

**TOPSFIELD**  
**DESIGN-BUILD PROJECT**  
**COLD STORAGE BUILDING**  
**WIN 026321.00**  
**2020**

**Updated 05/15/2020**

# **STATE PROJECT**

**MAINTENANCE & OPERATIONS**

## BIDDING INSTRUCTIONS

1. Use pen and ink to complete all paper Bids.
2. **See Special Provision, Design-Build Project Requirements for further submission requirements, submissions, packaging and labeling and other related information.**

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

For a Paper Bid:

Envelope 1, the Price Proposal Package (Bid) containing

1. the completed Schedule of Items, and
2. two copies of the completed Agreement, Offer, & Award form
3. Bid Guaranty

Envelope 2, the Technical Proposal Package containing

1. the Notice to Contractors,
2. the completed Acknowledgement of Bid Amendments form,
3. the Technical Proposal including
  - 3.1. the completed Form A - Technical Proposal Certification Form or
  - 3.2. if submitting an alternative design, a completed Form A - Technical Proposal Certification Form and Form B – Alternate Design Form and Alternative Design submittals and
4. the completed Contractor Information Sheet, and
5. any other Certifications or Bid Requirements listed in the Bid Book.

For an Electronic Bid:

**NOTE: Not all projects accept Electronic Bids. Please review the Notice to Contractors and see if it specifically states that Electronic Bids be accepted.**

- a) a completed Bid using Expedite® software and submitted via the Bid Express™ web- based service,
  - b) a facsimile of the Form A -Technical Proposal Certification Form and Form B – Alternate Design Form, if applicable, can be sent via facsimile to (207) 624-3431,
  - c) an electronic Bid Guaranty (if required) or a faxed copy of a Bid Bond (with original to delivered within in 72 hours) and
  - d) any other Certifications or Bid requirements listed in the Bid Documents as due by Bid opening.
3. Include prices for all items in the Schedule of Items.
  4. 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 or
    - c) an electronic bid bond submitted with an electronic bid.
  5. See Special Provision, Design-Build Project Requirements for further submission requirements, submissions, packaging and labeling and other related information.

If a paper Bid is to be sent express, please take note that overnight services do not always arrive in time and that delivery may be affected by carrier volume, weather and other factors. Packages using express services should be sent to directly to the DOT Headquarters Building, Maine Department of Transportation, 24 Child Street, Augusta. “FedEx First Overnight” delivery is suggested as the package is delivered directly to the DOT Headquarters Building, Mailroom, 24 Child Street, Augusta.

Allow extra days for U.S. Postal Service Express Mail which has proven not to be reliable and sometimes does not deliver directly to the DOT Headquarters Building but instead delivers to the State of Maine Mail Distribution Center.

If a paper bid is to be mailed, the mailing address is Maine Department of Transportation, 16 State House Station, Augusta, ME 04333-0016. Allow additional working days for this mail to pass through the state mail system in addition to the US Postal Service as this mail is not delivered directly to the Department of Transportation.

If a paper Bid is to be hand carried, deliver directly to the “Public Entrance” which is located on the Capitol Street side of the DOT Headquarters Building in Augusta. <http://www.maine.gov/mdot/contact>. Hand-carried Bids should have the price proposal and the technical proposal in separate envelopes inside and outer envelope, and should be marked with the following information:

Bid Enclosed: Do Not Open

Town: Topsfield

WIN: 026321.00

Date of Bid Opening:

Name of Contractor:

Bids are not excepted by email or fax.

*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, March 2020 Edition.*

# 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 an optional plan holders 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 fill out the on-line plan holder registration form and provide an email address to the MDOT Contracts mailbox at: [MDOT.contracts@maine.gov](mailto: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 Rebecca Snowden at [rebecca.snowden@maine.gov](mailto:rebecca.snowden@maine.gov) or Diane Barnes at [diane.barnes@maine.gov](mailto:diane.barnes@maine.gov).

**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, executors, 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 submitting questions concerning specific Contracts that have been advertised for Bid, include additional numbered pages as required. RFI’s may be faxed to 207-624-3431, submitted electronically through the Departments web page of advertised projects by selecting the RFI tab on the project details page or via e-mail to [RFI-Contracts.MDOT@maine.gov](mailto:RFI-Contracts.MDOT@maine.gov).

These are the only allowable mechanisms 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.

When submitting RFIs by Email please follow the same guidelines as stated on the “Request for Information” form and include the word “RFI” along with the Project name and Identification number in the subject line.



