moved from one location in the municipality to another location in the same municipality for purposes not related to the sale of the mobile home.

11. Violation. A person who moves an object over the public way in violation of this section commits a traffic infraction.

Section History:
PL 1993, Ch. 683, §A2 (NEW).
PL 1993, Ch. 683, §B5 (AFF).
PL 1997, Ch. 144, §1,2 (AMD).
PL 1999, Ch. 117, §2 (AMD).
PL 1999, Ch. 125, §1 (AMD).
PL 1999, Ch. 580, §13 (AMD).
PL 2001, Ch. 671, §30 (AMD).
PL 2003, Ch. 166, §13 (AMD).
PL 2003, Ch. 452, §Q73,74 (AMD).
PL 2003, Ch. 452, §X2 (AFF).

Town: Bethel - Gilead
PIN #: 9184.XX
Date: 6/8/07

SPECIAL PROVISION
SECTION 105
General Scope of Work
(Environmental Requirements)

In-water Work shall not be allowed between the dates of 10/1 and 6/30.
(In-water work is allowed from 7/1 to 9/30.)

Water body Name(s) with Station #s: Unnamed 1+170, Wild River 3+420 → 3+500, Unnamed 4+590, Unnamed 5+070, Unnamed 5+275, Unnamed 6+940, Wheeler Brook 7+260, Bog Brook 7+650, Unnamed 9+060, Unnamed 11+060, Pleasant River 12+640 → 12+660 & 1+040, Ordway Brook 1000+109, Unnamed 15+630, Unnamed 15+900, Unnamed 18+770 and Unnamed 19+080
Special Conditions: In-Water work shall be conducted during low flows. Culverts must be imbedded at least 6 inches

In-Water work consists of any activity conducted below the normal high water mark.

All activities are prohibited (including placement and removal of cofferdams) below the normal high water mark and non low flow conditions during the In-Water work window restriction, except for the following:

- Work within a sealed and dewatered cofferdam. Maintenance pumping within a sealed cofferdam is also allowed.

No construction activity, whether temporary or permanent, is allowed that completely blocks a river, stream, or brook without providing downstream flow.

The contractor shall abide by all permits and conditions.

SPECIAL PROVISION
SECTION 105
General Scope of Work
(Limitations of Operations)

The Contractor will be allowed to commence work and end work daily according to the Department of Marine Resources Sunrise/Sunset Table at the following Web address (http://www.maine.gov/dmr/sunrise_table.htm). Contractor will be allowed to enter roadway at Sunrise and must be off the roadway before Sunset. Any work outside these times will require nighttime lighting and safety attire.

SPECIAL PROVISION
SECTION 106
QUALITY
(Quality Level Analysis- Structural Concrete)

106.7.1 Standard Deviation Method Under H. Replace the Method A payfactor with the following;

"Method A: PF = [32.5 + (Quality Level * 0.75)] * 0.01"

SPECIAL PROVISION
SECTION 107
TIME
(Supplemental Liquidated Damages for Fabrication Time)

107.8.1 Fabrication Time.

The Department has budgeted for the following amounts of continuous full time fabrication/shop inspection for certain Work components:

Element	Time	Supplemental LD
1) Structural Steel Plate Girders	42 calendar days	$500 per calendar day
2) Precast Deck Panels	21 calendar days	$500 per calendar day

The Contractor is responsible for requiring their fabricators and suppliers to produce these products for the Work continuously until finished, including any needed actions to correct unacceptable workmanship or materials. If the Department determines that shop inspection beyond these times is required, then the corresponding Supplemental Liquidated Damages will be deducted as they occur from amounts otherwise due the Contractor. The Contractor will be notified by the Department when these times begin and when the allotted time will expire.

If a fabricator or supplier works more than one shift per day and the Department determines that inspection is required for each shift, each shift will count as a calendar day and the LD rate will be the noted amount per shift per calendar day in lieu of per calendar day.

Inspection is required for the following activities:

For metal fabrication work - welding, including tack welding, heat correcting, non-destructive examination, assembly verification, protective coating application.

For concrete work – tensioning of strands, batching and casting of concrete, breaking of test cylinders, de-tensioning.

SPECIAL PROVISION
SECTION 107
TIME
(Limitation of Operations)
and
(Supplemental Liquidated Damages)

Where existing pavement carries traffic and is removed to install (or remove) drainage or utility structures, the pavement shall be replaced daily with a temporary pavement consisting of a minimum of 75 mm [3 inches] of acceptable hot or cold bituminous mixture. Cold bituminous mixture shall contain aggregates, asphalt cutbacks, liquefiers and wetting agents. No separate payment will be made for furnishing, placing, maintaining, and removing temporary pavement and all cost of such work will be considered incidental to the various drainage items.

Where existing pavement is excavated or covered by fill as a part of the general grading operations prior to November 1, 2007/08, the binder course of the hot mix asphalt pavement shall be installed and completed on or before November 1, 2007/08. Supplemental liquidated damages shall be assessed the Contractor in the amount of Five Hundred Dollars ($500.00) per day for each calendar day, beginning November 2, 2007/08 that above stated binder course remains incomplete. This assessment of supplemental liquidated damages shall be in addition to the liquidated damages per calendar day, as specified in Section 107 of the Standard Specifications.

Assessments of Supplemental Liquidated Damages shall cease on November 15, 2007/08.

Grading operations which excavate or fill over existing pavement being used to carry traffic shall be suspended on November 1, 2007/08 and not be resumed until the Spring of 2008/09.

Special Provision
Section 107
Prosecution and Progress
(Contract Time)

1) **The contractor will be allowed to commence work on this project as long as all applicable plans as required under this contract have been submitted and approved and the office trailer is 100% complete.**

2) **The completion date for this contract is August 14, 2009.**

3) **The contractor shall cease all operations that effect traffic and have all lanes open to traffic and the roadway in safe operating condition as directed on the following dates :**

August 31, 2007 by noon, and shall not commence work again until September 4, 2007 (Labor Day).

May 23, 2008 by noon, and shall not commence work again until May 27, 2008 (Memorial Day).
June 27, 2008 by noon, and shall not commence work again until July 7, 2008 (4th of July).
August 29, 2008 by noon, and shall not commence work again until September 2, 2008 (Labor Day).

May 29, 2009 by noon, and shall not commence work again until June 2, 2009 (Memorial Day)
July 3, 2009 by noon, and shall not commence work again until July 6, 2009 (4th of July)

SPECIAL PROVISION
SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Under Section 202.02 of the Standard Specifications, ownership of buildings and all equipment, fixtures, and materials therein shall be interpreted as meaning all equipment, fixtures, and materials that are recognized as real property. Any items that are recognized as personal property are excepted and are reserved to the owner. If the bidder is in doubt as to whether any item not listed is real or personal property, they shall request a determination of the matter prior to date on which bids are to be received.

The following list of items is to be reserved to the property owners and/or occupants of Buildings No.1

No Reservations

Buildings to be removed under Section 202 - Removing Structures and Obstructions of the contract will be made available to the Contractor as follows: [Building No.1] to be removed upon completion of the project.

Failure by the Maine State Department of Transportation to meet dates of availability may entitle the Contractor to time extension if requested by the Contractor, in writing, such request indicating delays in construction, if any, caused by changes in availability dates.

With the "Notice to Proceed", or when a building becomes available to the Contractor, the Department will designate whether rodent control measures are required or not.

The Contractor shall not remove a building until the Department has certified it to be free of rodents. Should rodent control measures be required, the Contractor shall procure the extermination services as soon as possible. The Department will re-inspect the building within seven days after the extermination services are performed. The cost of extermination services until the building is found to be rodent free will be paid for as a specialty Pay Item under Section 109.3 - Extra Work.

This building may or may not contain asbestos. Prior to any demolition of building(s) the Contractor will conduct an asbestos survey on the building(s) to determine if any asbestos exists. The survey will be conducted by a DEP certified Asbestos Inspector. No separate payment will be made for the survey and it shall be considered incidental. The survey results will be communicated with the Resident. If no asbestos is discovered, the demolition process may proceed. If asbestos is found, the Contractor will employ a DEP certified Asbestos Abatement Contractor for its' removal and disposal. The Department will bear all expenses incurred in the abatement of any asbestos containing material as detailed in Standard Specification 109.7 – Equitable Adjustments to Compensation. Any questions can be directed to the Office of Legal Service (624-3020).

Each building shall be removed promptly after notification that it is free of rodents. All subsequent inspection costs and extermination services necessary to assure that the building is rodent free at time of removal will be at the expense of the Contractor.

Bethel-Gilead
PIN 9184.00
27 April 2007

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(BLASTING)

203 – EXCAVATION AND EMBANKMENT, is amended to include the following:

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. The work to be done under this Special Provision includes furnishing all labor, equipment, materials and services and performing operations required to fragment and excavate materials classified as rock utilizing controlled blasting procedures specified herein to the grades and limits indicated on Drawings. The work shall be performed such that damage is prevented to adjacent structures, property (includes the St. Lawrence and Atlantic Railroad; "Railroad") and work. The work shall be performed such that damage is minimized to adjacent rock, and such that resulting ground vibrations and air blast overpressures are consistently maintained below the maximum levels specified in this Special Provision.

2. The purpose of the controlled blasting is to create a stable rock face with a fall zone to protect the traveling public from rock fall hazard.

3. Protecting existing structures, adjacent property, workers, Department personnel and consultants, and the general public from damage or injury from improper handling of explosives, flyrock, excessive ground vibrations and/or excessive air blast overpressure levels.

4. Furnishing, installing, and implementing an audible warning system to indicate impending blasting and familiarizing workers, Department personnel and consultants, and the general public with the system implemented.

1.02 SYSTEM DESCRIPTIONS

A. Definitions:

1. Earth is defined as all materials not classified as rock.

2. Rock excavation: Definition in Standard Specification Section 203.01.b shall apply.

1.03 QUALITY ASSURANCE

A. Qualifications:

1. Persons responsible for blasting shall be licensed blasters in the State of Maine. The Contractor shall document, with project descriptions, blast plans and references outlining successful experience performing controlled blasting for slopes greater than 15 m in height adjacent to a highway facility that included careful perimeter control blasting, measures to prevent damage to pavement or other structures, and measures to eliminate the need for or to minimize the length of traffic stoppage. The Blasting Subcontractor shall demonstrate at least three similar projects in the last six (6) years.

B. Codes, Permits and Regulations:

1. The Contractor shall comply with all applicable Federal, State, and Local laws, rules, ordinances and regulations governing the transportation, storage, handling and use of explosives. All labor, materials, equipment and services necessary to make the blasting operations comply with such requirements shall be provided without additional cost to the Department.

2. The Contractor shall obtain and pay for all permits and licenses required to complete the work of this Special Provision.

3. In case of conflict between regulations or between regulations and Specifications, the Contractor shall comply with the strictest applicable codes, regulations, or Specifications.

C. Blasting Limit Criteria:

1. Existing Occupied Structures:

a. Peak Particle Velocity Limits - At nearby existing occupied structures, the maximum Peak Particle Velocity (PPV) shall not exceed the United States Bureau of Mines (USBM) Safe Limits (see Figure 1).

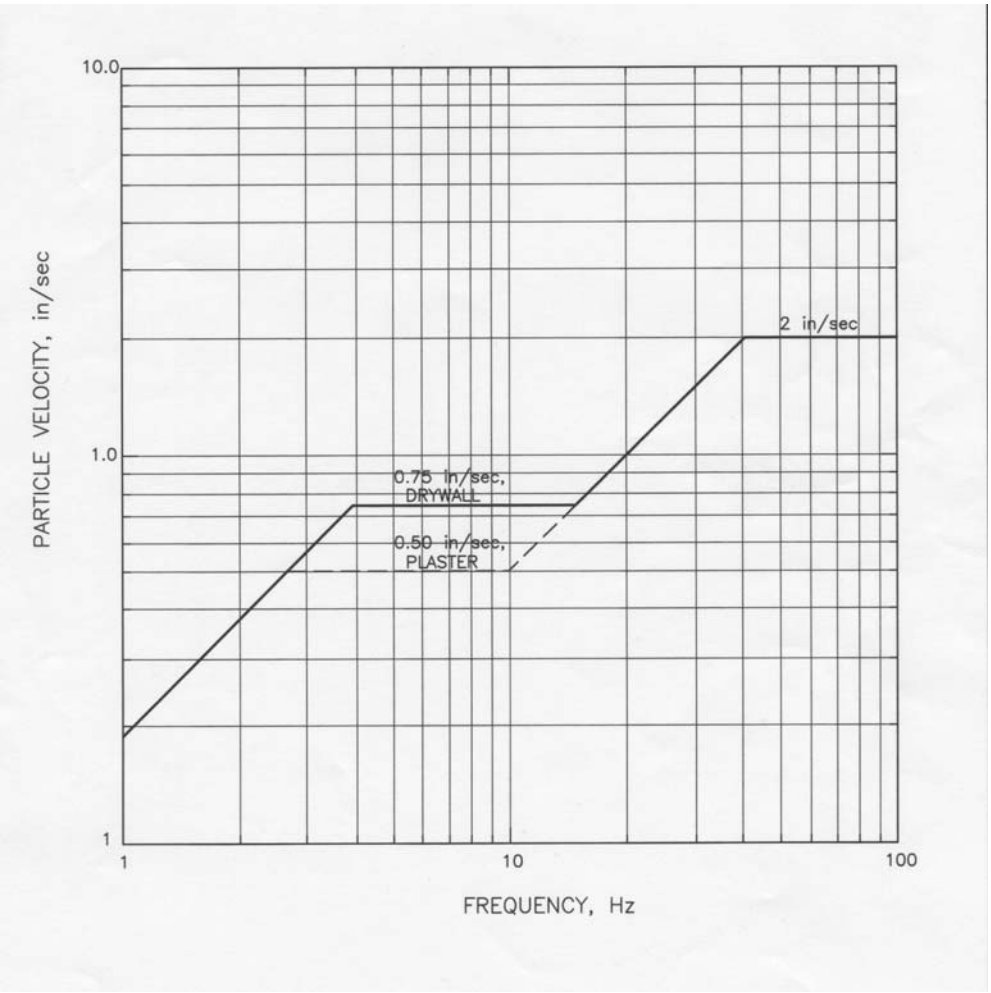


Figure 1 – Blasting Limit Criteria

b. Airblast Overpressure Limits – Maximum sound pressure level of 133 dB (peak, impulsive), measured with a seismograph.

2. The Railroad and Utilities: The PPV shall not exceed 76.2 mm/sec (3 ips) at the Railroad or existing utilities.

3. The Contractor shall comply with the Blasting Limit Criteria during all blasting and rock excavation. Adjustments to the drilling and blasting program and procedures, to comply with the Blasting Limit Criteria, shall be made by the Contractor during execution of the work at no expense to the Department.

D. Blast Monitoring:

1. The Contractor shall conduct blast vibration monitoring of every blast round required to excavate rock during the conduct of construction. Monitoring shall include one seismograph at the closest utility, one seismograph at the nearest segment of the Railroad and one seismograph adjacent to the nearest occupied structure.

2. The Contractor shall notify the Resident one hour prior to each blast.

3. The Contractor may perform additional blast monitoring at no additional cost to the Department.

4. Blast monitoring shall be conducted by qualified professionals trained in the use of a seismograph, and records shall be analyzed and results reported by persons familiar with analyzing and reporting the frequency content of a seismograph record.

5. All instrumentation proposed for use on the project shall have been calibrated within the previous twelve (12) months to a standard which is traceable to the National Bureau of Standards. Characteristics of required instrumentation are listed below:

   a. Measure and report the three (3) mutually perpendicular components of particle velocity in directions vertical, radial, and perpendicular to the vibration source.

   b. Measure and display the maximum peak particle velocity component and airblast overpressure, and the frequencies of each. The readings must be displayed and be able to be read in the field, immediately after each blast.

   c. Furnish a permanent time history record of particle velocity waveforms and airblast overpressure waveforms.

   d. Furnish a printout of USBM limits with vibration data.

6. The Contractor shall film each blast from a minimum of two (2) locations and shall submit films to the Resident within 24 hours of each blast event.

F. Blast Monitoring Reports:

1. Generally within 24 hours following each blast, a Blast Monitoring Report shall be submitted to the Resident. Any vibrations close to or exceeding the specified limits will be immediately reported to the Resident by the Contractor.

G. Notification: The Contractor shall be responsible for notification of representatives of the railroad and utilities prior to each blast.

H. The Contractor shall cooperate with the Resident in permitting observation of the Contractor's drilling and loading procedures, as well as in providing detailed information on blasting operations.

I. The Contractor shall be completely responsible for all damages resulting from the blasting operations and shall, as a minimum, take whatever measures are necessary to maintain peak particle velocities within the specified limits. Modifications to blasting and excavation methods required to meet these requirements shall be undertaken at no additional cost to the Department.

J. Airborne Dust and Noise Limits: The Contractor shall take precautions, such as the use of water, vacuums and mufflers to minimize noise and dust from air track drilling operations.

1.04 SUBMITTALS

A. Advance Blasting Plan Submittal:

The Contractor shall submit a Blasting Plan containing the following information to the Resident no more than ten (10) business days after removal of overburden soil and at least ten (10) business days prior to commencing the drilling/blasting operations. It is the Department's intent to respond to the major items in the Contractor's submittal within five (5) business days after receipt. A Blasting Plan shall also be submitted at any time the Contractor proposes to change the drilling and blasting methods. If the location of faces change or other conditions change, the Contractor is required to submit a new Blasting Plan.

1. Sequence and schedule of blasting rounds, including the general method of developing the excavation, lift heights, etc.

2. Listing of inclinometer device to be used to accurately position drill angle on all drill rigs, complete with catalog cuts, specifications and operation procedures.

3. Specifics of a typical blast round to be implemented in each of the following areas:

   a. At a test blast area within the excavation limits.

   b. At the highest rock cut area.

4. Include the following blast round details:

   a. Plan of a typical round design showing hole spacing and delay pattern, including test blasts and production blasts.

   b. Diameter, spacing, burden, depth and orientation of each blast hole for a typical round design, including test blasts, production blasts and blasts where controlled blasting techniques are required.

   c. Nomenclature and amount (in terms of weight and number of cartridges) of explosives and distribution of charge to be used within each hole, on each delay, and the total for the blast.

   d. Nomenclature and type of detonators; typical delay pattern wiring diagram for the round: type and capacity of firing source, size, type and location of safety switches and lightning gap.

   e. Type and amount of stemming to be used in holes.

   f. Calculations of anticipated vibration levels at the nearest adjacent structures, utilities or railroad siding.

5. Manufacturers data sheets for all explosives, primers and initiators to be employed.

6. Methods of matting or covering of the blast area in open excavations to prevent excessive throw of rock.

7. Written evidence of the licensing, experience and qualifications of the blasters who will be directly responsible for the loading of each shot and for firing it.

8. Name and qualifications of the person(s) responsible for design and directing the blasting. This submittal shall document by project lists and samples of blasting round design calculations that the person has the required experience in controlling open-cut blast vibrations in blasting rounds of the type required on the project.

9. Details of a traffic control plan specific to blast events.

10. Details of an audible advance signal system to be employed at the job site as a means of informing workers, Department personnel or its representatives, and the general public that a blast is about to occur.

11. Submit a certificate of insurance documenting that liability insurance coverage in an amount no less than $2,000,000 will be in force for the duration of blasting at the site. The Contractor shall ensure that all approved damage claims will be honored, pursuant to the terms of the insurance policies and/or applicable state law.

12. Listing of instrumentation proposed for use in profiling rock face and for surveying as-drilled locations of blast holes, complete with catalog cuts, performance specifications and operating procedures.

13. Submit a copy of the blasting permit(s) obtained to conduct blasting on the site (when received).

B. Blast Monitoring Report Submittals:

1. Within 24 hours following each blast, the Contractor shall submit to the Resident a Blast Monitoring Report. Each Blast Monitoring Report shall include all of the following applicable items:

   a. Blast round design data, as indicated in Section 1.04.A.4 above.

   b. Blast Monitoring Location Plan, indicating the location from the blast to the monitoring locations.

   c. Vibration data from each seismograph, including a copy of the strip charge (or other permanent record of velocity/time waveform) with calibration and monitoring record marked with the date, time and location of the blast.

C. Progress Submittal:

1. In the event that the Contractor's design round results in ground vibrations which exceed the blasting limit criteria specified in this Special Provision, the Contractor shall immediately revise the round design appropriately and submit the revised round design

to the Resident for review. The Contractor shall allow sufficient time for review, and shall not conduct additional blasting until the revised blast round design is approved.

2. Review by the Department of blast designs and techniques shall not relieve the Contractor of responsibility for the accuracy, adequacy and safety of the blasting, exercising proper supervision and field judgment and producing the results within the blasting limits required by this Special Provision.

3. The Contractor shall report to the Resident in writing all blasting complaints received by the Contractor within 24 hours of receipt. Each blast complaint report shall include the name and address of the complaintant, time received, date and time of blast complained about and a description of the circumstances which led to the complaint.

D. The time period(s) specified for submittal are the minimum required by the Resident to review, evaluate and respond to the Contractor. If, after review, the Resident requires re-submission for any reason, the specified time period(s) shall commence upon the date of receipt of the re-submittal(s). The Contractor is responsible for scheduling specified submittal and re-submittal so as to prevent delays in the work.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.01 MINIMUM SAFETY PRECAUTIONS

A. Clearing the Danger Area Before Blasting: No blasting shall be permitted until all personnel in the danger area have been removed to a place of safety. A loud, audible, warning system devised and implemented by the Contractor shall be sounded before each blast. The Contractor shall familiarize all personnel on the project and the general public with the implemented system. The danger area shall be patrolled before each blast to make certain that it has been completely cleared, and guards shall be stationed to prevent entry until the area has been cleared by the blaster following the blast.

B. Explosives shall be stored, handled and employed in accordance with Federal, State, and Local regulations including 29 CFR 1926 Subpart U – Blasting and the Use of Explosives. All other Standard Specification Section 105.2.6 – Use of Explosives shall apply.

C. No explosives, caps, detonators or fuses shall be stored on the site during non-working hours.

D. The Contractor shall be responsible for determining any other safety requirements unique to blasting operations on this particular site so as not to endanger life, property, utility services, any existing or new construction, or any property adjacent to the site.

E. No requirement of, or omission to require, any precautions under this Contract shall be deemed to limit or impair any responsibility or obligations assumed by the Contractor under or in connection with this Contract; and the Contractor shall at all times maintain adequate protection to safeguard the public and all persons engaged in the work, and shall take such precautions as will accomplish such end, without undue interference to the public. The

Contractor shall be responsible for and pay for any damage to adjacent structures including all utilities and the adjacent railroad, resulting from work executed under this Special Provision.

3.02 TEST BLASTING

A. The initial blasting at the site shall consist of at least one test blast, for the purpose of assessing the vibration attenuation characteristics at the site and the effectiveness of perimeter controlled blasting measures. The test blast shall take place in the area designated by the Resident.

B. Requirements for controlled and production blasting operations covered elsewhere in this specification shall also apply to blasting control carried out in conjunction with the test shots.

C. Blast rock shall be removed from the face at the test blast locations to allow for inspection of perimeter controlled blasting.

D. Contractor will not be allowed to drill ahead of the test blast area until the test section has been excavated and the results evaluated by the resident.

E. If at any time during the progress of the work, the methods of drilling and blasting do not produce the desired result of a uniform slope and shear face, within the tolerances specified, the Contractor shall be required to drill, blast and excavate in short sections, not exceeding 30 m in length, until a technique is arrived at that will produce the desired results. Extra cost resulting from this requirement shall be borne entirely by the Contractor.

3.03 GENERAL BLASTING PROCEDURES

A. Pre-blast meeting: A pre-blast meeting shall be held prior to the start of any drilling or blasting activities. The purpose of the meeting shall be to review the blasting procedures and vibration monitoring requirements and to facilitate coordination between all parties involved. Individuals attending the pre-blast meeting should include the Resident, the Contractor, the Contractor's blaster, any utility affected by the blasting operation, a representative from the Railroad, and any other personnel the Department deems appropriate.

B. Blasting shall be limited to between sunrise and sunset Monday through Friday or as otherwise restricted by the Department. No blasting shall be conducted on Saturdays, Sundays, holidays, or other times unless prior written permission is received from the Resident.

C. Blasting, staging and operations shall be performed in the area including the southern shoulder of Route 2 and the southern travel lane of Route 2. The portion of the southern travel lane needed for staging and the barriers planned for protection of the lane shall be defined in the traffic control plan.

D. The Contractor shall notify the Resident at least 48 hours before blasting operations are to commence, and at least 24 hours prior to recommencing blasting if operations are suspended for any reason.

E. The Contractor shall conduct blasting operations such that damage is prevented to adjacent improvements including the Railroad, existing utilities, property and work, and such that peak

particle velocity levels do not exceed the maximum specified limits at the locations specified herein.

F. Production blast holes shall be drilled on the patterns submitted by the Contractor and approved by the Resident. The production blast holes shall be drilled within two (2) blasthole diameters of the staked collar location. If more than 5% of the holes are drilled outside of this tolerance, at the option of the Resident, the Contractor may be required to refill these holes with crushed stone and redrill them at the proper location.

G. First-row-in production blast holes (adjacent to perimeter blast holes) shall be drilled and loaded such that no portion of these holes are closer than 1.5 m to the presplit lines to avoid overbreak of the design rock face. Spacing and loading of the first-row-in holes should be 0.5 to 0.75 times the production hole loading and spacing.

H. In order to ensure good bearing material for the roadway, the Contractor shall conduct blasting such that overbreak and fracturing of rock is minimized below the required subgrade level for the roadway. Subdrill (depth of blasthole below required subgrade) should be kept to the minimum necessary to adequately fragment and remove the rock to the limits of excavation. Subdrill shall not exceed 600 mm unless the Contractor has submitted an advance written request to the Resident indicating why additional subdrill is required.

I. All blasts shall be designed to move blastrock in the direction of the stress-relieved free face previously marked out or previously blasted. Blasts shall not be designed to push blastrock in the direction of Route 2.

J. Blasthole Drilling: Drilling logs shall be kept on each blasthole to show open bedding, jointing and open or mud filled seams, zones of soft or weathered rock, mud pockets, etc. These logs shall be provided to the Resident before any blastholes are loaded. The logs shall be used to properly design and load blastholes and protect from hazardous blasting effects.

K. Blastholes shall be stemmed with dry angular crushed stone material with a maximum particle size of 10 mm.

L. No free-flowing, pourable or pumpable explosives shall be used unless approved in writing by the Resident. All explosives shall be in cartridges or other semi-rigid containers.

M. Immediately after blasting, the Contractor shall have sufficient equipment available at the site to clear the roadway of all blastrock and debris. The Contractor shall also use, as required, a mechanical sweeper to control dust and small stones.

N. The maximum time for which traffic on Route 2 may be stopped at any single blast event between the hours of 5:00 AM and 9:00 PM shall be 15 minutes, from the time traffic is stopped until travel lanes are cleared of blast debris, to the satisfaction of the Resident, and notice is given that one-way traffic may be resumed. The Contractor shall reduce the size of the blast, change the design and method of blast, use more mats, or otherwise alter the blasting so that the traffic is not stopped for more than 15 minutes between the hours of 5:00 AM and 9:00 PM. If, due to the throw of rock onto the northern travel lane, or due to other blasting-related activities, traffic is stopped for more than 15 minutes, the Contractor shall pay supplemental liquidated damages of $1,600.00. For each additional 15 minute increment that traffic is stopped, the total supplemental liquidated damages shall increase by an additional

$1,600.00. Supplemental liquidated damages will not be charged for closures needed to protect the public safety due to misfires. Supplemental liquidated damages will not be charged for closures of 2 hours or less between the hours of 9:00 PM and 5:00 AM, but the Resident must be notified a minimum of 48 hours before such a planned extended closure. Supplemental liquidated damages of $400 for each half hour increment will be charged for closures that extend past the initial two hours. Procedures to notify all affected emergency service agencies and the traveling public of planned extended closures shall be covered in the Traffic Control Plan.

O. Railroad Considerations: The Contractor shall design the blast such that no blastrock is thrown onto the Railroad right-of-way and the following additional procedures shall be followed:

1. A time schedule for blasting shall be determined and coordinated with train operations and must be approved by the Railroad at least one working day (24 hours) in advance.

2. No blasting shall take place nor shall any explosive be placed during the period 30 minutes immediately preceding the passage of a train and 5 minutes following the passage.

3. Regardless of the blasting procedure that is approved, if the Railroad's Chief Engineer or his designated representative determines that blasting is adversely affecting the Railroad's property or operations, the Railroad reserves the right to terminate or suspend the operations of the Contractor until the Contractor has received the approval of the Railroad's Chief Engineer for any changes in procedures, materials, equipment or personnel deemed necessary by the Railroad to protect its operations, personnel and property.

4. The Contractor shall, at his expense, furnish, erect and maintain signs warning of blasting operations on the Railroad right of way. Said signs shall be approved by the Railroad and shall be placed as designated by the Railroad at least 100 meters from the blasting site as measured along the Railroad right of way.

P. At the completion of each blast round, the Contractor shall collect the fragmented rock and dispose of all material outside the limits of the Rock Cut area as indicated on the drawings (reuse on project) or as otherwise determined by the Contractor.

Q. If the blasting and rock excavation is performed using multiple lifts, any remaining bench shall be less than 0.40 meters in width.

R. Blasting agent limitations: Blasting agents that contain perchlorates shall not be used for any blasting for the project.

3.04 SPECIAL CONTROLLED BLASTING PROCEDURES

A. Controlled blasting is defined as a blasting method which utilizes a line of closely spaced, lightly loaded blastholes that are fired either before or after the main production blast to define a break line on the perimeter of the excavation.

B. Cushion Blasting:

1. Cushion (trim) blasting shall be used where the designed slope is 2:1 (vertical to horizontal) or steeper and the rock cut is 3 m or greater.

2. Prior to drilling, all soil and loose and disintegrated rock shall be removed down to solid rock for a distance of at least 10 m beyond the end of the production hole drilling limits, or to the end of the cut, before drilling the cushion blast line. Removal of soil and loose rock shall be coordinated with construction of a TECCO Mesh and/or soil-nail wall retaining system, if necessary, to retain the overburden soil that remains in-place above the rock.

3. Cushion blast holes shall be loaded and fired separately after the main round to create a fracture plane along the perimeter of the excavation. Alternatively, they may be fired as the last delay(s) of a round, a minimum of 25 milliseconds after detonation of adjacent production holes. In general, the cushion blast row should be detonated with a row-to-row timing of 1.5 to 3 times the production hole row-to-row timing.

4. Cushion blast holes shall be 100 mm or less in nominal diameter, spaced no greater than eight (8) times the hole diameter on-center, and shall be drilled along the cushion blast line and at the required slope inclination to the full depth of the cut or to a pre-determined stage (lift) elevation.

5. Drilling 600 mm below the payment line will be allowed to facilitate removal of the toe berm.

6. Continuous column charge explosives manufactured especially for cushion blasting shall be used for all cushion blasting. The top of the hole, for a minimum distance of 0.5 m or 0.7 times the burden, whichever is greater, shall be unloaded and stemmed. The bottom charge concentration within the bottom 1 to 3 feet of hole shall be no greater than three (3) times the column charge concentration.

7. The maximum diameter of explosives used in cushion blast holes shall be not greater than ½ the diameter of the cushion blast hole. The maximum column charge concentration shall be 0.6 kg/m.

8. The upper portion of all cushion blast holes, from the top most charge to the hole collar, shall be stemmed. Stemming materials shall be dry angular granular material with a maximum particle size of 10 mm.

9. Cushion blast charges shall be fired with detonating cord extending the full depth of each hole.

10. The Contractor shall control drilling operations by the use of proper equipment and

technique to ensure that no hole shall deviate from the plane of the planned slope by more than 225 mm either parallel or normal to the slope. Cushion blast holes exceeding these limits shall not be paid for unless, in the Resident's opinion, satisfactory slopes are being obtained.

11. Cushion blast holes shall be drilled within 75 mm of the staked collar location. If more than 5% of the cushion blast holes are outside of the 75 mm tolerance, they will be filled with crushed stone, stemmed and re-drilled.

C. Presplitting: Presplit blast holes shall be loaded and fired separately before the main round to create a fracture plane along the perimeter of the excavation. Alternatively, they may be fired as the first delay(s) of a round, a minimum of 25 milliseconds prior to detonation of adjacent production holes. With the exception of the above criteria, requirements given in Section 3.04.B for cushion blasting also apply to presplitting.

3.05 BOREHOLE DEVIATION MEASUREMENTS

A. In order to assure adequate rock fragmentation, minimize the damage to remaining rock beyond the excavation limits, and minimize the possibility of excessive throw of rock onto Route 2, the Contractor shall utilize borehole deviation techniques in order to determine the actual burden (distance to free face) for selected production and perimeter holes.

B. Borehole deviation survey shall be completed for every other production hole and every fourth perimeter hole. The borehole deviation survey system shall be capable of measuring deviation along two axes: one parallel to the excavation limits, and one perpendicular to the excavation limits. It should be able to survey a 50 mm to 100 mm diameter hole, up to 30 m deep, to approximately 30 degrees, at an accuracy of 0.10 degrees. One acceptable system would be the "Boretrack" borehole deviation survey system.

3.06 SCALING

A. The primary purpose of the scaling effort is to remove potentially unstable blocks of rock and rock fragments from the top and face of the slope. Scaling shall be accomplished by the manual method using a suitable standard steel mine scaling rod or other hand-held means to detached partially loosened blocks and loose rock fragments. Subject to the Resident's approval, other methods such as machine scaling, hydraulic splitters, or light blasting may be used in lieu of or to supplement hand scaling.

B. The scaling operations must be conducted by personnel experienced in scaling work, so as to minimize damage to the surrounding sound rock. Scaling shall start at the top of the slope and work down. The scaling operations shall be sufficient to only remove the loose surficial rock surface and loose rock blocks.

C. Scaling should be completed to remove loose or hanging rock during or upon completion of excavation in each lift of rock removed to the Resident's satisfaction. Drilling of the next lift will not be allowed until this work has been completed.

D. The Resident or an approved representative must be present on site during all scaling activities. The Resident's representative will a) approve the method of scaling, b) determine

the limits of scaling and c) inspect the new rock face after scaling and determine if additional scaling or other remediation is required.

E. If the exposed rock face is deemed unsuitable by the Resident after scaling, and the Resident and Contractor cannot agree on the cause of instability, a mutually agreed upon independent blasting consultant will be hired with the expense to be split between the Department and the Contractor. The independent blasting consultant shall determine whether the condition resulted from adverse geologic conditions or poor blasting control. If poor blasting control is deemed the cause of the condition, the Blasting Contractor shall remediate the condition by installing rock bolts or other approved techniques at the Contractor's expense to the satisfaction of the Resident, Engineer and/or Geologist. Stabilization necessitated by the rock geology will be paid for at the appropriate unit price

3.07 MEASUREMENT AND PAYMENT

A. Measurement

1. Rock removed in accordance with this Special Provision will be paid using the neat lateral and horizontal limits indicated on the Drawings, and the measured quantity shall be an in place measurement. If the blasting and rock excavation is performed using multiple lifts, any remaining bench shall be less than 0.4 meters wide and any additional excavation required as a result of the benching shall not be measured for payment.

2. There will be no separate measurement for installing, maintaining and monitoring blast instrumentation, borehole deviation surveys, collecting blast debris, disposal of materials, scaling and all other work noted above all cost in connection there with will be considered incidental.

3. Production holes will not be measured for payment.

4. Special perimeter control blasting procedures (3.04) at the perimeter of the rock slopes shall be measured by the linear meter of presplit or cushion blast hole, measured from the collar of the hole to a depth 15 cm below the finished ditch line. Holes which deviate from the correct alignment by more than 225 mm either parallel or normal to the slope shall not be measured for payment. If more than 5 % of the presplit holes are drilled more than 75 mm from the staked collar location, they shall not be measured for payment.

B. Payment

1. Rock removed in accordance with this Special Provision will be paid for at the contract unit price per cubic meter for Pay Item 203.21 – Rock Excavation. Work associated with conducting pre-blast surveys, blast monitoring, borehole deviation surveys, collecting blast debris, scaling, disposal of materials and all other work noted above will not be paid for separately but are considered incidental to the contract unit price for Pay Item 203.21 – Rock Excavation

2. Payment for special perimeter control blasting (3.05) will be paid for at the contract unit price per linear meter for Pay Item 203.212). Rock Excavation, Special Perimeter Control.

END OF SPECIAL PROVISION

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Addendum to
Report on Reconstruction of Route 2
PIN 9184.20
Bethel/Gilead, Maine

Kitty Breskin, P.E.

June 22, 2007 Project Number AC-NH-9184(30)

Addendum to Geotechnical Report: Areas of special concern

Station 10+160 to 10+560, Right

Reconstruction of Route 2 requires excavation into the north face of Peaked Hill in Gilead. The north face of Peaked Hill includes the remaining face of a landslide that took place in 1826, as documented in Incidents in White Mountain History by Benjamin Willey, 1856. The average slope of this hill is 1v:1.5h with steeper sections. The hill is well vegetated now, and appears to be at least minimally stable, but part of the toe berm created by the slide was excavated for construction of the existing highway and railroad. This project requires removal of the remainder of the toe berm created by the slide. Many small scarps on this hillside indicate areas of local instability. Computer modeling based on a combination of photographs, USGS topographic mapping and MeDOT survey used with soils testing data shows this slope to have a Factor of Safety of 1.1 or less in its current configuration.

The precise location of the 1926 slide cannot be determined but the area of concern extends from Station 10+160 to Station 10+560, Right. Our boring at Station 10+260 approximately 1 meter Right encountered dense to very dense, damp sandy SILT or silty SAND extending to bedrock refusal at a depth of 4.79 meters. Direct Shear testing indicated $\phi = 38^{\circ}$ at maximum density for these soils; $\phi = 36^{\circ}$ may be a more realistic value. These could be either the original soils as deposited by the glacier or paleo-landslide debris. They are similar to the soils at the current active slide to the west on Route 113 approximately 1.86 km south of Route 2, and we have assumed that the soils in our samples are representative of conditions further up the hill where drill access was not feasible and no sampling or testing was done.

There are many extremely large boulders in the soil matrix and we anticipate that boulder fields will be encountered during excavation. In wet conditions, water draining from boulder fields may lead to substantially lower strength in the surrounding soils, and local instability is likely when the vegetative cover is removed and during excavation. Between Station 10+320 and Station 10+400 some outcrops extend well above the surrounding soil, but cracking at the base of the exposed portion has partially or completely detached the overlying rock. We anticipate that stones in subsurface boulder fields will be similar to those on the surface. Attached photographs show the magnitude of the surface boulders.

Large rocks and boulders inside the clearing limits must be broken in place and removed. No boulders will be allowed to extend more than 150 mm beyond the finished cut slope, and care must be taken to ensure that any boulders left in place are large enough to be well embedded in the soil. During boulder removal no areas of over-steepened slope may be left longer than the minimum time needed to fill the void.

The proposed Geocell slope treatment will stabilize the surface of the lower slope when it is complete, and allow top-down construction. Computer modeling using reasonable average soil strengths indicates the minimum acceptable Factor of Safety of 1.3 may be achieved for lower slopes in the finished project; but erosion of unprotected surface soils could lead to temporary marginal stability or instability during construction. The upper slope will still have a FS or 1.1 or less, and a construction Factor of Safety of 1.1 for the lower slope is only possible if no erosion is allowed to steepen local areas of slope. The potential instability caused by this work could lead to catastrophic slides starting high up the slope well above the project if adequate care is not taken during construction.

Extreme care must be taken during construction to ensure that no erosion of this slope is allowed to take place overnight or on the weekends during construction of this project. This must be considered in the Erosion Control Plan.

Station 10+550 to 10+760, Right

Rock cuts up to 15 meters tall will be required in this area. Controlled blasting is required to ensure that the final slope is stable, and scaling must be done as the blasting progresses. Blasting should be done in a way to minimize disruption of traffic during blasting and clean-up activities. It is the intent of MaineDOT to minimize the impacts to the traveling public and to the railroad from blasting activity. Our concept is that most presplitting, production blasting and final scaling can take place between the design finished rock slope and the highway, in a blasting corridor built from the eastern end of the blasting zone. The shell of stone between this blasting corridor and the existing highway will protect the traveling public during blasting activities and can be dropped into the corridor near the end of the blasting and rock removal phase of the project.

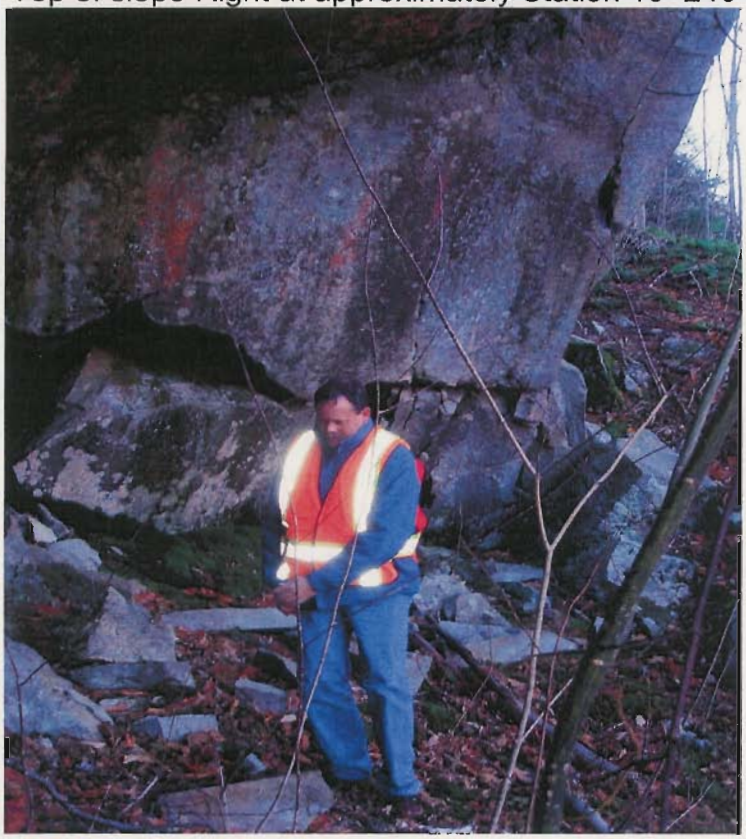
An additional concern is that the blasting must not disturb marginally stable soils on the slope above the rock to be excavated.

A Special Provision for Controlled Blasting is included in the Contract Documents.

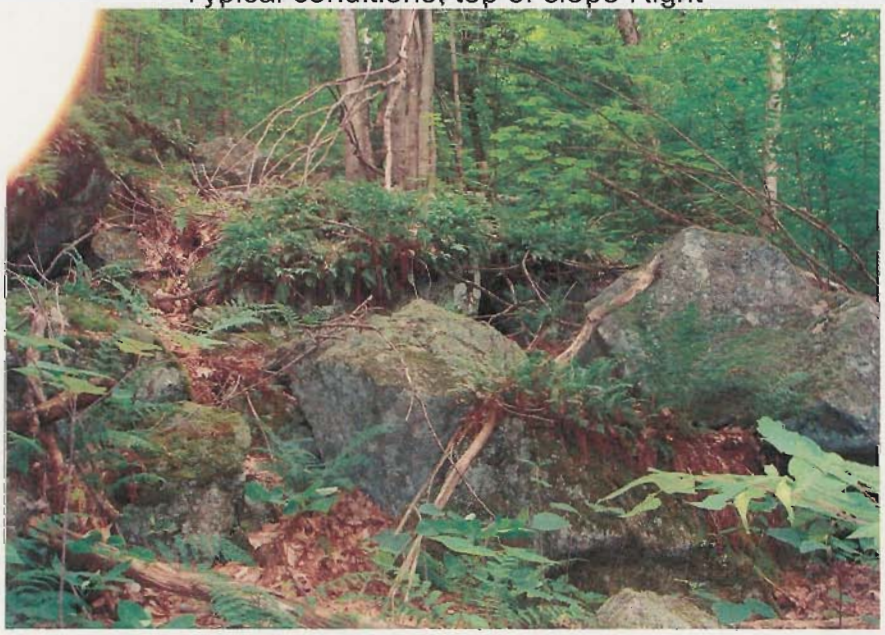
Station 10+320 to 10+560, Left

The existing highway embankment appears to have been built with inadequate compaction, and the side slope on the left is steep. In many areas boulder toe berms or rock rubble retaining walls support these slopes. Some of these rock walls are quite tall, and no information is available on how they were constructed. Excavation of at least the upper portion of these rock walls will be required. Depending on how the walls were built, this excavation may affect Maintenance of Traffic: a temporary signal may be required. The amount to be excavated will be determined during construction; the quantity in the schedule of items is based on full excavation.

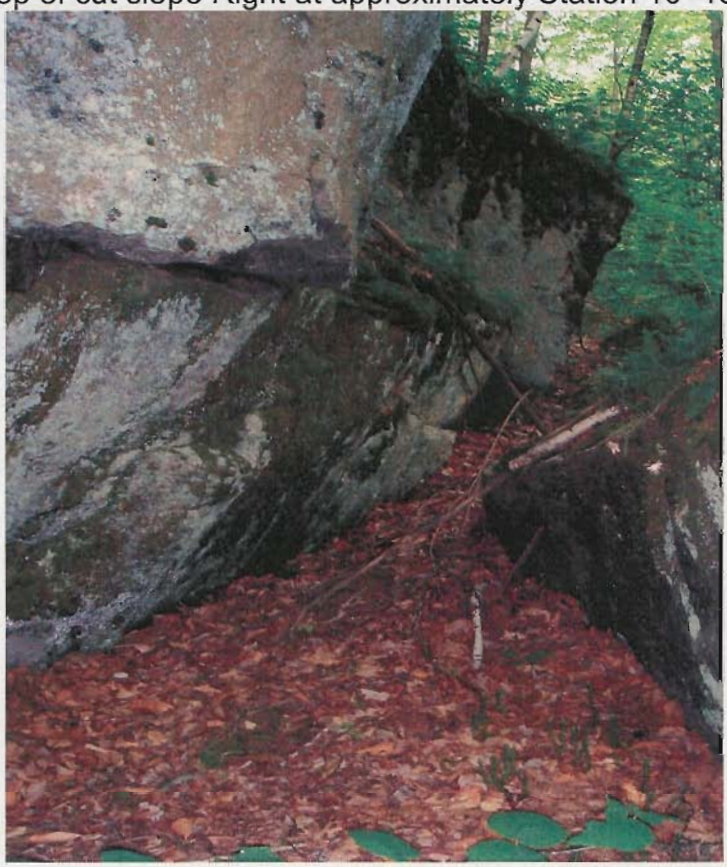
Top of slope Right at approximately Station 10+240



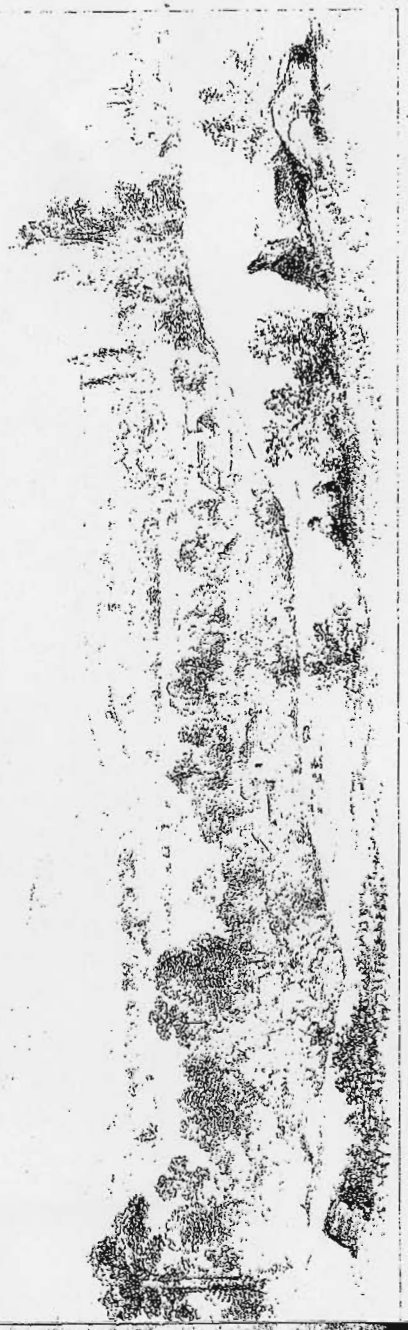
Typical conditions, top of slope Right



Top of cut slope Right at approximately Station 10+180



Attachments:
Excerpt from Incidents in White Mountain History
Boring Logs
Lab Test Results



INCIDENTS

IN

WHITE MOUNTAIN HISTORY:

CONTAINING

FACTS RELATING TO THE DISCOVERY AND SETTLEMENT OF THE MOUNTAINS, INDIAN HISTORY AND TRADITIONS, A MINUTE AND AUTHENTIC ACCOUNT OF THE DESTRUCTION OF THE WILLEY FAMILY, GEOLOGY AND TEMPERATURE OF THE MOUNTAINS;

TOGETHER WITH

Many Interesting Anecdotes

ILLUSTRATING

LIFE IN THE BACK-WOODS.

BY

BENJAMIN G. WILLEY.

BOSTON:
NATHANIEL NOYES,
No. 11 Cornhill.
DOVER, N. H.: EDMUND J. LANE.
1856.

giving a character of energy to the place. They regarded religious institutions, and helped sustain them by their property and example. They were a church-going people, always attending the worship of God on the Sabbath.

From the earliest time of its settlement it has enjoyed more or less steadily the preaching of the gospel. Before any Christian church was planted in it, it had a succession of missionaries, sent from different sources, who were instrumental of great religious benefit to the people. Among these were the Rev. Jotham Sewall, or, as he is often called, "Father Sewall," and the Rev. Samuel Hidden, of Tamworth.

In 1818, a Congregational church was formed, consisting of Melvin Farwell and wife, Abraham Burbank and wife, Widow Susannah Burbank, Betsey Philbrook, John Mason, jr., H. Ingalls, Rhoda Styles, Mary Peabody, and Ephraim and Seth Wight. This church, sometimes through its own efforts, and sometimes in connection with Shelburne, has had preaching most of the time since its formation. Its regularly settled pastors have been Rev. Henry White, and Rev. Henry Richardson. Besides those, Rev. Daniel Goodhue and others have been supplies for different portions of time. There is a Methodist church, also, which has been instrumental of great religious and moral benefit to the place.

During the terrible storm of 1826, when my brother's family was destroyed at the Notch, slides also took place on many of the mountains around this town. From Picked Hill came rushing down thousands of tons of earth, and rocks, and trees, and water, destroying all that lay in their path. No lives were lost, but the consternation of the inhabitants was great. The darkness was so intense as almost to be felt. The vivid lightnings and long streams of

fire, covering the sides of the mountains, caused by the concussion of the rocks, only served to make the darkness more visible. Amid the deluge of rain, the terrific crashings of the thunder, and, over all, the deafening roar of the descending slides, it was impossible to make one's self heard. The valley rocked as though an earthquake was shaking the earth. The frightful scene did not last long; but, during its continuance, more terror was crowded into it than during an ordinary lifetime. The inhabitants under these mountains alone can appreciate the awful scene through which my brother and his family passed on that terrible night.

This region has been very much infested with bears, especially during the summer months. Many live now on the mountains, preventing entirely the raising of sheep. Though much of the land, especially on the mountains, is well adapted to grazing, still it is never safe to trust sheep and young stock far from the settlements. So late as the summer of 1852, a most desperate encounter took place between one of the farmers in this vicinity and a large black bear of the white-face breed — the most savage of that variety.

A Mr. Bean was to work in his field, accompanied by a boy twelve years of age. The bear approached him, and having his gun with him, charged for partridges, he fired, but with little effect. The bear bore down upon him; he walked backwards, loading his gun at the same time, when his foot caught by a twig, which tripped him up, and the bear leaped upon him. He immediately fired again, but with no visible effect. The bear at once went to work,— seizing his left arm, biting through it, and lacerating it severely. While thus amusing himself, he was tearing with his fore paws the clothes, and scratching the flesh on the

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project: Route 2 with Pleasant River Bridge
Location: Bethel-Gilead, Maine

Boring No.: HB-GIL-201
PIN: 9184.00

Driller:	Maine Test Boring, Inc.	**Elevation (m):**		**Auger ID/OD:**	150 mm HSA
Operator:	Tom/Jonathon	**Datum:**	NAVD 88	**Sampler:**	Standard Split Spoon
Logged By:	G. Lidstone	**Rig Type:**	Track Mounted Mobile B-47	**Hammer Wt./Fall:**	63.5 kg/760 mm
Date Start/Finish:	7/25/06; 10:15-12:15	**Drilling Method:**	Hollow Stem Auger	**Core Barrel:**	N/A
Boring Location:	10+440, 4.88 m Lt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
T_v = Pocket Torvane Shear Strength (kPa)
q_p = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOH = weight of 64 kg hammer
WOR = weight of rods

Definitions:
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA		GRAVEL, COBBLES, some brown, damp, fine to coarse sand, tarce silt, (Fill).	
	1D	61.0/12.7	0.61 - 1.22	2/3/10/9	13	HSA		Similar to above, but medium dense.	
1.2	2D	61.0/30.5	1.22 - 1.83	6/7/6/4	13			GRAVEL, medium dense, some brown, damp, fine to coarse sand, trace silt, with brown, moist, silty fine to coarse sand layers.	G#207004 A-1-b, SW-SM WC=7.6%
	3D	61.0/15.2	1.83 - 2.44	4/15/12/5	27				
2.4	4D	61.0/12.7	2.44 - 3.05	3/3/4/7	7			GRAVEL, moist, loose, some brown, fine to medium sand, little silt, (Fill).	G#207005 A-1-b, SM WC=8.1%
	5D	61.0/22.9	3.05 - 3.66	4/6/8/5	14		-3.05	3.05 Brown, moist, medium dense, fine to coarse SAND, some silt, trace gravel.	G#207006 A-1-b, SM WC=11.1%
3.6	6D	61.0/17.8	3.66 - 4.27	3/6/5/5	11			Brown, moist, medium dense, silty fine to medium SAND, little coarse sand, trace gravel (drilling action indicates cobbles).	G#207007 A-1-b, SM WC=13.7%
4.8	7D	61.0/22.9	4.72 - 5.33	2/4/6/3	10			Brown, moist, loose, silty fine to medium SAND, some gravel, trace coarse sand, organic silt layer from 4.72-4.78 m bgs.	G#207008 A-1-b, SM WC=11.9%
6	8D/AB	61.0/17.8	6.10 - 6.71	3/9/9/7	18		-6.19	(8D/A) 6.1-6.19 m bgs. Dark brown, moist, silty fine to medium SAND, trace gravel. 6.19 (8D/B) 6.19-6.7 m bgs. Brown, moist, medium dense, fine SAND, tarce silt.	IL#209633 Loss=5.6% H2O=20.6%
7.2							-7.04	7.04 Bottom of Exploration at 7.04 m below ground surface. REFUSAL	
8.4									

Remarks:

Drop winch, donut hammer.
Offsets are from existing Roadway CL.
Observed by Bob Estes, Haley & Aldrich Consultants.
IL=Ignition Loss

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project:	Route 2 with Pleasant River Bridge	**Boring No.:**	HB-GIL-202
Location:	Bethel-Gilead, Maine	**PIN:**	9184.00

Driller:	Maine Test Boring, Inc.	**Elevation (m):**		**Auger ID/OD:**	150 mm HSA
Operator:	Tom/Jonathon	**Datum:**	NAVD 88	**Sampler:**	Standard Split Spoon
Logged By:	G. Lidstone	**Rig Type:**	Track Mounted Mobile B-47	**Hammer Wt./Fall:**	63.5 kg/760 mm
Date Start/Finish:	7/25/06; 12:45-?	**Drilling Method:**	Hollow Stem Auger	**Core Barrel:**	N/A
Boring Location:	10+260, 5.94 m Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
T_v = Pocket Torvane Shear Strength (kPa)
q_p = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOH = weight of 64 kg hammer
WOR = weight of rods

Definitions:
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA / HSA			
	1D/AB	61.0/35.6	0.30 - 0.91	2/3/3/7	6		-0.24	Brown, moist, loose, fine to medium SAND, little gravel, trace silt, trace organics. 0.24	
							-0.61	Brown, moist, loose, silty fine to medium SAND, little gravel, trace coarse sand. (1D/A) 0.30-0.61 m bgs. 0.61	
1.2								(1D/B) 0.61-0.91 m bgs. Brown, damp, dense, silty fine to medium SAND.	
	2D	61.0/55.9	1.52 - 2.13	12/17/18/18	35				G#207001 A-4, SM WC=1.1%
2.4							-2.44	2.44	
								Brown, damp, very dense, silty fine to medium SAND, trace gravel, (2 Jars).	
	3D	61.0/53.3	3.05 - 3.66	21/32/33/43	65				G,DS#207002 A-4, ML WC=10.1%
3.6									
	4D	21.3/17.8	4.57 - 4.79	23/50(2.4")	---				G#207003 A-4, ML WC=9.1%
4.8							-4.79	4.79	
								Bottom of Exploration at 4.79 m below ground surface. REFUSAL	
6									
7.2									
8.4									

Remarks:

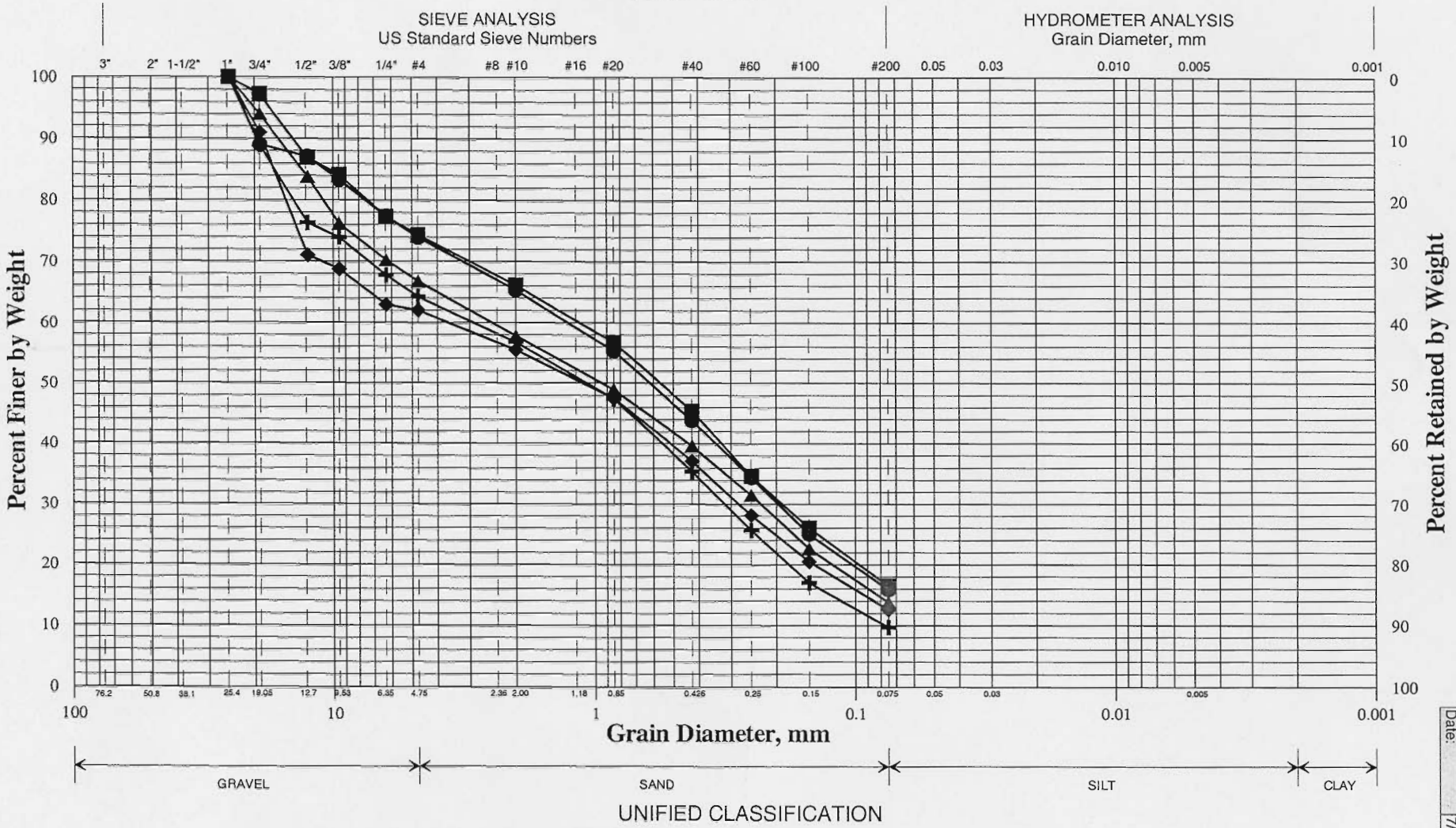
Drop winch, donut hammer.
Offsets are from existing Roadway CL.
Observed by Bob Estes, Haley & Aldrich Consultants.
DS=Direct Shear (T-236)

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

State of Maine Department of Transportation

GRAIN SIZE DISTRIBUTION CURVE



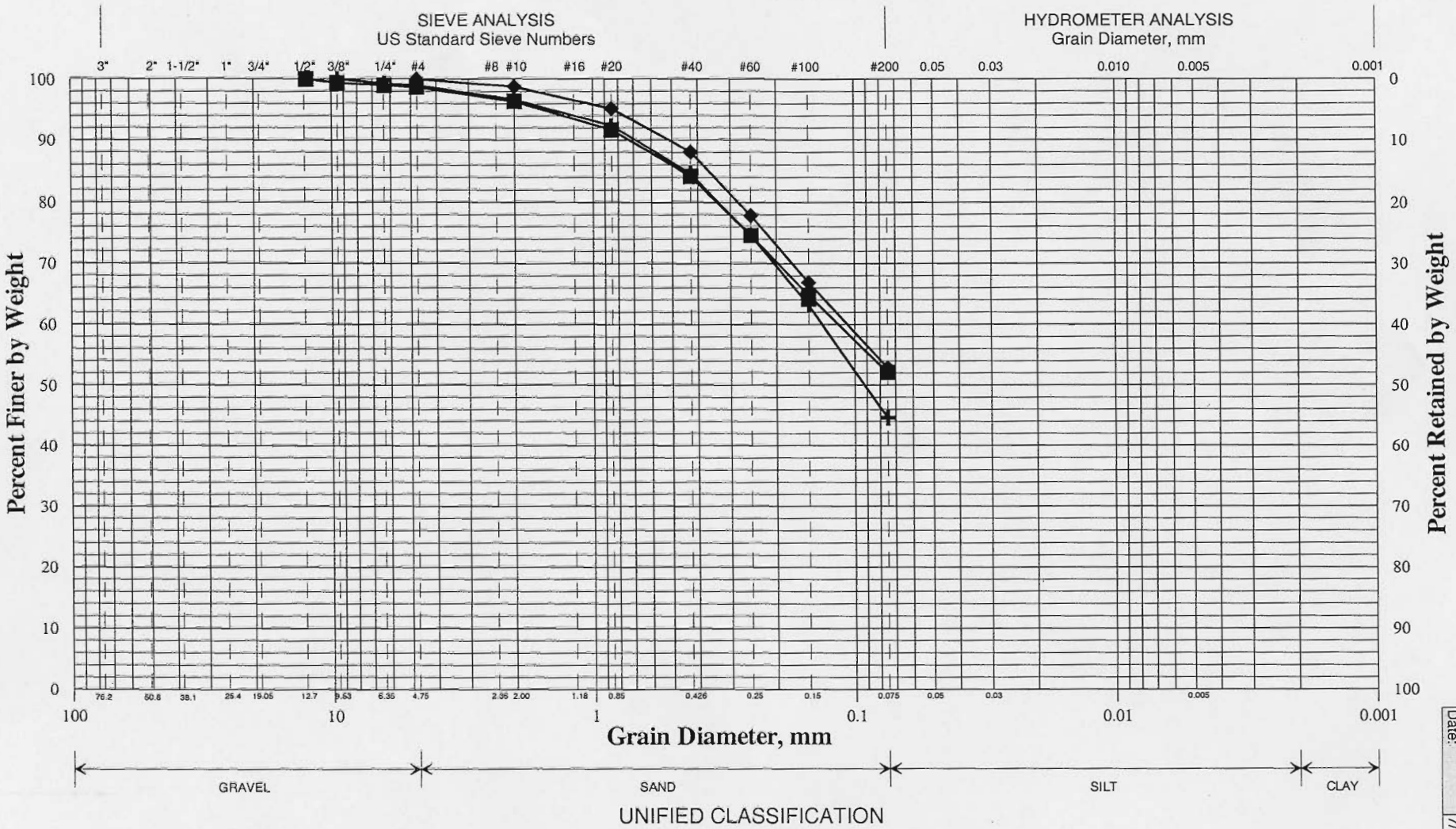
	Boring/Sample No.	Station	Offset, m	Depth, m	Description	W, %	LL	PL	PI
✚	HB-GIL-201/2D	10+440	4.88 LT	1.22-1.83	Gravelly SAND, trace silt.	7.6			
◆	HB-GIL-201/4D	10+440	4.88 LT	2.44-3.05	Gravelly SAND, little silt.	8.1			
■	HB-GIL-201/5D	10+440	4.88 LT	3.05-3.66	SAND, some gravel, little silt.	11.1			
●	HB-GIL-201/6D	10+440	4.88 LT	3.66-4.27	SAND, some gravel, little silt.	13.7			
▲	HB-GIL-201/7D	10+440	4.88 LT	4.72-5.33	SAND, some gravel, little silt.	11.9			
✕									

PIN:	009184.00
Town:	Gilead,Bethel
Reported by:	WHITE, TERRY A
Date:	7/31/2006

SHEET NO. 2

State of Maine Department of Transportation

GRAIN SIZE DISTRIBUTION CURVE



UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, m	Depth, m	Description	W, %	LL	PL	PI
✚	HB-GIL-202/2D	10+260	5.94 RT	1.52-2.13	Silty SAND, trace gravel.	11.1			
◆	HB-GIL-202/3D	10+260	5.94 RT	3.05-3.66	Sandy SILT, trace gravel.	10.1			
■	HB-GIL-202/4D	10+260	5.94 RT	4.57-4.79	Sandy SILT, trace gravel.	9.1			
●									
▲									
✕									

PIN:	009184.00
Town:	Gilead,Bethel
Reported by:	WHITE, TERRY A
Date:	7/31/2006

SHEET NO. 3

State of Maine - Department of Transportation

Laboratory Testing Summary Sheet

Town(s): Gilead Project Number: 9184.00

Boring & Sample Identification Number	Station (Meter)	Offset (Meter)	Depth (Meter)	Reference Number	G.S.D.C. Sheet	W.C.	L.L.	P.I.	Classification		
									Unified	AASHTO	Frost
HB-GIL-201, 2D	10+440	4.88 Lt.	1.22-1.83	207004	2	7.6			SW-SM	A-1-b	0
HB-GIL-201, 4D	10+440	4.88 Lt.	2.44-3.05	207005	2	8.1			SM	A-1-b	II
HB-GIL-201, 5D	10+440	4.88 Lt.	3.05-3.66	207006	2	11.1			SM	A-1-b	II
HB-GIL-201, 6D	10+440	4.88 Lt.	3.66-4.27	207007	2	13.7			SM	A-1-b	II
HB-GIL-201, 7D	10+440	4.88 Lt.	4.72-5.33	207008	2	11.9			SM	A-1-b	II
HB-GIL-201, 8D/A	10+440	4.88 Lt.	6.1-6.19	209633	---	---	Ignition Loss = Loss 5.6%, H2O 20.6%				
HB-GIL-202, 2D	10+260	5.94 Rt.	1.52-2.13	207001	3	11.1			SM	A-4	III
HB-GIL-202,3D	10+260	5.94 Rt.	3.05-3.66	207002	3	10.1			ML	A-4	IV
HB-GIL-202, 4D	10+260	5.94 Rt.	4.57-4.79	207003	3	9.1			ML	A-4	IV

Classification of these soil samples is in accordance with AASHTO Classification System M-145-40. This classification is followed by the "Frost Susceptibility Rating" from zero (non-frost susceptible) to Class IV (highly frost susceptible). The "Frost Susceptibility Rating" is based upon the MDOT and Corps of Engineers Classification Systems.

