Updated 11/27/07

FEDERAL PROJECT

August 01, 2007
Supersedes July 6, 2005

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, 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 (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. 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 located at 16 Child Street 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 Civil Rights Office, or fax to (207)624-3431 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: _____

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): _____**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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 2008 (October 1, 2007 through September 30, 2008), MaineDOT has established a DBE participation goal of 4.5% to be achieved through race/gender neutral and race/gender conscious means.

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, Civil Rights Office, 16 State House Station, Augusta ME 04333-0016. Appointments may be scheduled by telephone at (207) 624-3519. The goal setting methodology is also available for viewing on the MaineDOT website: http://www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php.

Public comment will be accepted for 45 days following the last date of publication. The public comment period will be complete on August 28th, 2007. The goal will be submitted for approval to the FHWA on August 1st, 2007 with an update based upon public comment sent to FHWA on August 30th.

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

Several interested stakeholders will be notified directly by e-mail of the goal publication, including Maine SBA, Associated Constructors of Maine, and ACEC, and Maine DBEs.

____ 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 Certified 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: _____

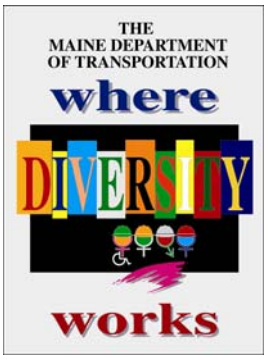
____ Accepted ____ Rejected _____

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 http://www.maine.gov/mdot

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

September 14, 2007

Vendor Registration

Prospective Bidders must register as a vendor with the Department of Administrative & Financial Services if the vendor is awarded a contract. Vendors will not be able to receive payment without first being registered. Vendors/Contractors will find information and register through the following link –
http://www.maine.gov/purchases/vendorinfo/vss.htm

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

LINCOLNVILLE/ISLESBORO
WALDO COUNTY

PROJECT NO. BR-1561(500)X
PROJECT NO. BR-1561(600)X
PIN 015615.00
PIN 015616.00

NEW VEHICLE TRANSFER BRIDGES

JUNE 2008

New Vehicle Transfer Bridges

Lincolnville/Islesboro-Waldo County

PIN 015615.00
PIN 015616.00

TABLE OF CONTENTS

New Vehicle Transfer Bridges

Lincolnville/Islesboro-Waldo County

PIN 015615.00
PIN 015616.00

SECTION 1

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 "Bid for New Vehicle Transfer Bridges. Town's of Lincolnville and Islesboro" 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 23, 2008 and at that time and place publicly opened and read. Bids will be accepted from contractors prequalified by the Department of Transportation for Bridge and Marine projects. All other Bids may be rejected. MDOT provides the option of electronic bidding. We 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: Federal Project No. BR-1561(500)X, PIN 015615.00
Federal Project No. BR-1561(600)X, PIN 015616.00
Location: In Waldo County, project is located on US Route 1 in Lincolnville.

Outline of Work: The Work includes the removal and disposal of two transfer bridges, support structure rehabilitation to include pile driving, the construction and installation of two new transfer bridges, utility upgrades, maintenance of traffic and other incidental work.

For general information regarding Bidding and Contracting procedures, contact Scott Bickford at (207)624-3410. Our webpage at http://www.state.me.us/mdot/project/design/homepg.htm 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** Paul Pottle 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 888-516-9364.

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine. 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 $37.00 ($41.00 by mail). Half size plans $19.00 ($22.00 by mail), Bid Book $10.00 ($13.00 by mail), Single Sheets $2, payment in advance, all non-refundable.

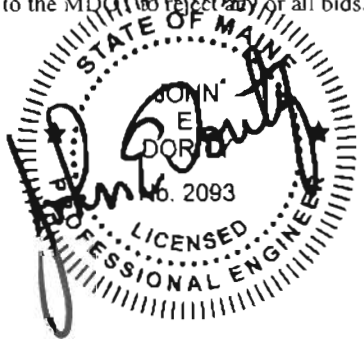
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of $115,000.00 payable to Treasurer, State 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 can be found at http://www.state.me.us/mdot/project/design/homepg.htm

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

Augusta, Maine
July 2, 2008



JOHN E. DORITY
CHIEF ENGINEER

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)

SCHEDULE OF ITEMS REVISED:

CONTRACT ID: 015615.00 PROJECT(S): BR-1561(500)X
BR-1561(600)X

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	202.01 REMOVING STRUCTURES AND OBSTRUCTIONS DEMOLITION	LUMP	LUMP			
0020	501.252 PILE JACKETS	LUMP	LUMP			
0030	501.703 STEEL PIPE PILES, DELIVERED AND INSTALLED	1100.000 LF				
0040	502.221 ABUTMENT MODIFICATIONS	LUMP	LUMP			
0050	504.510 MISC. FABRICATION	LUMP	LUMP			
0060	531.40 TRANSFER BRIDGE	2.000 EA				
0070	608.62 GENERATOR PAD	LUMP	LUMP			
0080	610.201 STONE RIPRAP	LUMP	LUMP			
0090	626.40 HOIST TOWER FOUNDATION	LUMP	LUMP			

CONTRACT ID: 015615.00 PROJECT(S): BR-1561(500)X
BR-1561(600)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	639.19 FIELD OFFICE TYPE B	1.000 EA				
0110	652.35 CONSTRUCTION SIGNS	180.000 SF				
0120	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP	LUMP			
0130	659.10 MOBILIZATION	LUMP	LUMP			
0140	832.071 CONTRACTOR ALLOWANCE CMP	$16,000	$16,000			
0150	910.40 ELECTRICAL - TRANSFER BRIDGE	2.000 EA				
	SECTION 0001 TOTAL					
	TOTAL BID					

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's No. 015615.00/015616.00, for the Lincolnville/Islesboro Ferry Terminal, New Vehicle Transfer Bridges, in the Towns of Lincolnville and Islesboro, County of Waldo, Maine**. The Work includes the removal and disposal of two transfer bridges, support structure rehabilitation to include pile driving, the construction and installation of two new transfer bridges, utility upgrades, maintenance of traffic 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 **December 19 ,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 _____

_____

$_____ 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 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 the 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: **PINS. 15615.00 / 15616.00 - Lincolnville/Islesboro Ferry Terminal, New Vehicle Transfer Bridges**, 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. 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's No. 015615.00/015616.00, for the Lincolnville/Islesboro Ferry Terminal, New Vehicle Transfer Bridges, in the Towns of Lincolnville and Islesboro, County of Waldo, Maine**. The Work includes the removal and disposal of two transfer bridges, support structure rehabilitation to include pile driving, the construction and installation of two new transfer bridges, utility upgrades, maintenance of traffic 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 **December 19 ,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 _____

_____

$_____ 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 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 the 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: **PINS. 15615.00 / 15616.00 - Lincolnville/Islesboro Ferry Terminal, New Vehicle Transfer Bridges**, 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. 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:

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 **South Nowhere,** 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, 2006.** 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 **____(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.

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 South Nowhere, 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 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.

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)

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.....	.....

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	…….....

General Decision Number: ME080005 06/06/2008 ME5

Superseded General Decision Number: ME20070005

State: Maine

Construction Type: Heavy

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

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	02/08/2008
1	04/04/2008
2	06/06/2008

* ENGI0004-013 04/01/2008

	Rates	Fringes
Power equipment operators:		
Cranes	$ 18.22	8.50
Drillers	$ 18.22	8.50
Mechanics	$ 18.22	8.50
Oilers	$ 18.22	8.50

IRON0496-002 03/16/2008

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 21.15	16.65

SUME2000-004 10/24/2000

	Rates	Fringes
Carpenters: (including Form Work)	$ 14.17	2.11
ELECTRICIAN	$ 13.67	1.39
IRONWORKER, REINFORCING	$ 29.00	3.32
Laborers:		
Flaggers	$ 6.00	
Pipelayers	$ 10.79	.60
Unskilled	$ 9.80	
Power equipment operators:		
Backhoes	$ 11.89	1.15
Bulldozers	$ 11.81	1.78
Excavator	$ 13.40	3.78
Graders	$ 12.10	1.40
Loaders	$ 12.40	2.88
Pavers	$ 7.50	
Piledrivers	$ 17.25	

Rollers	$ 10.18	1.46
Truck drivers:		
Dump	$ 9.17	.76

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 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

New Vehicle Transfer Bridges

Lincolnville/Islesboro-Waldo County

PIN 015615.00
PIN 015616.00

SECTION 2

Town: Islesboro/Lincolnville
Project: 15615.00/15616.00
Date: June 17, 2008

SPECIAL PROVISIONS
SECTION 104
Utilities

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications **is** required and will be in conjunction with the Project Preconstruction Meeting.

GENERAL INFORMATION

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

Summary of Utilities Involved:

Utility/Railroad	Aerial	Underground	Railroad
Central Maine Power Company	✔		

UTILITY RELATED CONTACT INFORMATION

Central Maine Power Company
(Permanent Electrical Service Coordination Only)

James Dean, Energy Service Specialist
Telephone: 207-621-6622
E-mail: james.dean@cmpco.com

Central Maine Power Company
(Temporary Electrical Service Coordination)

Customer Service
Telephone: 800.565.3181

Maine Department of Transportation
(MDOT Project Manager)

Paul Pottle, Project Manager
Telephone: 207.624.3555
E-mail: paul.pottle@maine.gov

Maine Department of Transportation
(MDOT Construction Manager)

Aurele Gorneau II, Const. Manager
Telephone: 207-624-3553
E-mail: aurele.gorneauII@maine.gov

SPECIAL NOTES TO CONTRACTOR

The intent of this MDOT Special Provisions, Section 104 Specification ***is to*** specify the utility coordination issues that are to be executed during the construction process by the Contractor. The Department has established utility accounts with the utilities involved as well as communicated to the utilities the intent of the project and Contractor's scope of work. As a result, there should be a mutual understanding of what is required of both the Contractor and the involved utilities.

The intent of this Specification ***is not to*** define the complete scope of the Contractor regarding the entire project. The complete Contractor's scope of work is defined in the specification developed by Fay, Spofford & Thorndike, Inc., titled "Lincolnville/Islesboro Ferry Terminals, New Vehicle Transfer Bridges, Lincolnville/Islesboro, Maine", dated June 17, 2008 and related drawings. However, it is reiterated in this specification that as part of the Contractors scope of work, the Contractor shall complete the public utility related electrical service work for the proposed facility as defined in the specifications and utility related drawings listed below.

Utility Related Drawings

C 3	Construction Staging
E-1	Lincolnville Electrical Site Plan
E-2 & 3	Lincolnville Electrical Details
E-4	Islesboro Electrical Site Plan
E-5	Islesboro Electrical Details
E-6 & 7	Transfer Bridge Electrical Plan

Utilities need ample time to respond. It is the Contractors responsibility to provide adequate notification regarding coordination and inspections of utility related facilities as required.

All utility related electrical work shall comply with the most recent version of the National Electrical Code, CMP's Standard Requirements for Electric Service and Meter Installations and the National Electrical Safety Code as applicable.

AERIAL

Temporary Electrical Service

The Contractors shall contact CMP to make provisions to energize the Contractor installed temporary electrical service that is to be utilized during construction. Refer to Special Provision Section 655 – Electrical Work of the specifications for additional information.

The Department has communicated to CMP that the Contractor will contact the utility when the temporary electrical service is ready to be coordinated, inspected and energized.

UNDERGROUND

Permanent Electrical Service

The Contractors shall complete all electrical work including but not limited to excavation, conduit installation, manhole and transformer foundation installation, and wiring as defined in Special Provision Section 655 – Electrical Work the specifications and related drawings.

The Contractor shall coordinate ***in advance*** with CMP to supply and install poles, transformers, overhead lines, metered service and line and pole removal. The contractor will work closely with CMP on the proper timing so as to have all systems ready and available at the time of the Ferry Service suspension and the timing for disconnection of existing and energizing of the new service. The utility shall supply and install the poles, transformers, primary connections at the transformer, overhead wirers and related equipment for metering. Finally, the utility will inspect and energize the new service upon proper coordination and request.

The CMP account number for the permanent three phase service at Lincolnville is 231-0121755. The Notification Number is 300418290 and the Work order number is 1000224139.

UTILITY LINE CLEARANCES

By State of Maine Title 35-A, the Contractor must maintain a minimum of 10' vertical and horizontal clearance around any and all electrical lines greater than 600V. For the project location as described, the three phase energized electrical system is 12,470 volts (12kV).

By State of Maine Title 35-A, the Contractor shall not raise, move or displace **any** aerial utility line or cable.

PROTECTION AGAINST UNDERMINING OF POLES

It is the Contractor's responsibility to take protective measures against the undermining of poles during underground conduit and riser installations as required.

UNDERGROUND UTILTIY FACILITY LOCATIONS

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 drawings 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.

DIG SAFE

The Contractor is responsible for determining the presence of underground utility facilities prior to any excavation work and shall notify the area utilities in accordance with State of Maine Title 23, MRSA 3360-A. Call 1-888-344-7233.

BLASTING

No blasting will be allowed without prior approval from the Department and proper coordination with all utilities in the area.

ALLOWANCE

The work done by Central Maine Power (CMP) will be paid for through the allowance set up in the Schedule of Items. The Department will only reimburse the Contractor for the invoice price from CMP not to exceed the allowance amount without prior written approval from the Department. Markup's of the CMP invoice will not be allowed or accepted.

SPECIAL PROVISION
SECTION 104.4

Communications and Coordination
(Progress Meetings)

Progress meetings shall be held weekly in the Departments Field Office. A time shall be determined for the meetings, this time shall be agreeable to all parties; the Owner, the Contractor and the Ferry Service. The current schedule will be discussed and updates will be given to all parties on what the next three weeks activities are and their potential impact on the sites, the harbors and the Ferry Service operation at both locations.

SPECIAL PROVISIONS

SECTION 104
Coordination with Marine Traffic

(Vessel Navigation, Ferry Service, Harbor Traffic, Town Floats)

VESSELL NAVIGATION:

The Contractor will be required to conduct the work in such a manner as not to obstruct the navigation of any ferry, and in case the Contractor's plant so obstructs the ferry, it shall be promptly moved on the approach of the ferry, to such an extent as may be necessary to afford a safe, practical passage. The Contractor shall also conduct his work in such a manner so as not to obstruct the navigation of any vessels outside the immediate construction area. Upon completion of the work, the Contractor shall promptly remove all plant buoys and other markers placed by the Contractor under this Contract.

All staging and floating equipment required shall be erected or furnished by the Contractor and maintained in safe condition by him for use by all trades. The Contractor shall submit the proposed method of staging and floating equipment to the Department for review and approval. The Department will seek input from the Towns and the Maine State Ferry Service prior to giving each approval. The Contractor will make adjustments to the proposed plan based on comments received. The plan as a minimum should demonstrate how the work and the current operations will be protected through the progress of the project.

The contractor is being made aware of the fact that there is a very active harbor at each location. The contractor should plan to do all work outside of the shutdown window in such a way as to minimize the impact on these working harbors. In Lincolnville, the Town has requested that as much of the work that needs to be done on the North side (harbor side) of the facility be done before the early part of June if possible, since there would be much less disruption of the floats, moorings and fish pier activity. When work is started on the harbor side of the facility, it should be completed as quickly as possible.

The Contractors plan may require the relocation of moorings or floats at either of the facilities. The need to relocate items should be kept to a minimum, and must be agreed to by the affected community. The Contractor will be responsible for moving the identified items to a location satisfactory to the Town and at the conclusion of the work, will be responsible for returning the item to its previous position. Should additional support features (i.e., extra chain, anchors, guide piles, etc…) be necessary to support the relocation, it will be the responsibility of the Contractor to provide and install these features at no additional cost to the Project.

FERRY SERVICE:

The Contractor shall obtain the latest Ferry Service Schedule to coordinate the work and shall plan for possible changes in schedule that may occur.

Normal Ferry Operations will be carried on during the life of this Contract. In the preparations of the Contractor's schedule, the Contractor shall carefully coordinate the planning of his/her work so that once an area is made available and work is started, it shall be carried through to completion within the time agreed upon.

The Contractor shall maintain pedestrian and vehicle access during normal ferry operations to prevent any delays in the State Ferry Service operating schedule. Except for periods after normal operating hours, no vehicles or equipment shall be parked or stored on the approach road in a manner that would prevent or impede ferry vehicular traffic flow. Any vehicle or equipment parked or stored on the approach road at anytime, shall have an operator immediately available to move the vehicle or equipment, in case of an emergency.

The approach road may be used for the delivery of materials during periods when there is no ferry vehicle traffic. During these periods, the Contractor will allow access to the public floats and will coordinate their efforts to minimize the impact on the facility.

Due to the limited space, the Department shall limit the passenger vehicle parking for the Contractor on property owned by the State. A maximum of two passenger vehicles will be allowed to park at the Lincolnville facility in a spot designated by the Department. No other Contractor parking will be allowed on the site. One passenger vehicle space will be made available at Islesboro. The Contractor shall seek other parking arrangements, if required, through the Town or through private property owners.

Due to the limited space, the Department can only provide very limited staging areas. In Lincolnville, the Department will provide up to 6 parking spaces in the lower lot to allow for the set up of Field Offices (to include the Departments) and some storage. At Islesboro, no space will be made available. The Contractor should plan on using floating storage or may make arrangements with municipal officials or private land owners for their storage/staging needs.

USE OF FERRY DURING NORMAL FERRY OPERATIONS:

The Contractor may make arrangements with the ferry service for passage on the ferry from the mainland to the island of material, equipment and personnel. These arrangements will be subject to the rules and fees of the ferry service.

TEMPORARY FERRY SERVICE:

During construction, one scheduled shutdown will be permitted as described in the following section. The Department will be providing temporary ferry service with an alternate boat which will accommodate pedestrian passengers. The Town floats and gangways will be used to transfer passengers between the boat and shore. Additionally, the Town floats shall be used continuously by the general public. Therefore, the Contractor shall maintain safe access to these floats for pedestrians and boats throughout the Contract period.

Due to the close proximity of the floats to the work site, the Contractor may wish to realign the floats. Realignment will be permitted subject to the approval of the Engineer and the owner of the floats. Approval will be dependent on the functional needs of the owners and factors such as water depths shall be taken into consideration. The cost of realignment or relocation of the floats shall be considered incidental and no additional compensation will be made.

If the Contractor requires the temporary ferry service to be moved during construction, he will be completely responsible for such a move and will be required to receive additional inspection by the Department prior to acceptance.

The Contractor shall submit full demonstration on the proposed temporary ferry access system prior to starting the work. The temporary access system shall be inspected and approved by the Department before any shutdown will be allowed.

EMERGENCY VEHICLE TRIPS:

There may be occasion during the shutdown period for access by emergency personnel and vehicles to the public floats and their gangways. Should this situation arise, the Contractor will suspend work within the area to allow for passage of emergency vehicles and personnel. The cost associated with this shall be considered incidental and no additional compensation will be made.

SCHEDULE FOR SHUTDOWN:

During the construction, regular ferry operations may be shut down only when the Contractor is totally prepared to demolish the existing bridges and erect the new bridges in a timely manner and according to a schedule which has been approved in writing by the Engineer.

A scheduled shutdown shall consist of an approved interruption of normal ferry service within the confines of the existing slip, but will allow for scheduled service to the Town floats that will allow for the transferring of pedestrians as outlined in the Temporary Ferry Service of this section.

The shutdown period may begin anytime after September 28th, 2009, but must be completed by November 14th, 2009. The shutdown period shall take place over consecutive weeks and can not exceed 4 weeks in total duration.

The shutdown period timing and sequencing shall be established prior to beginning work at the site. The planning will include a public notice period where as a minimum, the following, are provided notification:

- Daily Newspaper of the area
- Weekly/Monthly Newspaper serving the island/mainland
- Town offices
- Harbor Masters
- Adjacent Property owners
- Informational flyers for the terminals and vessels
- Maine State Ferry Service

Notification will be given a far in advance of the actual shutdown as possible, but as a minimum, at least six (6) months before the actual shutdown and again, a month before the actual shutdown date.