### **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/venbid/index.shtml>

## CONTRACTOR INFORMATION

**Contractor Name:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

**Vendor Customer Number:** \_\_\_\_\_

**Contact Information (Primary Contact):** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Cell Phone:** \_\_\_\_\_

**Fax:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Mailing Address (if different from above):** \_\_\_\_\_

\_\_\_\_\_

**The company has the following organizational structure:**

Sole Proprietorship

Limited Liability Company

Partnership

Joint Venture

Corporation

Other: \_\_\_\_\_

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name and Title Printed)

**STATE OF MAINE DEPARTMENT OF TRANSPORTATION  
NOTICE TO CONTRACTORS**

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for **Cold Storage Building** in the town of **TOPSFIELD**" will be received from contractors at the Reception Desk, MaineDOT Building, Capitol Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on **September 9, 2020** and at that time and place, publicly opened and read. Bids will be accepted from all bidders. **We now accept electronic bids for 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. Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.** The lowest responsive bidder must demonstrate successful completion of projects of similar size and scope to be considered for the award of this contract.

Description: WIN 026321.00

Location: In Washington County, project is located at 35 South Road, Topsfield.

Outline of Work: Design and Build a Cold Storage Building and other incidental work.

For general information regarding Bidding and Contracting procedures, contact George Macdougall at (207) 624-3410. Our webpage at <http://www.maine.gov/mdot/contractors/> contains a copy of the Schedule of Items, Plan Holders List, written portions of bid amendments, bid results and an electronic form for RFI submittal. For Project-specific information fax all questions to **Gail Iler** at (207) 624-3431, use electronic RFI form or email questions to [RFI-Contracts.MDOT@maine.gov](mailto:RFI-Contracts.MDOT@maine.gov), project name and identification number should be in the subject line. Questions received after 12:00 noon of Friday 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. TTY users call Maine Relay 711.

Bid Documents, plans, specifications and bid forms can be viewed and obtained digitally at no cost at <http://www.maine.gov/mdot/contractors/>. Plans, specifications and bid forms may be seen at the MaineDOT Building in Augusta, Maine, and at the Department of Transportation's Regional Office in Presque Isle. 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., Bid Book \$10 (\$13 by mail), payment in advance, all non-refundable.

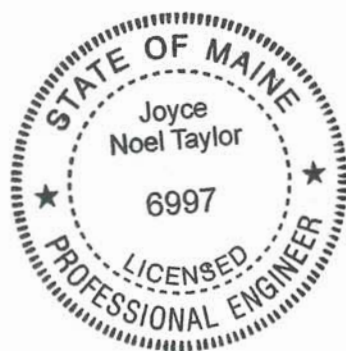
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of \$12,000.00 payable to Treasurer, State 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 State Laws.

All work shall be governed by *State of Maine, Department of Transportation, Standard Specifications, March 2020 Edition*, price \$10 [\$15 by mail], and *Standard Details, March 2020 Edition*, price \$10 [\$15 by mail]. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. *Standard Detail* updates can be found at <http://www.maine.gov/mdot/contractors/publications/>.

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

Augusta, Maine  
August 19, 2020



JOYCE NOEL TAYLOR, P. E.  
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/contractors/> . 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)

8/10/2020

Maine Department of Transportation

Proposal Schedule of Items

Page 1 of 1

Proposal ID: 026321.00

Project(s): 026321.00

SECTION: 1 PROJECT ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0010	815.00 BUILDING - TOPSFIELD COLD STORAGE BUILDING	LUMP SUM	LUMP	SUM	_____	_____
		<b>Section: 1</b>	<b>Total:</b>		_____	_____
			<b>Total Bid:</b>		_____	_____

Paper bids shall be signed in pen and ink. Stamped and copied signatures will not be accepted.

\_\_\_\_\_  
(Print Respondent's Name and Title)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**FORM A: TECHNICAL PROPOSAL CERTIFICATION  
MUST BE SUBMITTED WITH THE BID.  
FORM FOLLOWS SCHEDULE OF ITEMS.**

Refer to "Special Provision Design-Build Project Requirements" for submission requirements.

Form A – Technical Proposal Certification Form  
**(This form is required to be submitted with Bid)**

Topsfield Cold Storage Building

Project WIN 026321.00

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Name of Designer & Design Firm

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Name of Builder

By signing below the above Bidder hereby certifies that to the best of the Design-Builder knowledge and belief:

The Design-Build team has read and understands the Contract Documents and is able to produce a design and construct a building that meets or exceeds the specifications contained in these bid documents.

The Design-Build team has received and considered complete copies of all Amendments.

The Design-Build team has read, reviewed and considered all materials and items supplied by the MaineDOT and posted on the MaineDOT website:

<http://www.maine.gov/mdot/contractors/>

The Designer, Builder and other Major Participants and key personnel indicated with the prequalification process will be used on this project.

This Price Proposal (Bid) is responsive.

The Person signing below is legally authorized to do so for both the Designer and Builder.