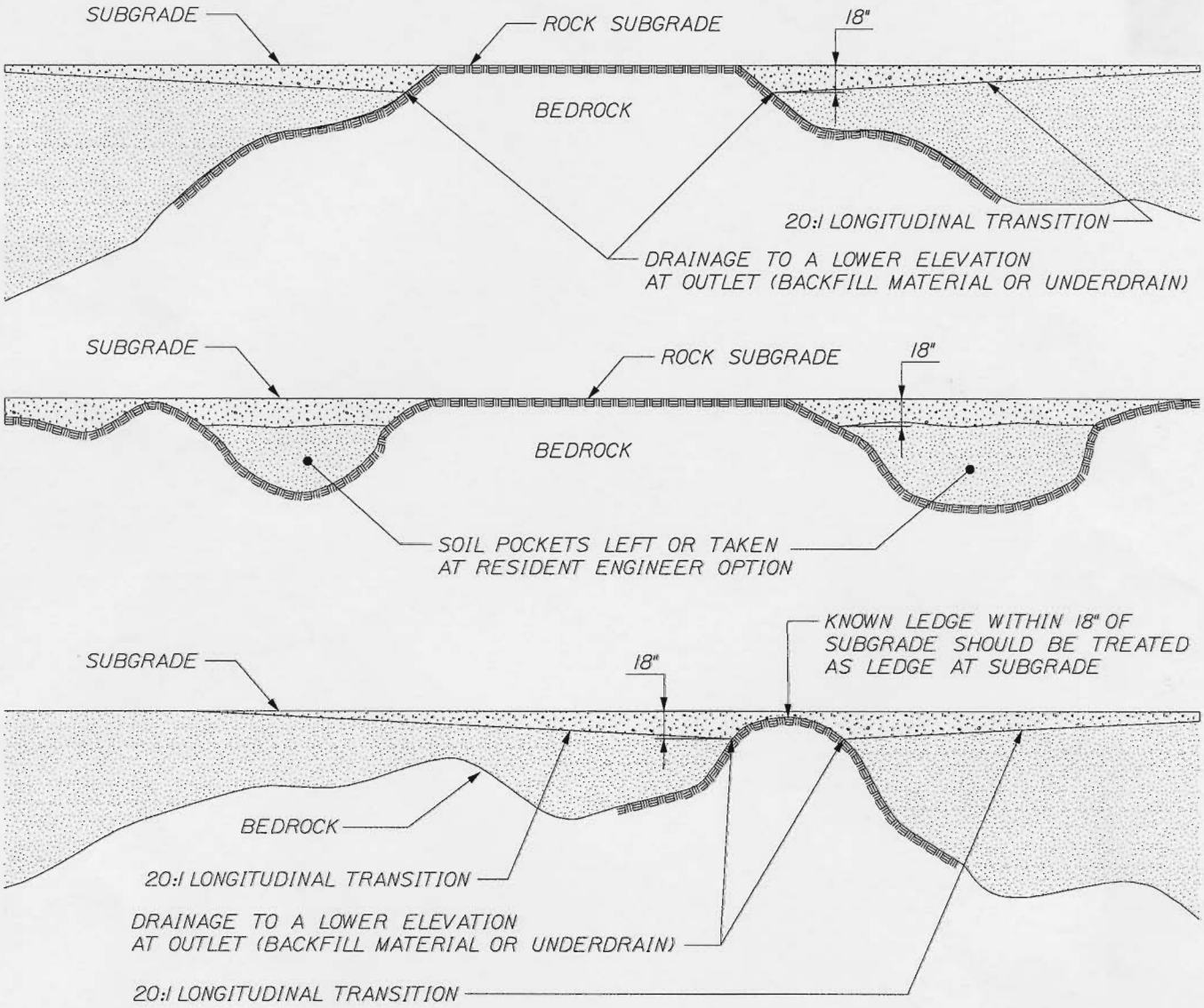
GSDC = Grain Size Distribution Curve as determined by AASHTO T 88-93 (1996) and/or ASTM D 422-63 (Reapproved 1998)

WC = water content as determined by AASHTO T 265-93 and/or ASTM D 2216-98

LL = Liquid limit as determined by AASHTO T 89-96 and/or ASTM D 4318-98

PI = Plasticity Index as determined by AASHTO 90-96 and/or ASTM D4318-98

PROFILE OF UNDERCUT OF FROST SUSCEPTIBLE SOILS OVER LEDGE



FROST SUSCEPTIBLE SOIL TO BE UNDERCUT AND REPLACED WITH NON FROST SUSCEPTIBLE MATERIAL

IF A SOIL SECTION BETWEEN LEDGE SUBGRADE IS OF SUCH LENGTH THAT THE TRANSITION FROM EACH EDGE WOULD MEET, IT SHOULD BE TREATED AS AN EARTH POCKET

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(Dirty Borrow)

Description: This work shall consist of furnishing and placing dirty borrow for seeding, in reasonably close conformity with the thicknesses called for on the plans or as authorized by the Resident.

Materials: Materials shall conform to the requirements specified in the following Sections of Division 700 – Materials:

Common Borrow	703.18
Humus	717.09

Dirty Borrow shall meet the requirements of Section 703.18 Common Borrow with the following addition and deletions: 703.18 Second sentence, delete the word peat.

Dirty Borrow shall contain no particles or fragments with a maximum dimension in excess of the compacted thickness of the layer being placed.

The granular material must have at least 20 percent, but not more than 50 percent, of the minus 25 mm [1 in] material passing the 75 micron [No. 200] mesh sieve.

The Dirty Borrow must have an organic humus content of 3% to 8% as determined by ignition test.

The Contractor may elect to manufacture Dirty Borrow from a combination of project materials that the contractor is entitled to use, combined with other suitable materials furnished by the Contractor.

CONSTRUCTION REQUIREMENTS

Application of Dirty Borrow: Dirty Borrow shall be spread evenly and uniformly on prepared areas in a thickness as shown on the plans.

Method of Measurement: Dirty Borrow will be measured by the cubic meter [cubic yard] complete in place after finishing to the required depth as shown on the plans or directed by the Resident. Lateral measurements will be parallel with the slope of the ground.

Basis of Payment: The accepted quantities of dirty borrow will be paid for at the contract unit price per cubic meter [cubic yard] complete in place.

Payment shall be full compensation for furnishing and placing the Dirty Borrow.

Payment will be made under:

Pay Item	Pay Unit
203.242 Dirty Borrow	Cubic Meter [Cubic Yard]

Bethel – Gilead
9184.30
May 23, 2007

Special Provision
Section 203
(Pavement Removal – HMA Alternate)

Description Removal of the existing bituminous pavement shall be accomplished by the use of a milling machine and the millings shall be hauled and stockpiled to the MaineDOT approved site @ Flat Rd. Gilead Me. The millings shall be processed so that 100% of the material passes 1 1/2" sieve.

All millings hauled to the MaineDOT stockpile site shall remain the property of the Department.

Basis of Payment The accepted quantity of millings will be paid for at the contract unit price per cubic meter of common excavation measured in its original position by cross sectional elevations of the area milled/excavated.
Payment shall be full compensation for milling, loading, hauling and stockpiling @ the above MaineDOT approved site.

Payment will be made under:

Pay Item		Pay Unit
203.20	Common Excavation	cubic meter(Cubic Yard)

SPECIAL PROVISION
SECTION 304
AGGREGATE BASE AND SUBBASE COURSE

The following replaces Section 304.02, Aggregate, in the Standard Specifications.

304.02 Aggregate Aggregates shall conform to the requirements specified in the following Subsection of Division 700 – Materials:

Aggregate Base	703.06a
Aggregate Subbase	703.06b

Aggregate Base Course shall be material meeting the requirements of Type B, Crushed. Type B base aggregate shall be paid for as Pay Item 304.09.

Aggregate Subbase Course Gravel shall be material meeting the requirements of Type D aggregate for the entire subbase layer for Alternate I, Alternate II, and Alternate III in the travel lanes and shoulder areas. For this project, Type E aggregate is not a Contractor option for subbase aggregate for any of the Alternates described above.

The portion of material passing the 75 mm (3 in) sieve at the time it is deposited on the roadway shall conform to the gradation requirements of the contract. Oversized stones shall be removed before depositing on the roadway. Oversized stones are stones that will not pass a 150 mm [6 in] square mesh sieve. Type D aggregate shall be paid for as Pay Item 304.10.

Dense Graded Aggregate Base for Alternate III may be manufactured from ledge, boulders, or natural aggregates from the project site. When tested by the Los Angeles wear test, the percent loss shall not exceed 25. The material will be tested before being used and retested at intervals of approximately 25%, 50%, and 75% completion of the course. At least 50 percent by weight of the material coarser than the No. 4 sieve shall have at least one fractured face.

The material shall meet the grading requirements of the following table:

Sieve Designation	**Percentage by Weight Passing Square Mesh Sieves**
90 mm (3 ½ inches)	100
75 mm (3 inches)	90-100
50 mm (2 inches)	75-100
25 mm (1 inch)	50-80
13 mm (½ inch)	30-60
No. 4	15-40
No. 200	0-6

Dense Graded Aggregate Base shall be paid for under Pay Item 304.1311. When using Dense Graded Aggregate Base, the top two inches in the base course shall meet the requirements of 411.10 Untreated Aggregate Surface Course unless otherwise authorized by the Resident. Untreated Aggregate Surface Course will be paid for under Pay Item 304.1311.

The following is made part of Section 304:

If the Contractor wishes to route public traffic over the completed aggregate base course, the course shall be constructed with a minimum 50 mm [2 in] surcharge above the design grade. Also, whenever the surcharge is used, it shall be placed on all aggregate base course subjected to public traffic including driveways, sidewalks, approach roads, or the outer portions of the shoulders. Removal of the surcharge shall be followed immediately in succession by the fine grading of the aggregate base and the construction of the next course.

The furnishing, placing, maintaining, and removal of the surcharge will not be paid for directly, but will be considered incidental to the Aggregate Base Course pay item.

SPECIAL PROVISION
SECTION 310
PLANT MIXED RECYCLED ASPHALT PAVEMENT

310.01 Description This work shall consist of the removal of all bituminous pavement from the existing roadway, hauling the bituminous pavement to an approved location, and processing as per Section 310.020. The gravel base of the existing roadway shall be regraded and compacted to the tolerances shown on the typicals, or as directed by the Resident.

All plant mixed recycled asphalt pavement shall be placed in one or more courses on an approved base and in accordance with these specifications, and in reasonably close conformity with the lines, grades and thicknesses indicated on the plans, or as established by the Resident. Excess recycled material not used in the PMRAP process will become the property and responsibility of the contractor.

MATERIALS

310.020 Composition of Mixture The mixture shall be composed as directed in the job mix formula. The recycled asphalt pavement shall be processed by the Contractor so all material will be no larger than 37.5 mm [1.5 in] and stockpiled so as to minimize segregation. The stockpile shall be free of any materials not generally considered to be asphalt pavement. If additional material is required, the material will be supplied by the State or acquired from the Contractor through the Contract Modification process.

A job mix formula shall be furnished by the Department establishing the percentage of emulsified asphalt cement, Portland Cement, aggregate, and water to be used in the mixture. The JMF additive proportions will be verified by taking a second recycled material sample once the stockpiles have been constructed.

Emulsion, water, aggregate and Portland Cement shall be added in percentage by weight and verified by tank checks done in accordance with the minimum quality control frequencies. Cement additive may be done in dry form or introduced as a cement slurry.

310.021 Emulsified Asphalt The emulsified asphalt shall be grade MS-2, MS-4, CSS-1, or HFMS-2 meeting the requirements of Section 702.04 - Emulsified Asphalt.

310.022 Portland Cement Portland Cement shall be Type I or II meeting the requirements of AASHTO M85.

310.023 Water Water shall be clean and free from deleterious concentrations of acids, alkalis, salts or other organic or chemical substances.

310.024 New Aggregate New aggregate, if required by the contract or job mix, shall meet the requirements of Section 411.02 - Untreated Aggregate Surface Course.

EQUIPMENT

310.030 Mixing Plant The mixing plant shall be of sufficient capacity and coordinated to adequately handle the proposed construction. Either a continuous pugmill mixer or a continuous drum type mixing plant shall be used. If a drum mixing plant is used it shall meet the requirements of Section 401.07. The mixing plant shall be capable of producing a uniform mixture meeting the requirements of the job mix formula.

310.031 Hauling Equipment Trucks used for hauling the mixture shall meet the requirements of Section 401.08.

310.032 Bituminous Pavers Pavers shall meet the requirements of Section 401.09.

310.033 Rollers Rollers shall meet the requirements of Section 401.10.

CONSTRUCTION REQUIREMENTS

310.040 Mixing The recycled asphalt pavement shall be delivered to the mixer at a temperature of not less than 10°C [50°F]. The emulsified asphalt shall meet the mixing temperature requirements listed in Section 702.05 - Application Temperatures. Recycled pavement and emulsified asphalt, and cement shall be proportioned and the mixing time set to produce a mixture in which uniform distribution of the emulsified asphalt and coating of the recycled pavement is obtained.

If a drum type mixing plant is used, the recycled asphalt pavement may be heated prior to being mixed with the emulsified asphalt to a temperature not to exceed 90°C [195°F].

Following mixing, the recycled asphalt pavement material shall be stockpiled and incorporated into the work. The material must be stockpiled, but not for longer than 48 hours.

310.041 Weather Limitations The plant mixed recycled asphalt pavement shall be performed when:

a. PM-RAP operations will be allowed between May 15th and September 15th inclusive in Zone 1 - Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais. PM-RAP will be allowed between May 1st and September 30th inclusive in Zone 2 - Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.
b. The atmospheric temperature, as determined by an approved thermometer placed in the shade at the recycling location, is 10°C [50^{0}F] and rising.
c. When there is no standing water on the surface.
d. During generally dry conditions, or when weather conditions are such that proper pulverizing, adding, mixing, and curing can be obtained using proper procedures, and when compaction can be accomplished as determined by the Resident.
e. When the surface is not frozen and when overnight temperatures are expected to be above 0°C [32^{0}F].

310.042 Spreading and Finishing The mixture shall be spread and finished in accordance with Section 401.15. Total layer thickness greater than 100 mm [4 in] will be placed in 2 lifts.

310.043 Compaction Compaction of the mixture shall be in accordance with Section 401.16. Rolling may be delayed to avoid lateral displacement as directed by the Resident. See also Section 310.051.

310.044 Joints Joints shall be constructed in accordance with Section 401.17.

310.045 Surface Tolerances The surface tolerances shall be as specified in Section 401.101, except that the maximum allowable variation shall be 10 mm [⅜ in]. The surface tolerance in existing gravel areas covered by PMRAP, with no additional gravel, shall be ± 10 mm [⅜ in].

TESTING REQUIREMENTS

310.050 Quality Control The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.6 - Acceptance and this Section. The Contractor shall not begin recycling operations until the Department approves the QCP in writing.

Prior to performing any recycling process, the Department and the Contractor shall hold a Pre-recycle conference to discuss the recycling schedule, type and amount of equipment to be used, sequence of operations, and traffic control. A copy of the QC random numbers to be used on the project shall be provided to the Resident. All field and plant supervisors including the responsible onsite recycling process supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Recycling Process including, but not limited to, the following:

a. JMF(s).
b. Mixing details, pugmill type, production rates, material processing.
c. Make and type of paver(s).
d. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers.
e. Testing Plan.
f. Transportation including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished product, type of release agent used (if required)
g. Laydown operations including procedures for mix design modification, avoiding recycling and curing in inclement weather, material yield monitoring, methods to ensure that segregation is minimized, longitudinal joint construction, procedures to determine the maximum rolling and placing speeds based on field quality control, and achieving the best possible smoothness.
h. Methods for protecting the finished product from damage and procedures for any necessary corrective action.
i. Method of grade checks.
j. Examples of Quality Control forms.
k. Name, responsibilities, and qualifications of the Responsible onsite Recycling Supervisor experienced and knowledgeable with the process.
l. Method for calibration/verification of density gauge.
m. A note that all testing will be done in accordance with AASHTO and MDOT/ACM procedures.
n. Stockpile procedures including method of moisture control.

The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate the PMRAP process in accordance with the following procedures and minimum frequencies:

MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Density	1 per 300 m [1000 ft] / lane	ASTM D 2950
Air Temperature	4 per day at even intervals	
Surface Temperature	At the beginning and end of each days operation	
Yield of all materials (Both the daily yield and yield since last test)	4 per day at even intervals	

The Contractor shall submit all QC test reports and summaries in writing, signed by the appropriate technician, and present them to the Department's onsite representative by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall make all test results, including randomly sampled densities, available to the Department onsite.

Penalties for QCP non-compliance will be in accordance with Standard Specification 106.4.6

The Contractor shall cease recycling operations whenever one of the following occurs:

a. The computed yield differs from the approved Job Mix Formula by 10% or more.
b. The Contractor fails to follow the approved QCP.
c. The Contractor fails to achieve 98% density after corrective action has been taken.
d. The finished product is visually defective, as determined by the Resident.

Recycling operations shall not resume until the Contactor and the Department agree on the corrective action to be taken.

310.051 Test strip The contractor shall assemble all items of equipment for the recycling operation on the first day of the recycling work. The Contractor shall construct a test strip for the project at a location approved by the Resident. The test strip section is required to:

a. Demonstrate that the equipment and processes can produce recycled layers to meet the requirements specified in these special provisions;
b. Determine the effect on the grading of the recycled material by varying the forward speed of the paving machine; and;
c. Determine the sequence and manner of rolling necessary to obtain the compaction requirements and establish a target TMD. The Contractor and the Department will calibrate their respective gauges at this time.

The test strip shall be at least 100 m [300 ft] in length of a full lane-width (or a half-road width).

Full PMRAP production will not begin until an acceptable test strip has been constructed. If a test strip fails to meet the requirements of this specification, the Contractor will be required to repair or replace the test strip to the satisfaction of the Resident. Any repairs, replacement, or duplication of the test strip will be at the Contractor's expense.

Quality Assurance density testing of the recycled material will be performed by the Department using the nuclear method. After the test strip has been placed, it will be rolled as directed until the nuclear density readings show an increase in density of less than 16 kg/m³ [1 pcf] for the final four roller passes. The test strip density will be used as the target density for the recycled material. The remaining PMRAP material shall be compacted to a minimum density of 98% of the target density as determined in the control section.

ACCEPTANCE TEST FREQUENCY

Property	Frequency	Test Method
In-place Density	1 per 600 m [2000 ft] / lane	ASTM D 2950

310.052 Repairs Repairs and maintenance for the PMRAP layers, during and after the curing period, resulting from damage caused by traffic, weather or environmental conditions, or caused by the Contractor's operations or equipment, shall be completed at no additional cost to the Department.

Low areas will be repaired using a hot mix asphalt shim course. Areas up to 25mm [1 in] high can be repaired by milling or shimming with hot mix asphalt. Areas higher than 25mm [1 in] will be repaired using a hot mix asphalt shim. All repair work will be done with the Resident's approval at the Contractor's expense.

310.06 Curing No new hot mix asphalt pavement or additional layers of PM-RAP shall be placed on the recycled asphalt pavement until a curing period of (4) four days has elapsed. The curing period starts once the PM-RAP has been placed in the roadway. When weather conditions are unfavorable, the curing period may be extended by the Resident.

310.07 Method of Measurement Plant Mixed Recycled Asphalt Pavement shall be measured by the square meter [square yard].

310.08 Basis of Payment The accepted quantity of Plant Mixed Recycled Asphalt Pavement will be paid for at the contract unit price per square meter [square yard], complete in-place which price will be full compensation for furnishing all equipment and labor for removing existing pavement, regrading and compacting existing gravel base, processing, mixing, testing, placing, and compacting, excess material relocation, and for all incidentals necessary to complete the work.

Payments will be made under:

Pay Item	Pay Unit
310.23 - 75mm [3 in] Plant Mixed Recycled Asphalt Pavement	Square Meter [yd^2]
310.24 - 100mm [4 in] Plant Mixed Recycled Asphalt Pavement	Square Meter [yd^2]
310.25 - 125mm [5 in] Plant Mixed Recycled Asphalt Pavement	Square Meter [yd^2]
310.26 - 150mm [6 in] Plant Mixed Recycled Asphalt Pavement	Square Meter [yd^2]

SPECIAL PROVISION
SECTION 310
Plant Mix Recycled Asphalt Pavement

Mix Design

The Plant Mix Recycled Asphalt Pavement on this project will be treated with the following material proportions:

Emulsion	3.25%
Water	4.0% – 8.0%
Portland cement (Type I or II)	1.00 %

The optimum moisture content for compaction shall be determined by the Department using samples obtained from the pulverized material prior to addition of the foamed asphalt, by means of AASHTO T 180, Method D.

A contract modification will be executed if percentages change from the requirements above for added emulsion or Portland cement by more than 0.10%. Positive and negative price adjustments will be made. The price adjustment will be based upon receipted bills for materials delivered the project site. If a price adjustment is warranted, the contractor will supply the Department with all receipted bills for emulsion and Portland cement for the entire project. Adjustments in water content exceeding the initial targets shall not be paid for directly, but shall be incidental.

The existing HMA layer thicknesses as determined from pavement cores are as follows:

Core #	Station	offset (ft)	Direction from existing CL	Core Thickness (in)
PC-1	9+920	6.5	RT	4
PC-2	9+920	0	CL	5
PC-3	9+920	7.5	LT	4.5
PC-4	10+320	7	RT	5.5
PC-5	10+320	0	CL	5
PC-6	10+320	7	LT	4.75
PC-7	10+950	9	RT	6.5
PC-8	10+950	0	CL	5.75
PC-9	10+950	9	LT	6
PC-10	11+420	8.5	RT	5
PC-11	11+420	0	CL	4.5
PC-12	11+420	9	LT	5
PC-13	11+920	8.5	RT	4.75
PC-14	11+920	0	CL	4.5

PC-15	11+920	9	LT	4
PC-16	12+580	8	RT	5.75
PC-17	12+580	0	CL	7
PC-18	12+580	9	LT	5.5

SPECIAL PROVISION
DIVISION 400
PAVEMENTS

SECTION 401 - HOT MIX ASPHALT PAVEMENT

401.01 Description The Contractor shall furnish and place one or more courses of Hot Mix Asphalt Pavement (HMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

401.02 Materials Materials shall meet the requirements specified in Section 700 - Materials:

Asphalt Cement	702.01
Aggregates for HMA Pavement	703.07
HMA Mixture Composition	703.09

401.021 Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) may be introduced into the mixture at percentages approved by the Department. If approved by the Department, the Contractor shall provide documentation stating the source, average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to it's use.

In the event that RAP source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO T312 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). The Contractor may use a maximum of 15% reclaimed asphalt pavement (RAP) in any base, binder, surface, or shim course. The Contractor may be allowed to use more than 15% RAP, up to a maximum of 25% RAP, in a base, binder, or shim course provided that PG 58-34 asphalt binder is used in the mixture.

The Contractor shall submit for Department approval a JMF to the Central Laboratory in Bangor for each mixture to be supplied. The Department may approve 1 active design per nominal maximum size, per traffic level, per plant, plus a 9.5mm “fine” mix @ 50 gyrations for shimming and where required, a non-RAP design for bridge decks. The Department shall then have 15 calendar days in which to process a new design before approval. The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in Table 1 of section 703.09. The general composition limits given in Table 1 of section 703.09 indicate the control points of mixtures permissible under this specification. The mixture shall be designed and produced, including all production tolerances, within the allowable control points for the particular type of mixture as outlined in Table 1 of section 703.09 The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate and mineral filler if required. It shall also state the proposed PGAB content, the name and location

of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

- Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.)
- Stockpile Gradation Summary
- Design Aggregate Structure Consensus Property Summary
- Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart)
- Trial Blend Test Results for at least three different asphalt contents
- Specific Gravity and temperature/viscosity charts for the PGAB to be used
- Recommended mixing and compaction temperatures from the PGAB supplier
- Material Safety Data Sheets (MSDS) For PGAB
- Asphalt Content vs. Air Voids trial blend curve
- Test report for Contractor's Verification sample

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 135 Mg [150 ton] for stone stockpiles, 70 Mg [75 ton] for sand stockpiles, and 45 Mg [50 ton] of blend sand before the Department will sample. The Department shall obtain samples for laboratory testing. The Contractor shall also make available to the Department the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Department shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements of the Department's written policy for mix design verification (See Maine DOT Policies and Procedures for HMA Sampling and Testing available at the Central Laboratory in Bangor). If the results are found to be acceptable, the Contractor will forward their results to the Department's Lab, which will test the Department's split of the sample. The results of the two split samples will be compared and shared between the Department and the Contractor. If the Department finds the mixture acceptable, an approved JMF will be forwarded to the Contractor and paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2%. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. The cold feed percentage for RAP may be adjusted up to 5 percentage points from the amount listed on the JMF but shall not exceed the maximum allowable percentage for RAP for the specific application.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G_{mm})			Voids in the Mineral Aggregate (VMA)(Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	$N_{initial}$	N_{design}	N_{max}	25	19	12.5	9.5	4.75		
<0.3	≤91.5	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	70-80	0.6-1.2
0.3 to <3	≤90.5								65-80	
3 to <10	≤89.0								65-80*	
10 to <30										
≥ 30										

*For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.
*For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

401.04 Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

In the truck at the mixing plant – allowable range 135° to 163°C [275 to 325°F]
At the Paver – allowable range 135° to 163°C [275 to 325°F]

The JMF and the mix subsequently produced shall meet the requirements of Tables 1 and Section 703.07.

401.05 Performance Graded Asphalt Binder Unless otherwise noted in Special Provision 403 - Hot Bituminous Pavement, PGAB shall be 64-28, except that for mixtures containing greater than 15% but no more than 25% RAP the PGAB shall be PG 58-34. The PGAB shall meet the applicable requirements of AASHTO M320 - Standard Specification for PGAB. The Contractor shall provide the Department with an approved copy of the Quality Control Plan for PGAB in accordance with AASHTO R 26 Certifying Suppliers of PGAB.

401.06 Weather and Seasonal Limitations The State is divided into two paving zones as follows:

a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.

b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

The Contractor may place Hot Mix Asphalt Pavement for use other than a traveled way wearing course in either Zone between the dates of April 15th and November 15th, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 4°C [40°F] or higher and the area to be paved is not frozen. The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course in Zone 1 between the dates of May 1st and the Saturday following October 1st and in Zone 2 between the dates of April 15th and the Saturday following October 15th, provided the air temperature determined as above is 10°C [50°F] or higher. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

Hot Mix Asphalt Pavement used for curb, driveways, sidewalks, islands, or other incidentals is not subject to seasonal limitations, except that conditions shall be satisfactory for proper handling and finishing of the mixture. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface and the air temperature shall be 4°C [40°F] or higher.

On all sections of overlay with wearing courses less than 25 mm [1 in] thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of May 15th and the Saturday following September 15th.

On all sections of overlay with wearing courses less than 1 inch thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of June 1st and the Saturday following September 1st if the work is to be performed, either by contract requirement, or Contractor option, during conditions defined as "night work".

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M156.

a. Truck Scales When the hot mix asphalt is to be weighed on scales meeting the requirements of Section 108 - Payment, the scales shall be inspected and sealed by the State Sealer as often as the Department deems necessary to verify their accuracy.

Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 20 Kg [50 pound] masses for scale testing.

401.072 Automation of Batching Batch plants shall be automated for weighing, recycling, and monitoring the system. In the case of a malfunction of the printing system, the requirements of Section 401.074 c. of this specification will apply.

The batch plant shall accurately proportion the various materials in the proper order by weight. The entire batching and mixing cycle shall be continuous and shall not require any manual operations. The batch plant shall use auxiliary interlock circuits to trigger an audible alarm whenever an error exceeding the acceptable tolerance occurs. Along with the alarm, the printer shall print an asterisk on the delivery slip in the same row containing the out-of-tolerance weight. The automatic proportioning system shall be capable of consistently delivering material within the full range of batch sizes. When RAP is being used, the plant must be capable of automatically compensating for the moisture content of the RAP.

All plants shall be equipped with an approved digital recording device. The delivery slip load ticket shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.073

401.073 Automatic Ticket Printer System on Automatic HMA Plant An approved automatic ticket printer system shall be used with all approved automatic HMA plants. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate.

The requirements of Section 108.1.3 f. - Delivery Slips, shall be met by the weigh slip or ticket, printed by the automatic system, which accompanies each truckload, except for the following changes:

a. The quantity information required shall be individual weights of each batch or total net weight of each truckload.

b. Signatures (legible initials acceptable) of Weighmaster (required only in the event of a malfunction as described in 401.074 c.).

c. The MDOT designation for the JMF.

401.074 Weight Checks on Automatic HMA Plant At least twice during each 5 days of production either of the following checks will be performed:

a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. Whenever the discrepancy in net weights is greater than 1.0%, but does not exceed 1.5%, the plant inspector will notify the producer to take corrective action; payment will still be governed by the printed ticket. The producer will be allowed a period of two days to make any needed repairs to the plant and/or platform scales so that the discrepancy in net weights between the two is less than 1.0%. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as

long as payment is determined by truck platform scale net weight. Effective corrective action shall be taken within two working days.

b. Where platform scales are not readily available, a check will be made to verify the accuracy and sensitivity of each scale within the normal weighing range and to assure that the interlocking devices and automatic printer system are functioning properly.

c. In the event of a malfunction of the automatic printer system, production may be continued without the use of platform truck scales for a period not to exceed the next two working days, providing total weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

401.08 Hauling Equipment Trucks for hauling Hot Mix Asphalt Pavement shall have tight, clean, and smooth metal dump bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies.

All truck dump bodies shall have a cover of canvas or other water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the loaded truck except when unloading.

All truck bodies shall have an opening on both sides, which will accommodate a thermometer stem. The opening shall be located near the midpoint of the body, at least 300 mm [12 in] above the bed.

401.09 Pavers Pavers shall be self-contained, self-propelled units with an activated screed (heated if necessary) capable of placing courses of Hot Mix Asphalt Pavement in full lane widths on the main line, shoulder or similar construction.

On projects with no price adjustment for smoothness, pavers shall be of sufficient class and size to place Hot Mix Asphalt Pavement over the full width of the mainline travel way with a 3 m [10 ft] minimum main screed with activated extensions.

The Contractor shall place Hot Mix Asphalt Pavement on the main line with a paver using an automatic grade and slope controlled screed, unless otherwise authorized by the Department. The controls shall automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 10 m [30 ft], a non-contact grade control with a minimum span of 7.3 m [24 ft], except that a 12 m [40 ft] reference shall be used on Expressway projects.

The Contractor shall operate the paver in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.101 - Surface Tolerances. The paver shall have a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. Pavers with extendible screeds shall have auger extensions and tunnel extenders as necessary.

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MDOT

projects. On a daily basis, the Contractor shall perform nuclear density testing across the mat being placed, at 300 mm [12 in] intervals. If the values vary by more than 2.0% from the mean, the Contractor shall make adjustments until the inconsistencies are remedied.

Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by section 106 - Quality

401.10 Rollers Rollers shall be static steel, pneumatic tire, or approved vibrator type. Rollers shall be in good mechanical condition, capable of starting and stopping smoothly, and be free from backlash when reversing direction. Rollers shall be equipped and operated in such a way as to prevent the picking up of hot mixed material by the roller surface. The use of rollers, which result in crushing of the aggregate or in displacement of the HMA will not be permitted. Any Hot Mix Asphalt Pavement that becomes loose, broken, contaminated, shows an excess or deficiency of Performance Graded Asphalt Binder, or is in any other way defective shall be removed and replaced at no additional cost with fresh Hot Mix Asphalt Pavement, which shall be immediately compacted to conform to the adjacent area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided specification densities are attained and with the following requirements:

a. At least one roller shall be a 14.5 Mg [16 ton] pneumatic-tired on bridges and variable depth courses as well as the first lift of pavement over gravel, a reclaimed pavement, or other irregular surface. When required by the Resident, the roller shall be ballasted to 18.1 Mg [20 ton].

b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.

c. Vibratory rollers shall not be operated in the vibratory mode when checking or cracking of the mat occurs, or on bridge decks.

d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.

The maximum operating speed for a steel wheel or pneumatic roller shall not exceed the manufacturer's recommendations, a copy of which shall be available if requested.

401.101 Surface Tolerances The Department will check surface tolerance utilizing the following methods :

a.) A 5 m [16 ft] straightedge or string line placed parallel to the centerline of pavement.

b.) A 3 m [10 ft] straightedge or string line placed transverse to the centerline of pavement.

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The Contractor shall correct variations exceeding 6 mm [¼ in] by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Departments use.

401.11 Preparation of Existing Surface The Contractor shall thoroughly clean the surface upon which Hot Mix Asphalt Pavement is to be placed of all objectionable material. When the surface of the existing base or pavement is irregular, the Contractor shall bring it to uniform grade and cross section. All surfaces shall have a tack coat applied prior to placing any new HMA course. Tack coat shall conform to the requirements of

Section 409 – Bituminous Tack Coat, section 702 – Bituminous Material, and all applicable sections of the contract. .

401.12 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day.

401.13 Preparation of Aggregates The Contractor shall dry and heat the aggregates for the HMA to the required temperature. The Contractor shall properly adjust flames to avoid physical damage to the aggregate and to avoid depositing soot on the aggregate.

401.14 Mixing The Contractor shall combine the dried aggregate in the mixer in the amount of each fraction of aggregate required to meet the JMF. The Contractor shall measure the amount of PGAB and introduce it into the mixer in the amount specified by the JMF.

The Contractor shall produce the HMA at the temperature established by the JMF.

The Contractor shall dry the aggregate sufficiently so that the HMA will not flush, foam excessively, or displace excessively under the action of the rollers. The Contractor shall introduce the aggregate into the mixer at a temperature of not more than 14°C [25°F] above the temperature at which the viscosity of the PGAB being used is 0.150 Pa•s.

The Contractor shall store and introduce into the mixer the Performance Graded Asphalt Binder at a uniformly maintained temperature at which the viscosity of the PGAB is between 0.150 Pa•s and 0.300 Pa•s. The aggregate shall be coated completely and uniformly with a thorough distribution of the PGAB. The Contractor shall determine the wet mixing time for each plant and for each type of aggregate used.

401.15 Spreading and Finishing On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness.

On roads opened to two-way traffic, the Contractor shall place each course over the full width of the traveled way section being paved that day, unless otherwise noted by the Department in Section 403 - Hot Bituminous Pavement.

401.16 Compaction Immediately after the Hot Mix Asphalt Pavement has been spread, struck off, and any surface irregularities adjusted, the Contractor shall thoroughly and uniformly compact the HMA by rolling.

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum based release agents.

The Contractor shall immediately correct any displacement occurring as a result of the reversing of the direction of a roller or from other causes to the satisfaction of the Department. Any operation other than placement of variable depth shim course that results in breakdown of the aggregate shall be discontinued. Any new pavement that shows obvious cracking, checking, or displacement shall be removed and replaced for the full lane width as directed by the Resident at no cost to the Department.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the Contractor shall thoroughly compact the HMA with mechanical vibrating compactors. The Contractor shall only use hand

tamping in areas inaccessible to all other compaction equipment. On depressed areas, the Contractor may use a trench roller or cleated compression strips under a roller to transmit compression to the depressed area.

Any HMA that becomes unacceptable due to cooling, cracking, checking, segregation or deformation as a result of an interruption in mix delivery shall be removed and replaced, with material that meets contract specifications at no cost to the Department.

401.17 Joints The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall always maintain a uniform head of HMA during the joint construction. The HMA shall be free of segregation and meet temperature requirements outlined in section 401.04. Transverse joints of the wearing course shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Department may allow feathered or "lap" joints on lower courses or when matching existing low type pavements.

Longitudinal joints shall be constructed in a manner that will best ensure joint integrity. Methods or activities that prove detrimental to the construction of sound longitudinal joints will be discontinued.

The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 75 mm [3 in] of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items.

401.18 Quality Control Method A, B & C The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.6 - Acceptance and this Section. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the QC random numbers to be used on the project shall be provided to The Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All field and plant supervisors including the responsible onsite paving supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement including, but not limited to, the following:

a. JMF(s)
b. Hot mix asphalt plant details
c. Stockpile Management (to include provisions for a minimum 2 day stockpile)
d. Make and type of paver(s)

e. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers
f. Name of QCP Administrator, and certification number
g. Name of Process Control Technician(s) and certification number(s)
h. Name of Quality Control Technicians(s) and certification number(s)
i. Mixing & transportation including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished pavement
j. Testing Plan
k. Laydown operations including longitudinal joint construction, procedures for avoiding paving in inclement weather, type of release agent to be used on trucks tools and rollers, compaction of shoulders, tacking of all joints, methods to ensure that segregation is minimized, procedures to determine the maximum rolling and paving speeds based on best engineering practices as well as past experience in achieving the best possible smoothness of the pavement
l. Examples of Quality Control forms including a daily plant report and a daily paving report
m. Silo management and details (can show storage for use on project of up to 36 hours)
n. Provisions for varying mix temperature due to extraordinary conditions
o. Name and responsibilities of the Responsible onsite Paving Supervisor
p. Method for calibration/verification of Density Gauge
q. A note that all testing will be done in accordance with AASHTO and the Maine DOT Policies and Procedures for HMA Sampling and Testing.
r. A note detailing conditions under which the percent of RAP will vary from that specified on the JMF.s. A note detailing when production will be halted due to QC testing results.

The QCP shall include the following technicians together with these minimum requirements:

a. QCP Administrator - A qualified individual shall administer the QCP. The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or its designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times. The QCP Administrator shall be certified as a Quality Assurance Technologist certified by the New England Transportation Technician Certification Program (NETTCP).

b. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.

c. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with the following minimum frequencies:

TABLE 2 : MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Temperature of mix	6 per day at street and plant	-
Temperature of mat	4 per day	-
%TMD (Surface)	1 per 115 Mg [125 ton] (As noted in QC Plan)	ASTM D2950
%TMD (Base)	1 per 225 Mg [250 ton] (As noted in QC Plan)	AASHTO T269
Fines / Effective Binder	1 per 450 Mg [500 ton]	AASHTO T 312*
Gradation	1 per 450 Mg [500 ton]	AASHTO T30
PGAB content	1 per 460 Mg [500 ton]	AASHTO T164 or T308
Voids at N_{design}	1 per 450 Mg [500 ton]	AASHTO T 312*
Voids in Mineral Aggregate at N_{design}	1 per 450 Mg [500 ton]	AASHTO T 312*
Rice Specific Gravity	1 per 450 Mg [500 ton]	AASHTO T209
Coarse Aggregate Angularity	1 per 4500 Mg [5000 ton]	ASTM D5821
Flat and Elongated Particles	1 Per 4500 Mg [5000 ton]	ASTM D4791
Fine Aggregate Angularity	1 Per 4500 Mg [5000 ton]	AASHTO T304

*Method A and B only.

The Contractor may utilize innovative equipment or techniques not addressed by the Contract documents to produce or monitor the production of the mix, subject to approval by the Department.

The Contractor shall submit all Hot Mix Asphalt Pavement plant test reports, inspection reports and updated pay factors in writing, signed by the appropriate technician and present them to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall also retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by The Department during QA inspections of the HMA production facility. Test results of splits that do not meet the Dispute Resolution Variance Limits in Table 10 shall trigger an investigation by the MDOT Independent Assurance Unit, and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.223 - Process for Dispute Resolution (Methods A , B and C only)].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report, shall be recorded and signed by the QCT and presented to the Department by 1:00 p.m. the next working day.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 2. The Contractor shall locate an approved SHRP Gyratory Compactor at the plant testing lab or within 30 minutes of the plant site.

The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the following working day. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. On surface courses, cores shall not be cut except for Verification of the Nuclear Density Gauge, at a rate not to exceed 3 per day or 2 per 900 Mg [1000 ton] placed.

The Contractor shall monitor plant production using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 3 below. The UCL and LCL, shall not exceed the allowable control points for the particular type of mixture as outlined in Table 1 of section 703.09

TABLE 3: Control Limits

Property	UCL and LCL
Passing 4.75 mm and larger sieves	Target +/-4.0
Passing 2.36 mm sieve	Target +/-2.5
Passing .075 mm sieve	Target +/-1.2
PGAB Content*	Target +/-0.3
Voids in the Mineral Aggregate	LCL = LSL + 0.2
% Voids at N_{design}	JMF Target +/-1.3

*Based on AASHTO T 308

The Contractor shall cease paving operations whenever one of the following occurs on a lot in progress:

a. Methods A and B: The Pay Factor for VMA, Voids @ N_d, Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.85. Method C: The Pay Factor for VMA, Voids @ N_d, Percent PGAB, percent passing the nominal maximum sieve, percent passing 2.36 mm sieve, percent passing 0.300 mm sieve or percent passing 0.075 mm sieve using all Acceptance or all Quality Control tests for the current lot is less than 0.85.

b. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Table 3: Aggregate Consensus Properties Criteria for the design traffic level.

c. Each of the first 2 control tests for a Method A or B lot fall outside the upper or lower limits for VMA, Voids @ Nd, or Percent PGAB; or under Method C, each of the first 2 control tests for the lot fall outside the upper or lower limits for the individual gradation sieve sizes as required in Table 3, or Percent PGAB.
This includes any case where both tests are out on the same, or different properties.

d. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.

e. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.

f. The Contractor fails to follow the approved QCP.

g. The Contractor's control chart shows the process to be out of control (defined as a single point outside of the control limits on the running average of three chart.) on any property listed in Table 3: Control Limits.

Paving operations shall not resume until the Contactor and the Department determines that material meeting the Contract requirements will be produced. The Department will consider corrective action acceptable if the pay factor for the failing property increases, based on samples already in transit, or a verification sample is tested and the property falls within the specification limits.

The Department retains the exclusive right, with the exception of the first day's production of a new JMF, to determine whether the resumption of production involves a significant change to the production process. If the Department so determines, then the current lot will be terminated, a pay factor established, and a new lot will begin.

401.19 Quality Control Method D For Items covered under Method D, the Contractor shall submit a modified QC Plan detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used. All mix designs (JMF) shall be approved and verified by MDOT prior to use. Certified QC personnel shall not be required. The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

401.20 Acceptance Method A, B & C These methods utilizes Quality Level Analysis and pay factor specifications.

For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per sublot on a statistically random basis, test, and evaluate in accordance with the following Acceptance Criteria:

TABLE 4: ACCEPTANCE CRITERIA

PROPERTIES	POINT OF SAMPLING	TEST METHOD
Gradation	Paver Hopper	AASHTO T30
PGAB Content	Paver Hopper	AASHTO T308
%TMD (Surface)	Mat behind all Rollers	AASHTO T269
%TMD (Base or Binder)	Mat behind all Rollers	AASHTO T269
Air Voids at N_d	Paver Hopper	AASHTO T 312
%VMA at N_d	Paver Hopper	AASHTO T 312
Fines to Effective Binder	Paver Hopper	AASHTO T 312
%VFB	Paver Hopper	AASHTO T 312

On the first day of production in the current calendar year, or the first day of production of a new JMF the Department will take three random samples, which will be used to calculate the quality level of the in-place material in the event the lot is terminated prematurely. Only one of the three will be tested, the other two will be held onsite until at least three random samples have been taken, at which time the other two will be discarded.

Lot Size For purposes of evaluating all acceptance test properties, a lot shall consist of the total quantity represented by each item listed under the lot size heading.

If the Department terminates a Lot prematurely, the samples from the first days production will be used to calculate a volumetric pay factor, and a minimum of three cores will be used for a density pay factor, if applicable, for quantities placed to date.

Sublot size The quantity represented by each sample will constitute a sublot. . If there is insufficient quantity in a lot to make up at least four sublots, then the lot quantity will be divided into four equal sublots for mix properties and five sublots for percent TMD.

If there is less than one-half of a sublot remaining at the end, then it shall be combined with the previous sublot. If there is more than one-half sublot remaining at the end, then it shall constitute the last sublot and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot.

Acceptance Testing The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and theMaine DOT Policies and Procedures for HMA Sampling and Testing, which will then be transported by the Contractor to the designated MDOT Laboratory, as directed by MDOT in approved transport containers to be provided by the Department, unless otherwise directed by the Resident. The Department will take the sample randomly within each sublot. Target values shall be as specified in the JMF. The Department will use Table 5 for calculating pay factors for gradation, PGAB Content, Air Voids at N_{design}, VMA, Fines to Effective Binder and VFB. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Isolated Areas During the course of inspection, should it appear that there is an isolated area that is not representative of the lot based on a lack of observed compactive effort, excessive segregation or any other questionable practice, that area may be isolated and tested separately. An area so isolated that has a calculated pay factor below 0.80, based on three random tests shall be removed and replaced at the expense of the Contractor for the full lane width and a length not to be less than 50 m [150 ft].

Pavement Density The Department will measure pavement density using core samples tested according to AASHTO T-166. The Department will randomly determine core locations. The Contractor shall cut 6 inch diameter cores at no additional cost to the Department by the end of the working day following the day the pavement is placed, and immediately give them to the Department. The cores will be placed in a transport container provided by the Department and transported by the Contractor to the designated MDOT Lab as directed by the Department. Pre-testing of the cores will not be allowed. At the time of sampling, the Contractor and the Department shall mutually determine if a core is damaged. If it is determined that the core(s) is damaged, the Contractor shall cut new core(s) at the same offset and within 1 m [3 ft] of the initial sample. At the time the core is cut, the Contractor and the Department will mutually determine if saw cutting of the core is needed, and will mark the core at the point where sawing is needed. The core may be saw cut by the Contractor in the Department's presence onsite, or in an MDOT Lab by The Department, without disturbing the layer being tested to remove lower layers of Hot Mix Asphalt Pavement, gravel, or RAP. No recuts are allowed at a test location after the core has been tested. Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2.

There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Bituminous Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum compaction will not be waived by the Department unless it is apparent during construction that local conditions make densification to this point detrimental to the finished pavement surface course.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4050 Mg [4500 tons], with unanticipated over-runs of up to 1350 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 675 Mg [750 ton] for mixture properties, 450 Mg [500 ton] for base or binder densities and 225 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.6 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

401.202 Method B Lot Size will be the entire production per JMF for the project and shall be divided into 3 equal sublots for Mixture Properties and 3 equal sublots for density.

TABLE 6: METHOD B ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
Air Voids	4.0% +/-2.0
Fines to Effective Binder	0.6 to 1.4
Voids in the Mineral Aggregate	LSL from Table 1
Voids Filled with Binder	Table1 plus a 4% production tolerance for USL.
% TMD (In-place Density)	95.0% +/- 2.5%

401.203 Testing Method C Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4050 Mg [4500 tons], with unanticipated over-runs of up to 1350 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 675 Mg [750 ton] for mixture properties, 450 Mg [500 ton] for base or binder densities and 225 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 7: METHOD C ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%

Fines to Effective Binder	0.6 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

401.204 Testing Method D For hot mix asphalt items designated as Method D in Section 403 - Hot Bituminous Pavement, one sample will be taken from the paver hopper or the truck body per 225 Mg [250 ton] per pay item. The mix will be tested for gradation and PGAB content. Disputes will not be allowed. If the mix is within the tolerances listed in Table 8: Method D Acceptance Limits, the Department will pay the contract unit price. If the test results for each 225 Mg [250 ton] increment are outside these limits, the following deductions (Table 8b) shall apply to the HMA quantity represented by the test.

TABLE 8: METHOD D ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
% TMD (In-place Density)	95.0% +/- 2.5%

TABLE 8b Method "D" Price Adjustments

PGAB Content	-5%
2.36 mm sieve	-2%
0.30 mm sieve	-1%
0.075 mm sieve	-2%
Density	-10%*

*Only applies when called for in Section 403 - Hot Bituminous Pavement. Contractor shall cut two 150 mm [6 in] cores, which shall be tested for percent TMD per AASHTO T-269. If the average for the two tests falls below 92.5% the disincentive shall apply.

401.21 Method of Measurement The Department will measure Hot Mix Asphalt Pavement by the Mg [ton] in accordance with Section 108.1 - Measurement of Quantities for Payment.

401.22 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of HMA specified.

The Department will pay for the work specified in Section 401.11, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental.

Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment.

The Department will make a pay adjustment for quality as specified below.

401.221 Price Adjustment for the Quality of Hot Bituminous Pavement (Methods A, B and C) The Department will sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of this Specification.

401.222 Pay Factor (PF) (Methods A and B) The Department will use density, Performance Graded Asphalt Binder content, voids @N_d, VMA, VFB, F/B^e, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. The Department will evaluate materials using the following price adjustment factors under Section 106.7 - Quality Level Analysis.

The Department will apply price adjustments to the appropriate Hot Mix Asphalt Pavement pay items. Price adjustments shall be applied based on test results for each lot. If any pay factor for any single property (or composite gradation under Method A or B) falls below 0.85, the Contractor shall shut down the HMA plant.

If any single pay factor for PGAB Content, VMA, or Air Voids under :

a. Method A falls below 0.75, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.55.
b. Method B falls below 0.83, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.70.

If the PGAB content for Method C falls below 0.75, then the PGAB pay factor shall be 0.55. If the percent passing the nominal maximum sieve, the 2.36 mm sieve, the 0.300 mm sieve or the 0.075 mm sieve for Method C falls below 0.75, then the composite pay factor for the four sieves shall be 0.55.

If the pay factor for Density falls below 0.80 for Method A or C or 0.83 for Method B, all of the cores will be randomly recut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80 for Method A or C or below 0.83 for Method B, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample sublot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

TABLE 9: TABLE OF GRADATION COMPOSITE " f " FACTORS
(Methods A and B)

Constituent		"f" Factor			
		19 mm	12.5 mm	9.5 mm	4.75 mm
Gradation	25 mm	-	-	-	-
	19 mm	4	-	-	-
	12.5 mm		4	4	-
	9.50 mm				4
	2.36 mm	6	6	6	8
	1.18 mm				
	0.60 mm	2	2	2	2
	0.30 mm	2	2	2	2
	0.075 mm	6	6	6	8

For each lot of material, the Department will determine a price adjustment as follows:

Gradation The Department will determine a composite pay factor (CPF) using applicable price adjustment factors "f" from Table 9: Table of Gradation Composite "f" Factors, and Acceptance limits from Table 5: Method A Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will not make price adjustments for gradation on Methods A and B, but will monitor them as shutdown criteria.

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using acceptance limits from Table 5: Method A Acceptance Limits, for Method A and C or Table 6: Method B Acceptance Limits, for Method B. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Density For mixes having a density requirement, the Department will determine a pay factor using acceptance limits from Table 5: Method A Density Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will calculate the price adjustment for density as follows:

PA = (density PF- 1.0)(Q)(P)x0.50

Where

PA = Price Adjustment
Q = Quantity represented by PF in Mg [ton]
P = Contract price per Mg [ton]
PF = Pay Factor

The maximum pay factor for Density shall be 1.025.

PGAB Content, VMA and Air Voids For mixes having a Volumetric Properties requirement, the Department will determine a pay factor using acceptance limits from Table 5: Method A Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will calculate the price adjustment for Volumetric Properties as follows:

PA = (voids @ N_d PF- 1.0)(Q)(P)x0.20 + (VMA @ N_d PF- 1.0)(Q)(P)x0.20 + (PGAB PF- 1.0)(Q)(P)x0.10,

Where

PA = Price Adjustment
Q = Quantity represented by PF in Mg [ton]
P = Contract price per Mg [ton]
PF = Pay Factor

The maximum Composite Pay Factor for mixes having only a Volumetric requirement shall be 1.025.

Pay Factor (PF) (Method C) The Department will use density, Performance Graded Asphalt Binder content, and the screen sizes listed in Table **7** for the type of HMA represented in the JMF. The Department will evaluate materials using the following price adjustment factors under Section 106.7 - Quality Level Analysis.

The Department will apply price adjustments to the appropriate Hot Mix Asphalt Pavement pay items. Price adjustments shall be applied based on test results for each lot. The Department will not make price adjustments for VMA, Voids at N^d, VFB or Fines to Effective Binder, but will monitor them as shutdown criteria, and continuation of JMF approval.

Density For mixes having a density requirement, the Department will determine a pay factor using acceptance limits from Table 7: Method C Acceptance Limits. The Department will calculate the price adjustment for density as follows:

PA = (density PF- 1.0)(Q)(P)x0.50

Where

PA = Price Adjustment
Q = Quantity represented by PF in Mg [ton]
P = Contract price per Mg [ton]
PF = Pay Factor

The maximum pay factor for Density shall be 1.025.

PGAB Content and Gradation The Department will determine a pay factor using acceptance limits from Table **7**: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

PA = (%Passing Nom. Max PF-1.0)(Q)(P)X0.05+(%passing 2.36 mm PF-1.0)(Q)(P)X0.05+(%passing 0.30 mm PF-1.0)(Q)(P)X0.05+(%passing 0.075 mm PF-1.0)(Q)(P)X0.10+(PGAB PF-1.0)(Q)(P)X0.25

Where

PA = Price Adjustment
Q = Quantity represented by PF in Mg [ton]
P = Contract price per Mg [ton]
PF = Pay Factor

The maximum Composite Pay Factor for mixes having only a Binder Content and Gradation requirement shall be 1.025.

401.223 Process for Dispute Resolution (Methods A B & C only)

a. Dispute Resolution sampling At the time of Hot-Mix Asphalt sampling, the Department will obtain a split sample of each Acceptance test random sample for possible dispute resolution testing. The Contractor shall also obtain a split sample of the HMA at this same time. If the Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the Acceptance sample and shall report their results to the Resident, with a copy to the QA Engineer at the Central Laboratory in Bangor by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of not more than two weeks, or until the sample is tested.

b. Disputing Acceptance results The Contractor may dispute the Department's Acceptance results and request (Methods A, B, & C) that the dispute resolution split sample be tested by notifying the Department's Resident and the QA Engineer at the Central Laboratory in Bangor in writing within two working days after receiving the results of the Acceptance test. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and

- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MDOT) of their split of the Acceptance sample indicating that the variances in Table10: Dispute Resolution Variance Limits, for the specific test result(s) or property(ies) were exceeded.

c. Disputable items The Contractor may dispute any or all of the following test results when the difference between the Department's value and the Contractor's value for that test equals or exceeds the corresponding allowable variation in Table 10: Dispute Resolution Variance Limits, PGAB content, G_{mb}, and G_{mm}. In addition, if the allowable variation for these tests is not met or exceeded, the Contractor may dispute either or both of the following material properties provided the difference between results for them equals or exceeds the corresponding allowable variation in Table 10: Voids at N_{design}, and VMA. For Method C only, % passing may only be disputed on sieves which are used for price adjustments

d. Outcome The value of any disputed result or property reported for the initial Acceptance sample shall stand if the value reported for the dispute resolution sample is not closer to the value the Contractor reported for their split sample than to the value reported for the initial Acceptance sample. Otherwise, the value reported for the dispute resolution sample will replace the value reported for the initial Acceptance sample, and will be used to re-calculate any other affected results or properties.

TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS

PGAB Content	+/-0.4%
G_{mb}	+/-0.030
G_{mm}	+/-0.020
Voids @ N_d	+/-0.8%
VMA	+/-0.8%
Passing 4.75 mm and larger sieves	+/- 4.0%
Passing 2.36 mm to 1.18 mm sieves	+/- 3.0%
Passing 0.60 mm	+/- 2.0 %
Passing 0.30 mm to 0.075 mm sieve	+/- 1.0%

SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box

402.01 Pavement Smoothness The final pavement surface shall be evaluated for smoothness using a Class I or Class II profiler as defined by ASTM E950 (94). Smoothness measurements will be expressed in terms of the International Roughness Index (IRI) as defined by the World Bank, in units of inches/mile.

402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A sublot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If greater than one-half the normal lot size, it will be tested as a separate lot.

402.03 Acceptance Testing The Department will conduct Acceptance testing following completion of the surface course. Sections to be excluded from testing include the following:

Bridge decks and joints (no smoothness measurements will be taken within 30 m [100 ft] of bridge joints)
Acceleration and deceleration lanes

Shoulders and ramps
Side streets and roads
Within 30 m [100 ft] of transverse joints at the beginning and end of the project
Within 30 m [100 ft] of railroad crossings
Urban areas with speed limits of 50 kph [30 mph] or lower

Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot.

The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

ACCEPTANCE LIMITS

Level	USL
I	1.10 m/km [70 in/mile]
II	1.25 m/km [80 in/mile]
III	1.40 m/km [90 in/mile]

Computation of Smoothness Pay Adjustment:

PA = (PF-1.0)(Q)(P)
where:
Q = Quantity of surface course in the Lot (excluding shoulders, side streets, bridge decks, ramps, acceleration and deceleration lanes)
PF = smoothness pay factor for the Lot
P = Contract unit price for surface pavement
PA = pay adjustment

402.04 Unacceptable Work In the event that any Lot is found to have a pay factor less than 0.80, the Contractor shall take whatever remedial action is required to correct the pavement surface in that Lot at no additional expense to the Department. Such remedial action may include but is not limited to removal and replacement of the unacceptable pavement. In the event remedial action is necessary, the Contractor shall submit a written plan to the Resident outlining the scope of the remedial work. The Resident must approve this plan before the remedial work can begin. Following remedial work, the Lot shall be retested, and will be subject to the specification limits listed above. The resulting pay factor, if within the acceptable range, will be used in the final pay adjustment. The Contractor shall pay the cost of retesting the pavement following corrective action.

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.101 Surface Tolerances.

Payment will be made under:

Pay Item	Pay Unit
402.10 Incentive/Disincentive - Pavement Smoothness	Lump Sum

SECTION 403 - HOT BITUMINOUS PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of bituminous pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established.

The bituminous pavement shall be composed of a mixture of aggregate, filler if required, and bituminous material.

403.02 General The materials and their use shall conform to the requirements of Section 401 - Hot Mix Asphalt Pavement.

403.03 Construction The construction requirements shall be as specified in Section 401 - Hot Mix Asphalt Pavement.

In addition, hot bituminous pavement placed on bridges shall also conform to the following requirements.

a. The mixture shall be composed of aggregate, PGAB and mineral filler but no recycled asphalt pavement and placed in courses as specified in the Special Provisions.

b. The bottom course shall be placed with an approved rubber mounted bituminous paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.

c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.

d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck.

e. After the top course has been placed, the shoulder areas shall be sealed 3 feet wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature.

f. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot bituminous pavement.

g. The atmospheric temperature for all courses on bridge decks shall be 50°F or higher.

403.04 Method of Measurement Hot bituminous pavement will be measured as specified in Section 401.21- Method of Measurement.

403.05 Basis of Payment The accepted quantities of hot bituminous pavement will be paid for at the contract unit price per ton for the bituminous mixtures, including bituminous material complete in place.

Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Bituminous Pavement, for Method location).

Payment will be made under:

Pay Item		Pay Unit
403.102	Hot Mix Asphalt Pavement for Special Areas	Ton
403.206	Hot Mix Asphalt, 25 mm Nominal Maximum Size	Ton
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	Ton
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	Ton
403.209	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	Ton
403.210	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	Ton
403.211	Hot Mix Asphalt (shimming)	Ton
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	Ton
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, Base	Ton

Alternate I
Gilead - Bethel
AC-NH-9184(30)X
Highway Reconstruction
US Route 2
June 14, 2007

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
			115mm HMA Overlay			
			PMRAP Treated Areas			
			Mainline Travelway, Bog Road			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13,22
Base	12.5mm	403.213	N/A	35mm	1	5,7
Base	19.0mm	403.207	N/A	45mm	1	5,7,12,21
			70mm HMA Overlay			
			PMRAP Treated Areas			
			Normal Shoulders			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	35mm	1	5,7
			115mm HMA Overlay			
			PMRAP Treated Areas			
			Curbed, Superelevated Lowside Shoulders			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	35mm	1	5,7
Base	19.0mm	403.207	N/A	45mm	1	5,7,12,21
			100mm HMA Overlay			
			Flemming Road			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	65mm	1	5,7
			80mm HMA Overlay			
			Pleasant River Bridge			
Wearing	9.5mm	403.210	N/A	40mm	1	2,5,9
Base	9.5mm	403.210	N/A	40mm	1	2,5,9
			Drives,Sidewalks, Misc.			
Wearing	9.5mm	403.209	N/A	50mm	2/more	2,3,10,11,14

COMPLEMENTARY NOTES

2. The density requirements are waived.
3. The design traffic level for mix placed shall be <0.3 million ESALS.
5. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract.
7. Section 106.6 Acceptance, (1) Method A.
9. Section 106.6 Acceptance, (2) Method C.
10. Section 106.6 Acceptance, (2) Method D.
11. A **"FINE"** 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item.

12. A mixture meeting the gradation of 12.5 mm hot mix asphalt may be used at the option of the contractor.
13. A mixture meeting the gradation of 9.5 mm hot mix asphalt may be used with the approval of the Department.
14. A mixture meeting the requirements of section 703.09 Grading 'D', with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.
21. A **"FINE"** 19.0 mm mix with a gradation above or through the restricted zone shall be used for this item if the 12.5mm option is not utilized.
22. The final pavement surface shall be evaluated for smoothness in accordance with the Standard Specifications, revision of December 2002, Section 402 - Pavement Smoothness.

Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item #409.15 shall be applied to any existing pavement and the **Plant Mixed Asphalt surface** at a rate of approximately 0.08 L/m², and on milled pavement approximately 0.2 L/m², prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.08 L/m².

Tack used between new layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

Alternate II
Gilead - Bethel
AC-NH-9184(30)X
Highway Reconstruction
US Route 2
June 14, 2007

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
			145mm HMA Overlay			
			Crushed Gravel Base Areas			
			Mainline Travelway, Bog Road			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13,22
Base	12.5mm	403.213	N/A	35mm	1	5,7,
Base	19.0mm	403.207	N/A	75mm	1	5,7,12,21
			70mm HMA Overlay			
			Crushed Gravel Base Areas			
			Normal Shoulders			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	35mm	1	5,7
			145mm HMA Overlay			
			Crushed Gravel Base Areas			
			Curbed, Superelevated Lowside Shoulders			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	35mm	1	5,7,
Base	19.0mm	403.207	N/A	75mm	1	5,7,12,21
			100mm HMA Overlay			
			Flemming Road			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	65mm	1	5,7
			80mm HMA Overlay			
			Pleasant River Bridge			
Wearing	9.5mm	403.210	N/A	40mm	1	2,5,9
Base	9.5mm	403.210	N/A	40mm	1	2,5,9
			Drives,Sidewalks, Misc.			
Wearing	9.5mm	403.209	N/A	50mm	2/more	2,3,10,11,14

COMPLEMENTARY NOTES

2. The density requirements are waived.
3. The design traffic level for mix placed shall be <0.3 million ESALS.
5. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract.
7. Section 106.6 Acceptance, (1) Method A.
9. Section 106.6 Acceptance, (2) Method C.
10. Section 106.6 Acceptance, (2) Method D.
11. A **"FINE"** 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item.

12. A mixture meeting the gradation of 12.5 mm hot mix asphalt may be used at the option of the contractor.
13. A mixture meeting the gradation of 9.5 mm hot mix asphalt may be used with the approval of the Department.
14. A mixture meeting the requirements of section 703.09 Grading 'D', with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.
21. A **"FINE"** 19.0 mm mix with a gradation above or through the restricted zone shall be used for this item if the 12.5mm option is not utilized.
22. The final pavement surface shall be evaluated for smoothness in accordance with the Standard Specifications, revision of December 2002, Section 402 - Pavement Smoothness.

Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item #409.15 shall be applied to any existing pavement and the **Plant Mixed Asphalt surface** at a rate of approximately 0.08 L/m², and on milled pavement approximately 0.2 L/m², prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.08 L/m².

Tack used between new layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

Alternate III
Gilead - Bethel
AC-NH-9184(30)X
Highway Reconstruction
US Route 2
June 14, 2007

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
			130mm HMA Overlay			
			Crushed Gravel Base Areas			
			Mainline Travelway, Bog Road			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13,22
Base	12.5mm	403.213	N/A	35mm	1	5,7,
Base	19.0mm	403.207	N/A	60mm	1	5,7,12,21
			70mm HMA Overlay			
			Crushed Gravel Base Areas			
			Normal Shoulders			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	35mm	1	5,7
			130mm HMA Overlay			
			Crushed Gravel Base Areas			
			Curbed, Superelevated Lowside Shoulders			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	35mm	1	5,7,
Base	19.0mm	403.207	N/A	60mm	1	5,7,12,21
			100mm HMA Overlay			
			Flemming Road			
Wearing	12.5mm	403.208	N/A	35mm	1	5,7,13
Base	12.5mm	403.213	N/A	65mm	1	5,7
			80mm HMA Overlay			
			Pleasant River Bridge			
Wearing	9.5mm	403.210	N/A	40mm	1	2,5,9
Base	9.5mm	403.210	N/A	40mm	1	2,5,9
			Drives,Sidewalks, Misc.			
Wearing	9.5mm	403.209	N/A	50mm	2/more	2,3,10,11,14

COMPLEMENTARY NOTES

2. The density requirements are waived.
3. The design traffic level for mix placed shall be <0.3 million ESALS.
5. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract.
7. Section 106.6 Acceptance, (1) Method A.
9. Section 106.6 Acceptance, (2) Method C.
10. Section 106.6 Acceptance, (2) Method D.
11. A **"FINE"** 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item.

12. A mixture meeting the gradation of 12.5 mm hot mix asphalt may be used at the option of the contractor.
13. A mixture meeting the gradation of 9.5 mm hot mix asphalt may be used with the approval of the Department.
14. A mixture meeting the requirements of section 703.09 Grading 'D', with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.
21. A **"FINE"** 19.0 mm mix with a gradation above or through the restricted zone shall be used for this item if the 12.5mm option is not utilized.
22. The final pavement surface shall be evaluated for smoothness in accordance with the Standard Specifications, revision of December 2002, Section 402 - Pavement Smoothness.

Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item #409.15 shall be applied to any existing pavement and the **Plant Mixed Asphalt surface** at a rate of approximately 0.08 L/m², and on milled pavement approximately 0.2 L/m², prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.08 L/m².

Tack used between new layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(QC/QA Acceptance Methods)

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
A	502.219	Structural Concrete Abut.&Retaining Walls	$400	A
A	502.26	Structural Concrete RW&SW Slab on Steel Bridge	$400	A
A	502.31	Structural Concrete Approach Slab	-	C
LP	502.49	Structural Concrete Curbs & Sidewalks	-	C
LP	526.34	Permanent Concrete Transition Barrier	-	C

P values listed above reflect the price per cubic meter (yd^3) for all pay adjustment purposes.

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Precast Deck Panels)

Description This work shall consist of casting, furnishing, and erecting prestressed structural concrete deck panels (hereafter called "precast deck panels") and all related materials as an optional stay-in-place forming system in accordance with the contract plans and specifications.

Construction Precast Deck Panels shall comply with Section 535 – Precast, Prestressed Concrete Superstructure.

Precast deck panels shall be manufactured in conformity with the following tolerances:

Depth of slab	- 3 mm, + 6 mm [-1/8 in, + 1/4 in]
Width of slab	-0, + 6 mm [-0, + 1/4 in]
Length of slab	± 6 mm [± 1/4 in]
Horizontal alignment	6 mm [1/4 in] (deviation from line parallel to centerline)
Squareness	13 mm [1/2 in] max. Difference in diagonal meas.
Vertical Position of Strand group	+0, - 6 mm [+0, -1/4 in] Meas. from bottom of slab
Vertical position of individual strands	± 6 mm [± 1/4 in]
Horizontal strand position	± 13 mm [± 1/2 in]
Strand Projection	-6mm, +19 mm [- 1/4 in, + 3/4 in]
Bowing	± 6 mm [± 1/4 in]
Threaded jack inserts	± 6 mm [± 1/4 in] longitudinally and transversely

Basis of Payment All work will be considered incidental to and included in Pay Item 502.26 Structural Concrete Roadway and Sidewalk Slab on Steel Bridges. Payment shall include full compensation for all materials wholly or partly in the precast deck panels and related materials or work required for the panel erected as shown on the plans. Related materials and work will include, but not limited to furnishing and installing temporary supports, including adhesive and grout bedding, reinforcing steel, welded wire fabric and cast-in-place concrete.

May 4, 2006
Supersedes September 29, 2004

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Quality Level Analysis)

502.01 Description In second sentence, replace "…METHOD B Small Qunatity Product Verification…" with "…METHOD B Statistical Acceptance…"

502.05 Composition and Proportioning Delete Table 1 and replace with the following;

TABLE 1- Methods A and B

Concrete CLASS	Compressive Strength (PSI)		Permeability (COULOMBS)		Entrained Air (%)		Notes
	LSL	USL	LSL	USL	LSL	USL	
S	2,900	N/A	N/A	N/A	6.0	8.5	1, 5
A	4,350	-----	-----	2,400	6.0	8.5	1,2,5,6
P	-----	-----	-----	-----	5 ½	7 ½	1,2,3,4,5
LP	5,075	-----	-----	2,000	6.0	8.5	1,2,5,6
Fill	2,900	N/A	N/A	N/A	N/A	N/A	6

502.503 Delete and replace with the following;

"502.0503 Quality Assurance METHOD B The Department will determine the acceptability of the concrete through a quality assurance program.

The Department will take Quality Assurance samples a minimum of once per sublot on a statistically random basis. Quality Assurance tests will include compressive strength, air content and permeability.

Concrete sampling for quality assurance tests will be taken at the discharge point, with pumped concrete sampling taken at the discharge end of the pump line.

Lot Size A lot size shall consist of the total quantity represented by each class of concrete in the Contract, except in the case when the same class of concrete is paid for under both lump sum items and unit price items in the Contract; in this case, the lump sum item quantities shall comprise 1 lot and the unit price item quantities shall comprise a separate lot. A lot shall consist of a minimum of 3 and a maximum of 10 sublots. If a lot is comprised of more than 10 sublots, sized in accordance with Table #3, then this quantity shall be divided equally into 2, or more, lots such that there is a minimum of 3 and a maximum of 10 sublots per lot. If there is insufficient quantity in a lot to meet the recommended minimum sublot size, then the lot shall be divided into 3 equal sublots.

Sublot Size, General The size of each sublot shall be determined in accordance with Table #3. The Resident may vary sublot sizes based on placement sizes and sequence.

Sublot Size, Unit Price Items Sublot sizes will initially be determined from estimated quantities. When the actual final quantity of concrete is determined: If there is less than one-half the estimated sublot quantity in the remaining quantity, then this quantity shall be combined with the previous sublot, and no further Acceptance testing will be performed; if there is more than one-half the estimated sublot quantity in the remaining quantity, then this quantity shall constitute the last sublot and shall be represented by Acceptance test results. If it becomes apparent part way through a lot that, due to an underrun in quantity, there will be an insufficient quantity of concrete to comprise three sublots, then the Resident may adjust the sizes of the remaining sublots and select new sample locations based on the revised estimated quantity of concrete remaining in the lot.