CONSTRUCTION SCHEDULE:

The Contractor will be required t submit a detailed written construction schedule. This schedule will be monitored closely and shall be updated weekly during construction meetings. Within sixty days of the start of construction, the Contractor shall submit a schedule indicating the anticipated dates for the ferry to be shut down.

Along with the construction schedule, the Contractor shall provide on a weekly basis a written day by day summary of construction activities that will occur for the upcoming three (3) week period. This summary will also highlight activities that will have an impact on the use of facilities in the construction and adjacent areas.

POLLUTION CONTROL:

All operations carried out by the contractor during the life of this contract shall comply with provisions and regulations for the control of air and noise pollution. The contractor shall make all applications and notices and comply with all appropriate provisions of the rules and regulations of Federal, State and Local Agencies.

The Contractor shall conduct his operations so as not to generate loud noises between the hours of 8:00 p.m. to 6:00 a.m., unless otherwise approved. Local requirements concerning noise may impose additional restrictions.

During the shutdown period the contractor may need to work extended days in order to complete within the four (4) week period. The contractor will plan these activities to minimize noise and light impacts on adjacent properties and provide

notification to adjacent property owners on the types of activities that can be expected and the steps that will be taken to minimize any adverse impacts. The contractor is being made aware that there are several residential homes in close proximity to the ferry facility in Lincolnville.

The contractor will also need to closely monitor debris and trash generated on site and ensure that it is properly contained and maintained. Trash must be removed regularly and as a minimum, at least weekly.

The Contractor is being made aware that there is no potable water located at Islesboro.

Town: Islesboro
PIN #: 15615.00
Date: 6/18/08

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

In-Water work consists of any activity conducted below the normal high water mark of a river, steam, brook, lake, pond or "Coastal Wetland" areas that are subject to tidal action during the highest tide level for the year which an activity is proposed as identified in the tide tables published by the National Ocean Service. http://www.oceanservice.noaa.gov/ For the full definition of "Coastal Wetlands", please refer to 38 MRSA 480-B(2)

I. In-Water Work shall not be allowed between the dates of **9/1** and **10/31**. **(See III. Special Conditions)**
(In-Water work is allowed from 11/1 **to** 8/31**.)**

II. In-Water work window applies to the following water bodies at the following station #'s:
1. **Atlantic Ocean**

III. Special Conditions:
1. **Pulling pipe and sheet piles as well as work behind cofferdams and inside pipe piles is the only approved in-water work during September and October.**

IV. Approvals:
1. Temporary Soil Erosion and Water Pollution Control Plan

V. All activities are prohibited (including placement and removal of cofferdams unless otherwise permitted by Regulatory Agencies) below the normal high water mark if outside the prescribed in-water work window, except for the following:

1. Work within a cofferdam constructed according to MaineDOT's Standard Specifications and in adherence with the contractors approved "Soil Erosion and Water Pollution Control Plan".

VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow.

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window. Procedure to modify the existing in-water work window can be found on the back of this document or the next page.

PROCEDURE FOR PROCESSING ANY IN-WATER WORK EXTENSION

MaineDOT will not incur any claims as a result of an In-Water modification being denied.

The following procedure will assist in processing a review by the Regulatory Agencies when the in-water work restrictions of a permit need modification:

1. The Contractor shall submit to the MaineDOT Resident in writing the in-water work extension request. The written request shall be submitted in accordance with State of MaineDOT Standard Specification section 107.4 Scheduling of Work This is a change in the contract, and per MaineDOT Standard Specification section 109, a contract modification is required.

2. The Contractor's written request shall have the following items identified for the MaineDOT Environmental Office to evaluate adequate justification to continue forward with the modification of existing Contract Permit Conditions:

    A) Description of the scope of In-Water work
    B) Total number of working days requested to complete the scope of In-Water work
    C) The reason(s) the In-Water work cannot be done in accordance with the Permit Conditions and/or Special Provision 105 Specification.
    D) Benefit(s) to the MaineDOT for this change of Contract requirement
    E) Photographs of the area of work described

3. MaineDOT is held harmless from claims and liability if the request to "Modify" the Contract Permit Conditions are denied.
   Please Note: depending on the level of State and Federal Permitting required for the project, permit modification timeframes will vary depending on revised consultations and approvals. Timeframes will vary from project to project (even site to site on individual projects) and contractors will not count this review/modification "timeframe" as time lost from doing in-water work.

4. If the request is approved by the Regulatory Agencies, then a Contract Modification will be issued by the MaineDOT Resident indicating the monetary and time commitment this change has on the MaineDOT's contract.

Town: Lincolnville
PIN #: 15616.00
Date: 6/18/08

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

In-Water work consists of any activity conducted below the normal high water mark of a river, steam, brook, lake, pond or "Coastal Wetland" areas that are subject to tidal action during the highest tide level for the year which an activity is proposed as identified in the tide tables published by the National Ocean Service. http://www.oceanservice.noaa.gov/ For the full definition of "Coastal Wetlands", please refer to 38 MRSA 480-B(2)

I. In-Water Work shall not be allowed between the dates of **9/1** and **10/31**. **(See III. Special Conditions)**
(In-Water work is allowed from 11/1 **to** 8/31**.)**

II. In-Water work window applies to the following water bodies at the following station #'s:
1. **Atlantic Ocean**

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1. **Pulling pipe and sheet piles as well as work behind cofferdams and inside pipe piles is the only approved in-water work during September and October.**

IV. Approvals:
1. Temporary Soil Erosion and Water Pollution Control Plan

V. All activities are prohibited (including placement and removal of cofferdams unless otherwise permitted by Regulatory Agencies) below the normal high water mark if outside the prescribed in-water work window, except for the following:

1. Work within a cofferdam constructed according to MaineDOT's Standard Specifications and in adherence with the contractors approved "Soil Erosion and Water Pollution Control Plan".

VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow.

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window. Procedure to modify the existing in-water work window can be found on the back of this document or the next page.

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2. The Contractor's written request shall have the following items identified for the MaineDOT Environmental Office to evaluate adequate justification to continue forward with the modification of existing Contract Permit Conditions:

    A) Description of the scope of In-Water work
    B) Total number of working days requested to complete the scope of In-Water work
    C) The reason(s) the In-Water work cannot be done in accordance with the Permit Conditions and/or Special Provision 105 Specification.
    D) Benefit(s) to the MaineDOT for this change of Contract requirement
    E) Photographs of the area of work described

3. MaineDOT is held harmless from claims and liability if the request to "Modify" the Contract Permit Conditions are denied.
   Please Note: depending on the level of State and Federal Permitting required for the project, permit modification timeframes will vary depending on revised consultations and approvals. Timeframes will vary from project to project (even site to site on individual projects) and contractors will not count this review/modification "timeframe" as time lost from doing in-water work.

4. If the request is approved by the Regulatory Agencies, then a Contract Modification will be issued by the MaineDOT Resident indicating the monetary and time commitment this change has on the MaineDOT's contract.

Lincolnville/Isleboro
PIN 15615.00/15616.00
June 18, 2008

SPECIAL PROVISION
SECTION 106
QUALITY
(Quality Level Analysis)

The first formula under Item H under Subsection 106.7.1, Standard Deviation Method, of the 2002 Revision of the Standard Specifications is deleted and replaced with the following:

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

Pin 15615.00/15616.00
Lincolnville/Islesboro
June 18, 2008

SPECIAL PROVISION

SECTION 107
TIME
(Contract Time)

All work shall be completed by December 19, 2009, which is the specified completion date for this contract.

SPECIAL PROVISION
SECTION 107
TIME

Incentives/Disincentives

The contractor is allotted four (4) weeks (28 calendar days) to complete the work associated with the shutdown of the Ferry Service across the transfer bridges. The contractor must have both transfer bridges fully operational as designed and open for use by the Ferry service in order for the shutdown to be considered completed. If either bridge is not operational, then the shutdown period will remain as a shutdown until both transfer bridges are operational.

The contractor will be paid an incentive for early completion or charged a disincentive for late completion. The maximum incentive will be 5 calendar days. There will be no maximum disincentive.

The amount of the incentive paid will be 28 days minus the actual number of full or partial calendar days used (as long as the number is less then 28 calendar days) before making the transfer bridges operational and available to the Ferry Service [calendar days] x $10,000.00, with a maximum incentive payout of $50,000.00.

The amount of disincentive charged will be the actual number of full or partial calendar days used in excess of 28 calendar days to make the transfer bridges operational and available to the Ferry Service [calendar days] x $10,000.00. There is no maximum disincentive amount.

SPECIAL PROVISION
SECTION 107
TIME
(Scheduling of Work – Projected Payment Schedule)

Description The Contractor shall also provide the Department with a Quarterly Projected Payment Schedule that estimates the value of the Work as scheduled, including requests for payment of Delivered Materials. The Projected Payment Schedule must be in accordance with the Contractor's Schedule of Work and prices submitted by the Contractor's Bid. The Contractor shall submit the Projected Payment Schedule as a condition of Award.

SPECIAL PROVISION
SECTION 107.3
ALLOWABLE WORK TIMES
(Night Work)

The following is in addition to the requirements of Section 107.3.2

The Contractor is being made aware of the close proximity of the local residences. The Contractor shall conduct operations so as not to generate loud noises between the hours of 8:00 PM and 6:00 AM unless otherwise approved. Local requirements concerning noise may impose additional restrictions and must be complied with by the Contractor.

SPECIAL PROVISION
SECTION 107.4
SCHEDULING OF WORK
(Schedule of Work Required)

In addition to the Schedule of Work, the Contractor will provide a written day by day summary of the construction activities that will occur for the upcoming three (3) week period. This summary will also highlight activities that will have an impact on the use of the facilities in the construction and adjacent areas. The summary shall be provided to the Department and reviewed at the bi-weekly construction meetings.

Pin 15615.00/15616.00
Lincolnville/Islesboro
June 18, 2008

SPECIAL PROVISIONS
SECTION 107.9
TIME
(Project Closeout)

The following is in addition to the requirements of Section 107.9.

The Contractor shall maintain, at the site, a set of Drawings, on which shall be recorded accurately as the work progresses, the actual dimensions and grades of all his work, indicating thereon all variations from the Contract Drawings. The record shall include the work of all Subcontractors. Record drawings shall be reviewed by the Resident, and the Contractor shall make all necessary changes according to the Resident's review.

Prior to final acceptance of the Work, all recorded data shall be transferred by the Contractor, to a complete set of reproducible record drawings, in ink or photolitho reproductions of the original of the Contract Drawings showing "As-Built" conditions.

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(QC/QA Acceptance Methods)

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
LP	626.40	Hoist Tower Foundations	$400	A
LP	502.221	Abutment Modifications	$400	A
LP	608.62	Generator Pad	$400	A

P Values listed above reflect the price per cubic yard for all pay adjustment purposes.

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 639
ENGINEERING FACILITIES
(Field Office Type B)

Add the following to Standard Specification 639.

639.04 Field Offices Make the following change

Description	Quantity Type B
Floor Area (Outside Dimension) - m^2 [ft^2]	20 [217]

SPECIAL PROVISION
SECTION 639
ENGINEERING FACILITIES
(Telephone)

639.09 Telephone

Paragraph 1 is amended as follows:

The contractor shall provide **two** telephone lines and two telephones,….

Add-

In addition the contractor will supply one computer broadband connection and modem lease. The type of connection supplied will be contingent upon the availability of services (i.e. DSL or Cable Broadband). It shall be the contractor's option to provide dynamic or static IP addresses through the service. **The selected service will have a minimum downstream connection of 1.5 Mbps and 384 Kbps upstream.** The contractor shall be responsible for the installation charges and all reinstallation charges following suspended periods. Monthly service and maintenance charges shall be billed by the Internet Service Provider (ISP) directly to the contractor.

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.

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 Sedimentation Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The latest version is dated "February 2008" and is available at;

http://www.maine.gov/mdot/environmental-office-homepage/surface-water-resources.php

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 Soil Erosion and Water Pollution Control Plan (SEWPCP.)

1. Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.
2. 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.
3. **If water is flowing within the drainage system, the water shall be diverted to a stable area or conduit and work shall be conducted in the dry.** The Contractor's plan shall address when and where the diversions will be necessary.
4. Dust control items other than those under *Standard Specification, Section 637 – Dust Control* , if applicable, shall be included in the plan.
5. Permanent slope stabilization measures shall be applied within one week of the last soil disturbance.
6. Permanent seeding shall be done in accordance with *Standard Specification, Section 618 - Seeding* unless the Contract states otherwise.
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. Temporary winter stabilization must be used between November 1 and April 1 or outside of said time period if the ground is frozen or snow covered. Temporary winter stabilization involves, at a minimum, covering all disturbed soils and seeded ground that is not Acceptable Work with an approved method. If temporary winter stabilization practices are used, spring procedures for permanent stabilization shall also be described in the SEWPCP. Use of these methods for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

9. All disturbed ditches shall be stabilized by the end of each workday. Stabilization shall be maintained on a daily basis.
10. 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.
11. If check dams are used, they shall be constructed of stone in accordance with BMP Manual, Section 9. *Hay Bale Temporary Check Dams* **are not allowed**. Delete all reference to them in Section 9.
12. Demolition debris (including debris from wearing surface removal, saw cut slurry, dust, etc.) shall be contained and shall not be allowed to discharge to any resource. All demolition debris shall be disposed of in accordance with *Standard Specifications, Section 202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges*. Containment and disposal of demolition debris shall be addressed in the Contractor's SEWPCP.
13. If a cofferdam sedimentation basin is used, it shall be located in an upland area where the water can settle and sink into the ground or be released slowly to the resource in a manner that will not cause erosion. The location of such a cofferdam sedimentation basin shall be addressed in the SEWPCP.
14. Prior to release to a natural resource, any impounded water that has been in contact with concrete placed during construction must have a pH between 6.0 and 8.5, must be within one pH unit of the background pH level of the resource and shall have a turbidity no greater than the receiving resource. This requirement is applicable to concrete that is placed or spilled (including leakage from forms) as well as indirect contact via tools or equipment. Water not meeting release criteria shall be addressed in the SEWPCP. Discharging impounded water to the stream must take place in a manner that does not disturb the stream bottom or cause erosion.
15. The Contractor shall be responsible for monitoring pH with a calibrated meter accurate to 0.1 units. A record of pH measurements shall be kept in the Environmental Coordinator's log (*Standard Specification, Section 656.4.4 Inspection and Record Keeping.*)

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 Sedimentation Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The latest version is dated "February 2008" and is available at;

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SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

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May 20, 2008
Supersedes January 29, 2008

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
535(03)	Precast Superstructure - Shear Key	12/5/07
535(04)	Precast Superstructure - Shear Key	12/5/07
535(05)	Precast Superstructure - Post Tensioning	12/5/07
535(17)	Precast Superstructure - Notes	12/5/07
801(01)	Drives on Sidewalk Sections	1/04/08
801(02)	Drives on Non-Sidewalk Sections	1/04/08
203(03)	Backslope Rounding	1/29/08
535(02)	Precast Superstructure - Curb Key & Drip Notch	5/20/08
535(05)	Precast Superstructure - Post Tensioning	5/20/08

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. Time.

6. 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 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…"

Description Change "Floor Area" to "Floor Area (Outside Dimension)". Change Type B floor area from "15 (160)" to "14.4 (155)".

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."

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following table.

AGGREGATE GRADATION CONTROL POINTS

SIEVE SIZE	Nominal Maximum Aggregate Size---Control Points (Percent Passing)				
	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm	TYPE 4.75 mm
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE				
37.5 mm	100				
25 mm	90-100	100			
19 mm	-90	90-100	100		
12.5 mm		-90	90-100	100	100
9.5 mm		-	-90	90-100	95-100
4.75 mm		-	-	-90	80-100
2.36 mm	19-45	23-49	28-58	32-67	40 - 80
1.18 mm		-	-	-	-
600 µm		-	-	-	-
300 µm		-	-	-	-
75 µm	1-7	2-8	2-10	2-10	2-10

Gradation Classification---- The combined aggregate gradation shall be classified as coarse-graded when it passes below the Primary Control Sieve (PCS) control point as defined in the following table. All other gradations shall be classified as fine-graded.

GRADATION CLASSIFICATION

PCS Control Point for Mixture Nominal Maximum Aggregate Size (% passing)				
Nominal Maximum Aggregate Size	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm
Primary Control Sieve	4.75 mm	4.75 mm	2.36 mm	2.36 mm
PCS Control Point (% passing)	40	47	39	47

If a Grading "D" mixture is allowed per Special Provision Section 403, it shall meet the following gradation and the aggregate requirements of Section 703.07.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
½ inch	100
⅜ inch	93-100
No. 4	60-80
No. 8	46-65
No. 16	25-55
No. 30	16-40
No. 50	10-30
No. 100	6-22
No. 200	3.0-8.0

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. NONSEGREGATED FACILITIES (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.

****

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.

****

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 #: 15615.00 **Town: Islesboro**
Environmental Office Contact: Josh Nichols (joshua.nichols@maine.gov) 624-3092
Coordination & Permits Manager: Matt Steele **Date Submitted: 6/18/08**
Database/Projex ☒

☒ **Section 106 and Tribal Consultation**

Architectural Resources	PA-B ☒	Applicable☐	Approved ☐
Archeological Resources	PA-B ☒	Applicable	Approved
Tribal Consultation	Tribal Letters Sent ☒		Approved ☐
Town & Local Hist. Society Contacted	Yes ☒	No☐	

☒ **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 ☐

☒ **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: 11/1 – 8/31

☒ Special Provision 656, Erosion Control Plan

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Chapter 305)

■ MDOT PIN: 15615.00

Name of Applicant: State of Maine Department of Transportation **Name of Contact:** Josh Nichols
Mailing Address: 16 Station State House **Town/City:** Augusta **State:** Me. **Zip Code:** 04330-0016
Daytime Telephone #: **Name of Wetland, Water Body or Stream:** Atlantic Ocean

Detailed Directions to Site: This project is located at the State Ferry Terminal, on Ferry Road, in the town of Islesboro.

Town/City: Islesboro **Map #:** N/A **Lot #:** N/A **County:** Waldo

Description of Project: Project scope is the replacement of the existing ferry terminal transfer bridge and expansion of the concrete footings and piers supporting the hoist tower (approximately 250 s.f.). The project will be performed in accordance with erosion control measures conforming with the latest versions of the *State of Maine Department of Transportation Standard Specifications for Highways and Bridges* and the *Department of Transportation's Best Management Practices for Erosion and Sediment Control.*

Part of a larger project? ☐Yes ☒No

(CHECK ONE) This project... ☒ does ☐ does not ...involve work below mean low water.

I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Regulation, Chapter 305. I have a copy of PBR Sections checked below. I have read and will comply with all of the standards.