---

Name of Proposer (Print)

---

Signature in Ink

---

Date

# Form B – Alternate Design Form

## Topsfield – 3 Bay Cold Storage Building

Project WIN 026321.00

Form B is required for all **Alternate Designs only**  
When submitting Form B, Form A is also required to be submitted with Bid

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Name of Designer & Design Firm

---

Name of Builder

At the time of Bid opening of the price proposals the Design-Building team must submit **Form B: Alternate Design Form** with their Bid package that includes the following:

Instructions: This form is to be used as a cover letter to accompany the documents required per Section 2.2 Submittal of Alternative Designs.

1. Detailed Description of Alternate Design

Describe requirements of 1 through 5 of Section 2.2  
Submittal of Alternate Designs.

No. of Pages \_\_\_\_\_

2. Schematic Drawings and Product Details

No. of Pages \_\_\_\_\_

3. Detailed description of other projects where the AD was used

No. of Pages \_\_\_\_\_

4. Detailed description of the risk associated with the use of this AD

No. of Pages \_\_\_\_\_

5. \_\_\_\_\_

No. of Pages \_\_\_\_\_

6. \_\_\_\_\_

No. of Pages \_\_\_\_\_

7. \_\_\_\_\_

No. of Pages \_\_\_\_\_

TOTAL Number of Pages included with submittal

\_\_\_\_\_

The Person signing below is legally authorized to do so for both the Designer and Builder.

---

Name of Proposer (Print)

---

Signature in Ink

---

Date

# **Special Provision**

## **Contract Forms**

### **Form A: Technical Proposal Certification Form**

(Required to be submitted with Bid)

### **Form B: Alternative Design Form** (AKA AD Form)

(When submitting an Alternative Design, Forms A & B are required to be submitted with Bid)

**DESIGN-BUILD CONTRACT AGREEMENT**

CONTRACT 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 24 Child, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and \_\_\_\_\_ (Design-Builder) 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 Design-Builder, in consideration of the mutual promises set forth in the Contract Documents, hereby agree as follows:

**A. The Work.**

The Design-Builder agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 026321.00** for the design and construction of a **Cold Storage Building** in the town of **Topsfield**, County of Washington, Maine. The Work includes design, construction and maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Design-Builder shall be responsible for furnishing all Design, 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.

**B. Time.**

The Design-Builder agrees to complete all Work, except warranty work, on or before **November 25, 2020**. Further, the Department may deduct from moneys otherwise due the Design-Builder, 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, March 2020 Edition* and related Special Provisions.

**C. Price.**

The Lump Sum Price(s) shown on 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 \_\_\_\_\_

\$ \_\_\_\_\_ .

#### **D. Contract.**

The Contract, which may be amended, modified, or supplemented in writing only through a Contract Modification, consists of the following documents:

1. This Design-Build Contract Agreement;
2. All portions of the Project Requirements, Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement;
3. All specifications, manuals, guides, laws and all other documents referenced in any of the above documents.

It is agreed and understood that the Contract will be governed by the documents listed above.

#### **E. Certifications.**

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

1. All of the statements, representations, covenants, and/or certifications required or set forth in Contract Documents, including those in Special Provisions and Bid Documents are still complete and accurate as of the date of this Contract Agreement.
2. The Design-Builder knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Design-Builder to sign this Contract Agreement on behalf of the Design-Builder and to legally bind the Design-Builder to the terms of this Contract Agreement.

#### **F. Offer.**

The undersigned, having carefully examined the site of work, the Project Requirements, *Standard Specifications March 2020 Edition*, Supplemental Specifications, and Contract Agreement for design and construction of: **WIN 026321.00 Cold Storage Building** in the town of **Topsfield**, on which bids will be received until the time specified in the "Notice to Contractors" does hereby bid and offer to enter into the 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 the Contract and for the lump sum price(s) in the attached Schedule of Items.

The Design-Builder agrees to perform the work required at the price specified above and in accordance with the terms of the Contract, and to provide the appropriate insurance if this offer is accepted by the Department in writing.

As Design-Builder 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, March 2020 Edition*, and as addressed in the contract documents.

Second: To begin the Work on the date specified in the Project Requirements and complete the Work within the time limits given in the Contract.

Third: That the Lump Sum Price(s) shall remain open for thirty (30) Calendar Days after the date of Bid Opening.

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

DESIGN-BUILDER

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Name and Title Printed)

Execution by the Department consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: Bruce Van Note Commissioner

**DESIGN-BUILD CONTRACT AGREEMENT**

CONTRACT 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 24 Child, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and \_\_\_\_\_ (Design-Builder) 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 Design-Builder, in consideration of the mutual promises set forth in the Contract Documents, hereby agree as follows:

**A. The Work.**

The Design-Builder agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 026321.00** for the design and construction of a **Cold Storage Building** in the town of **Topsfield**, County of Washington, Maine. The Work includes design, construction and maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Design-Builder shall be responsible for furnishing all Design, 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.