Sublot Size, Lump Sum Items Each lot shall be divided into sublots of equal size, based on the estimated quantity of concrete.

TABLE 3

Quantity m^3 [cy]	Recommended Sublot Size m^3 [cy]
0-400 [0-500]	40 [50]
401-800 [501-1000]	60 [75]
801-1600 [1001-2000]	80 [100]
1601 [2001]or greater	200 [250]

Determination of the concrete cover over reinforcing steel for structural concrete shall be made prior to concrete being placed in the forms. Bar supports, chairs, slab bolsters, and side form spacers shall meet the requirements of Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice, Chapter 3 Section 2.5 Class 1, Section 2.6 Class 1A, or Section 4. All supports shall meet the requirements for type and spacing as stated in the CRSI Manual of Standard Practice, Chapter 3. Concrete will not be placed until the placing of the reinforcing steel and supports have been approved by the Resident. If the Contractor fails to secure Department approval prior to placement, the Contractor's failure shall be cause for removal and replacement at the Contractor's expense. The Contractor shall notify the Resident, at least 48 hours prior to the placement, when the reinforcing steel will be ready for checking. Sufficient time must be allowed for the checking process and any needed repairs.

Evaluation of materials will be made using the specification limits in Table 1.

Compressive strength tests will be completed by the Department in accordance with AASHTO-T22 at ≥ 28 days, except that no slump will be taken. The average of two concrete cylinders per sublot will constitute a test result and this average will be used to determine the compressive strength for pay adjustment computations.

Testing for Entrained Air in concrete, at the rate of one test per sublot, shall be in accordance with AASHTO T152.

Rapid Chloride Permeability test specimens will be completed by the Resident in accordance with AASHTO T-277 at an age ≥ 56 days. Two 100 mm x 200 mm [4 in x 8 in] cylinders will be taken per sublot placed.

Surface Tolerance, Alignment and Trueness, Plumb and Batter, and Finish will be measured as described in Section 502.0502.

Rejection by Resident For an individual sublot with a calculated pay factor of less than 0.80, the Department will, at its sole discretion:

A. Require the Contractor to remove and replace the entire affected placement with concrete meeting the Contract requirements at no additional expense to the Department, or

B. Accept the material, at a reduced payment as determined by the Department. (See also Section 502.191)

For a lot in progress, the Contractor shall discontinue operations whenever one or more of the following occurs:

A. The pay factor for any property drops below 1.00 and the Contractor is taking no corrective action

B. The pay factor for any property is less than 0.90

C. The Contractor fails to follow the QC Plan"

502.18 Method of Measurement Under Section E. make the following change from "….Method A, and under Section 502.19…" to "…Method A, Section 502.0503- Quality Assurance Method B, and under Section 502.19…"

502.19 Basis of Payment Modify the first sentence of the seventh paragraph from "…accepted under Method A." to "…accepted under Method A and Method B."

502.191 Pay Adjustment for Compressive Strength Add the following as the second sentence to the first paragraph; "Pay factors (PF) for pay adjustments for compressive strength will be determined using the Quality Level Analysis as specified in Section 106."

502.192 Pay Adjustment for Chloride Permeability Delete and replace with the following;

"Pay factors (PF) for pay adjustments for Chloride Permeability will be determined using the Quality Level Analysis as specified in Section 106.

Values greater than 4000 coulombs shall be subject to rejection and replacement at no additional cost to the Department."

502.193 Pay Adjustment for Air Content Delete and replace with the following;

"Pay factors (PF) for pay adjustments for air content will be determined using the Quality Level Analysis as specified in Section 106."

Add the following Section;

"502.195 Pay Adjustments for Compressive Strength, Chloride Permeability and Air Content The Composite Pay Factor (CPF) for each lot of concrete shall be computed as follows:

CPF = [(Compressive Strength PF-1)(0.20)] + [(Air Content PF-1)(0.40)]
+ [(Chloride Permeability PF-1)(0.40)]

The pay adjustment for each lot of concrete shall be computed as follows:

Lot Pay Adjustment = P x CPF x Lot Size

There will be no positive pay adjustments for Method B Concrete."

SPECIAL PROVISION
SECTION 526
CONCRETE BARRIER
(Temporary Concrete Barrier)

Materials The connecting pin shall be 1 ⅛" in [28.58 mm] in diameter with a nut and washer connection.

SPECIAL PROVISION
SECTION 603

PIPE CULVERTS AND STORM DRAINS

The following section shall be added:

606.0312 Fish Weirs

Fish weirs shall be constructed to the dimensions shown in the plans. The pipe supplier shall determine required reinforcement and joint details. Fish weirs shall be installed by the supplier in pipe at locations as shown in the plans prior to delivery of pipe to site.

603.11 Method of Measurement. The following shall be added to this section:

Fish weirs will not be measured separately from pipe materials.

603.12 Basis of Payment. The following shall be added to this section:

Payment for fish weirs will be incidental to appropriate culvert pipe items.

Payment will be made under:

Pay Item		Pay Unit
603.1753	450 mm RCP Class V	meter
603.211	900 mm Corrugated Metal Pipe	meter
603.221	1050 mm Corrugated Metal Pipe	meter
603.2891	2400 mm RCP Class III with Fish Weirs	meter

SPECIAL PROVISION
SECTION 603

PIPE CULVERTS AND STORM DRAINS
(Pipe jacking)

603.01 Description. The following shall be added to this section:

Pipe jacking shall consist of furnishing all labor, materials, and equipment necessary to install culverts using trenchless methods, including but not limited to tunneling and boring.

The following section shall be added:

606.033 Pipe Jacking

The Contractor shall submit to the Resident a complete plan and schedule for jack pipe installation prior to beginning such work. The submission shall include complete details of sheeting, shoring, and bracing for protecting the rail bed, materials, and equipment. The Contractor shall not proceed until the plan has been approved by the Resident. The Contractor shall ensure that the pipe to be jacked will have design strength and wall thickness adequate to withstand the jacking operation.

Construction shall be performed in such a manner that the ground surface above the pipe will not settle or be disturbed. Installation of the pipe shall immediately follow heading or tunneling excavation. Voids occurring behind the pipe during installation shall be filled with hydraulic cement grout, placed under pressure, upon completion of the jacking operation.

Joint sealant material shall be placed ahead of the jacking frame. The Contractor shall, at their own expense, replace or repair, as directed by the Resident, pipe that is damaged during jacking operations.

603.11 Method of Measurement. The following shall be added to this section:

Pipe jacking will not be measured separately from pipe materials.

603.12 Basis of Payment. The following shall be added to this section:

Payment for pipe jacking will be incidental to pipe to be jacked.

SPECIAL PROVISION
SECTION 606
GUARDRAIL
TEMPOARY GUARDRAIL

606.01 Description. The following shall be added to this section:

Temporary Guardrail shall consist of furnishing all labor, materials, and equipment necessary to install and remove temporary guardrail. Temporary guardrail may be salvaged guardrail components, in acceptable condition, or new guardrail components meeting the specifications for Guardrail Type 3c – Single Rail. New guardrail components that have not been damaged may be reused in a final installation. No salvaged components may be used in a final installation. Temporary guardrail shall be terminated by installing curved guardrail with a terminal end, as directed by the resident.

606.08 Method of Measurement. The following shall be added to this section:

Temporary Guardrail will be measured by the meter from center to center of end posts along the gradient of the rail. No separate measurement will be made for straight versus curved guardrail.

606.09 Basis of Payment. The following shall be added to this section:

The accepted quantities of Temporary Guardrail will be paid for at the contract unit price per meter complete in place, including terminal ends. Payment shall include removal.

Payment will be made under:

Pay Item		Pay Unit
606.43	Temporary Guardrail	Meter

SPECIAL PROVISION
SECTION 606
GUARDRAIL
(Remove and Dispose)

This Section of the Standard Specifications is amended by the addition of the following:

Description This work shall consist of the removing and disposing of existing beam guardrail, as indicated on the plans.

CONSTRUCTION REQUIREMENTS

General The existing guardrail shall be removed and shall become the property of the Contractor to be disposed of off the project.

Method of Measurement Guardrail, Remove and Dispose, will be measured by the meter [foot] of rail.

Basis of Payment The quantity of Guardrail, Remove and Dispose, will be paid for at the contract unit price per meter [foot].

Payment will made under:

Pay Item	Pay Unit
606.363 Guardrail, Remove and Dispose	Meter [Foot]

SPECIAL PROVISION
SECTION 606
GUARDRAIL

606.01 Description This work shall consist of furnishing and installing guardrail components in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as established. The types of guardrail are designated as follows:

Type 3-Galvanized steel "w" beam, wood posts or galvanized steel posts.
Type 3a-Galvanized steel "w" beam, wood posts, wood or composite offset blocks.
Type 3aa-Corrosion resistant steel "w" beam, wood posts, wood or composite offset blocks.
Type 3b-Galvanized steel "w" beam, galvanized steel posts, galvanized steel offset blocks.
Type 3c-Galvanized steel "w" beam, wood posts or galvanized steel posts, wood or composite offset blocks.
Type 3d-Galvanized steel "w" beam, galvanized steel posts, wood or composite offset blocks.
Thrie Beam-Galvanized steel thrie beam, wood posts or galvanized steel posts, wood or composite offset blocks.

Median barriers shall consist of two beams of the above types, mounted on single posts. Except for thrie beam, median barriers may include rub rails when called for.

Bridge mounted guardrail shall consist of furnishing all labor, materials, and equipment necessary to install guardrail as shown on the plans. This work shall also include drilling for and installation of offset blocks if specified, and incidental hardware necessary for satisfactory completion of the work.

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, Adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing endpost as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

606.02 Materials Materials shall meet the requirements specified in the following Sections of Division 700 - Materials:

Timber Preservative	708.05
Metal Beam Rail	710.04
Guardrail Posts	710.07
Guardrail Hardware	710.08

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be “U” channel steel, 2.44m [8 ft] long, 3.72 kg/m [2 ½ lb/ft] minimum and have 9.5 mm [3/8 in] round holes, 25 mm [1 in] center to center for a minimum distance of 610 mm [2 ft] from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared end treatment’s terminal and its tangent point, both at the leading and trailing ends of each run of guardrail. The marker’s flexible posts shall be grey with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the end treatment is not flared, markers will only be required at the end treatment’s terminal. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Maine DOT’s Approved Product List of Guardrail Material. The marker shall be grey, flexible, durable, and of a non-discoloring material to which 75 mm [3 in] by 225 mm [9 in] reflectors shall be applied, and capable of recovering from repeated impacts. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail (“butterfly”-type) delineators shall be mounted on all “w”-beam guardrail. The delineators shall be mounted within the guardrail beam at guardrail posts. Delineators shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Reflectorized beam guardrail delineators shall be placed at approximately 20 m [62.5 ft] intervals or every tenth post on tangents and at approximately 10 m [31.25 ft] intervals or every fifth post on curves. Exact locations of the delineators shall be as directed by the Resident. On divided highways, the left hand delineators shall be yellow and the right hand delineators shall be silver/white. On two directional highways, the right hand side shall be silver/white and no reflectorized delineator used on the left. All reflectors shall have reflective sheeting applied to only one side of the delineator facing the direction of traffic as shown in the Standard Detail 606(07). Reflectorized sheeting for guardrail delineators shall meet the requirements of Section 719.01.

Single wood post shall be of cedar, white oak, or tamarack, well seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department’s Approved Products List and shall be NCHRP 350 tested and approved.

The Guardrail 350 Flared Terminal shall be a terminal with a 1.2 m [4 ft] offset as shown in the Manufacturer's installation instructions.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than 13 mm [½ in]. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the meter [linear foot] from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans.

Terminal section, low volume end, NCHRP 350 end treatments, reflectorized flexible guardrail marker, terminal end, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be measured by the cubic meter [cubic yard] determined from the actual depth of the hole and a hypothetical circle diameter of 600 mm [2 ft].

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per meter [linear foot] for the type specified, complete in place. Reflectorized beam guardrail ("butterfly"-type) delineators will not be paid for directly, but will be considered incidental to guardrail items. Terminal section, buffer end, NCHRP 350 end treatment, bridge connection, single post and reflectorized flexible guardrail markers will be paid for at the contract unit price each for the kind specified complete in place.

NCHRP 350 end treatments and low volume guardrail ends will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer's installation instructions. Each end treatment will be clearly marked with the manufacturers name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under Pay Item 206.07. Type III Retroreflective Adhesive Sheeting

shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 75 mm [3 in] wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail 350 flared terminal shall also include a set of installation drawings supplied to the Resident.

Anchorages to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 45 m [150 ft] or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per meter and will be full compensation for adjusting to grade. Payment shall also include adjusting terminal end treatments where required.

Modify guardrail will be paid for at the contract unit price per meter and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams; removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends where required.

Remove and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends when required. No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or “w”-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

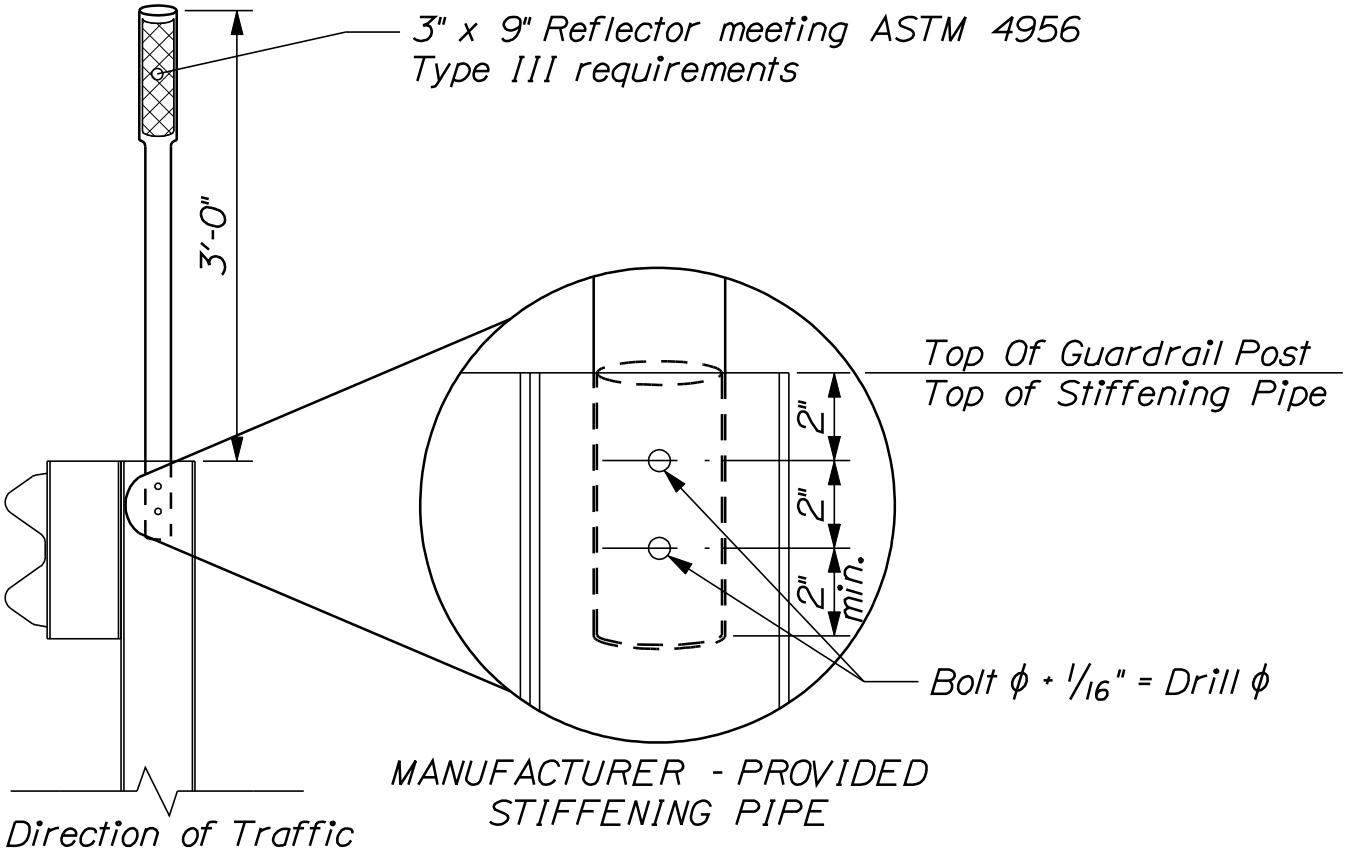
Payment will be made under:

	Pay Item	Pay Unit
606.15	Guardrail Type 3a-Single Rail	meter [Linear Foot]
606.151	Guardrail Type 3aa-Single Rail	meter [Linear Foot]
606.17	Guardrail Type 3b-Single Rail	meter [Linear Foot]
606.1721	Bridge Transition - Type I	Each
606.1722	Bridge Transition - Type II	Each
606.1731	Bridge Connection - Type I	Each
606.1732	Bridge Connection - Type II	Each
606.178	Guardrail Beam	meter [Linear foot]
606.18	Guardrail Type 3b - Double Rail	meter [Linear foot]
606.19	Guardrail Type 3a - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.191	Guardrail Type 3aa - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.20	Guardrail Type 3a - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.201	Guardrail Type 3aa - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.21	Guardrail Type 3b - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.22	Guardrail Type 3b - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.23	Guardrail Type 3c - Single Rail	meter [Linear Foot]
606.2301	Guardrail Type 3c - Double Rail	meter [Linear Foot]
606.231	Guardrail Type 3c - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.232	Guardrail Type 3c - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.24	Guardrail Type 3d - Single Rail	meter [Linear Foot]
606.2401	Guardrail Type 3d - Double Rail	meter [Linear Foot]
606.241	Guardrail Type 3d - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.242	Guardrail Type 3d - over 4.5 m [15 feet] radius	meter [Linear Foot]
606.25	Terminal Connector	Each
606.257	Terminal Connector - Thrie Beam	Each
606.265	Terminal End-Single Rail - Galvanized Steel	Each
606.266	Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275	Terminal End-Double Rail - Galvanized Steel	Each
606.276	Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.353	Reflectorized Flexible Guardrail Marker	Each
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker	Each
606.356	Underdrain Delineator Post	Each
606.358	Guardrail, Modify, Type 3b to 3c	meter [Linear Foot]
606.3581	Guardrail, Modify Existing to Type 3d	meter [Linear Foot]
606.362	Guardrail, Adjust	meter [Linear Foot]
606.365	Guardrail, Remove, Modify, and Reset, Type 3b to 3c	meter [Linear Foot]
606.3651	Guardrail, Remove, Modify, and Reset Existing to Type 3d	meter [Linear Foot]
606.366	Guardrail, Removed and Reset, Type 3c	meter [Linear Foot]
606.367	Replace Unusable Existing Guardrail Posts	Each
606.47	Single Wood Post	Each
606.48	Single Galvanized Steel Post	Each
606.50	Single Steel Pipe Post	Each

606.51	Multiple Mailbox Support	Each
606.55	Guardrail Type 3 - Single Rail	meter [Linear Foot]
606.551	Guardrail Type 3 - Single Rail with Rub Rail	meter [Linear Foot]
606.56	Guardrail Type 3 - Double Rail	meter [Linear Foot]
606.561	Guardrail Type 3 - Double Rail with Rub Rail	meter [Linear Foot]
606.568	Guardrail, Modify Type 3c -Double Rail	meter [Linear Foot]
606.59	Guardrail Type 3 - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.60	Guardrail Type 3 - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.63	Thrie Beam Rail Beam	meter [Linear Foot]
606.64	Guardrail Thrie Beam - Double Rail	meter [Linear Foot]
606.65	Guardrail Thrie Beam - Single Rail	meter [Linear Foot]
606.66	Terminal End Thrie Beam	Each
606.70	Transition Section - Thrie Beam	Each
606.71	Guardrail Thrie Beam - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.72	Guardrail Thrie Beam - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	meter [Linear Foot]
606.74	Guardrail Type 3 - Single Rail Bridge Mounted	meter [Linear Foot]
606.753	Widen Shoulder for Low Volume Guardrail End - Type 3	Each
606.754	Widen Shoulder for Guardrail 350 Flared Terminal	Each
606.78	Low Volume Guardrail End - Type 3	Each
606.79	Guardrail 350 Flared Terminal	Each

1. Reflectorized Flexible Guardrail Markers shall be from Maine DOT's Approved Product List of Guardrail Material.

2. Installation:
   a. Each bolt-hole diameter shall be the bolt diameter + 1/16".
   b. Wood post attachment - attach marker with 2, 5/16" diameter zinc-coated lag bolts, having 2" of embedment into wood post.
   c. Steel post attachment - attach marker with 2, 1/4" diameter zinc-coated bolt, washer and nut assemblies, having 1/2" of bolt extension behind steel post.
   d. When provided by the marker manufacturer, a stiffening pipe shall be inserted into the base of the marker prior to drilling bolt holes and shall remain in-place.



REFLECTORIZED FLEXIBLE GUARDRAIL MARKER DETAILS

606(34)

SPECIAL PROVISION 610
Stream Channel Relocation

610.01 Description This work shall consist of constructing new stream channels as shown on the plans at the direction of the Department to simulate the existing natural channel. Channel layout and material placement will be at the direction of the Resident or his/her designee.

610.02 Materials

Materials shall conform to the following requirements:

Stream Channel Rocks shall consist of sound durable rock which will not disintegrate by exposure to water or weather. Stone shall be field stone, similar to native material in existing stream. No quarry stone or round boulders or cobbles will be allowed. The gradation shall conform to the following table:

Sieve Designation		
US Customary	Metric	Percent by Weight Passing Square Mesh Sieves
18in	600 mm	100
12in	450 mm	40 - 50
6 in	300 mm	30 - 40
3 in	150 mm	5 - 10

Stream Channel Gravel shall consist of hard, durable rock, shall be sub-angular in shape and shall conform to the following table:

Sieve Designation		
US Customary	Metric	Percent by Weight Passing Square Mesh Sieves
2 1/2 in.	63 mm	100
1 in.	25 mm	40 - 50
3/8 in.	9.5 mm	10 - 20
No. 10	2.00 mm	0 - 5

610.31 Construction

1) All activities shall be done in compliance with Standard Specification 656, Temporary Soil Erosion and Water Pollution Control and described in the Contractor's Soil Erosion and Water Pollution Control Plan.

2) Beginning on the downstream end of the project site, the new channel shall be excavated and shaped to a depth and width as designated by the Resident or his/her designee. Refer to Typical Sections for details. Exact channel location, both horizontal & vertical, to be determined in the field by the Resident or his/her designee.

3) Stream Channel Rock and Stream Channel Gravel shall be machine placed as directed. Minimal hand placement of stone may be required. Materials shall be compacted to the approximate density of the surrounding undisturbed material.

4) No material shall be dropped from a distance greater than three feet in order to minimize segregation.

5) All disturbed soil on top of bank shall be mulched with Erosion Control Blanket before installation of plant material. Erosion Control Blanket shall be installed according to the Typical Section for "All Channels" and shall be paid for separately. Refer to Special Provision 621 for description of Plant Material.

610.41 Method of Measurement

Stream Channel Rock ,and Gravel will be measured in the truck before placement by the cubic meter.

610.51 Basis of Payment

The accepted quantities of Stream Channel Rock and Stream Channel Gravel will be paid for at the contract unit price per cubic yard before placement.

Costs for all required excavation shall be paid for as hourly equipment rental.

Payments will be made under:

Pay Item	Pay Unit
610.210 Stream Channel Rock	cubic meter
610.211 Steam Channel Gravel	cubic meter

SPECIAL PROVISION
SECTION 620
REINFORCEMENT GEOTEXTILE
(GEOCELL CONFINEMENT FOR SLOPE PROTECTION)

614.01 Description

This work shall consist of furnishing and placing a geocell slope protection system, in reasonably close conformity with the lines and grades shown on the plans, as specified herein, and as directed by the Resident. The geocell slope protection system consists of geocell material into which select infill material is placed. It is referred here after as geocell confinement system.

614.02 Submittals

Submittals shall comply with MaineDOT Section 105-General Scope of Work. All information shall be submitted to the Resident thirty (30) days prior to the geocell section installation.

A. Product Data. Submit manufacturer's product data.

B. Supplier Design. Submit manufacturer's project-specific design recommendations or engineering design for cell size, stake anchor length and stake anchor spacing.

C. Shop Drawings. Submit manufacturer's shop drawings including section layout, direction of expansion, and anchor stake locations.

D. Samples. Submit manufacturer's samples of geocell sections, anchors, and end caps.

E. Material Certification. Submit manufacturer certification of polyethylene used to make geocell material including percentage of carbon black, polyethylene density, and ESCR.

MATERIALS

614.03 Geocell Confinement System

The complete geocell confinement system includes the geocell sections, cell infill, anchors, and a surface treatment.

A. Geocell Sections. The geocell sections shall be a polyethylene sheet strip assembly connected by a series of offset, full depth, ultrasonic welded seams aligned perpendicular to the longitudinal axis of the strips, which, when expanded, form walls of flexible 3-dimensional, cellular confinement system. The geocell material shall be manufactured by Presto Products Company, Appleton, Wisconsin, Webtec Geosynthetics, Charlotte, North Carolina, or an approved equal. Sections shall be in conformance with manufacturers design recommendations or engineering design for this project.

1. Geocell base material

   a. The geocell material shall be polyethylene stabilized with black carbon, with the following properties:
      i. Density, ASTM D 1505: 58-60 pcf.
      ii. Environmental stress crack resistance (ESCR) ASTM D 1693: 3000 hours.
      iii. Ultraviolet light stabilization: carbon black.
      iv. Carbon Black Content: 1.5 to 2 percent by weight, through the addition of a carrier with a certified carbon black content.

v. Homogeneously distributed through material.

2. Geocell Strip Properties and Assembly

a. Perforated Strip/Cell:
   i. Strip sheet thickness, ASTM D 5199: 50 mil minus 5%, plus 10%. Determine thickness in the flat before surface disruption.
   ii. Sheet thickness: 60 mil +/- 6 mil.
   iii. Polyethylene Strips: Perforated with horizontal rows of 0.40 in diameter holes.
   iv. Perforation Within Each Row: 0.65 to 0.75 in on center.
   v. Horizontal Rows: staggered and separated 0.50 in relative to hole centers.
   vi. Edge of strip nearest edge of perforation: 0.24 in minimum.
   vii. Centerline of spot welds to nearest edge of perforation: 0.70 in minimum.

b. Assembly of Cell sections:
   i. Fabricated using strips of sheet polyethylene each with a length of 12 ft and a width equal to cell depth.
   ii. Connect strips using full-depth, ultrasonic spot-welds align perpendicular to longitudinal axis of strip.
   iii. Ultrasonic weld melt-pool width: 1.0 in maximum.

3. Geocell Properties

a. Individual Cells: Uniform in shape and size when expanded. Over- or under-expansion of uniform individual cells will be allowed on curved slopes.

b. Individual Cell Dimensions:
   i. Length: 8.8 in +/- 10%
   ii. Width: 10.2 in +/- 10%
   iii. Nominal area 44.8 sq in +/- 1%
   iv. Nominal depth: 4 in

4. Cell Seam Strength Tests

a. The seams for geocell sections shall consist of 2 carbon-black stabilized strips welded together.

b. Short Term Seam Peel Strength Test:
   i. Cell Seam Strength: Uniform over full depth of cell.
   ii. Minimum seam peel strength: 320 lbf for 4 in depth.

c. Long Term Seam Peel Strength Test:
   i. Conditions: Minimum of 168 hours (7 days) in a temperature-controlled environment that undergoes change on a 1-hour cycle from room temperature to 130º F.
   ii. Room temperature: ASTM E 41.
   iii. Test Samples: Weld two 4 in wide strips together.
   iv. Test: Test sample consisting of 2 carbon black stabilized strips shall support a 160 lb load for the test period.

B. Anchoring Components. The anchoring system shall consist of Straight No. 4 steel reinforcing rods with an ATRA clip, or an approved equal, as end cap. Length shall be as specified in the manufacturer's recommendations or an engineering design.

C. Granular Borrow. Granular Borrow shall meet the requirements of MaineDOT Section 703.19 - Granular Borrow, Material for Embankment Construction.

D. Geocell Infill Material. Geocell infill material shall meet the requirements of the following specification:

Aggregate for crushed stone surface 703.12

CONSTRUCTION

614.04 Construction Requirements

A. Subgrade Preparation.
1. Prepare the subgrade by removing the all existing vegetation and loose surficial soils from the slope.
2. Excavate and the slope section as needed.
3. Place, compact, and shape Granular Borrow as needed, so that when placed the top of installed geocell section is flush with or slightly lower that the final grade as indicated on the plans.
4. Install non-woven erosion control geotextile underlayer, if required, on the prepared surface, ensuring required overlaps are maintained and outer edge of geotextile are buried a minimum of 6 in. below grade.

B. Placement and Anchoring.
1. Anchor geocell sections at the crest of the slope or as per manufacturer's recommendations. Use type of anchor and frequency of anchoring as indicated on the shop drawings.
2. Expand geocell sections down slope. Confirm each geocell section is expanded uniformly to required dimensions and outer cells of each layer are correctly aligned.
3. Interleaf edges of adjacent sections. Ensure that the upper surface of adjoining geocell sections are flush at the joint and adjoining cells are fully anchored. Anchor with specified anchors in prescribed pattern throughout the slope surface.

C. Placement of Infill.
1. Place infill in expanded cells with suitable material handling equipment, such as a backhoe, front-end loader, conveyor, or crane mounted skip. Limit drop height to a maximum of 1 m (3 ft). Avoid displacement of the geocell sections by infilling from crest to toe of slope.

2. Overfill and compact infill in accordance with consistency of material and cell depth as follows:
   a. For geocell slopes with Aggregate for Crushed Stone Surface or Dirty Borrow infill, overfill the cells approximately 1 INCH and compact with a plate tamper or backhoe bucket. Remove loose surface material so infill is flush with top edges of cells.

614.05 Delivery Storage and Handling

A. Delivery. Deliver material to site in manufacturer's original unopened containers and packaging, with labels clearly identifying product name and manufacture.

B. Storage. Store materials in accordance with the manufacturer's instructions. Store material out of direct sunlight.

C. Handling. Protect materials during handling and installation to prevent damage.

614.06 Method of Measurement
The Geocell Confinement System measurement will be by the square foot of material installed.

614.07 Basis of Payment
The Geocell Confinement System will be paid for at the Contract unit price per square foot which shall be full compensation for all labor and materials, including the geocell sections, anchoring components, granular borrow, infill, and surface treatments. The unit price shall be full compensation for subgrade preparation, and placing and compacting Granular Borrow to the subgrade.

Pay Item		Pay Unit
620.604	Geocell Confinement System for Slope Protection	Square meter (square foot)

SPECIAL PROVISION
SECTION 635
PREFABRICATED GRAVITY RETAINING WALL
(Prefabricated Concrete Block Gravity Wall)

Description This work shall consist of the design and construction of a prefabricated concrete block gravity wall in accordance with these specifications and in reasonably close conformance with the lines and grades shown on the plans, or established by the Resident. Blocks shall be made of wet cast concrete made from Portland cement, water, chemical admixtures, and aggregates.

Included in the scope of the prefabricated gravity wall construction are: geotechnical design of any wall with a maximum height greater than 1.37 meters [4.5 ft] or as specified on the wall detail sheet, all grading necessary for wall construction, compaction of the wall foundation soil, backfill, piped drainage, construction of leveling pads, and block wall installation.

The prefabricated gravity wall design shall follow the general dimensions of the wall envelope shown in the contract plans. The minimum wall embedment shall be at or below the elevation shown on the plans or as specified by the designer. The top of the upper row of blocks shall be at or above the top of the face elevation shown on the plans.

The Contractor shall require the design-supplier to supply an on-site, qualified experienced technical representative to advise the Contractor concerning proper installation procedures. The technical representative shall be on-site during initial stages of installation and thereafter shall remain available for consultation as necessary for the Contractor or as required by the Resident. The work done by this representative is incidental to the construction of the wall.

MATERIALS

Materials Materials shall meet the requirements of the following sections of Division 700:

Underdrain Backfill Type C	703.22
Gravel Borrow	703.20
Underdrain Pipe	706.06 or 706.09
Reinforcing Steel	709.01

The Contractor is cautioned that all of the materials listed are not required for every prefabricated concrete block gravity wall. The Contractor shall furnish the Resident a Certificate of Compliance certifying that the applicable materials comply with this section of the specifications. Materials shall meet the following additional requirements:

Concrete Units Materials shall conform to the requirements of Section 502 Structural Concrete Class A except that the requirements for Chloride Permeability shall not apply

A. The minimum 28 day compressive strength requirement shall be 30 MPa [4350 psi] for any individual unit and 31.7 MPa [4600 psi] for the average of 3 units

B. Unit Depth - 1040 mm [41 in], minimum for an unreinforced wall, or 710 mm [28 in] minimum for a geogrid reinforced wall.

C. Unit Width - 1160 mm [46 in], minimum at the face

D. Unit Height - 450 mm [18 in], minimum at the face for a standard block

E. Tolerances - formed dimensions shall not vary more than 2 mm [1/16"] from the Manufacturer's published tolerances.

F. Face Texture - formed finish on all exposed surfaces.

G. Color - pigment shall be added during the casting process of the concrete unit to achieve a consistent shade of gray or other color as determined by the Resident.

H. Imperfections - All units shall be sound and free of cracks or other defects that would interfere with the proper placing of each unit or significantly impair the strength or performance of the construction. Minor cracks (e.g. no greater than 0.5 mm [0.02 in] in width and no longer than 25% of the unit height) incidental to the method of manufacture or minor chipping resultant from shipment and delivery, are not grounds for rejection.

Exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 3 meters [10 ft] under diffused lighting.

I. Other Constituents – Air entraining agents, coloring pigments, integral water repellents, pozzolans, and other constituents shall be previously established as suitable for use in Class A concrete and shall conform to applicable AASHTO standards or, shall be shown by test or experience to be not detrimental to the appearance or durability of the concrete units or any material customarily used in retaining wall construction.

J. Other Units – end blocks, steps, caps and other wall units shall be supplied by the same supplier as the block units and cast in strict accordance with manufacturer's requirements and with Sections A through I above.

<u>Geogrid Reinforcing</u> The structural geogrid reinforcing shall meet the following requirements:

A. The geogrids shall be a regular polymeric grid structure of select high density polyethylene (HDPE), polypropylene (PP), or polyester (PET) resin manufactured by Tensar, Huesker, Strata Systems, Mirafi, or approved equal.

B. The geogrid shall conform to the following criteria:
   B1. PP and HDPE: Min. retained strength of 70 % after 150 hours, per ASTM D-4355.
   B2. HDPE: Grade = E-4, E-5, E-8, E-9, E-10, E-11, J-3, J-4, J-5, P-24, or P-34, per ASTM D-1248.

B3. PET: Molecular weight (Mn) > 25,000 g/mole, Inherent Viscosity Method per ASTM D-4603, with Correlation or Determined Directly Using Gel Permeation Chromatography.

B4. PET: Carboxyl end group (CEG) < 30 meg/kg, GRI:GG7

B5. All polymers: Minimum Weight per Unit Area of 270 g/m^2, per ASTM D-5261

B6. A default total reduction factor for creep, durability, and installation damage of 7 may be used in design, provided the criteria of B2 through B5 are satisfied and B1 is adjusted to 70% after 500 hours is satisfied.

C. The Long Term Tensile Strength (T_{al}) of the geogrid shall be determined by reducing the Ultimate Strength (T_u), as determined using ASTM 4595 or GRI:GG1, by the product of the reduction factors for durability, installation damage, and creep, denoted RF_D, RF_{ID}, and, RF_{CR}, respectively. The required tests used to determine the reduction factors, minimum value to be used in design if test value is less than minimum, and maximum value to be used in design in the absence of test data are summarized below.

Reduction Factor	Test	Minimum/Maximum
Durability (RF_D)	HDPE and PP: ASTM D4355 PET: GRI:GG7	1.1 / 2.0
Installation Damage(RF_{ID})	Site installation damaged tests, similar to ASTM D-5818	1.1 / 3.0
Creep(RF_{CR})	ASTM D-5262	HDPE = 2.5/5.0 PP = 4.0/5.0 PET = 2.0/2.5

D. The pullout resistance factors, F* and α, used in pullout design, shall be determined for the proposed reinforcement and wall system, with soil similar to the specified backfill material of this Section. The pullout resistance factors shall be determined in accordance with Appendix A of FHWA SA-96-071 "Mechanical Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines." In the absence of test data, empirical relationships may be used to determine the pullout resistance factors, any empirical relationships used in design shall be referenced in the design calculations.

E. Long-term connection strength between the geogrid reinforcement and the modular blocks shall be checked, per AASHTO-Standard Specifications for Highway Bridges, Section 5.8.

F. The Contractor shall submit a Manufacturer's Certificate, which shall state that the furnished geogrid(s) meets the requirements of this Section, as evaluated by the manufacturer's quality control program. Included with the certificates, shall be the design parameters and required properties referenced in this Section. The certificates shall be attested to by a person having legal authority to bond the manufacturer. In case of dispute over validity of values, the Resident can require the Contractor to supply test data from a Department approved laboratory to support the certified values submitted.

Geogrid Connection Reinforcing bar used in the geogrid connection shall be 13 mm [½"] diameter epoxy coated reinforcing bar, coated on the ends and meeting the requirements of Section 503, Reinforcing Steel. Installation shall be in accordance with manufacturer's recommendations.

Concrete Leveling Pad Concrete for leveling pads shall be Fill Concrete conforming to the requirements of Section 502 Structural Concrete. Unless otherwise specified, concrete for leveling pads shall be accepted under Method "C" requirements.

Reinforced and Select Backfill Material Reinforced and select backfill material placed behind the concrete units shall be Gravel Borrow conforming to the requirements of Section 703.20. Material between blocks must be gravel borrow as above or crushed stone meeting the requirements of Section 703.12. If Gravel Borrow is used between blocks, geotextile shall be placed behind vertical joints to prevent loss of granular material between blocks. Compliance with the gradation requirements shall be the responsibility of the Contractor, who shall furnish a copy of the backfill test results prior to construction. If crushed stone is used between blocks no geotextile is required behind vertical joints.

Materials Certificate Letter The Contractor, or the supplier as his agent, shall furnish the Resident a Materials Certificate Letter for the above materials, including the backfill material, in accordance with Section 700 of the Standard Specifications. A copy of all test results performed by the Contractor or his supplier necessary to assure contract compliance shall also be furnished to the Resident. The Resident will base acceptance upon the materials Certificate Letter, accompanying test reports, and visual inspection.

DESIGN REQUIREMENTS

Design Requirements The Prefabricated Concrete Block Gravity Wall shall be designed by a Professional Engineer registered in the State of Maine. The design to be performed by the wall system supplier shall be in accordance with AASHTO Standard Specifications for Highway Bridges, current edition, except as required herein. Thirty days prior to beginning construction of the wall, the design computations shall be submitted to the Resident for review by the Project Geotechnical Engineer. The design by the wall system supplier shall consider the stability of the wall as outlined below:

(a) Safety Factors. The minimum factors of safety shall be as follows:

1. Overturning:	2.0
2. Sliding:	1.5
3. Stability of temporary construction slope:	1.2
4. Ultimate bearing capacity:	2.0
5. Reinforcement pullout	1.5
6. Reinforcement rupture	1.5
7. Reinforcement connection failure	2.0

(b) Backfill Soil Parameters. For overturning and sliding stability calculations, earth pressure shall be assumed acting on a vertical plane dropping from the back of the highest block or geogrid. Stability shall also be calculated at each level within the wall.

These unit weights and friction angles are based on a backfill meeting the requirements for select backfill in this specification. Backfill behind the concrete units and reinforced fill zone shall be assumed to have a unit weight of 1922 kg/m^3 [120 pcf] and a friction angle of 30 degrees. The friction angle of the foundation soils shall be assumed to be 30 degrees unless otherwise noted on the plans. The friction angle of the select backfill used in the reinforced fill zone for internal stability design of the wall shall be assumed to be 34° unless noted otherwise on the plans.

(d) External loads which affect the internal stability such as those applied through traffic, slope surcharge, hydrostatic and seismic loads shall be accounted for in the design.

(e) The actual applied bearing pressures under the prefabricated concrete block gravity wall shall be clearly indicated on the design drawings.

(f) Stability During Construction. The factors of safety to be used for stability during construction stages shall be the same factors used for the design of the wall.

(g) Hydrostatic Forces. Unless specified otherwise, when a design high water surface is shown on the plans at the face of the wall, the design stresses calculated from that elevation to the bottom of wall must include a 0.9 meter [3 ft] minimum differential head of saturated backfill.

(h) Design Life. Design life shall be in accordance with AASHTO requirements.

(i) Depth of Embedment. The depth of embedment for frost protection and stability shall be as shown on the plans supplied by the designer.

(j) Drainage System. Piped drainage shall be designed to collect and dispose of water from the base of the reinforced soil zone and backfill soil. This shall outlet into surrounding drainage systems or ditches.

(k) The design shall provide for end blocks, cap blocks, or other concrete units necessary to give the wall a finished appearance.

Submittals The Contractor shall supply wall design computations, wall details, dimensions, quantities, and cross sections necessary to construct the wall. Thirty days prior to beginning construction of the wall, the design computations and wall details shall be submitted to the Resident for review by the Project Geotechnical Engineer. Mix design information shall be submitted including aggregate source, current gradation, aggregate quality information and concrete unit weight. If geotechnical design is required, the fully detailed plans shall be prepared in conformance with Section 105.7 of the Standard Specifications and shall include, but not be limited to the following items:

I. A plan and elevation sheet or sheets for each wall, containing the following: elevations at the top of leveling pads, the distance along the face of the wall to all steps in the leveling pads, the location of the original and final ground line.
II. All details for foundations and leveling pads, including details for steps in the leveling pads, as well as allowable and actual maximum bearing pressures shall be provided.
III. The wall plans shall be prepared and stamped by a Professional Engineer. Four sets of design drawings and detail design computations shall be submitted to the Resident for review by the Project Geotechnical Engineer.
IV. Prior to the beginning of construction, the contractor shall supply the Resident with two copies of the design-supplier's Installation Manual. In addition, the Contractor shall have two copies of the Installation Manual on the project site.

CONSTRUCTION REQUIREMENTS

Excavation The excavation and use as fill disposal of all excavated material shall meet the requirements of Section 203 -- Excavation and Embankment, except as modified herein.

Foundation The area upon which the prefabricated block gravity wall structure is to rest, and within the limits shown on the submitted plans, shall be graded for a width equal to, or exceeding, the length of the blocks. Prior to wall and leveling pad construction, this foundation material shall be compacted to at least 95 percent of maximum laboratory dry density. Frozen and unsuitable soil shall be removed and replaced with gravel borrow compacted to 95% of T-180.

A concrete leveling pad shall be constructed as indicated on the plans. Dimensions may be modified per the wall supplier's recommendations, with written approval of the Project Geotechnical Engineer. The leveling pad shall be cast to the design elevations as shown on the plans, or as required by the wall supplier upon written approval of the Project Geotechnical Engineer. Allowable elevation tolerances are +3 mm [+0.01 foot] and -6 mm [-0.02 foot] from the design elevations. Leveling pads which do not meet this requirement shall be repaired or replaced as directed by the Resident at no additional cost to the Department. Placement of wall units may begin after the strength of the concrete leveling pad reaches 6900 kPa [1000 psi] or is adequate to support the proposed loads. Contractor may begin placement of concrete block units after 12 hours at his own risk.

Method and Equipment Prior to erection of the prefabricated concrete block wall, the Contractor shall furnish the Resident with detailed information concerning the proposed construction method and equipment to be used. The erection procedure shall be in accordance with the manufacturer's instructions. Any units that are damaged due to handling will be replaced at the Contractor's expense.

Installation of Wall Units A field representative from the wall system being used shall be available, as needed, during the erection of the wall. The services of the representative shall be at no additional cost to the project. Horizontal joint fillers shall be installed as needed.

The maximum offset in any unit horizontal joint shall be 6.5 mm [1/4 in]. The prefabricated wall blocks shall be installed to a tolerance of plus or minus 20 mm in 3 m [3/4 inch in 10 ft] in vertical alignment and horizontal alignment.

Select Backfill Placement Backfill placement shall closely follow the erection of each row of prefabricated wall units. The Contractor shall decrease the lift thickness if necessary to obtain the specified density. The maximum lift thickness shall be 200 mm [8 in] loose. Gravel borrow backfill shall be compacted in accordance with Section 203.12 except that the minimum required compaction shall be 95 percent of maximum density as determined by AASHTO T99 Method C or D. Backfill compaction shall be accomplished without disturbance or displacement of the wall blocks. Sheepsfoot rollers will not be allowed. Whenever a compaction test fails, no additional backfill shall be placed over the area until the lift is recompacted and a passing test achieved.

The moisture content of the backfill material prior to and during compaction shall be uniform throughout each layer. Backfill material shall have a placement moisture content less than or equal to the optimum moisture content. Backfill material with a placement moisture content in excess of the optimum moisture content shall be removed and reworked until the moisture content is uniform and acceptable throughout the entire lift. The optimum moisture content shall be determined in accordance with AASHTO T99, Method C or D. At the end of the day's operations, the Contractor shall shape the last level of backfill so as to direct runoff of rain water away from the wall face.

Method of Measurement Prefabricated Modular Gravity Wall will be measured by the square meter of front surface not to exceed the dimensions shown on the contract plans unless authorized by the Resident. Vertical and horizontal dimensions will be from the edges of the blocks. No field measurements for computations will be made unless the Resident specifies, in writing, a change in the limits indicated on the plans.

Basis of Payment The accepted quantity of Prefabricated Modular Gravity Retaining Wall will be paid for at the contract unit price per square meter complete in place. Payment shall be full compensation for furnishing geotechnical design as required, all labor, equipment and materials including all precast concrete units, hardware, joint fillers, woven geotextile, geogrid and steel, drainage pipe, and technical field representative.

Cost of cast-in-place concrete for leveling pad will not be paid for separately, but will be considered incidental to the Prefabricated Modular Gravity Wall. Excavation, foundation material and backfill material will all be incidental to the Prefabricated Modular Gravity Wall.

There will be no allowance for excavating and backfilling for the Prefabricated Modular Gravity Wall beyond the limits shown on the approved submitted plans, except for excavation required to remove unsuitable subsoil in preparation for the foundation. Payment for excavating unsuitable subsoil shall be full compensation for all costs of pumping, drainage, sheeting, bracing and incidentals for proper execution of the work.

Payment will be made under:

Pay Item	Pay Unit
635.31 Prefabricated Concrete Block Gravity Wall	Square Meter(square foot)

Special Provision
Section 636
Mesh Faced Slope Stabilization System

1.0 GENERAL

1.1 Description: This work shall consist of designing, furnishing and installing a mesh faced slope stabilization system referred to in these specifications as a Geobrugg "TECCO" Slope Stabilization System (TSS). Stabilization of large rock blocks may be included under this Special Provision. The TSS shall be designed and constructed only if needed, and at locations as directed by the Resident. Work required for the TSS consists of the following: slope clearing and scaling as needed; installation of rock dowels of length and orientation as indicated in the design; application of fertilizer, seed and erosion control blanket; installation of geotextile turf reinforcement mat; installation of TECCO steel wire mesh and related materials, and attachment to rock dowels at specified pre-tensioned levels; and application of mulch and hydroseeding to wire mesh facing. The TECCO wire mesh and related materials are available from Geobrugg North America, LLC, New London CT, (860) 442-9945.

The contractor shall furnish all labor, materials and equipment required to complete the work.

1.2 Design Manuals: The installation of the TSS should follow the manufacturer's standards and requirements detailed in "The TECCO Slope Stabilization System Manual" by Fatzer AG, dated June 1, 2001. Rock dowel design and testing should follow guidelines presented in "Recommendations for Prestressed Rock and Soil Anchors" prepared by the Post Tensioning Institute, Third Edition, 1996.

1.3 Subsurface Information: Available information concerning subsurface soil, rock and groundwater conditions at TSS designated areas is presented in the "Report on Reconstruction of Route 2, P.I.N. #009184.30, Bethel/Gilead, Maine", December 2002. The Contractor shall be responsible for obtaining additional subsurface information required for design.

1.4 Existing Site Conditions: The Department shall verify all existing dimensions and site slope conditions where TSS is required. The Department is responsible for determining actual locations of all existing utilities shown on the plans and those utilities or underground obstructions not shown on the plans, that may impact or conflict with the TSS installations.

1.5 Design Requirements: The TSS shall be designed and stamped by a Registered Professional Engineer licensed in the State of Maine. The Engineer who stamps the design must have successfully completed at least three projects in the last three years involving design of similar stabilization systems. The System shall be designed to withstand static and dynamic forces generated from rocks or soil moving under the permanently installed system. Snow and ice loads must also be considered in the design.

The TSS Design Engineer or his qualified representative shall be required to provide special inspection services during TSS construction as described in Section 1.8.

1.6 Specialty Subcontractor Qualifications: The specialty subcontractor company and on-site superintendent responsible for slope clearing and cleaning, rock dowel installation and testing, and TECCO mesh installation must have successfully completed at least three projects within the last three years requiring the installation of rock dowels and tensioned wire mesh facing on mixed face (soil and rock) slopes of similar or greater height and similar or greater steepness as the TSS system required for this project

1.7 Pre-Construction Meeting: A pre-construction meeting shall be held prior to the start of the Work and shall be attended by the Resident, the TSS Design Engineer or his representative, any specialty Subcontractors, and the Contractor. The pre-construction meeting shall be conducted to clarify the construction requirements for the Work, to coordinate construction activities, and to identify contractual relationships and responsibilities.

1.8 Special Inspection: Special inspection shall be provided by the TSS Design Engineer or his representative for all rock dowel installations and testing, and for all TECCO mesh installations. The TSS Design Engineer or his representative shall have experience monitoring rock dowel installations and testing, and monitoring TECCO mesh installations. Accurate records documenting the TSS as-built construction shall be maintained by the Contractor and submitted to the Resident. The Contractor shall obtain as-built dowel locations and all other information as required by the Department's Geotechnical Engineer.

2.0 CONSTRUCTION SITE DRAINAGE

Any subsurface drainage features encountered during the excavation shall be brought to the immediate attention of the Resident. Work in these areas shall be suspended until remedial measures approved by the Resident are implemented by the contractor.

3.0 CONSTRUCTION METHODS AND SEQUENCE

A. The contractor is responsible for the construction means and methods and control of the process of the work associated with TSS construction including rock dowel installation and TECCO mesh installation. This includes the construction sequence, the safety of the workers, temporary handrails, work area access, barriers, and lifting of materials and construction equipment into and out of the work area.

B. The construction sequence shall be as shown on the plans, or in accordance with the approved TSS design drawings submitted by the TSS Design Engineer, unless approved otherwise by the Resident.

4.0 SUBMITTALS

4.1 TSS Designer Qualifications: Qualifications shall be submitted during construction within two weeks after the Resident determines a TSS system is required. Qualifications shall include a description of TSS Design Engineer's experience with design of completed projects involving similar materials, systems and stabilization requirements. For each project description include owners name, address and contact reference.

4.2 Specialty Subcontractor Qualifications: Qualifications shall be submitted during construction within two weeks after the Resident determines a TSS system is required. Qualifications shall be provided for the specialty subcontractor company and on-site superintendent responsible for slope clearing and scaling, rock dowel installation and testing, and TECCO mesh installation. A reference list shall be provided for the company and the on-site superintendent listing projects completed within the last three years requiring the installation of rock dowels and tensioned wire mesh facing on mixed face (soil and rock) slopes of similar or greater height and similar or greater steepness as the TSS system required for this project. A brief description of each project with the owner's name and current phone number shall be included.

4.3 TSS Design Documents: A minimum of two weeks before the start of installation, Contractor shall submit a proposed design including drawings, details, cross-sections, calculations, catalog cuts and other supporting materials as necessary to demonstrate that the design meets the requirements for this Special Provision for the following: talus block stabilization criteria; TSS rock dowel locations and spacing; rock dowel size, length, and orientation; rock dowel load capacity; TECCO wire mesh grade size; estimated material quantities, and installation sequence and schedule.

4.4 Permanent Rock Dowels: The following information concerning testing and installation of permanent rock dowels shall be submitted to the Resident:

A. The number and locations of dowels to be subjected to verification testing, and the Test Load to be used in testing.

B. Drilling methods and equipment including the drill rig type, proposed drillhole diameter, and method of cuttings removal to achieve the specified pullout resistances for dowels.

C. Grout mix design including brand and type of Portland Cement, source, gradation and quality of all aggregates, proportions of mix by weight and water-cement ratio, manufacturer and brand name of all admixtures.

D. Dowel grout placement procedures and equipment.

E. Dowel verification testing equipment including details of the jacking frame and appurtenant bracing, and methods of installing test dowels. Identification numbers and certified calibration records for each test jack and pressure gauge pair to be used. Calibration records shall include the date tested, device identification number, and the calibration test results and shall be certified for an accuracy of at least 2% of the applied certification loads by a qualified independent testing laboratory within 90 days prior to submittal.

F. Once available, certified mill test results for rock dowel bars from each heat, specifying the ultimate strength, elongation and composition.

G. Manufacturer certifications for the dowel centralizers, couplers and galvanizing.

4.5 TECCO Mesh System Materials. Prior to installation the contractor shall submit to Resident certifications stating the technical data of the Tecco wire mesh, compression claws, Tecco spike plates, and boundary ropes. As applicable, the certifications from the manufacturer shall include tensile strength, wire quality, mesh shape, corrosion protection, spike plate dimensions, and boundary rope breaking force.

4.6 Erosion Control Blanket. Prior to installation of the Erosion Control Blanket (ECB) the contractor shall submit to the Resident a certificate stating the name of the ECB manufacturer, product name, style, and other information from the manufacturer describing the ECB materials and properties.

4.7 Turf Reinforcement Mat. Prior to installation of the Turf Reinforcement Mat (TRM) the contractor shall submit to the Resident a certificate stating the name of the TRM manufacturer, product name, style, and other information from the manufacturer describing the TRM materials and properties.

4.8 Seed Mixture. The contractor shall submit a manufacturer's certificate of compliance for the seed mixture with each shipment of seed. The certificate shall contain guaranteed percentages of purity, weed content and germination of the seed, net weight and date of shipment.

5.0 CLEARING AND CLEANING OF SLOPE

A. The limits of clearing shall extend 3 meters (ten feet) outside the limits of the slope protection system or as approved by the Resident

B. . Trees shall be cut flush with ground surface so that the erosion control blanket beneath the TECCO mesh will be in contact with the ground. Stumps shall not protrude more than 150 mm (6 inches) above the ground surface. Crushed stone or soil fill may be required to level the surface around stumps as directed by the Resident.

C. Loose rocks and debris must be removed prior to installation of the slope stabilization mesh.

D. Methods of removal or stabilization-in-place of face protrusions (cobbles, boulders, talus blocks, rubble or other objects) to accomplish the construction shall be determined by the contractor. Contractor shall notify the Resident of the proposed method of removal or mitigation of face protrusions prior to initiation of the work. If stabilization - in-place is proposed, the contractor's TSS Design Engineer shall provide sketch details and calculations supporting the stability of the proposed mitigation method. Should removal of face protrusions result in voids beneath the mesh, contractor shall determine the appropriate method of backfilling based on field conditions. The proposed method shall be approved by the Resident.

6.0 PERMANENT ROCK DOWELS

6.1 Materials: Materials for construction shall be furnished new and without defects. Defective materials rejected by the Resident shall be removed by the Contractor. The materials for rock dowels shall consist of the following:

A. Dowel bars, nuts and plates shall conform to ASTM A615 or ASTM A722, grade 75 or higher. All dowel bars and end hardware shall be hot dipped galvanized conforming to ASTM A767. Bar couplers shall be hot dipped galvanized conforming to ASTM A767 and shall develop the ultimate tensile strength of the bars as certified by the manufacturer.

B. Centralizers shall be constructed of Schedule 40 PVC, shall be securely attached to the dowel bar, sized to position the dowel bar within 1 inch of the center of the drillhole, sized to allow tremie pipe insertion to the bottom of the drillhole, and sized to allow grout to flow freely up the drillhole

C. Dowel grout shall be a neat cement, with a minimum 3-day compressive strength of 1500 psi and a minimum 28-day compressive strength of 3000 psi per ASTM C109. Cement shall conform to ASTM C150, Type 1.

6.2 Material Handling and Storage:

A. Cement shall be adequately stored to prevent moisture degradation and partial hydration. Cement that has become caked or lumpy shall not be used. Aggregates shall be stored so that segregation and the inclusion of foreign materials are prevented. The bottom 150 mm (6 inches) of aggregate piles in contact with the ground shall not be used

B. All dowel bars shall be carefully handled and shall be stored on supports to keep the steel from contact with the ground. Steel bars shall be picked up in such a way as to

prevent overstressing. Damage to the steel or galvanized coating as a result of overstressing, abrasion, cuts, nicks, welds, and weld spatter shall be cause for rejection by the Resident. Grounding of welding leads to the dowel steel will not be allowed. Dowel steel shall be protected from and sufficiently free of dirt, rust and other deleterious substances prior to installation. Heavy corrosion or pitting of dowels shall be cause for rejection by the Resident. For damaged galvanized dowels, the coating shall be repaired in accordance with the manufacturer's recommendations

6.3 Dowel Installation:

A. Successful dowel capacity verification tests shall be performed as described in Section 6.6 prior to starting installation of production dowels.

B. Dowels shall be installed at the locations and to the lengths indicated on the plans and/or as directed by the Geotechnical Engineer or her agent during construction. The Geotechnical Engineer or her agent may add, eliminate, or relocate dowels to accommodate actual field conditions.

C. The Contractor shall select the drilling equipment and methods suitable for the ground conditions. The drillhole diameter shall be selected to provide the minimum specified grout cover over the dowel bar and to develop the specified pullout resistance. The Contractor shall use cased or augercast drilling methods to support the sides of the drillhole if caving conditions are encountered in the drillhole. Water, drilling mud or other fluids used to assist in cuttings removal shall not be allowed. Uncased drillholes shall be observed for cleanliness prior to insertion of the dowel

D. Dowel bars shall be inserted into the drillhole to the required length without difficulty and in such a manner as to prevent damage to the drillhole. Dowel bars that cannot be fully inserted to the design depth shall be removed from the drillhole and the drillhole shall be cleaned sufficiently to allow unobstructed installation of the bar.

E. The dowel shall be installed in a local depression with an approximate relative size shown on the drawings.

F. Bar couplers may be used as required.

6.4 Grouting:

A. Grout equipment shall produce a uniformly mixed grout free of lumpy and undispersed cement. A positive displacement grout pump shall be used. The pump shall be equipped with a pressure gauge that can measure at least twice but no more than three times the intended grout pressure. The grouting equipment shall be sized to enable the entire dowel to be grouted in one continuous operation. The mixer shall be capable of continuously agitating the grout during usage.

B. Grouting prior to insertion of the dowel bar may be allowed provided the dowel bar is less than 7.5 feet long, neat cement grout is used, a stabilized grout level is achieved (as described below), and the dowel bar is immediately inserted through the grout to the specified length without difficulty. No portion of the dowel hole shall be left open for more than 1 hour prior to grouting unless approved otherwise by the Resident. The grout shall be injected at the lowest point of each drillhole through a tremie pipe with the drillhole filled in one continuous operation. Grout pressures shall be controlled to prevent excessive ground heave or fracturing. Once the hole is full, the grout level shall be observed for five minutes. If the grout level does not drop by more than one inch in five minutes, insert the dowel. If the grout drops more than one inch, re-fill the hole to the level desired. If grout continues to drop for more than fifteen minutes, thicken grout mix as directed by the Resident. The dowel should only be inserted once the grout level has stabilized. If the grout has reached first set before the grout level has stabilized, the grout should be allowed to set and then the hole should be re-drilled at the direction of the Resident. The quantity of grout and grouting pressures shall be recorded for each dowel.

C. For dowels longer than 7.5 feet long the dowels shall be inserted prior to grouting and cement grout shall be placed using a 0.75 inch diameter polyethylene (or similar) permanent grout tube attached to the dowel. The grout tube shall have three openings cut into the lower 4.0 foot bond zone to allow free flow of grout. If the grout tube bottom opening becomes clogged, grout shall be placed by pumping grout into the grout tube.

D. A grout sock may be used to reduce grout loss as determined by the contractor based on drilling conditions encountered.

E. During casing removal for drill holes advanced by either cased or augercast methods, the grout surface within the casing shall be continually monitored for maintenance of "head" sufficient to offset the external groundwater/soil pressure.

F. Dowel grout shall be tested by a testing agency under contract with the Department in accordance with ASTM C109 at a frequency of no less than one test for every 50 cubic yards of grout placed and at a minimum frequency of every third grouting day.

G. The Resident shall verify that the contractor is using the approved grout mix on a daily basis. Any deviations from the approved mix will require additional testing.

6.5 Tolerances: The dowels shall not extend beyond the limits shown of the plans unless approved otherwise. Bars shall be centered within 1 inch of the center of the drillhole. Individual dowels shall be positioned no more than one foot from the design spacing shown on the plans. Dowel inclination shall be within plus or minus 3 degrees of that shown in the design. Dowels that encounter unanticipated obstructions during drilling shall be relocated by the contractor with the approval of the Geotechnical Engineer or her agent. Dowels that do not satisfy the specified tolerances due to the Contractor's installation methods shall be replaced to the Resident's satisfaction at no additional cost to the Department

6.6 Dowel Testing:

A. For each different method of dowel installation, two successful verification pullout tests shall be performed to verify the Contractor's installation methods, anchor pullout capacity, and design assumptions. The tests shall be performed prior to installation of production dowels at locations within the limits of work specified by the Resident. The dowels used for the verification tests shall be sacrificial and shall not be incorporated as production dowels. Dowel testing shall not be performed until the dowel grout has attained at least 50 percent of its specified 28-day compressive strength. All test data shall be recorded by the TSS Design Engineer or his representative, unless required otherwise by the Geotechnical Engineer.

B. Testing equipment shall include two dial gauges, a dial gauge support, jack and pressure gauge, a load cell and a reaction frame. A minimum of two dial gauges capable of measuring to 0.001 inch shall be available at the site to measure the anchor movement. The dial gauges shall have a minimum travel sufficient to allow the test to be performed without re-setting the dial gauge. The dial gauges shall be aligned within 5° of the axis of the dowel and shall be supported independent of the jacking set-up and the soil. A hydraulic jack, pressure gauge, and pump shall be used to apply and measure the test load. Test set-up shall be as approved by the Resident.

C. The jack and pressure gauge shall be calibrated by an independent test laboratory as a unit. The pressure gauge shall be graduated in 100 psi increments or less. The jack shall be capable of tensioning dowel bars to 80 percent of the guaranteed ultimate tensile strength of the bars within the rated pressure capacity of the pumping units, unless approved otherwise by the Resident.

D. The jack shall be independently supported and centered over the anchor dowel so that the dowel does not carry the weight of the jack. The stressing equipment shall be placed over the dowel in such a manner that the jack, bearing plates, and stressing anchorage are in alignment. The jack shall be positioned at the beginning of the test such that unloading and repositioning of the jack will not be required during the test. The contractor will be required to provide a bearing pad for each test. The bearing pad shall be constructed to a size and thickness that will prevent failure of the pad or movement of the test jack or bearing plate

E. Details of the verification testing arrangement including the method of distributing test load pressures to the excavation surface or reaction frame, test dowel bar size, grouted hole diameter and reaction plate dimensioning shall be developed by the Contractor and submitted to the Resident for approval. The test dowels shall be constructed using the same equipment, methods, and hole diameter as planned for the production dowels. Changes in the drilling or installation method may require additional dowel testing as determined by the Resident; and such testing shall be provided at no additional cost to the Department.

F. Test dowels shall have both bonded and unbonded lengths. Prior to testing, only the bonded length of the test dowel shall be grouted. The unbonded length of the test dowel shall be at least 2 feet unless approved otherwise by the Resident. The bond length shall be determined by the TSS Design Engineer based on the design pullout load for the dowels and the design bond stress indicated in the TSS design documents. The test load (TL) shall not exceed 1.33 times the design load (DL) and shall not exceed 80 percent of the guaranteed ultimate tensile strength for the bar.

G. Verification test dowels shall be cyclically and incrementally loaded and unloaded in accordance with the schedule shown below. The load shall be decreased to the alignment load (AL) after each cycle maximum, and the movement of each successive alignment load step shall be recorded. At each load increment, the total movement of the pulling head shall be recorded to the nearest 0.001 inch with respect to an independent fixed reference point. The load shall be held at each increment just long enough to obtain the movement reading but no longer than 1 minute. Movement readings at the maximum test load (1.33 DL) shall be taken at 1, 2, 3, 4, 5, 6 and 10 minutes to measure creep rate. If the total creep movement between 1 and 10 minutes exceeds 0.040 inch, the test load shall be maintained for an additional 50 minutes. Total movements shall then be recorded at 20, 30, 40, 50 and 60 minutes from the start of the test load hold time.

Load	Movement Measurement
AL	
0.25 DL	X
AL	X
0.25 DL	
0.50 DL	X
AL	X
0.25 DL	
0.50 DL	
0.75 DL	X
AL	X
0.25 DL	
0.50 DL	
0.75 DL	
1.00 DL	X
AL	X
0.25 DL	
0.50 DL	
0.75 DL	
1.00 DL	
1.20 DL	X
AL	X
0.25 DL	

0.50 DL		
0.75 DL		
1.00 DL		
1.20 DL		
1.33 DL	X	Test Load start
	X	Test Load at final hold
AL	X	

H. The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 0.25 DL. During load hold periods, the dowel load shall not be allowed to deviate from the test pressure by more than 50 pounds per square inch. The load should be returned to the load at the cycle maximum load prior to taking the movement reading at the cycle interval.

I. A test dowel shall be considered acceptable when:

1. A creep rate is observed to be less than 0.04 inches per log cycle of time between the 1 and 10 minute reading or, if exceeded, less than 0.080 inches per log cycle of time between the 6 and 60 minute readings. and the rate is linear or decreasing at the end of the creep test load hold period.
2. The total movement at the test load exceeds 80 percent of the theoretical elongation of the unbonded length (plus jack length), and is less than 100 percent of the theoretical elongation of the unbonded length (plus jack length) plus 50 percent of the bonded length.
3. A pullout failure does not occur during testing. Pullout failure is defined as the load at which attempts to increase the test load simply result in continued pullout movement of the test dowel.

J. The TSS Design Engineer shall evaluate the results of each verification test and submit a test results summary to the Resident. Dowel installation methods that do not satisfy the dowel testing requirements shall be considered inadequate. The contractor shall propose alternative methods and install replacement verification test dowels.

7.0 SEEDING AND FERTILIZING

A. Fertilizer, lime and seed shall be placed prior to installation of the erosion control blanket and turf reinforcement mat described in Section 8.0 of this Specification.

B. Seeding mixture, fertilizer type, and placement requirements shall be as directed by the project Landscape Architect. Seeding should be done before ground is frozen or average daily temperature is below 0° C (32° F).

8.0 EROSION CONTROL BLANKET AND TURF REINFORCEMENT MAT

A. Erosion control geotextile materials shall be placed between the soil surface and the TECCO wire mesh to prevent soil erosion during the period grass vegetation is established, and to provide a stable environment for seed germination and growth. Erosion control blankets (coconut fiber mats) shall be used at slope areas where groundwater seepage is present and where fine grained soil materials are present that will not be protected from erosion with a turf reinforcement mat alone. A turf reinforcement mat (TRM) shall be placed on all TSS slope areas overlying the erosion control blanket (ECB), if present, and prior to TECCO mesh installation, as shown on the design plans. A TRM will not be installed over rock outcrops. The ECB and TRM shall be specified by the TSS Design Engineer.

B. The ECB and TRM shall be stored and handled following the manufacturer's recommendation to prevent damage to the product.

C. Prior to ECB and TRM placement, remove large rocks, soil clods or vegetation and other objects that could prevent the ECB and TRM from establishing intimate contact with the soil subgrade.

D. Unroll ECB and TRM materials downslope overlapping adjacent rolls a minimum of 3 inches. Lay material loosely, maintaining direct contact with the soil subgrade.

E. The ECB and TRM materials shall be placed over, and penetrated by, the TECCO dowels such that the ECB and TRM are in contact with the ground and not sitting on top of the dowels. If necessary, a slit no longer than 1.25 inches may be made in the ECB and TRM to allow for placement of the ECM and TRM over the TECCO dowel.

F. Staple the ECB and TRM at a frequency and manner recommended by the manufacturer applicable to the project slope angle and soil conditions. The TECCO dowels and spike plate are an equivalent stapling system. If the manufacturer recommends staples at a higher frequency than the TECCO dowel system, contractor shall provide additional staples to ensure intimate contact with the subgrade while vegetation is establishing.

9.0 TECCO WIRE MESH

9.1 Materials:

A. TECCO alloyed, high-tensile steel wire mesh with a minimum tensile strength of 1770 N/mm^2 (256,000 psi) manufactured by Geobrugg shall be used. Wire mesh shall be provided with corrosion protection with zinc coating as specified by the manufacturer. Mesh size shall be determined by the TSS Design Engineer and indicated in the design documents.

B. Compression claws meeting manufacturer's specifications shall be used to fasten the wire meshes together. Compression claws shall be hot dipped galvanized for corrosion protection in accordance with manufacturer's requirements.