☐Sec. (2) Soil Disturbance	☐Sec. (8) Shoreline stabilization	☐Sec. (14) Piers, Wharves & Pilings
☐Sec. (3) Intake Pipes	☐Sec. (9) Utility Crossing	☐Sec. (15) Public Boat Ramps
☐Sec. (4) Replacement of Structures	☐Sec. (10) Stream Crossing	☐Sec. (16) Coastal Sand Dune Projects
☐Sec. (5) REPEALED	☒Sec. (11) State Transport. Facilities	☐Sec. (17) Transfers/Permit Extension
☐Sec. (6) Movement of Rocks or Vegetation	☐Sec. (12) Restoration of Natural Areas	☐Sec. (18) Maintenance Dredging
☐Sec. (7) Outfall Pipes	☐Sec. (13) F&W Creation/Enhance/Water Quality Improvement	

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules. I also understand that ***this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.***

I have attached all of the following required submittals. **NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS:**

- ■ **A $55 (non-refundable) payment shall be done by internal billing.**
- ■ ***Attach*** **a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.**
- ❑ ***Attach*** **photographs showing existing site conditions (unless not required under standards).**

Signature of Applicant: _____ **Date:** 10/31/07

John E. Dority, Chief Engineer

Keep the bottom copy as a record of permit. Send the form with attachments via certified mail to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below**. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP STATE HOUSE STATION 17 AUGUSTA, ME 04333-0017 (207)287-2111 PORTLAND DEP 312 CANCO ROAD PORTLAND, ME 04103 (207)822-6300 BANGOR DEP 106 HOGAN ROAD BANGOR, ME 04401 (207)941-4570 PRESQUE ISLE DEP 1235 CENTRAL DRIVE PRESQUE ISLE, ME 04769 (207)764-0477

OFFICE USE ONLY		Ck.#	Staff		Staff	
PBR #	FP	Date	Acc. Date		Def. Date	After Photos

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO ATTENTION OF

MAINE PROGRAMMATIC GENERAL PERMIT (PGP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

OFFICE OF ENVIRONMENTAL SERVICES
MAINE DEPT. OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333

CORPS PERMIT # NAE-2008-01493
CORPS PGP ID# 08-178
STATE ID# PBR

DESCRIPTION OF WORK:

Conduct repairs to the existing State Ferry Terminal at ~~Lincolnville~~ ISLESBORO, Maine. Regulated work includes the removing old timber sheathing, pile driving to support improvements to he concrete tower supports, installation of additional riprap protection, and installation of steel plate to protect the tower supports. This work is shown on the attached plans entitled "LINCOLNVILLE-ISLESBORO FERRY TERMINALS, NEW VEHICLE TRANSFER BRIDGE, ISLESBORO" in 4 sheets undated. Approximately 500 s.f. (0.011 acres) of tidal bottom will be impacted by the project. DOT PIN: 15615.00

LAT/LONG COORDINATES : 44.2806176° N 68.9435636° W USGS QUAD: ISLESBORO, 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 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 [X] ISSUED[ ] DENIED [ ] DATE

APPLICATION TYPE: PBR: X TIER 1: TIER 2: TIER 3: LURC: DMR LEASE: NA:

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 4/29/08 LEVEL OF REVIEW: CATEGORY 1: CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10_____, 404_____ 10/404__X__, 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.

AGENCY OBJECTIONS/COMMENTS: EPA NO, USF&WS NO, NMFS NO, SHPO NO, THPO NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office.

Jay L. Clement

JAY L. CLEMENT
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

5/19/08

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-2008-01493

1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed 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).

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 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 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. 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.

US Army Corps of Engineers®
New England District

PGP
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. [insert permit number] was issued to [insert permittee name]. This work is located in (WATERBODY) at (ADDRESS), (CITY), (STATE). The permit authorized the permittee to (WORK DESCRIPTION).

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: _____

_____

_____

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: _____

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 *
****

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 (_____) _____

Environmental Summary Sheet

PIN #: 15616.00 **Town: Lincolnville**
Environmental Office Contact: Josh Nichols (joshua.nichols@maine.gov) 624-3092
Coordination & Permits Manager: Matt Steele **Date Submitted: 6/18/08**
Database/Projex ☒

☒ **Section 106 and Tribal Consultation**

Architectural Resources	PA-B ☒	Applicable☐	Approved ☐
Archeological Resources	PA-B ☒	Applicable	Approved
Tribal Consultation	Tribal Letters Sent ☒		Approved ☐
Town & Local Hist. Society Contacted	Yes ☒	No☐	

☒ **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 ☐

☒ **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: 11/1 – 8/31

☒ Special Provision 656, Erosion Control Plan

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Chapter 305)

■ MDOT PIN: 15616.00

Name of Applicant: State of Maine Department of Transportation **Name of Contact:** Josh Nichols
Mailing Address: 16 Station State House **Town/City:** Augusta **State:** Me. **Zip Code:** 04330-0016
Daytime Telephone #: **Name of Wetland, Water Body or Stream:** Atlantic Ocean

Detailed Directions to Site: This project is located at the State Ferry Terminal in the town of Lincolnville.

Town/City: Lincolnville **Map #:** N/A **Lot #:** N/A **County:** Waldo

Description of Project: Project scope is the replacement of the existing ferry terminal transfer bridge and installation of 12 new, 14" diameter piles that support the hoist tower. The project will be performed in accordance with erosion control measures conforming with the latest versions of the *State of Maine Department of Transportation Standard Specifications for Highways and Bridges* and the *Department of Transportation's Best Management Practices for Erosion and Sediment Control.*

Part of a larger project? ☐Yes ☒No

(CHECK ONE) This project... ☒ does ☐ does not ...involve work below mean low water.

I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Regulation, Chapter 305. I have a copy of PBR Sections checked below. I have read and will comply with all of the standards.

☐Sec. (2) Soil Disturbance	☐Sec. (8) Shoreline stabilization	☐Sec. (14) Piers, Wharves & Pilings
☐Sec. (3) Intake Pipes	☐Sec. (9) Utility Crossing	☐Sec. (15) Public Boat Ramps
☐Sec. (4) Replacement of Structures	☐Sec. (10) Stream Crossing	☐Sec. (16) Coastal Sand Dune Projects
☐Sec. (5) REPEALED	☒Sec. (11) State Transport. Facilities	☐Sec. (17) Transfers/Permit Extension
☐Sec. (6) Movement of Rocks or Vegetation	☐Sec. (12) Restoration of Natural Areas	☐Sec. (18) Maintenance Dredging
☐Sec. (7) Outfall Pipes	☐Sec. (13) F&W Creation/Enhance/Water Quality Improvement	

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules. I also understand that ***this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.***

I have attached all of the following required submittals. **NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS:**

- ■ **A $55 (non-refundable) payment shall be done by internal billing.**
- ■ ***Attach*** **a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.**
- ❑ ***Attach*** **photographs showing existing site conditions (unless not required under standards).**

Signature of Applicant: _____ **Date:** 10/31/07
John E. Dority, Chief Engineer

Keep the bottom copy as a record of permit. Send the form with attachments via certified mail to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below**. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP STATE HOUSE STATION 17 AUGUSTA, ME 04333-0017 (207)287-2111 PORTLAND DEP 312 CANCO ROAD PORTLAND, ME 04103 (207)822-6300 BANGOR DEP 106 HOGAN ROAD BANGOR, ME 04401 (207)941-4570 PRESQUE ISLE DEP 1235 CENTRAL DRIVE PRESQUE ISLE, ME 04769 (207)764-0477

OFFICE USE ONLY		Ck.#	Staff		Staff	
PBR #	FP		Date	Acc. Date	Def. Date	After Photos

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO ATTENTION OF

MAINE PROGRAMMATIC GENERAL PERMIT (PGP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

OFFICE OF ENVIRONMENTAL SERVICES
MAINE DEPT. OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333

CORPS PERMIT # NAE-2008-01492
CORPS PGP ID# 08-177
STATE ID# PBR

DESCRIPTION OF WORK:
Conduct repairs to the existing State Ferry Terminal at Lincolnville, Maine. Regulated work includes the removing old timber sheathing, pile driving to support improvements to he concrete tower supports, installation of additional riprap protection, and installation of steel plate to protect the tower supports. This work is shown on the attached plans entitled "LINCOLNVILLE-ISLESBORO FERRY TERMINALS, NEW VEHICLE TRANSFER BRIDGE, LINCOLNVILLE" in 4 sheets undated. Approximately 300 s.f. (0.006 acres) of tidal bottom will be impacted by the project. DOT PIN: 15616.00

LAT/LONG COORDINATES : 44.2803095° N 69.0068697° W **USGS QUAD:** LINCOLNVILLE, 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 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 [X] ISSUED [ ] DENIED [ ] DATE_____

APPLICATION TYPE: PBR: X , TIER 1: , TIER 2 : , TIER 3: , LURC: DMR LEASE: NA:

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 4/29/08 LEVEL OF REVIEW: CATEGORY 1: CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 , 404 10/404 X , 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.

AGENCY OBJECTIONS/COMMENTS: EPA NO , USF&WS NO , NMFS NO , SHPO NO , THPO NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office.

Jay L. Clement
JAY L. CLEMENT
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

5/19/08
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-2008-01492

1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed 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).

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 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 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. 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.

US Army Corps of Engineers®
New England District

PGP
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. [insert permit number] was issued to [insert permittee name]. This work is located in (WATERBODY) at (ADDRESS), (CITY), (STATE). The permit authorized the permittee to (WORK DESCRIPTION).

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: _____

_____

_____

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: _____

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 *
****

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 (_____) _____

New Vehicle Transfer Bridges

Lincolnville/Islesboro-Waldo County

PIN 015615.00
PIN 015616.00

SECTION 3

STATE OF MAINE

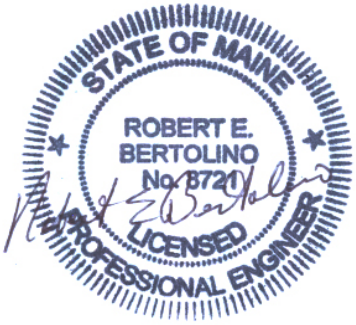
Department of Transportation

FERRY TERMINALS

LINCOLNVILLE / ISLESBORO, ME

PIN NO.'S 15615.00 & 15616.00

SPECIAL PROVISIONS – TECHNICAL



Prepared by Fay Spofford & Thorndike, LLC

June 27, 2008

LINCOLNVILLE / ISLESBORO FERRY TERMINALS

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SECTION 3
SPECIAL PROVISIONS – TECHNICAL

SPECIAL PROVISIONS - TECHNICAL

SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS

Section 202 Removing Structures and Obstructions is revised as follows:

202.01 Description. This subsection is amended by the addition of the following paragraphs:

Removal shall include but not be limited to the vehicle transfer bridge structure and hoist towers, and all other miscellaneous items indicated and necessary to complete the work.

The items to be salvaged are indicated on the drawings. They shall be carefully dismantled by the Contractor and shall be carefully stored by the Contractor at a location to be designated by the Department. The existing stone rip rap in front of the Lincolnville abutment shall be removed and reset after completion of the footing scour repair. The contractor shall provide and maintain a floating silt curtain during the entire demolition period.

202.03 Removing Existing Superstructure, Structural Concrete, Railings and Bridges This subsection is amended by the addition of the following paragraphs:

The existing structural steel hoist towers and transfer bridge are coated with lead based paint. Removal and disposal of all components coated with lead paint shall be in accordance with all applicable local, state, and federal regulations.

The brass identification plaque located at and attached to the north face of the hoist tower shall be salvaged and turned over to the Department.

SPECIAL PROVISIONS - TECHNICAL

SECTION 403
HOT MIX ASPHALT

This section is amended by the addition of the following:

Desc. Of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
Wearing	9.5 mm	403.209	N/A	1 ½"	1	3, 9, 13, 17
Base	9.5 mm	403.209	N/A	1 ½"	1	3, 9, 13, 17

COMPLEMENTARY NOTES

3. The design traffic level for mix placed shall be <0.3 million ESALS.

9. Section 106.6 Acceptance, (2) Method C – For hot mix asphalt items designated as Method C in Standard Provisions Section 403 – Hot Mix Asphalt, one sample will be taken from the paver hopper or the truck body per 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 9, Method C the Department will pay the contract unit price.

Table 9

Property	USL and LSL
	Method C
Percent Passing 4.75 mm [No. 4] and larger sieves	Target ± 7
Percent Passing 2.36 mm [No. 8] to 1.18 mm [No. 16] sieves	Target ± 5
Percent Passing 0.60 mm [No. 30]	Target ± 4
Percent Passing 0.30 mm [No. 50] to 0.075 mm [No. 200] sieve	Target ± 3
PGAB Content	Target ± 0.5

If the test results for each 250 ton increment are outside these limits the following deductions (Table 9b) shall apply to the HMA quantity represented by the test. A second consecutive failing test shall result in cessation of production.

TABLE 9b

PGAB Content	-5%
2.36 mm sieve	-2%
0.30 mm sieve	-1%
0.075 mm sieve	-2%

11. 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 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.

17. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a 3-5 ton vibratory roller. An approved release agent is required to ensure the mixture dose not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum base fuel oils will not be permitted.

The Department will pay for the work specified in Subsection 401.11 for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying Item 409.15 bituminous material to joints and contact surfaces is incidental.

Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.025 gal/yd^2, and on milled pavement approximately 0.5 gal/yd^2, prior to placing a new course. All joints between existing and new pavement will be tacked.

SPECIAL PROVISIONS - TECHNICAL

SECTION 501
FOUNDATION PILES

SECTION 501 - Foundation Piles is revised as follows:

501.01 Description. This work shall consist of furnishing and installing open end pipe piles, providing concrete fill for pipe piles and anodes in accordance with the plans and specifications.

Piles shall be driven to acceptable penetration resistance into dense granular soil or bedrock, as indicated on the plans, as specified herein, and as directed by the Engineer.

The number of piles are shown on the plans. The estimated pile lengths are shown on the plans; the lengths are based on subsurface interpretations. The driven pile lengths will vary depending on the actual conditions encountered in the field.

Wave Equation Analyses conducted by the Contractor shall be used to establish acceptable penetration resistance to develop the minimum ultimate pile capacities to provide service design loads indicated on the drawings (minimum ultimate pile capacities shall be equal to or greater than two times the indicated pile design loads). Dynamic Pile testing conducted by the Contractor shall be used to confirm that the acceptable penetration resistance develops the required minimum ultimate pile capacity. The Engineer shall review the Wave Equation Analyses and the Dynamic Pile testing conducted by the Contractor.

501.02 Materials. The first paragraph is revised to read as follows: "Steel pipe piles shall conform to ASTM A 252, Grade 3, minimum yield point of 45 ksi, seamless or straight seam welded. Spiral welded pipe will not be permitted. Pile tips are required for all driven piles and shall be APF outside cutting shoe No. 0-14001 or equal and shall meet or exceed the strength requirements of ASTM A 148, Grade 90-60 for steel castings."

The third paragraph is revised to read as follows: "Concrete for pipe piles shall be class A and shall meet the requirement of Section 502, Structural Concrete.

Add the following paragraphs:

Anodes shall be W-120 ‘ALOLINE’ Aluminum Anodes as manufactured by Wilson Walton International, Inc. or approved equal.

Welding and electrodes shall conform to the American Welding Society Publication AWS D1.1".

Coat all steel pipe piles full length unless indicated otherwise with a fusion bonded epoxy powder coating system. The coating shall be Scotchkote #6233 Fusion Bonded Epoxy Coating

as manufactured by 3M Company, Electro-Products Division, St. Paul, MN; or equivalent by Morton International, Woodstock, Illinois or approved equal.

Any damage to the epoxy powder coating system shall be repaired using a high solids epoxy coating. The coating shall be Scotchkote # 312 Liquid Epoxy Coating as manufactured by 3M Company, Electro-Products Division, St. Paul, MN or approved equal.

All surfaces shall be thoroughly prepared for coating application in strict accordance with the coating manufacturer's recommendation. All cleaning and coating work must be performed in a heated building. Preceding grit blasting, steel must be heated to at least 100 degrees F. to eliminate possibility of moisture on the surfaces to be cleaned and coated.

Grit blasting shall be to clean grey metal, at least equivalent to a Near White as defined by SSPC Specification SP-10. All work blasted in one day must be coated on that day.

Any areas of the surface which show traces of oil, grease, or other organic matter shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot-blasting.

All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit at the time the coating is applied.

The Engineer shall have access to each part of the process and shall have the right and opportunity to witness any of the quality control test and/or perform such test himself on a random sampling basis.

Piles shall be coated on the outside only. The fusion bonded epoxy coating shall be applied in an environmentally controlled plant that is fully enclosed. The coating system shall be fully automatic with the capabilities of preheating and post baking. The grit blast cleaning machine shall be fully automatic and fully enclosed in an environmentally controlled plant. The finished coating thickness shall be 10 mils nominal as tested in accordance with ASTM-G12.

The coating material shall be applied strictly in accordance with the coating manufacturer's recommendation as to coating application procedure and curing schedule. In no case shall the oven temperatures or temperature of the piling during any part of the curing process, exceed 260C (500 F).

The cured coating shall be of uniform color, gloss and thickness, and shall be free of blisters, pinholes, fish eyes, sags, runs, and any other irregularities.

The coater shall be responsible for all quality control checking including visual inspection, thickness measurement, and holiday testing, and shall keep records on the results of all such inspections in a form suitable to the Engineer.

The Engineer shall have access to each part of the process and shall have the right and opportunity to witness any of the quality control test and/or perform such test himself on a random sampling basis.

501.03 Equipment. Revise the Section to read as follows: Piles may be driven with steam, air or diesel hammers. Gravity hammers shall not be used.

The plant and equipment furnished for steam and air hammers shall have sufficient capacity to maintain at the hammer, under working conditions, the volume and pressure specified by the manufacturer. The plant and equipment shall be equipped with accurate pressure gauges that are easily accessible to the Engineer. The weight of the striking parts of air and steam hammers shall not be less than 1/3 the weight of drive head and pile being driven.

Open-ended (single acting) diesel hammers shall be equipped with a device such as rings on the ram or a scale (jump stick) extending above the ram cylinder, to permit the Engineer to visually determine hammer stroke at all times during pile driving operations. Also, the Contractor shall provide the Engineer with a chart from the hammer manufacturer equating stroke and blows per minute for the open-end diesel hammer to be used. Closed-end (double acting) diesel hammers shall be equipped with a bounce chamber pressure gage, in good working order, mounted near ground level so as to be easily read by the Engineer. Also, the Contractor shall provide the Engineer a chart, calibrated to actual hammer performance within 90 days prior to use, equating bounce chamber pressure to either equivalent energy or stroke for the closed-end diesel hammer to be used.

All equipment furnished by the Contractor to place the piles shall be approved by the Engineer prior to use. All pile driving equipment shall be sized such that the specified piles can be driven to the required ultimate capacity, without damage. Approval of the pile driving equipment by the Engineer will be based on the wave equation analysis and the Pile Driving Analyzer (PDA).

The Contractor shall submit to the Engineer the necessary pile driving equipment information on a form supplied by the Engineer as well as a Wave Equation Analysis to determine preliminary driving criteria at least 14 days prior to any pile driving. The Engineer will respond in writing as to the adequacy of the Contractor's driving equipment proposal.

The Contractor will be notified of the acceptance or rejection of the driving system within 7 calendar days of the Engineer's receipt of the Pile and Drive Equipment Data Form. If the wave equation analyses show that the driving system is unacceptable, the Contractor shall modify or replace the proposed equipment, at his expense, until subsequent wave equation analyses indicate the piles can be driven to the desired ultimate capacity, without damage. The Engineer will notify the Contractor of the acceptance or rejection of the revised driving system within 7 calendar days of the receipt of a revised Pile and Driving Equipment Data Form.

The criteria which the Engineer will use to evaluate the driving equipment from the wave equation results consists of the required number of hammer blows per inch and stroke at the required ultimate pile capacity and the pile stresses during driving. The required number of

hammer blows indicated by the wave equation at the ultimate pile resistance shall be between 8 and 12 blows per inch for the driving equipment to be acceptable.

In addition, for the driving equipment to be acceptable, the pile stresses indicated by the wave equation shall not exceed a compressive driving stress of 90 percent of the yield point of the pile material.

During pile driving operations, the Contractor shall use the approved system. No variations in the driving system will be permitted without the Engineer's written approval. Any change in the driving system will only be considered after the Contractor has submitted a revised equipment data form. The Contractor will be notified of the acceptance or rejection of the driving system changes within 7 calendar days of the Engineer's receipt of the requested change. The time required for submission, review, and approval of a revised driving system shall not constitute the basis for a contract time extension to the Contractor.

Leads: Pile driver leads shall be constructed in such a manner as to afford freedom of movement of the hammer and to insure proper support of the pile during driving.