**B. Time.**

The Design-Builder agrees to complete all Work, except warranty work, on or before **November 25, 2020**. Further, the Department may deduct from moneys otherwise due the Design-Builder, 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, March 2020 Edition* and related Special Provisions.

**C. Price.**

The Lump Sum Price(s) shown on 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 \_\_\_\_\_

\$ \_\_\_\_\_ .

#### **D. Contract.**

The Contract, which may be amended, modified, or supplemented in writing only through a Contract Modification, consists of the following documents:

1. This Design-Build Contract Agreement;
2. All portions of the Project Requirements, Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement;
3. All specifications, manuals, guides, laws and all other documents referenced in any of the above documents.

It is agreed and understood that the Contract will be governed by the documents listed above.

#### **E. Certifications.**

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

1. All of the statements, representations, covenants, and/or certifications required or set forth in Contract Documents, including those in Special Provisions and Bid Documents are still complete and accurate as of the date of this Contract Agreement.
2. The Design-Builder knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Design-Builder to sign this Contract Agreement on behalf of the Design-Builder and to legally bind the Design-Builder to the terms of this Contract Agreement.

#### **F. Offer.**

The undersigned, having carefully examined the site of work, the Project Requirements, *Standard Specifications March 2020 Edition*, Supplemental Specifications, and Contract Agreement for design and construction of: **WIN 026321.00 Cold Storage Building** in the town of **Topsfield**, on which bids will be received until the time specified in the "Notice to Contractors" does hereby bid and offer to enter into the 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 the Contract and for the lump sum price(s) in the attached Schedule of Items.

The Design-Builder agrees to perform the work required at the price specified above and in accordance with the terms of the Contract, and to provide the appropriate insurance if this offer is accepted by the Department in writing.

As Design-Builder 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, March 2020 Edition*, and as addressed in the contract documents.

Second: To begin the Work on the date specified in the Project Requirements and complete the Work within the time limits given in the Contract.

Third: That the Lump Sum Price(s) shall remain open for thirty (30) Calendar Days after the date of Bid Opening.

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

DESIGN-BUILDER

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Name and Title Printed)

Execution by the Department consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: Bruce Van Note Commissioner

## DESIGN-BUILD CONTRACT AGREEMENT

CONTRACT 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 24 Child, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and (Name of firm bidding the project) (Design-Builder) a corporation or other legal entity organized under the laws of the State of \_\_\_\_\_, 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 Design-Builder agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN 026217.00 in the town of Enfield, County of Penobscot and WIN 026219.00 in the town of Jonesboro, County of Washington, Maine. The Work includes design and construction of two (2) Cold Storage Buildings, and maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Design-Builder shall be responsible for furnishing all Design, 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.

### **B. Time.**

The Design-Builder agrees to complete all Work, except warranty work, on or before **September 30, 2020**. Further, the Department may deduct from moneys otherwise due the Design-Builder, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

**C. Price.**

The Lump Sum Price(s) shown on 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 here in numerical terms). Performance Bond and Payment Bond each being 100% of the amount of this Contract.

**D. Contract.**

The Contract, which may be amended, modified, or supplemented in writing only consists of the Design Build Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* 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 Design-Builder hereby certifies that to the best of the Design-Builder's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in Contract Documents, including those in Special Provisions and Bid Documents are still complete and accurate as of the date of this Contract Agreement.
2. The Design-Builder knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Design-Builder to sign this Contract Agreement on behalf of the Design-Builder and to legally bind the Design-Builder to the terms of this Contract Agreement.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**WIN 026217.00 in the town of Enfield, County of Penobscot and WIN 026219.00 in the town of Jonesboro, County of Washington for the construction of (2) two Cold Storage Buildings.**

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 Design-Builder 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 Design-Builder 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, March 2020 Edition*, 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 March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

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

Fifth: 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 Design-Builder, for itself, its successors and assigns, hereby execute three duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in this Contract.