C. TECCO diamond shaped spike plates manufactured by Geobrugg shall be used to hold the mesh firmly against the soil. Spike plates shall be hot dipped galvanized for corrosion protection in accordance with manufacturer's requirements.

D. Boundary ropes shall be used if called for in the design. Boundary rope shall be steel wire rope with minimum breaking force and corrosion protection requirements as specified by the TSS Design Engineer in the design documents.

E. Miscellaneous Materials such as wire rope clips, thimbles or any other connectors needed for the design.

9.2 Installation:

A. The TECCO wire mesh shall be installed after placement of dowels and ECB/TRM materials, following the manufacturer's guidelines. The top and sides of the mesh shall be secured as recommended by the manufacturer. Horizontal and vertical connectors shall be as recommended by the manufacturer or designer.

B. Spike plates must fit well between the mesh and be pressed firmly in the ground.

C. Following installation of the spike plates, the nut should be tightened to the prestress level or tightening torque level required by the TSS Design Engineer using methods required by the manufacturer.

10.0 HYDROSEEDING AND MULCHING

Hydroseeding may be the preferred method of seed application and mulching for the project and should be assessed by the contractor and Resident at the time of construction. If selected, the hydroseeding process would occur after TECCO mesh installation is complete. If hydroseeding is not selected a mulch will need to be applied to the surface of the wire mesh and will need to be specified herein.

11.0 METHOD OF MEASUREMENT

The TECCO Slope Stabilization System Mesh Facing will be measured by the square meter (square yd). The facing shall include all wire mesh, spike plates, boundary ropes, connecting devices, erosion control blanket, turf reinforcement mat, fertilizer, seed, and mulch. The Dowels will be measured by the linear meter (foot) and will include any rock dowels and grouting that are installed as part of the TECCO Slope Stabilization System, and engineering monitoring by the TSS Design Engineer or his representative

during dowel installation and testing. No specific payment will be made for sacrificial dowels or for verification testing necessary for acceptance, which will be considered incidental to the Dowels.

Stabilization-in-place of large blocks or talus blocks shall include rock dowels installed specifically for this purpose, the dowel design by the TSS Design Engineer. Ring nets may also be required. The Dowels will be measured by the linear meter (foot) and will include any rock dowels and grouting that are installed as part of the large block stabilization system, and engineering monitoring by the TSS Design Engineer or his representative during dowel installation and testing. No specific payment will be made for sacrificial dowels or for verification testing necessary for acceptance, which will be considered incidental to the Dowels. Stabilization-in-place of large rock blocks will be measured by the length of dowel required, and by area of rock block to be stabilized in square meters (square feet) of ring net, if a ring net system is utilized.

12.0 BASIS OF PAYMENT

The accepted quantities of TECCO Slope Stabilization System will be paid for at the contract unit prices for Mesh Facing, and Dowels or Rock Bolts. Payment under these items will include all labor, equipment, earthwork, materials, and field tests. Engineering design and mobilization will be incidental to the cost of the Slope Stabilization System. **The quantities in the contract are estimates only. There will be no adjustment in the contract price for differences between the estimated and the actual quantities.** The Resident shall determine the location and extent of areas to receive Slope Stabilization System treatment. Dowel lengths will be as required in the design. Selection of large block removal or stabilization-in-place shall be determined by the Resident.

Pay Item		**Unit**
636.412	Slope Stabilization Mesh Facing	m^2 (ft^2)
504.908	Dowels or rock bolts	m (ft)
636.70	Large block stabilization ring net	m^2 (ft^2)

February 27, 2003
Supersedes December 10, 2002

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

Approaches Approach signing shall include the following signs as a minimum. Field conditions may warrant the use of additional signs as determined by the Resident.

Road Work Next x Miles
Road Work 500 Feet
End Road Work

Work Area At each work site, signs and channelizing devices shall be used as directed by the Resident. Signs include:

Road Work xxxx[1]
One Lane Road Ahead
Flagger Sign

Other typical signs include:

Be Prepared to Stop
Low Shoulder
Bump
Pavement Ends

The above lists of Approach signs and Work Area signs are representative of the contract requirements. Other sign legends may be required.

The Contractor shall conduct their operations in such a manner that the roadway will not be restricted to one lane for more than 800 m [2,500 ft] at each work area. Where more than one work area restricts traffic to one lane operation, these work areas shall be separated by at least 1.6 km [1 mile] of two way operation.

Temporary Centerline A temporary centerline shall be placed each day on all new pavement to be used by traffic. The temporary centerline, when specified of reflectorized traffic paint, shall conform to the standard marking patterns used for permanent markings.

Failure to apply a temporary centerline daily will result in suspension of paving until temporary markers are applied to all previously placed pavement.

[1] "Road Work Ahead" to be used in mobile operations and "Road Work xx ft" to be used in stationary operations as directed by the Resident.

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
(Traffic Control)

Failure by the contractor to follow the Contracts 652 Special Provisions and Standard Specification and/or The Manual on Uniform Traffic Control Devices (MUTCD) and/or The Contractors own Traffic Control Plan will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Departments Resident or any other representative of The Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Any reduction in payment under this Special Provision will be in addition to forfeiting payment of maintenance of traffic control devices for that day.

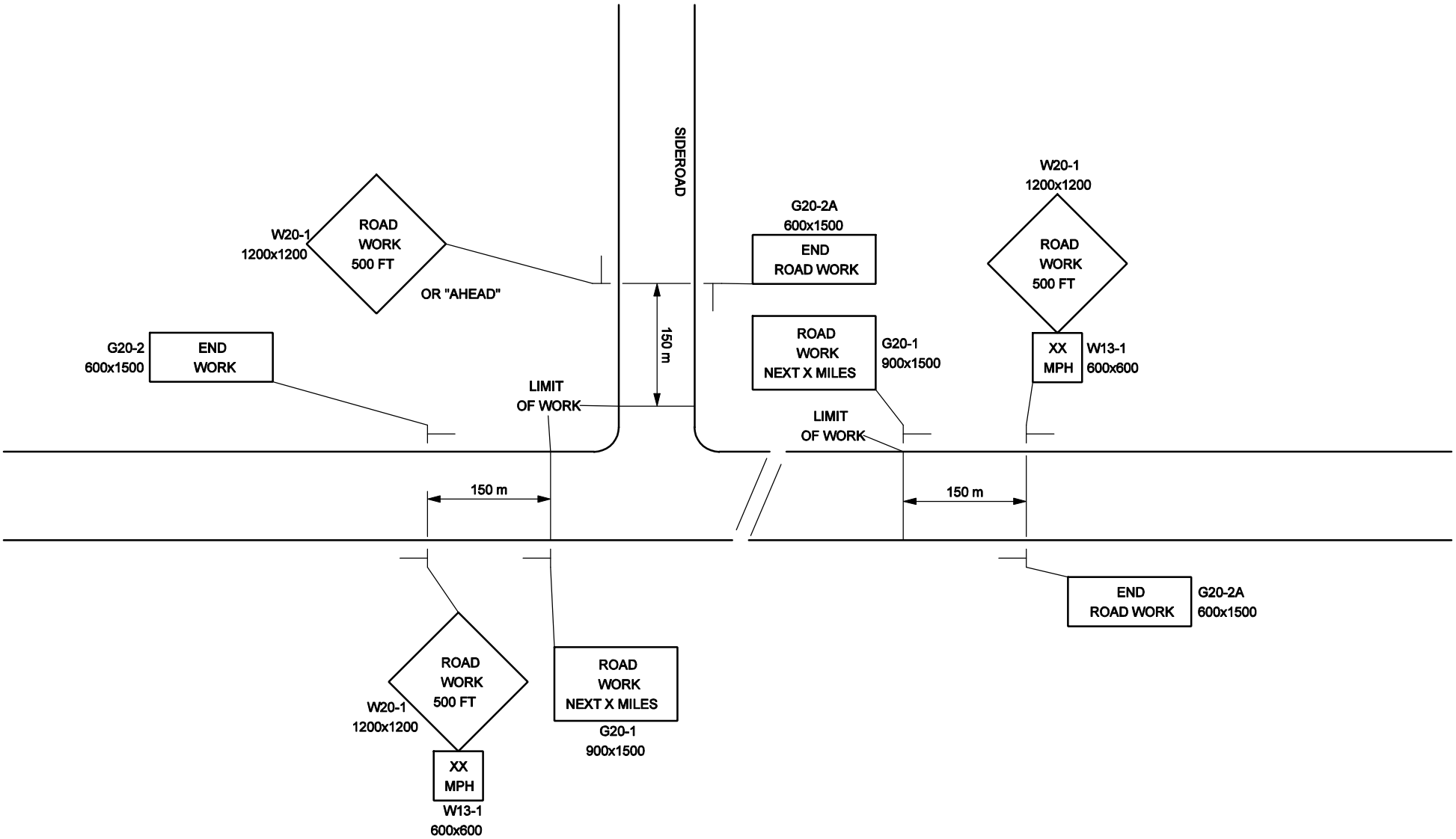
ORIGINAL CONTRACT AMOUNT

from	Up to and	Amount of Penalty
More Than	**Including**	**Damages per Violation**
$0	$100,000	$250
$100,000	$300,000	$500
$300,000	$500,000	$750
$500,000	$1,000,000	$1,500
$1,000,000	$2,000,000	$2,500
$2,000,000	$4,000,000	$5,000
$4,000,000	and more	$10,000

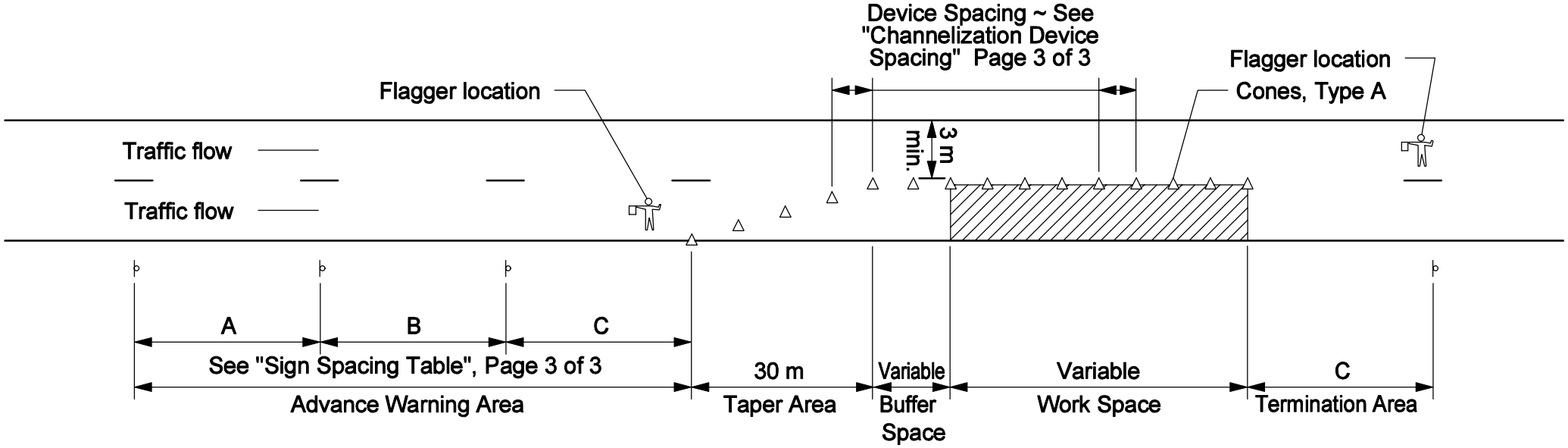
April 17, 2007
Supersedes May 10, 2006

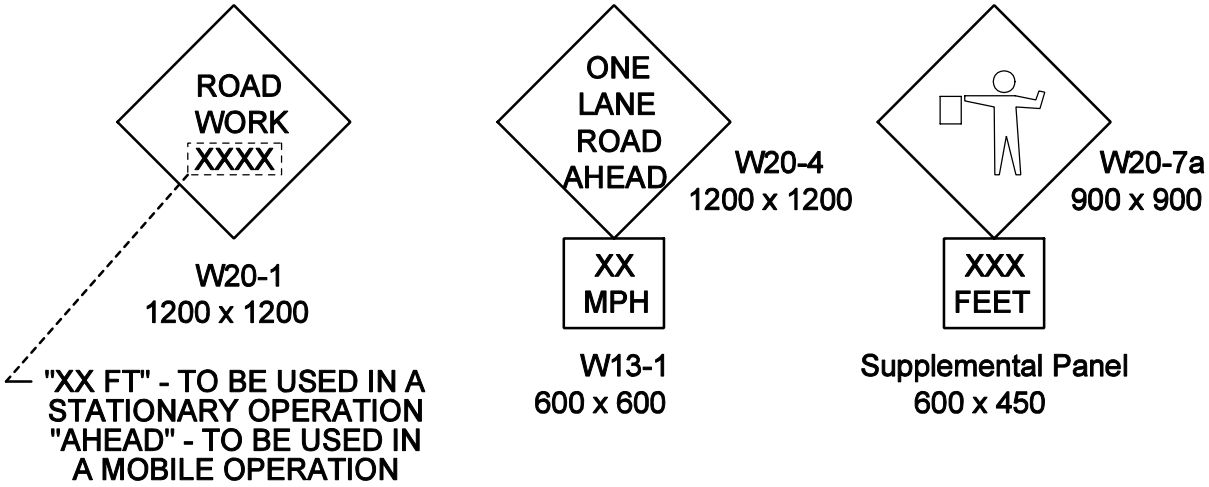
SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
Construction Sign Sheeting Material

Super high intensity fluorescent retroreflective sheeting, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic), is required for all construction signs.



TYPICAL
-- PROJECT APPROACH SIGNING --
TWO WAY TRAFFIC





TYPICAL APPLICATION: TWO - WAY, TWO LANE ROADWAY, CLOSING ONE LANE USING FLAGGERS

TYPE OF TAPER	TAPER LENGTH (L)*
Merging Taper	at least L
Shifting Taper	at least 0.5L
Shoulder Taper	at least 0.33L
One-Lane, Two-Way Traffic Taper	100 ft (30 m) maximum
Downstream Taper	100 ft (30 m) per lane

* Formulas for L are as follows:

For speed limits of 40 mph (60 km/h) or less:

$L = \frac{WS^2}{60}$ $\quad (L = \frac{WS^2}{155})$

For speed limits of 45 mph (70 km/h) or greater:

$L = WS$ $\quad (L = \frac{WS}{1.6})$

* Formulas for L are as follows:

A minimum of 5 channelization devices shall be used in the taper.

CHANNELIZATION DEVICE SPACING

The spacing of channelization devices shall not exceed a distance equal to 1.0 times the speed limit in mph when used for taper channelization, and a distance in feet of 2.0 times the speed limit in mph when used for tangent channelization.

SIGN SPACING TABLE			
Road Type	Distance Between Signs**		
	A	B	C
Urban 30 mph (50 km/h) or less	100 (30)	100 (30)	100 (30)
Urban 35 mph (55 km/h) and greater	350 (100)	350 (100)	350 (100)
Rural	500 (150)	500 (150)	500 (150)
Expressway / Urban Parkway	2,640 (800)	1,500 (450)	1000 (300)

**Distances are shown in feet (meters).

GENERAL NOTES;

1. Final placement of signs and devices may be changed to fit field conditions as approved by the Resident.

SUGGESTED BUFFER ZONE LENGTHS

Speed (mph)	Length (feet)	Speed (mph)	Length (feet)
20	115	40	325
25	155	45	360
30	200	50	425
35	250	55	495

Town: Bethel
PIN: 9184.30
Date: June 18, 2007

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

The following is added to Section 656 regarding Project Specific Information and Requirements. All references to the Maine Department of Transportation Best Management Practices for Erosion and Sediment Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The "Table of Contents" of the latest version is dated "1/19/00" (available at http://www.state.me.us/mdot/mainhtml/bmp/bmpjan2000.pdf.) **Procedures specified shall be according to the BMP Manual unless stated otherwise.**

Project Specific Information and Requirements

The following information and requirements apply specifically to this Project. The temporary soil erosion and water pollution control measures associated with this work shall be addressed in the SEWPCP.

1. This project is located within the upper portion of the Androscoggin River watershed. All tributaries along this stretch of the Androscoggin have been designated Class A, therefore this project is considered **SENSITIVE** in accordance with the BMP Manual. The Contractor's SEWPCP shall comply with Section II.B., Guidelines for Sensitive Waterbodies in the BMP Manual.
2. A preconstruction field review is mandatory for this project. The preconstruction field review shall take place before commencing any work that involves soil disturbance or potential impacts on water quality. The date and time shall be set by the Contractor in consultation with the Resident and ENV Water Quality Unit representative.
3. Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.
4. All disturbed ditches shall be stabilized by the end of each workday. Stabilization shall be maintained on a daily basis. Erosion control blanket shall be installed in the bottoms of all ditches except where a stone lining is planned. Seed shall be applied prior to the placement of the blanket.
5. Permanent slope stabilization measures shall be applied within one week of the last soil disturbance.
6. The Contractors SEWPCP shall address specifics associated with any in-stream work locations. Items to be addressed shall include the following; type and location of cofferdams and sedimentation basins, method of maintaining stream flow, and timing of work to comply with in-stream work windows.
7. Culvert inlet and outlet protection shall be installed within 48 hours of culvert installation, or prior to a storm event, whichever is sooner.
8. The SEWPCP shall describe the location and method of temporary erosion and sediment control for existing and proposed catch basins, outlet areas and culvert inlets and outlets.

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

9. Dust control items other than those under *Standard Specification, Section 637 – Dust Control*, if applicable, shall be included in the plan.
10. Permanent seeding shall be done in accordance with *Standard Specification, Section 618 - Seeding* unless the Contract states otherwise.
11. After November 1 the Contractor shall use winter stabilization methods, such as Erosion Control Mix as specified in *Standard Specification, Section 619 - Mulch*. If required, spring procedures for permanent stabilization shall also be described in the plan. Use of this product for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

NOTES:

1. Any and all references to "bark mulch" or "composted bark mix" shall be a reference to " Erosion Control Mix" in accordance with *Standard Specification, Section 619 - Mulch.*

February 12, 2007
Supersedes October 12, 2006

STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:
http://www.maine.gov/mdot/contractor-consultant-information/ss_standard_details_updates.php

Detail #	Description	Revision Date
504(15)	Diaphragms	12/30/02
507(04)	Steel Bridge Railing	2/05/03
526(33)	Concrete Transition Barrier	8/18/03
645(06)	H-Beam Posts – Highway Signing	7/21/04
645(09)	Installation of Type II Signs	7/21/04
626(09)	Electrical Junction Box for Traffic Signals and Lighting	2/25/05
604(01)	Catch Basins	11/16/05
604(05)	Type “A” & “B” Catch Basin Tops	11/16/05
604(06)	Type “C” Catch Basin Tops	11/16/05
604(07)	Manhole Top “D”	11/16/05
604(09)	Catch Basin Type “E”	11/16/05
606(02)	Multiple Mailbox Support	11/16/05
606(07)	Reflectorized Beam Guardrail Delineator Details	11/16/05
609(06)	Vertical Bridge Curb	11/16/05
504(23)	Hand-Hold Details	12/08/05
609(03)	Curb Type 3	6/27/06
609(07)	Curb Type 1	6/27/06
535(01)	Precast Superstructure - Shear Key	10/12/06
535(02)	Precast Superstructure - Curb Key & Drip Notch	10/12/06

535(03)	Precast Superstructure - Shear Key	10/12/06
535(04)	Precast Superstructure - Shear Key	10/12/06
535(05)	Precast Superstructure - Post Tensioning	10/12/06
535(06)	Precast Superstructure - Sections	10/12/06
535(07)	Precast Superstructure - Precast Slab & Box	10/12/06
535(08)	Precast Superstructure - Sections	10/12/06
535(09)	Precast Superstructure - Sections	10/12/06
535(10)	Precast Superstructure - Sections	10/12/06
535(11)	Precast Superstructure - Sections	10/12/06
535(12)	Precast Superstructure - Sections	10/12/06
535(13)	Precast Superstructure - Sections	10/12/06
535(14)	Precast Superstructure - Stirrups	10/12/06
535(15)	Precast Superstructure - Plan	10/12/06
535(16)	Precast Superstructure - Reinforcing	10/12/06
535(17)	Precast Superstructure - Notes	10/12/06
801(01)	Drives on Sidewalk Sections	2/06/07
801(02)	Drives on Non-Sidewalk Sections	2/06/07

SUPPLEMENTAL SPECIFICATION

(Corrections, Additions, & Revisions to Standard Specifications - Revision of December 2002)

SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions

Closeout Documentation Replace the sentence "A letter stating the amount….. DBE goals." with "DBE Goal Attainment Verification Form"

Add "Environmental Information Hazardous waste assessments, dredge material test results, boring logs, geophysical studies, and other records and reports of the environmental conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation."

Add "Fabrication Engineer The Department's representative responsible for Quality Assurance of pre-fabricated products that are produced off-site."

Geotechnical Information Replace with the following: "Boring logs, soil reports, geotechnical design reports, ground penetrating radar evaluations, seismic refraction studies, and other records of subsurface conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation."

SECTION 102
DELIVERY OF BIDS

102.7.1 Location and Time Add the following sentence "As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book."

102.11.1 Non-curable Bid Defects Replace E. with "E. The unit price and bid amount is not provided or a lump sum price is not provided or is illegible as determined by the Department."

SECTION 103
AWARD AND CONTRACTING

103.3.1 Notice and Information Gathering Change the first paragraph to read as follows: "After Bid Opening and as a condition for Award of a Contract, the Department may require an Apparent Successful Bidder to demonstrate to the Department's satisfaction that the Bidder is responsible and qualified to perform the Work."

SECTION 104
GENERAL RIGHTS AND RESPONSIBILITIES

104.3.14 Interpretation and Interpolation In the first sentence, change "…and Geotechnical Information." to "…Environmental Information, and Geotechnical Information."

Delete the entire Section 104.5.9 and replace with the following:

104.5.9 Landscape Subcontractors The Contractor shall retain only Landscape Subcontractors that are certified by the Department's Environmental Office Landscape Unit.

SECTION 105
GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

105.6.1 Department Provided Services The Department will provide the Contractor with the description and coordinates of vertical and horizontal control points, set by the Department, within the Project Limits, for full construction Projects and other Projects where survey control is necessary. For Projects of 1,500 feet in length, or less: The Department will provide three points. For Projects between 1,500 and 5,000 feet in length: The Department will provide one set of two points at each end of the Project. For Projects in excess of 5,000 feet in length, the Department will provide one set of two points at each end of the Project, plus one additional set of two points for each mile of Project length. For non-full construction Projects and other Projects where survey control is not necessary, the Department will not set any control points and, therefore, will not provide description and coordinates of any control points. Upon request of the Contractor, the Department will provide the Department's survey data management software and Survey Manual to the Contractor, or its survey Subcontractor, for the exclusive use on the Department's Projects.

105.6.2 Contractor Provided Services Utilizing the survey information and points provided by the Department, described in Subsection 105.6.1, Department Provided Services, the Contractor shall provide all additional survey layout necessary to complete the Work. This may include, but not be limited to, reestablishing all points provided by the Department, establishing additional control points, running axis lines, providing layout and maintenance of all other lines, grades, or points, and survey quality control to ensure conformance with the Contract. The Contractor is also responsible for providing construction centerline, or close reference points, for all Utility Facilities relocations and adjustments as necessary to complete the Work. When the Work is to connect with existing Structures, the Contractor shall verify all dimensions before proceeding with the Work. The Contractor shall employ or retain competent engineering and/or surveying personnel to fulfill these responsibilities.

The Contractor must notify the Department of any errors or inconsistencies regarding the data and layout provided by the Department as provided by Section 104.3.3 - Duty to Notify Department If Ambiguities Discovered.

105.6.2.1 Survey Quality Control The Contractor is responsible for all construction survey quality control. Construction survey quality control is generally defined as, first, performing initial field survey layout of the Work and, second, performing an independent check of the initial layout using independent survey data to assure the accuracy of the initial layout; additional iterations of checks may be required if significant discrepancies are discovered in this process. Construction survey layout quality control also requires written documentation of

the layout process such that the process can be followed and repeated, if necessary, by an independent survey crew.

105.6.3 Survey Quality Assurance It is the Department's prerogative to perform construction survey quality assurance. Construction survey quality assurance may, or may not, be performed by the Department. Construction survey quality assurance is generally defined as an independent check of the construction survey quality control. The construction survey quality assurance process may involve physically checking the Contractor's construction survey layout using independent survey data, or may simply involve reviewing the construction survey quality control written documentation. If the Department elects to physically check the Contractor's survey layout, the Contractor's designated surveyor may be required to be present. The Department will provide a minimum notice of 48 hours to the Contractor, whenever possible, if the Contractor's designated surveyor's presence is required. Any errors discovered through the quality assurance process shall be corrected by the Contractor, at no additional cost to the Department.

105.6.4 Boundary Markers The Contractor shall preserve and protect from damage all monuments or other points that mark the boundaries of the Right-of-Way or abutting parcels that are outside the area that must be disturbed to perform the Work. The Contractor indemnifies and holds harmless the Department from all claims to reestablish the former location of all such monuments or points including claims arising from 14 MRSA § 7554-A. For a related provision, see Section 104.3.11 - Responsibility for Property of Others.

SECTION 106
QUALITY

106.4.3 Testing Change the first sentence in paragraph three from "…maintain records of all inspections and tests." to "…maintain original documentation of all inspections, tests, and calculations used to generate reports."

106.6 Acceptance Add the following to paragraph 1 of A: "This includes Sections 401 - Hot Mix Asphalt, 402 - Pavement Smoothness, and 502 - Structural Concrete - Method A - Air Content."

Add the following to the beginning of paragraph 3 of A: "For pay factors based on Quality Level Analysis, and"

106.7.1 Standard Deviation Method Add the following to F: "Note: In cases where the mean of the values is equal to either the USL or the LSL, then the PWL will be 50 regardless of the computed value of s."

Add the following to H: "Method C Hot Mix Asphalt: PF = [55 + (Quality Level *0.5)] * 0.01"

SECTION 107
TIME

107.3.1 General Add the following: "If a Holiday occurs on a Sunday, the following Monday shall be considered a Holiday. Sunday or Holiday work must be approved by the Department,

except that the Contractor may work on Martin Luther King Day, President's Day, Patriot's Day, the Friday after Thanksgiving, and Columbus Day without the Department's approval."

107.7.2 Schedule of Liquidated Damages Replace the table of Liquidated Damages as follows:

From More Than	Up to and Including	Amount of Liquidated Damages per Calendar Day
$0	$100,000	$100
$100,000	$300,000	$200
$300,000	$500,000	$400
$500,000	$1,000,000	$575
$1,000,000	$2,000,000	$750
$2,000,000	$4,000,000	$900
$4,000,000	and more	$1,875

SECTION 108
PAYMENT

108.4 Payment for Materials Obtained and Stored First paragraph, second sentence, delete the words "…Delivered on or near the Work site at acceptable storage places."

SECTION 109
CHANGES

109.1.1 Changes Permitted Add the following to the end of the paragraph: "There will be no adjustment to Contract Time due to an increase or decrease in quantities, compared to those estimated, except as addressed through Contract Modification(s)."

109.1.2 Substantial Changes to Major Items Add the following to the end of the paragraph: "Contract Time adjustments may be made for substantial changes to Major Items when the change affects the Critical Path, as determined by the Department"

109.4.4 Investigation / Adjustment Third sentence, delete the words "subsections (A) - (E)"

109.5.1 Definitions - Types of Delays

B. Compensable Delay Replace (1) with the following; "a weather related Uncontrollable Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an Equitable Adjustment if the Project falls within the geographic boundaries prescribed under the disaster declaration."

109.7.2 Basis of Payment Replace with the following: "Equitable Adjustments will be established by mutual Agreement for compensable items listed in Section 109.7.3-Compensable Items, based upon Unit or Lump Sum Prices. If Agreement cannot be reached, the Contractor shall accept payment on a Force Account basis as provided in Section 109.7.5 - Force Account Work, as full and complete compensation for all Work relating to the Equitable Adjustment."

109.7.3 Compensable Items Replace with the following: "The Contractor is entitled to compensation for the following items, with respect to agreed upon Unit or Lump Sum Prices:

1. Labor expenses for non-salaried Workers and salaried foremen.

2. Costs for Materials.

3. A 15 % markup on the totals of Items 1 and 2 of this subsection 109.7.3 for home office overhead and profit of the Contractor, its Subcontractors and suppliers, and any lower tier Subcontractors or suppliers, with no mark-ups on mark-ups.

4. Cost for Equipment, based on Blue Book Rates or leased rates, as set forth in Section 109.7.5(C), or the Contractor's Actual Costs if determined by the Department to be lower.
5. Costs for extended job-site overhead.
6. Time.

7. Subcontractor quoted Work, as set forth below in Section 109.7.5 (F)."

109.7.5 Force Account Work

C. Equipment

Paragraph 2, delete sentence 1 which starts; "Equipment leased…."

Paragraph 6, change sentence 2 from "The Contractor may furnish…" to read "If requested by the Department, the Contractor will produce cost data to assist the Department in the establishment of such rental rate, including all records that are relevant to the Actual Costs including rental Receipts, acquisition costs, financing documents, lease Agreements, and maintenance and operational cost records."
Add the following paragraph; "Equipment leased by the Contractor for Force Account Work and actually used on the Project will be paid for at the actual invoice amount plus 10% markup for administrative costs."

Add the following section;

"F. Subcontractor Quoted Work When accomplishing Force Account Work that utilizes Subcontractors, the Contractor will be allowed a maximum markup of 5% for profit and overhead on the Subcontractor's portion of the Force Account Work."

SECTION 110
INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

110.2.3 Bonding for Landscape Establishment Period The Contractor shall provide a signed, valid, and enforceable Performance, Warranty, or Maintenance Bond complying with the Contract, to the Department at Final Acceptance.

The bond shall be in the full amount for all Pay Items for work pursuant to Sec 621, Landscape, payable to the "Treasurer - State of Maine," and on the Department's forms, on exact copies thereof, or on forms that do not contain any significant variations from the Department's forms as solely determined by the Department.

The Contractor shall pay all premiums and take all other actions necessary to keep said bond in effect for the duration of the Landscape Establishment Period described in Special Provision 621.0036 - Establishment Period. If the Surety becomes financially insolvent, ceases to be licensed or approved to do business in the State of Maine, or stops operating in the United States, the Contractor shall file new bonds complying with this Section within 10 Days of the date the Contractor is notified or becomes aware of such change.

All Bonds shall be procured from a company organized and operating in the United States, licensed or approved to do business in the State of Maine by the State of Maine Department of Business Regulation, Bureau of Insurance, and listed on the latest Federal Department of the Treasury listing for "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies."

By issuing a bond, the Surety agrees to be bound by all terms of the Contract, including those related to payment, time for performance, quality, warranties, and the Department's self-help remedy provided in Section 112.1 - Default to the same extent as if all terms of the Contract are contained in the bond(s).

Regarding claims related to any obligations covered by the bond, the Surety shall provide, within 60 Days of Receipt of written notice thereof, full payment of the entire claim or written notice of all bases upon which it is denying or contesting payment. Failure of the Surety to provide such notice within the 60-day period constitutes the Surety's waiver of any right to deny or contest payment and the Surety's acknowledgment that the claim is valid and undisputed.

SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS

202.02 Removing Buildings Make the following change to the last sentence in the final paragraph, change "…Code of Maine Regulations 401." to "…Department of Environmental Protection Maine Solid Waste Management Rules, 06-096 CMR Ch. 401, Landfill Siting, Design and Operation."

SECTION 203
EXCAVATION AND EMBANKMENT

203.01 Description Under b. Rock Excavation; add the following sentence: "The use of perchlorate is not allowed in blasting operations."

SECTION 502
STRUCTURAL CONCRETE

502.05 Composition and Proportioning; TABLE #1; NOTE #2; third sentence; Change "…alcohol based saline sealer…" to "alcohol based silane sealer…". Add NOTE #6 to Class S Concrete.

502.0502 Quality Assurance Method A - Rejection by Resident Change the first sentence to read: "For an individual sublot with test results failing to meet the criteria in Table #1, or if the calculated pay factor for Air Content is less than 0.80……"

502.0503 Quality Assurance Method B - Rejection by Resident Change the first sentence to read: "For material represented by a verification test with test results failing to meet the criteria in Table #1, the Department will……"

502.0505 Resolution of Disputed Acceptance Test Results Combine the second and third sentence to read: "Circumstances may arise, however, where the Department may ……"
502.10 Forms and False work

D. Removal of Forms and False work 1., First paragraph; first, second, and third sentence; replace "forms" with "forms and false work"

502.11 Placing Concrete

G. Concrete Wearing Surface and Structural Slabs on Precast Superstructures Last paragraph; third sentence; replace "The temperature of the concrete shall not exceed 24° C [75° F} at the time of placement." with "The temperature of the concrete shall not exceed 24° C [75° F} at the time the concrete is placed in its final position."

502.15 Curing Concrete First paragraph; replace the first sentence with the following; "All concrete surfaces shall be kept wet with clean, fresh water for a curing period of at least 7 days after concrete placing, with the exception of vertical surfaces as provided for in Section 502.10 (D) - Removal of Forms and False work."

Second paragraph; delete the first two sentences.

Third paragraph; delete the entire paragraph which starts "When the ambient temperature…."

Fourth paragraph; delete "approved" to now read "…continuously wet for the entire curing period…"

Fifth paragraph; second sentence; change "…as soon as it is possible to do so without damaging the concrete surface." to "…as soon as possible."

Seventh paragraph; first sentence; change "…until the end of the curing period." to "…until the end of the curing period, except as provided for in Section 502.10(D) - Removal of Forms and False work."

502.19 Basis of Payment First paragraph, second sentence; add "pier nose armor" to the list of items included in the contract price for concrete.

SECTION 503
REINFORCING STEEL

503.06 Placing and Fastening Change the second paragraph, first sentence from: "All tack welding shall be done in accordance with Section 504, Structural Steel." to "All tack welding shall be done in accordance with AWS D1.4 Structural Welding Code - Reinforcing Steel."

SECTION 504
STRUCTURAL STEEL

504.09 Facilities for Inspection Add the follow as the last paragraph: "Failure to comply with the above requirements will be consider to be a denial to allow access to work by the Contractor. The Department will reject any work done when access for inspection is denied."

504.18 Plates for Fabricated Members Change the second paragraph, first sentence from: "…ASTM A 898/A 898 M…" to "…ASTM A 898/A 898 M or ASTM A 435/A 435 M as applicable and…"

504.31 Shop Assembly Add the following as the last sentence: "The minimum assembly length shall include bearing centerlines of at least two substructure units."

504.64 Non Destructive Testing-Ancillary Bridge Products and Support Structures Change the third paragraph, first sentence from "One hundred percent…" to "Twenty five percent…"

SECTION 535
PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.02 Materials Change "Steel Strand for Concrete Reinforcement" to "Steel Strand." Add the following to the beginning of the third paragraph; "Concrete shall be Class P conforming to the requirements in this section. 28 day compressive strength shall be as stated on the plans. Coarse aggregate…."

535.05 Inspection Facilities Add the follow as the last paragraph: "If the above requirements are not met, the Contractor shall be considered to be in violation of Standard Specification 104.2.5 – Right to Inspect Work. All work occurring during a violation of this specification will be rejected."

535.26 Lateral Post-Tensioning Replace the first paragraph; "A final tension…" with "Overstressing strands for setting losses cannot be accomplished for chuck to chuck lengths of 7.6 m [25 ft] and less. In such instances, refer to the Plans for all materials and methods. Otherwise, post-tensioning shall be in accordance with PCI standards and shall provide the anchorage force noted in the Plans. The applied jacking force shall be no less than 100% of the design jacking force."

SECTION 603
PIPE CULVERTS AND STORM DRAINS

603.0311 Corrugated Polyethylene Pipe for Option III Replace the Minimum Mandrel Diameter Table with the following:

Nominal Size US Customary (in)	Minimum Mandrel Diameter (in)	Nominal Size Metric (mm)	Minimum Mandrel Diameter (mm)
12	11.23	300	280.73
15	14.04	375	350.91
18	16.84	450	421.09
24	22.46	600	561.45
30	28.07	750	701.81
36	33.69	900	842.18
42	39.30	1050	982.54
48	44.92	1200	1122.90

SECTION 604
MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

"Tops and Traps	712.07
Corrugated Metal Units	712.08
Catch Basin and Manhole Steps	712.09"

SECTION 605
UNDERDRAINS

605.05 Underdrain Outlets Make the following change:

In the first paragraph, second sentence, delete the words "metal pipe".

SECTION 606
GUARDRAIL

606.02 Materials Delete the entire paragraph which reads "The sole patented supplier of multiple mailbox…." and replace with "Acceptable multiple mailbox assemblies shall be listed on the Department's Approved Products List and shall be NCHRP 350 tested and approved."
Delete the entire paragraph which reads "Retroreflective beam guardrail delineators…." and replace with "Reflectorized sheeting for Guardrail Delineators shall meet the requirements of Section 719.01 - Reflective Sheeting. Delineators shall be fabricated from high-impact, ultraviolet and weather resistant thermoplastic.

606.09 Basis of Payment First paragraph; delete the second and third sentence in their entirety and replace with "Butterfly-type guardrail reflectorized delineators shall be mounted on all W-beam guardrail at an interval of every 10 posts [62.5 ft] on tangents sections and every 5 posts [31.25 ft] on curved sections as directed by the Resident. On divided highways, the delineators shall be yellow on the left hand side and silver/white on the right hand side. On two-way

roadways, the delineators shall be silver/white on the right hand side. All delineators shall have retroreflective sheeting applied to only the traffic facing side. Reflectorized guardrail delineators will not be paid for directly, but will be considered incidental to the guardrail items."

SECTION 609
CURB

609.04 Bituminous Curb f., Delete the requirement "Color Natural (White)"

SECTION 615
LOAM

615.02 Materials Make the following change:

Organic Content	Percent by Volume
Humus	"5% - 10%", as determined by Ignition Test

SECTION 618
SEEDING

618.01 Description Change the first sentence to read as follows: "This work shall consist of furnishing and applying seed ….." Also remove ",and cellulose fiber mulch" from 618.01(a).
618.03 Rates of Application In 618.03(a), remove the last sentence and replace with the following: "These rates shall apply to Seeding Method 2, 3, and Crown Vetch."

In 618.03(c) "1.8 kg [4 lb]/unit." to "1.95 kg [4 lb]/unit."

618.09 Construction Method In 618.09(a) 1, sentence two, replace "100 mm [4 in]" with "25 mm [1 in] (Method 1 areas) and 50 mm [2 in] (Method 2 areas)"

618.15 Temporary Seeding Change the Pay Unit from Unit to Kg [lb].

SECTION 620
GEOTEXTILES

620.03 Placement Section (c)
Title: Replace "Non-woven" in title with "Erosion Control".
First Paragraph: Replace first word "Non-woven" with "Woven monofilament".
Second Paragraph: Replace second word "Non-woven" with "Erosion Control".

620.07 Shipment, Storage, Protection and Repair of Fabric Section (a)
Replace the second sentence with the following: "Damaged geotextiles, as identified by the Resident, shall be repaired immediately."

620.09 Basis of Payment
Pay Item 620.58: Replace "Non-woven" with "Erosion Control"

Pay Item 620.59: Replace "Non-woven" with "Erosion Control"

SECTION 621
LANDSCAPING

621.0036 Establishment Period In paragraph 4 and 5, change "time of Final Acceptance" to "end of the period of establishment". In Paragraph 7, change "Final Acceptance date" to ""end of the period of establishment" and change "date of Final Acceptance" to "end of the period of establishment".

SECTION 626
HIGHWAY SIGNING

626.034 Concrete Foundations Add to the following to the end of the second paragraph: "Pre-cast and cast-in-place foundations shall be warranteed against leaning and corrosion for two years after the project is completed. If the lean is greater than 2 degrees from normal or the foundation is spalling within the first two years, the Contractor shall replace the foundation at no extra cost."

SECTION 627
PAVEMENT MARKINGS

627.10 Basis of Payment Add to the following to the end of the third paragraph: "If allowed by Special Provision, the Contractor may utilize Temporary Bi-Directional Yellow and White(As required) Delineators as temporary pavement marking lines and paid for at the contract lump sum price. Such payment will include as many applications as required and removal."

SECTION 637
DUST CONTROL

637.06 Basis of Payment Add the following after the second sentence of the third paragraph: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 637 and/or the Contractor's own Soil Erosion and Pollution Control Plan concerning Dust Control and/or the Contractor's own Traffic Control Plan concerning Dust Control and/or visible evidence of excessive dust problems, as determined by the Resident, will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Additional penalties may also be assessed in accordance with Special Provision 652 - Work Zone Traffic Control and Standard Specification 656 - Temporary Soil Erosion and Water Pollution Control."

SECTION 639
ENGINEERING FACILITIES

639.04 Field Offices Change the forth to last paragraph from: "The Contractor shall provide a fully functional desktop copier…" to "….desktop copier/scanner…"

SECTION 652
MAINTENANCE OF TRAFFIC

652.2.3 Flashing Arrow Board Delete the existing 5 paragraphs and replace with the following: Flashing Arrow Panels (FAP) must be of a type that has been submitted to AASHTO's National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels.

FAP units shall meet requirements of the current Manual on Uniform Traffic Control Devices (MUTCD) for Type "C" panels as described in Section 6F.56 - Temporary Traffic Control Devices. An FAP shall have matrix of a minimum of 15 low-glare, sealed beam, Par 46 elements capable of either flashing or sequential displays as well as the various operating modes as described in the MUTCD, Chapter 6-F. If an FAP consisting of a bulb matrix is used, each element should be recess-mounted or equipped with an upper hood of not less than 180 degrees. The color presented by the elements shall be yellow.

FAP elements shall be capable of at least a 50 percent dimming from full brilliance. Full brilliance should be used for daytime operation and the dimmed mode shall be used for nighttime operation. FAP shall be at least 2.4 M x 1.2 M [96" x 48"] and finished in non-reflective black. The FAP shall be interpretable for a distance not less than 1.6 km [1 mile].

Operating modes shall include, flashing arrow, sequential arrow, sequential chevron, flashing double arrow, and flashing caution. In the three arrow signals, the second light from the arrow point shall not operate.

The minimum element on-time shall be 50 percent for the flashing mode, with equal intervals of 25 percent for each sequential phase. The flashing rate shall be not less than 25 nor more than 40 flashes per minute. All on-board circuitry shall be solid state.

Primary power source shall be 12 volt solar with a battery back-up to provide continuous operation when failure of the primary power source occurs, up to 30 days with fully charged batteries. Batteries must be capable of being charged from an onboard 110 volt AC power source and the unit shall be equipped with a cable for this purpose.

Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.
The FAP shall be mounted on a pneumatic-tired trailer or other suitable support for hauling to various locations, as directed. The minimum mounting height of an arrow panel should be 2.1 M [7 feet] from the roadway to the bottom of the panel.

The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers.

A portable changeable message sign may be used to simulate an arrow panel display."

652.2.4 Other Devices Delete the last paragraph and add the following:
"652.2.5 Portable Changeable Message Sign Trailer mounted Portable Changeable Message Signs (PCMS) must be of a type that has been submitted to AASHTO's National

Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels. The PCMS unit shall meet or exceed the current specifications of the Manual on Uniform Traffic Control Devices (MUTCD), 6F.55.

The front face of the sign should be covered with a low-glare protective material. The color of the LED elements shall be amber on a black background. The PCMS should be visible from a distance of 0.8 km [0.5 mile] day and night and have a minimum 15º viewing angle. Characters must be legible from a distance of at least 200 M [650 feet].

The message panel should have adjustable display rates (minimum of 3 seconds per phase), so that the entire message can be read at least twice at the posted speed, the off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed. Each message shall consist of either one or two phases. A phase shall consist of up to eight characters per line. The unit must be capable of displaying at least three lines of text with eight characters per line. Each character shall be 457 mm [18"] high. Each character module shall use at least a five wide and seven high pixel matrix. The text of the messages shall not scroll or travel horizontally or vertically across the face of the sign.

Units shall automatically adjust their brightness under varying light conditions to maintain legibility.

The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Message must be changeable with either a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.

PCMS units shall have the capability of being made programmable by means of wireless communications. PCMS units shall also be fully capable of having an on-board radar system installed if required for a particular application.

PCMS' primary power source shall be solar with a battery back-up to provide continuous operation when failure of the primary power source occurs. Batteries must be capable of being charged from a 110 volt AC power source. The unit must also be capable of being operated solely from a 110 volt AC power source and be equipped with a cable for this purpose.

The PCMS shall be mounted on a trailer in such a way that the bottom of the message sign panel shall be a minimum of 2.1 M [7 ft] above the roadway in urban areas and 1.5 M [5 ft] above the roadway in rural areas when it is in the operating mode. PCMS trailers should be of a heavy duty type with a 51 mm [2"] ball hitch and a minimum of four leveling jacks (at each corner). The sign shall be capable of being rotated 360° relative to the trailer. The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers."

652.3.3 Submittal of Traffic Control Plan In item e. change "A list of all certified flaggers…" to "A list of all the Contractor's certified flaggers…"

In the last paragraph add the following as the second sentence: "The Department will review and provide comments to the Contractor within 14 days of receipt of the TCP."

652.3.5 Installation of Traffic Control Devices In the first paragraph, first sentence; change "Signs shall be erected…" to "Portable signs shall be erected.." In the third sentence; change "Signs must be erected so that the sign face…" to "Post-mounted signs must also be erected so that the sign face…"

652.4 Flaggers Replace the first paragraph with the following; "The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer. Flaggers shall wear safety apparel meeting ANSI 107-1999 Class 2 risk exposure and clearly identify the wearer as a person, shall be visible at a minimum distance of 300 m [1000 ft], and shall wear a hardhat with retroreflectivity. For nighttime conditions, Class 3 apparel should be considered, retroreflective or flashing SLOW/STOP paddles shall be used, and except in emergency situations the flagger station shall be illuminated to assure visibility."

Second paragraph, first sentence; change "…have sufficient distance to stop before entering the workspace." to "…have sufficient distance to stop at the intended stopping point." Third sentence; change "At a spot obstruction…" to "At a spot obstruction with adequate sight distance,…"

Fourth paragraph, delete and replace with "Flaggers shall be provided as a minimum, a 10 minute break, every 2 hours and a 30 minute or longer lunch period away from the work station. Flaggers may only receive 1 unpaid break per day; all other breaks must be paid. Sufficient certified flaggers shall be available onsite to provide for continuous flagging operations during break periods. Breaker flaggers will not be paid for separately, but shall be considered incidental to the appropriate pay item."

652.8.2 Other Items Replace the last paragraph with the following: "There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time."

SECTION 653
POLYSTYRENE PLASTIC INSULATION

653.05 Placing Backfill In the second sentence; change "…shall be not less than 150 mm [6 in] loose measure." to "…shall be not less than 250 mm [10 in] loose measure." In the third sentence; change "…crawler type bulldozer of not more than 390 kg/m^2 [80 lb/ft^2] ground contact pressure…" to "…crawler type bulldozer of not more than 4875 kg/m^2 [2000 lb/ft^2] ground contact pressure…"

653.06 Compaction In the last sentence; change "…not more than 390 kg/m^2 [80 lb/ft^2] ground contact…" to "…not more than 4875 kg/m^2 [2000 lb/ft^2] ground contact…"

SECTION 656
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.1 If Pay Item 656.75 Provided Replace the second paragraph with the following: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 656 and/or the Contractor's own Soil Erosion and Pollution Control Plan will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item."

SECTION 701
STRUCTURAL CONCRETE RELATED MATERIALS

701.10 Fly Ash - Chemical Requirements Change all references from "ASTM C311" to "ASTM C114".

SECTION 703
AGGREGATES

703.05 Aggregate for Sand Leveling Change the percent passing the 9.5 mm [3/8 in] sieve from "85 – 10" to "85 – 100"

703.06 Aggregate for Base and Subbase Delete the first paragraph: "The material shall have…" and replace with "The material shall have a minimum degradation value of 15 as determined by Washington State DOT Test Method T113, Method of Test for Determination of Degradation Value (March 2002 version), except that the reported degradation value will be the result of testing a single specimen from that portion of a sample that passes the 12.5 mm [½ in] sieve and is retained on the 2.00 mm [No. 10] sieve, minus any reclaimed asphalt pavement used."

703.07 Aggregates for HMA Pavements Delete the forth paragraph: "The composite blend shall have…" and replace with "The composite blend, minus any reclaimed asphalt pavement used, shall have a Micro-Deval value of 18.0 or less as determined by AASHTO T 327. In the event the material exceeds the Micro Deval limit, a Washington Degradation test shall be performed. The material shall be acceptable if it has a value of 30 or more as determined by Washington State DOT Test Method T 113, Method of Test for Determination of Degradation Value (March 2002 version) except that the reported degradation value will be the result of testing a single composite specimen from that portion of the sample that passes the 12.5mm [1/2 inch] sieve and is retained on the 2.00mm [No 10] sieve, minus any reclaimed asphalt pavement used."

703.18 Common Borrow Replace the first paragraph with the following: "Common borrow shall consist of earth, suitable for embankment construction. It shall be free from frozen material, perishable rubbish, peat, and other unsuitable material including material currently or

previously contaminated by chemical, radiological, or biological agents unless the material is from a DOT project and authorized by DEP for use."

703.22 Underdrain Backfill Material Change the first paragraph from "…for Underdrain Type B…" to "…for Underdrain Type B and C…"

SECTION 706
NON-METALLIC PIPE

706.06 Corrugated Polyethylene Pipe for Underdrain, Option I and Option III Culvert Pipe Change the first sentence from "…300 mm diameters to 900 mm" to "…300 mm diameters to 1200 mm" Delete, in it's entirety, the last sentence which begins "This pipe and resins…" and replace with the following; "The manufacturing plants of polyethylene pipe shall be certified by the Eastern States Consortium. Polyethylene pipe shall be accepted based on third party certification by the AASHTO's National Transportation Product Evaluation Program."

SECTION 709
REINFORCING STEEL AND WELDED STEEL WIRE FABIC

709.03 Steel Strand Change the second paragraph from "…shall be 12mm [½ inch] AASHTO M203M/M203 (ASTM A416/A416M)…" to "…shall be 15.24 mm [0.600 inch] diameter AASHTO M203 (ASTM A416)…"

SECTION 710
FENCE AND GUARDRAIL

710.03 Chain Link Fabric Add the following sentence: "Chain Link fabric for PVC coated shall conform to the requirements of AASHTO M181, Type IV-Class B."

710.07 Guardrail Posts Section b. change "…AASHTO M183/M183M…" to "…AASHTO M 270M/M 270 Grade 250 (36)…"

SECTION 712
MISCELLANEOUS HIGHWAY MATERIALS

712.06 Precast Concrete Units In the first paragraph, change "…ASTM C478M…" to "…AASHTO M199…" Delete the second paragraph and replace with the following; "Approved structural fibers may be used as a replacement of 6 x 6 #10 gauge welded wire fabric when used at an approved dosage rate for the construction of manhole and catch basin units. The material used shall be one of the products listed on the Maine Department of Transportation's Approved Product List of Structural Fiber Reinforcement." Delete the fifth paragraph and replace with the following; "The concrete mix design shall be approved by the Department. Concrete shall contain 6% air content, plus or minus 1½% tolerance when tested according to AASHTO T152. All concrete shall develop a minimum compressive strength of 28 MPa [4000 psi] in 28 days when tested according to AASHTO T22. The absorption of a specimen, when tested according to AASHTO T280, Test Method "A", shall not exceed nine percent of the dry mass."

Add the following:
"712.07 Tops, and Traps These metal units shall conform to the plan dimensions and to the following specification requirements for the designated materials.

Gray iron or ductile iron castings shall conform to the requirements of AASHTO M306 unless otherwise designated.

712.08 Corrugated Metal Units The units shall conform to plan dimensions and the metal to AASHTO M36/M36M. Bituminous coating, when specified, shall conform to AASHTO M190 Type A.

712.09 Catch Basin and Manhole Steps Steps for catch basins and for manholes shall conform to ASTM C478M [ASTM C478], Section 13 for either of the following material:

(a) Aluminum steps-ASTM B221M, [ASTM B211] Alloy 6061-T6 or 6005-T5.

(b) Reinforced plastic steps Steel reinforcing bar with injection molded plastic coating copolymer polypropylene. Polypropylene shall conform to ASTM D 4101.

712.23 Flashing Lights Flashing Lights shall be power operated or battery operated as specified.

(a) Power operated flashing lights shall consist of housing, adapters, lamps, sockets, reflectors, lens, hoods and other necessary equipment designed to give clearly visible signal indications within an angle of at least 45 degrees and from 3 to 90 m [10 to 300 ft] under all light and atmospheric conditions.

Two circuit flasher controllers with a two-circuit filter capable of providing alternate flashing operations at the rate of not less than 50 nor more than 60 flashes per minute shall be provided.

The lamps shall be 650 lumens, 120 volt traffic signal lamps with sockets constructed to properly focus and hold the lamp firmly in position.
The housing shall have a rotatable sun visor not less than 175 mm [7 in] in length designed to shield the lens.

Reflectors shall be of such design that light from a properly focused lamp will reflect the light rays parallel. Reflectors shall have a maximum diameter at the point of contact with the lens of approximately 200 mm [8 in].

The lens shall consist of a round one-piece convex amber material which, when mounted, shall have a visible diameter of approximately 200 mm [8 in]. They shall distribute light and not diffuse it. The distribution of the light shall be asymmetrical in a downward direction. The light distribution of the lens shall not be uniform, but shall consist of a small high intensity portion with narrow distribution for long distance throw and a larger low intensity portion with wide distribution for short distance throw. Lenses shall be marked to indicate the top and bottom of the lens.

(b) Battery operated flashing lights shall be self- illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [½ in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin. The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

If required by the Resident, certification as to conformance to these specifications shall be furnished based on results of tests made by an independent testing laboratory. All lights are subject to random inspection and testing. All necessary random samples shall be provided to the Resident upon request without cost to the Department. All such samples shall be returned to the Contractor upon completion of the tests.

712.32 Copper Tubing Copper tubing and fittings shall conform to the requirements of ASTM B88M Type A [ASTM B88, Type K] or better.

712.33 Non-metallic Pipe, Flexible Non-metallic pipe and pipe fittings shall be acceptable flexible pipe manufactured from virgin polyethylene polymer suitable for transmitting liquids intended for human or animal consumption.

712.34 Non-metallic Pipe, Rigid Non-metallic pipe shall be Schedule 40 polyvinylchloride (PVC) that meets the requirement of ASTM D1785. Fittings shall be of the same material.

712.341 Metallic Pipe Metallic pipe shall be ANSI, Standard B36.10, Schedule 40 steel pipe conforming to the requirements of ASTM A53 Types E or S, Grade B. End plates shall be steel conforming to ASTM A36/A36M.

Both the sleeve and end plates shall be hot dip galvanized. Pipe sleeve splices shall be welded splices with full penetration weld before galvanizing.

712.35 Epoxy Resin Epoxy resin for grouting or sealing shall consist of a mineral filled thixotropic, flexible epoxy resin having a pot life of approximately one hour at 10°C [50°F]. The grout shall be an approved product suitable for cementing steel dowels into the preformed holes of curb inlets and adjacent curbing. The sealant shall be an approved product, light gray in color and suitable for coating the surface.

712.36 Bituminous Curb The asphalt cement for bituminous curb shall be of the grade required for the wearing course, or shall be Viscosity Grade AC-20 meeting the current requirements of Subsection 702.01 Asphalt Cement. The aggregate shall conform to the requirements of Subsection 703.07. The coarse aggregate portion retained on the 2.36 mm [No. 8] sieve may be either crushed rock or crushed gravel.

The mineral constituents of the bituminous mixture shall be sized and graded and combined in a composite blend that will produce a stable durable curbing with an acceptable texture.

Bituminous material for curb shall meet the requirements of Section 403 - Hot Bituminous Pavement.

712.37 Precast Concrete Slab Portland cement concrete for precast slabs shall meet the requirements of Section 502 - Structural Concrete, Class A.

The slabs shall be precast to the dimension shown on the plans and cross section and in accordance with the Standard Detail plans for Concrete Sidewalk Slab. The surface shall be finished with a float finish in accordance with Subsection 502.14(c). Lift devices of sufficient strength to hold the slab while suspended from cables shall be cast into the top or back of the slab.

712.38 Stone Slab Stone slabs shall be of granite from an acceptable source, hard, durable, predominantly gray in color, free from seams which impair the structural integrity and be of smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Exposed surfaces shall be free from drill holes or indications of drill holes. The granite slabs in any one section of backslope must be all the same finish.

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [½ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [3/4 in] shall show in the joint for the full exposed height.

Liftpin holes in all sides will be allowed except on the exposed face.

SECTION 717
ROADSIDE IMPROVEMENT MATERIAL

717.03 C. Method #3 - Roadside Mixture #3 Change the seed proportions to the following:

Crown Vetch	25%
Perennial Lupine	25%
Red Clover	12.5%
Annual Rye	37.5%

717.05 Mulch Binder Change the third sentence to read as follows:

"Paper fiber mulch may be used as a binder at the rate of 2.3 kg/unit [5 lb/unit]."

SECTION 720
STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS

720.08 U-Channel Posts Change the first sentence from "…, U-Channel posts…" to "…, Rib Back U-Channel posts…"

SECTION 722
GEOTEXTILES

722.01 Stabilization/Reinforcement Geotextile Add the following to note #3; "The strengths specified in the columns labeled"<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

722.02 Drainage Geotextile Add the following to note #3; "The strengths specified in the columns labeled"<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

722.01 Erosion Control Geotextile Add the following note to Elongation in the Mechanical Property Table; "The strengths specified in the columns labeled"<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

APPENDIX A TO DIVISION 100

SECTION 1 - BIDDING PROVISIONS

A. Federally Required Certifications By signing and delivering a Bid, the Bidder certifies as provided in all certifications set forth in this Appendix A - Federal Contract Provisions Supplement including:

- Certification Regarding No Kickbacks to Procure Contract as provided on this page 1 below.
- Certification Regarding Non-collusion as provided on page 1 below.
- Certification Regarding Non-segregated Facilities as provided by FHWA Form 1273, section III set forth on page 21 below.
- "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion" as provided by FHWA Form 1273, section XI set forth on page 32 below.
- "Certification Regarding Use of Contract Funds for Lobbying" as provided by FHWA Form 1273, section XII set forth on page 35 below.

Unless otherwise provided below, the term "Bidder", for the purposes of these certifications, includes the Bidder, its principals, and the person(s) signing the Bid. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above.

CERTIFICATION REGARDING NO KICKBACKS TO PROCURE CONTRACT Except expressly stated by the Bidder on sheets submitted with the Bid (if any), the Bidder hereby certifies, to the best of its knowledge and belief, that it has not:

(A) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other then a bona fide employee working solely for me) to solicit or secure this contract;

(B) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or;

C) paid, or agreed to pay, to any firm, organization, or person (other than a bona fide employee working solely for me) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract;

By signing and submitting a Bid, the Bidder acknowledges that this certification is to be furnished to the Maine Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this contract in anticipation of federal aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), the Bidder hereby certifies, to the best of its knowledge and belief, that:

the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with the Contract.

For a related provisions, see Section 102.7.2 (C) of the Standard Specifications - "Effects of Signing and Delivery of Bids" - "Certifications", Section 3 of this Appendix A entitled "Other Federal Requirements" including section XI - "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion" and section XII. - "Certification Regarding Use of Contract Funds for Lobbying."

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B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

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SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall

document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.

3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

4. Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.

5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.

6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review

of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.

9. Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later that one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.

10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.

11. Validate all tests and other selection requirements.

12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

13. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

14. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.

16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

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Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

(d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of $10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for female participation in each trade 6.9%

Goals for minority participation for each trade
Maine
001 Bangor, ME 0.8%
Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME
SMSA Counties: 4243 Lewiston-Auburn, ME 0.5%
(Androscoggin)

6403 Portland, ME 0.6%
(Cumberland, Sagadahoc)

Non-SMSA Counties: 0.5%
(Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;

   d. "Minority" includes:
      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.

6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the

apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.

   f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific

review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both make and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)

10. The Contractor shall not use the goals and timetables or affirmative action even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location sat which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

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D. Disadvantaged Business Enterprise (DBE) Requirements The Department has established an annual Disadvantaged Business Enterprise goal to be achieved through race neutral means. This goal will adjusted periodically and will be provided by Supplemental Provision. The Contractor shall comply with all provisions of this section regarding DBE participation and the Department's latest version of the Disadvantaged Business Enterprise Program Manual, said Manual being incorporated herein by reference. In the case of conflict between this Contract and said Manual, this Contract shall control. The Department reserves the right to adjust DBE goals on a project-by-project basis by addendum.

Policy. It is the Department's policy that DBEs as defined in 23 CFR Part 26 and referenced in the Transportation Equity Act for 21st Century of 1998, as amended from the Surface Transportation Uniform Relocation Assistance Act of 1987, and the Intermeddle Surface Transportation Efficiency Act of 1991. The intent hereto remains to provide the maximum opportunity for DBEs to participate in the performance of contracts financed in whole or in part with federal funds.

The Department and its Contractors shall not discriminate on the basis of race, color, national origin, ancestry, sex, age, or disability in the award and performance of DOT assisted contracts.

Disadvantaged Business Enterprises are those so certified by the Maine Department of Transportation Civil Rights Office prior to bid opening date.

The Department has determined that elements of a good faith effort to meet the contract goal include but are not limited to the following:

1. Whether the Contractor advertised in general circulation, trade association, and minority/women's-focus media concerning the subcontracting opportunities;

2. Whether the Contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;

3. Whether the Contractor followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested;

4. Whether the Contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals;

5. Whether the Contractor provided interested DBEs with adequate information about the plans, specification and requirements of the contract;

6. Whether the Contractor negotiated in good faith with interested DBEs, not rejecting the DBE as unqualified without sound reasons based on a thorough investigation of their capabilities;

7. Whether the Contractor made efforts to assist interested DBEs with other appropriate technical/financial assistance required by the Department or Contractor;

8. Whether the Contractor effectively used the services of available minority/women's community organizations, minority/women's business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBEs.

Substitutions of DBEs. The following may be acceptable reasons for Civil Rights Office approval of such a change order:

- The DBE defaults, voluntarily removes itself or is over-extended;
- The Department deletes portions of the work to by performed by the DBE.

It is not intended that the ability to negotiate a more advantageous contract with another certified DBE be considered a valid basis for such a change in DBE utilization once the DBE Bid Submission review has been passed. Any requests to alter the DBE commitment must be in writing and included with the change order.

Failure to carry out terms of this Standard Specification shall be treated as a violation of this contract and will result in contract sanctions which may include withholding of partial payments totaling the creditable dollars amount which would have been paid for said DBE participation, termination of this contract or other measures which may affect the ability of the Contractor to obtain Department contracts.

Copies of the Maine Department of Transportation's DBE Program may be obtained from:

Maine Department of Transportation
Civil Rights Office
#16 State House Station
Augusta, Maine 04333-0016
tel. (207) 624-3519

Quarterly Reporting Requirement. The Contractor must submit Semi-annual reports of actual dollars paid to Disadvantaged Business Enterprises (DBE's) on this Project to the MDOT Civil Rights Office by the end of the third week of April and October for the period covering the preceding six months considered Federal Fiscal Year periods. The reports will be submitted directly to the Civil Rights Office on the form provided in the latest version of the DBE Program Manual. Failure to submit the report by the deadline may result in a withholding of approval of partial payment estimates by the Department.

SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or $2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

> "This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of $2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States."

B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" (expermnt.htm) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a

reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MDOT or from sources designated by MDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273, are hereby incorporated into the Bid Documents and Contract.

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Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS(As revised through March 10, 1994)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

   Section I, paragraph 2;
   Section IV, paragraphs 1, 2, 3, 4, and 7;
   Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

   a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

   b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION (Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
   a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

   b. The contractor will accept as his operating policy the following statement:
   "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment,

upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. EEO Officer. The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

   a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

   b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

   c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

   d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

   e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

   a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion.

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision

for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions. If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

   a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

   b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

   c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

   d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment. The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports. The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the MDOT and the Federal Highway Administration.

The Contractor will submit to the MDOT a report for the month of July, indicating the total hours worked by minority, women and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR-1391. If on-the-job training is being required by "Training Special Provision," the Contractor will be required to furnish Form FHWA-1409. The report is required for week ending July 15 and can be obtained from MDOT, is due by week ending August 20th. This report is to be furnished directly to MDOT - Civil Rights Office.

III. <u>NONSEGREGATED FACILITIES</u> (Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE (Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

   a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the

provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor

as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers. Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT). Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding. The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4

and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation. Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages. The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS (Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3). The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

   a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

   b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in

Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

   (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

   (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

   (3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

   a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

   b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

   c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

   a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor,

with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health

standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations

in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:
(Applicable to all Federal-aid contracts - 49 CFR 29)

   a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

   b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

   c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

   d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

   e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out

in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--
Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or

local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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2. Instructions for Certification - Lower Tier Covered Transactions: (Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

****

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--
Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

****

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING
(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

   b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a

Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

End of FHWA 1273

Environmental Summary Sheet

PIN #: 9184.00 (Included .10, .20 and .30) **Town: Bethel - Gilead**
Environmental Office Contact: **Ben Condon (ben.condon@maine.gov) 592-0921**
Coordination & Permits Manager: Matt Steele **Date Submitted: 6/12/07**
Database/Projex ☒

☒ **Section 106 and Tribal Consultation**

Architectural Resources	PA ☐	Applicable☒	Approved ☒
Archeological Resources	PA ☐	Applicable☒	Approved ☒
Tribal Consultation	Tribal Letters Sent ☒		Approved ☐

☒ **4(f) and 6(f)**

Section 4(f)	Are there Right of Way Takes or Easements on Public Park Property	☐ Yes	☒ No
	Are there Right of Way Takes or Easements on Public Recreational Property	☐ Yes	☒ No
	Are there Right of Way Takes or Easements on Public Wildlife Refuge Property	☐ Yes	☒ No
	Are there Right of Way Takes or Easements on Historic Eligible or Listed Property	☐Yes	☒ No
	Are there Right of Way Takes or Easements on Property within a Historic District	☐Yes	☒ No
	Has MHPC Determined an Adverse Effect	☐Yes	☒ No
	Is a Programmatic or Full 4(f) Document Required	☐Yes	☒ No

LAWCON 6(f) N/A ☒ Applicable☐ Approved ☐

☒ **FEMA** GIS Floodplains Checked ☒ N/A ☒ Applicable☐ Approved ☐

☒ **Maine Department of Inland Fisheries and Wildlife (MDIFW) Essential Habitat**

GIS Essential Habitats Checked ☒

Eagle Nest	N/A☒	Applicable ☐	Approved ☐
Piping Plover	N/A ☒	Applicable ☐	Approved ☐
Roseate Tern	N/A ☒	Applicable☐	Approved ☐

☒ **Maine Department of Conservation/ Public Lands, Submerged Land Lease** N/A ☒ Applicable ☐

☒ **Land Use Regulation Commission (LURC)** Not Applicable ☒ No permit Required ☐

Notice	☐	Approved ☐
Permit	☐	Approved ☐

☒ **Maine Department of Environmental Protection (MDEP) Site Location of Development**

N/A ☒ Applicable ☐ Approved ☐

☒ **Maine Department of Environmental Protection (MDEP), Natural Resource Protection Act**

No permit required ☐
Exempt ☐ (Must use erosion and sediment control and not block fish passage.)

PBR	☒	Approved ☒
Tier 1	☐	Approved ☐
Tier 2	☐	Approved ☐
Individual	☒	Approved ☒

☐ **Army Corps of Engineers (ACOE), Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.**

No permit required ☐

Category 1-NR☐	Approved ☐
Category 2☒	Approved ☒
Category 3☐	Approved ☐

NOTE: If project requires a Category 2 or 3 Permit from the ACOE, then the MaineDOT Resident **must** fill out a **"Work Start Notification Form"** and a **"Compliance Certification Form" (when project has been completed)** and send them to the address listed on the forms.

☐ **IN-STREAM TIMING RESTRICTIONS:** 105 Special Provision ☒ n/a ☐

Dates instream work is allowed: 7/1 through 9/30

☒ Special Provision 656, Erosion Control Plan ☒ Special Provision 203, Dredge Spec and/or Hazardous Waste Spec

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

MAINE DEPARTMENT OF TRANSPORTATION	) NATURAL RESOURCES PROTECTION
Bethel, Oxford County	) FRESHWATER WETLAND & STREAM
ROUTE 2 UPGRADE	) WATER QUALITY CERTIFICATION
L-23115-TH-A-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of the DEPARTMENT OF TRANSPORTATION (MDOT) with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: In 2003, the applicant submitted two Natural Resources Protection Act Permit by Rule Notification Forms, Chapter 305, Section 11 State Transportation Facilities, for the end segments of the Route 2 reconstruction project. The applicant filled 7,106 square feet of wetlands of special significant, 3,037 square feet of forested freshwater wetlands and 1,078 square feet of stream channel associated with the first section of the project in Bethel. The applicant filled 2,313 square feet of freshwater wetlands of special significance and 333 square feet of stream channel associated with the Gilead section of the project.