Followers: Followers will not be allowed.

Hammer Cushion: All power pile driving equipment shall be equipped with a suitable thickness of hammer cushion material to prevent damage to the hammer and pile and to insure uniform driving behavior. Hammer cushions shall be made of durable, manufactured materials, provided in accordance with the hammer manufacturer's guidelines except that all wood, wire rope, and asbestos hammer cushions are specifically disallowed and shall not be used. A striker plate as recommended by the hammer manufacturer shall be placed on the hammer cushion to insure uniform compression of the cushion material. The hammer cushion shall be inspected in the presence of the Engineer when beginning pile driving at each pile group or after each 100 hours of pile driving, whichever is less. Any reduction of hammer cushion thickness exceeding 10 percent of the original thickness shall be replaced by the Contractor before driving is permitted to continue.

Pile Drive Head: Piles driven with power hammers require an adequate drive head to distribute the hammer blow to the pile head. The drive head shall be axially aligned with the hammer and the pile. The drive head shall be guided by the leads and not be free-swinging. The drive head shall fit around the pile head in such a manner as to prevent transfer of torsional forces during driving while maintaining proper alignment of hammer and pile.

For special types of piles, appropriate driving heads, mandrels, or other devices shall be provided in accordance with the manufacturer's recommendations so that the piles may be driven without damage.

501.05 Special Requirements for Steel Pipe Piles and Steel Casings.

Add the following paragraphs:

"Pile Coating

All damaged pile coating on pipe piles shall be touched up as follows. The touch up epoxy material shall be a two-part epoxy system designed and color-matched for patching the epoxy coating used on the steel piling.

Mix ratio of Part A to Part B shall be 1:1 by volume. The two parts must be thoroughly mixed until a uniform color is achieved. If thinning is required, thin each part separately to minimize loss of pot life with thinner recommended by the producer. Pot life should be approximately 8 hours. Material should be capable of being applied with ordinary brush or roller at a temperature of 55 degrees F. and above. A tack-free surface should be achieved in 2 to 3 hours at 72 degrees F. Full cure should be achieved in 3 to 5 days at 72 degrees F. Care should be exercised in handling parts before they are fully cured.

Existing work shall be protected from spillage and spattering during application of coatings. All spillages and spatterings shall be cleaned up immediately. Contractor is responsible to leave existing areas free of all such foreign materials. Coating which in the opinion of the Owner does not meet acceptance shall be redone at no additional cost to the Owner.

Anodes

Provide anodes on all steel pipe piles. The anodes shall be clean and free of paint, grease and oil prior to installation. The anodes shall not be coated. Field coat as specified for pile touch-up at all attachment brackets, fasteners and welds."

501.07 Pile Testing and Acceptance. Pile testing, consisting of dynamic load tests, will be required for two of the piles as determined by the Resident. The required minimum ultimate capacity of the pile shall be 2.25 times the pile design load indicated on the drawings.

501.09 Replace the first two paragraphs with the following:

Full length piles shall always be used whenever practical. When splices are unavoidable, one splice per pile will be permitted. The splice shall be located so that it will be a minimum of 5 feet below the mud line on the installed pile.

Pile splices shall utilize backing rings.

501.10 Prefabricated Pile Tips. Replace the second paragraph with the following:

All steel pipe piles shall have cast steel pile conical tips as shown on the drawings.

501.11 Method of Measurement. Delete this section and replace with the following:

Piles will be measured by the number and linear feet of length satisfactorily driven and remaining in the completed structure. Measurements will be made from the tip of the steel pipe to the cutoff elevation as shown on the plans. Unused pile cutoffs become the property of the Contractor. The unit price shall include the set up necessary to support the driving operation, the pipe pile, the driving, and the concrete fill. All other pile items, to include but not limited to, equipment mobilization, pile tips, pipe splices, pile cleaning, rock anchors, and anodes shall be included in the lump-sum bid.

501.12 Basis of Payment. Delete this section and replace with the following:

The accepted quantities of piles will be paid for per the linear foot prices indicated on the bid sheet. Excavating and cleaning steel pipe piles and furnishing and placing reinforcing steel will be considered as incidental to the related pay items.

SPECIAL PROVISIONS - TECHNICAL

SECTION 502
STRUCTURAL CONCRETE

Section 502 Structural Concrete is revised as follows:

502.03 Materials. At the end of the paragraph add the following: "Bonding agent shall be a two-component, high modulus, moisture-insensitive structural epoxy resin adhesive similar to "Sikadur 32, Hi-Mod" by Sika Corporation, "EVA-POX-HI MOD Fresh Concrete Bonder" by E-Poxy Industries, Inc. or "EUCO # 452 Epoxy System" by Euclid Chemical Company".

502.05 Composition and Proportioning

Revise note #3 as follows:

Calcium Nitrite shall be added at the rate of 5 gallons per cubic yard.

Lincolnville – High Early Strength Concrete Mix:

Cement – Minimum 490 pounds per cubic yard
Slag - 210 pounds plus Silica Fume @ 25 pounds per cubic yard
W.R. Grace Polar Set - 15 ounces per 100 pounds of cement, or an approved equal.

Isleboro – High Early Strength Concrete Mix:

Cement – Minimum 490 pounds per cubic yard
Slag - 210 pounds plus Silica Fume @ 25 pounds per cubic yard
Polar Set - 30 ounces per 100 pounds of cement, or an approved equal
Recover - 2 ounces per 100 pounds of cement to be placed on the cement and slag, or an approved equal.

502.701 Delivery

At the end of paragraph "A." add the following:

The use of a hydration stabilizing admixture for extended set time control will be allowed and shall conform to the following:

The hydration stabilizing admixture shall comply with the performance criteria of ASTM C494 Designation Type D (excluding the 3 hour maximum set time requirement), shall be favorably evaluated by ICBO as a hydration stabilizer, and shall be Recover ® as manufactured by Grace Construction Products, or its equivalent.

The ASTM-C94 Section 11.7 stating that discharge of the concrete shall be completed within 1.5 hours or before the drum has revolved 300 revolutions after batching, and the 1.5 hour delivery and discharge time limit in Section 502.0701 of these Special Provisions, shall not be applicable when hydration stabilizers are present within the mix.

502.11 Placing Concrete.

(f) Construction Joints. Delete the second sentence and substitute the following: "Horizontal construction joints will be allowed between low tide and high tide elevations only where shown on the plans. At these locations, a bonding agent shall be used in strict accordance with the manufacturer recommendations."

502.19 Basis of Payment – All concrete work shall be considered as incidental to the related pay item in the Schedule of Values and shall be included in the lump sum price for those items.

SUPPLEMENTAL SPECIFICATION

SECTION 503
REINFORCING STEEL

503.01 Description. This work shall consist of furnishing and placing epoxy coated reinforcing steel in accordance with the plans and specifications.

SUPPLEMENTAL SPECIFICATION

SECTION 504
STRUCTURAL STEEL

Section 504 Structural Steel is revised as follows:

504.01 Description. This subsection is amended by the addition of the following paragraph:

Steel member components categorized as "Fracture Critical Members, FCM", as shown on the contract drawings shall conform to the requirements of the ANSI/AASHTO/AWS D 1.5-95, Section 12.

504.02 Materials. This subsection is amended by the addition of the following paragraph:

Steel in main load carrying members shall meet the Charpy-V-Notch impact test requirements as specified for Zone 2 in Table 7.1 of the AASHTO "Guide Specifications for Fracture Critical Non-Redundant Steel Bridge Members". Girders and floor beams are considered to be main load carrying members.

SUPPLEMENTAL SPECIFICATION

SECTION 506
PAINTING STRUCTURAL STEEL

506.01 Description. This work shall consist of furnishing and applying shop applied prime and finish coats in accordance with the plans and specifications.

506.02 Materials. Products specified are manufactured by Tnemec Company, Inc., North Kansas City, Missouri and are specified as a standard of quality.

Equivalent materials of other manufacturers may be substituted only by approval of the Engineer. Requests for substitution shall include manufacturer's literature for each product giving the name, generic type, descriptive information, solids by volume, recommended dry film thicknesses and a list of five projects where each product has been used and rendered satisfactory service. No request for substitution will be considered that would decrease film thickness or offer a change in the generic type of coating specified. Manufacturer's certified test reports showing that the substitute product(s) equal or exceed the performance of the specified products as outlined herein, System Requirements, shall be submitted.

Prime coat - urethane zinc-rich primer, 90-97 Tneme-Zinc.

Finish coats - aliphatic acrylic polyurethane finish, Series 73 Endura-Shield III.

System Requirements:

1. Abrasion: No more than 95 mg. loss after 1,000 cycles, (Fed. Test Method Std. No. 141, Method 6192, CS-17 Wheel, 1,000 grams load).

2. Adhesion: Not less than a rating of 5, average of three tests, (ASTM D 3359 Method B, Crosshatch Adhesion).

3. Humidity: No blistering, cracking, softening or delamination of film after 600 hours exposure, (ASTM D 2247-68).

4. Salt Spray (Fog): No blistering, cracking, softening or delamination of film after 1,000 hours exposure, (ASTM B 117-73).

5. Solids by Volume: 58.0 $\pm$ 2.0% (mixed).

506.03 Surface Preparation. Delete the second and third paragraphs including Methods A through B and Substitute the following:

"All surface preparation shall be in accordance with Steel Structures Painting Council Surface Preparation Specification No. 10 - Near-White Blast Cleaning."

506.04 Weather Conditions.

Paragraph (a), second line, delete "40 F" and substitute "50 F or above 120 F".

506.05 thru 506.09. Delete these subsections and substitute the following:

"506.05 Preparation of Paint. Mix and thin materials for shop and field application according to manufacturer's latest printed instructions. Do not use materials beyond manufacturer's recommended shelf life. Do not use mixed materials beyond manufacturer's recommended pot life.

506.06 Paint Application. Apply materials for shop and field application at specified film thickness by method recommended by manufacturer. Allow each coat to dry thoroughly before recoating. Follow manufacturer's recommended recoat time. Cut edges clean and sharp where work joins other materials or colors. Make finish coats smooth, uniform in color, and free of brush marks, laps, runs, dry spray, overspray and skipped or missed areas. Field touch-up shall be in accordance with the paint manufacturer's recommendations.

506.07 Inspection. Request acceptance of each coat before applying succeeding coats. Repair and touch-up all work that is not acceptable to the Engineer and request final acceptance.

506.08 Cleaning. Remove paint spatters from adjoining surfaces. Repair damage to coatings or surfaces caused by cleaning operations. Remove debris from job site and leave storage areas clean.

506.09 Painting Schedule.

A. Surfaces not to be painted under this section:

1. Galvanized steel items.

2. Items with factory-applied final finish.

3. Coating for steel pipe piles specified under Section 501 - Foundation Piles.

4. Coating for reinforcing steel specified under Section 503 - Reinforcing Steel.

5. Coating for electrical items specified under Section 655 - Electrical Work.

B. Surfaces to be Painted:

1. Transfer Bridge

2. Transfer bridge hoist towers, including hoist machinery and protective covers.

3. Lateral bridge guides at hoist tower foundations.

4. Railings as indicated in Section 507 – Railings.

5. Miscellaneous ungalvanized steel.

C. Coating System:

1. Primer shall be Tnemec-Zinc 90-97, one component urethane, zinc-rich primer at 2.5-3.5 mils DFT as manufactured by Tnemec Co., Inc.

2. Intermediate coat shall be Tnemec Series 161 Tnemec-Fascure epoxy-polyamide coating at 4.0-6.0 mils DFT.

3. Top coat shall be Tnemec Series 73 Endura Shield III, aliphatic polyurethane enamel at 4.0-6.0 mils DFT. Color to top coat shall be selected by the Department.

4. Equal products as manufactured by Dupont or Ameron will also be acceptable.

SECTION 507
RAILINGS

All work under this item shall conform with Section 507 of the Standard Specifications modified as follows:

507.01 Description. This work shall consist of the furnishing of all materials for and the construction of railings and handrails on the transfer bridge, the hoist towers, and the generator foundations in reasonably close conformity with the lines and grades shown on the plans or established by the Engineer.

507.02 Materials. Railings shall be black steel pipe conforming to the requirements of ASTM A53, Type S, Grade A. Railings on the transfer bridge and the hoist tower shall be painted in accordance with Section 506, Painting Structural Steel. Railings on the hoist tower foundations and the generator foundations shall be hot-dip galvanized.

Add the following paragraph:

Hinges, latches and stops shall be stainless steel heavy duty construction, surface mounted.

507.03 Steel Bridge Railing. Jointing of posts, rail and corners shall be by one of the following methods:

(1) Flush-type rail fittings of commercial standard, welded and ground smooth.

(2) Mitered and welded joints made by fitting post to top rail and intermediate rail to post, mitering corners, groove welding joints, and grinding smooth. Railing splices shall be butted and reinforced by a tight fitting interior sleeve not less than 6 inches long.

(3) Railings shall be bent at corners to the radius as indicated on the plans using suitable jigs which will not crush the pipe.

The Contractor shall provide all additional connection details which are not specifically indicated on the plans, as necessary, to complete the work under this section.

SPECIAL PROVISIONS - TECHNICAL

SECTION 519
REHABILITATION OF STRUCTURAL CONCRETE

521.01 Description. This work shall consist of the removal of existing concrete, surface preparation and repair required for the rehabilitation of the existing abutments and hoist tower foundations as shown on the plans and as directed by the Engineer.

The area under the toe of the Lincolnville abutment shall be filled with Class 'A' concrete in accordance with Section 502 of the Special Provisions.

The vertical surfaces of the Islesboro hoist tower foundations and wherever repair areas are more than 10 square feet and 2-inches deep, with existing reinforcing exposed, shall be repaired with Class 'A' concrete having a 3/8" maximum aggregate size and in accordance with Section 502 of the Special Provisions.

A two-component polymer-modified cementitious, fast-setting, trowel grade structural repair mortar shall be used, as directed by the Engineer, to repair smaller repair areas including surface cracks on the abutments and as directed by the Engineer. It is anticipated that this material will be used in the tidal zone and the manufacturer shall certify that the product is suitable for such use.

Any repairs which must be completed "wet" in standing water, shall be completed using a fast-setting repair material which is specifically intended for underwater use.

521.02 Materials

POLYMER-MODIFIED CEMENTITIOUS MORTAR

(A) The polymer-modified cementitious system shall consist of a two-component system whose components generally conform to the following requirements:

1. Component A shall be a liquid polymer emulsion of an acrylic copolymer base and additives. This acrylic copolymer shall have the following properties:

pH	4.5 - 6.5
Minimum film forming Temperatures	Approx. 68 F
Tear Strength	Approx. 990-1420 psi
Elongation at break	500-900%

Particle Size Range	Less than 0.1 Micron

2. Component B shall be a blend of selected Portland Cements, specially graded aggregates, organic accelerator, and admixtures for controlling setting time, water reducers for workability, and a corrosion inhibitor.

3. The Component ratio of A to B shall be in accordance with the manufacturer's recommendations. The system shall not contain chlorides, nitrates, added gypsum, added lime, or high alumina cements. The systems shall be non-combustible, both before and after cure.

(B) Typical Properties of Mixed Components

1.	Application Time (Working Time)	15 mins. after combining components
2.	Finishing Time	20-60 mins. after combining components
3.	Color	Concrete Gray

(C) Typical Properties of Cured Materials

1.	Abrasion Resistance	6 times that of controlled concrete
2.	Bond Strength (pull off method)	100% concrete substrate failure
3.	Modulus of Elasticity	4.5×10^6 psi
4.	Surface Scaling (Deicing salt solution freeze/thaw)	No deterioration after 120 cycles
5.	Compressive Strength (2 hours 50% RH)	150 psi minimum
6.	Compressive Strength (28 days 50% RH)	5,500 psi minimum
7.	Flexural Strength (28 days 50% RH)	1,300 psi minimum

8. This system shall conform with ECA/USPHS Standards for surface contact with potable water.

9. This system shall not produce a vapor barrier.

10. This system shall be thermally compatible with concrete.

(D) Certification

The Contractor shall furnish notarized certification that all materials conform to the above requirements.

FAST-SETTING PATCH MATERIAL FOR USE IN STANDING WATER

This material shall be specifically manufactured for use in underwater application such as Five Star Structural Concrete Underwater HP, manufactured by Five Star Products, Inc., Fairfield, CT. The material shall be installed according to the procedures recommended by the manufacturer.

521.03 Construction Methods

(A) Surface Preparation

Areas to be patched must be clean and sound. All loose and disintegrated concrete shall be removed by means of chipping or an equivalent method to a depth where sound concrete is exposed. Sandblast concrete and reinforcing steel to remove all contaminants and rust. Chipping methods are to be approved by the Engineer.

(B) Cover for Reinforcement

When placement of a patch provides less than one inch cover for new or existing steel reinforcement, the mortar thickness shall be increased so as to provide a minimum cover of one inch.

(C) Mixing

Mix manually or mechanically in accordance with the manufacturer's instructions. Manual mix in a wheel barrow or mortar box. Mechanically mix in appropriate sized mortar mixer or with electric drill and paddle.

(D) Application and Finishing

1. At time of application surfaces should be damp (saturated surface dry) with no glistening water. Mortar must be worked into substrate filling all pores and voids. Force material against edge of repair, working toward center. After filling, consolidate, then screed.

2. Maximum thickness of application in one pass shall be 1". If the depth of patch exceeds 1", Mortar shall be placed in two passes of approximate equal

thickness. Before the first pass has achieved an initial set, the surface shall be prepared for the second pass by scratching with a trowel.

3. Priming is not always required but when the surface is porous, or the mix is stiff, use the remainder of Component A as a prime coat. A stiff mix is required for vertical or overhead surfaces.

Brush the prime coat over the substrate just before placing the mortar. Do not prime until ready to patch. Mortar must be placed while prime coat is wet. Do not let the prime coat dry before placing the mortar. Do not re-prime over dried prime coat. Dried prime coat must be removed by mechanical means.

After priming, work mix into substrate, filling all pores and voids. Avoid puddling of primer on horizontal substrates.

(E) Curing

1. Use fine mist spray of water, wet burlap, or nonsolvent approved curing compound if ambient conditions might cause premature surface drying -- high temperature, low humidity, strong winds. If necessary, protect newly applied mortar from rain. To prevent freezing, cover with insulating material.

Limitations

The application, storage, mixing and precautions shall all be in accordance with the manufacturer's recommendations.

Manufacturer's Field Representative

1. The Contractor shall arrange with the materials manufacturer or distributor to have the services of a competent field representative at the work site prior to any mixing of components to instruct the work crews in the proper mixing and application procedures. He shall remain at the work site after work commences and continue to instruct until he and the Engineer are satisfied that the crew has mastered the technique of installing the system successfully. The representative shall make periodic visits to the work site as the work progresses and shall confer on each visit with the Contractor and Engineer.

2. The manufacturer's field representative must be fully qualified to perform the work and shall be subject to the approval of the Engineer.

3. The Contractor shall be completely responsible for the expense of the services of the required field representative and the bid contract price shall be full compensation for all costs in connection therewith.

521.04 Materials approved by the Department

The polymer-modified cementitious repair material shall be from the list of materials approved by the Department. The manufacturer's representatives should be consulted prior to selection of the repair material to assure that a particular product is appropriate for this application.

SPECIAL PROVISIONS - TECHNICAL

SECTION 531
TRANSFER BRIDGE, HOIST MACHINERY AND HOIST TOWERS

531.01 Description. This work shall consist of furnishing and installing an adjustable transfer bridge for vehicular and pedestrian traffic between land and ferry. The transfer bridge shall include, but not be limited to, a bridge structure with an articulated apron assembly, hoist towers, hoist machinery and controls, counterweights, and all appurtenances in accordance with the plans and specifications.