DESIGN-BUILDER

\_\_\_\_\_

Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_

Witness

\_\_\_\_\_  
(Name and Title Printed)

Execution by the Department consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

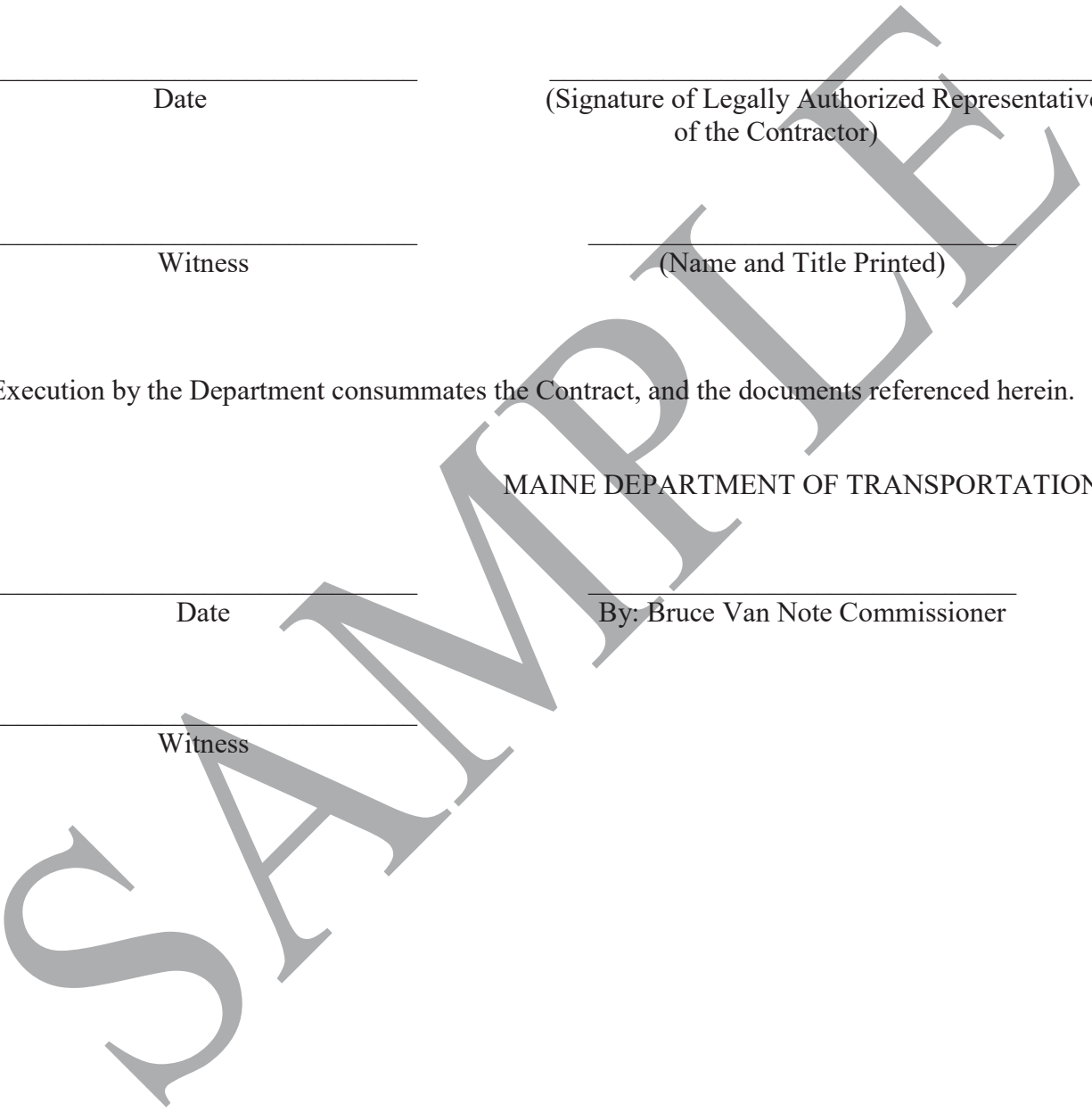
\_\_\_\_\_

Date

\_\_\_\_\_  
By: Bruce Van Note Commissioner

\_\_\_\_\_

Witness



BOND # \_\_\_\_\_

CONTRACT PERFORMANCE BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ in 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 \_\_\_\_\_  
\_\_\_\_\_ **in 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 .....

.....

State of Maine  
 Department of Labor  
 Bureau of Labor Standards  
 Augusta, Maine 04333-0045  
 Telephone (207) 623-7906

**Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.**

**2020 Fair Minimum Wage Rates  
 Building 2 Washington County  
 (other than 1 or 2 family homes)**

<u>Occupation Title</u>	<u>Minimum Wage</u>	<u>Minimum Benefit</u>	<u>Total</u>	<u>Occupation Title</u>	<u>Minimum Wage</u>	<u>Minimum Benefit</u>	<u>Total</u>
Asbestos/Lead Removal Worker	\$15.50	\$1.07	\$16.57	Ironworker - Structural	\$21.18	\$2.47	\$23.65
Boilermaker	\$30.00	\$10.86	\$40.86	Laborers (Helpers & Tenders)	\$15.50	\$0.37	\$15.87
Boom Truck (Truck Crane) Operator	\$25.00	\$4.94	\$29.94	Laborer - Skilled	\$18.00	\$2.00	\$20.00
Bricklayer	\$25.00	\$2.90	\$27.90	Line Erector Power/Cable Splicer	\$31.00	\$3.42	\$34.42
Carpenter	\$20.50	\$2.30	\$22.80	Loader Operator - Front-End	\$20.00	\$3.12	\$23.12
Carpenter - Acoustical	\$20.00	\$0.80	\$20.80	Mechanic- Maintenance	\$18.00	\$2.33	\$20.33
Carpenter - Rough	\$18.63	\$3.73	\$22.36	Mechanic- Refrigeration	\$27.00	\$4.37	\$31.37
Cement Mason/Finisher	\$16.00	\$4.04	\$20.04	Millwright	\$24.00	\$10.37	\$34.37
Communication Equip Installer	\$26.47	\$16.78	\$43.25	Oil/Fuel Burner Servicer/Installer	\$28.50	\$8.01	\$36.51
Crane Operator =>15 Tons)	\$30.00	\$7.76	\$37.76	Painter	\$16.33	\$0.62	\$16.95
Dry-Wall Applicator	\$23.50	\$0.00	\$23.50	Paver Operator	\$20.50	\$0.44	\$20.94
Dry-Wall Taper & Finisher	\$22.00	\$1.26	\$23.26	Pipe/Steam/Sprinkler Fitter	\$26.00	\$4.00	\$30.00
Electrician - Licensed	\$26.00	\$7.89	\$33.89	Plumber (Licensed)	\$26.00	\$4.40	\$30.40
Electrician Helper/Cable Puller	\$16.00	\$1.04	\$17.04	Plumber Helper/Trainee	\$19.00	\$3.45	\$22.45
Elevator Constructor/Installer	\$59.47	\$24.57	\$84.04	Propane & Natural Gas Serv/ Inst	\$27.75	\$4.46	\$32.21
Excavator Operator	\$21.43	\$4.13	\$25.56	Roofer	\$18.35	\$2.19	\$20.54
Fence Setter	\$19.75	\$4.10	\$23.85	Sheet Metal Worker	\$19.50	\$5.35	\$24.85
Flagger	\$13.00	\$0.00	\$13.00	Sider	\$18.00	\$0.46	\$18.46
Floor Layer	\$20.00	\$0.03	\$20.03	Tile Setter	\$22.00	\$1.36	\$23.36
Glazier	\$18.00	\$0.96	\$18.96	Truck Driver - Light	\$16.00	\$0.44	\$16.44
Heating (HVAC)	\$25.00	\$2.78	\$27.78	Truck Driver - Medium	\$19.00	\$1.97	\$20.97
Industrial Truck (Forklift) Operator	\$27.42	\$6.26	\$33.68	Truck Driver - Heavy	\$18.63	\$0.98	\$19.61
Insulation Installer	\$22.00	\$3.99	\$25.99	Truck Driver - Tractor Trailer	\$17.50	\$0.94	\$18.44
Ironworker - Ornamental	\$26.00	\$22.37	\$48.37	Truck Driver - (Cement)	\$17.25	\$2.26	\$19.51
Ironworker - Reinforcing	\$29.45	\$23.49	\$52.94				

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.


Welders are classified in the trade to which the welding is incidental.

Apprentices – The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest:   
 Scott R. Cotnoir  
 Wage & Hour Director  
 Bureau of Labor Standards