B. Summary: The applicant is proposing to reconstruct the middle section of Route 2, bridging the gap between the two previously constructed ends. This gap section is approximately 6.16 miles long. The applicant intends to change the road alignment and change road grades to correct existing deficiencies and address safety concerns. The existing roadway does not meet highway safety standards. The applicant will reconstruct the existing bridges over the Pleasant River and the Wild River, and add rip rap around the existing bridge over Bog Brook. Existing culverts will be upgraded and/or replaced in seven streams, including Wheeler Brook. Fleming Road, a secondary road connecting to Route 2, will be re-aligned by installing a new culvert in Ordway Brook, removing the fill and culvert associated with the existing crossing and recreating 131 feet of new channel. The proposed project will fill approximately 34,069 square feet of freshwater wetlands of special significance, 21,737 square feet of forested freshwater wetlands, 13,956 square feet of stream channel and it will alter an additional 24,300 square feet of wet meadow wetland. To mitigate for impacts to both freshwater wetlands and streams, the applicant proposes to reconstruct approximately 1,140 linear feet of Barker's Brook, reconnect the brook to its floodplain and enhance a forested wetland, for a total of 2.56 acres of compensation. The applicant submitted plans outlining the proposed Route 2 project, the reconstruction of Ordway Brook and the proposed mitigation project along Barker's Brook. The project site is the segment of Route 2 between Bethel and Gilead.

Cumulative impacts for all three sections of the project total: 43,488 square feet of fill in freshwater wetlands of special significance, 24,774 square feet of fill in forested freshwater

wetlands, 15,367 square feet of altered stream channel and 24,300 square feet of alteration in a wet meadow wetland.

C. Current Use of the Site: The project site is Route 2, which carries east-west traffic in this part of the State. Barker's Brook crosses under the Sunday River Road and carries water to the Sunday River.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

In accordance with Chapter 315, Assessing and Mitigating Impacts to Scenic and Aesthetic Uses, the applicant submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicant also submitted several photographs of the proposed project site.

The proposed project is located in Bog Brook, Ordway Brook, Wheeler Brook, the Pleasant River and the Wild River, which are public natural resources visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. Route 2 is the major east-west traffic route in this area. The surrounding land is a mixture of residential development and undeveloped forest. The applicant stated that the reconstructed road will have a similar appearance to the existing road. In some locations it will be wider or the grade will be different but from the adjoining scenic resources, the view will be unchanged.

Department staff visited the project site on July 27, 2006. The Department did not identify any issues involving existing recreational and navigational uses.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resource.

3. SOIL EROSION:

The applicant proposes to follow its Best Management Practices for Erosion and Sediment Control (BMP). Permanent erosion controls are shown on the submitted plans. MDOT will require the contractor to write an Erosion Control Plan outlining the temporary measures to be used during project construction. The Temporary Erosion Control Plan will be required to comply with Section II.B Guidelines for Sensitive Waterbodies in MDOT's BMP Manual. The contractor will also be required to submit the temporary erosion control plan to the applicant for review prior to project construction.

The applicant submitted a copy of the BMP manual, including Section II.B. Provided that the BMP manual is followed during project construction, the Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

4. HABITAT CONSIDERATIONS:

The Maine Department of Inland Fisheries and Wildlife reviewed the proposed project and stated that there are no Essential or Significant Wildlife Habitats at the project site. The streams that will be impacted by this project contain a number of fish. To minimize impacts of the fisheries, IF&W stated that culvert installations should occur between July 1 and September 30 and that

fish passage should not be impeded. IF&W further stated that, to insure adequate fish passage, culverts should be imbedded 6 inches into the sediment. IF&W staff requested that the applicant notify them before construction of the new channel for Ordway Brook to set up a site visit and to inform them of the date of channel construction.

The Department finds that the activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life provided that the culverts are installed between July 1 and September 30, that the culverts are imbedded in the stream bed at least 6 inches and that the applicant contacts IF&W to set up a site visit before the new channel for Ordway Brook is constructed and to inform IF&W of the date of construction for the new Ordway Brook channel.

5. WATER QUALITY CONSIDERATIONS:

The applicant proposes to install cofferdams and dewater the area of any poured pilings or abutments. The applicant also proposes to treat the affected water for pH in accordance with the Memorandum of Agreement between the applicant and the Department.

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicant proposes to fill a total of 43,488 square feet of freshwater wetlands of special significance, 24,774 square feet of forested freshwater wetlands and 15,367 square feet of stream channel to reconstruct Route 2 between Bethel and Gilead. The applicant also proposes to alter an additional 24,300 square feet of wet meadow wetland to construct the proposed compensation project.

The Department's Wetlands and Waterbodies Protection Rules, Chapter 310, require that the applicant meet the following standards:

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. Each application for an Individual permit must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist. The applicant submitted an alternatives analysis for the proposed project as Exhibit 10 in the application. The results of the alternatives analysis indicate that the "do nothing" alternative is not feasible given the deficiencies in the roadway and safety concerns. The proposed alternative corrects the deficient sub base and pavement and improves sight distances, safety, and drainage and ride ability. The proposed alternative reduces shoulder width to minimize impacts to adjacent wetlands while still meeting the project purpose and need.

B. Minimal Alteration. The amount of freshwater wetland and streams to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The applicant reduced the widths of the shoulders and increased the side slopes of fill. The applicant will utilize either 2:1 or 1.5:1 side slopes in the wetland and stream crossings. In cases where the slopes will be 1.5:1, they will be stabilized with rip rap and a guardrail will be installed at the shoulder. Bridges were designed to minimize the number of pilings in the water.

C. Compensation. In accordance with Chapter 310(5)(C), compensation is required to achieve the goal of no net loss of freshwater wetland and stream functions and values. The applicant submitted a functional assessment of the freshwater wetland along the project corridor. Many of the wetlands are associated with streams. The principal functions and values of the impacted wetlands include: Floodflow Alteration, Fish and Shellfish Habitat and Wildlife Habitat. To compensate for lost functions and values, the applicant proposes to restore a length of Barker's Brook by reconstructing the channel and increasing the connection with the floodplain. The applicant proposes to restore and enhance approximately 2.56 acres of stream habitat, floodplains and freshwater wetlands, including approximately 1,140 linear feet of brook, beginning at the downstream side of the Sunday River Road crossing and almost reaching the brook's confluence with the Sunday River.

The compensation project is described in a report prepared by Parish Geomorphic Ltd., entitled "Wetland Mitigation Plan" and dated April 2006. The applicant obtained construction easements from abutting property owners to do the restoration work and secured a conservation easement with the landowners to protect the area after construction. Access to the compensation site is from an adjacent wet meadow wetland. The applicant proposes to temporarily impact 24,300 square feet of wet meadow wetland for the staging area associated with the restoration project. A geotextile fabric will be placed between the surface of the wet meadow and any fill necessary to support the equipment. The fill and geotextile will be removed once construction is complete. The restoration area and the staging area will be monitored for a period of five years and an annual monitoring report submitted to the Department. The applicant also intends to submit an as-built plan of the compensation area to the Department along with the first year's monitoring report.

The Department finds that the applicant has avoided and minimized freshwater wetland and stream impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

7. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing scenic, aesthetic, or navigational uses, soil erosion, habitat or fisheries, the natural transfer of soil, natural flow of water, water quality, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment provided that the project is constructed according to the applicant's Section II.B Guidelines for Sensitive Waterbodies in the BMP manual.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that stream culverts are installed between July 1 and September 30, that they are imbedded in the stream bed at least 6 inches and that the applicant contacts IF&W to set up a site visit before the new channel for Ordway Brook is constructed and to inform IF&W of the date of construction for the new Ordway Brook channel.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of the DEPARTMENT OF TRANSPORTATION to reconstruct Route 2 in Bethel and Gilead as outlined above, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. The project shall be constructed in accordance with the applicant's Section II.B Guidelines for Sensitive Waterbodies in its BMP manual.

5. Stream culverts shall be installed between July 1 and September 30 and shall be imbedded in the stream bed at least 6 inches.

6. The applicant shall contact IF&W to set up a site visit before the new channel for Ordway Brook is constructed and shall inform IF&W of the date of construction for the new Ordway Brook channel.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED AT AUGUSTA, MAINE, THIS 8TH DAY OF November, 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application June 2, 2006
Date of application acceptance June 22, 2006

Date filed with Board of Environmental Protection
DEH/ATS59539/L23115AN

FILED
NOV - 9 2006
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

NATURAL RESOURCE PROTECTION ACT (NRPA)
STANDARD CONDITIONS

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. **Approval of Variations From Plans.** The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. **Compliance With All Applicable Laws.** The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. **Erosion Control.** The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. **Compliance With Conditions.** Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. **Initiation of Activity Within Two Years.** If construction or operation of the activity is not begun within two years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits shall state the reasons why the applicant will be able to begin the activity within two years form the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.

F. **Reexamination After Five Years.** If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.

G. **No Construction Equipment Below High Water.** No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

H. **Permit Included In Contract Bids.** A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

I. **Permit Shown To Contractor.** Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92)
DEP LW0428

Erosion Control

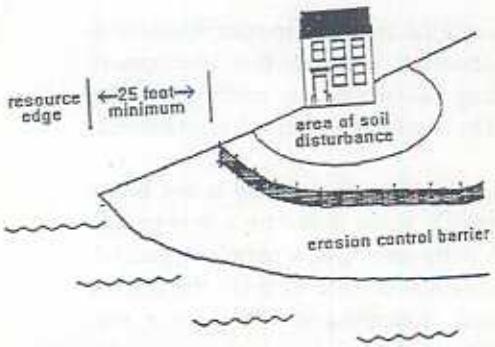
Before Construction

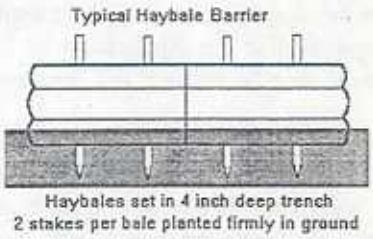
1. If you have hired a contractor, make sure you have discussed your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is and where it is located. Most people could identify the edge of a lake or a river. The edges of wetlands, however, are often not obvious. Your contractor may be the person actually pushing dirt around but you are both responsible for complying with the permit.

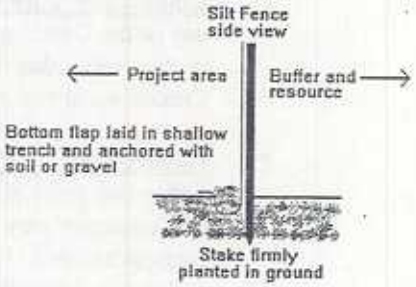
2. Call around and find sources for your erosion controls. You will probably need silt fence, hay bales and grass seed or conservation mix. Some good places to check are feed stores, hardware stores, landscapers and contractor supply houses. It is not always easy to find hay or straw during late winter and early spring. It may also be more expensive during those times of year. Plan ahead. Purchase a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the activity.

4. If a contractor is installing the barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level along the land slope, whenever possible. This keeps stormwater from flowing to the lowest point of the barrier where it builds up and overflows or destroys it.







During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops striking the soil that causes a lot of erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. In that situation, stop work and figure out what can be done to prevent more soil from getting past the barrier.

After Construction

1. After the project is complete, replant the area. All ground covers are not equal. For instance, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high maintenance areas. The same mix would not be a good choice for stabilizing a road shoulder or a cut bank that you don't intend to mow.

2. If you finish your project after September 15, then do not spread grass seed. There is a very good chance that the seed will germinate and be killed by a frost before it has a chance to become established. Instead, mulch the site with a thick layer of hay or straw. In the spring, rake off the mulch and seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away.

3. Keep your erosion control barrier up and maintained until the area is permanently stabilized.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

RECEIVED
FEB 12 2007

REPLY TO:
ATTENTION OF:

MAINE PROGRAMMATIC GENERAL PERMIT (PGP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

Office of Environmental Services
Attn: David Gardiner
Maine Department of Transportation
16 State House Station
Augusta, Maine 04333-0016

CORPS PERMIT # NAE-2006-1793
CORPS PGP ID# 03-368
STATE ID# L-23115-TH-A-N

DESCRIPTION OF WORK:
To place fill in 69,764 SF (1.60 acres) of wetland in conjunction with the Route 2 reconstruction project from the Wild River in Gilead, Maine to the Pleasant River in Bethel, Maine as shown on the attached plans. To satisfy Maine DEP requirements for compensatory mitigation, the applicant will implement the Barker Brook Stream Channel Restoration Plan described in the application document entitled Wetland Mitigation Plan.
SEE ATTACHED CONDITIONS

LAT-LONG COORDINATES : 44.39258681 N 70.977434587 W USGS QUAD: Bethel, ME

I. CORPS DETERMINATION:
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine Programmatic General Permit (PGP).**

You must perform the activity authorized herein in compliance with all the terms and conditions of the PGP [including any attached Additional Special Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed PGP carefully, including the PGP conditions beginning on page 7, to familiarize yourself with its contents. You are responsible for complying with all of the PGP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 38 of the PGP (page 15) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the PGP on October 11, 2010. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 11, 2011.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.** Also, this permit requires you to notify us before beginning work and allow us to inspect the project. Hence, you must complete and return the attached Work Start Notification Form(s) to this office no later than 2 weeks before the anticipated starting date. (For projects requiring mitigation, be sure to include the MITIGATION WORK START FORM).

II. STATE ACTIONS: PENDING [ ] ISSUED [X] DENIED [ ] DATE Nov 8, 2006

APPLICATION TYPE: PBR: ___ TIER 1: ___ TIER 2: ___ TIER 3: X LURC: ___ DMR LEASE: ___ NA: ___

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 8/4/06 LEVEL OF REVIEW: CATEGORY 1: ___ CATEGORY 2: X

AUTHORITY: SEC 10 ___, 404 X, 10/404 ___, 103 ___

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

ESSENTIAL FISH HABITAT (EFH): EFH PRESENT Y / (N) (CIRCLE ONE)
IF YES: Based on the terms and conditions of the PGP, which are intended to ensure that authorized projects cause no more than minimal environmental impacts, the Corps of Engineers has preliminary determined that this project will not cause more than minimal adverse effects to EFH identified under the Magnunson-Stevens Fisheries Conservation and Management Act.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office.

Rodney A. Howe
RODNEY A. HOWE
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

2-8-07
FRANK J. DEL GIUDICE DATE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

US Army Corps of Engineers®
New England District

ADDITIONAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
PROGRAMMATIC GENERAL PERMIT NO. NAE-2006-1793
MAINE DEPARTMENT OF TRANSPORTATION
ROUTE 2 RECONSTRUCTION
FROM THE WILD RIVER TO THE PLEASANT RIVER
BETHEL, MAINE

1. This permit authorizes impacts to **only** those areas of wetlands shown on the project plans entitled STATE OF MAINE DEPT OF TRANSPORTATION U.S. ROUTE 2 BETHEL – GILEAD OXFORD COUNTY MAINE WETLAND IMPACTS. No other filling, clearing or other disturbance in wetlands shall occur. Any additional proposals that would further impact wetlands will require additional permitting.

2. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permitee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.

4. Culverts placed at stream and/or wetland crossings shall be imbedded 6"-12" below the natural streambed or wetland so as not to impede fish or other aquatic life passage.

5. Areas of wetland that are temporally disturbed for the installation of utility lines shall be restored to original contours and stabilized with wetland seed mix.

6. To satisfy Maine DEP requirements for compensatory mitigation, the applicant will implement the Barker Brook Stream Channel Restoration Plan described in the application document entitled "Wetland Mitigation Plan for the Maine Department of Transportation's Bethel-Gilead Highway Improvement Project (MDOT PIN 9184.00)" and dated "April 2006". That mitigation plan is subject to the following conditions.

    1. In stream work is limited to low flow periods between July 15 and October 1 to avoid impacts to Atlantic salmon and other fisheries and local water quality. In stream work during this period shall cease whenever a thunderstorm is imminent and shall not resume until flows have returned to low levels. Fish passage through the new culvert shall not be impeded.

    2. Any equipment that must traverse vegetated wetland shall be supported by mats or low ground pressure equipment. Any side casting of excavated material shall be placed on geotextile fabric to avoid direct impacts to the wetland vegetation.

    3. Except where stated otherwise, reports, drawings, correspondence and any other submittals required by this permit shall be marked with the words "Permit No. 200200202" and shall be addressed to "Inspection Unit, CENAE-CO-R, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751." Two additional copies shall be sent to "U.S. Army Corps of Engineers, Maine Project Office, 675 Western Avenue, No. 3, Manchester, Maine 04351." Documents which are not marked and addressed in this manner may not reach their intended destination and do not comply with the requirements of this permit.

US Army Corps
of Engineers®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

USACE Project Number: NAE-2006-1793

Name of Permittee: Maine Department of Transportation (PIN 9184.00)

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

```
*************************************************************************
* MAIL TO: U.S. Army Corps of Engineers, New England District           *
*          Policy Analysis/Technical Support Branch, ATTN: Marie Farese *
*          Regulatory Division                                          *
*          696 Virginia Road                                            *
*          Concord, Massachusetts 01742-2751                            *
*************************************************************************
```

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee ***Date***

_____ _____

Printed Name Date of Work Completion

( ) _____

Telephone Number

US Army Corps
of Engineers ®
New England District

WORK-START NOTIFICATION FORM

(Minimum Notice: Two weeks before work begins)

```
*************************************************************************
* MAIL TO:  U.S. Army Corps of Engineers, New England District          *
*           Policy Analysis/Technical Support Branch                    *
*           Regulatory Division                                         *
*           696 Virginia Road                                           *
*           Concord, Massachusetts 01742-2751                           *
*************************************************************************
```

Corps of Engineers Permit No. NAE-2006-1793 was issued to Maine Department of Transportation. The permit authorized the permittee to place fill in 69,764 SF (1.60 acres) of wetland in conjunction with the Route 2 reconstruction project from the Wild River in Gilead, Maine to the Pleasant River in Bethel, Maine. The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

_____

_____

_____

Telephone Numbers:( ) _____ ( ) _____

Proposed Work Dates: **Start** _____ **Finish** _____

Permittee's Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

****

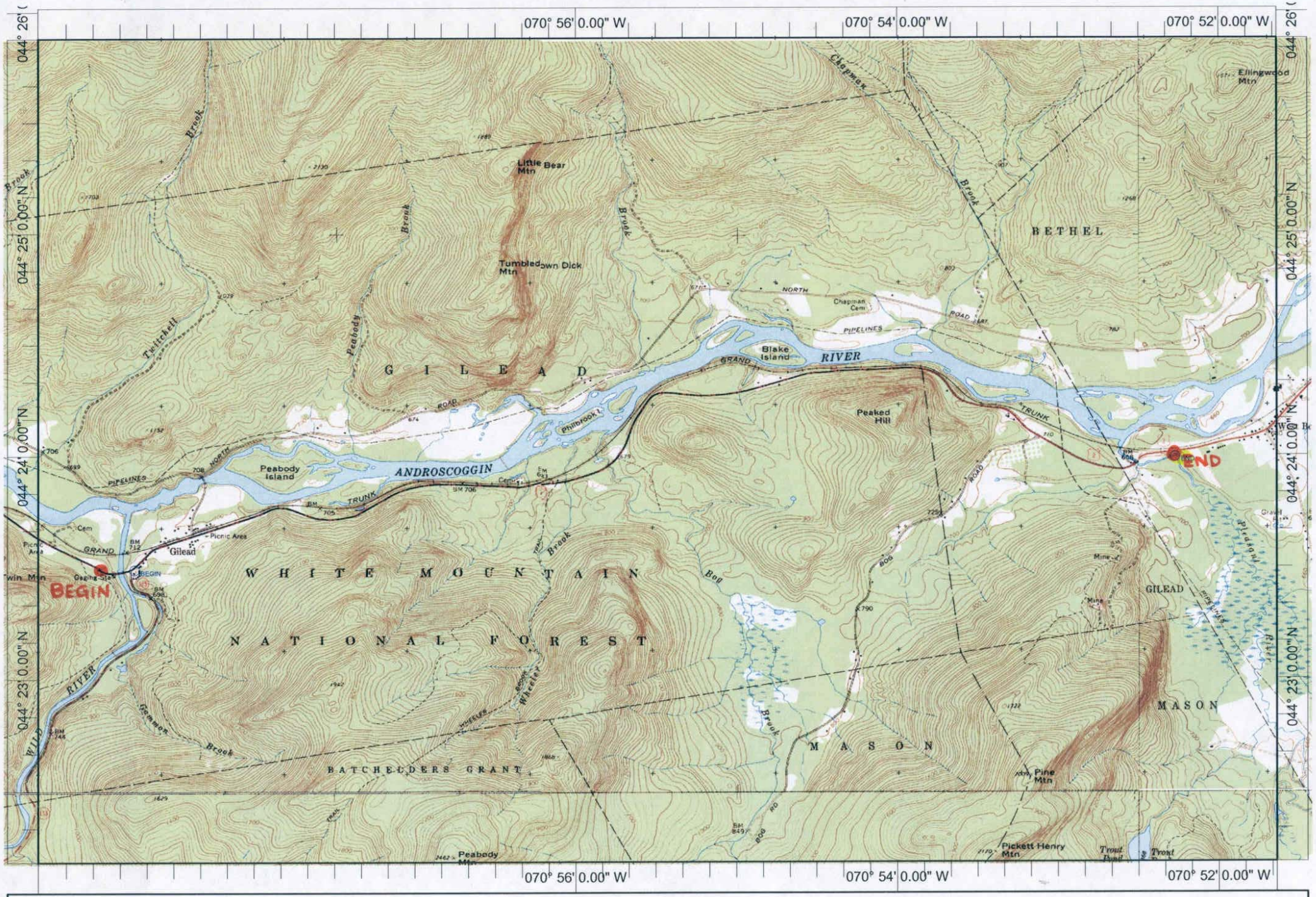
FOR USE BY THE CORPS OF ENGINEERS

PM: _____ **Submittals Required:** _____

Inspection Recommendation: _____

_____

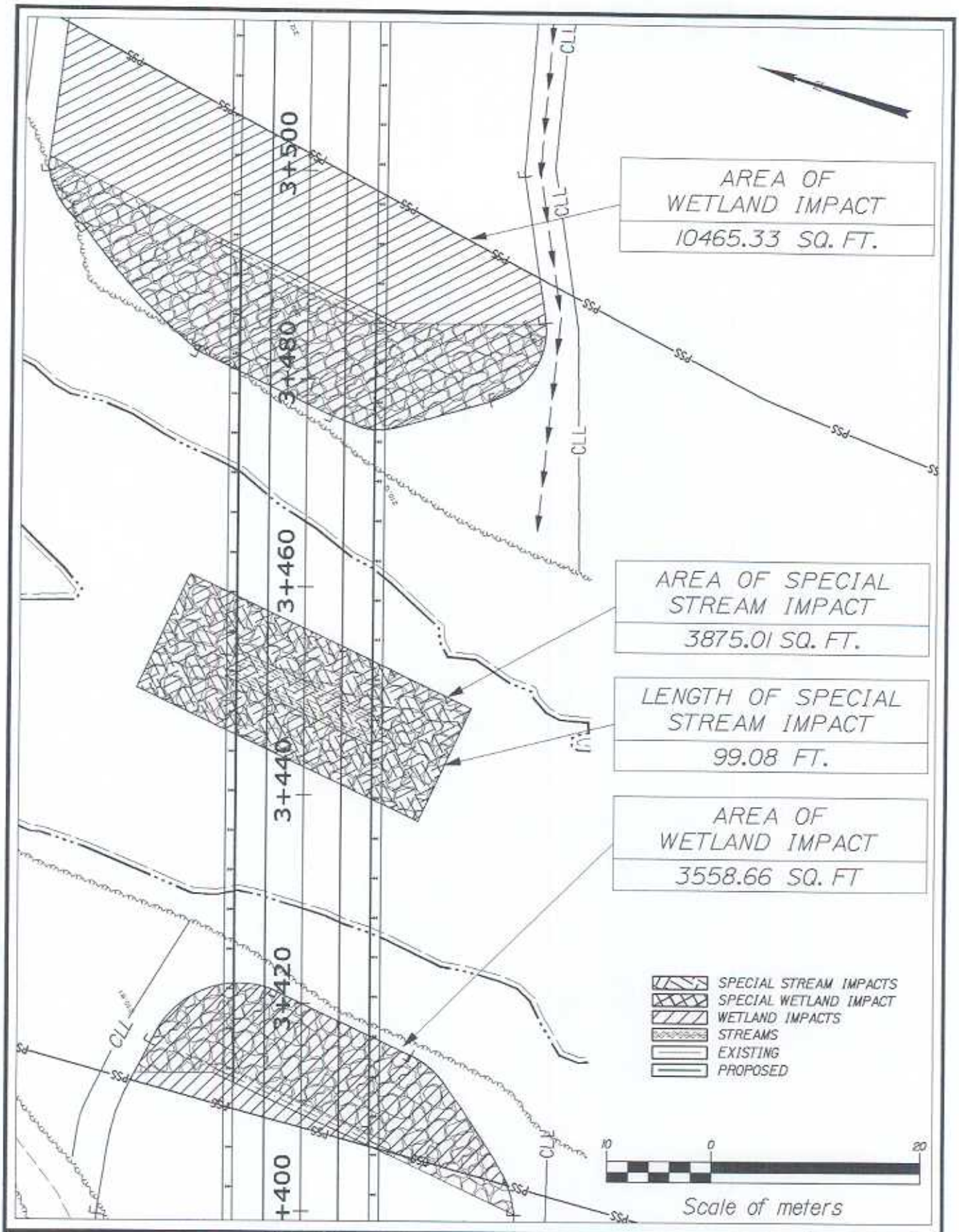
_____



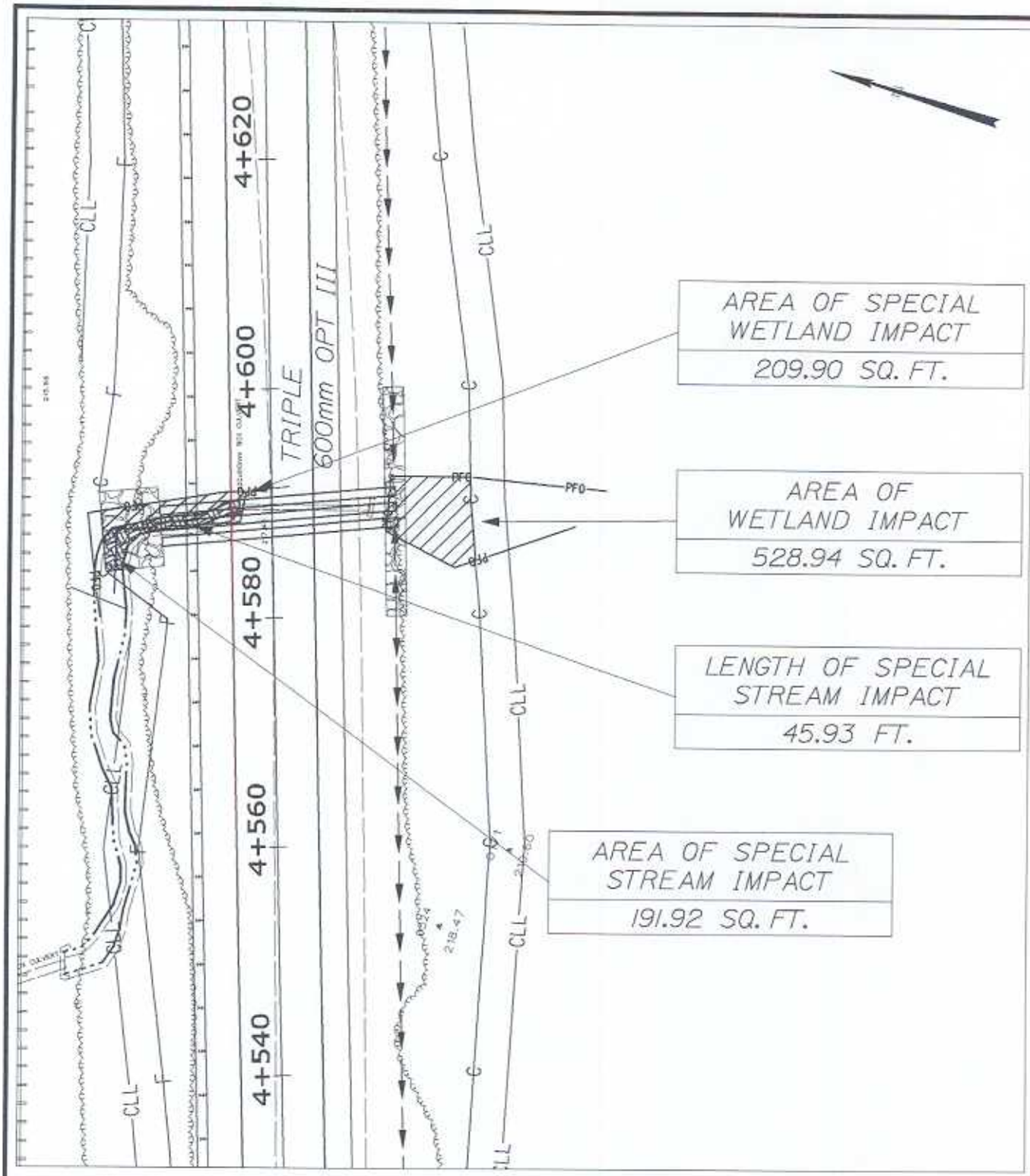
Name: GILEAD
Date: 3/28/2006
Scale: 1 inch equals 3333 feet

Location: 044° 24' 02.1" N 070° 55' 29.7" W
Caption: Bethel/Gilead 9184.00
Route Highway Improvements

Copyright (C) 1997, Maptech, Inc.



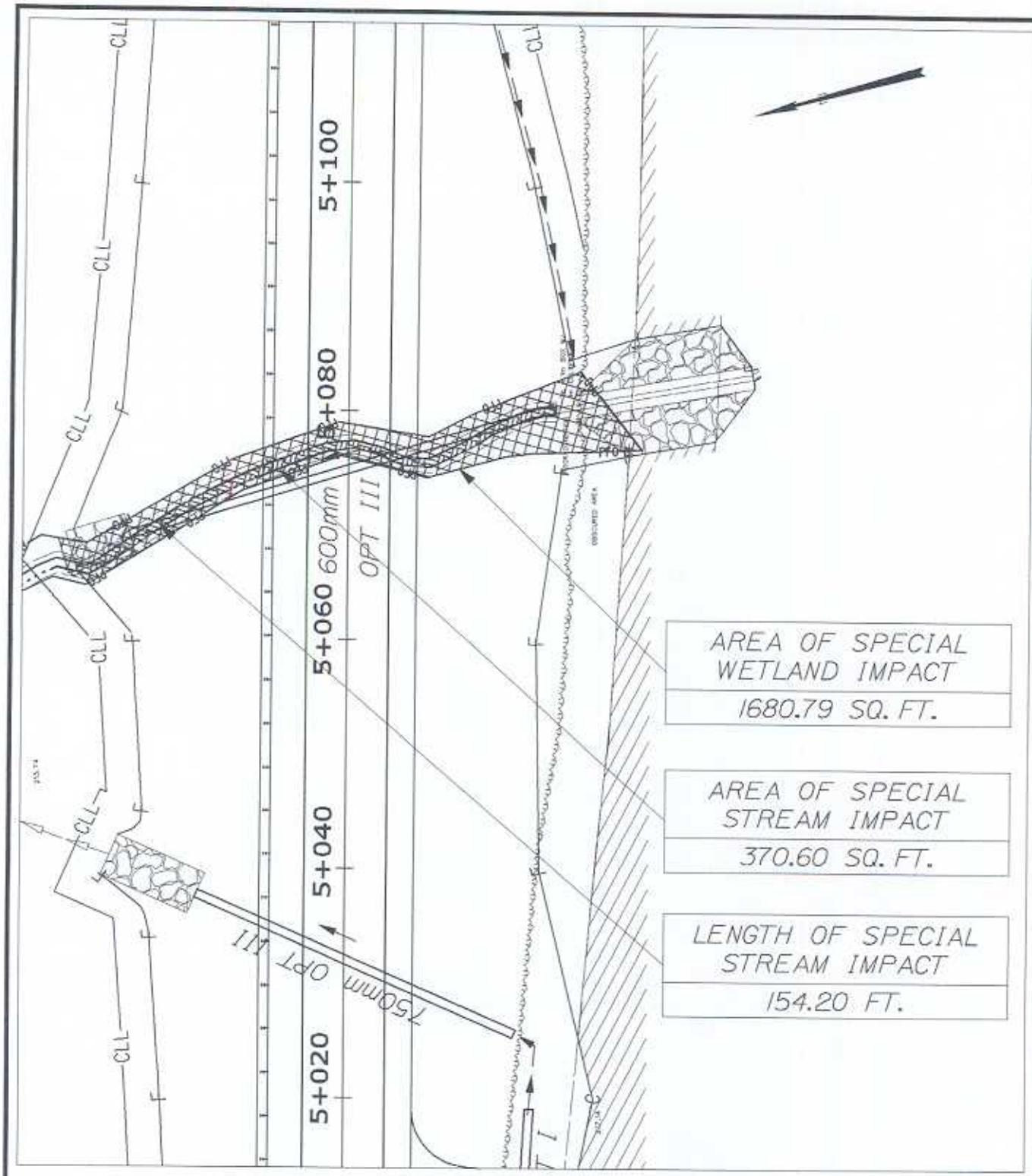
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 1
9184.00	WETLAND IMPACTS	OF 14



WETLAND IMPACTS
STREAMS
EXISTING
PROPOSED

10 0 20
Scale of meters

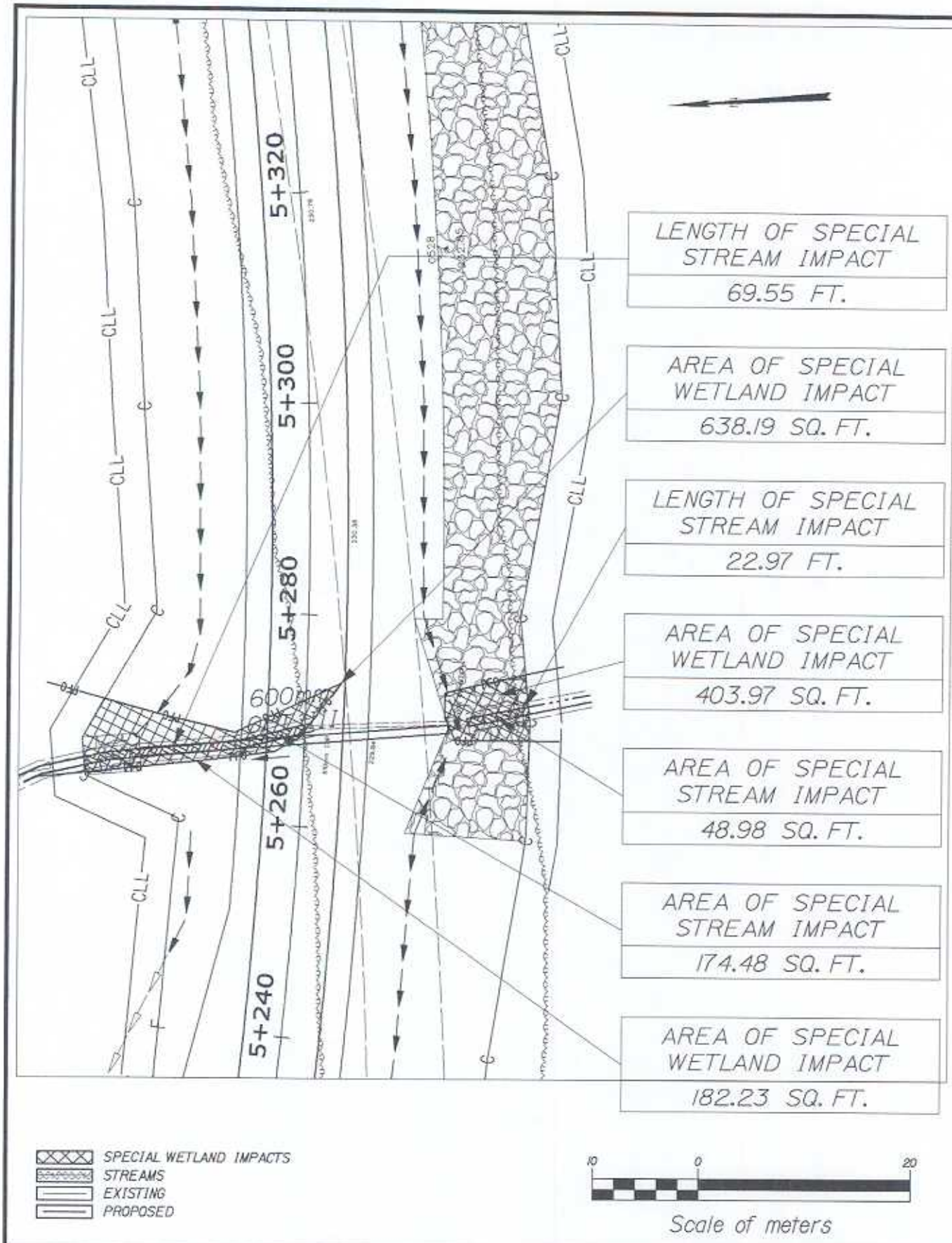
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 2
9184.00	WETLAND IMPACTS	OF 14



SPECIAL WETLAND IMPACTS
STREAMS
EXISTING
PROPOSED

10 0 20
Scale of meters

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 3 OF 14
9184.00	WETLAND IMPACTS	



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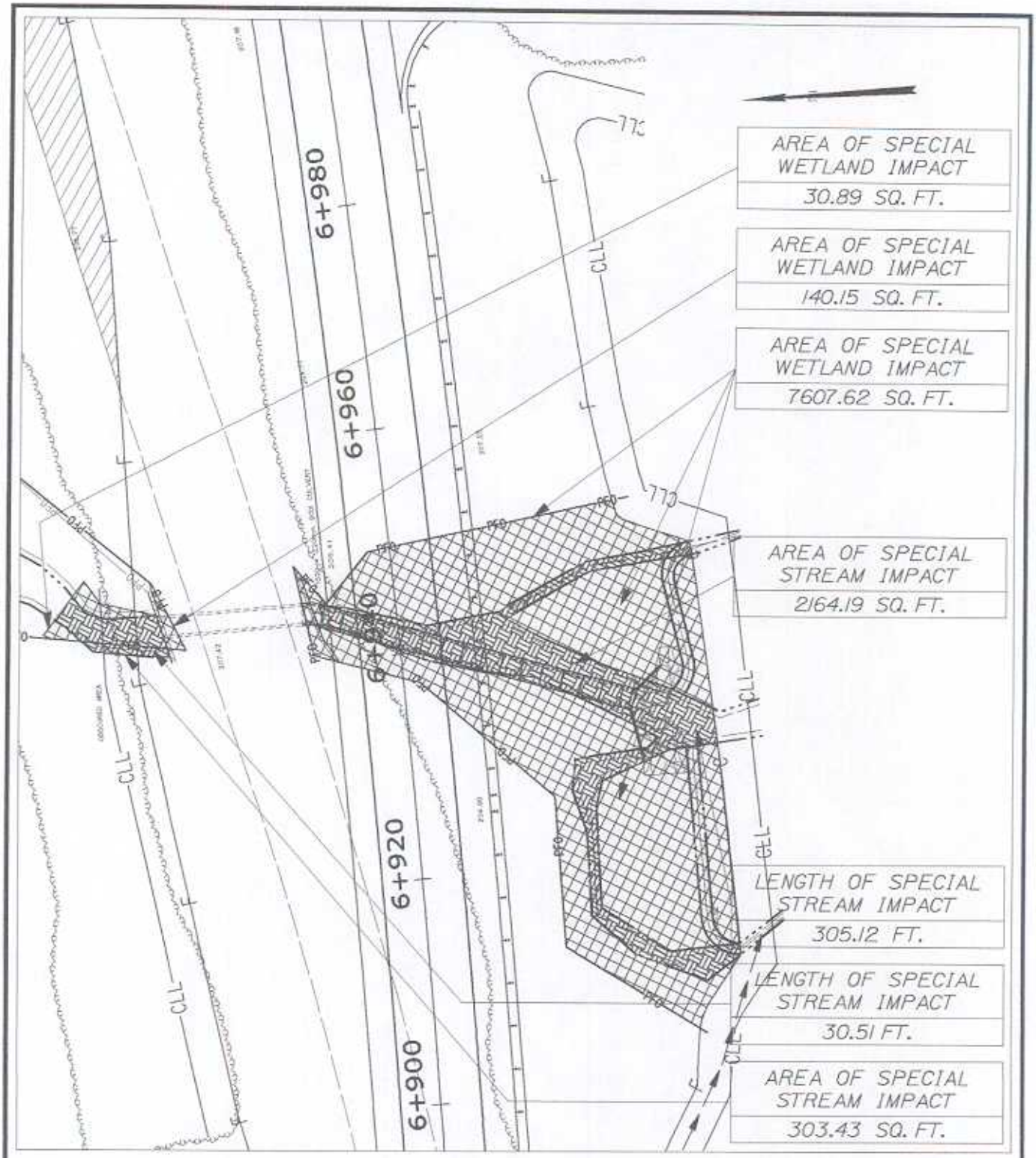
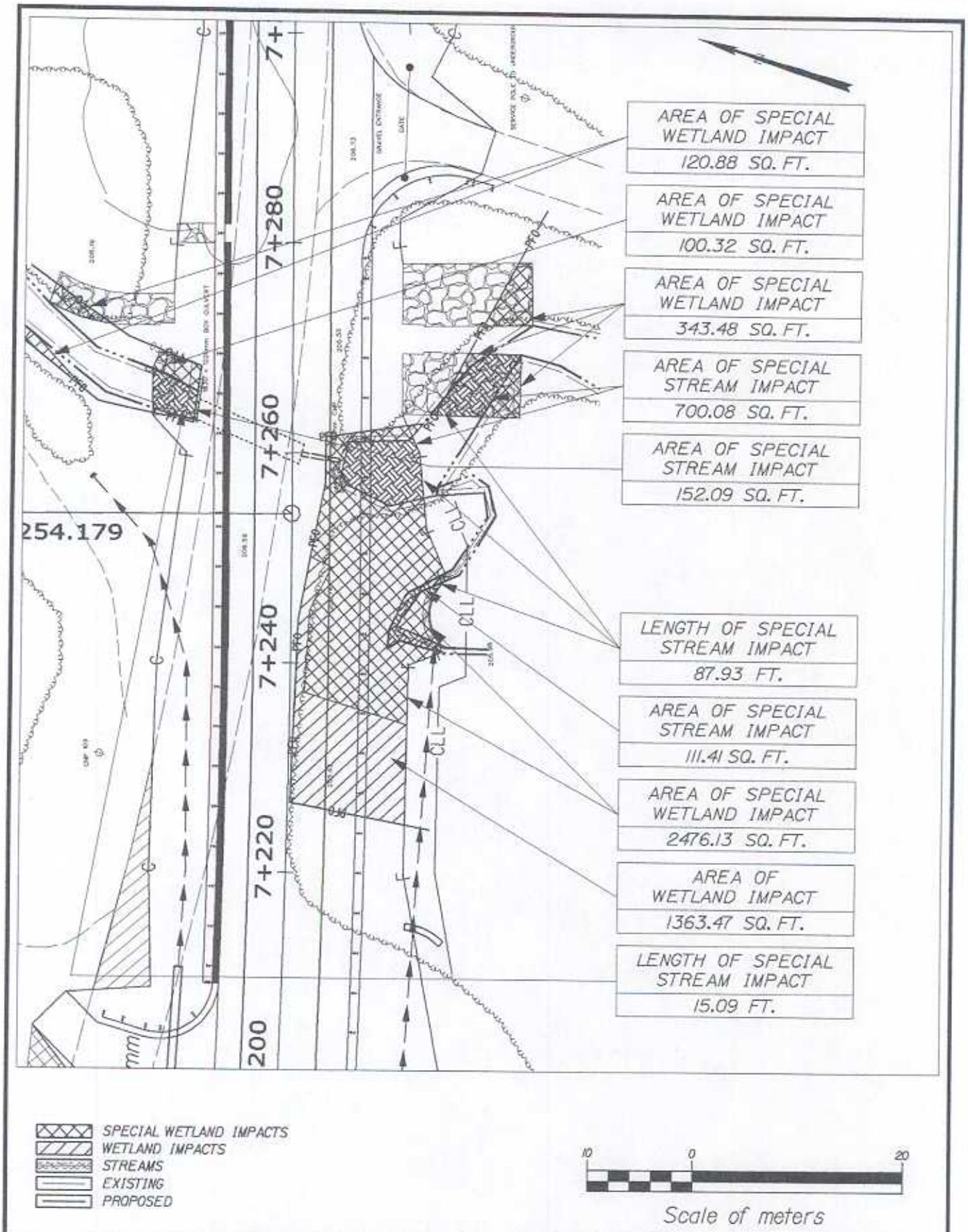
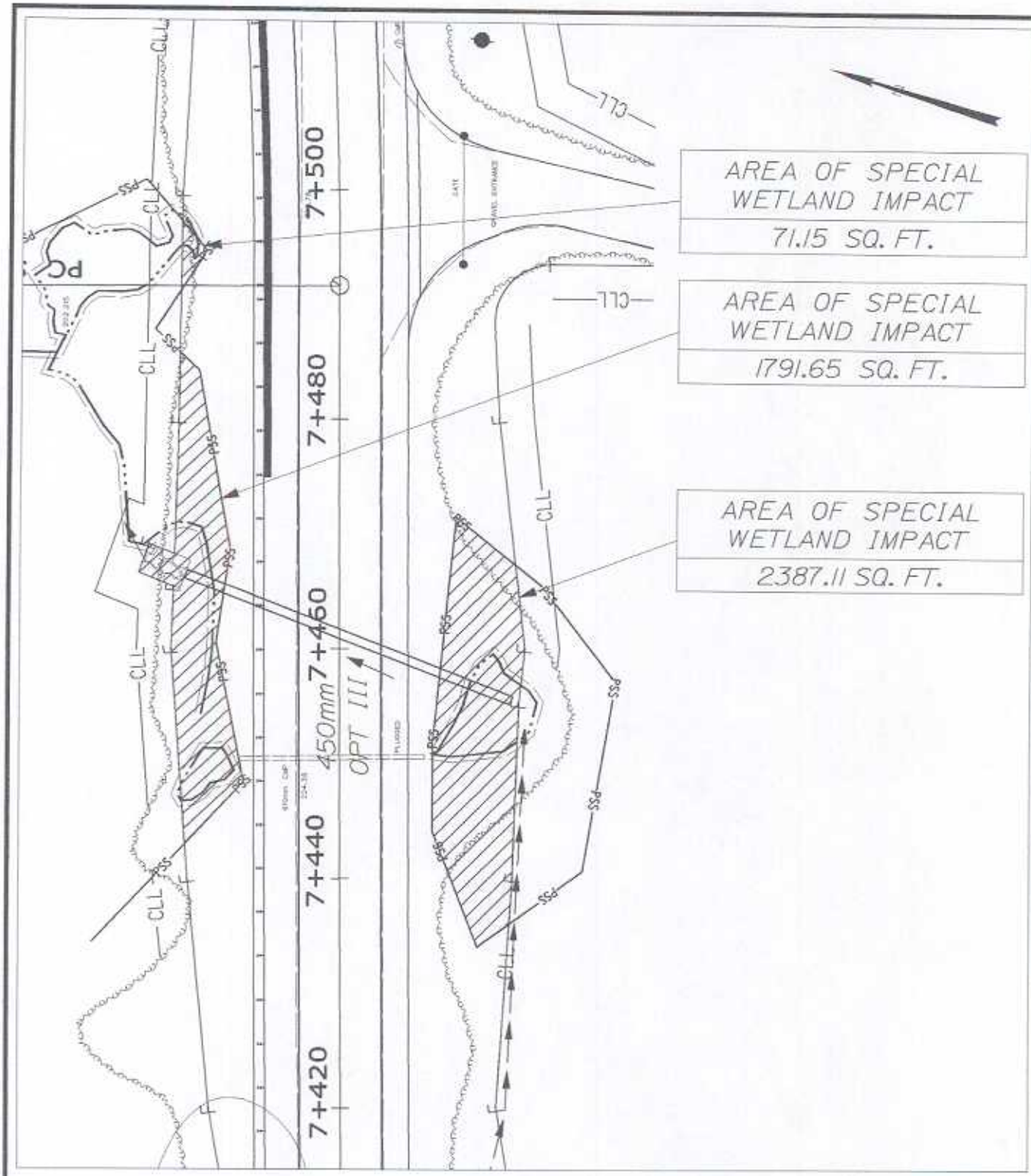
9184.00	WETLAND IMPACTS	



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 5 OF 14
9184.00	WETLAND IMPACTS	



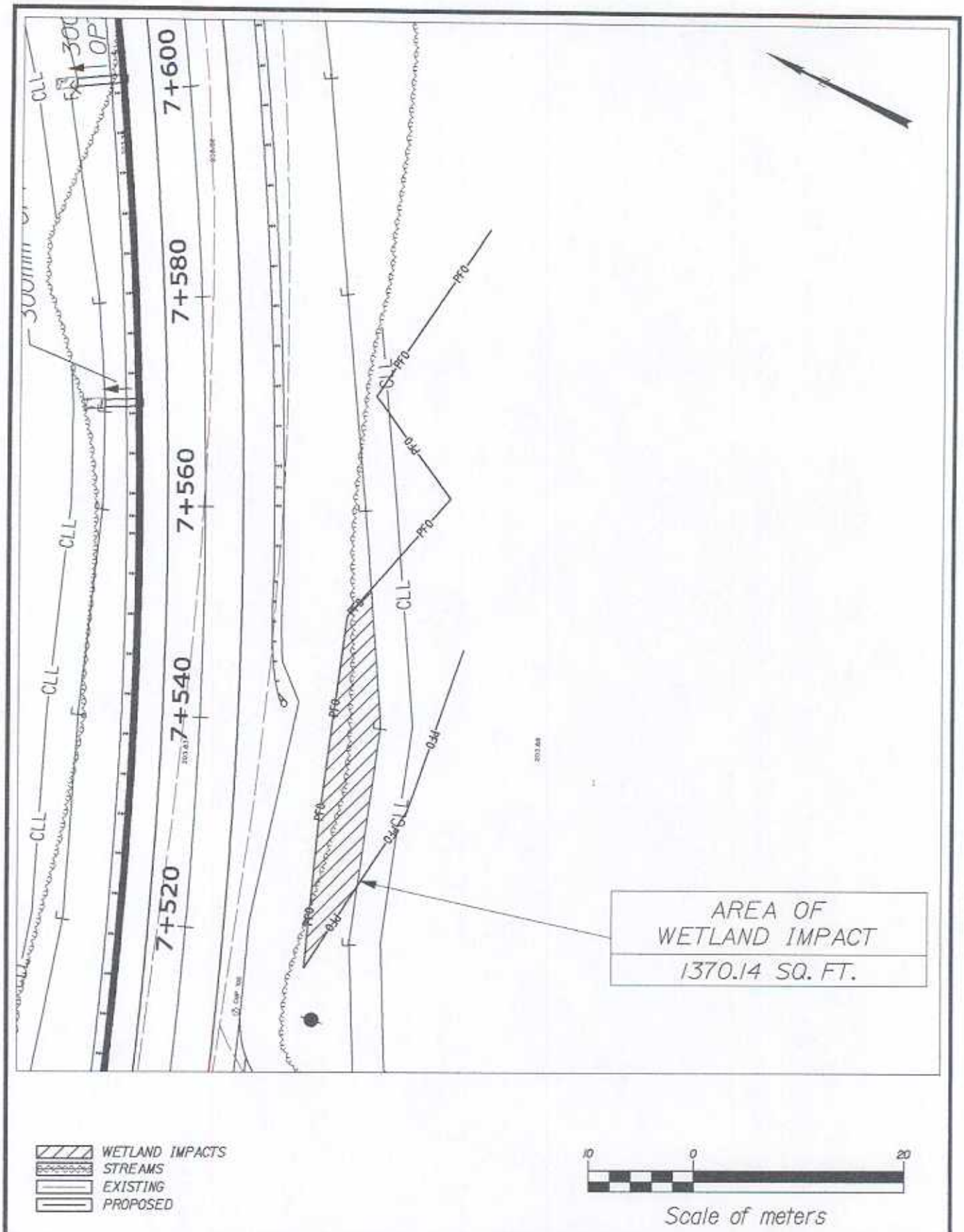
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 6 OF 14
9184.00	WETLAND IMPACTS	



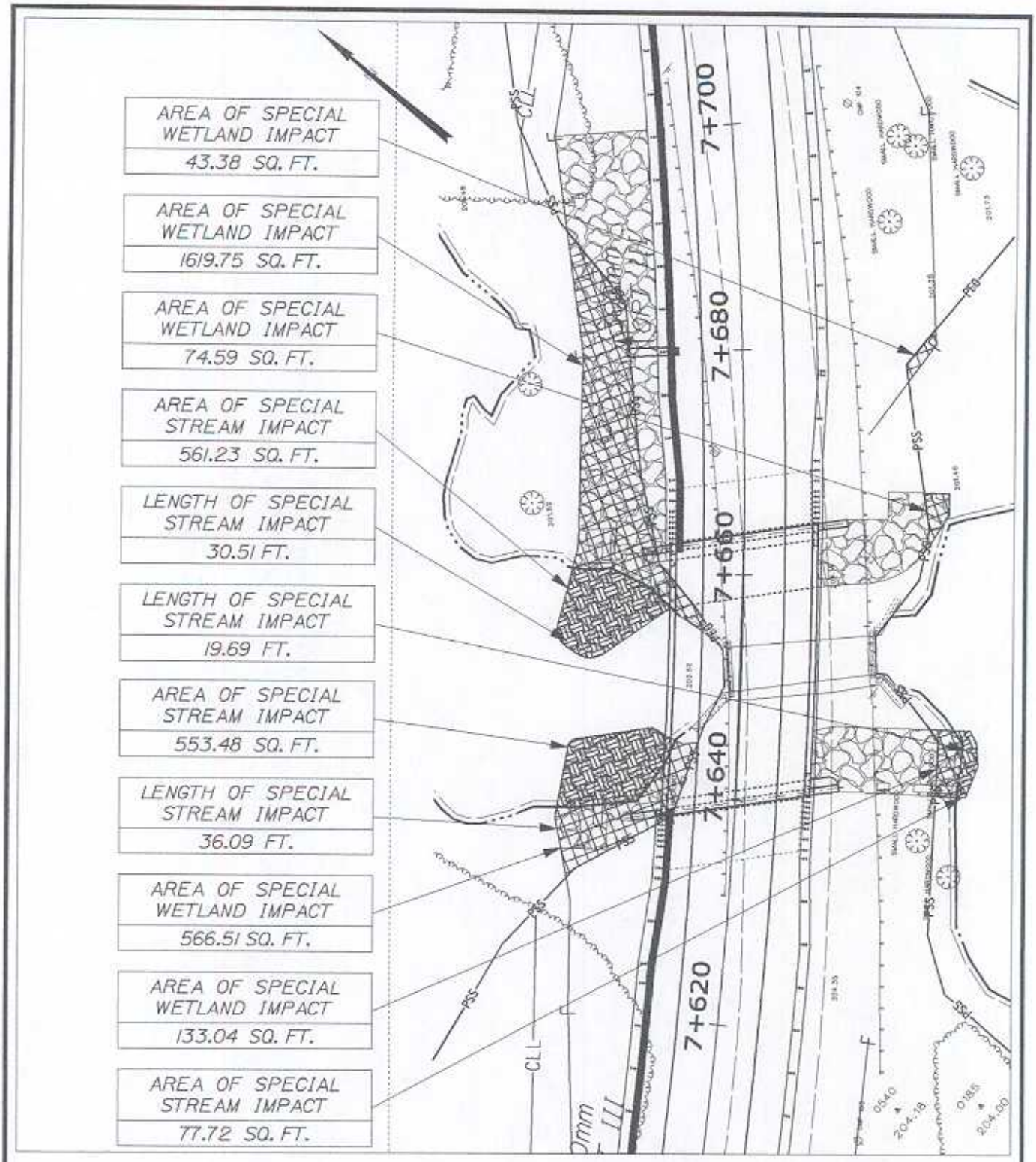
WETLAND IMPACTS
STREAMS
EXISTING
PROPOSED

10 0 20
Scale of meters

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 7
9184.00	WETLAND IMPACTS	OF 14



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 8 OF 14
9184.00	WETLAND IMPACTS	

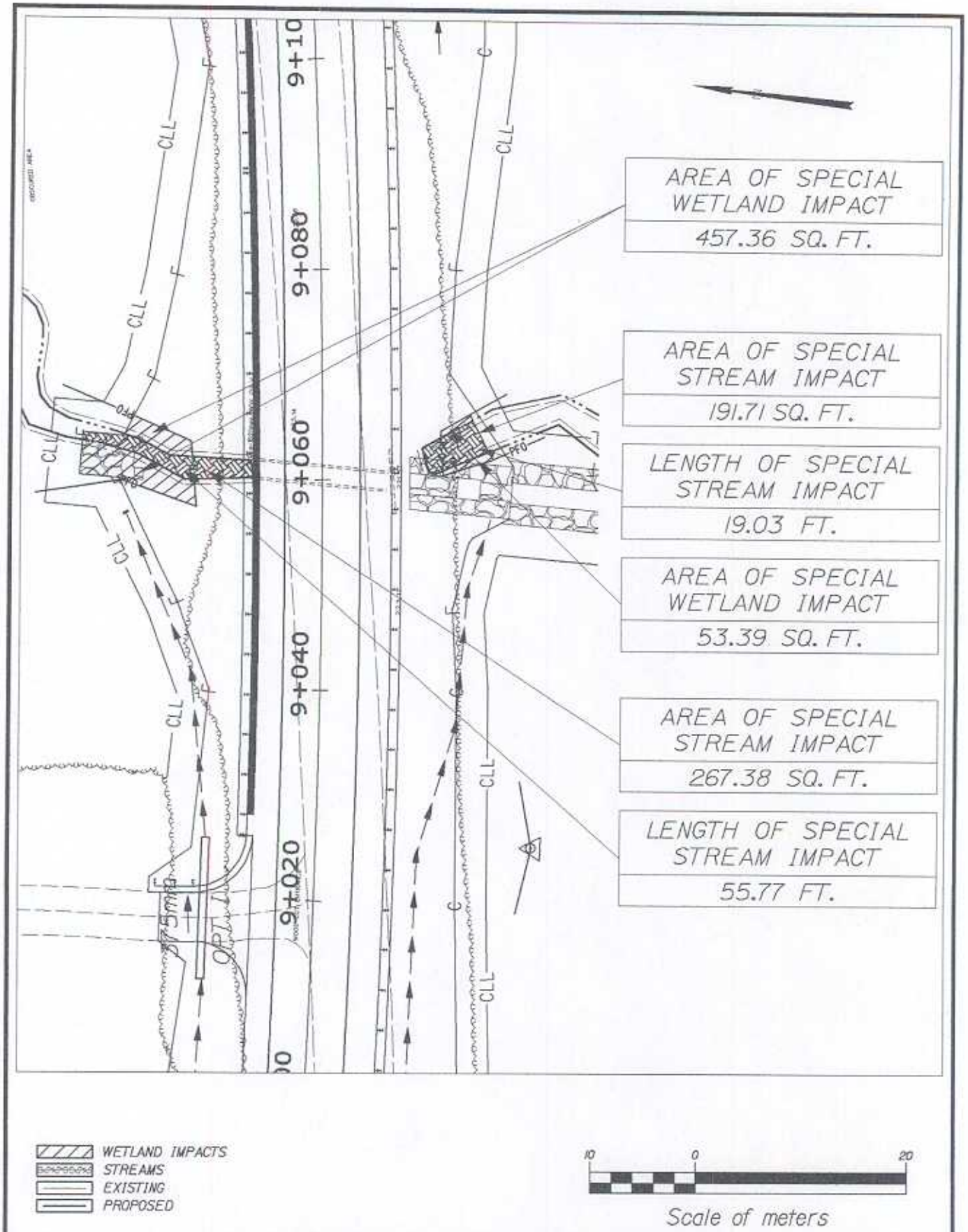


SPECIAL STREAM IMPACTS
SPECIAL WETLAND IMPACTS
WETLAND IMPACTS
STREAMS
EXISTING
PROPOSED

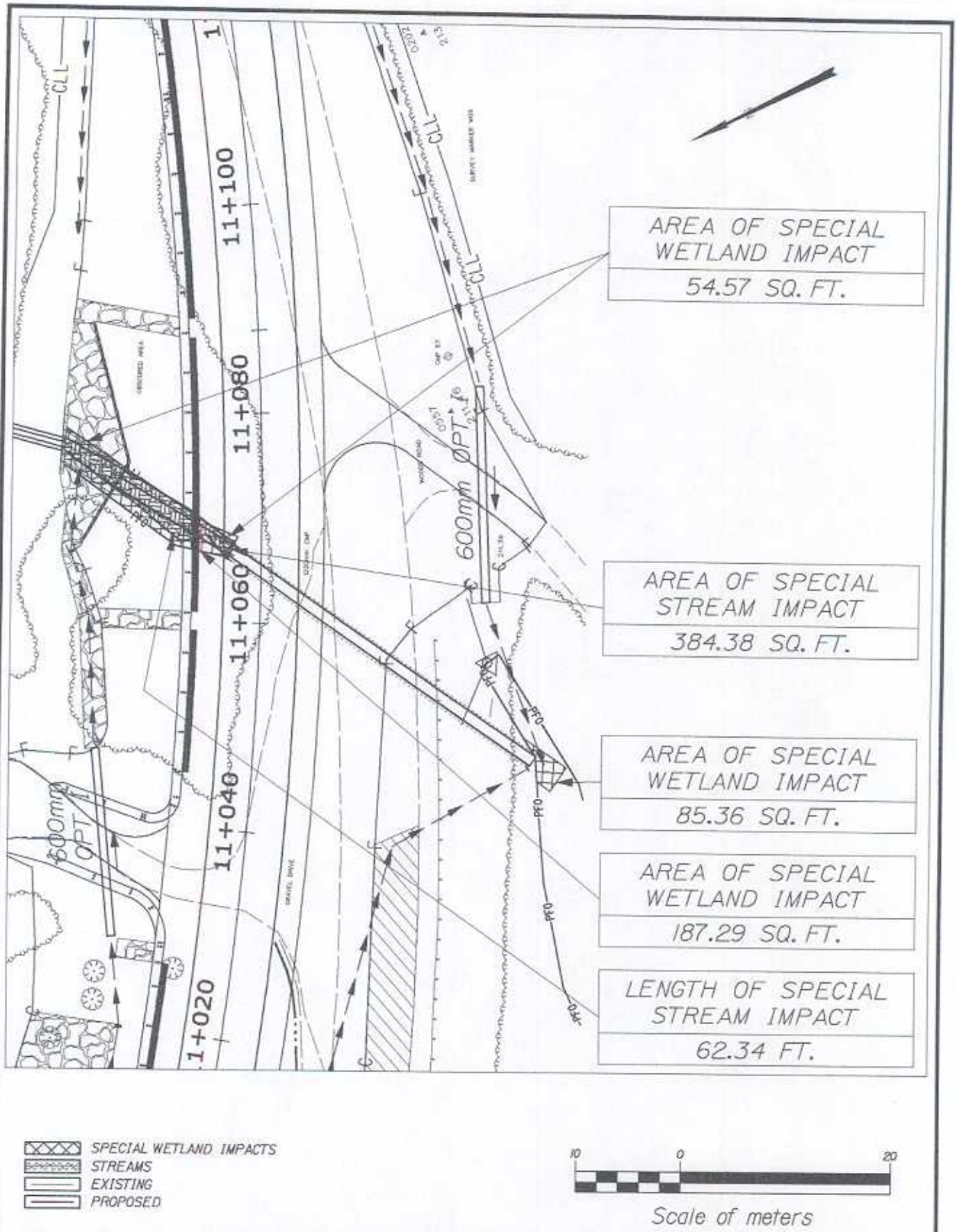
10 0 20

Scale of meters

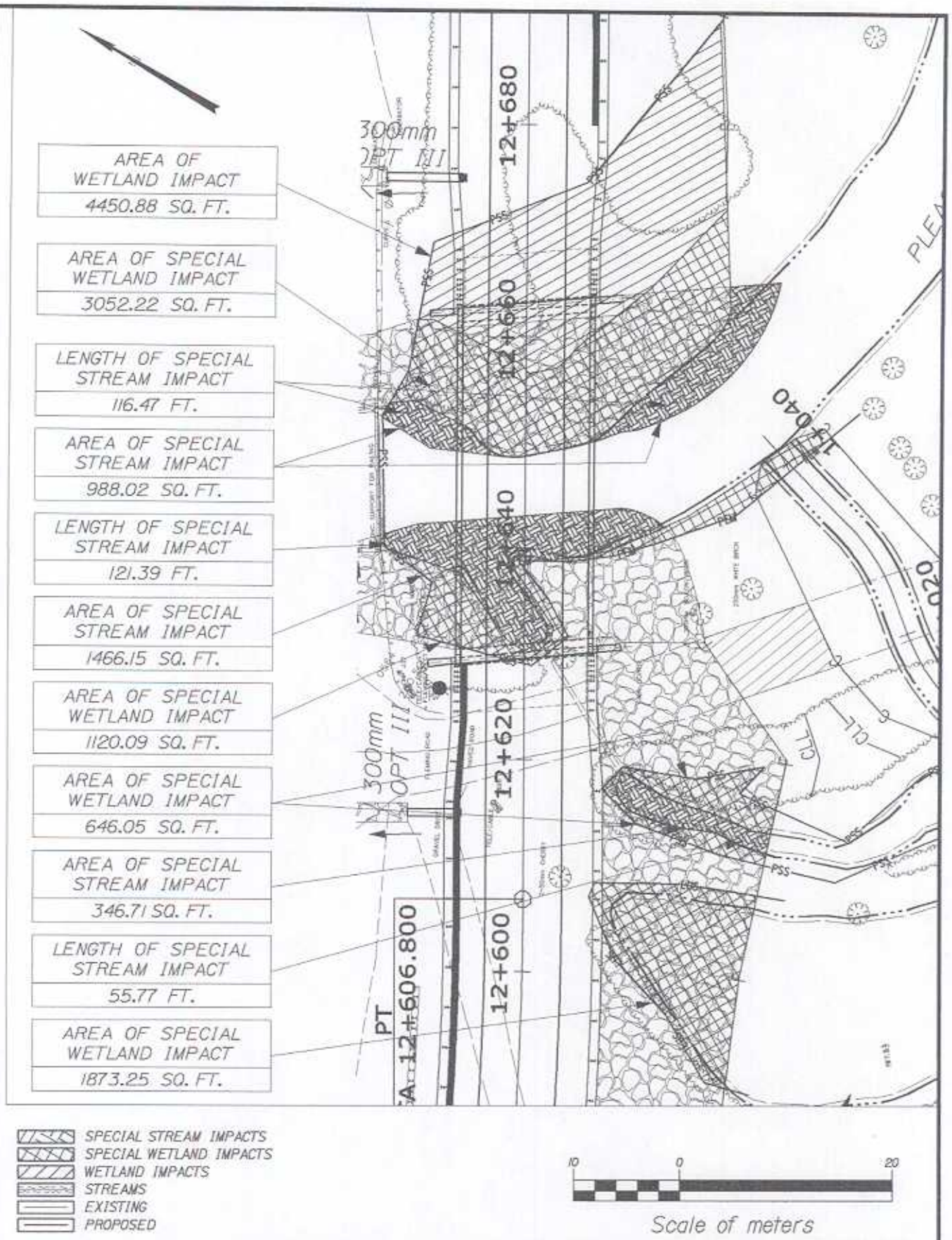
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 9 OF 14
9184.00	WETLAND IMPACTS	



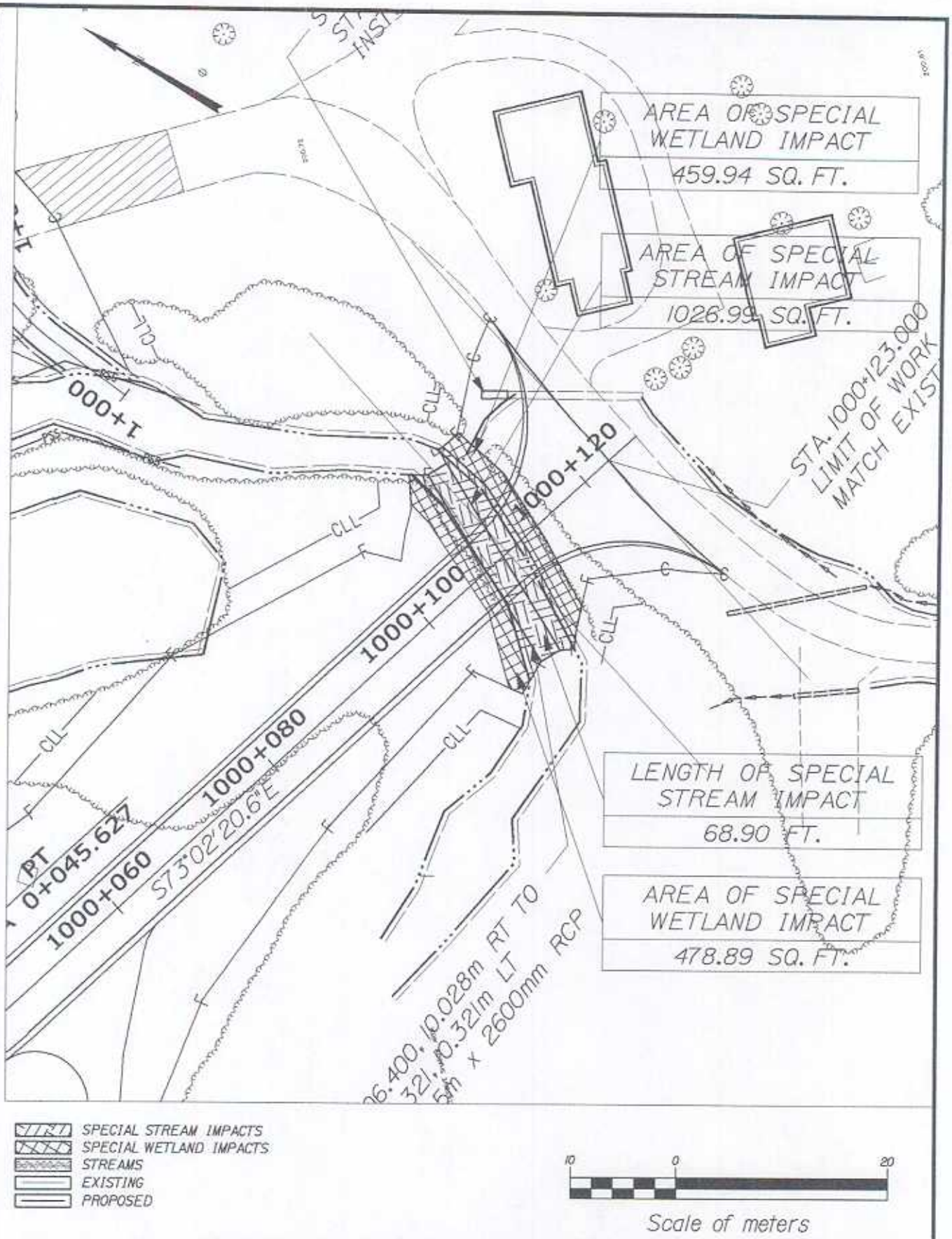
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 10 OF 14
9184.00	WETLAND IMPACTS	