All structural steel work shall be in accordance with Section 504 -- Structural Steel. Structural steel for the transfer bridge shall conform to the requirements of AASHTO Designation M270 Grade 36. All other structural steel shall conform to the requirements of ASTM A36. Steel pins and shafts as indicated on the plans shall conform to the requirements of ASTM A668 Class D. Structural steel shall be fabricated and erected in accordance with the applicable requirements of the AASHTO 2002 Standard Specifications for Highway Bridges, the 1978 Guide Specifications for Fracture Critical Non-redundant Steel Bridge Members, and the 2000 Standard Specifications for Moveable Highway Bridges, including current interims. Welding of structural steel shall be performed in accordance with ANSI/AASHTO/AWS D1.5-99, Bridge Welding Code.

Hoist machinery shall be fabricated, erected and tested in accordance with the AASHTO 1988 Standard Specifications for Moveable Highway Bridges.

The open grid steel grating of the bridge deck shall be as shown on the plans or an approved equal. The steel grating bars shall conform to the requirements of ASTM A588/A588M. The tops of the bars shall be serrated and the joints between the bearing bars and crossbars shall be welded. Where shown on the plans, the grating shall be filled with concrete as specified in Section 502 -- Structural Concrete.

Open grating shall be steel grating with grating bars conforming to the requirements of ASTM A36/A36M. Bearing bars shall be 1-1/4 inches by 3/16 inch, spaced at 1-3/16 inches center-to-center. Cross bars shall be welded at right angles to the bearing bars, spaced 4 inches center-to-center.

All steel gratings shall be hot-dip galvanized in accordance with the requirements of ASTM A123. Damaged surfaces shall be repaired with galvanizing repair method and paint conforming to ASTM A780 or by the application of stick or thick paste material specifically designed for repair of galvanizing, as approved by the Engineer. Clean areas to be repaired and remove the slag from the welds. Heat surfaces to which stick or paste material is applied, with a torch to a temperature sufficient to melt the metallics in stick or paste; spread the molten material uniformly over surfaces to be coated and wipe the excess material off.

Cap screws shall be hex head, zinc plated standard strength steel, Grade 2.

Elastic locknuts shall be zinc plated steel with a nylon insert that holds it at any point along the bolt where threads are in full contact.

Specifications for railings are in Section 507 -- Railings.
Specifications for bridge counterweight sheave covers, wire screen enclosures, and miscellaneous machinery guards are in Section 602 -- Metal Fabrications. Specifications for electrical controls of machinery are in Section 655 -- Electrical Work.

531.02 Painting. Fabricated structural steel, railings, counterweights, protective covers, wire screen enclosures, and machinery parts shall be painted in accordance with the requirements of Section 506 -- Painting Structural Steel.

531.03 Hoist Machinery. The hoist machinery for the adjustable transfer bridge shall consist of an electric wire rope winch with a five part reeving as indicated on the plans and specified herein. The hoist machinery for the apron shall consist of an electric wire rope winch as indicated on the plans and specified herein. Each mechanical system shall be individually powered by an electric motor and an emergency manual operator.

The two mechanical systems shall be capable of operating over a temperature range of from -30 F to 110 F in an outdoor, marine environment. Machinery parts shall be finished, at minimum, in accordance with Subsection 2.5.17. Fits and Surface Finishes of the AASHTO Standard Specifications for Movable Highway Bridges. Provision shall be made for effective lubrication of moving parts. Lubricating devices, i.e. copper grease extension tubes and stainless steel grease fittings, shall be easily accessible. All machinery parts shall be finished for use in an outdoor, marine environment

531.04 Electric Wire Rope Winch Assembly. The electric wire rope winch assembly shall consist of an electric motor, a disc-type motor brake, a gear drive, a wire rope drum with two divided sections, a ratchet and pawl backup holding system, manual operator and a machinery support frame. These components shall be designed to operate in accordance with the criteria listed below. The electric wire rope winch assembly detailed on the plans is based on winch model no. X-2558 manufactured by Jered LLC manufacturer of NETEC equipment located at PO Box 904, Brunswick, GA 31521-0904. Substitution of an equal electric wire rope winch is acceptable, subject to the approval of the Engineer provided it meets all the requirements of these specifications.

System Components:

1. Electric Motor - The electric motor shall be of speed and horsepower required to drive the 10,000 lb. load measured at the bridge at a speed of 8 ft./min., 460 volts A-C, three phase, 60 Hz, U-frame, totally enclosed non-ventilated, double “C” face mounted, for operation in an outdoor, marine environment and meeting the requirements of IEEE

Standard No. 45, Electric Installations on Shipboard. The motor shall be rated for operation in an ambient temperature ranging from minus 40°C to plus 40°C with a maximum temperature rise of 55°C over a 40°C ambient. The motor shall be 30 minute duty suitable for repetitive jogging and reversing duty and shall be a NEMA Design D, 275% starting torque, 10 H.P.

The motor, including frame with, end brackets, bearing inner caps, and conduit box and cover shall be of gray cast iron construction. ASTM Type A-48, Class 30 or better. Bearings shall be doubled sealed ball bearings and shaft seals for -54°C to 121°C rated. The motor shafts and all hardware shall be stainless steel.

It shall have a minimum of Class F insulation, and the wound stator assembly shall receive a baked non-hygroscopic insulation treatment. The motor leads shall be non-wicking type. The internal rotating assembly and stator winding shall have a corrosion resistant coating.

The motor shall be of fully gasketed construction and shall be completely sealed to prevent contaminant intrusion. The conduit box shall be cast metal and diagonally split and rotatable in 90 increments and shall be provided with 2-3/4 inch NPT threaded conduit holes. The box and cover shall be provided with a neoprene gasket between the box and frame and between the box and cover. The gasket between the box and frame shall prevent moisture from passing between the box and the motor enclosure. All hardware shall be hex head, high strength stainless steel.

A forged steel, shouldered removable eyebolt shall be provided. The eyebolt hole shall be designed to prevent moisture or foreign material from entering the motor enclosure when the eyebolt is removed.
The motor shall be provided with a stainless steel nameplate, with required NEMA data and AFBMA bearing numbers, lubrication instructions and connection diagram affixed to the motor frame with stainless steel or brass drive pins.

Stainless steel condensation drains shall be mounted in the lowest parts of both end brackets of the motor.

The motor shall be given a final coat of epoxy paint in accordance with Section 506 - Painting Structural Steel of these specifications.

The motor shall be provided with a 120 volt internal space heater to prevent condensation.

The motor shall be provided with thermal overloads built into the motor windings to open the remote motor control coil. The use of thermisters in lieu of same will not be permitted.

2. Motor Brake - The motor brake shall be a NEMA 4X 460 volt, single phase disc-type, spring set, electric release motor brake with 120 volt anti-condensation heater and Class "H" insulation. The brake shall be rated to hold the entire static load of 37,320 lbs. on the winch drum. In addition, provide with hand release knob. Design to mount to "C" face motor provided. Provide breather drain.

3. Gear Drive - The gear drive shall be designed and manufactured in accordance with the AASHTO Standard Specifications for Moveable Highway Bridges. The gear reduction ratio for the hoist and for the manual operator shall be designed to meet the operating criteria described herein. All lubricants shall be synthetic with viscosity and composition in accordance with the recommendations of the winch/component manufacturer. The lubricants shall be rated for operation in a temperature range of -30°F to 110°F in an outdoor, marine environment. Gear cases with an oil bath capacity greater than 2 gallons and subject to buildup of condensation shall have an immersion heater to prevent freezing of condensation and to maintain the oil bath at a temperature of approximately 32°F.

   An immersion type 120 volt electric heater for 2" NPT threaded insert and with Type 2 moisture tight enclosure for conduit connection. A thermostat shall be provided to maintain oil viscosity down to -50°F. The heater element shall be suitable for the type oil used and not exceed the oil manufacturer's watts per square inch density. The thermostat shall be mounted in a NEMA 4X junction box wired to the heater element.
   All internal electrical components and wiring and hydraulic components, and hoses shall be suitable for the temperatures and oily atmosphere encountered.

4. Wire Rope Drum - The wire rope drum shall be a cast steel drum with a 40 inch pitch diameter and grooved for a one inch diameter wire rope. The drum shall be split for two wire ropes to be reeved, one in each direction, supporting each side of the bridge as indicated on the plans. The drum shall be wide enough to hold 80 feet of wire rope wrapped on a single layer. The drum width shall also accommodate an additional three wraps of wire rope adjacent to anchorage to the drum.

5. Ratchet and Pawl Backup Holding System - The ratchet and pawl backup holding system shall be rated for the breaking strength of 1-inch diameter wire rope, 51.7 tons, acting on the winch drum. The winch should operate with the pawl constantly set on the ratchet. The pawl shall only be withdrawn when the winch is operated in the pay out direction (lowering the bridge). Once the winch has stopped operating in the pay out direction, the pawl shall drop into place. The system shall include a mechanism to manually withdraw the pawl when necessary to use the manual operator described below.

   The position of the pawl shall be monitored by means of a 120 volt proximity limit switch and remote red and green indicator lights. The green light shall operate such that the light is on when the pawl is set on the ratchet. The light should be off only when the pawl is withdrawn. The green light shall be on when the pawl is engaged and the red

light shall be on when the pawl is withdrawn. Provide within the terminal box an Allen Bradley Catalog No. 700-HA-32A 1-1-4 relay with manual operator and pilot light and Catalog No. 700-HN125 relay socket for field connection to the remote pawl status indicating light.

All wiring shall be marked and terminated in a NEMA 4X terminal box mounted on the gear case for field connections.

The system shall be designed with an automatic mechanism which withdraws the pawl when the winch pays out to lower the bridge. The electric controls of this system shall be designed to assure that the winch motor does not start faster than the mechanism which withdraws the pawl. Should a delayed start be required in the circuit, the Contractor shall provide a schematic drawing of the proposed circuit and catalog cuts of the proposed components for approval of the Engineer.

6. Manual Operator - The machinery shall be designed and manufactured to provide for emergency manual operation by means of a 24 inch diameter handwheel requiring no more than a 10 lb. effort to turn the wheel with a 10,000 lb. load on the bridge. The handwheel should be designed to be disengaged from the winch and stored during normal operation and should be designed to easily be engaged when needed. An adapter shall be provided which will engage the handwheel shaft on one side and accommodates a commercial-grade 1/2 inch electric drill chuck on the other side.

7. Machinery Support Frame - The winch shall be mounted on a support frame with a bolt pattern around the perimeter. The support frame is to be set on a structural steel support as indicated on the plans. The height of the centerline of the hoist drum above the base of the winch frame shall be coordinated with the structural steel support frame and any required modifications presented to the Engineer for approval.

8. Operation Criteria:

Static Load (Holding Load): 121,000 lb. on the bridge plus an allowance for impact and overload. The total single lead line pull on the winch drum is 37,320 lbs.

Lifting Load: 10,000 lb. load on the bridge. This is equivalent to a single lead line pull at the winch drum of 2,570 lb.

Operating Speed: 8 ft./min. at the bridge hoist support beam for typical operating conditions (40 ft./min. at the hoist drum). The maximum speed should be 10 ft./min. (50 ft./min. at the hoist drum).

531.05 Apron Hoist Assembly. The Jered Model 08001000 apron hoist assembly shall consist of a single drum winch, driven through reduction gears by an electric motor. It shall have an electric brake with manual release and an emergency manual operator. It shall be shop

assembled on a substantial steel base. The power source for the hoist motor and brake will be a single, 480 volts, 3-phase circuit. The winch shall provide positive drive to the hoisting wire rope. Reduction gearing and bearings shall be totally enclosed in a sealed chamber and shall operate in an oil bath. All bearings shall be either ball or roller suited to the service.

The drum shall be a long, lift type made of rolled steel sections, grooved for the first layer of 1/2-inch diameter wire rope and equipped with extra heavy drum flanges. The drum shall be able to hold 24 feet of 1/2-inch diameter wire rope in two layers. The wire rope shall pay from the top of the drum. The first layer of wire rope shall be rated at 2,000 pounds minimum at 5 feet per minute. Components of the single drum winch shall have at least a 5 to 1 factor of safety on its rated capacity.

The electric motor shall be a 460 volt, 3 phase, 3/4 horsepower minimum, reversible, single speed, 600 rpm, totally enclosed, ball bearing type, marine duty motor with an internally contained 460 volt single phase electric brake and 120 volt space heaters. The brake shall have a manual release for emergency manual operation during power outages. The manual brake release mechanism shall be provided with a set of electrical contacts rated at 10 amperes at 120 volts, which shall open when the brake is manually released.

The emergency manual operator shall consist of an 18-inch diameter, cast iron or steel, offset hand wheel mounted on a floorstand and connected to the motor shaft with suitable 1 to 1 ratio steel bevel gears, steel shafts, flange bearings, couplings, and a load holding mechanism. Minimum torque capacity of the load holding mechanism shall be 1,200 inch-pounds. The load holding mechanism shall be a Safety-Lock Brake Model No. SL-O-2400 manufactured by Curtiss Wright/Marquette of Fountain Inn, SC or equal. Shaft adaptors will be required on both input and output ends of the Safety-Lock Brake. The input shaft of the Safety-Lock Brake shall be connected to the shafting of the hand wheel. The coupling (manual clutch) between electric motor and manual operator shall be disengaged at all times except during manual operation. The load holding mechanism is required in the manual operator to prevent the hand wheel from back spinning.

The apron hoist assembly arrangement detail shown on the plans is based on components from NETEC, Division of Jered Industries Inc. of Brunswick, GA. A hoist assembly of equal quality from another manufacturer will be acceptable, subject to the approval of the Engineer.

531.06 Counterweights. Counterweights shall consist of fabricated steel boxes housing steel filler plates. The size and number of plates provided shall be as shown on the plans. The number of plates placed in each bridge counterweight box shall be the number required to maintain a tension of 1,500 pounds at each hoist support beam with the bridge in the horizontal position. The number of plates placed in each apron counterweight box shall be the number required to maintain a tension of approximately 1,000 pounds, plus or minus 100 pounds, in the apron hoist cable with both the bridge and apron in the horizontal position. Prior to final acceptance, the specified tensions shall be shown by field demonstration, i.e. measuring apparatus such as in-line tension indicators, using a method that has been approved by the

Engineer. Filler plates that are not placed in the boxes shall be moved to an on-site location for storage, as directed by the Engineer.

531.07 Wire Ropes and Fittings. All hoisting and counterweight wire ropes or cables shall be bright, extra improved plow steel, preformed, right regular lay, with independent wire rope core of the 6x37 classification. The construction and nominal strength shall be as follows:

1-5/8-inch, 6x41 WS, 132 tons nominal strength
1-inch, 6X41 WS, 51.7 tons nominal strength
1/2-inch, 6x41 WS, 13.3 tons nominal strength

Each wire rope shall be provided with the necessary forged steel sockets or fittings as indicated on the plans. All fittings shall be attached in accordance with the Wire Rope Users Manual published by the Wire Rope Technical Board. All wire ropes shall be treated with a lubricant at the manufacturer's plant during manufacture.

Fittings shall be galvanized in accordance with the requirements of ASTM A153.

531.08 Sheaves and Wire Rope Blocks. All hoist and counterweight sheaves shall be cast steel or roll forged steel. Each sheave pin, as indicated on the plans, shall be bored and counterbored for and be equipped with external stainless steel grease fittings. The bridge counterweight sheave shall be bored with a key way for a class 1 press fit shaft. Blocks shall have stainless steel grease fittings. Dimensions of sheaves and blocks indicated on the plans are based on those manufactured by the Crosby Group, Incorporated of Tulsa, OK.

531.09 Pillow Blocks for Bridge Counterweight Sheaves. The shafts of the bridge counterweight sheaves shall each be supported on two pillow blocks with split roller bearings and seals. Each bearing shall be mounted in a spherical cartridge that is self-aligning for up to one degree in any direction. The roller bearings and pillow blocks shall be capable of resisting all the loads imposed by the bridge counterweights. Pillow blocks shall be aligned prior to placement of bridge counterweights. The pillow blocks and roller bearings arrangement details are based on an 02 Series pillow block manufactured by Cooper Bearing Company of Virginia Beach, VA. Pillow blocks with split roller bearing, including necessary dimensional adjustments to the system by the Contractor, from another manufacturer will be acceptable, subject to the approval of the Engineer.

531.10 Bronze Padlock. Bronze weatherproof padlocks which are identically keyed shall be furnished for the two gates on the transfer bridge. These padlocks shall have master keys which are identical to the masterkeys of the padlocks for the electrical lock boxes.

531.11 Connection Details. The Contractor shall provide connection details necessary to complete the work under this section which are not specifically indicated on the plans. Connection details shall conform to the requirements of the AASHTO standards referenced herein.

531.12 Changes in Dimensions. The apron support frame, bridge counterweight sheave supports, and sheave supports Types A and B are detailed to accommodate sheaves with the specific dimensions shown on the plans. Changes in any dimensions of the sheaves are permitted provided all effected dimensions are adjusted by the Contractor and such changes and adjustments are approved in writing, by the Engineer.

531.13 Test and Operation. Upon completion of the installation of the transfer bridge and at such time as the Engineer may direct, the Contractor shall conduct an operating test for acceptance. The bridge and apron, with and without superimposed loads, together with the operating equipment, shall be demonstrated to operate in accordance with the requirements of the plans and specifications. The operating test shall include, but not be limited to, the demonstration of the full range of vertical travel of the electric winch and the transfer bridge; the full range of angular travel of the articulated apron assembly with the transfer bridge at horizontal, maximum high, and maximum low positions; and the applicable requirements under Subsection 4.1.10 Testing of the AASHTO Standard Specifications for Movable Highway Bridge. The Contractor shall furnish the necessary weights or vehicles required to test the entire system and shall have the necessary electrical current available to carry out this test.

Three copies of an operating and maintenance manual, containing full instructions for operation and maintenance, shall be furnished to the Department.

As required under Subsection 4.1.11. Bridge Operator of the AASHTO Standard Specifications for Moveable Highway Bridges, the contractor shall provide competent personnel to supervise the final adjustments of the hoist machinery of the transfer bridge and make all necessary corrections as may be required for proper operation. These personnel shall be available for as long as necessary until final acceptance of the transfer bridge.

A written acceptance of the transfer bridge will be issued by the Department after successful demonstration of the operating machinery meeting the requirements set forth on the plans and specifications.

SPECIAL PROVISIONS - TECHNICAL

SECTION 550
METAL FABRICATIONS

550.1 Description. This work shall consist of furnishing and installing ladders, support brackets for electrical equipment, modifications to the existing walkways and miscellaneous metal fabrications in accordance with the plans and specifications.

MATERIALS

550.2 Materials. Products shall conform to the respective reference specifications and standards and to the requirements specified herein.

Steel and Iron. If not specified otherwise, use standard mill finished structural steel shapes or bar iron in compliance with AISC S326 Specifications for Design, Fabrication and Erection of Structural Steel for Buildings.

Steel shall conform to ASTM A36/A36M.

Steel pipe shall conform to ASTM A53, Type S, Grade B.

Steel sheet metal shall conform to ASTM A611, Grade B.

Bolts, anchor bolts, nuts and washers shall conform to ASTM A307 or A325 as indicated, and shall be galvanized unless noted otherwise on plans.

Screws shall conform to FS FF-S-92, and shall be stainless steel.

Non-shrink, Non-metallic, grout shall be "Masterflow 928" manufactured by Master Builders, "SIKA Grout 212", manufactured by SIKA, "High Flow Grout", manufactured by Euclid Chemical Co., or approved equal.

Painting system consists of a shop applied prime coat and field applied finish coating and shall conform to the following:

1. Primer shall be Tnemec-Zinc 90-97, one component urethane, zinc-rich primer at 2.5-3.5 mils DFT as manufactured by Tnemec Co., Inc.

2. Intermediate coat shall be Tnemec Series 161 Tnemec-Fascure epoxy-polyamide coating at 4.0-6.0 mils DFT.

3. Top coat shall be Tnemec Series 73 Endura Shield III, aliphatic polyurethane enamel at 4.0-6.0 mils DFT. Color for top coat shall be selected by the Department.