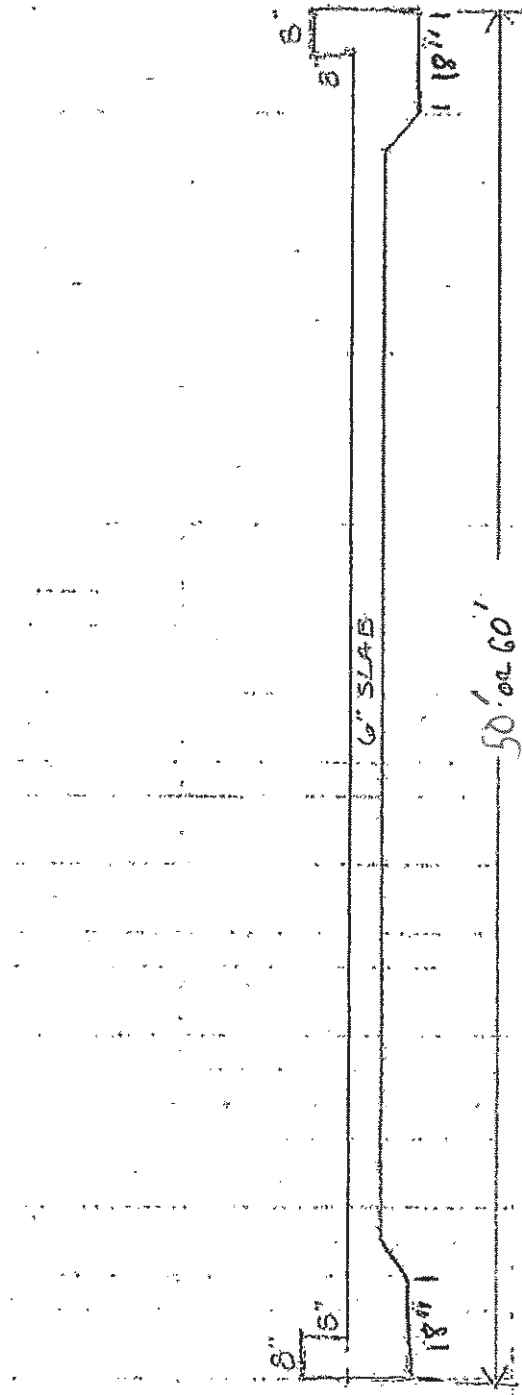


Google Earth

Imagery Date: 4/20/2016 45°24'59.46" N 67°44'11.58" W elev 496 ft eye alt 936 ft

1996

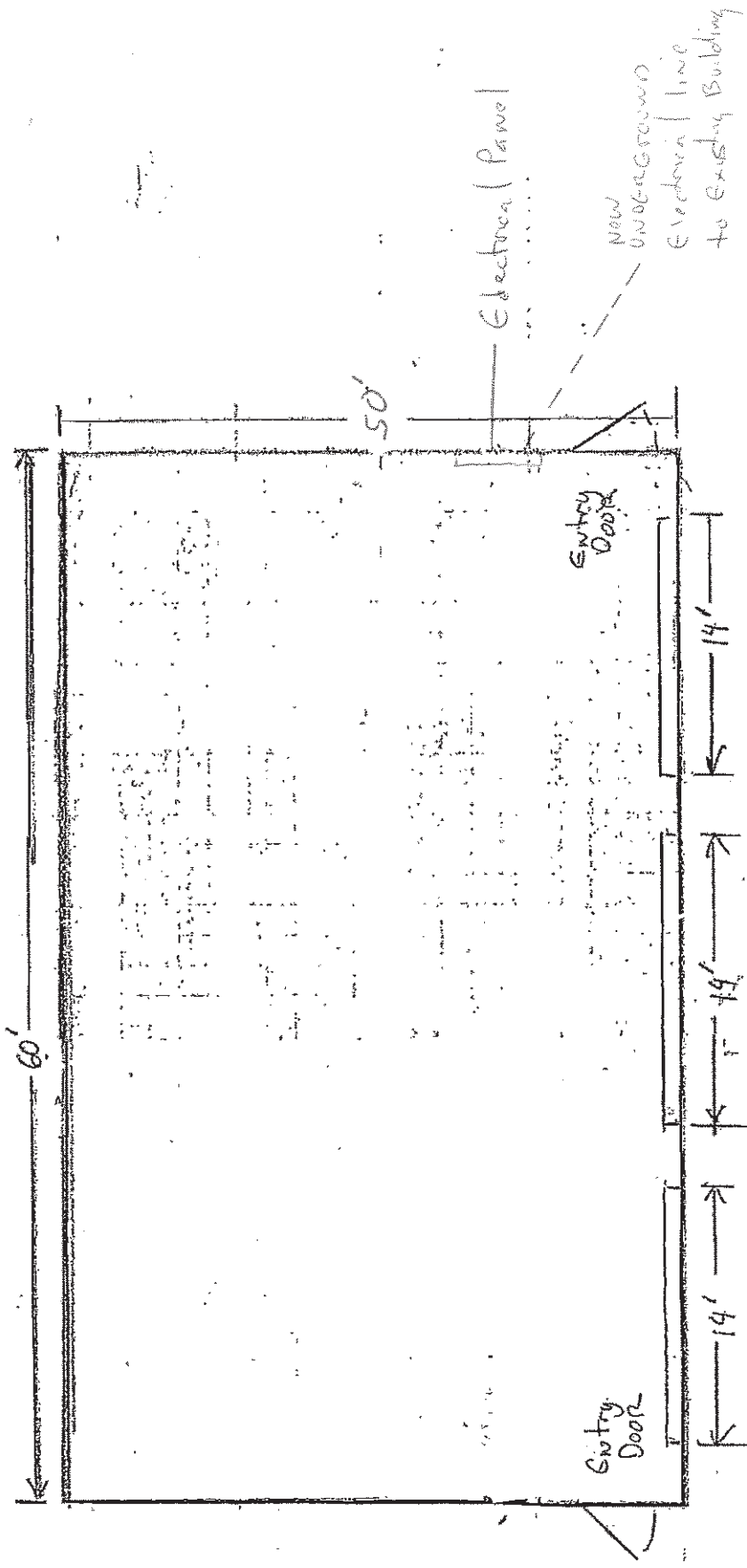
# Topsfield Cold Storage Building 50'x60' Monolithic Slab with 8" placed curb wall