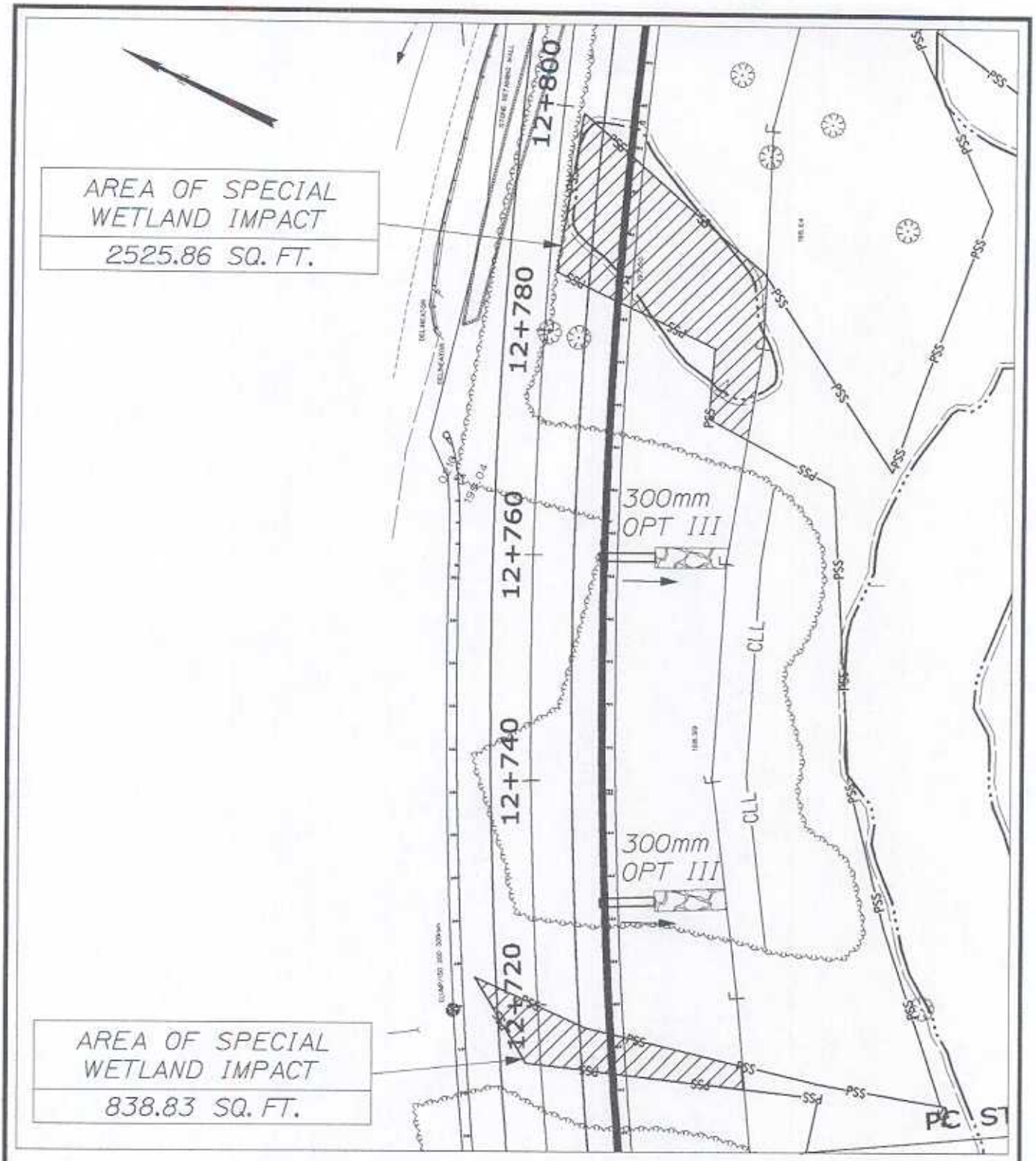
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 11 OF 14
9184.00	WETLAND IMPACTS	



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 12 OF 14
9184.00	WETLAND IMPACTS	



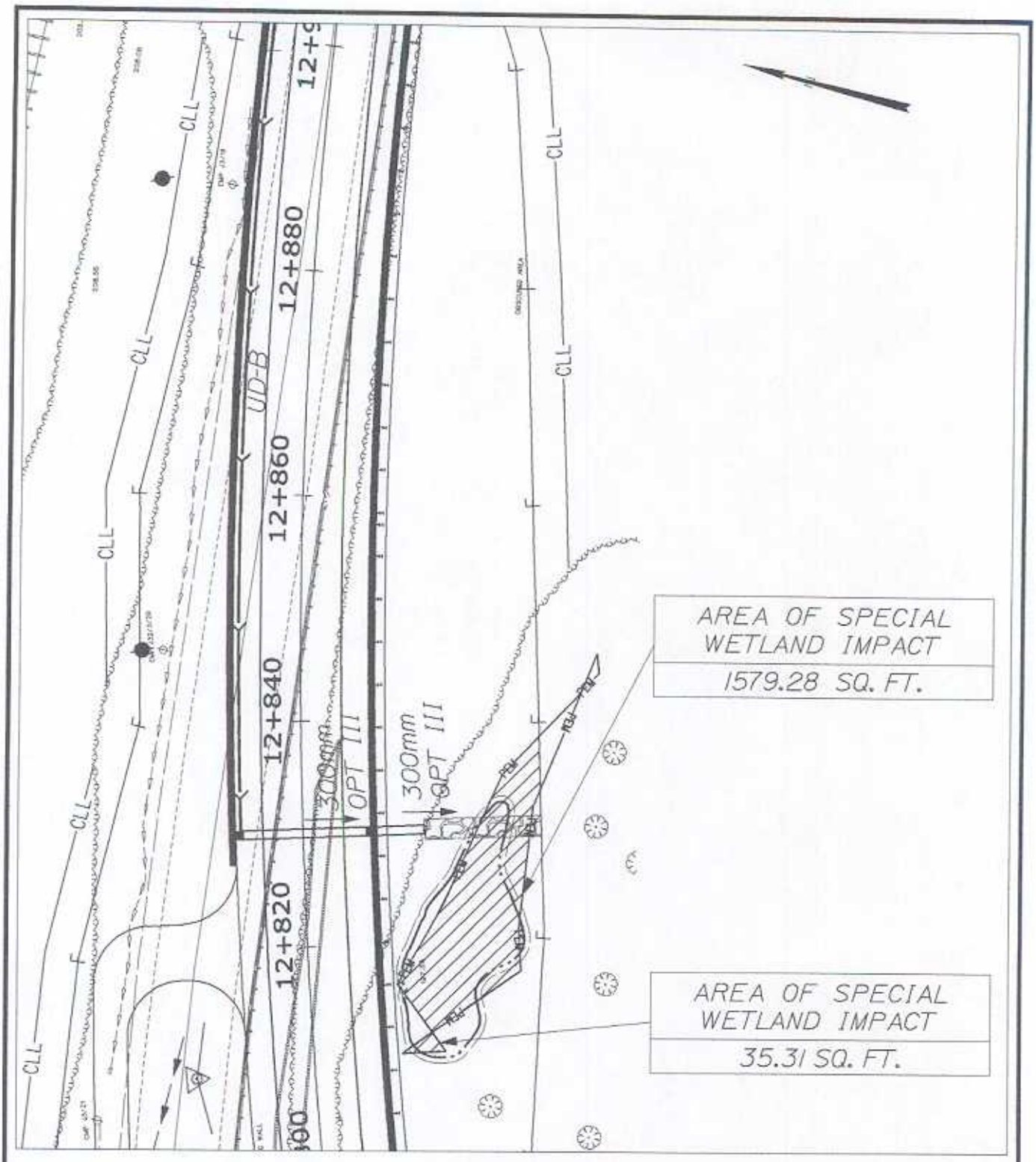
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 12a OF 14
9184.00	WETLAND IMPACTS	



WETLAND IMPACTS
STREAMS
EXISTING
PROPOSED

10 0 20
Scale of meters

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 13 OF 14
9184.00	WETLAND IMPACTS	

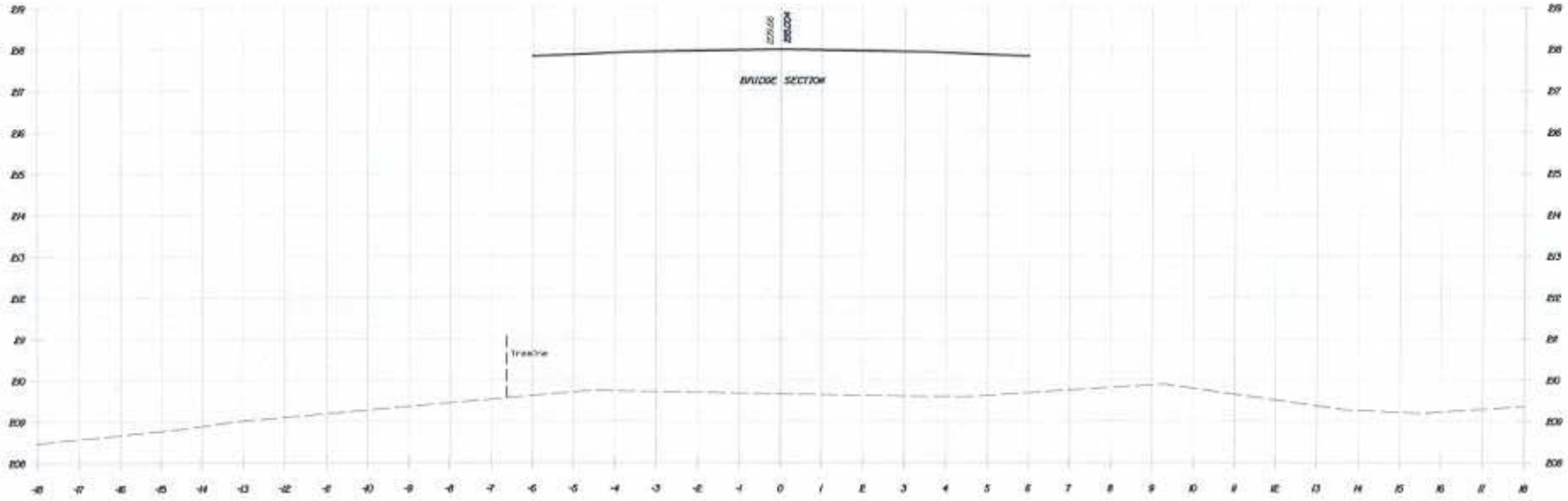


WETLAND IMPACTS
STREAMS
EXISTING
PROPOSED

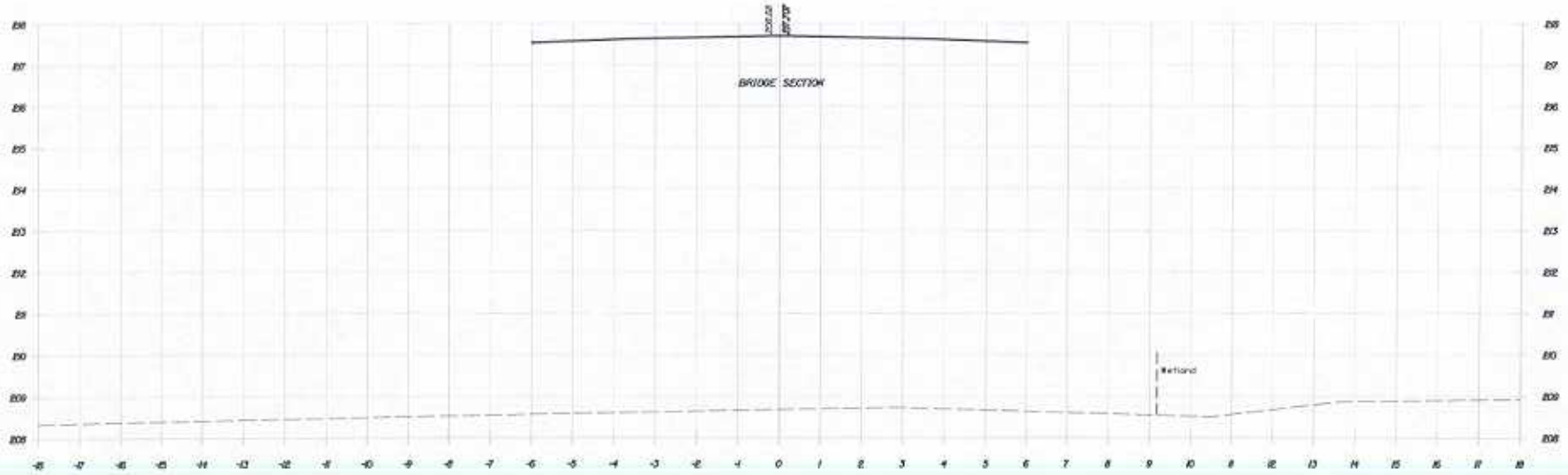
10 0 20
Scale of meters

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	U.S. Route 2 BETHEL - GILEAD Oxford	SHEET NUMBER 14 OF 14
9184.00	WETLAND IMPACTS	

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

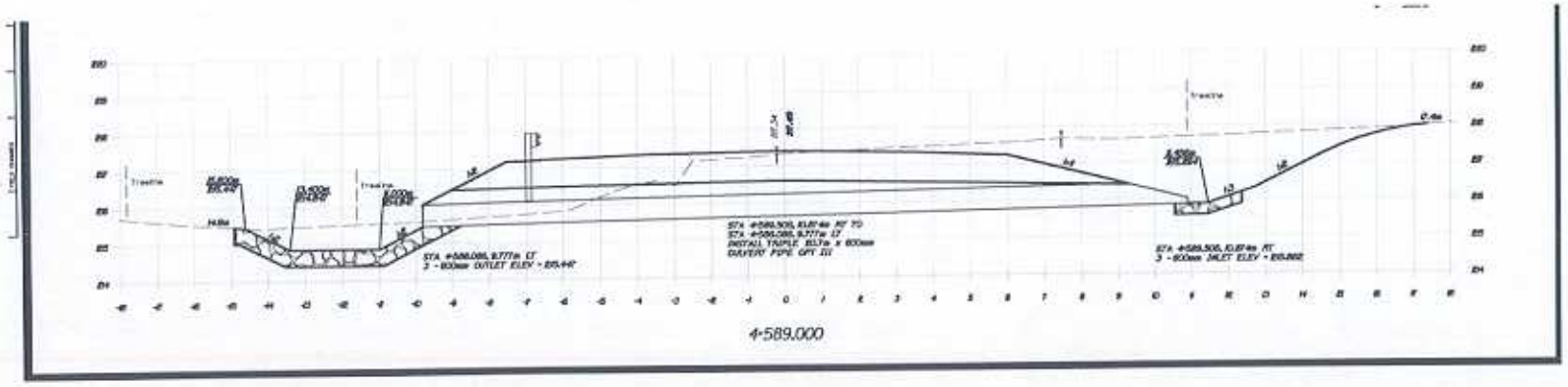


3+480.000



3+460.000

PLANS



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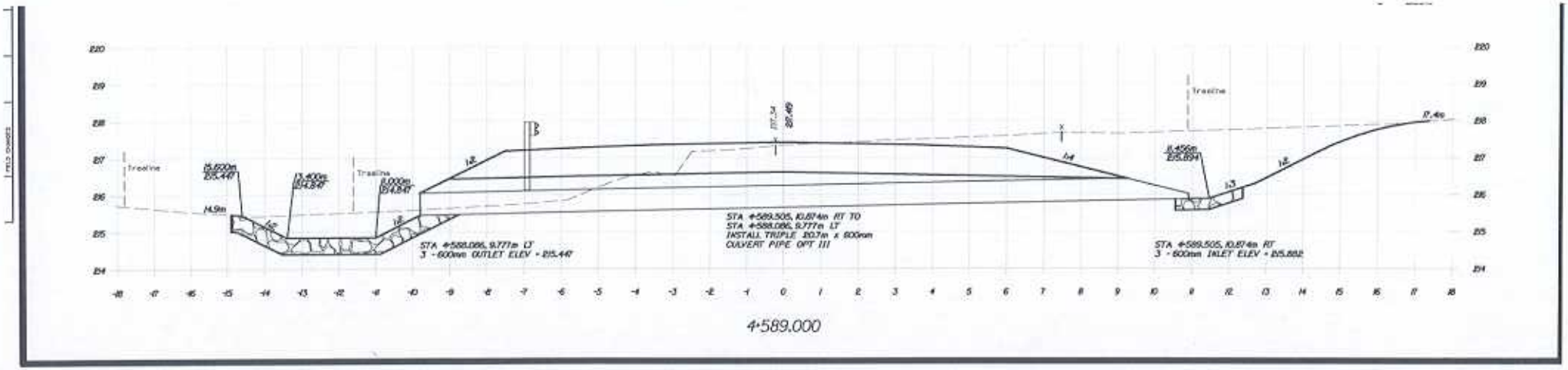
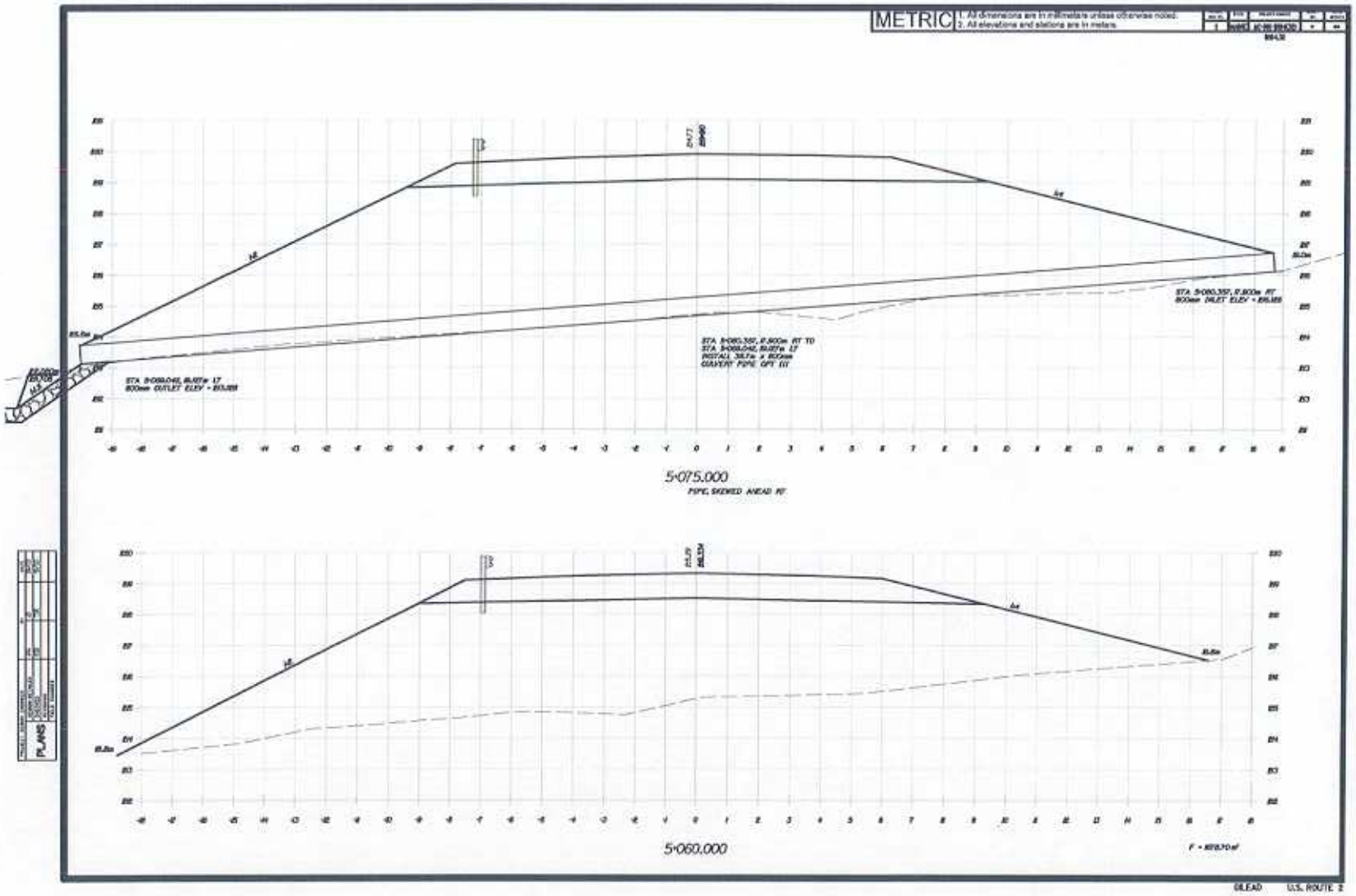
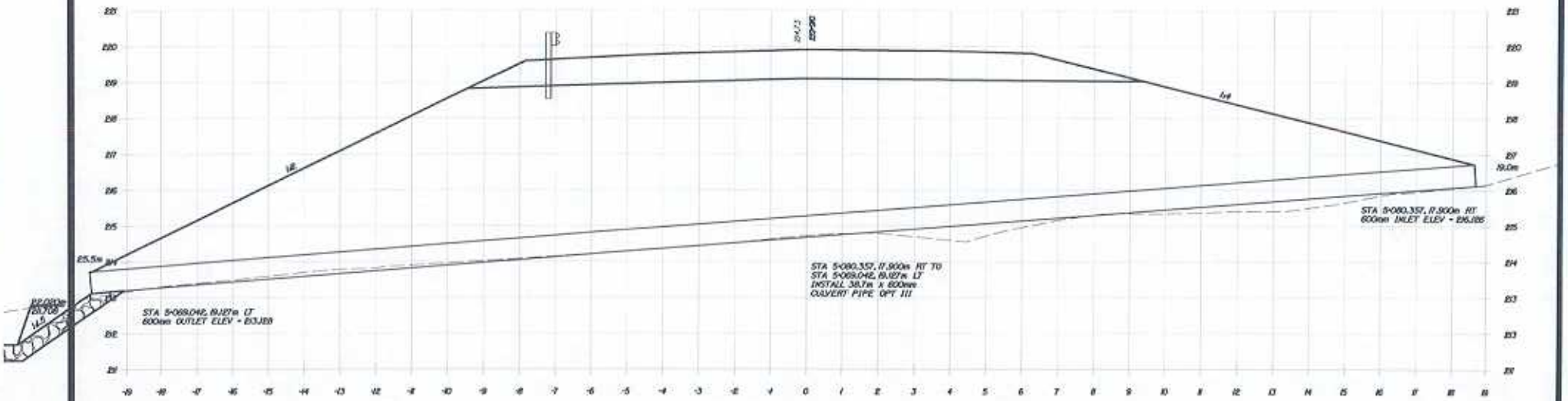

Trackline
15.620m
215.44
14.9m
13.400m
214.84
Trackline
8.000m
214.84
STA 4+588.086, 9.777m LT
3 - 600mm OUTLET ELEV = 215.44
STA 4+589.505, 10.874m RT TO
STA 4+588.086, 9.777m LT
INSTALL TRIPLE 3@3.7m x 600mm
CULVERT PIPE OPT III
Trackline
15.456m
215.894
STA 4+589.505, 10.874m RT
3 - 600mm INLET ELEV = 215.882
17.4m
4+589.000

n.T.S.


METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
5+075.000
PIPE, SKEWED AHEAD RT
5+060.000
PLANS
GILEAD
U.S. ROUTE 2

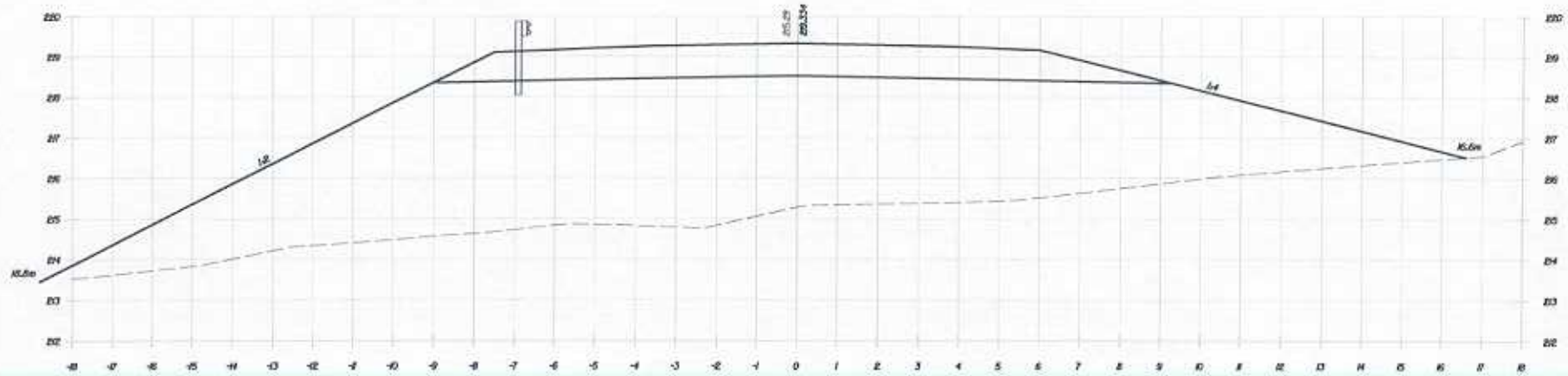
1:200

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.



5+075.000

PIPE SKEWED AHEAD RT



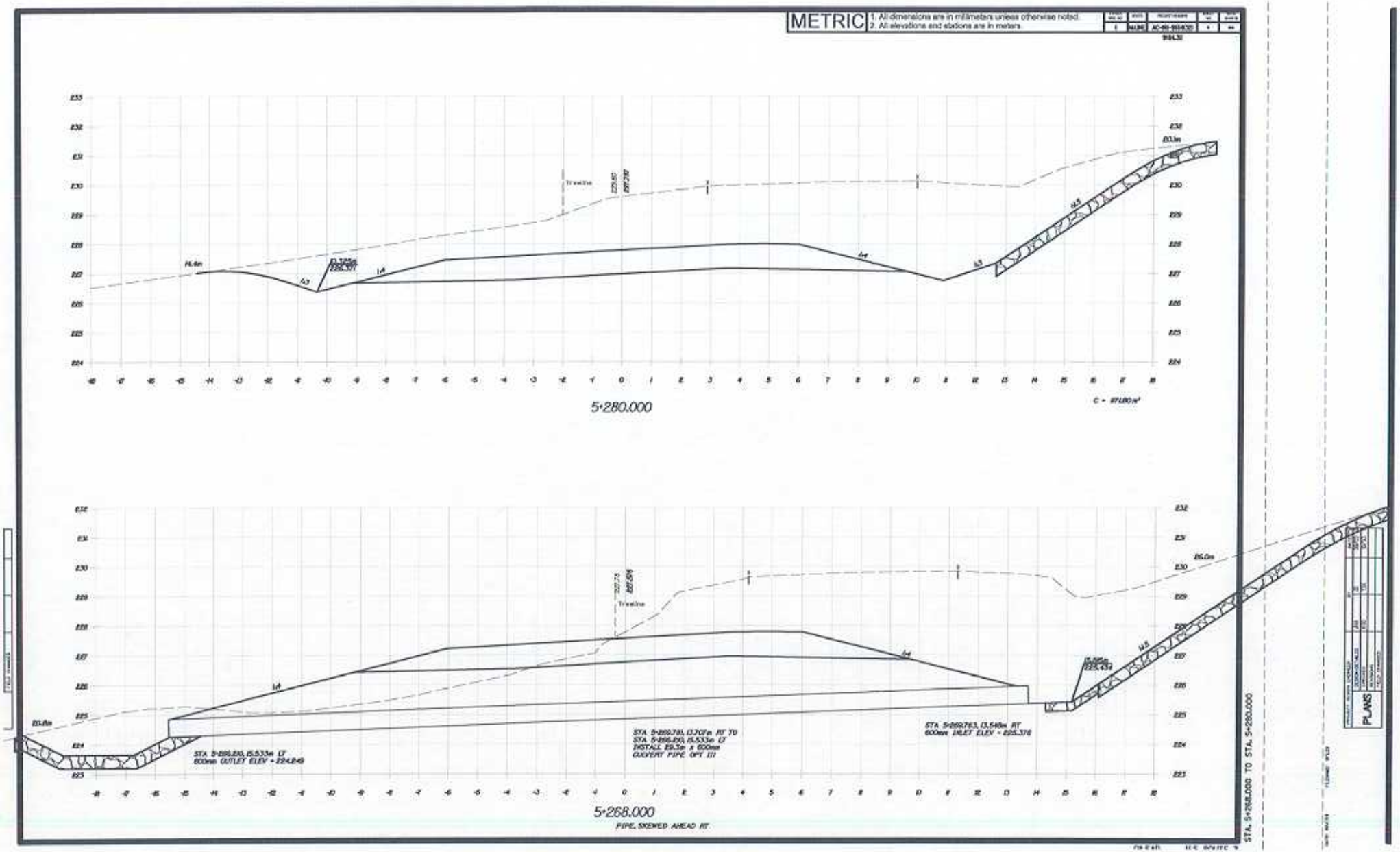
5+060.000

F - 107.870 m²

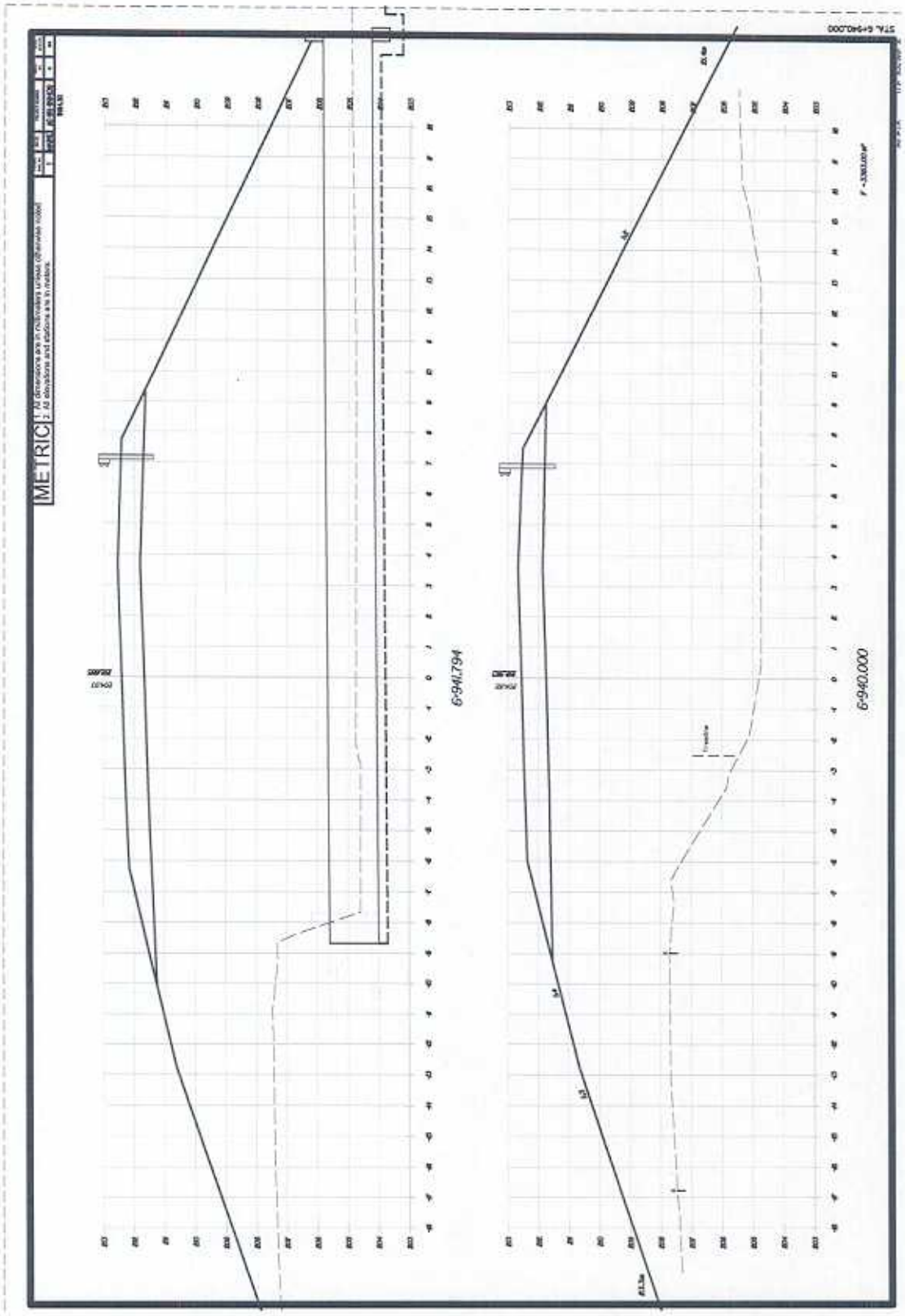
PLANS

GLEAD U.S. ROUTE 2

n.t.s.


METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
5+280.000
5+268.000
PIPE SKEWED AHEAD RT
STA 5+269.780, 13.707m RT TO
STA 5+286.690, 15.533m LT
INSTALL 89.3m x 600mm
CULVERT PIPE OFF LT
STA 5+269.783, 13.540m RT
600mm INLET ELEV = 825.318
STA 5+286.690, 15.533m LT
600mm OUTLET ELEV = 824.849
STA. 5+268.000 TO STA. 5+280.000
PLANS

1:200



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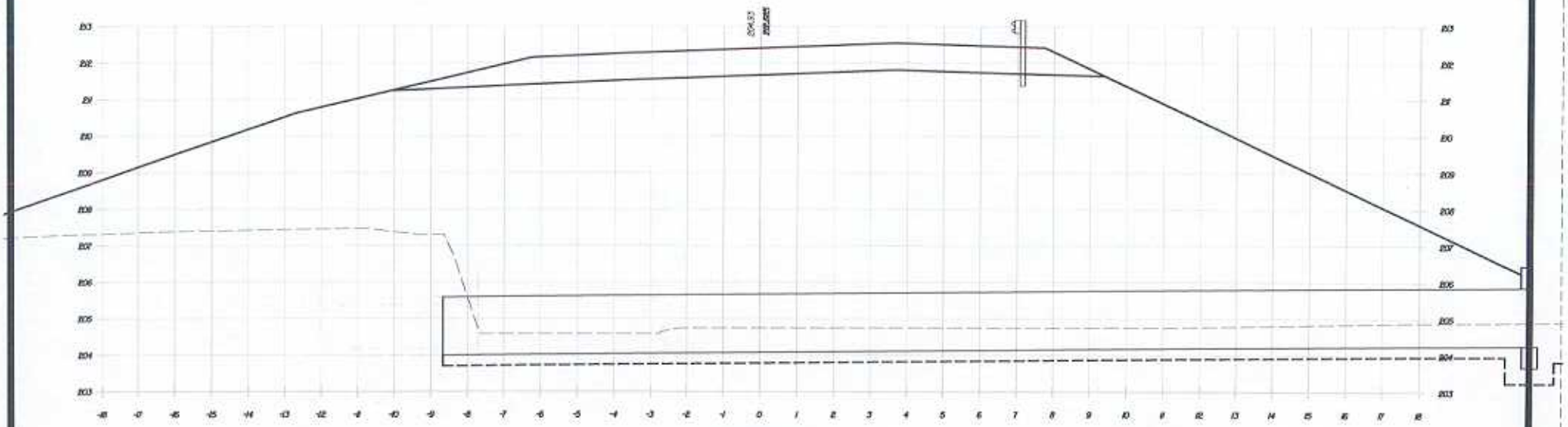
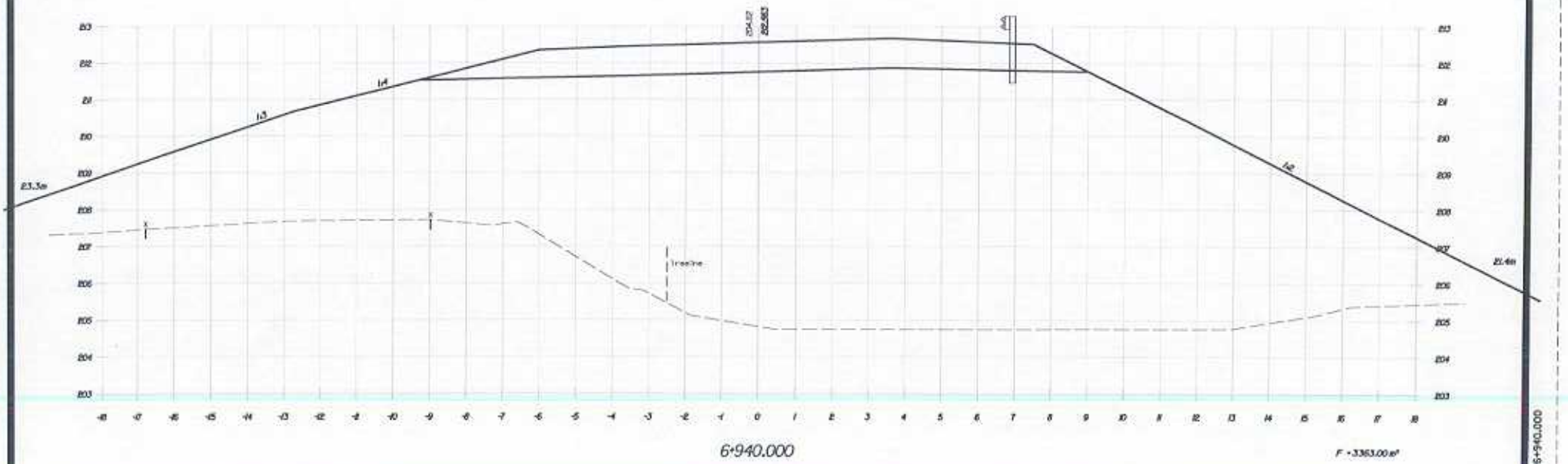
METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

1	MAINE	AC-NH-918400	4	**

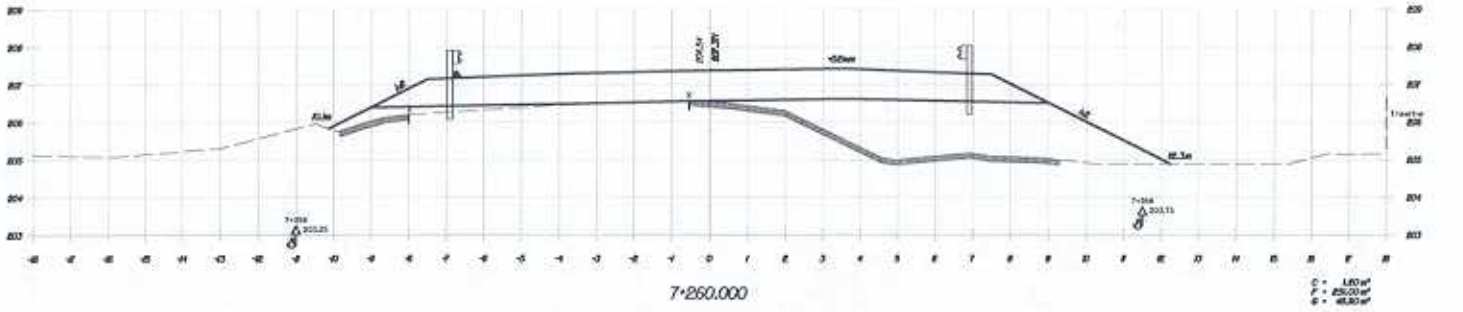
918430



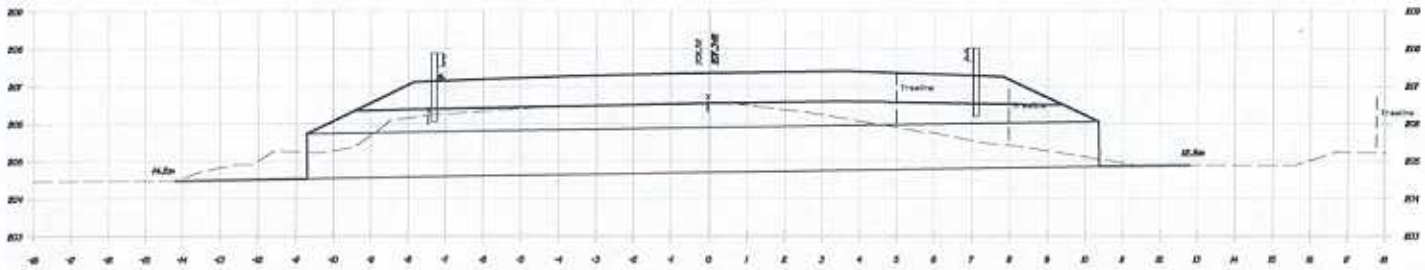


STA. 6+940.000

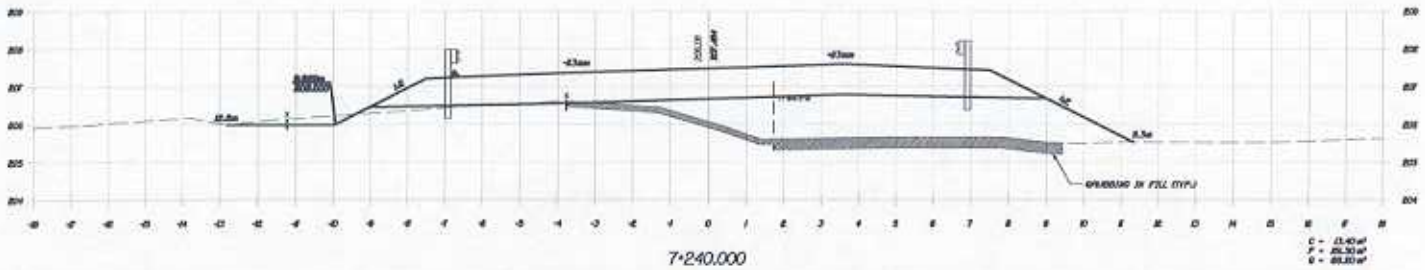
N.T.S.



7+260.000



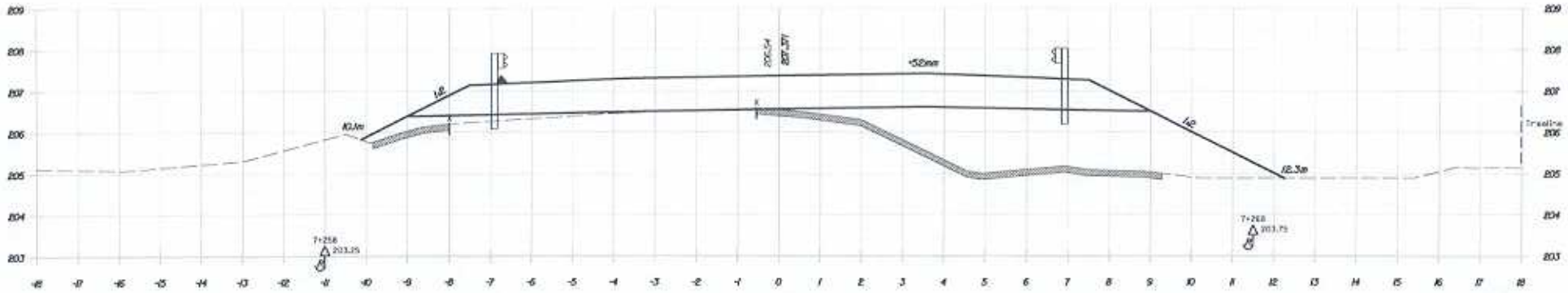
7+257.000



7+240.000

1:200

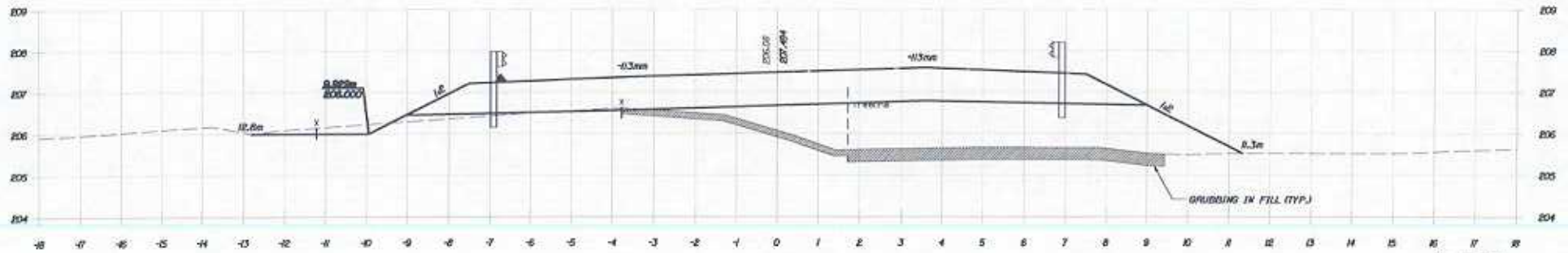
METRO 2. All elevations and stations are in meters.



7+260.000

C = 1.80 m³
F = 150.00 m³
G = 48.90 m³

7+257.000

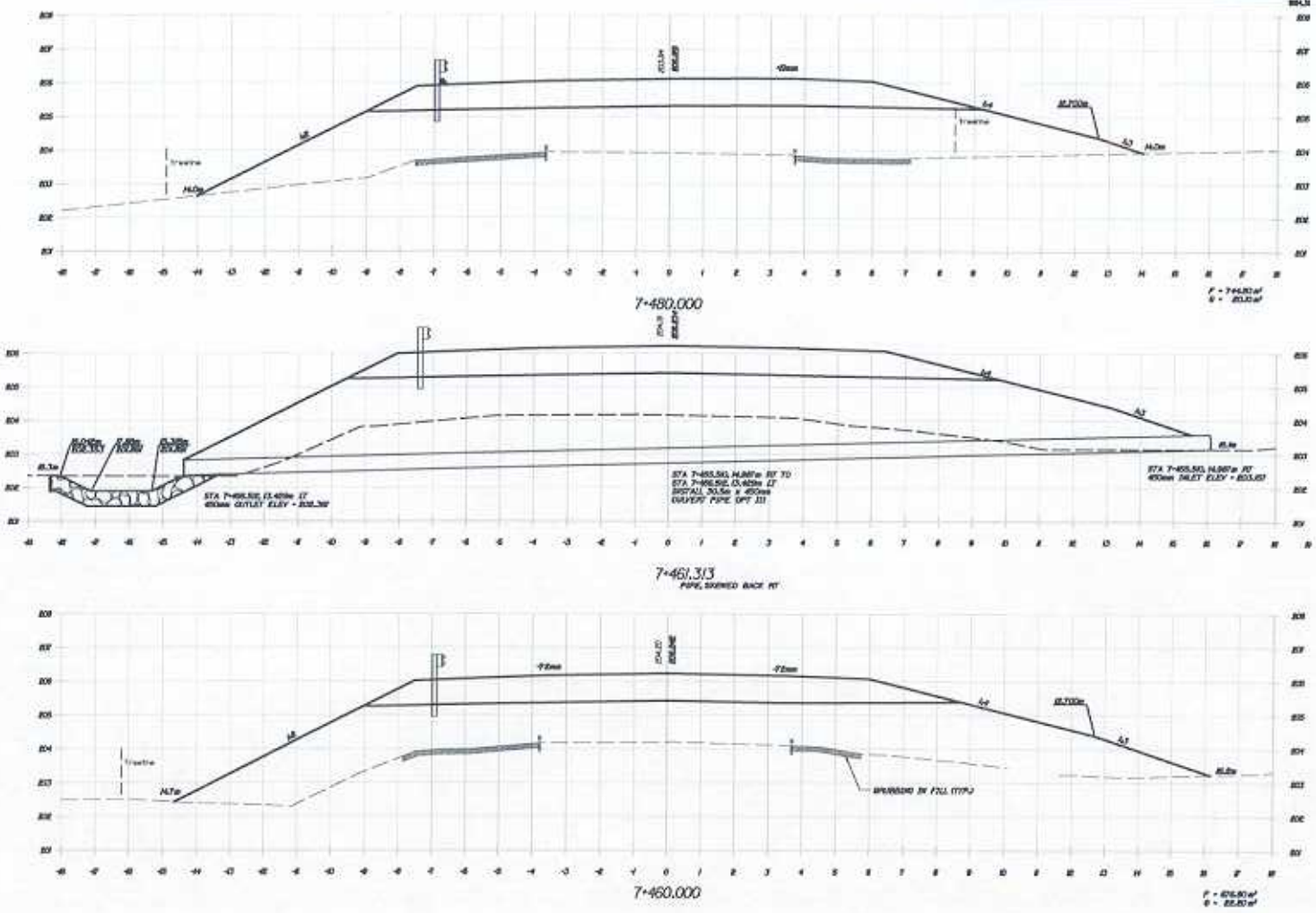


7+240.000

C = 13.40 m³
F = 151.30 m³
G = 62.80 m³

n.T.S.

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.



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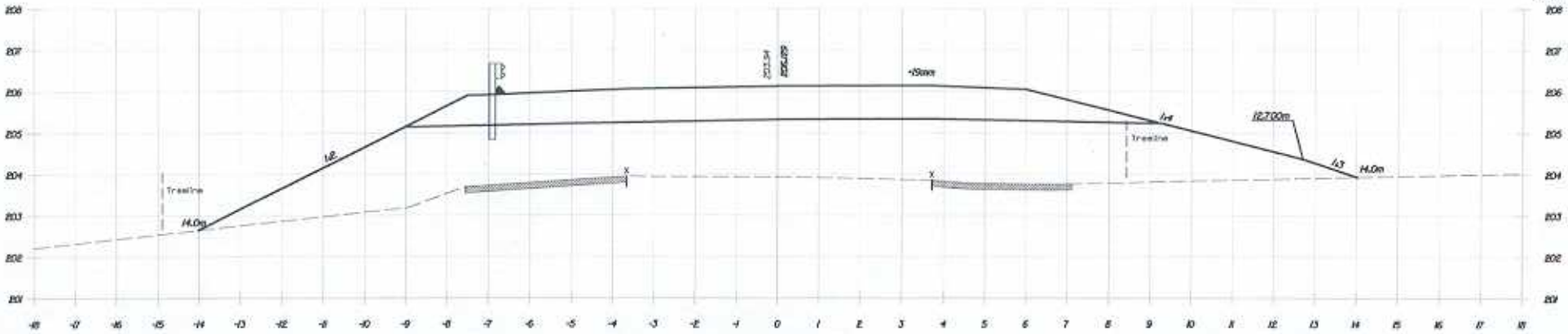
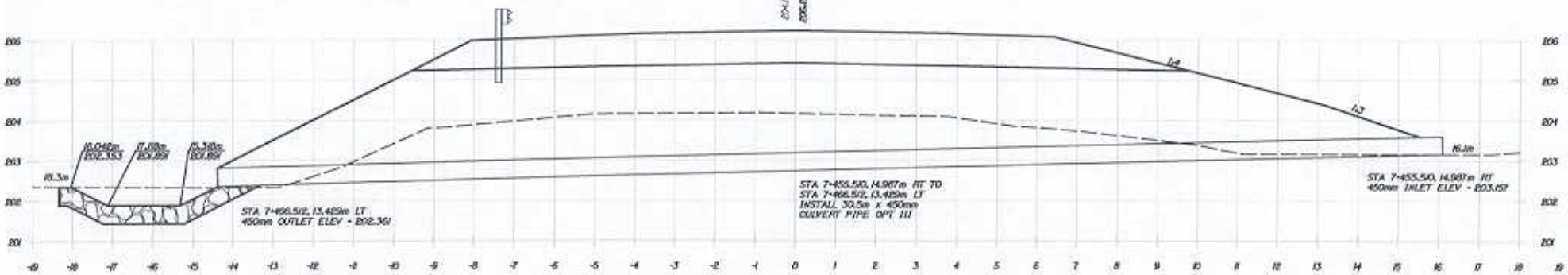
METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

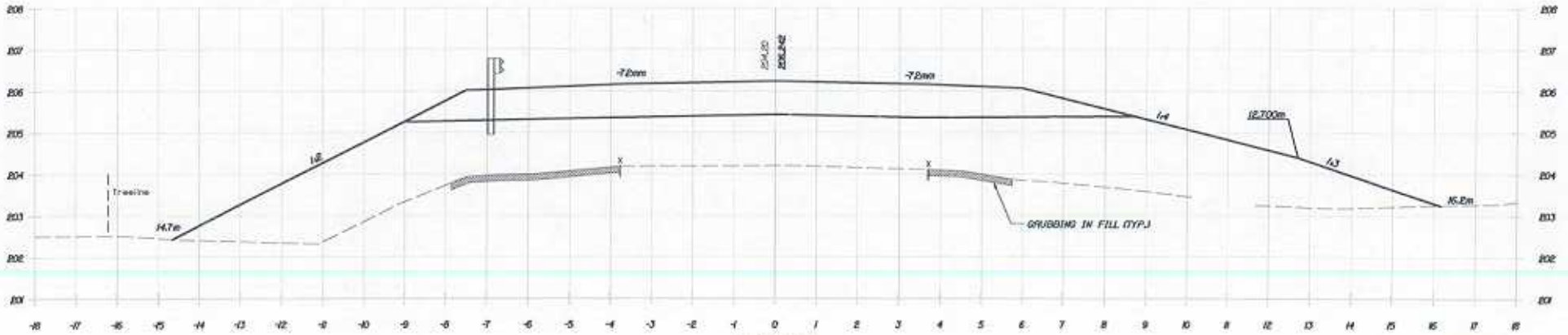
FEDERAL AID NO.	STATE	PROJECT NUMBER	SHEET NO.
1	MAINE	AC-NH-9184(31)	*



7+480.000

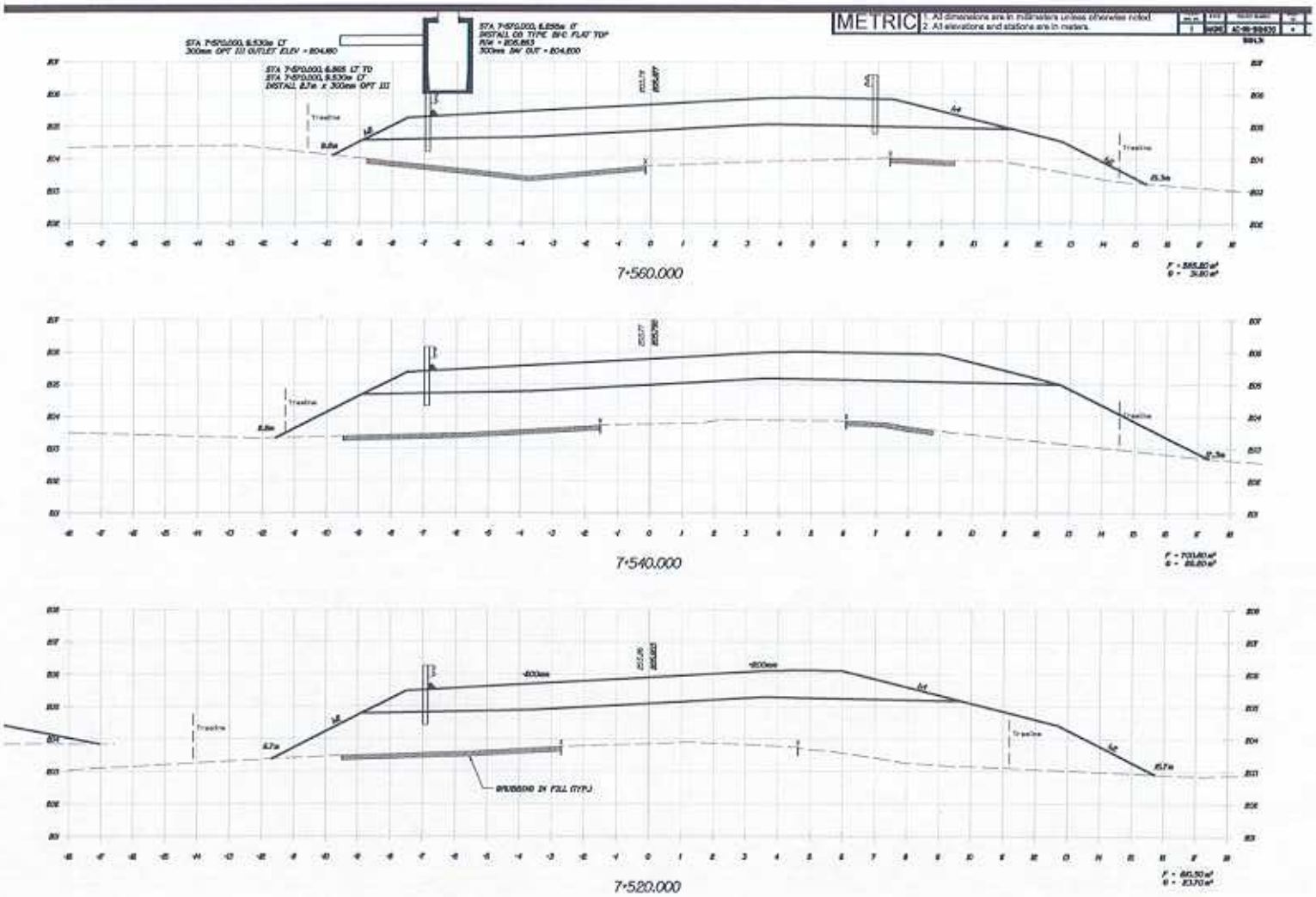


7+461.313
PIPE SKEWED BACK RT



7+460.000

n.T.S.

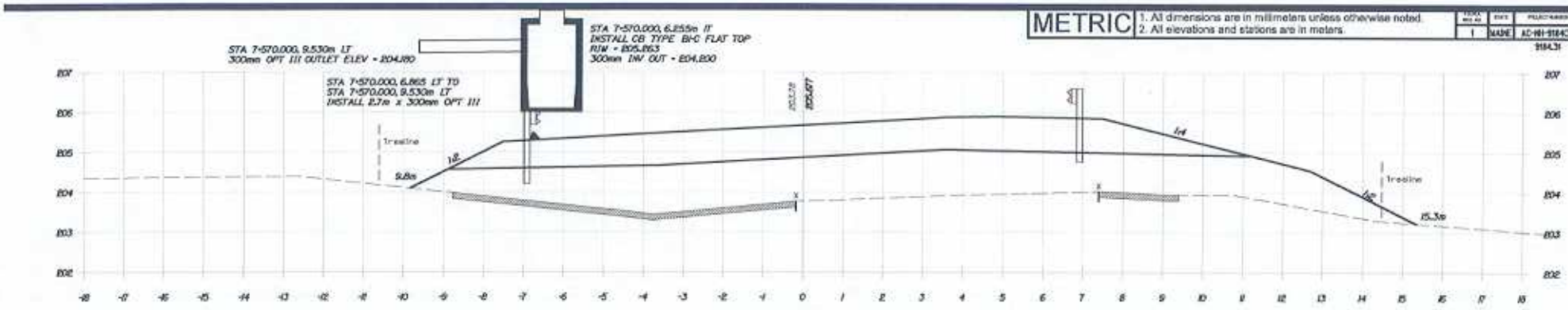

METRIC
1. All dimensions are in millimeters unless otherwise noted
2. All elevations and stations are in meters.
7+560.000
7+540.000
7+520.000

1:200

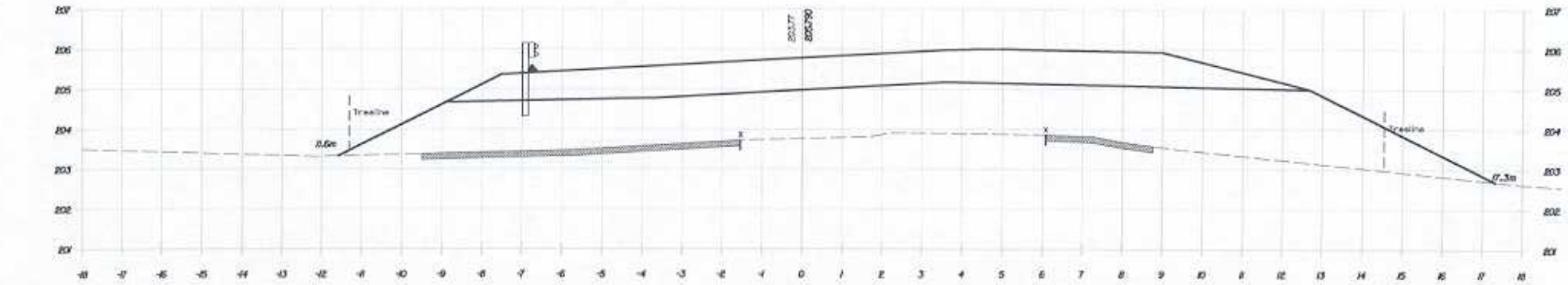
METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

FEDERAL REG. NO.	STATE	PROJECT NUMBER	SHEET NO.
1	MAINE	AC-NH-9184(31)	*

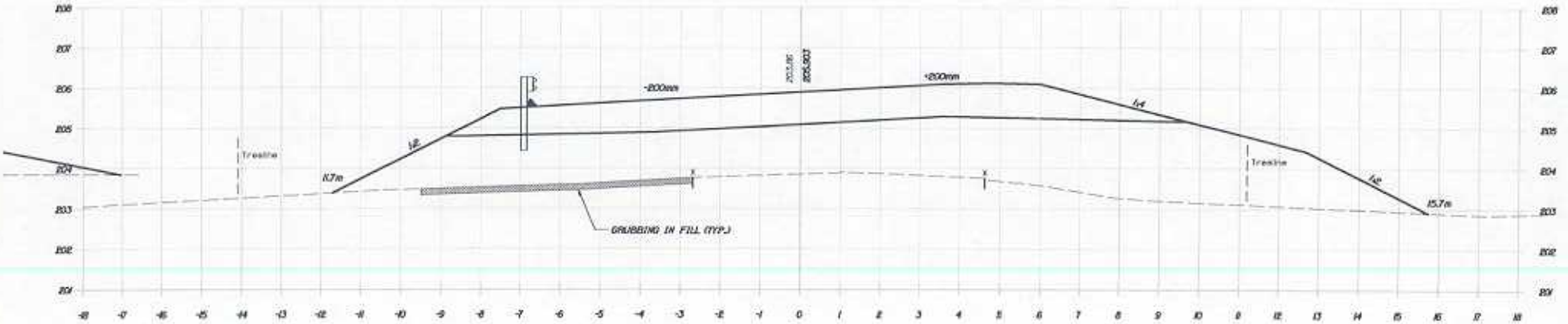
9184.31



7+560.000



7+540.000



7+520.000

n.T.S.