4. Equal products as manufactured by Dupont or Ameron will also be acceptable.

550.3 Dissimilar Material. Where dissimilar metals as defined by MIL-STD-889 are in contact, or where aluminum is in contact with concrete, mortar, masonry, wood, or absorptive materials subject to wetting, protect the surfaces with a coat of bituminous paint, a coat of varnish conforming to Federal Specification TT-V-51, or a coat of zinc chromate primer conforming to Federal Specification TT-P-645 or Federal Specification TT-P-664 to prevent galvanic or corrosive action.

550.4 Construction Methods.

Fabrication shall be performed by mechanics skilled in the trade and in accordance with the manufacturer's directions. Metalwork shall be well formed to shape and size, with sharp lines, angles, and true curves. All work shall be fabricated to allow for expansion and contraction of materials. Provide welding and bracing of adequate strength and durability, with tight, flush joints, dressed smooth and clean.

Measurements shall be performed before fabrication, provide necessary field measurements and verify all measurements.

Metal surfaces shall be clean and free from mill scale, flake rust and rust pitting; well formed and finished to shape and size, with sharp lines, angles, and smooth surfaces. Shearing and punching shall leave clean true lines and surfaces. Unless otherwise indicated, weld or rivet permanent connections. Welds and flush rivets shall be used and finished flush and smooth on surfaces that will be exposed after installation. Do not use screws or bolts where they can be avoided; when used, heads shall be countersunk, screwed up tight and threads nicked to prevent loosening.

Fastening. Provide the necessary rabbets, lugs, and brackets so that the work can be assembled in a neat and substantial manner. Holes for bolts and screws shall be drilled. Joints exposed to the weather shall be formed to exclude water. Conceal fastenings where possible.

Shop Fabrication. Fabrication and assembly shall be done in the shop to the greatest extent possible.

Miscellaneous Items

1. Ladders

   Fabricate ladders with steel channels or bars for strings and steel rods for rungs as indicated on the plans. Ladders shall be galvanized after fabrication.

2. Bollards

Fabricate from steel pipe, grind all edges smooth. Paint as specified herein.

Anchorage, Fastenings, and Connections

1. Anchorage

Provide anchorage for fastening work securely in place. Set anchors in concrete as the work progresses. Sizes, kinds, and spacings of anchors not indicated or specified shall be as necessary for the purpose, as approved. Anchorage not otherwise specified or indicated includes slotted inserts, expansion shields, and powder-driven fasteners, when approved for concrete; machine and carriage bolts for steel; through bolts, lag bolts, and screws for wood. Provide inserts of suitable and approved types where required for support or anchorage of equipment and finish construction. Inserts shall be gray or malleable iron castings or galvanized steel, unless indicated or specified otherwise. Slotted inserts shall be of types required to engage with anchors. Except where specified otherwise, anchors and anchor bolts shall be zinc-coated.

2. Threaded Connections

Make threaded connections up tight so that threads are entirely concealed. Make bolted work up tight and nick the threads or bush the stem to prevent loosening. Abutting bars shall be shouldered and headed, dowelled and pinned. Pass small bars through larger bars and pin. Rivet, bolt, and screw heads shall be flat and countersunk in exposed work and elsewhere as required.

3. Anchors and Connecting Members

Provide in concrete as the work progresses, to avoid unnecessary cutting and drilling. Cut, fit, and drill as necessary so all materials are properly set in place and to permit engaging work to be properly installed.

4. Design Connections

Where not shown or indicated, connection details shall be in accordance with AISC M011 and connections shall be provided using common steel bolts. Provide necessary holes for securing work to structure. Use lock washers under nuts.

5. Built-In Work

Metal work built-in with concrete shall be formed for anchorage, or be provided with suitable anchoring devices as shown or as required. Furnish metal work in ample time for securing in place as the work progresses.

Welding. Perform welding, welding inspection, and corrective welding, in accordance with AWS D1.1. Weld in a manner to prevent permanent distortion of the connected parts. Weld continuously along the entire area of contact except where tack welding is permitted. Do not tack weld exposed connections. Grind smooth visible welds in the finished installation.

Finishes

1. Galvanizing

Hot-dip galvanize items specified to be zinc-coated after fabrication, where practicable. Galvanizing: ASTM A123, ASTM A153 and ASTM A525, as applicable.

a. Galvanize

Anchor bolts, washers, and parts or devices necessary for proper installation, unless indicated otherwise.

2. Repair of Zinc-Coated Surfaces

Repair surfaces damaged by welding or other means with galvanizing repair paint conforming to DOD-P-21035 or by the application of stick or thick paste material specifically designed for repair of galvanizing, as approved. Clean areas to be repaired and remove the slag from the welds. Surfaces to which stick or paste material is applied, shall be heated with a torch to a temperature sufficient to melt the metallics in stick or paste; spread the molten material uniformly over surfaces to be coated and wipe the excess material off.

3. Painting.

a. Surface Preparation

1. Prior to applying coatings surfaces shall be treated in conformance with SSPC-SP6, commercial blast cleaning. Surfaces to be coated shall of free of all dirt, rust, scale, loose particles, disintegrated coatings, grease, oil and other deleterious substances.

2. Shop primed surfaced shall be power washed prior to application of the finish coating system.

b. Paint System Application

1. Surfaces shall be painted in accordance with the following:

a. Prepared surface shall be given one coat of primer to a minimum dry film thickness (DFT) of 2.5 to 3.5 mils.

b. An intermediate coat shall be applied to a minimum DFT of 4.0-5.0 mils.

c. Top coat shall be applied to a minimum DFT of 4.0-5.0 mils.

d. Curing time for each application of coatings shall be as per paint manufacturer's recommendation and no successive coats shall be applied until preceding coat has cured. Application of coatings shall be in strict accordance with paint manufacturer's recommendations and these specifications. No painting shall be done in foggy or rainy weather or when the ambient temperature is below 50 degrees F or over 95 degrees F. All coats shall be evenly applied, free from runs, drops, ridges, waves, laps, brush marks and variations in colors. Paints shall be carefully applied so as not to spill, drip, be sprayed on or otherwise contaminate other surfaces. All applications shall be thoroughly worked into all joints, crevices and open spaces and finished surface free of defects. Damaged coatings shall be retouched before applying successive coats.

550.5 Submittals. Shop drawings and/or catalog cuts shall be submitted for review and approval and shall indicate all materials, thicknesses and show connection and welding details.

SPECIAL PROVISIONS - TECHNICAL

SECTION 560
PILE JACKETS

560.1 Description. This work shall consist of cleaning exiting piles at the Lincolnville hoist tower foundations within the indicated limits and furnishing and installing protective pile jackets.

560.2 Materials. Corrosion inhibiting tape shall be a synthetic fiber-reinforced tape impregnated with a petroleum based compound. The exterior jacket shall be a high density polyethylene (HDPE) jacket, ultraviolet resistant, secured with 316 stainless steel bolts and nuts. The tape and jacket system shall be SeaShield Series 2000HD, as manufactured by Denso North America, Inc, Houston, Texas. An alternate system, the TC Enviroshield Series R Module, as manufactured by the Tapecoat Company, Evanston, Il. may also be used.

560.3 Construction Methods. Remove any concrete, loose rust, scale, marine growth or other foreign material from the section of pile to be jacketed. Install jacket system in accordance with manufacturers instructions.

560.5 Submittals. Catalog cuts shall be submitted for review and approval and shall indicate all materials and installation procedures and requirements.

SPECIAL PROVISIONS - TECHNICAL

SECTION 610
STONE FILL, RIPRAP, STONE BLANKET AND STONE DITCH PROTECTION

This section is revised as follows.

610.01 Description. This work shall consist of furnishing and placing stone riprap as indicated on the drawings.

MATERIALS

610.2 Materials.

Stone Riprap shall meet the requirements for Stone Blanket Material.

All stone shall weigh not less than 160 pounds per cubic foot, as determined by the standard test for apparent specific gravity (ASTM Standard C 127), using representative chips about one inch in size taken from the stone as furnished.

Stone shall be hard, durable, rough, angular in shape and resistant to weathering. Neither breadth nor thickness of a single stone shall be less than one-third of its length. Rounded stone or boulders will not be accepted. Stone shall be free of overburden, spoil, shale and organic material.

610.03 Construction Requirements.

During construction, the Contractor shall take all necessary precautions to protect the slope protection from displacement by the sea and from all other causes.

No bulldozers, cranes or similar heavy equipment will be permitted to operate on the surface of any new riprap protection layer.

Stone shall be placed in such a manner as to avoid displacing the underlying material. Placing of slope protection by dumping or by similar methods will be permitted in front of the abutment.

The larger stones shall be well distributed and the entire mass of stone shall conform approximately to the gradation specified. All material going into slope protection shall be so placed and distributed that there will be no large accumulations of either the larger or smaller sizes of stone.

Hand placing or rearranging of individual stones by mechanical equipment may be required to the extent necessary to secure the results specified.

Unless otherwise authorized by the Engineer, the slope protection shall be placed in conjunction with the excavation work and with the backfilling of the Islesboro generator foundation with only sufficient lag in construction of the riprap protection as may be necessary to allow for proper construction of the portion of the embankment protected and to prevent mixture of backfill and riprap material.

SECTION 655
ELECTRICAL WORK

655.01 Work to be Done. The work to be done includes the furnishing of all labor, materials, tools, equipment, and incidentals necessary to furnish, install, test and place in satisfactory operation the complete electrical system, including power and lighting, diesel generating facilities complete with fuel tanks, enclosures, transfer switches & accessories and radio control systems, at the Islesboro Island and Lincolnville, Maine Ferry Terminals, as shown on the Plans and as herein specified. Included is all work and materials necessary to remove transfer bridges and existing electric services at the existing ferry transfer bridges. Included shall be electrical work associated with the demolition of the existing facilities and the disconnection of wiring to equipment to be salvaged and turned over the MDOT. See Contract Specifications regarding the time frame for demolition and the installation of a new system.

See contract drawings for existing and new service modifications . Certain work will be done by the Central Maine Power Company with backcharges to the Contractor.

Electric service to the ferry terminal facility will be 277/480 volts, 3-phase, 4-wire, 60 cycles at Lincolnville and 230 volt, 3-phase, 3-wire at Islesboro. Watthour meter services will be required for each transfer bridge facility to meet C.M. Power Co. requirements.

At Islesboro, the overhead service will be removed and existing manual transfer equipment on the service pole removed as indicated. The service will remain at 230 volts, 3-phase.

655.02 Work Not Included. The electric utility company will provide new overhead service transformers, wood poles, overhead wiring and watthour meters as indicated on the Plans for Lincolnville. The Central Maine Power Company will remove existing pole mounted transformers and the WHM at Lincolnville. Wire, and conduit and meter socket on pole #3/3 will be removed by the Contractor.

The apron hoist and transfer bridge hoist motor and gear box shall be provided with electric brakes, internal heaters and thermostats, proximity switch, hydraulic pump and motor and hydraulic solenoid and pawl withdrawal operator under Section 531 of the Specifications. All other electric controls shall be provided under this Section.

655.03 Equipment and Material Schedules. As soon as practicable after the date of award of contract and before any material and equipment are purchased, the Contractor shall submit to the Engineer for approval a complete list, in triplicate, of materials, fixtures, and equipment to be incorporated into the work. Items not meeting the requirements of the Specifications as determined by the Engineer will be rejected.

655.04 Permits. All permits necessary for making electrical connections and all other permits must be obtained by and at the expense of the Contractor.

655.05 Codes. The complete electrical work shall be done in accordance with the National Electrical Code, the National Electrical Safety Code, and the rules and regulations of the respective utility company (Central Maine Power Company).

655.06 Electrical Service. The Contractor shall provide underground electrical services, meter socket and grounding in accordance with the latest requirements of the respective utility company. The Contractor shall provide PVC coated rigid steel conduit below grade from the riser pole to the meter socket at Lincolnville. The meter socket shall be located as shown on the Plans and shall be as specified by the utility company. The Contractor shall pay all back charges to the respective utility company for all new construction and relocations required under this contract. Provide for a $ 16,000.00 allowance for these back charges. At Islesboro the contractor shall provide underground services to a new service entrance breaker as indicated from the existing 230-volt, 3-phase, 3-wire open delta service pole and watt hour meter. Confirm all arrangements with Central Maine Power Co. first.

The electric utility serving the facilities are as follows:

Central Maine Power Company
James Dean, Energy Services Advisor
57 Old Winthrop Road
Augusta, ME 04330
Tel. No.: 800-565-0121

655.07 Conduits. All conduit shall be of standard electrical trade sizes indicated, but not smaller than 3/4-inch. The conduit and fittings shall be PVC coated hot dipped galvanized rigid steel and shall have a charcoal gray or black 40-mil thick, bonded polyvinyl chloride coating on the exterior. The conduit shall also have a 3 mil urethane coating on the inside. All coated conduit shall be approved and listed by Underwriters' Laboratories, Inc. All conduit shall, prior to coating, conform to Federal Specification WW-C-581, ANSI Standard C80.1, and to Underwriters' Laboratories specifications. The zinc surface of the conduit shall remain intact and undisturbed on both the inside and the outside of the conduit throughout the preparation and application processing. A polyvinyl chloride (PVC) coating shall be bonded to the galvanized outer surface of the conduit. The bond between the PVC coating and the conduit surface shall be greater than the tensile strength of the plastic. The thickness of the PVC coating shall be a minimum of 40-mil thick. A loose coupling shall be furnished with each length of conduit. A PVC coating shall be bonded to the outer surface of the coupling and a PVC sleeve equal to the outside diameter of the uncoated conduit shall extend beyond both ends of the coupling approximately one pipe diameter or 1-1/2 inches, whichever is smaller. The wall thickness of the coating on the coupling and the sleeve shall be at least as thick as the coating on the conduit. The wall thickness of the coating on conduit bodies and fittings and the sleeve walls shall be identical to those on couplings in length and thickness. The covers on all conduit bodies shall be coated on both sides and shall be designed to be completely interchangeable. The inside of conduit bodies shall remain undisturbed in the processing and shall retain the manufacturers cadmium plate-aluminum paint finish. All coated material shall be installed and patched according to the manufacturer's recommended installation and patching instructions. The conduit shall be shipped with thread protectors installed on both ends and the couplings boxed separately. Clips, beam clamps and other fittings used with PVC coated conduit shall have PVC coatings. Clips shall be one-hole malleable iron and bolts shall be stainless steel. Conduit shall be Robroy Industries "Red H_2OT Red", Perma-cote Supreme, and Plastic Applicators "Kor-Kap". A touchup compound shall be provided for sealing joints, exposed threads and areas damaged during installation. Exposed conduits shall have supports spaced not more than 8 feet apart and shall be run exposed parallel or perpendicular to structural members. Conduits which have been damaged in any way shall not be installed. All outlets, junction boxes, conduit fittings, or device boxes installed shall be of the cast metal gasketed type.

Flexible. Flexible conduit shall be steel liquid-tight type with a copper bonding wire. Flexible conduit shall be as manufactured by Anaconda Metal Hose, Electri-Flex Co., Type LA, or Crouse-Hinds Co., or equal. Flexible metal conduit connectors shall have grounding ferrules which when the compression nut is tightened assures collaring of the liquid tight conduit in such a way that the end of the ferrule pinches around the conduit. Connectors shall be as manufactured by Appleton Electric Co., Crouse-Hinds Co., or equal. Provide cold shrink

corrosion & salt spray protection over flexible conduit fittings similar to Crouse Hinds TMC-K Kits.

Schedule 40 PVC conduit (use at utility poles where indicated). PVC conduit shall be Schedule 40, 90 degree C. U.L. rated per U.L. - 651. Conduit shall be composed of 100 percent virgin polyvinyl chloride and shall conform to NEMA Specification TC-2. It shall be U.L. listed in conformity with Article 347 of the National Electrical Code. Conduit, fittings and cement shall be produced by the same manufacturer, who must have had 5 years of experience in manufacturing the products. all joints shall be solvent cemented in accordance with the recommendations of the manufacturer. PVC conduit shall be as manufactured by Carlon, CertainTeed Corporation, Triangle Conduit and Cable Co., Inc., or equal.

655.08 Wiring. All wiring shall be copper, EPR or cross linked polyethylene insulated for 600 volts and shall be of the sizes shown on the Plans. No conductor shall be smaller than No. 12 AWG. All conductors shall have Type USE 2-RHH-2 or -RHH-VW-1 insulation, with a XLPE, PVC or neoprene jacket over the insulation. Wiring shall be color coded or black with colored tape at all ends. Use black, red & blue for wiring 240 volts and below and orange, yellow brown for 480-volt phase identification.

Cables between the terminal boxes on the hoist towers and the transfer bridge shall be extra flexible, abrasion, water and ozone resistant good for -34 C to +90 C outdoor with 90 C rated 600 volt conductors and jacket equal to Carol Cable "Super Vutron II" or Essex Cable Type S0W - A/S0W with IPCEA NEMA color coding, number and size of conductors as indicated with length required to reach the bridge in extreme raised or lowered position with sufficient slack to prevent strain on the cable. Cables shall be suitable for immersion in salt water. Position terminal boxes so that cable does not hang in water. Locate as high as possible. Provide corrosion proof basket weave cable strain relief grips on each end.

All connections shall be made with solderless pressure connectors.

655.09 Control and Service Cabinets. The Contractor shall furnish and install NEMA 4X control panel and service panels with all equipment as shown on the Plans. The enclosure itself shall be made of 10-gauge thick 316 stainless sheet steel with double hinged gasketed door with latches and 12" high floor stands welded to enclosures. Provide a 3-point latch handle with provisions for padlocking (see Paragraph 655.13) or stainless steel padlock and hasp. The enclosure shall contain a 3/4-inch AC Exterior plywood backboard painted on all surfaces with two coats of insulating varnish. The enclosure shall be constructed of plates continuously welded and ground smooth. Angle bracing shall be used for all corners with cross bracing inside as required. Doors shall also contain cross bracing and door stop kit. The Contractor shall submit to the Engineer for approval a detailed drawing of the enclosure before proceeding with its fabrication. The dimensions and internal arrangement of the enclosure shall be as shown on the drawings, however, provide equipment arrangement drawing based on equipment to be supplied with complete wiring and schematic drawings. Provide door pocket for schematics with plastic envelope. Provide with removable center post, rolled flanges on doors with closed cell gasketing. The doors shall be provided with heavy duty continuous hinges with stainless steel hinge pins. Provide white painted interior Provisions shall be made for proper ventilation

and drainage of condensation. All wire ends, terminal strips and switches, relays and contactors shall be provided with permanent identification. Provide with 800 watt, 120V thermostatically controlled unit heaters Hoffman catalog # DAH8001B and corrosion inhibitor tape and 60 watt T-10 lamp light fixture with guard and switch. . Do not mount heater direct on wood back board, but mount to metal side wall or raised metal brackets to wood backboard. Penetrations shall be water tight. Provide schematic wiring and ladder diagrams of all required components within the cabinet in accordance with UL 508 and J.I.C,

655.10 Switches and Receptacles. All switches controlling lighting circuits shall be extra-heavy-duty type, 120/277V, rated 20 amperes, and shall be Crouse-Hinds type EFS, with external operator handle, or approved equal. Photo-electric switches shall be as noted and arranged to face north with time delay to prevent operation from vehicle lights.

All duplex receptacles shall be extra-heavy-duty type, GFCI type 20 amperes, 125 volts, three-pole, two-wire grounded type and shall be Hubbell No. GF5352GY or approved equal with screw cover weather proof plates.

Switches and receptacles shall be weatherproof type enclosed in cast-metal condulets with gaskets and cast-metal covers to suit the device installed. Push-pull switch operators will not be acceptable.

655.11 Lighting Fixtures. Lighting fixtures shall be of the types and locations shown on the Contract Drawings and as specified herein. The type "C" floodlight fixtures mounted on the transfer bridge shall be U.L. marine outside (salt water) listed UL595 and UL1572, Hubbell Cat. No. MVH-0400S-26 or G.E. Co. P54S-40-S-O-A-1-7x6-DB with multi-tap ballast for 277 volt operation and heavy duty hot dipped galvanized trunnion yoke for either 2-1/2" bolts or one 3/4" bolt mounting. The housing and door frame shall each be one piece die cast copper free aluminum. Continuous one piece silicone rubber gasket, cast hinges, captive corrosion proof screws, and hydro formed one piece Anodal finished reflector, and with 400 watt high pressure sodium lamps, tempered glass lenses and polycarbonate or lexan shield shall be included. See Contract Drawings for specifics for rough service floodlight Type D and type A, B, E & F fixtures, complete with lamps. All fixtures shall be UL 1598A Marine outside type salt water listed.

655.12 Grounding. Permanent and effective ground connections shall be provided for all electrical equipment, frames, housings, metal cabinets enclosing electrical equipment and lightning system as required by the National Electrical Code. All ground connections to equipment shall be made by the use of copper terminal lugs, brazed to copper ground cables and bolted and clamped in an approved manner to the equipment. Run the ground conductor from the main service breaker, transformer and to the main ground cable and copper ground rod. Separately derived systems shall have transformer neutrals grounded and bonded per latest edition of the N.E. Code.

655.13 Padlocks. Bronze weather and ice proof pad locks with masterkeys to fit all locks shall be furnished for the control and service cabinets and other equipment unless otherwise specified installed under this contract. All pad locks shall be keyed alike. A lock shall be provided for each cabinet.

655.14 Radio Remote Controls shall consist of two sets of a Intercontinental Technologies, LTD., "Telecrane", Model F21DN1, fixed receiver with antenna and coaxial cable and two portable transmitters, Model F21DN1, operating on the 236-341 MHZ band. The Department is standardizing with this unit and no other will be permitted. Transmissions shall be digital type with a minimum 9600 BAUD rate and 70 MS response time. System components shall be suitable for operation from -30 to +70 C. Each transmission shall include a minimum 7 bit address, as well as control and check codes. Controls shall consist of labeled membrane pushbuttons. Transmitters shall be powered by four (4) "AA" alkaline batteries, with spare transmitter complete with batteries. The Contractor shall run operational tests on the system to the satisfaction of the Engineer at a minimum distance of 250 feet. Nameplates labeled "apron", "ramp" and "lighting" shall be provided.

Transmitting antenna which is an integral part of the transmitter enclosure.

Rugged splash proof high impact outdoor case with door access to battery. provide wrist straps and leather holsters for each transmitter.

Recessed, marked pushbuttons shall be included. These pushbuttons require a key to operate, to guard against accidental turn on. A key and strap will be included with each transmitter. When the transmitter is "OFF" the activation of any other switch on the transmitter shall not result in any signal being transmitted to the receiver.

The transmitter shall be capable of transmitting all required functions simultaneously, and shall be FCC certified and shall be appropriately labeled as such and shall be easy to maintain. This transmitter shall be certified for Part 15 operation and no end-user license shall be required. Battery shall be protected within transmitter case but accessible through battery compartment door.

Each microcomputer controlled receiver/decoder/interface unit shall be of unitized design and shall be provided to work in conjunction with the system transmitter to receive, decode, and provide an appropriate output to the controls of a transfer bridge apron and lights and shall be designed to only select commands from the designated system transmitter. The receiver/decoder/interface components shall be shock mounted for outdoor operation. Provide an environmentally and tamper resistant NEMA 4x Type, gasketed, front-access enclosure.

Provide enclosure with breakers, drains and enclosure heater with built-in fan and thermostatic control (0-100 F) similar to Hoffman Cat. #D-AH1001A.

The receiver/decoder section shall consist of a microcomputer board and an RF module both of which are interchangeable with similar systems. The microcomputer board shall contain application and diagnostic programs, 16 bit switch selectable access code and fixed crystal controlled receiver. Indicators to diagnose and locate system malfunctions shall reside on individual boards.

The receiver shall be designed to operate in the presence of interfering electrical noise and extraneous radio signals as might be caused by motor brushes, contactors arcing, trolley collector shoes, arc welders, truck ignition, generators, power distribution equipment, fluorescent lighting, radio transmitters of all types, induction heaters, numerical controllers, digital transmission lines, and all sources of interfering electrical noise presently encountered in and near the vicinity of the terminal.

The microcomputer controlled receiver shall employ numerous data checks of the eight bit data words such as parity bit check, frame successive compare check, directional decode check, stuck bit check, frame timing check and full house check to assure the appropriate transmitter signal is being received and to monitor internal workings of the system.

The system shall be designed to be guarded by a receiver generated Dynamic Enable Signal which assures "no signal, no operation".

A watch dog timer reset function shall be provided separate from the microcomputer to provide redundant checking of processing errors and to shut down system should such an error occur.

The interface portion shall provide 5 ampere, 250 V.A.C. rated contacts to drive coils of up to NEMA 2 AC contactors.

Output monitoring of all output functions shall be standard.

Opto-isolation shall be provided as part of failsafe design between control electronics and output drivers.

A receiving antenna of rugged outdoor construction shall be provided. The receiver shall be capable of receiving up to 12 functions with no perceptible delay in simultaneous operation. The failure of any electronic component in either the short-or-open-circuit mode shall result in no motion, rather than uncommanded motion, for the motions involved.

Reliability, dependability, maintainability and ruggedness shall be prime considerations in the design and construction of all components parts of this equipment to insure operation of the system under all conditions of dust, moisture, temperature, vibration, corrosive influences and electrical interferences. Reduced maintenance and long service shall be achieved by simplicity of design and function, use of standard components and heavy-duty industrial type parts conservatively rated. To the greatest extend practicable, construction shall be in the form of modules replaceable as units. All units shall be factory assembled and wired to plainly marked barrier-type terminal strips to facilitate field installation. The system shall be capable of being operated from the supply or control voltages indicated. The system shall operate in ambient temperatures up to +70 C maximum and down to -30 C minimum. The system shall be protected for operation in the outdoor conditions of conductive dust, moisture, salt spray, Et. Al. found in the transfer bridge operating area.

Entire remote radio control system shall be designed to provide maximum safety for personnel, or other operated equipment, adjacent structures, plant equipment and material being conveyed, taking full advantage of the safety features built into the existing control equipment. Utilizing microcomputer driven diagnostic and checking routines plus redundant checks which are independent from the microcomputer the transmitting and receiving equipment shall be engineered to perform in such a way that an extraneous signal from any source, natural or man-made will not be accepted as a valid signal. The system shall be designed in such a way that the failure of an electronic component or its normal aging will result in stopping the motion involved. All motions shall stop when the receiver runs out of the specified range of the transmitter. The "dead man" feature, consisting of pressure sensitive membrane switches, built into the master control transmitter, shall cause all equipment motion commands to stop if the operator should accidentally trip and fall or drop the transmitter. Additional, a protective ridge and recess shall be positioned over the motion switches to prevent accidental actuation of motion switches should the transmitter be dropped. Likewise, all control switches shall be designed to facilitate safe manipulation by an operator whose vision and attention will normally be directed toward the remote equipment under his control. Shock conditions which might be encountered on ramp bridge or other specified equipment shall not defeat the safe operation of the receiver/decoder/interface unit.

It is essential that the entire control system react with a minimum of time delay to provided for nearly instantaneous operation of any crane motion in response to the master control setting. The digitally encoded system will have a baud rate to emulate instantaneous response to human perception.

System design shall provide for in each system rapid identification of faults through an on board receiver located diagnostic procedure which through a series of test lights shall indicate the problem area and point to the module to be replaced. The diagnostic procedure will also be available as a means to test the transmitter. All spare parts necessary to maintain one system shall be listed, and priced, as part of Vendor's submittal. These shall include one transmitter and the receiver/decoder/interface unit modules, plus necessary maintenance parts.

Full system commissioning shall be provided. This will be performed by Manufacturer's trained personnel after installation is completed. The installation shall be fully checked as part of the radio control commissioning.

This system commissioning will be scheduled during normal daytime working hours, Monday through the following Friday, as requested by Purchaser's personnel. Coordinate control signal decoder/encoder with MDOT personnel.

Supply a full set of drawings, including dimensional drawings of cabinets, module location drawings and typical electrical interconnection and control elementary diagrams. The latter diagrams shall indicate the typical interconnection between Manufacturer's intermediate relays and equipment magnetics.

655.15 Terminal Strips shall be double ended box type, rated at 600 volts and capable of taking 1 no. 10, or 3 no. 12 wires each or as required. Sections shall be mounted on a channel

and shall be numbered as shown on the Plans. All 120 volt and 480 volt terminal strips shall be separated by barriers in the enclosures. The enclosures other than the control cabinet shall be cast metal gasketed NEMA 6P with threaded hubs or bosses and mounting lugs. Seal around all cable entrances. All terminal strips and wire ends shall be identified with waterproof markings.

655.16 Motor Starters and Contactors shall fully conform to U.L. and NEMA standards and shall be NEMA rated as indicated on the Plans. Ambient compensating, selectable Class 10,20 or 30 thermal overload relays shall be provided in each phase wire on motor starters. The transfer bridge motor starter shall include a reversing contactor, motor starter or contactor with separate ambient compensating class 10/20/30 adjustable thermal overload device as indicated on the plans. There are two types of contractors, electrically held (LC) and Mechanically held (RC).

655.17 Relays shall be 600 volt, 10 ampere machine-tool relays with 120 volt coils. Timing relays shall be on or off delay as indicated on the Plans.

655.18 Control Stations shall consist of heavy-duty oiltight/watertight pushbutton/selector switches in NEMA 4X stainless steel enclosures as indicated on the Plans.

655.19 Limit Switches shall be NEMA and U.L. 6P submersible, -20 F to +140 F, Snap-action silver alloy contacts, die-cast construction, lever action, with 3 inch lever arm with roller. 10 ampere continuous rated contacts (60A make, 6 amp break) at 120 VAC. Contacts arranged as indicated on the Plans. Provide with overtravel and reset range as required for the installation for apron and bridge control.

655.20 Cabinet Heater shall be a thermostatically controlled fan driven heater unit in a anodized aluminum housing with an air sensing thermostat adjustable 0-100 F with barrier terminal block equal to Hoffman Cat. No. D-AH8001B. Maintain manufacturer's recommended clearance from electrical components.

655.21 Transformers shall be outdoor weatherproof encapsulated with full capacity taps above and below normal as indicated on the plans.

655.22 Weatherproof Panelboards shall be stainless steel or fiberglass NEMA 4X rated equal to Square D Co. NQOD, Cutler-Hammer or General Electric Co. equal with copper bus bars, bolted breakers with panel locks. Provide with 22,000 ampere I.C. rated at 120/240 volts QOB-VH circuit breakers.

655.23 Circuit Breakers. The main circuit breakers shall be service entrance rated 250 ampere frame rated 18,000 I.C. at 480 volts Square D type JD, with 18,000 ampere feeder breakers Square D Co. type HD, or General Electric or Cutler-Hammer approved equal. Provide with NEMA 1 or NEMA 4X enclosures where exposed to elements.

655.24 Lightning and Surge Arresters. Provide at the main circuit breaker a 3 phase 0-650 volt lightning arrester equal to Square D Co. Cat #SP3650 or G.E. Co. or Westinghouse Co. approved equal and with a 3 phase surge arrester G.E. Co. 9L5ECC001 or Square D or

Westinghouse Co. approved equal all connected solidly to ground. Fuse lightning arrester if required by the manufacturer.

655.25 Remote Control Switches shall be of the number of poles and ratings indicated and mounted on a subpanel with single coil operation voltage as indicated or required and with coil clearing contacts, ASCO. Model 920, U.L. listed with no derating for tungstem or guartz halogen loads and with a short circuit rating of 22,000 I.C. at 480 volts. The unit shall be provided with manual operation provisions and can be mounted in any position.

655.26 Time Clocks shall be of the ampere rating, number of poles and in the enclosure indicated. They shall be designed for 120 or 277 volts as indicated and shall be astronomic type with 16 hour reserve power. Factory wire to "ON-OFF-AUTOMATIC" switches for each circuit independently. Contacts shall be tungsten rated 20 amperes to 277 volts. Operating temperature range shall be -40 F to 165 F.

655.27 Generators, Fuel Oil Tanks and sound attenuated enclosures and automatic transfer switches. The generator sets shall be rated for continuous standby power duty rating three phase, 4 wire, 277/480 volt, 60 hertz a.c., 0.8 power factor with KVA and KW ratings as per generator tabulation herein with engine conforming to EPA Tier 3 none road emissions regulations. The performance of the engine generator shall be certified by an independent testing laboratory as to the pant's full power rating and voltage and frequency regulations. The continuous standby rating shall be verified by manufacturer's published literature. All equipment shall be new and of the latest design, and shall meet all applicable IEEE, DEMA, and NEMA requirements.

Engine: the engine shall be diesel, four cycle, water cooled with 125-degree ambient radiator, pusher type fan, water pump, and radiator duct adapter. Rust inhibitor and antifreeze solution shall be provided for a temperature of minus 30 degrees. The engine shall have the number of cylinders with a piston displacement and a horsepower rating (at an operating speed of 1800 rpm) of not less than shown in the tabulation: Engine Generator Set Specifics. The BMEP at the KW rating with radiator fan shall not exceed the figures stated in the tabulation. Running the engine at higher speeds and moving the alternator through gear reduction will not be permitted. Lubrication shall be by a full pressure gear type oil pump and the engine equipped with an oil filter of the replaceable element type. There shall be one more main bearing than there are number of cylinders. Provide 12 volt D.C. operated fuel solenoid valve and flexible fuel lines and connectors, shutoff valve and fuel filters with restriction indicator. Provide replaceable element type air cleaner, and fuel filters. Engine speed shall be governed by an isochronous electronic governor to maintain generator speed with 0.25 percent from no load generator output. The complete engine generator unit shall be free from critical and torsional vibration within the operating speed range. The engine shall be started by means of a 12-volt starting motor and shall be equipped with a 12-volt 45-ampere battery-recharging generator with automatic charge rate regulator. The engine shall be protected from damage during operation by means of a high water temperature, low oil pressure, low coolant level shutdowns. An automatically controlled 120-volt engine jacket water heater for connection to an external power source to maintain the water at 80 degree F. through a factory-wired thermostat shall be provided. An oil pressure switch shall be provided in the circuit to shut the heater off

whenever the engine is operating. All moving parts such as fan, belts, etc shall be guarded in accordance with OSHA requirements.

The diesel generator set shall be a continuous duty set mounted in perfect alignment on all-welded, fabricate steel, sub-base with double wall fuel tank sub-base which shall provide for attachment of all necessary engine and generator accessories. The set shall meet the UL, IEEE, DEMA and NEMA applicable publication requirements. Integral vibration isolation eliminates need for under unit vibration isolators. The generator set shall be rated for continuous standby 24 hour duty with rating as shown on the attached schedule and Drawings. The continuous rating shall be verified by manufacturer's published literature only. The generator set shall be:

Driven by a turbo charged diesel engine with engine specifics per tabulation in this section which shall be run at 1800 rpm, and operate satisfactorily on a commercial grade of No. 2 fuel oil not required a premium fuel, such as Kerosene.

The engine shall be vertical, multi-cylinder four cycle, solid injection fuel diesel type, with moving parts housed. The maximum design speed of the engine in the service anticipated shall not exceed 1800 rpm. The lubrication system shall be of the forced feed type and the initial filling of the oil shall be by the Contractor and of a type recommended by the Engine manufacturer. The fuel injection system for the engine shall be of the low pressure type, with pressure in the lines from the fuel pump to the injectors not in excess of 200 psi. the use of glow plug starting aids will not be permitted. The following attached fuel system accessories shall be provided: filters, D.C. fuel line solenoid valve with auxiliary manual operator, vent and fill lines, engine fuel pump and flexible connectors. The cylinder liners of the engine shall be of the wet type with chromed inner surfaces and be removable, with crankshaft fully counterbalanced with all bearing surfaces Tocco-hardened or equal, with one more main bearing than there are number of cylinders and replaceable bearing inserts. The complete unit shall be free from critical and torsional vibration within the operating speed range. Engine generator specifics are tabulated herein.

The Engines shall be furnished complete with the following accessories:

One full flow and on by-pass type lubrication oil filter.

Dry replaceable element type air cleaner with restriction indicator for air intake system.

Replaceable element type filter, to be engine-mounted in fuel line between fuel supply and fuel pump.

Engine fuel system with governor. Governor performance (valued in percent of rated speed) shall be as follows:

Steady state stability – plus or minus 0.25 percent.

Minimum droop – 3.0 percent.

Transient deviation, no load to full load – 4.0 percent.

Maximum recovery time, no load to 95 percent full load state – 0.5 second.

Overspeed shutdown set alarm system for protection against overspeeding.

Generator: The generator alternator shall be drip proof 4-pole, revolving field type with PMG static exciter and solid state regulator. Provide a permanent magnet excited generator. It shall be 130 degrees C. rise over 40 degrees C. ambient, but Class H insulated, and shall be firectly connected to the engine flywheel housing and driven

through a semi-flexible driving flange to insure permanent alignment. The alternator shall be insuated with epoxy varnish fungus resistant per MIL-24092. Voltage regulation shall be within plus or minus 2 percent of rated voltage when full load at rated power factor is applied to the generator. A rheostat shall provide plus or minus 5 percent voltage adjustment. The voltage regulator shall be solid state.
Stable alternator operating conditions shall be re-established within 2 seconds following any sudden change in load between no load and full load, or between full load and no land. Stable operation is defined as operation with terminal voltage held constant within plus or minus 2 percent of rated voltage. A line voltage 3-pole circuit breaker shall be furnished and mounted and wired on the generator output terminal box and shall be of the frame and trip size shown on the drawings.

Engine generator mountings. The engine generator shall be mounted on a structural steel mounting skid with vibration isolation attached to a matching double wall fuel tank sub-base. The engine generator suppler shall furnish complete prints showing in detail the mounting dimensions necessary for anchor bolts, fuel tank – vent fill and size and locations.

Instrument panel. Provide the following features:

AC interlock to prevent starter re-engagement with engine running.
DC Circuit protection.
Error-proof wiring harness for electrical connections.
Panel Lamps (2).
Voltmeter, DC Battery.
AC ammeter, 2% of full-scale accuracy.
AC voltmeter, 2% of full-scale accuracy
Frequency meter, 0.5% of full-scale accuracy.
Voltmeter ammeter phase selector switch.

Prealarm indicators:
Auxiliary (multiple function).
Battery charger
Fuel, low pressure
Pressure, low oil
Temperature, low engine
Temperature, high engine
Voltage, high battery.
Voltage, low battery.
Under/over voltage frequency
Low Fuel Alarm.

Shutdown indicators:
Auxiliary (multiple function).
Emergency stop.
Level, low coolant (utilizes auxiliary indicator).
Overcrank
Overspeed
Pressure, low oil.

Temperature, high engine.
Fail to start
Low fuel.

Status indicators:

Generator switch not-in-auto.
System ready (green).
Running time meter. Switches and standard features.
Continuous or cyclic cranking. The Cyclic cranking provides up to 45 seconds of continuous cranking or 75 seconds of cyclic cranking (crank 15 seconds, rest15 seconds, crank 15 seconds, etc.). The crank disconnect speed is 290 rpm (13Hz).
Horn, alarm (with silencing switch).
Shutdown, overvoltage protection.
Start, remote 2-wire.
Switch, lamp-test.
Swiitch, meter range selector.
Swithc, run/off-reset/auto (engine start) with LED indications.
Timer, engine cooldown (5-minute fixed).
Voltage control, generator output voltage-adjusting (front panel mounted, +5% of nominal voltage).
Engine coolant heater control to shut off heater when engine runs.