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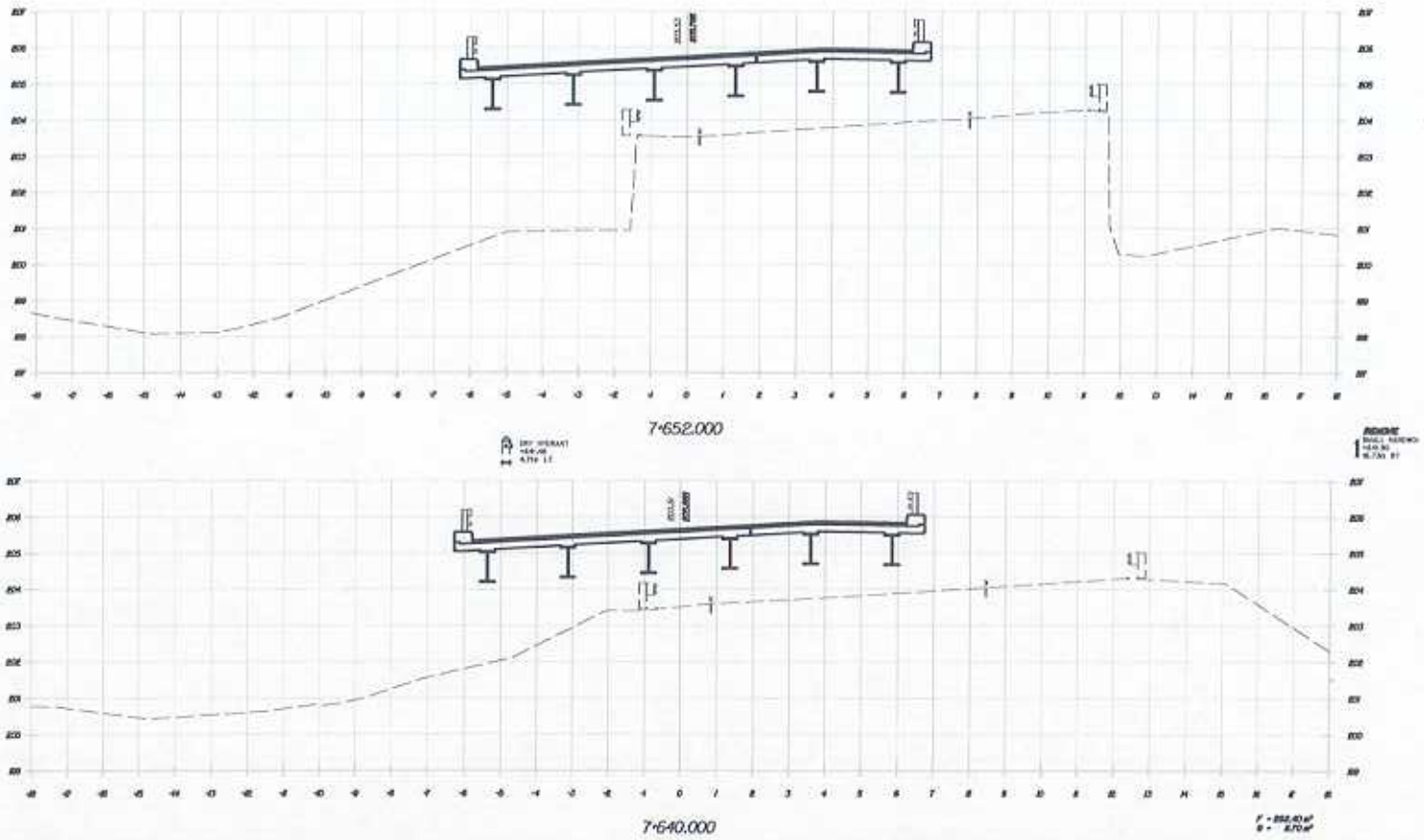

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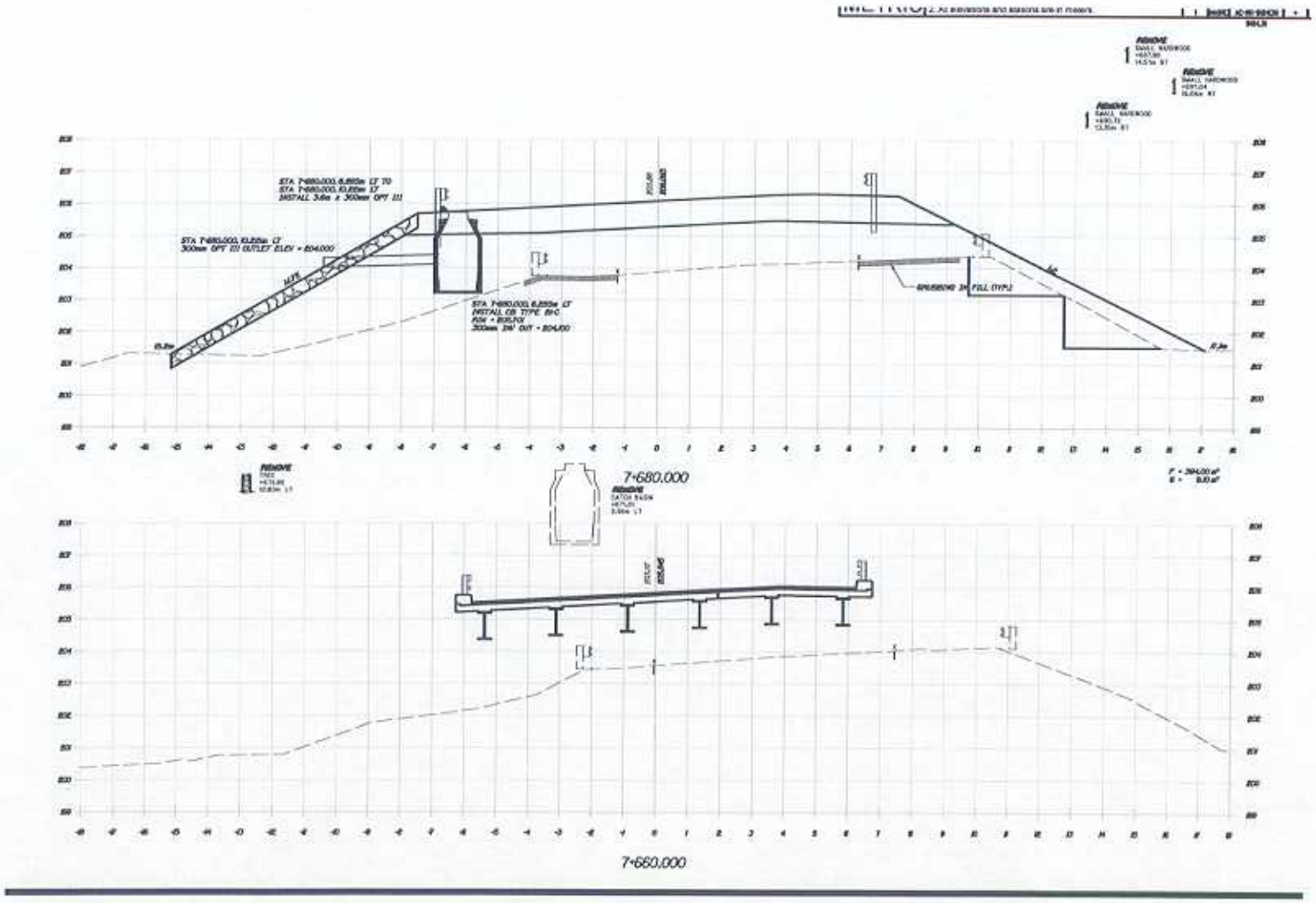

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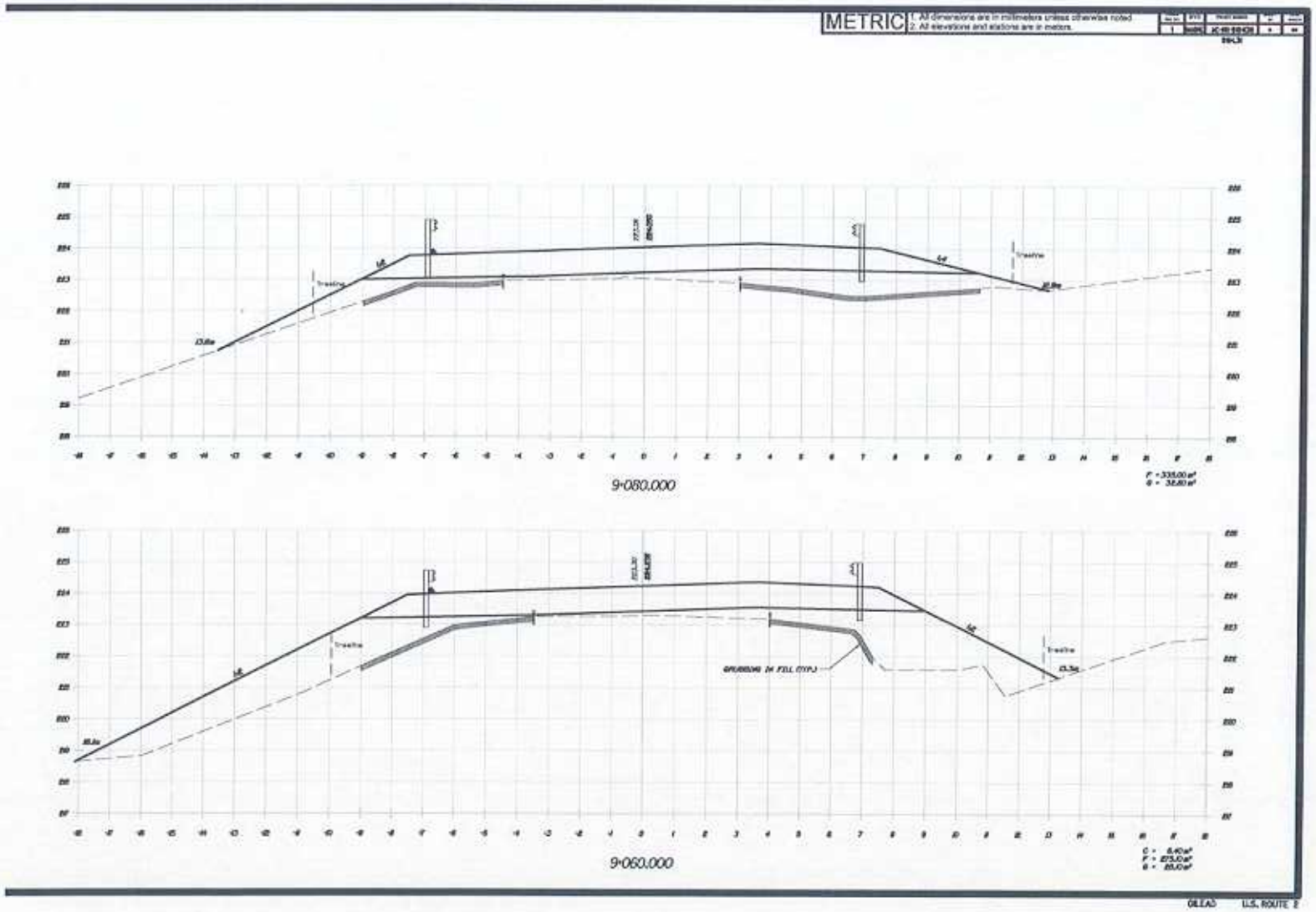
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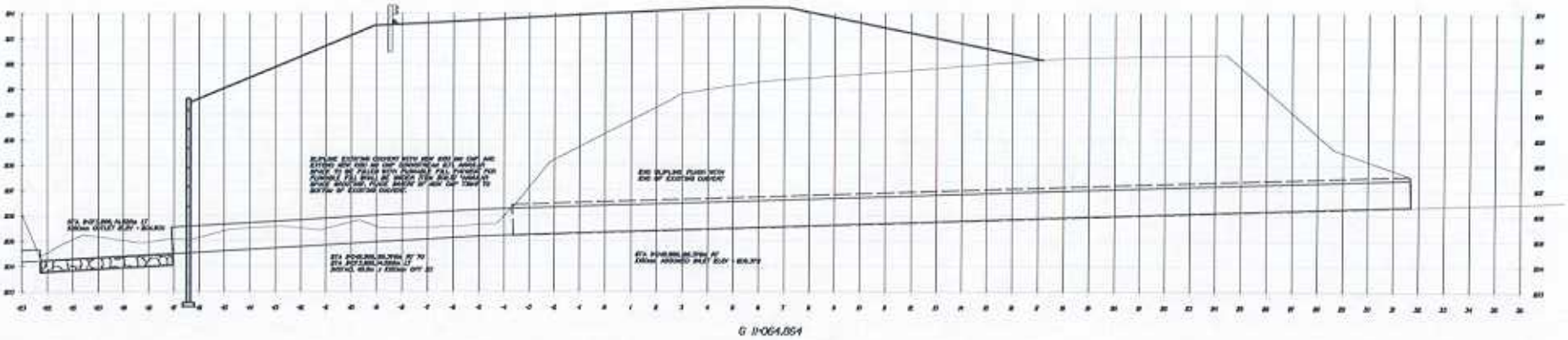
2. All elevations and stations are in meters.
9+080.000
9+060.000
GRADING IN FILL (TYP.)
GILEAD
U.S. ROUTE 2

1:200



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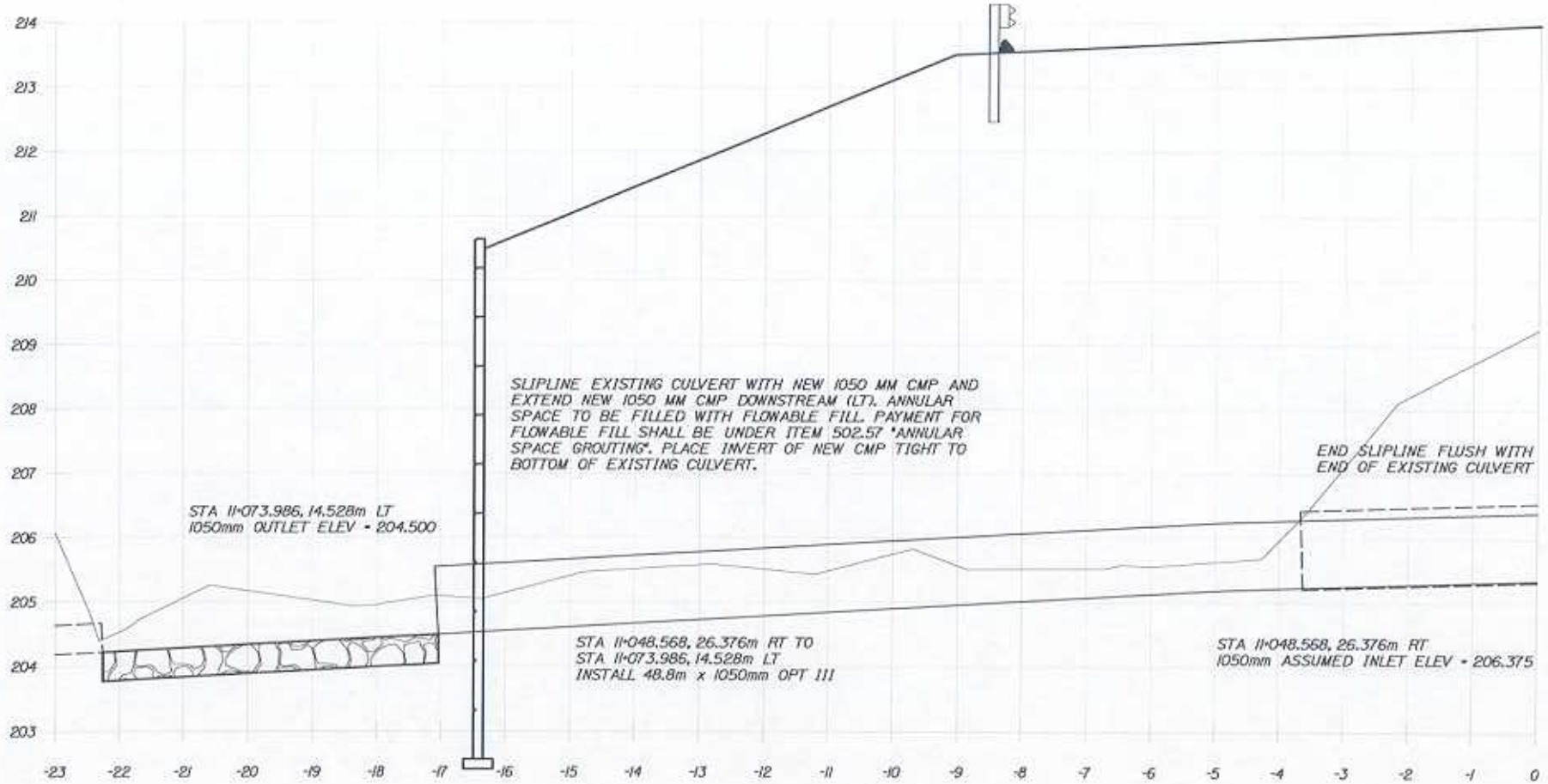
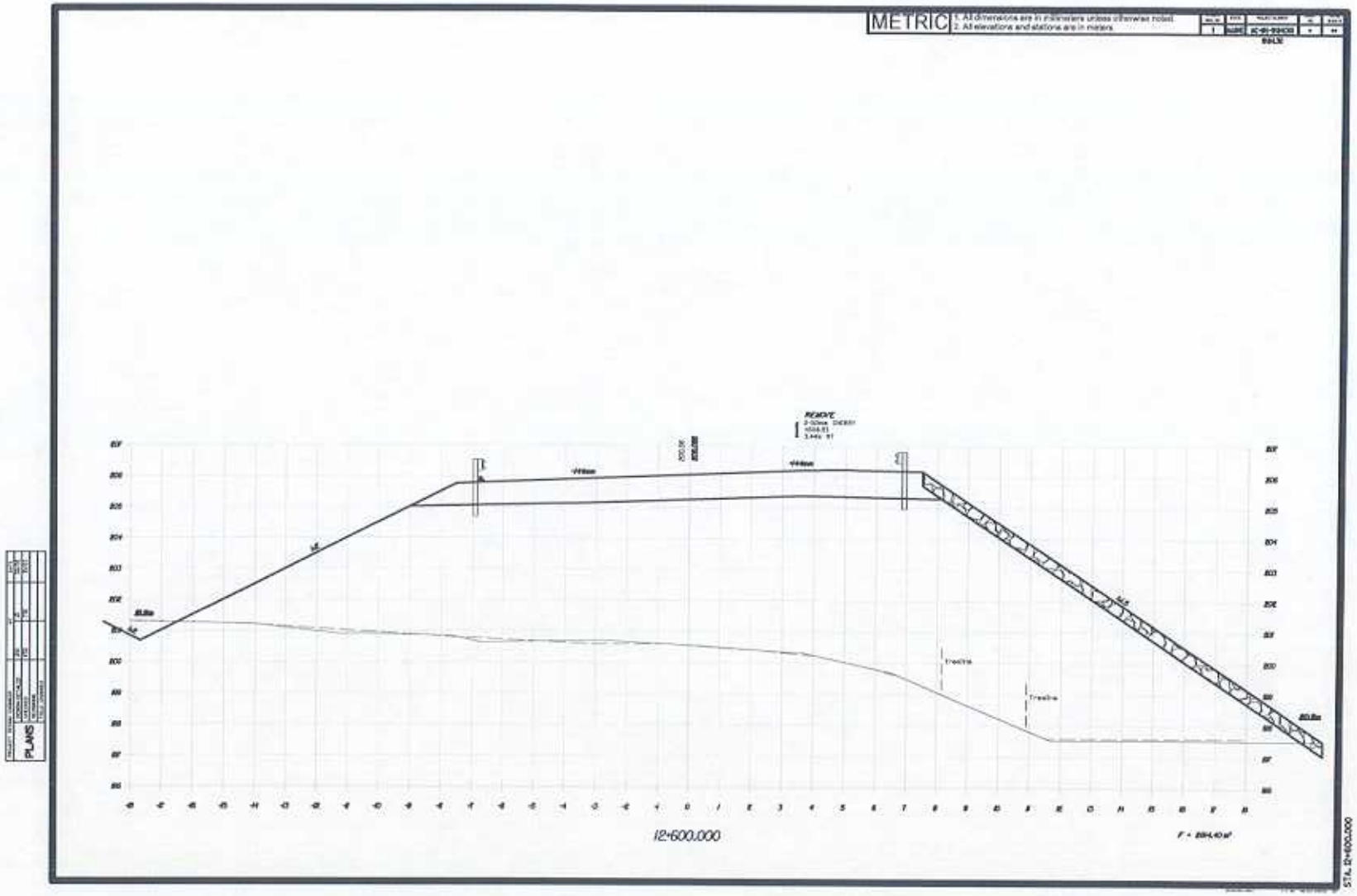
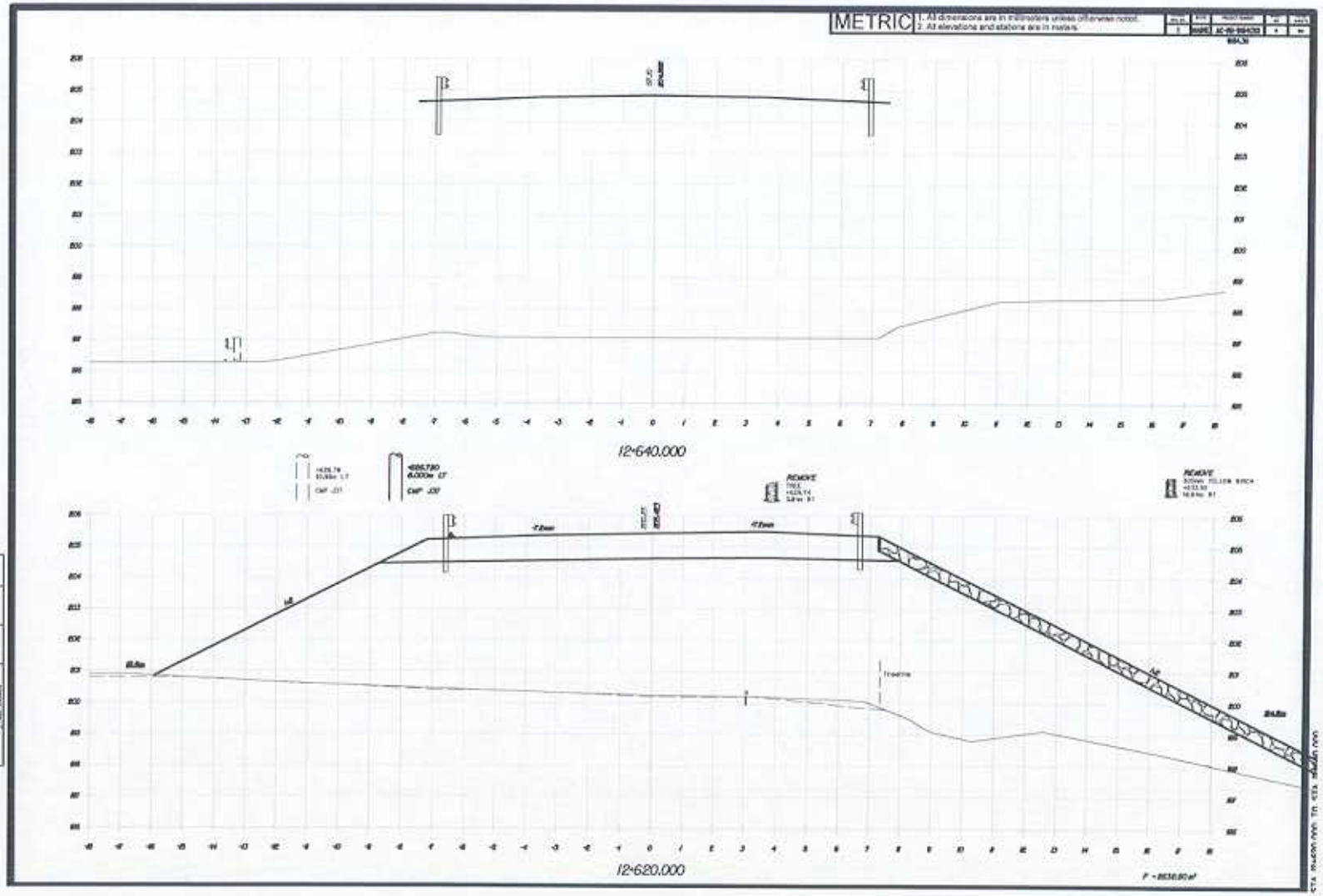


11+064.864
PIPE

n.T.S.


METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
PLANS
12+600.000
STA. 12+600.000

1:200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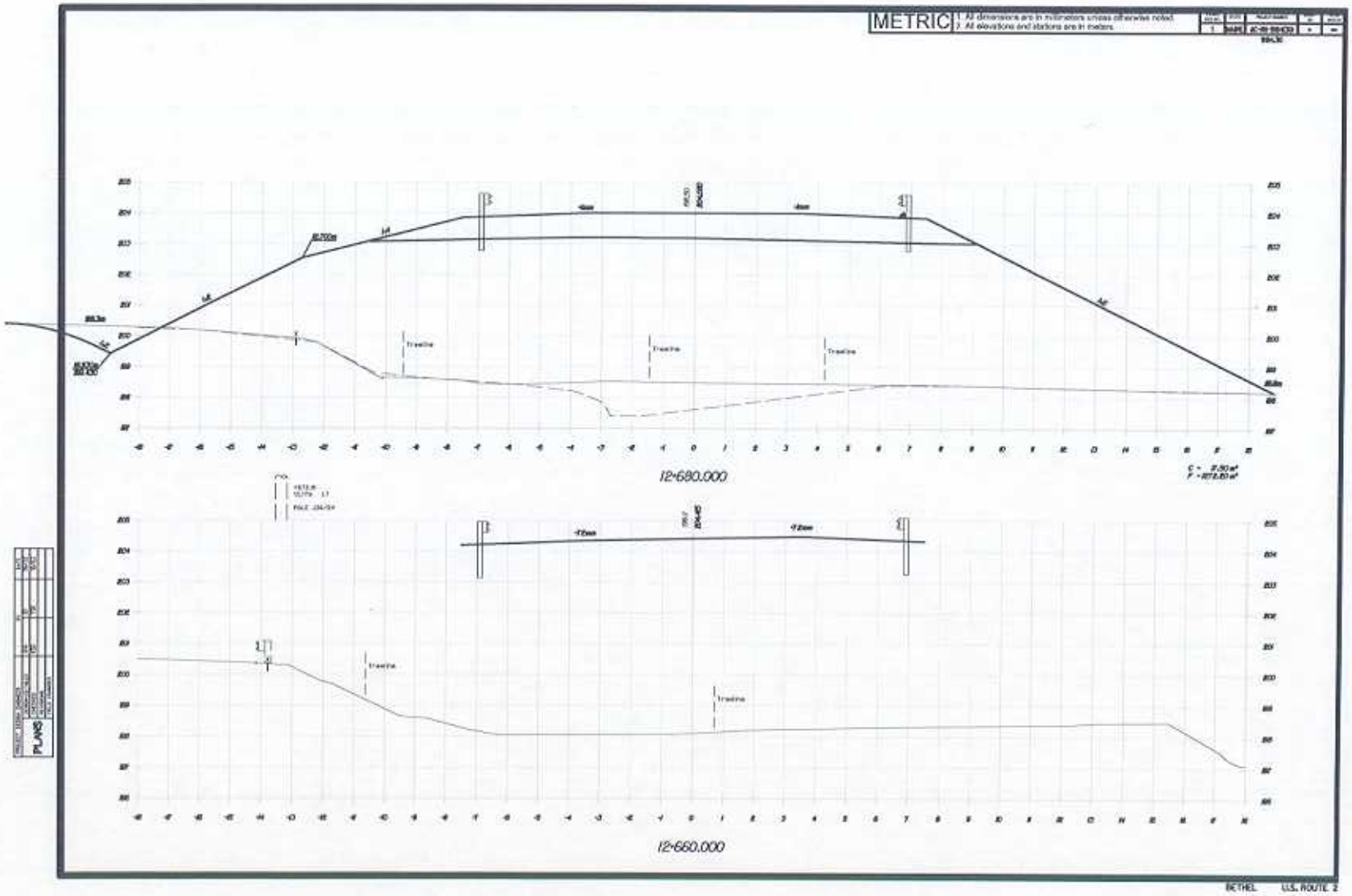
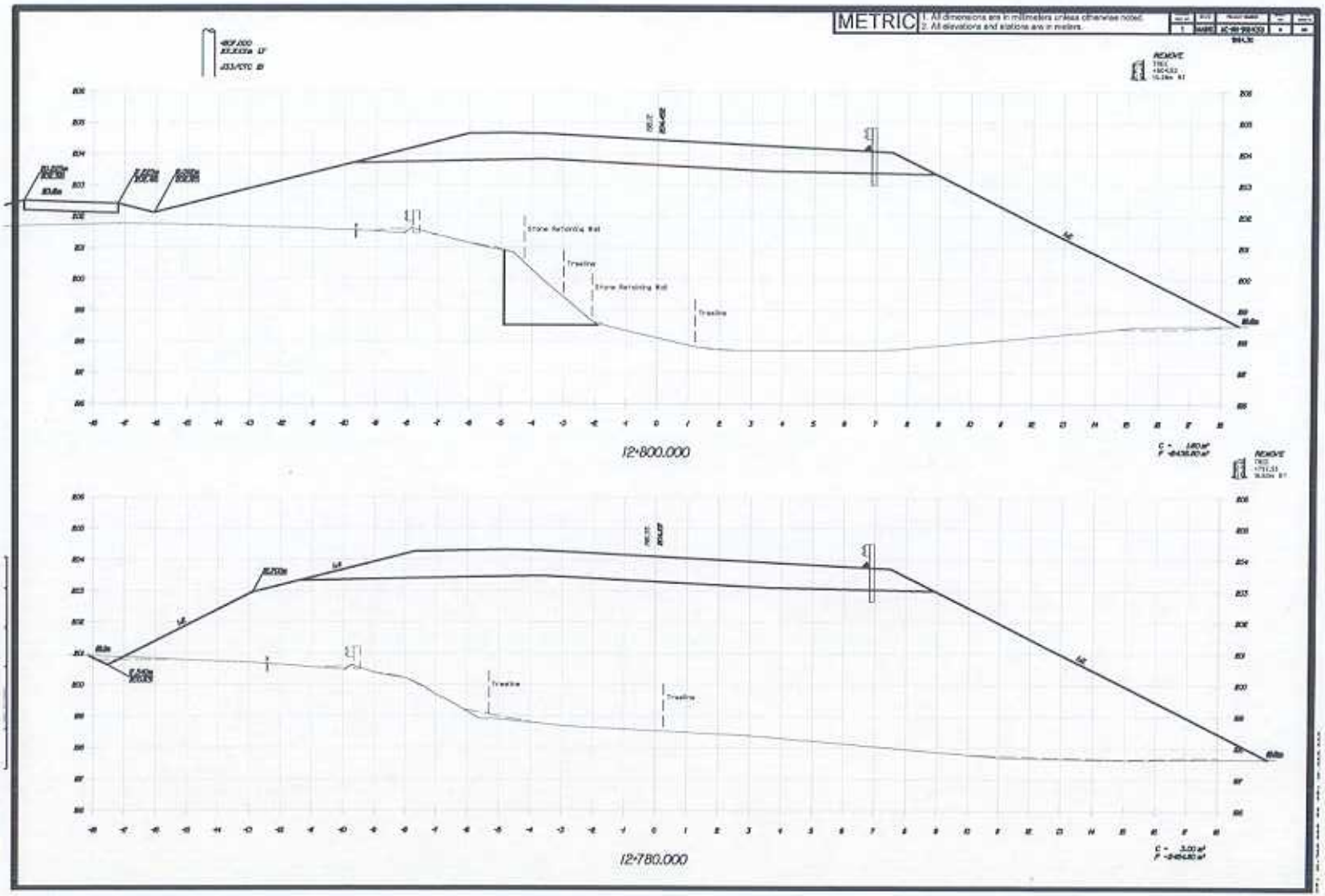
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
12+640.000
12+620.000
PLANS

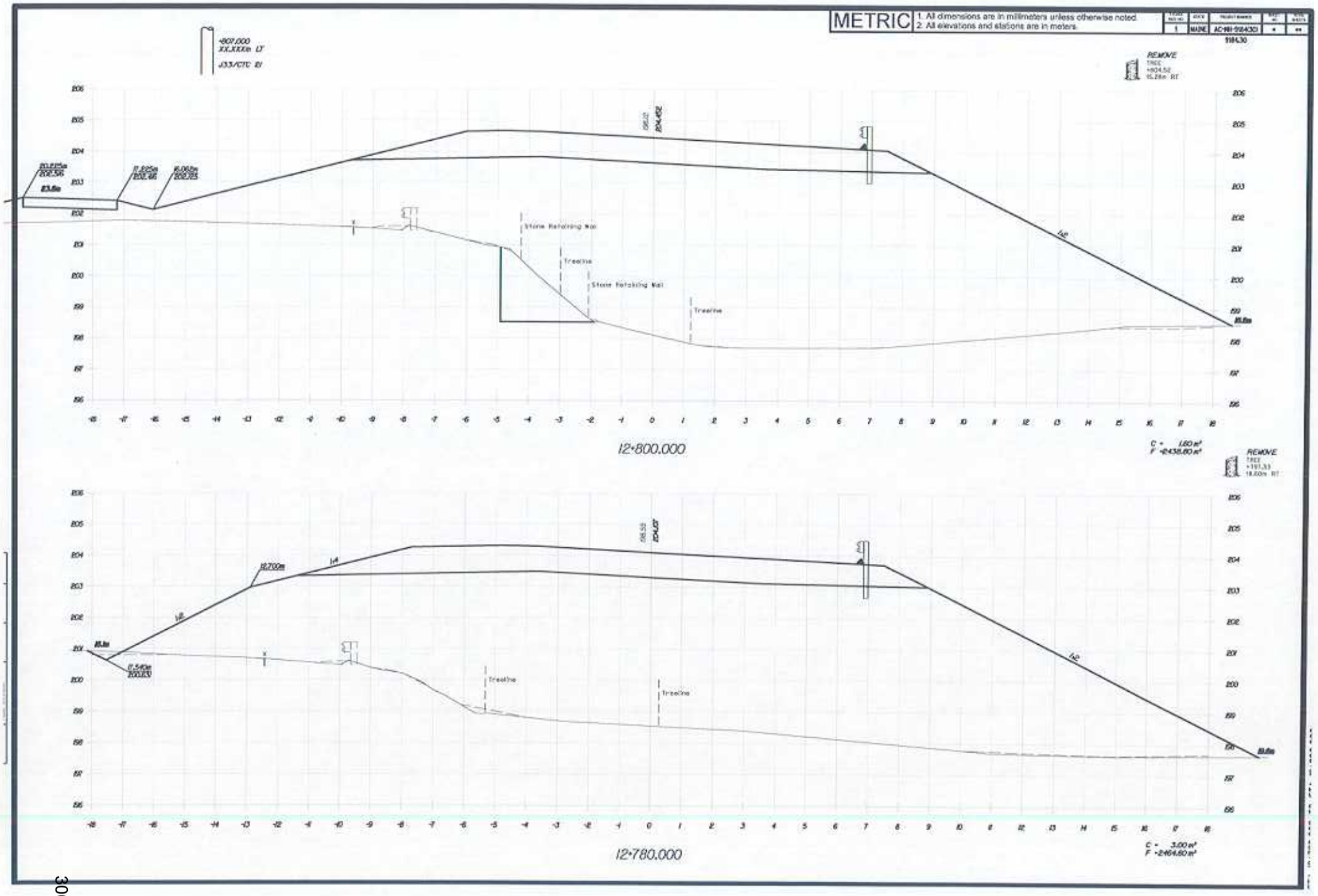
1:200


METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
12+680.000
12+660.000
PLANS
BETHEL
U.S. ROUTE 2

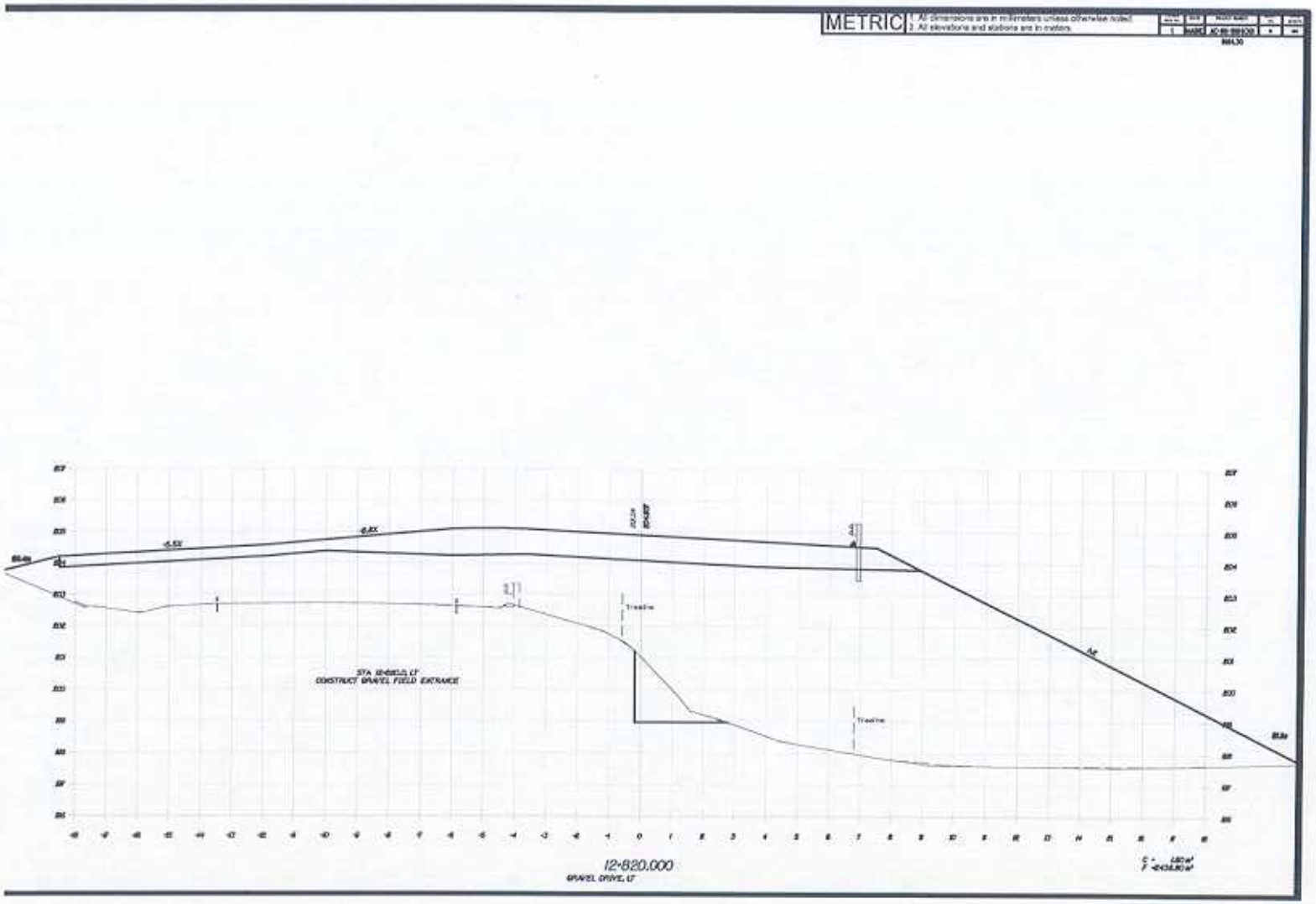
1:200


METRIC
1. All dimensions are in millimetres unless otherwise noted.
2. All elevations and stations are in metres.
Stone Retaining Wall
Treeline
Stone Retaining Wall
Treeline
12+800.000
Treeline
Treeline
12+780.000

1:200

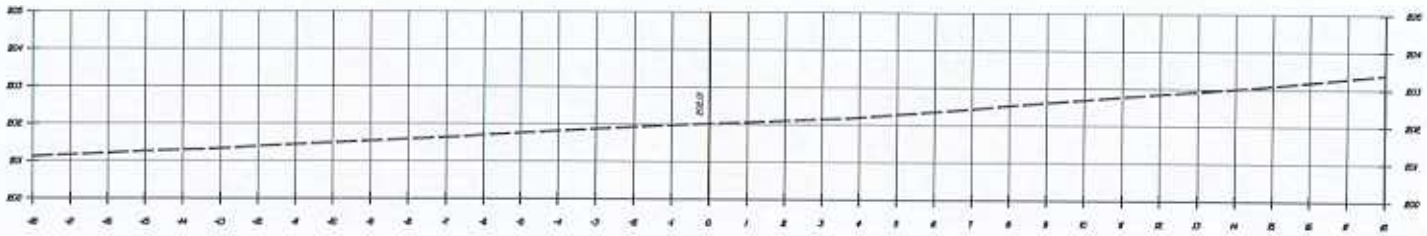

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
MAINE
REMOVE
Stone Retaining Wall
Treeline
12+800.000
12+780.000

n.T.S.


METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.
CONSTRUCT GRAVEL FIELD ENTRANCE
12+820.000
GRAVEL DRIVE LT

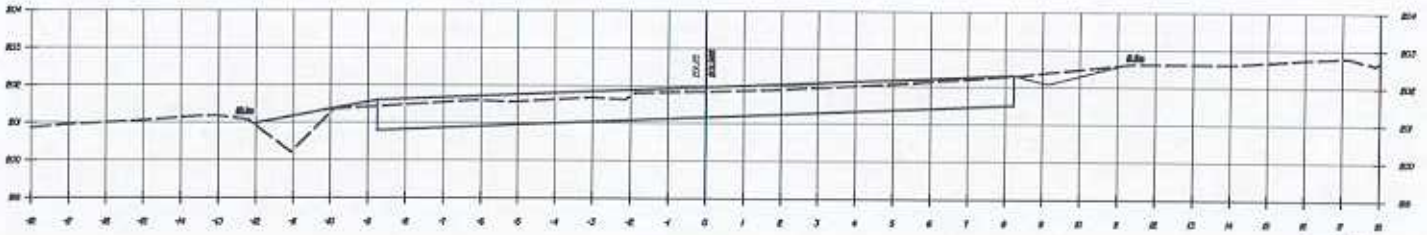
1:200

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.



1000+126.500

STA. 1000+123.000
LIMIT OF WORK
MATCH EXISTING PAVEMENT



1000+120.000

PLANS

BETHEL

RELOCATED FLEMING ROAD

STA. 1000+120.000 TO STA. 1000+126.500

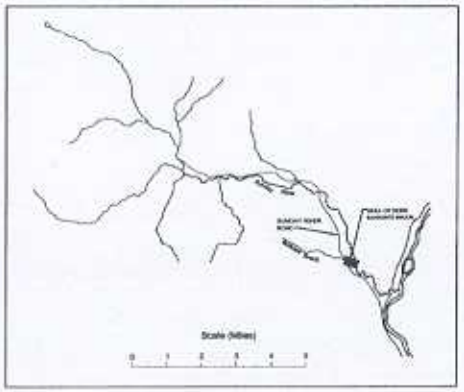
IMPERIAL	1. All dimensions are in inches (feet unless otherwise noted). 2. All elevations and stations are in feet.	FEDERAL REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	Maine	NH-9184(400)E	1	11

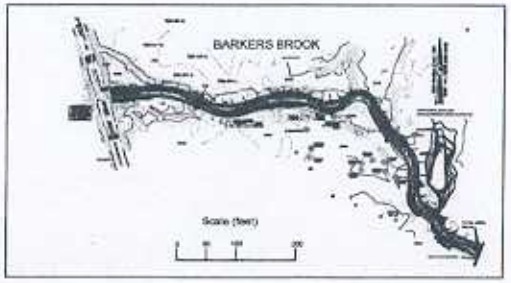
State of Maine
Department of Transportation

Bethel-Gilead, U.S. Route 2
(Barkers Brook Restoration)
A Wetland Compensation Project
Oxford County

Project No. NH-9184(400)E

Index	
Sheet 1	Cover Sheet
Sheet 2	Materials and Quantities
Sheet 3	Planform
Sheet 4	Construction Access/Site Stabilization
Sheet 5	Plan and Profile
Sheet 6	Grading Plan
Sheet 7	Wetland Enhancement
Sheet 8	Cross-sections
Sheet 9	Planting Plan
Sheet 10	Details





PARISH geomorphic

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

1/16/07

01/16/07

United States
Department of Transportation
Federal Highway Administration

APPROVED:

DATE: Jan. 17, 2007

Barkers Brook - Estimated Quantities and Associated Costs

Item No.	Description	Quantity	Units
201.11	Clearing	0.9	AC
203.2	Common Excavation (Stream Pools)	200	CY
203.2	Common Excavation (Wetland)	560	CY
203.25	Granular Borrow	145	CY
304.1	Aggregate Sub Base - Coarse Gravel	100	CY
610.1	Vegetated Rip Rap	12	CY
610.21	River Stones - Riffles	320	CY
610.25	Stream - Pools	1	LS
610.60	Barrier Boulder	10	EA
615.07	Loam	250	CY
618.1401	Seeding (No. 2 Mix)	20	UN
618.143	Special Seeding (Floodplain Mix)	13	UN
618.143	Special Seeding (Wetland Mix)	14	UN
620.60	Seperation Geotextile	2900	SY
621.01	Evergreen Trees (8 inch - 12inch)	42	EA
621.101	Herbaceous Plug Plantings	200	EA
621.245	Large Deciduous Trees (2 foot - 3 foot) Group A	259	EA
621.52	Deciduous Rooted Cuttings (8 inch - 12 inch)	42	EA
621.54	Deciduous Shrubs (18 inch - 24 inch) Group A	1170	EA
621.8	Establishment Period	1	LS
621.95	Brush Layering	320	SY
621.96	Engineered Log Jam (Wetland)	1	LS
621.97	Engineered Woody Debris (Wetland)	1	LS
629.05	Hand Labour, Straight Time	4	HR
631.12	All Purpose Excavator (Including Operator)	4	HR
631.172	Truck - Large (Including Operator)	2	HR
631.18	Chainsaw (Including Operator)	1	HR
652.34	Cone	12	EA
652.35	Construction Signs	100	SF
652.361	Maintenance of Traffic Control Devices	(40) 1	(CD) LS
652.38	Flagger	20	HR
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.1	Mobilization	1	LS

BARKERS BROOK

"ELEV. 654" fd.

"ELEV. 654" fd.

"ELEV. 654" fd.

"ELEV. 654" fd.

GRASS

WOODED

GRASS

SAND

BARKERS BROOK

High Flow Channel

FLOW

1/2" REBAR, PAINTED PINK, DRIVEN HORIZONTALLY INTO BANK (ELEV. = 649.4')

1/2" REBAR, PAINTED PINK, DRIVEN HORIZONTALLY INTO BANK (ELEV. = 647.6')

BLUE FLAG AT PROPOSED INLET

18" AMERICAN ELM

#6

12" BLACK CHERRY

13" BLACK CHERRY

#5

#4

#3

#2

#1

2" IP fd. 1.0' up

North American Datum 1983

MAINE STATE PLANE (WEST ZONE)

PROPOSED WETLAND ENHANCEMENT (Refer to sheet 10)

23" SILVER MAPLE

14" SILVER MAPLE

Tie into existing channel

Limit of construction

LEGEND

- BRUSH LAYERING
- VEGETATED RIPRAP
- ADD SOIL
- RIFFLE
- POOL
- CROSS SECTION
- PROPOSED TOP OF BANK
- PROPOSED CHANNEL
- PROPOSED THALWEG AND CHAINAGE
- EXISTING CHANNEL

SCALE

1" = 30'

0 20 40 60 80 100

day River Road Culvert to remain undisturbed. All damage during to be repaired at cost by the contractor to the approval of the sting vegetation to be protected where possible.

Design	J.P.	Checked	J.P.
Drawn	D.D.	Checked	J.P.
Date January 1997		Plot Date January 1998	
CAD FILE			

No.	Date	By	REVISIONS
4	Jan 2007	J.J.	Corrected poly. # and note
3	Dec 2005	D.D.	Added bar scale.
2	Dec 2005	D.D.	Added and removed notes.
1	Apr 2000	D.D.	Added and removed notes.

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

PARISH geomorphic

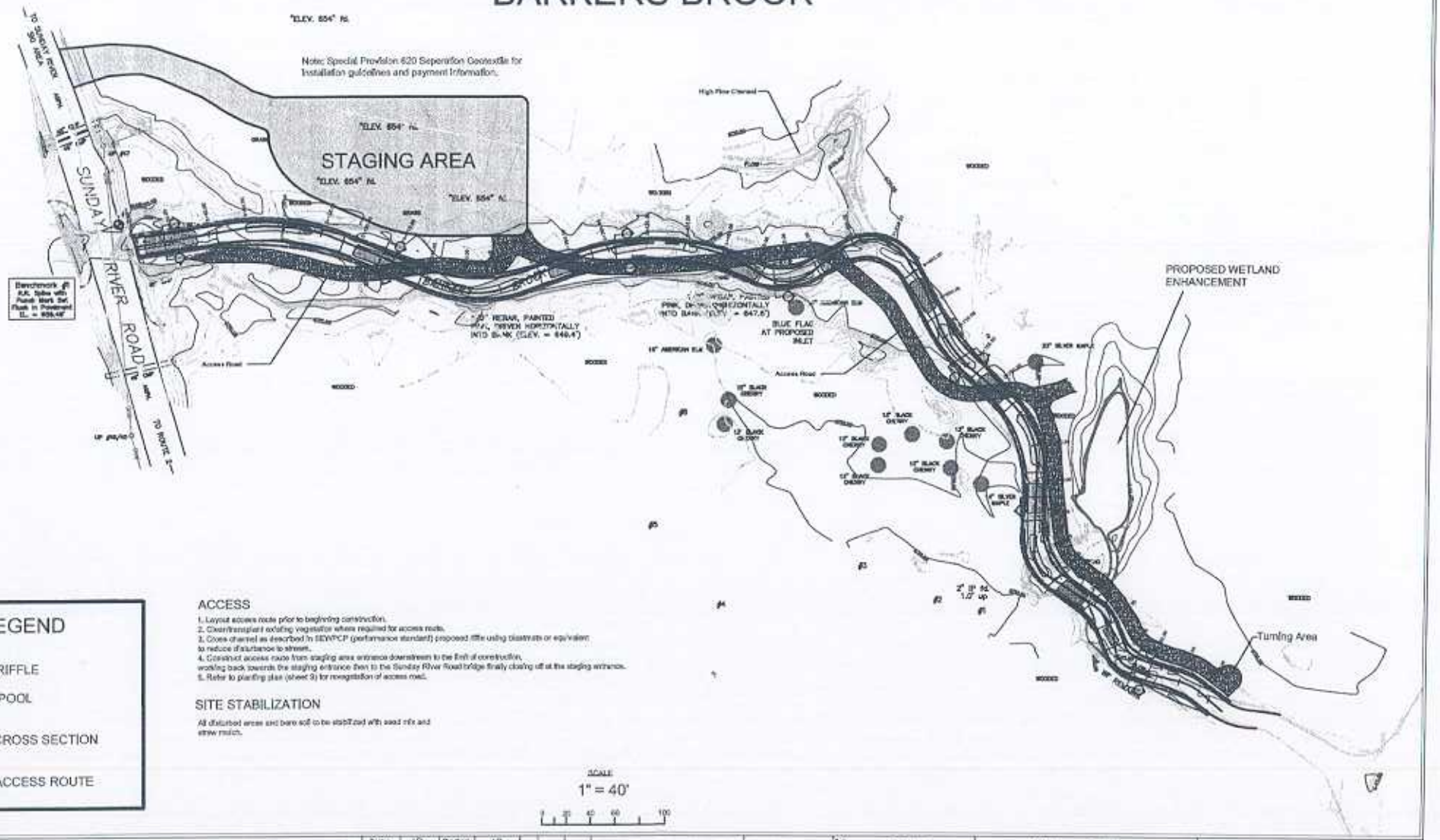
Barkers Brook

Planform

PROJECT No. NH-9184(400)E

SHEET 3 of 10

BARKERS BROOK



Design	J.P.	Checked	J.P.
Drawn	D.D.	Checked	J.P.
Date: January 1/07		Plot Date: January 1/07	

No.	Date	By	REVISIONS
8	Jan 2007	J.J.	Corrected end, & end date
6	Sept 1/06	J.J.	Added spec prov 620 note
4	Dec 2005	D.D.	Added bar scale and stations, deal and note
3	Dec 2005	D.D.	Removed cofferdams and shoring notes, added note
2	Nov 1/05	D.D.	Revised notes, removed details
1	July 2005	D.D.	Added and removed notes

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

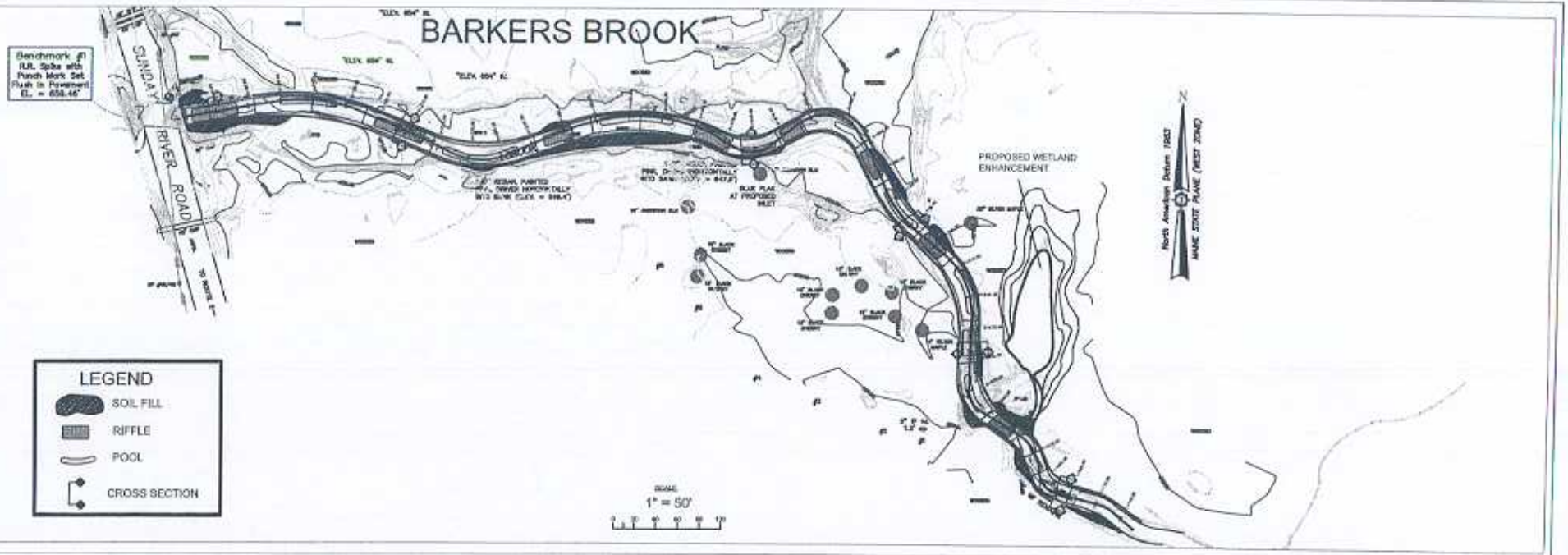
PARISH geomorphic

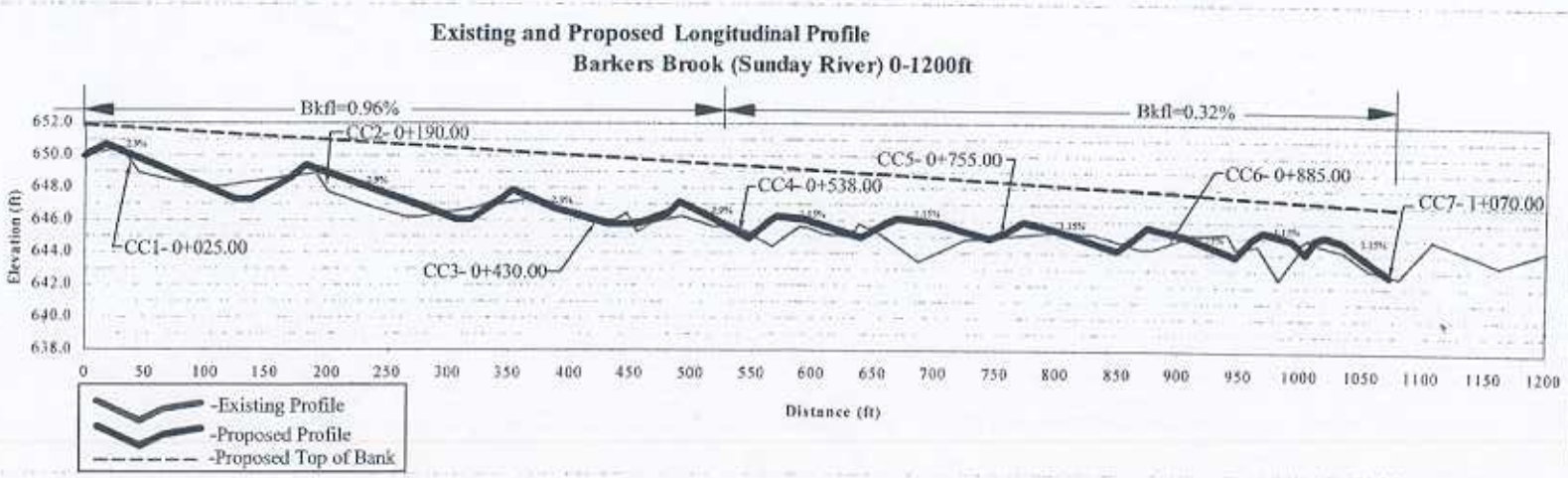
Barkers Brook

Construction Access/Site Stabilization

PROJECT No: NH-9184(400)E

SHEET 4 of 10





Design	D.D.	Checked	J.P.				
Drawn	D.D.	Checked	J.P.				
Date: January 2007		Plot Date: January 2007					
CAD File:							
				4	Jan 2007	J.J.	Corrected proj. stand date
				3	Dec 2006	D.D.	Added bar scale.
				2	Mar 1996	D.D.	Removed notes.
				1	July 2006	D.D.	Removed some notes, changed fonts.
				No.	Date	By	REVISIONS

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

PARISH geomorphic

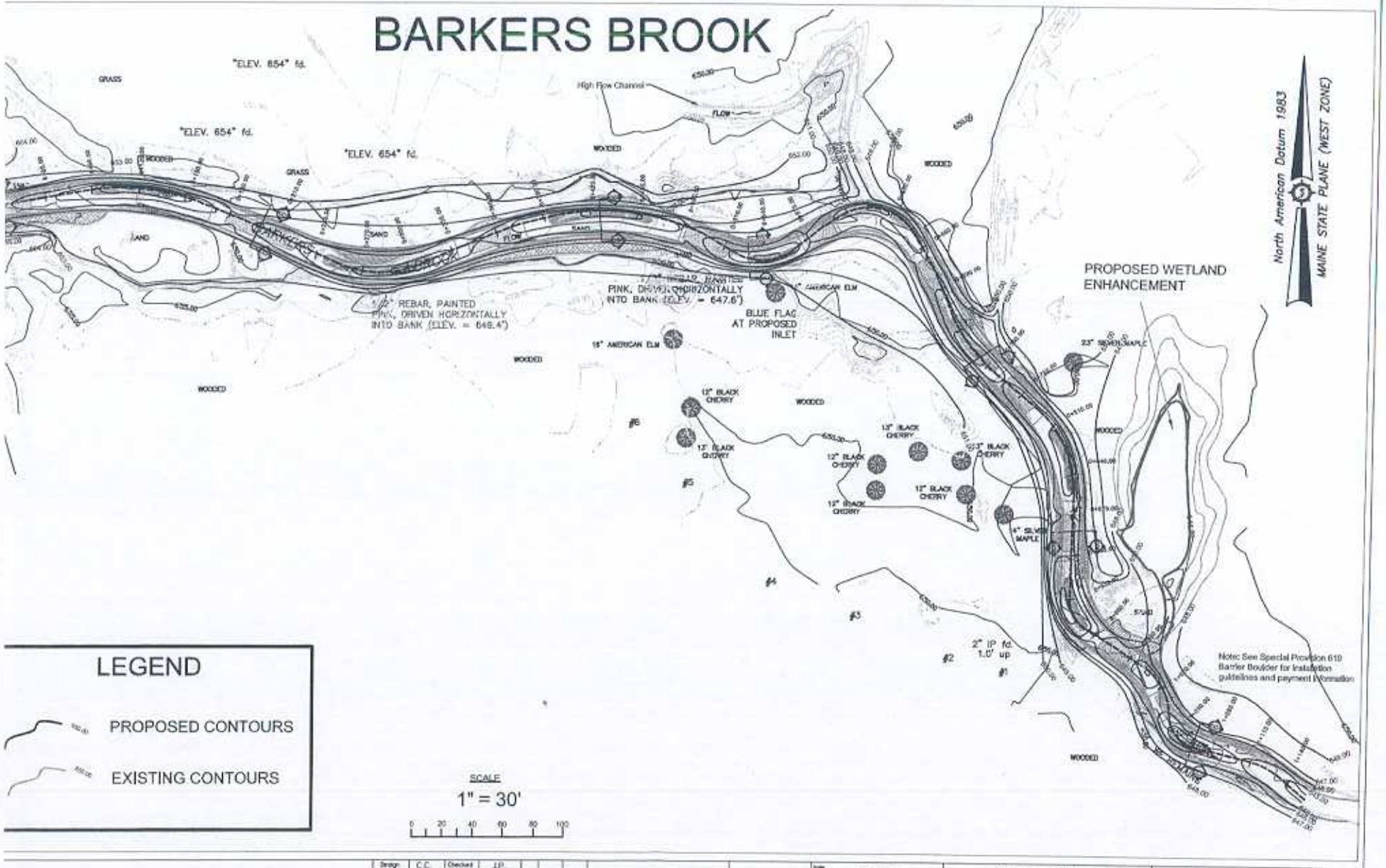
Barkers Brook

Profile

PROJECT No: NH-9584(400)E

SHT 5 # 10

BARKERS BROOK



: to be sourced on site. Offsite sources must be inspected by a ecologist to ensure there is no Purple Loosestrife sellowts) or Phragmites (Phragmites communis).

Design: C.C.	Checked: J.P.		
Drawn: D.D.	Checked: J.P.		
Date: January 1997	Plot Date: January 1997		
CAD FILE: Item 3 - No. of pages			

No.	Date	By	REVISIONS
5	Jan 2007	J.J.	Corrected plot, if any date
4	Sept 1998	J.J.	Added spec. prov. 619 note.
3	Dec 2000	D.D.	Added notes and bar scale.
2	Mar 1999	D.D.	Removed and added notes.
1	July 2000	D.D.	Removed notes.

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

PARISH geomorphic

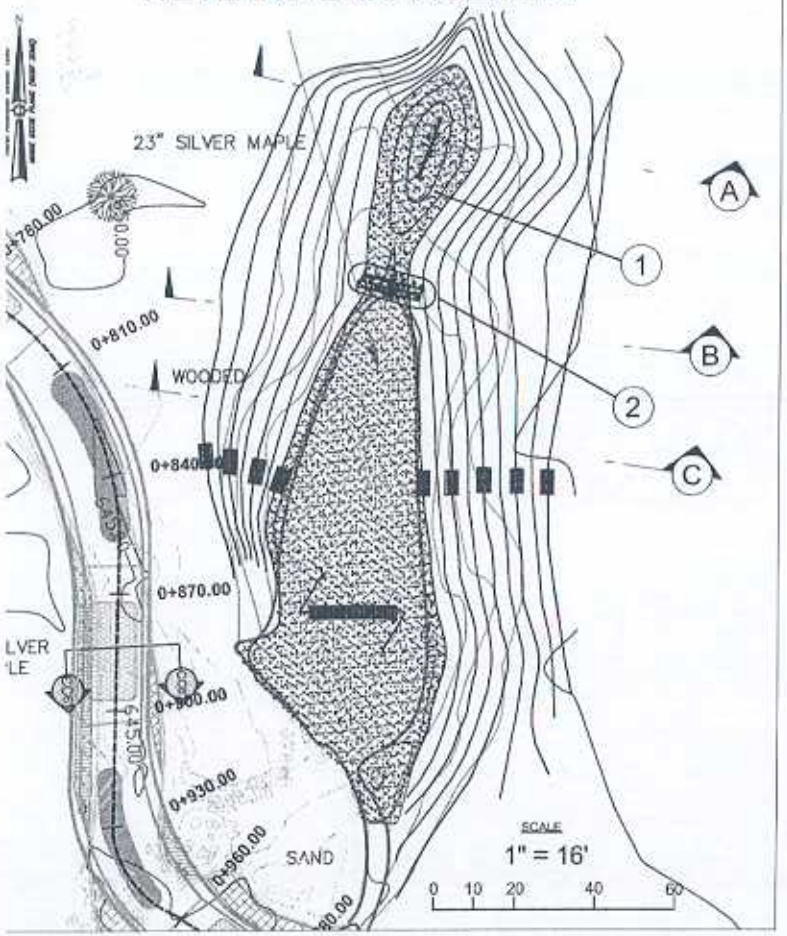
Barkers Brook

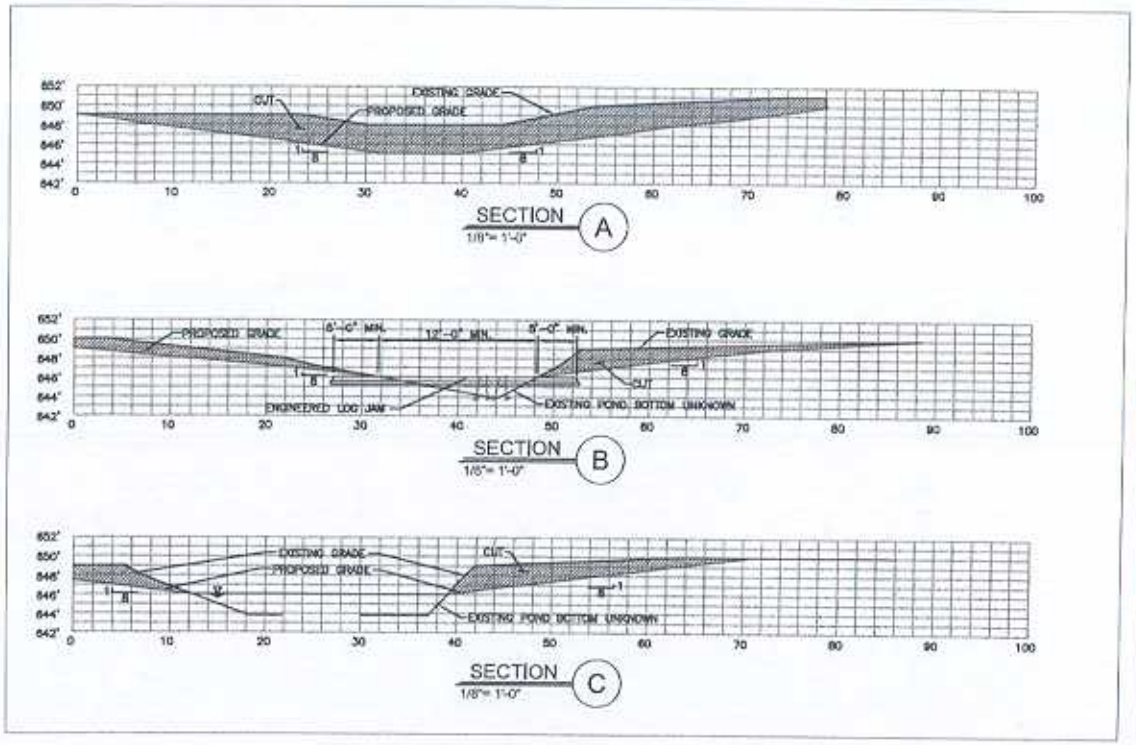
Grading Plan

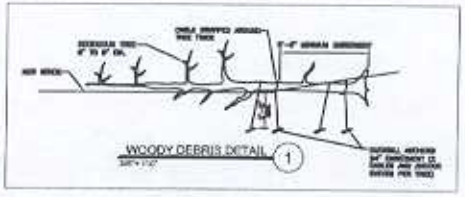
PROJECT NO. NH-9184(400)E

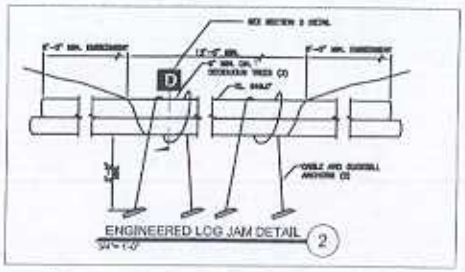
SHEET 6 of 10

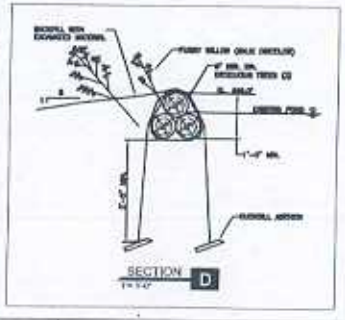
WETLAND ENHANCEMENT











GEND

- NEW CONTOUR
- EXISTING CONTOUR

T FEATURES

- ANCHORED WOODY DEBRIS
- ENGINEERED LOG JAM
- FLAGGED TREES TO REMAIN
- AREA SUBJECT TO PROLONGED SEASONAL INUNDATION

WETLAND CREATION AND ENHANCEMENT AREA (APPROXIMATE BELOW THE 650.00' CONTOUR LINE). TYPICAL HARDWOOD FLOODPLAIN NATIVE PLANTINGS TO BE PLANTED BETWEEN EL. 648.00' & 650.00' CONTOURS:

TREES (CONTAINERIZED, 8-10 FT.)	QUANTITY
SILVER MAPLE (ACER SACCHARINUM)	20
RED MAPLE (ACER RUBRUM)	20
BLACK ASH (FRAXINUS NIGRA)	20
BLACK WILLOW (SALIX NIGRA)	20

SHRUBS (CONTAINERIZED, 18"-24" 1 GAL.)	QUANTITY
BLACK CHOKEBERRY (ARONIA MELANOCARPA)	20
REDOSIER DOGWOOD (CORNUS SERICEA)	20

HERBS (PLUGS)	QUANTITY
OSTRICH FERN (MATTEUCCIA STRUTHIOPTERIS)	50
SENSITIVE FERN (ONOCLEA SENSIBILIS)	50
HOP SEDGE (CAREX LUPULINA)	50
FRINGED SEDGE (CAREX CRINITA)	50
NEW ENGLAND EROSION CONTROL SEED MIX (WETLAND)	1 LB

SPECIES:
SWITCHGRASS (PANICUM VIRGATUM), VIRGINIA WILD RYE (ELYMUS VIRGINICUS), CREEPING RED FESCUE (FESTUCA RUBRA), FOX SEDGE (CAREX VULPINOIDEA), CREEPING BENTGRASS (AGROSTIS STOLONIFERA), SILKY WILD RYE (ELYMUS VILLOSUS), NODDING BUR-MARIGOLD (BIDENS CERNUA), SOFT RUSH (JUNCUS EFFUSUS), GRASS-LEAVED GOLDENROD (SOLIDAGO GRAMINIFOLIA), SENSITIVE FERN (ONOCLEA SENSIBILIS), JOE-PYE WEED (EUPATORIUM MACULATUM), BONESET (EUPATORIUM PERFOLIATUM), FLAT-TOP ASTER (ASTER UMBELLATUS), NEW YORK ASTER (ASTER NOVI-BELGII), BLUE VERVAIN (VERBENA HASTATA).