Generator engine exhaust system. A critical (or hospital type) silencer shall be factory mounted complete with drain with shutoff, seamless stainless steel flexible exhaust section and rain cap and mounted with in the enclosure. Muffler shall be aluminized steel and coated to be temperature and rust resistant for critical application. An expanded metal guard and insulating blanket shall be provided to prevent contract with hot flexible exhaust pipe connections.

Auxiliary heaters with thermostatic controls all factory wired as follow:

Engine jacket water heater 1000 watt 12 volt. (to de-energize when engine runs).
Battery warming heater 150 watt, 120 volt.
Lube oil sump heater.
Anti-condensation generator heater.
Anti-condensation controller heater.

Batteries. Starting batteries of the lead antimony aid type shall be furnished to provide 12 volts for engine starting. They shall be not less than 640 CCA at 0°F rating. A corrosion-proof battery rack shall be provided with necessary battery cables. Battery terminals shall be provided with corrosion protection. A 6 ampere float and equalize type battery charger shall be provided to maintain starting batteries at full charge. It shall be fully automatic in operation. The charger shall be current limited during cranking operation and short circuit conditions and temperature compensated for - 40°C to + 60°C with accurate voltmeter and ammeter fused reverse polarity transient protection.

Double Wall Secondary Containment Sub Base Fuel Tank.

A sub base fuel tank used in connection with a diesel powered generator set of 55kW rating will contain fuel to support the generator set for a period of 24 hours at 100% of rated load and 40 hours at 75% of rated load.

The sub base fuel system is listed under UL 142, sub-section entitled Special Purpose Tanks EFVT category, and will bear their mark of UL Approval according to their particular classification.

The above ground steel secondary containment rectangular tank for use as a sub base for diesel generators is manufactured and intended to be installed in accordance with the Flammable and Combustible Liquids Code – NFPA 30, the Standard for Installation and Use of Stationary Combustible Engine and Gas Turbines – NFPA 37, and Emergency and Standby Power Systems – NFPA 110.

Construction: Primary Tank:

It will be rectangular in shape and constructed in clam shell fashion to ensure maximum structural integrity and allow the use of a full throat fillet weld.

Steel Channel Support System:

Reinforced steel box channel for generator support, with a load rating of 5,000 lbs. per gen set mounting hole location. Full height gussets at either end of channel and at gen set mounting holes shall be utilized.

Exterior Finish:

The exterior coating has been tested to withstand continuous salt spray testing at 100% exposure for 244 hours to a 5 percent salt solution at 92-97°F. The coating has been subjected to full exposure humidity testing to 100% humidity at 100°F for 24 hours. Tests are to be conducted in accordance with the American Standard Testing Methods Society.

Venting:

Normal venting shall be sized in accordance with the American Petroleum Institute Standard No. 2000, Venting Atmospheric and Low Pressure Strange Tanks not less than 1 –1/4" (3 cm.) nominal inside diameter. A 1 –1/4" atmospheric mushroom cap shall be furnished and the installing contractor shall pipe above the highest fill point as a minimum.

Emergency Venting:

The emergency vent opening shall be sized to accommodate the total capacity of both normal and emergency venting and shall be not less than that derived from NFPA 30, table 2-8, and based on the wetted surface area of the tank. The wetted area of the tank shall be calculated on the basis of 100percent of the primary tank. A zinc plated emergency pressure relief vent cap shall be furnished for the primary tank. The vent is spring-pressure operated: opening pressure is 0.5/psig and full opening pressure is 2.5 psig. Limits are stamped marked on top of each vent. The

emergency relief vent is sized to accommodate the total venting capacity of both normal and emergency vents.

Fuel Fill:

There shall be a 2" NPT opening within the primary tank with an 8" raised fill pipe and lockable manual fill cap.

Fuel Level

A direct reading, UL listed, magnetic fuel level gauge with a hermetically-sealed vacuum tested dial shall be provided to eliminate fogging.

Low Fuel Level Switch:

Consists of a 50 watt float switch for remote or local annunciation for a (50% standard) low fuel level condition.

General:

All equipment necessary for proper installation shall be furnished, including five copies of complete operating instructions and parts manuals. A black-on=white instruction form covering the complete operation of the equipment shall be provided for installation as directed by the Engineer and shall included the name, address and telephone number of the local representative from whom parts and services area available. The engine generator accessory equipment shall be of the latest design conforming to manufacturer's standards for this equipment and shall be offered only for the rating and service for which it was designed. All equipment shall be furnished to the Contractor by the engine generator supplier, establishing one source for the proper operation of the emergency system.

The supplier of the engine generator sets shall furnish the Contractor seven copies of material for approval. This shall included complete certified copies of shop drawings, catalog cuts, wiring diagrams, outline drawings and dimensions of all equipment being furnished. General advertising pamphlets and items, which do not pertain to installation, shall not be furnished. Provide 4 hours of on-site training for Owner's personnel per site. Training shall include maintenance parts ordering, safety, operation, troubleshooting and a complete review of operation and service manuals.

Testing:

Upon completion of the installation, the engine generator shall be tested by a representative of the manufacturer at a time approved by the Engineer or Owner. All costs for the test, including lube oil, rust inhibitor and fuel used, shall be assumed by the Contractor. The test shall consist of a two-hour running period under bridge load conditions. The test shall be run under simulated power failure and with the entire emergency load connected and running, as determined by the Engineer. Readings as

outlined below shall be taken and 5 copies of a written report of the test submitted to the Engineer.

Time
Oil pressure
Engine water temperature
Battery charge rate
Generator voltage (all legs)
Generator amperage (all lets)
Frequency
Outside air temperatures
Engine oil temperature
All alarm functions and generator shutdown functions shall be demonstrated to be operable in the field.

A written report covering these readings shall be submitted in five copies for the test. The Owner's operating personnel shall be instructed in the operation of the equipment. All tests and instructions shall be conducted at a time favorable to the owner.

Certification.

The engine manufacturer shall be required to certify in his proposal that the units offered comply with the minimum requirements outlined in the Specifications. A copy of the manufacturer's proposal shall accompany submittals data. However, contract pricing need not be shown in the proposal.

The generator manufacturer shall further certify in writing upon completion of the installation that the machinery is installed correctly, operates correctly, and is warranted for 60 months.

Tabulation of Engine Generator Specifics.

Manuf. And Cat. No.	Ratings* KW	KVA	Engine Specifications No. Cyl.	CU. In.	HP	BMEP PSI
Caterpiller D50-4	50	62.5	4	269	94.5	155
Kohler 50REOZJC	50	63	4	276	99	157.8
Onan DGCB	60	75	4	240	102	171.1

Engines are turbo charged.

HP Based on 1,800 RPM w.o Fan cooling load.

The MDOT transit bridge operators prefer Caterpillar brand for ease in stocking components used at other sites.

655.28 Outdoor Weather Protective Enclosure. The generator set shall be provided with an outdoor enclosure, with the entire package listed under UL2200. The packages shall comply with the requirements of the national Electrical Code for all wiring materials and component spacing. The total assembly of generator set, enclosure and sub-base shall be designed to be lifted into place using spreader bars. Housing shall provide ample airflow for generator set operation at rated load in an ambient temperature of 120 degrees F. The housing shall have hinged access doors a s required to maintain easy access for all operating and service functions. All doors shall be lockable, and include retainers to hold the door open during service and weatherproof seals. Enclosure roof shall be cambered to prevent rainwater accumulation. Openings shall be screened to limit access of rodents into the enclosure. All electrical power and control interconnections shall be made within the perimeter of the enclosure.

All sheet metal shall be primed for corrosion protection and finish painted with the manufacturers stand colors using a two step electro-coating paint process, or equal meeting the performance requirements specified below. All surfaces of all metal parts shall be primed and painted. The painting process shall result in a coating that meets the following requirements.

Primer Thickness – 0.5 – 2.0 Mils
Top Coat Thickness – 0.8 – 1.2 Mils.
Gloss – Per ASTM D523-89, 80% plus or minus 5%. Gloss retention after one year shall exceed 50%.
Crosshatch Adhesion – Per ASTM D3359-93, 4B-5B
Impact Resistance – Per ASTM D2794-93 120-160 inch-pounds.
Salt Spray – Per ASTM B117-90 1000+ hours.
Humidity – Per ASTM D2247-92, 1000+ hours.
Water Soak – Per ASTM D2247-92 1000+ hours.

Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant, and designed to minimize marring of the painted surface when removed for normal installation or service work.

Enclosure shall be constructed of minimum .125" thick aluminum framework and for panels. All hardware and hinges shall be stainless steel. The enclosure shall be rated for 150 MPH wind exposure.

A factory-mounted exhaust silencer shall be installed inside the enclosure. The exhaust shall exit the enclosure through a rain collar and terminate with a rain cap. Exhaust connections to the generator set shall be through seamless stainless steel flexible connections.

The Enclosure shall include the following maintenance provisions: interior valves and flexible coolant and lubricating oil drain lines, that extends to the exterior of the enclosure, with internal drain valves.

The generator set shall be provided with a sound attenuated housing which allows the generator set to operate at full rated load in an ambient temperature of up to 120 degrees F and down to –30 degrees F. The enclosure shall reduce the sound level of the generator set while operating a full rated load to a maximum of 66.3 dBA at any location 7 meters from the generator set in a free field environment. The enclosure shall be insulated with non-hydroscopic materials.

Provide a single phase, three wire load center panelboard with main breaker and branch breaker factory wired to the following:

Two 110 volt (incandescent light fixtures).
Battery Charger.
Battery Warming pads.
Jacket water heater.
Lube oil heater.
Stator space heater.
Duplex outlet NEMA 5020R w/GFCI.

655.29 Automatic Transfer Switch Submittal: The submittal shall include prototype test certification and specification sheets showing all standard and optional accessories to be supplied, schematic wiring diagrams, dimension drawings, and interconnection diagrams identifying by terminal number, each required interconnection between the generator set and the transfer switch if it is included elsewhere in this specifications.

Testing: To assure that the equipment has been designed and built to the highest reliability and quality standards, the manufacturer and/or local representative shall be responsible for three separate tests: design prototype tests, final production tests, and site tests.

Design Prototype Test: Components of the emergency system such as the engine/generator set, transfer switch, and accessories shall not be subjected to prototype tests

since the test are potentially damaging. Rather, similar design prototypes and preproduction models, which will not be sold, shall have been used for the following tests.

Production Tests: Final Production Tests: Each transfer switch shall be tested under load with all guards in place. Test shall include:

The complete automatic transfer switch shall be tested to ensure proper operation of the individual components and correct overall sequence of operation and to ensure that the operating transfer time, voltage, frequency, and time delay settings are in compliance with the specification requirements.

The complete automatic transfer switch shall be subjected to a dielectric strength test per NEMA Standard ICS 1-109.05.

The control panel shall meet or exceed the voltage surge withstand capability in accordance with ANSI C37.90a-2978 and the impulse withstand voltage test in accordance with NEMA Standard ICS 1-109.

Upon Request, arrangements to either witness this test will be made, or a certified test record will be sent prior to shipment.

Site Tests: The manufacturer's local representative shall perform an installation check, start-up, and building load test. The engineer, regular operators, and the maintenance staff shall be notified of the time and date of the site test.

Warranty & Maintenance: A five year warranty for the automatic transfer switch shall be included to guaranteed against defective material and workmanship in accordance with the manufacturer's published warranty from date of start-up. Optional warranties shall be available upon request.

The automatic transfer switch manufacturer and its distributor shall maintain a 24-hour parts and service organization. This organization shall be regularly engaged in a maintenance contract program to perform preventive maintenance and service on equipment similar to that specified. A service agreement shall be available and shall included system operation under simulated operating conditions, adjustment to the generator, transfer switch, and switchgear controls as required, and certification in the owner's maintenance log of repairs made and proper functioning of all systems.

Compliance With Codes and Standards: The ATS shall conform to the requirements of:

UL1008—Standard for Automatic Transfer Switches
NEMA Standard IC10 (formerly ICS 2-447) Automatic Transfer Switches.
UL 508—Standard for Industrial Control Equipment.

Electrical Requirements: Automatic transfer switches not intended for continuous duty or repetitive load transfer switching are not acceptable.

The automatic transfer switch shall be rated to withstand the rms symmetrical short circuit current available at the automatic transfer switch terminals with the type of overcurrent protection sown on the plans.

Equipment: The transfer switch shall be a 277/480 volt, 60Hz Kohler model KDT-ACTA-0225S., ASCO Series 300-3-104-N-1-G-44G, or G.E. Zenith approved equal.

The transfer switch shall have the following characteristics:

100 amp current rating
3 Pole
4 Wire, 3 Phase
480 Volt-60Hz
Solid Neutral

The withstand and closing ratings with any overcurrent protective device shall be 30,000 Amps.

The ATS shall be furnished in a NEMA 4X enclosure.

The switch shall be a 480 volt class.

The switch shall be furnished with a strip heater and thermostat.

Mechanical Requirements: All main contacts shall be of silver composition.

All contacts, coils, springs, and control elements shall be conveniently removable from the front of the transfer switch without major disassembly or disconnection of power conductors.

The contract transfer time shall have a programmed off position.

All moveable parts of the operating mechanism shall remain in positive mechanical contact with the main contacts during the transfer operation without the use of separate mechanical interlocks.

The neutral conductor shall be solidly connected as shown on the plans, a neutral conductor terminal plate with fully rated AL-CU pressure connectors shall be provided.

Transfer Switch Control System: The control module shall direct the operation of the transfer switch. The module's sensing and logic shall be a built-in microprocessor-based system for maximum reliability, minimum maintenance, and inherent digital communications capability. The control settings shall be3 stored in nonvolatile EEPROM. The module shall contain an integral battery-backed programmable clock and calendar. The control module shall have a keyed disconnect plug to enable the control module to be disconnected from the transfer mechanism for routine maintenance.

The control module shall be mounted separately from the transfer mechanism unit for safety and ease of maintenance. Interfacing relays shall be industrial control grade plug-in type with dust cover.

The control module shall included a user interface keypad with tactile feedback pushbuttons and light=emitting diode status indication. These features shall be user accessible when the enclosure door is closed:

Keypad pushbuttons:

- Start/end system test
- Set/end exercise
- End time delay
- Lamp test/service reset

Light-emitting diode status indicators:

- Contactors Position: Normal, Off, Emergency.
- Source Available: Normal, Emergency.
- Service Required: Immediate, maintenance.
- Not in automatic mode.
- Four stage time delay remaining.
- Exercise: load, No load, set/disabled
- Test: load, no load
- Load Control Active: peak shave, load shed, pre/post-transfer signal
- In-Phase monitor/Off delay Active.

Outputs:

- Generator engine start gold flashed contact rated 2 amps @ 30 VDC/250VAC.
- Pre-transfer load control, one normally open contact rated 10 amps @ 30 VDC/250 VAC.
- One programmable output, factory- set to load blank control rated 2 amps @ 30 VCD/250 VAC.

Operation:

All phases of normal and all phases of emergency shall be monitored for over and under voltage and single phase of normal and emergency for over – and under – frequency. In addition, the controller shall use anti-single phasing protection that detects regenerative voltage (using the phase angle of the source) to determine a failed source condition.

Voltage and frequency sensing:

- Under voltage pick-up set at 90% of nominal voltage, adjustable 85% - 100% of nominal voltage.
- Under voltage dropout set at 90% of pickup voltage, adjustable 75% - 98% of pickup voltage.
- Over voltage drop set at 110% of nominal voltage, adjustable 105% - 135% of nominal voltage.
- Over voltage pick-up set at 95% of dropout voltage, adjustable 85% - 100% of nominal voltage.
- Voltage dropout time set at 0.5 seconds adjustable 0.1 – 9.9 seconds.
- Voltage accuracy: 2%.

Under frequency pick-up set at 90% of nominal frequency, adjustable 85% - 95% of nominal frequency.
Under frequency dropout set at 99% of pick-up frequency, adjustable 95% - 99% of pick-up frequency.
Over frequency dropout set at 101% of pick-up frequency, adjustable 101% - 105% of nominal frequency.
Over frequency pick-up set at 110% of nominal frequency, adjustable 105% - 120% of nominal frequency.
Frequency accuracy: 1%.

Time Delays:

Time delay for engine start to delay initiation of transfer form momentary source outages: Range 0-6 seconds. Factory set at 3 seconds.
Time delay for transfer to standby: Range 0-60 minutes. Factory set at 1 second.
Time delay for transfer back to normal: Range 0-60 minutes. Factory set at 15 minutes.
Time delay for engine cool down: Range 0-60 minutes. Factory set at 0 minutes.
Failure to acquire standby source: Range 0-60 minutes. Factory set at 1 minute.
Pre-transfer to normal signal: Range 0-60 minutes. Factory set at 3 second.
Pre-transfer to standby signal: Range 0-60 minutes. Factory set at 3 second.
Post-transfer to normal signal: Range 0-60 minutes. Factory set at 0 minute.
Post-transfer to standby signal: Range 0-60 minutes. Factory set at 0 minutes.

User terminals shall be available to connect a normally open contact that, when closed, signals the control module to start and transfer load to the engine-generator. Opening these contacts shall initiate a retransfer and engine cool down sequence. The load shall be transferred to an available utility source immediately if the generator source should fail.

The following features shall be built into the control module logic. These features shall be enabled at the factory of in the field.

Phase rotation sensing programmable ABC or CBA.

In-phase monitoring shall continuously monitor the contractor transfer times, source voltage, frequency and phase angle to provide a self-adjusting, zero crossing contactor transfer signal. A flashing LED on the user interface panel shall indicate active in-phase monitoring.

Plant Exerciser: Programmable seven-day or fourteen-day exerciser with user selectable load or no-load operation. An LED, on the user interface, shall indicate the type of exercise (load or no load). The time remaining on the exercise shall be indicated. The exercise time may be reset at any time with a single keystroke. The engine shall be allowed to run when the exercise period is terminated. The exerciser may be disabled for maintenance purposes. An amber LED shall flash on the user interface if the exerciser has bee disabled. The exerciser shall have the capability of being programmed, using up to twenty-one (21) event for a calendar mode. The controller shall have provisions for disconnecting a load bank (during exercise) if there is a loss of normal power.

The control module must be upgradeable with the following options.

Supervised transfer control switch.

Provide a programmable input/output (I/O) module with two inputs and six outputs rated 2 amps @ 30 VDC/250 VAC.

655.30 Time Clocks shall be of the ampere rating, number of poles and in the enclosure indicated. They shall be designed for 120 or 277 volts as indicated and shall be astronomic type with 16-hour reserve power. Factory wire to "ON-OFF-AUTOMATIC" switches for each circuit independently. Contacts shall be tungsten rated 20 amperes to 277 volts. Operating temperature range shall be –40F to 165 F.

655.31 Materials and Workmanship. All equipment, materials, and workmanship shall be first-class in every particular; equipment and materials shall be manufactured and installed to the satisfaction of the Engineer.

655.32 Test of Electrical System. The Contractor shall conduct, at his own expense and at such time as the Engineer designates, tests to demonstrate that the electrical system or systems operate in accordance with the requirements of the Specifications. Meters required for testing shall be furnished by the Contractor. The Contractor shall remedy or replace all defective materials, equipment, or work and shall make all necessary adjustments within such time as the Engineer shall direct. The existing transfer bridge electrical systems shall be removed and designated equipment salvaged and turned over to the MDOT. Utility watt hour meter shall be turned over to the Utility. See specification Section 533 for work having to do with replacement transfer bridge machinery and hoists.

655.33 Electrical Guaranty. The electrical system, together with the component units, as included in all sections of the Specifications, shall be guaranteed for a period of one year from date of final acceptance thereof against defective materials and workmanship except that the generator system along with the automatic transfer switch shall be guaranteed for five years. Upon receipt of notice of failure of any part of the guaranteed system or component units during the guaranty period, the affected part or parts shall be replaced promptly with new parts by and at the expense of the Contractor.

END OF SECTION 655