LOG JAM PLANTINGS	QUANTITY
DEC. ROOTED CUTTINGS	
PUSSY WILLOW (SALIX DISCOLOR)	38
BLACK WILLOW (SALIX NIGRA)	38

Design	A.H.	Checked	J.P.
Drawn	D.D.	Checked	J.P.
Date January 1997		Plot Date January 1997	
CAD FILE			

No.	Date	By	REVISIONS
4	Apr 06-97	L.L.	Corrected plug & seed data
3	Mar 20-97	D.D.	Added tree labels
2	Feb 11-97	D.D.	Removed bodies, added details & wetland
1	July 28-96	D.D.	Revised detail, added notes, changed statistical data

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

PARISH geomorphic

Kleinschmidt
Energy & Water Resource Consultants

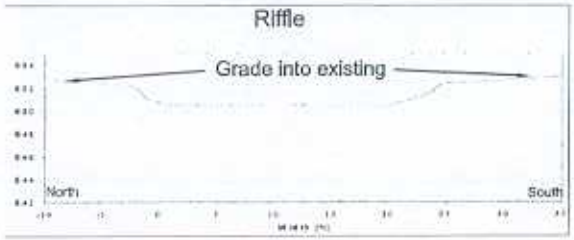
Barkers Brook

Wetland Enhancement

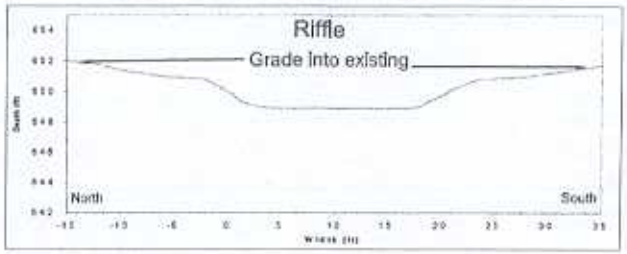
PROJECT No: NH-9184(400)E

SHT 7 of 10

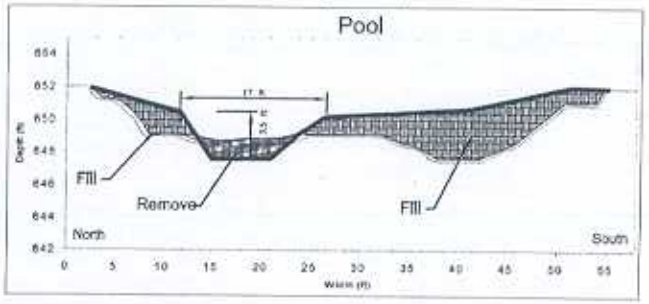
Cross-section (CC1) 0+25.00



Cross-section (CC2) 0+203.00



Cross-section (CC3) 0+398.00



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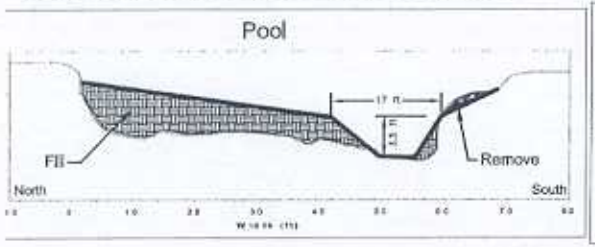
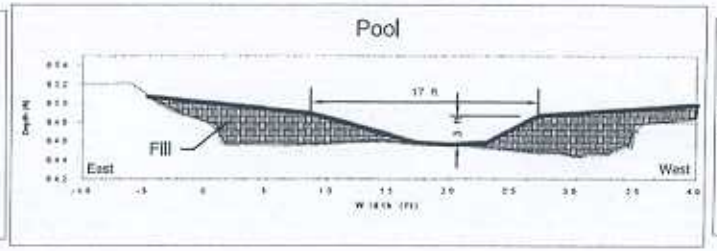
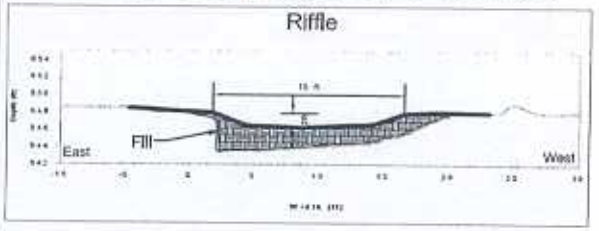


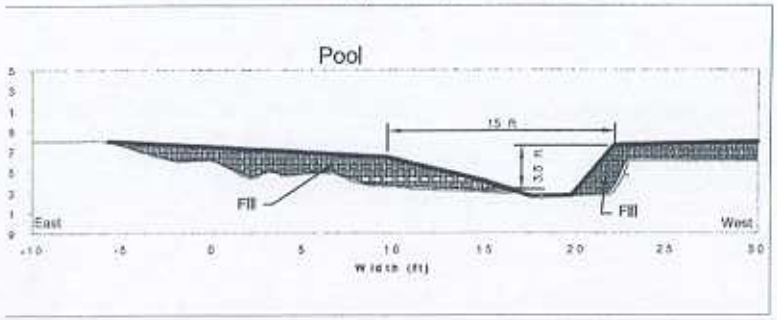
Cross-section (CC5) 0+741.00



Cross-section (CC6) 0+882.00



Cross-section (CC7) 1+068.00



Legend

- -Existing Channel
- -Proposed Channel
- -Fill Soil
- -Remove Soil

Design	D.D.	Checked	J.P.				
Drawn	D.D.	Checked	J.P.				
Date January 2007		Plot Date January 2007					
CAD FILE:							
2	Jan 2007	J.J.	Corrected proj. # and date				
1	Nov 1999	D.D.	Changed title, added and removed notes.				
No.	Date	By	REVISIONS				

As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

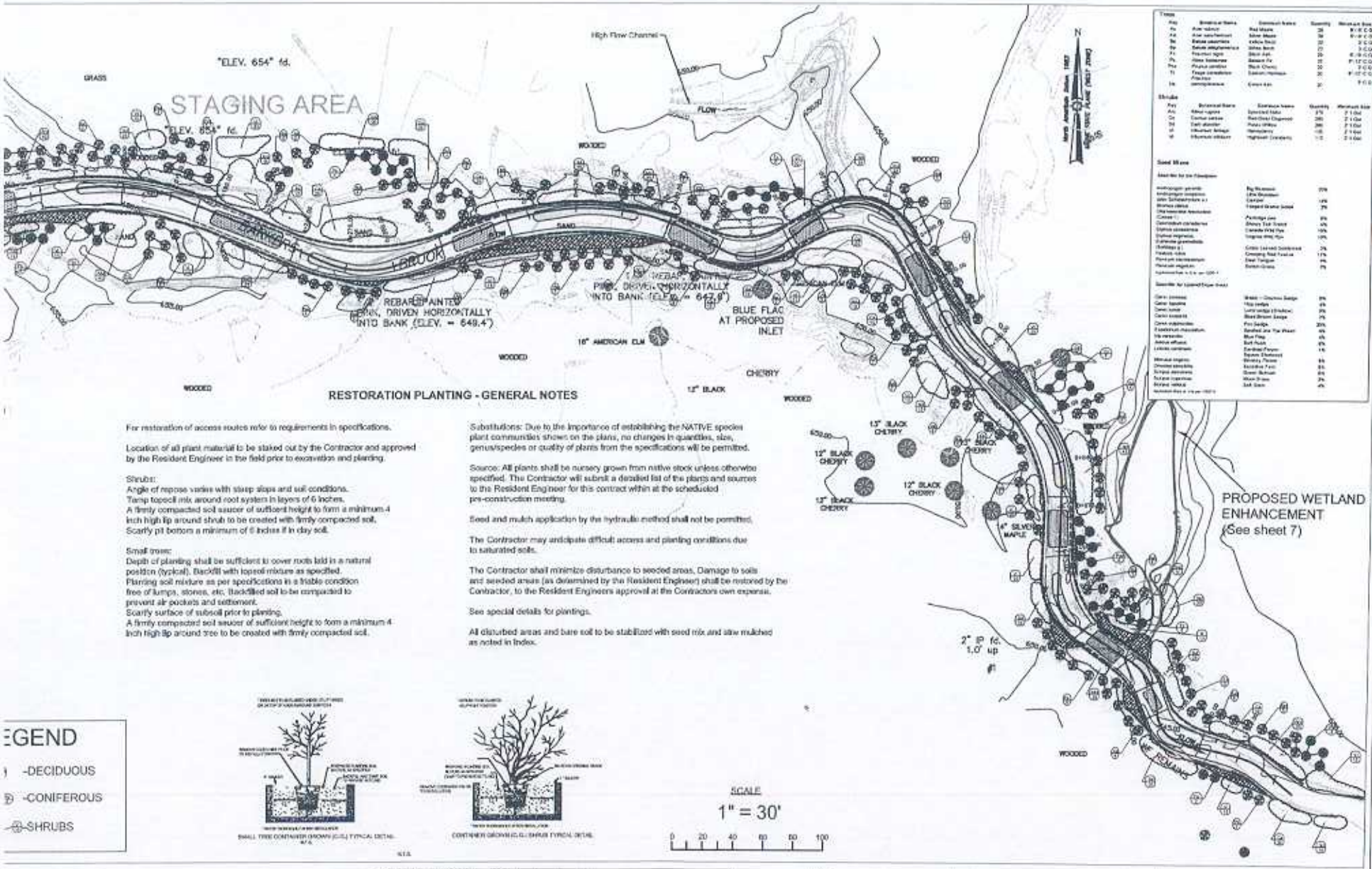
PARISH geomorphic

Barkers Brook

Cross-sections

PROJECT No. NH-9184(400)E

SHEET 8 of 10



RESTORATION PLANTING - GENERAL NOTES

For restoration of access routes refer to requirements in specifications.

Location of all plant material to be staked out by the Contractor and approved by the Resident Engineer in the field prior to excavation and planting.

Shrubs:
Angle of repose varies with steep slops and soil conditions.
Tamp topsoil mix around root system in layers of 6 inches.
A firmly compacted soil saucer of sufficent height to form a minimum 4 inch high lip around shrub to be created with firmly compacted soil.
Scarfy pit bottom a minimum of 6 inches if in clay soil.

Small trees:
Depth of planting shall be sufficient to cover roots laid in a natural position (typical). Backfill with topsoil mixture as specified.
Planting soil mixture as per specifications in a friable condition free of lumps, stones, etc. Backfilled soil to be compacted to prevent air pockets and settlement.
Scarfy surface of subsoil prior to planting.
A firmly compacted soil saucer of sufficient height to form a minimum 4 inch high lip around tree to be created with firmly compacted soil.

Substitutions: Due to the importance of establishing the NATIVE species plant communities shown on the plans, no changes in quantities, size, genus/species or quality of plants from the specifications will be permitted.

Source: All plants shall be nursery grown from native stock unless otherwise specified. The Contractor will submit a detailed list of the plants and sources to the Resident Engineer for this contract within at the scheduled pre-construction meeting.

Seed and mulch application by the hydraulic method shall not be permitted.

The Contractor may anticipate difficult access and planting conditions due to saturated soils.

The Contractor shall minimize disturbance to seeded areas. Damage to soils and seeded areas (as determined by the Resident Engineer) shall be restored by the Contractor, to the Resident Engineers approval at the Contractors own expense.

See special details for plantings.

All disturbed areas and bare soil to be stabilized with seed mix and straw mulched as noted in Index.

SMALL TREE CONTAINER GROWN (C.G.) TYPICAL DETAIL

CONTAINER GROWN (C.G.) SHRUB TYPICAL DETAIL

N.T.S.

EGEND

-DECIDUOUS

-CONIFEROUS

-SHRUBS

SCALE

1" = 30'

0 20 40 60 80 100

Design	C.C.	Checked	J.P.
Drawn	D.D.	Checked	J.P.
Date January 1998		Plot Date January 1998	
CAD FILE:			

No.	Date	By	REVISIONS
4	Jan 2002	J.J.	Corrected grid, if and line
3	Dec 2000	D.D.	Added tree matrix
2	Jan 2000	D.D.	Removed notes
1	July 2000	D.D.	Issued and changed notes

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

PARISH geomorphic

Kleinschmidt

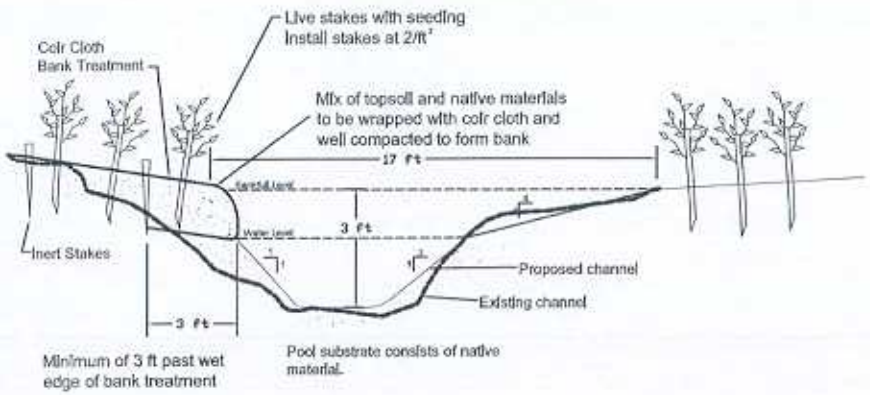
Barkers Brook

Planting Plan

PROJECT NO.: NH-9184(400)E

Sheet 9 of 10

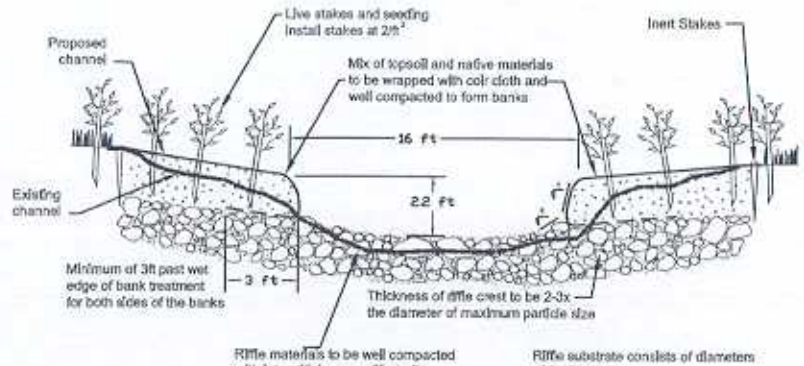
Pool Cross-section



*See Special Provisions

N.T.S.

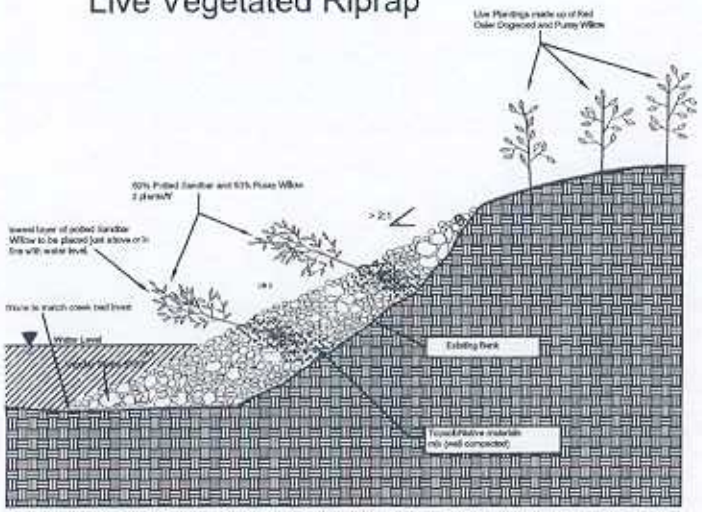
Riffle Cross-section



*See Special Provisions

N.T.S.

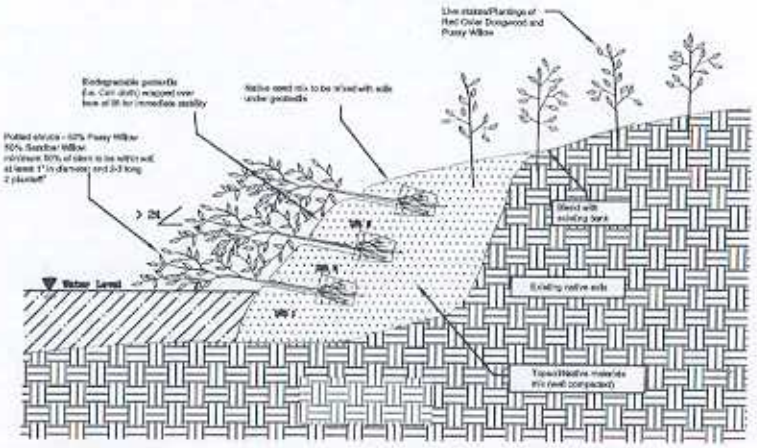
Live Vegetated Riprap



*See Special Provisions

N.T.S.

Live Brush Layering



*Brush layers to be installed 6-8ft - 20 inch high
*Number of lifts dependent on bank height/slope to be determined by the
Resident Engineer at time of construction

*See Special Provisions

N.T.S.

Design	D.D.	Checked	J.P.
Drawn	D.D.	Checked	J.P.
Date January 1998		Plot Date	January 1998
CAE FILE:			

No.	Date	By	REVISIONS
4	Jan 2007	J.J.	Corrected proj. # and date
3	Dec 1999	D.D.	Changed and added notes in details.
2	Nov 1999	D.D.	Changed and added notes in details.
1	July 1999	D.D.	Changed and added notes.

Scale: As Shown

APPROVALS

Signed _____ Date _____

State of Maine
Department of Transportation

PARISH geomorphic

Barkers Brook

Details

PROJECT No.: NH-9184(400)E

SHT 10 OF 10

Applicant: General Public, State of Maine
Permit Number: NAE-2005-2164

Effective Date: October 11, 2005
Expiration Date: October 11, 2010

DEPARTMENT OF THE ARMY
PROGRAMMATIC GENERAL PERMIT
STATE OF MAINE

The New England District of the U.S. Army Corps of Engineers hereby issues a Programmatic General Permit (PGP) that expedites review of minimal impact work in coastal and inland waters and wetlands within the State of Maine.

I. GENERAL CRITERIA

Activities with minimal impacts, as specified by the terms and conditions of this PGP and on the attached Appendix A, Definition of Categories, are either:

Category 1: Non-reporting. Eligible without screening (provided the authorizations are obtained which this permit states are necessary for activities to be eligible for authorization under this non-reporting category), or,

Category 2: Reporting. Require screening and a written determination of eligibility under the PGP by the Corps after coordination with the U.S. Fish and Wildlife Service (U.S. FWS), U.S. Environmental Protection Agency (EPA) and the National Marine Fisheries Service (NMFS).

This PGP does not affect the Corps Individual Permit review process or activities exempt from Corps jurisdiction.

II. ACTIVITIES COVERED:

Work and structures that are located in, or that affect, navigable waters of the United States (U.S.) (Corps regulates under Section 10 of the Rivers and Harbors Act of 1899); the discharge of dredged of fill material into waters of the United States (Corps regulates under Section 404 of the Clean Water Act); and the transportation of dredged material for the purpose of disposal in the ocean (Corps regulates under Section 103 of the Marine Protection, Research and Sanctuaries Act).

III. PROCEDURES:

A. State Approvals

For projects authorized pursuant to this PGP, the following State approvals are also required. The applicable permits must be obtained in order for this PGP authorization to be valid (applicants are responsible for ensuring that all required State permits and approvals have been applied for and obtained):

- Maine Department of Environmental Protection (DEP): Natural Resources Protection Act (NRPA) permit, including permit-by-rule and general permit authorizations (NRPA permit issuance constitutes both the state permit and the WQC); Site Location of Development Act permit; and Maine Waterway Development and Conservation Act permit.
- Maine Department of Conservation: Land Use Regulation Commission (LURC) permit.
- Maine Department of Marine Resources: Lease.
- Maine Department of Conservation, Bureau of Parks and Lands, Submerged Lands: Lease

NOTE: This PGP may authorize projects that are not regulated by the State of Maine (e.g., seasonal floats or moorings).

B. Corps Authorizations

CATEGORY 1 (Non-Reporting)

Eligibility Criteria

Activities in Maine may proceed without application or notification to the Corps if they:

- Are subject to Corps jurisdiction (see General Condition 2, Page 7),
- Meet the definition of Category 1 in Appendix A - Definition of Categories, and
- Meet the General Conditions of the PGP (see Pages 7 - 15).

If the State or the Corps does not contact the applicant for DEP's Tier One permits during the DEP's Tier One 30-day review period, Corps approval may be assumed and the project may proceed. Refer to the Federal Screening Procedures (see Page 4) for additional information regarding screening.

Project proponents seeking Category 1 authorizations are not relieved of the obligation to comply with this PGP's General Conditions (see Page 7) and other Federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA) and the Wild and Scenic Rivers Act. Therefore, consultation with the Corps and/or outside experts such as the Maine Historic Preservation Commission and the appropriate Indian tribes is recommended when there is a high likelihood of the presence of resources of concern.

Although Category 1 projects are non-reporting, the Corps reserves the right to require screening under Category 2 or Individual Permit review if there are concerns for the aquatic environment or any other factor of the public interest (see General Condition 4, Discretionary Authority, Page 7).

Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, is eligible for Corps authorization under this PGP in accordance with the review thresholds and conditions contained herein. The Maine DEP and LURC have waived WQC for projects authorized under Categories 1 and 2 of this PGP and not subject to jurisdiction under the NRPA and LURC Land Use Districts and Standards.

Enforcement cases. This PGP does not apply to any existing or proposed activity in Corps jurisdiction associated with an on-going Corps or EPA enforcement action until such time as the enforcement action is resolved or the Corps determines that the activity may proceed independently without compromising the enforcement action. The Corps may choose not to accept applications or issue permits to any applicant with outstanding violations.

CATEGORY 2 (Reporting – Requiring Screening)

Eligibility Criteria

Activities in Maine require written approval from the Corps if they:

- Are subject to Corps jurisdiction (see General Condition 2, Page 7),
- Meet the definition of Category 2 in Appendix A - Definition of Categories, and
- Meet the General Conditions of the PGP (see Pages 7 - 15),

These projects will be reviewed through interagency screening (see Federal Screening Procedures below) to determine whether such activities may be authorized under this PGP. To be eligible and

subsequently authorized, an activity must result in minimal impacts to the aquatic environment as determined by the Corps based on comments from the review team and the criteria listed above. Mitigation may be required to compensate for unavoidable impacts to ensure net effects of a project are minimal.

For Category 2 projects, applicants must obtain a written authorization from the Corps and State approvals as stated on Page 1.

To ensure compliance with the conditions of this PGP, consultation with the Corps and outside experts is required. This includes consultation with the Maine Historic Preservation Commission and the appropriate Native American Indian tribes to ensure compliance with Condition 8. Also, note the review thresholds under Category 2 apply to single and complete projects only (see General Condition 5).

Enforcement cases. See previous section.

Application Procedures

The Corps must review and approve in writing all Category 2 activities. Generally, the State will provide the Corps with a copy of State applications received, but it is ultimately the applicant's responsibility to ensure the Corps receives the application from the State. Therefore, it is recommended that applicants either verify with the Corps receipt of their application from the State (DEP or LURC), or apply directly to the Corps with either a copy of their State application or a Corps application (ENG Form 4345). Applicants must apply directly to the Corps using ENG Form 4345 if the work is not State regulated.

Upon receipt of the application, the Corps will determine if it:
(a) requires additional information (see "information typically required" on the following page);
(b) is appropriate for screening with the Federal resource agencies (see Category 2 Federal Screening Procedures on the following page);
(c) is ineligible under the terms and/or conditions of this PGP; or
(d) will require Individual Permit review, regardless of whether the terms and conditions of this PGP are met, based on concerns for the aquatic environment or any other factor of the public interest (see General Condition 4, Discretionary Authority).

If open water disposal is proposed, the Corps will make a suitability determination, fully coordinated with the Federal resource agencies, before coordinating a project at a joint processing meeting.

All Category 2 applicants shall submit a copy of their application materials to the Maine Historic Preservation Commission and the Indian tribe(s) listed on Page 17, at the same time, or before, they apply to the DEP, LURC, or the Corps, to be reviewed for the presence of historic, archaeological or tribal resources in the permit area that the proposed work may affect. Submittals to the DEP or Corps shall include information to indicate that this has been done (a copy of the applicant's cover letter to Maine Historic Preservation Commission and tribes or a copy of the Historic Preservation Commission and tribal response letters is acceptable).

Information Typically Required

The following information may not be necessary for all projects. Please see www.nae.usace.army.mil for a more comprehensive checklist. Select "Regulatory/Permitting," "Forms" and then "Application and Plan Guideline Checklist." Please check with our Maine office for project-specific requirements.

(a) purpose of project;
(b) 8½"x 11" locus map. 8½"x 11" plan views of the entire property, including property lines, and project limits with existing and proposed conditions;
(c) typical cross-section views of all wetland and waterway fill areas and wetland replication areas;
(d) legible, reproducible plans. Show mean low water (MLW), mean high water (MHW) and high tide line (HTL) elevations in navigable waters;
(e) each plan should show the NGVD 1929 equivalent for the project's vertical datum (MLW, MLLW, MHW, HTL or other tidal datum for tidal projects) with the vertical units. Do not use local datum;
(f) wetland delineation for the site, Corps wetland delineation data sheets (see web site), and calculations of waterway and wetland impact areas (see General Condition 2);
(g) delineation of submerged aquatic vegetation, e.g., eel grass beds, in tidal waters;
(h) volume, type and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below ordinary high water in inland waters and below the high tide line in coastal waters;
(i) limits of any Federal Navigation Project in the vicinity and State Plane Coordinates for the limits of the proposed work closest to the Federal Navigation Project;
(j) on-site alternatives analysis. Please contact Corps for guidance;
(k) identify and describe potential impacts to Essential Fish Habitat. See General Condition 11 and contact Corps for guidance;
(l) photographs of wetland/waterway to be impacted.

Information typically required for dredging projects:
(a) sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing. For projects proposing open water disposal, applicants are encouraged to contact the Corps as early as possible regarding sampling and testing protocols. Sampling and testing of sediments without such contact should not occur and, if done, would be at the applicant's risk.
(b) the area in square feet and volume of material to be dredged below mean high water;
(c) existing and proposed water depths;
(d) type of dredging equipment to be used;
(e) nature of material (e.g., silty sand);
(f) any existing sediment grain size and bulk sediment chemistry data for the proposed or any nearby projects;
(g) information on the location and nature of municipal or industrial discharges and occurrence of any contaminant spills in or near the project area, location of the disposal site (include locus sheet);
(h) shellfish survey;
(i) identify and describe potential impacts to Essential Fish Habitat (see General Condition 11);
(j) delineation of submerged aquatic vegetation (e.g., eelgrass beds).

Federal Screening Procedures
The Corps will review all complete applications for Category 2 projects requiring Corps approval at interagency screening meetings (or "joint processing" meetings) with the Federal resource agencies (U.S. FWS, EPA and NMFS) to determine whether such activities may be authorized under this PGP. The Federal resource agencies will comprise the interagency review team. The meetings are held at the Corps every three weeks, or coordinated as necessary to provide applicants with a timely response. The Corps and Federal resource agencies, at the branch chief or equivalent level, may agree on certain activities that do not need to be coordinated at these meetings.

If the Corps and Federal resource agencies determine that the activity is eligible for the PGP, the Corps will send an authorization letter directly to the applicant. The Corps will generally issue an eligibility determination within the State's review period, not to exceed 60 days. If the Corps determines that the activity is not eligible under the PGP or that additional information is required, the Corps will notify the applicant in writing and will send a copy of this notification to DEP or LURC.

For projects reviewed with the Federal resource agencies, the agencies may recommend, within ten business days, either 1) special conditions for projects to avoid or minimize adverse environmental effects and to ensure the terms and conditions of the PGP are met, or 2) Individual Permit review. The Corps will determine that a project is ineligible under this PGP and will begin its Individual Permit review procedures if any one of the Federal resource agencies, within ten business days of the screening meeting, expresses a concern within their area of expertise, states the resource or species that could be impacted by the project, and describes the impacts that, either individually or cumulatively, will be more than minimal.

This ten-day notice may be spoken and is not required to be fully documented, but must be confirmed with a written response within an additional ten working days from the date of the spoken comment. Written responses must be signed by the Federal resource agency field supervisor or branch chief, as appropriate, and must identify the affected resource within their area of expertise. The intent of the spoken notification is to allow the Corps to give timely notification to the applicant that additional information is needed and/or an Individual Permit may be required. The Corps may reinstate a project's eligibility under the PGP provided the Federal agencies' concerns are satisfied. The Federal resource agencies may request additional information within their area of expertise within ten business days of the screening meeting. This information shall be commensurate to the level of impact and agreed upon by the Corps. The agencies are allowed an additional ten business days after their receipt of additional information to provide special conditions or a written Individual Permit request to the Corps.

If the applicant is unable to resolve the concerns, the Corps, independently or at the request of the Federal resource agencies, will require an Individual Permit for the project. The applicant will be notified of this in writing, along with information about submitting the necessary application materials.

Minerals Management Service (MMS) Review

Projects with construction of solid fill structures or discharge of fill that may extend beyond the coastline or the baseline from which the territorial sea is measured (i.e., mean low water), must be coordinated with Minerals Management Service (MMS), Outer Continental Shelf (OCS) Survey Group, pursuant to the Submerged Lands Act (43 USC, Section 1301-1315, 33 CFR 320.4(f)). The Corps will forward project information to MMS for their review. The MMS will coordinate their determination with the Department of the Interior (DOI) Solicitor's Office. The DOI will have 15 calendar days from the date MMS is in receipt of project information to determine if the baseline will be affected. No notification to the Corps within 15-day review period will constitute a "no effect" determination. Otherwise, the solicitor's notification to the Corps may be spoken but must be followed with a written confirmation within ten business days from the date of the spoken notification. This procedure will be eliminated if the State of Maine provides a written waiver of interest in any increase in submerged lands caused by a change in the baseline resulting from solid fill structures or fills authorized under this PGP.

Emergency Situations Procedures

Emergency situations are limited to sudden, unexpected occurrences that could potentially result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process an application under standard procedures. If an emergency situation requires action in less than 30 days after the occurrence, it qualifies for the amended notification procedures described below.

Notification Procedures for Emergency Situations:

Any project proponent may request emergency authorization from the Corps, however the Corps will determine if a project qualifies for these emergency situation procedures. The Federal resource agencies, the Maine Historic Preservation Commission and the tribes will each designate an emergency contact and an alternate in the event the regular contact is unavailable. When an application for Category 2 work is received that the Corps determines is an "emergency" as defined above, the Corps will fax a copy of the plans and Determination of Eligibility to the agency representatives and their alternates. The resource agencies would then have 16 business hours to notify the Corps if they have any comments on authorization of the project under the PGP. Objections to the Corps determination of an "emergency" situation will not be accepted. If no response is received within 16 business hours, the Corps will proceed with a decision on the application. If the resource agencies have comments on the proposal, they will have 16 business hours to put their comments in writing. If written comments from the Federal agencies are not received within 16 business hours, the Corps will proceed with a decision on the application.

If a Federal agency requests that an Individual Permit be required for a project or requests modifications to the project based on concerns within their area(s) of expertise, the Corps will notify the applicant within one business day of receipt of that request that the project as proposed does not qualify for authorization under this PGP and the emergency Individual Permit procedures may be followed. In any event, the Corps will notify the applicant within 16 business hours of commencement of the screening process as to whether the project may proceed under this PGP.

IV. CORPS AUTHORIZATION: INDIVIDUAL PERMIT

Work that is defined in the Individual Permit category of Appendix A – Definition of Categories, or that does not meet the terms and conditions of this PGP, will require an application for an Individual Permit from the Corps (see 33 CFR Part 325.1). The screening procedures outlined for Category 2 projects will only serve to delay project review in such cases. The applicant should submit the appropriate application materials (including the Corps application form) at the earliest possible date. General information and application forms can be obtained at our web site or by calling us (see Page 16). Individual water quality certification and coastal zone management consistency concurrence are required when applicable from the State of Maine before Corps permit issuance. The Federal resource agencies' comments are due within ten working days after the Public Notice's expiration date, unless the Corps receives and approves a written request for a time extension within ten working days after the notice's expiration.

V. PROGRAMMATIC GENERAL PERMIT CONDITIONS:

The following conditions apply to activities authorized under this Maine PGP, including all Category 1 (non-reporting) and Category 2 (reporting – requiring screening) activities:

General Requirements

1. Other Permits. Authorization under this PGP does not obviate the need to obtain other Federal, State, or local authorizations required by law. This includes, but is not limited to, the project proponent obtaining a Flood Hazard Development Permit issued by the town, if necessary. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See http://www.maine.gov.

2. Federal Jurisdictional Boundaries. Applicability of this PGP shall be evaluated with reference to Federal jurisdictional boundaries. Applicants are responsible for ensuring that the boundaries used satisfy the Federal criteria defined at 33 CFR 328-329. These sections prescribe the policy, practice and procedures to be used in determining the extent of jurisdiction of the Corps concerning "waters of the U.S." and "navigable waters of the U.S." Wetland boundaries shall be delineated in accordance with the January 1987 Corps of Engineers Wetlands Delineation Manual, located at http://www.usace.army.mil/inet/functions/cw/cecwo/reg/ wlman87.pdf. The U.S. FWS publishes the National List of Plant Species that Occur in Wetlands, located at http://www.nwi.fws.gov. The Natural Resources Conservation Service (NRCS) develops the hydric soil definition and criteria, and publishes the current hydric soil lists, located at http://soils.usda.gov/use/hydric/.

3. Minimal Effects. Projects authorized by this PGP shall have no more than minimal individual and cumulative adverse environmental impacts as determined by the Corps.

4. Discretionary Authority. Notwithstanding compliance with the terms and conditions of this permit, the Corps retains discretionary authority to require Category 2 or Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR 320.4(a)]. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant Individual Permit review based on the concerns stated above. This authority may be invoked for projects with cumulative environmental impacts that are more than minimal or if there is a special resource or concern associated with a particular project that is not already covered by the remaining conditions of the PGP and that warrants greater review. Whenever the Corps notifies an applicant that an Individual Permit may be required, authorization under this PGP is void and no work may be conducted until the individual Corps permit is obtained or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this PGP.

5. Single and Complete Projects. This PGP shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single project shall be treated together as constituting one single and complete project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) unless the Corps determines that a component has independent utility. (The *Independent Utility* test is used to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.) For linear projects, such as power lines or pipelines with multiple

crossings, the "single and complete project" (i.e., single and complete crossing) will apply to each crossing of a separate water of the U.S. (i.e., single waterbody) at that location; except that for linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project, and may be reviewed for Category 1 eligibility. (However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies.) If any crossing requires a Category 2 activity, then the entire linear project shall be reviewed as one project under Category 2. Also, this PGP shall not be used for any activity that is part of an overall project for which an Individual Permit is required, unless the Corps determines the activity has independent utility.

6. Permit On-Site. For Category 2 projects, the permittee shall ensure that a copy of this PGP and the accompanying authorization letter are at the work site (and the project office) authorized by this PGP whenever work is being performed, and that all personnel with operation control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this PGP. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means this PGP and the authorization letter (including its drawings, plans, appendices and other attachments) and also includes permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract as a change order. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire PGP authorization, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

National Concerns

7. St. John/St. Croix Rivers. This covers work within the Saint John and Saint Croix River basins that requires approval of the International Joint Commission. This includes any temporary or permanent use, obstruction or diversion of international boundary waters which could affect the natural flow or levels of waters on the Canadian side of the line, as well as any construction or maintenance of remedial works, protective works, dams, or other obstructions in waters downstream from boundary waters when the activity could raise the natural level of water on the Canadian side of the boundary.

8. Historic Properties. Any activity authorized by this PGP shall comply with Section 106 of the National Historic Preservation Act. Information on the location and existence of historic resources can be obtained from the Maine Historic Preservation Commission, the National Register of Historic Places, and the Penobscot, Passamaquoddy, Micmac, and Maliseet Tribal Historic Preservation Officers. See Page 17 for historic properties contacts. If the permittee, either prior to construction or during construction of the work authorized herein, encounters a previously unidentified archaeological or other cultural resource, within the area subject to Department of the Army jurisdiction, that might be eligible for listing in the National Register of Historic Places, he/she shall stop work and immediately notify the District Engineer and the Maine Historic Preservation Commission and/or applicable Tribe(s).

9. National Lands. Activities authorized by this PGP shall not impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Park or any other area administered by the National Park Service.

10. Endangered Species. No activity may be authorized under this PGP which:

- is likely to adversely affect a threatened or endangered species, a proposed species, designated critical habitat, or proposed critical habitat as identified under the Federal ESA,
- would result in a "take" of any threatened or endangered species of fish or wildlife, or
- would result in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.

Applicants shall notify the Corps if any listed species or critical habitat, or proposed species or critical habitat, is in the vicinity of the project and shall not begin work until notified by the District Engineer (DE) that the requirements of the ESA have been satisfied and that the activity is authorized. Information on the location of threatened and endangered species and their critical habitat can be obtained from the U.S. FWS and NMFS (see Page 16 for addresses).

11. Essential Fish Habitat. As part of the PGP screening process, the Corps will coordinate with NMFS in accordance with the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed "Essential Fish Habitat (EFH)", and is broadly defined to include "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Applicants may be required to describe and identify potential impacts to EFH. Conservation recommendations made by NMFS will normally be included as a permit requirement by the Corps. For additional information, see the EFH regulations at 50 CFR Part 600 (http://www.nmfs.noaa.gov). Additional information on the location of EFH can be obtained from NMFS (see Page 16 for contact information).

Any work in any aquatic habitat in the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration, shall not be authorized under Category 1 of the PGP and must be screened for potential impacts to EFH.

Androscoggin River	Hobart Stream	Passagassawaukeag River	Saco River
Aroostook River	Kennebec River	Patten Stream	Sheepscot River
Boyden River	Machias River	Penobscot River	St. Croix River
Dennys River	Narraguagus River	Pleasant River	Tunk Stream
Ducktrap River	Orland River	Presumpscot River	Union River
East Machias River			

12. Wild and Scenic Rivers. Any activity that occurs in a component of, or within 0.25 mile up or downstream of, the main stem or tributaries of a river segment of the National Wild and Scenic River System, must be reviewed by the Corps under the procedures of Category 2 of this PGP regardless of size of impact. This condition applies to both designated Wild and Scenic Rivers and rivers designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. The Corps will consult with the National Park Service (NPS) with regard to potential impacts of the proposed work on the resource values of the Wild and Scenic River. The culmination of this coordination will be a determination by the NPS and the Corps that the work: (1) may proceed as proposed; (2) may proceed with recommended conditions; or (3) could pose a direct and adverse effect on the resource values of the river and an individual permit is required. If

preapplication consultation between the applicant and the NPS has occurred whereby NPS has made a determination that the proposed project is appropriate for authorization under this PGP (with respect to Wild and Scenic River issues), this determination should be furnished to the Corps with submission of the application. (See NPS address on Page 16.) National Wild and Scenic Rivers System segments for Maine as of September 2005 include: Allagash River beginning at Telos Dam continuing to Allagash checkpoint at Eliza Hole Rapids, approximately 3 miles upstream of the confluence with the St. John River (length = 92 miles).

13. Federal Navigation Project. Any structure or work that extends closer to the horizontal limits of any Corps Federal Navigation Project (See Appendix B) than a distance of three times the project's authorized depth shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys.

14. Navigation. (a) There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. (b) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

15. Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States (U.S.) in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.

Minimization of Environmental Impacts

16. Minimization. Discharges of dredged or fill material into waters of the United States, including wetlands, shall be avoided and minimized to the maximum extent practicable. Permittees may only fill those jurisdictional wetlands that the Corps authorizes to be filled and impact those wetlands that the Corps authorizes as secondary impacts. For coastal structures such as piers and docks, the height above the marsh at all points should be equal to or exceed the width of the deck. The height shall be measured from the marsh substrate to the bottom of the longitudinal support beam. This will help ensure sunlight reaches the area beneath the structure.

17. Heavy Equipment in Wetlands. Heavy equipment, other than fixed equipment (drill rigs, fixed cranes, etc.), working within wetlands shall not be stored, maintained or repaired in wetlands unless it is less environmentally damaging otherwise, and as much as possible shall not be operated there. Where construction requires heavy equipment operation in wetlands, the equipment shall

either have low ground pressure (<3 psi), or shall not be located directly on wetland soils and vegetation; it shall be placed on swamp or timber mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. (See General Condition 18 below.) Other support structures that are less impacting and are capable of safely supporting equipment may be used with written Corps authorization. Similarly, not using mats during frozen, dry or other conditions may be allowed with written Corps authorization. An adequate supply of spill containment equipment shall be maintained on site.

NOTE: "Swamp mats" is a generic term used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes, and they include large timbers bolted or cabled together (timber mats). Corduroy roads, which are not considered to be swamp mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another.

18. Temporary Fill. Fill placed into waters of the U.S. (including wetlands) totaling greater than or equal to 4,300 SF (15,000 SF if a DEP Tier One Permit is issued) in total area (i.e., the sum of permanent and temporary fill areas) exceeds the Category 1 threshold and may not be discharged without written authorization from the Corps. When temporary fill is used (e.g., access roads, swamp mats, cofferdams), it shall be stabilized and maintained during construction in such a way as to prevent soil eroding into portions of waters of the U.S. where it is not authorized. Swamp or timber mats (see Gen.Cond. 17 above) are considered as temporary fill when they are removed immediately upon work completion. The area must be restored in accordance with Gen.Cond. 19.

- Unconfined temporary fill authorized for discharge into flowing water (rivers and streams) shall consist only of clean washed stone.
- Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric laid on the pre-construction wetland grade. (Swamp and timber mats are excluded from this requirement.)
- Temporary fill shall be removed as soon as it is no longer needed, and it shall be disposed of at an upland site and suitably contained to prevent subsequent erosion into waters of the U.S.
- Waters of the U.S. where temporary fill was discharged shall be restored (see Gen.Cond. 19).
- No temporary work shall drain a water of the U.S. by providing a conduit for water on or below the surface.

19. Restoration.

- Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be stabilized with a wetland seed mix containing only plant species native to New England.
- The <u>introduction</u> or <u>spread</u> of invasive plant species in disturbed areas shall be controlled.
- In areas of authorized temporary disturbance, if trees are cut they shall be cut at ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.
- Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

20. Coastal Bank Stabilization. Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction should be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable. For example, vertical bulkheads should only be used in situations where reflected wave energy can be tolerated. This generally eliminates bodies of water where the reflected wave energy may interfere with or impact on harbors, marinas, or other developed shore areas. A revetment is sloped and is typically employed to absorb the direct impact of waves more effectively than a vertical seawall. It typically has a less adverse effect on the beach in front of it, abutting properties and wildlife. For more information, see the Corps Coastal Engineering Manual (supersedes the Shore Protection Manual), located at http://chl.erdc.usace.army.mil. Select "Products/ Services," "Publications." Part 5, Chapter 7-8, a(2)c is particularly relevant.

21. Sedimentation and Erosion Control. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, vegetated filter strips, geotextile silt fences, hay bales or other devices, shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion, of collecting sediment, suspended and floating materials, and of filtering fine sediment. These devices must be removed in a timely manner upon completion of work, but not until the disturbed areas have been stabilized. The sediment collected by these devices shall be removed and placed at an upland location in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

22. Waterway Crossings.
(a) All temporary and permanent crossings of waterbodies (waterways and wetlands) shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, to maintain existing low flows, and to not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction. (NOTE: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine applicability of this PGP).
(b) Aquatic Life Movements. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. For new permanent crossings, open bottom arches, bridge spans or embedded culverts are generally preferred over traditional culverts and should be installed when practicable. Coordination with the Corps is recommended for Category 1 projects when site constraints (e.g., placing footings) may render open bottom arches, bridge spans or embedded culverts impractical. In these cases, well-designed culverts may actually perform better. Culverts shall be installed with their inverts embedded below existing streambed grade to avoid "hanging" and associated impediments to fish passage. The "Design of Road Culverts for Fish Passage" provides design guidance and is available at www.nae.usace.army.mil, "Regulatory/Permitting," "Other."
(c) Culverts at waterbody crossings shall be installed in such a manner as to preserve hydraulic connectivity, at its present level, between the wetlands on either side of the road. The permittee shall take necessary measures to correct wetland damage due to lack of hydraulic connectivity.
(d) Culverts and bridges shall span the waterway a minimum of 1.2 times the bankfull width in probable fish bearing waterways to qualify as a Category 1 non-reporting activity. See "Design of Road Culverts for Fish Passage," referenced in (b) above, for information on bankfull width.

(e) Projects using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), plastic pipes, and High Density Polyethylene Pipes (HDPP) are not allowed as non-reporting Category 1 activities, either as new work or maintenance activities.
(f) Waterbody crossings shall be culverted to at least municipal or State standards. The Maine DEP's stream crossing standards are at 06-096, Chapter 305: Permit by Rule, Section 10. Stream crossings (bridges, culverts and fords).
(g) Waterway crossings proposed by the Maine Dept. of Transportation should conform to the MDOT Fish Passage Policy and Design Guides.
(h) Construction equipment shall not cross streams without the use of temporary bridges, culverts, or cofferdams.
(i) For projects that otherwise meet the terms of Category 1, in-stream construction work shall be conducted during the low flow period July 15 - October 1 in any year. Projects that are not to be conducted during that time period are ineligible for Category 1 and shall be screened pursuant to Category 2, regardless of the waterway and wetland fill and/or impact area.

23. Discharge of Pollutants. All activities involving any discharge of pollutants into waters of the U.S. authorized under this PGP shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 USC 1251) and applicable State and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this PGP, the authorized work shall be modified to conform with these standards within six months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the EPA. Applicants may presume that State water quality standards are met with the issuance of a LURC or DEP NRPA permit.

24. Spawning Areas. Discharges of dredged or fill material, and/or suspended sediment producing activities in fish and shellfish spawning or nursery areas and amphibian and waterfowl breeding areas during spawning or breeding seasons shall be avoided. During all times of year, impacts to these areas shall be avoided or minimized to the maximum extent practicable.

25. Storage of Seasonal Structures. Coastal structures, such as pier sections and floats, that are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location located above mean high water (MHW) and not in tidal wetlands. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate and the substrate seaward of MHW. Seasonal storage of structures in navigable waters, e.g., in a protected cove on a mooring, requires Corps and local harbormaster approval.

26. Environmental Functions and Values. The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner so as to maintain as much as is practicable, and minimize any adverse impacts on existing fish, wildlife, and natural environmental functions and values.

27. Protection of Vernal Pools. Impacts to uplands in proximity (within 500 feet) to the vernal pools referenced in Appendix A - Definitions of Categories, shall be minimized to the maximum extent possible.

Procedural Conditions

28. Cranberry Development Projects. For cranberry development projects authorized under the PGP, the following conditions apply:

- If a cranberry bog is abandoned for any reason, the area must be allowed to revert to natural wetlands unless an Individual Permit is obtained from the Corps allowing the discharge of fill for an alternate use.
- No stream diversion shall be allowed under this permit.
- No impoundment of perennial streams shall be allowed under this permit.
- The project shall be designed and constructed to not cause flood damage on adjacent properties.

29. Inspections. The permittee shall allow the District Engineer (DE) or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with the terms and conditions of this permit. The DE may also require post-construction engineering drawings for completed work and post-dredging survey drawings for any dredging work.

30. Work Start Notification Form and Compliance Certification. Every permittee who receives a written Category 1 or 2 PGP authorization from the Corps must submit a 1) Work Start Notification Form (WSNF) two weeks before work commencement, and 2) signed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals). The Corps will forward the blank WSNF and Compliance Certification Form with the authorization letter. The Compliance Certification Form will include: (a) a statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions; (b) a statement that any required mitigation was completed in accordance with the permit conditions; and (c) the signature of the permittee certifying the completion of the work and mitigation.

31. Maintenance. The permittee shall maintain the work or structures authorized herein in good condition and in conformance with the terms and conditions of this permit. This does not include maintenance of dredging projects. Maintenance dredging is subject to the review thresholds in Appendix A and/or any conditions included in a written Corps authorization. Maintenance dredging includes only those areas and depths previously authorized and dredged. Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a)(2).

32. Property Rights. This permit does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations. If property associated with work authorized by the PGP is sold, the PGP authorization is automatically transferred to the new property owner. The new property owner should provide this information to the Corps in writing. No acknowledgement from the Corps is necessary.

33. Modification, Suspension, and Revocation. This permit may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7. Any such action shall not be the basis for any claim for damages against the United States.

34. Restoration. The permittee, upon receipt of a notice of revocation of authorization under this permit, shall restore the wetland or waterway to its former condition without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.

35. Special Conditions. The Corps, independently or at the request of the Federal resource agencies, may impose other special conditions on a project authorized pursuant to this general permit that are determined necessary to minimize adverse environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, will constitute a permit violation and may subject the permittee to criminal, civil, or administrative penalties or restoration.

36. False or Incomplete Information. If the Corps makes a determination regarding the eligibility of a project under this permit and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the permit shall not be valid and the government may institute appropriate legal proceedings.

37. Abandonment. If the permittee decides to abandon the activity authorized under this general permit, unless such abandonment is merely the transfer of property to a third party, he/she must restore the area to the satisfaction of the District Engineer.

Duration of Authorization/Grandfathering:

38. Duration of Authorization. This PGP expires five years from the effective date listed at the top of Page 1. Activities authorized under Category 1 of this PGP that have commenced (i.e., are under construction) or are under contract to commence in reliance upon this PGP's authorization will remain authorized provided the activity is completed within 12 months of the PGP's expiration date. Activities authorized under Category 2 of this PGP will remain authorized in accordance with the project-specific date that the Corps provides to the permittee in the PGP authorization letter, unless:
(a) The PGP is either modified or revoked, or
(b) Discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2 (e)(2).

39. Previously Authorized Activities.
(a) Activities completed under the authorizations of past PGPs that were in effect at the time the activity was completed will continue to be authorized by those PGPs.
(b) Completed projects that have received written verification or approval from the Corps, based on applications made to the Corps prior to issuance of this PGP or the previous nationwide permits, regional general permits, or letters of permission shall remain authorized as specified in each authorization.
(c) Activities authorized pursuant to 33 CFR Part 330.3 ("Activities occurring before certain dates") are not affected by this PGP.

VI. CONTACTS FOR MAINE PROGRAMMATIC GENERAL PERMIT:

1. FEDERAL

U.S. Army Corps of Engineers
Maine Project Office
675 Western Avenue #3
Manchester, Maine 04351
(207) 623-8367
(207) 623-8206 (fax)

Federal Endangered Species
U.S. Fish and Wildlife Service
Maine Field Office
1168 Main Street
Old Town, Maine 04468
(207) 827-5938
207-827-6099 (fax)

Federal Endangered Species & Essential Fish Habitat
National Marine Fisheries Service
One Blackburn Drive
Gloucester, Massachusetts 01939
(978) 281-9102
(978) 281-9301 (fax)

Wild and Scenic Rivers
National Park Service
North Atlantic Region
15 State Street
Boston, Massachusetts 02109
(617) 223-5203

Bridge Permits
Commander (obr)
First Coast Guard District
One South Street - Battery Bldg
New York, New York 10004
(212) 668-7021

2. STATE OF MAINE

Maine Department of Environmental Protection
(For State Permits & Water Quality Certifications)
Division of Land Resource Regulation
Bureau of Land and Water Quality
17 State House Station
Augusta, Maine 04333
(207) 287-2111

Southern Maine Regional Office
312 Canco Road
Portland, Maine 04103
(201) 822-6300

Eastern Maine Regional Office
106 Hogan Road
Bangor, Maine 04401
(207) 941-4570

Northern Maine Regional Office
1235 Central Drive - Skyway Park
Presque Isle, Maine 04769
(207) 764-0477

Maine Land Use Regulation Commission (LURC)
[call (800) 452-8711 for appropriate LURC office]
22 State House Station
Augusta, ME 04333-0022
(207) 287-2631
(207) 287-7439 (fax)

45 Radar Road
Ashland, ME 04732-3600
(207) 435-7963
(207) 435-7184 (fax)

Lakeview Drive
P.O. Box 1107
Greenville, ME 04441
(207) 695-2466
(207) 695-2380 (fax)

(For CZM Determinations)
State Planning Office
Coastal Program
184 State Street
State House Station 38
Augusta, Maine 04333
(207) 287-1009

(For Submerged Lands Leases)
Maine Department of Conservation
Bureau of Parks and Lands
22 State House Station
Augusta, Maine 04333
(207) 287-3061

191 Main Street
East Millinocket, ME 04430
(207) 746-2244
(207) 746-2243

(For Aquaculture Leases)
Maine Department of Marine Resources
P.O. Box 8
West Boothbay Harbor, Maine 04575
(207) 633-9500

3. HISTORIC PROPERTIES

Maine Historic Preservation Commission
State House Station 65
Augusta, Maine 04333-0065
(207) 287-2132
(207) 287-2335 (fax)

Aroostook Band of Micmacs
Attn: Mr. Williams Phillips, Chief
7 Northern Road
Presque Isle, Maine 04769
(207) 764-1972
(207) 764-7667 (fax)

Houlton Band of Maliseet Indians
Attn: Tribal Chief
88 Bell Road
Littleton, Maine 04730
(207) 532-4273, x215
(207) 532-2660 (fax)

Passamaquoddy Tribe of Indians
Pleasant Point Reservation
Attn: Tribal Council
P.O. Box 343
Perry, Maine 04667
(207) 853-2600
(207) 853-6039 (fax)

Passamaquoddy Tribe of Indians
Indian Township Reservation
Attn: Donald Soctomah, THPO
P.O. Box 301
Princeton, Maine 04668
(207) 796-2301
(207) 796-5256 (fax)

Penobscot Indian Nation
Indian Island Reservation
Attn: Ms. Bonnie Newsom, THPO
12 Wabanaki Way
Indian Island, Maine 04468
(207) 817-7471
(207) 817-7450 (fax)

4. ORGANIZATIONAL WEBSITES:

Army Corps of Engineers	www.nae.usace.army.mil (click "Regulatory/Permitting")
Corps of Engineers Headquarters	www.usace.army.mil (click "Services for the Public")
Environmental Protection Agency	www.epa.gov/owow/wetlands/
National Marine Fisheries Service	www.nmfs.noaa.gov
U.S. Fish and Wildlife Service	www.fws.gov
National Park Service	www.nps.gov/rivers/index.html
State of Maine	www.maine.gov
State of Maine -Aquaculture Guidelines	www.maine.gov/dmr/aquaculture/index.htm

for Christine J. Grey 10-11-05
District Engineer Date

APPENDIX A: DEFINITION OF CATEGORIES

A. INLAND WATERS AND WETLANDS	**Inland Waters and Wetlands:** Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, and excluding Section 10 Navigable Waters of the U.S. The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present. For the purposes of this PGP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands[1] to tidal waters are reviewed in the Navigable Waters section. (See II. Navigable Waters on the next page.)		
	CATEGORY 1	**CATEGORY 2**	**INDIVIDUAL PERMIT**
(a) NEW FILL/ EXCAVATION DISCHARGES	<4,300 SF inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, cleared or excavated). Fill area includes all temporary and permanent fill, and excavation discharges (except for incidental fallback). Swamp mats are considered as fill. [See General Condition (GC) 18.] Provided: • In-stream (e.g., rivers, streams, brooks, etc.) work limited to Jul 15 - Oct 1 • In-stream work of up to 4,300 SF of fill below OHW in waterways not designated as EFH for Atlantic salmon (see GC 11, Page 9) and performed in accordance with Maine Permit By Rule standards or a LURC permit. • Waterway crossings shall comply with GC 22. • Projects covered by a DEP Tier One permit with no cumulative impacts >15,000 SF in inland wetlands from previous permits, unauthorized work, and/or other state permits. • Subdivision fill complies with GC 5, Single and Complete Projects (see Page 7). This category excludes: • Dams, dikes or activities involving water diversions.[2] • Non-State approved sediment releases/sluices from dams. • Open trench excavation in flowing waters (see GC 22, Page 12).	4,300 SF to <3 acres inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, cleared or excavated). Fill area includes all temporary and permanent fill, and excavation discharges (except for incidental fallback). Swamp mats filling any area ≥4,300 SF are reviewed in Category 2. (See GC 18, Page 11.) Includes: In-stream work, including crossings (other than spanned crossing as described in Category 1) with any discharge of fill below ordinary high water in perennial waterways designated as EFH for Atlantic salmon. Time of year restrictions determined case-by-case. Projects with proactive restoration as a primary purpose with impacts of any area ≥4,300 SF. The Corps, in consultation with State & Federal agencies, must determine that net adverse effects are not more than minimal. Specific activities with impacts of any area ≥4,300 SF required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.	≥3 acres inland waterway and/or wetland fill and secondary impacts (e.g., areas drained, flooded, cleared or excavated). Fill area includes all temporary and permanent fill, and excavation discharges (except for incidental fallback).[5] EIS required by the Corps. In-stream work exceeding Category 2 limits.

	CATEGORY 1	CATEGORY 2	INDIVIDUAL PERMIT
	• Work in waters designated as EFH for Atlantic salmon (see GC 11, Page 9), unless the waterway is crossed with a span and footprints of the span abutments are outside ordinary high water with no more than 4,300 SF of associated wetland impact. • Work in Special Inland Waters or Wetlands[3] (vernal pools). • Work in special aquatic sites (SAS)[4] other than wetlands. • Work within ¼ mile of a Wild and Scenic River (see GC 12, Page 9). • Work on National Lands (see GC 9, Pg. 9). • Work affecting threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9).		
(b) BANK STABILIZATION PROJECTS	Inland bank stabilization <100 FT long and <1 CY of fill per linear foot below OHW. Provided: • In-stream work limited to Jul 15 - Oct 1. • No work in special inland waters & wetlands[3] and SAS[4]. • No open trench excavation in flowing waters (see GC 22, Page 12). • No structures angled steeper than 3H:1V allowed. Only rough-faced stone or fiber roll revetments allowed. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH (see GC 11, Page 9).	Inland bank stabilization ≥100 FT long and/or ≥1 CY of fill per linear foot, or any amount with fill in wetlands.	
(c) REPAIR AND MAINTENANCE OF AUTHORIZED FILLS	Repair or maintenance of existing, currently serviceable, authorized fills with no substantial expansion or change in use. *Conditions of the original authorization apply, however minor deviations in fill design allowed.[6]	Replacement of non-serviceable fills, or repair/maintenance of serviceable fill, with expansion <3 acres, or with a change in use.	Replacement of non-serviceable fill, or repair/maintenance of serviceable fill, with expansion ≥1 acre.

II. NAVIGABLE WATERS	**Navigable Waters of the United States**: Waters that are subject to the ebb and flow of the tide and Federally designated navigable rivers (the Penobscot River, Kennebec River, and Lake Umbagog) (Section 10 Rivers and Harbors Act of 1899). The jurisdictional limits are the mean high water (MHW) line in tidal waters and the ordinary high water (OHW) mark in non-tidal portions of the Federally designated navigable rivers. For the purposes of this PGP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands[1] to tidal waters are also reviewed in this Navigable Waters section.		
	CATEGORY 1	**CATEGORY 2**	**INDIVIDUAL PERMIT**
(a) FILL	Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided the U.S. Coast Guard authorizes such discharges as part of the bridge permit. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.	<1 acre fill and/or secondary waterway impacts (e.g., areas drained, flooded or cleared). Fill includes temporary and permanent waterway fill. Temporary fill or excavation <1 acre in SAS[4]. Permanent fill or excavation <1,000 SF in SAS[4]. Permanent fill and/or excavation ≥1,000 SF in SAS[5] when associated with a project with proactive restoration as a primary purpose. The Corps, in consultation with Federal & state agencies, must determine that net adverse effects are not more than minimal. Specific activities with impacts of any area required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.	≥1 acre waterway fill and/or secondary waterways or wetland impacts (e.g., areas drained, flooded or cleared). Fill includes temporary and permanent waterway fill. Temporary fill or excavation ≥1 acre in SAS[4]. Permanent fill or excavation ≥1,000 SF in SAS[4] other than as specified in Cat. 2 EIS required by the Corps.
(b) REPAIR AND MAINTENANCE WORK	Repair or maintenance of existing, currently serviceable, authorized structure or fill with no substantial expansion or change in use. *Conditions of the original authorization apply. Must be rebuilt in same footprint, however minor deviations in structure design allowed[6]	Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fills, with fill, replacement or expansion <1 acre, or with a change in use.	Replacement of non-serviceable structures and fills or repair/ maintenance of serviceable structures or fill, with replacement or expansion ≥1 acre.

	CATEGORY 1	CATEGORY 2	INDIVIDUAL PERMIT
(c) DREDGING AND ASSOCIATED DISPOSAL	Maintenance dredging for navigational purposes <1,000 cy with upland disposal. Includes return water from upland contained disposal area. Provided: • Proper siltation controls are used. • Dredging & disposal operation limited to November 1 - January 15. • No impact to special aquatic sites[4]. • No dredging in intertidal areas. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9).	Maintenance dredging ≥1,000 CY, new dredging <25,000 CY, or projects not meeting Category 1. Includes return water from upland contained disposal areas. Provided: • Disposal includes 1) upland, 2) beach nourishment (above MHW) of any area provided dredging's primary purpose is navigation or sand is from an upland source and Corps, in consultation w/Federal and State agencies, determines the net adverse effects are not more than minimal; and 3) open water & confined aquatic disposal, if Corps, in consultation with Federal and State agencies, finds the material suitable.	Maintenance dredging and/or disposal (any amount) in or affecting a SAS[4]. See II(a) above for dredge disposal in wetlands or waters. New dredging ≥25,000 CY, or any amount in or affecting SAS[4]. Beach nourishment associated with dredging when the primary purpose is not navigation (i.e., aggregate/sand mining) or the material is from an upland source.
(d) MOORINGS	Private, non-commercial, non-rental, single-boat moorings authorized by the local harbormaster. Provided: • Not associated with any boating facility[7] • Not located in a Federal Navigation Project other than a Federal Anchorage. Moorings in Federal Anchorage not associated with a boating facility[7]. • No interference with navigation • Not located in vegetated shallows[8] • Within ¼ mile of the owner's residence or a public access point.[9] Minor relocation of previously authorized moorings and moored floats consistent with Harbormaster recommendations, provided it is also consistent with local regulations, is not located in vegetated shallows, and does not interfere with navigation.	Moorings associated with a boating facility[7]. Moorings that don't meet the terms in Category 1 and don't require an Individual Permit. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits[10] of a Corps Federal Channel. (See Appendix B.) The buffer zone is equal to three times the authorized depth of that channel.	Moorings within the horizontal limits[10], or with moored vessels that extend, into the horizontal limits of a Federal Navigation Project (See App. B), except those in Federal Anchorages under Category 1. Note: Federal Navigation Projects include both Federal Channels and Federal Anchorages.

	CATEGORY 1	CATEGORY 2	INDIVIDUAL PERMIT
(e) STRUCTURES AND FLOATS	Reconfiguration of existing authorized structures or floats. Provided: • Structures not positioned over vegetated shallows[8] or salt marsh. • Floats supported off substrate at low tide. • No dredging, additional slips or expansion. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9)..	Private structures or floats, including floatways/skidways, built to access waterway (seasonal and permanent) Expansions to existing boating facilities[7]. Compliance with the following is recommended, but not required: • Pile-supported structures <400 SF, with attached floats totaling ≤200 SF. • Bottom anchored floats ≤200 SF. • Structures are ≤4' wide and have at least a 1:1 height:width ratio[11]. • Floats supported above the substrate during all tides. • Structures & floats not located within 25' of any vegetated shallows[8]. • Moored vessels not positioned over SAS[4]. • No structure located within 25' of the riparian property boundary. • No structure extends across >25% of the waterway width at mean low water. • Not located within the buffer zone of the horizontal limits[10] of a Corps Federal Navigation Project (FNP) (See App. B). The buffer zone is equal to three times the authorized depth of that FNP.	Structures or floats, including floatways/skidways, located such that they and/or vessels docked or moored at them are within the horizontal limits of a Corps Federal Navigation Project (see App. B). Structures and floats associated with a new or previously unauthorized boating facility[7]. Note: Federal Navigation Projects include both Federal Channels and Federal Anchorages.
(f) MISCELLANEOUS	Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are removed within 30 days after use is discontinued. The placement of aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard. (See 33 CFR part 66, Chapter I, subchapter C)."	Structures or work in or affecting tidal or navigable waters, that are not defined under any of the previous headings listed above. Includes, but is not limited to, utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, floatways/skidways, bridges, tunnels and horizontal directional drilling activities seaward of the MHW line.	EIS required by the Corps. Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities with more than minimal individual and cumulative impacts to environmental resources or navigation. A 25' eelgrass set back is recommended.

	Oil spill clean-up temporary structures or fill. Fish/wildlife harvesting structures/fill (as defined by 33 CFR 330, App. A-4) Scientific measurement devices and survey activities such as exploratory drilling, surveying and sampling activitities. Does not include oil and gas exploration and fill for roads or construction pads. Shellfish seeding (brushing the flats[12]) projects. Provided: • No work in National Wildlife Refuges. • No work affects threatened or endangered species (see GC 10, Page 9) or EFH salmon migration (see GC 11, Page 9).	Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. A 25' eelgrass set back is recommended. Aquaculture guidelines are provided at: www.maine.gov/dmr/aquaculture/index.htm.	Aquaculture guidelines are provided at: www.maine.gov/dmr/aquaculture/index.htm.

[1] **Bordering and Contiguous Wetlands:** A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary highwater mark (MHW in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natur or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary highwater mark and above th normal hydrologic influence of their adjacent waterbody. Note, with respect to the Federally designated navigable rivers, the wetlands bordering and contiguous to the tidally influenced portions of those rivers are reviewed under "II. Navigable Waters."

[2] **Water Diversions:** Water diversions are activities such as bypass pumping or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintaine within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

[3] **Special Inland Waters and Wetlands:** Vernal Pools - Temporary to permanent bodies of water occurring in shallow depressions that fill during the spring and fall and may dry during the summer. Vernal pools have no permanent or viable populations of predatory fish. Vernal pools provide the primary breeding habitat for wood frogs, spotted salamanders, blue-spotted salamanders, and fairy shrimp, and provide habitat for other wildlife including several endangered and threatened species.

[4] **Special Aquatic Sites:** Includes wetlands and saltmarsh, mudflats, riffles and pools, and vegetated shallows.

[5] **IP Required:** The greater the impacts, the more likely an Individual Permit will be required. The Corps will determine the need for compensatory mitigation on a case-by-case basi

[6] **Maintenance:** Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitatior or replacement are minimal. No seaward expansion for bulkheads or any other fill activity is considered Category 1 maintenance. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

[7] **Boating Facilities:** Facilities that provide, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockominiums, etc.

[8] **Vegetated Shallows:** Subtidal areas that support rooted aquatic vegetation such as eelgrass

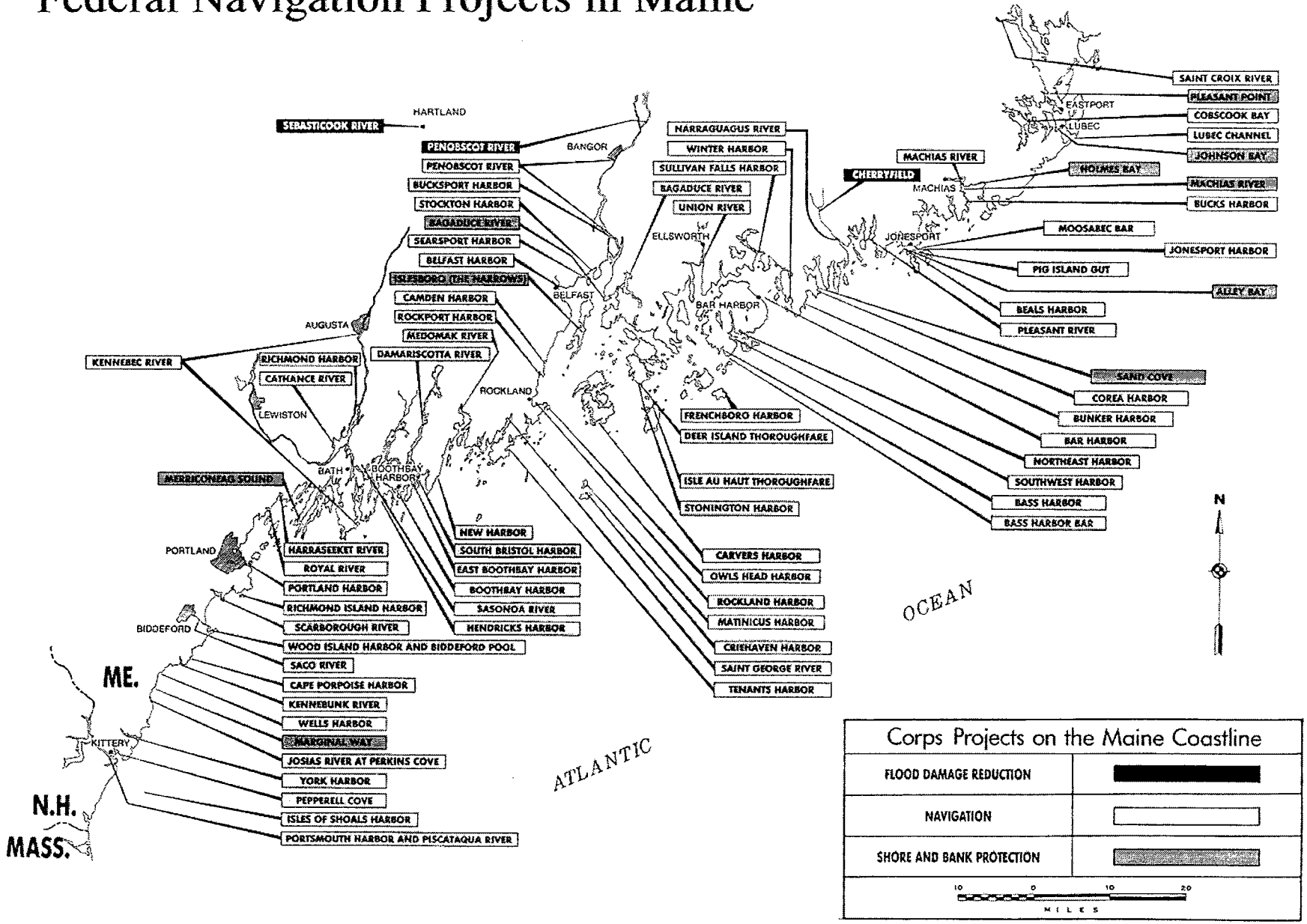
[9] **Mooring Location:** Cannot be at a remote location to create a convenient transient anchorage.

[10] **Horizontal Limits:** The outer edge of a Federal Navigation Project (FNP). Contact the Corps of Engineers for information on FNP's.

[11] **Structures:** The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.

[12] **Brushing the Flats:** The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats to enhance recruitment of soft-shell clams (*Mya arenaria*).

Federal Navigation Projects in Maine



US Army Corps of Engineers®
New England District

PGP WORK START NOTIFICATION FORM
(Minimum Advance Notice: Two Weeks)

MAIL TO: U.S. Army Corps of Engineers, New England District
Regulatory Branch
Policy Analysis/Technical Support Section
696 Virginia Road
Concord, Massachusetts 01742-2751

A Corps of Engineers Permit ( ) was issued to _____. The permit authorized the permittee(s) to _____

_____

_____

_____

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

_____

_____

Business Address: _____

_____

_____

Telephone: ( ) _____ ( ) _____

Proposed Work Dates: Start: _____

Finish: _____

PERMITTEE'S SIGNATURE: _____ DATE: _____

PRINTED NAME: _____ TITLE: _____

FOR USE BY THE CORPS OF ENGINEERS

PM _____ Submittals Required: _____

Inspection Recommendation: _____

US Army Corps
of Engineers ®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Corps of Engineers Permit No: _____

Name of Permittee: _____

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

```
*************************************************************************
* MAIL TO:  U.S. Army Corps of Engineers, New England District          *
*           Policy Analysis/Technical Support Branch, ATTN: Marie Farese *
*           Regulatory Division                                          *
*           696 Virginia Road                                            *
*           Concord, Massachusetts 01742-2751                            *
*************************************************************************
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Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ Signature of Permittee

_____ Date

_____ Printed Name

_____ Date of Work Completion

( ) _____ Telephone Number

( ) _____ Telephone Number