NOT DRAWN TO SCALE INFORMATION ONLY

**Topsfield Cold Storage Building 50'x60', 16' ceiling height, (3) 14' x 14' overhead doors with windows, (2) 3'-0" x 6'-8" fiberglass entry doors with half glass**

NOT DRAWN TO SCALE INFORMATION ONLY



## **SPECIAL PROVISION**

### **DESIGN-BUILD PROJECT REQUIREMENTS**

#### **1. GENERAL INFORMATION**

##### **Issuance of Notice to Contractors**

This Request for Proposals, issued by the Maine Department of Transportation (the Department) constitutes a request for Design-Builder Team to submit proposals (bids) to design and build a Cold Storage Building at the Maine Department of Transportation Maintenance Lot on **35 South Road in Topsfield** in accordance with the contract documents.

##### **Procurement Process Overview**

The Department is requesting that contractors, designers and builders submit proposals (bids) to design and build a storage building in Bangor on the date specified in the Notice to Contractors. Proposers are qualified to submit proposals if they have an engineer of record licensed in Maine and adequate prior experience building. The Proposal shall consist of the following two components: (1) the Technical Proposal Certification and if applicable, the Alternative Design Form and Alternative Design submittals and (2) the Price Proposal (Bid). Pursuant to Title 23, MRSA, Chapter 410, Section 4244, Design-Build Contracting, the Department intends to award a Design-Build Contract to the Design-Builder that submits the Price Proposal (Bid) determined by the Department to be lowest responsive and responsible bid. No determination of best value will be made by the Department. The Department reserves the right to reject any or all Proposals. The Apparent Low Bidder will be the Bidder that submits an apparently responsive Technical Proposal and the lowest apparently responsive Bid. The Successful Bidder will be notified, and then the team shall submit technical design and drawings and other project related information for review and comments. Upon accepted and completed review and comments, the Department will award the contract and then issue a "Release for Construction" notification to the Design-Builder for Construction to commence.

##### **Overall Intent of Contract Documents**

The intent of the Contract Documents is to provide for the design, construction, and completion of the Work described in the Contract in conformity with the Contract. The Design-Builder shall furnish all design services, labor, materials, equipment, tools, transportation services, supplies and all incidentals required to complete the Work in accordance with the Contract.

The RFP is the document consisting of the Agreement, Project Requirements, and related Special Provisions that is distributed to prequalified Proposers for the purposes of transmitting project information to the Proposers, setting forth procedures to be used during the Proposal preparation period, specifying Proposal submittals, establishing the Proposal evaluation process, and specifying procedures and pre-award submittal requirements for award and execution of the Contract.

The Proposal is the submittal by the Design-Builder (then designated a “Proposer”) in response to the RFP. The Proposal represents the offer by the Design-Builder to perform the Work in accordance with the Contract, and the component of its Proposal known as the Technical Proposal; and for the price submitted in the component of its Proposal known as the Price Proposal. The Proposal is a Contract Document to the extent that it meets or exceeds the requirements of the other Contract Documents. In other words, if the Proposal includes statements that can reasonably be interpreted as offers to provide higher quality items than otherwise required by the Contract or to perform services in addition to those otherwise required, or otherwise contain terms which are more advantageous to the Department than the requirements of the other Contract Documents, the Department obligations hereunder shall include compliance with all such statements, offers and terms. This offer is accepted by the Department upon award of the Contract.

The Contract is the written agreement setting forth the respective rights and obligations of the Department and the Design-Builder from execution of the Contract until the performance of all warranty obligations set forth in the Contract.

## **2. PROPOSAL SUBMISSION REQUIREMENTS**

The Bidder must deliver its Price Proposal Package (Bid), Technical Proposal Package and Bid Guaranty in a sealed envelope to the exact location and before the precise time (as determined by the Department) specified in the Notice to Contractors or any applicable Bid Amendment. The Price Proposal Package (Bid), Technical Proposal Package and Bid Guaranty must be signed by duly authorized individuals. The sealed envelope must be labeled with the Bidder's name, the Project location, WIN, and the words “Bid Enclosed”.

Design-Build team shall provide responses to all information requested in this Special Provision. Failure to respond or failure to provide requested information may result in a determination by the Department, in its sole discretion, that a Proposal (Bid) is non-responsive. The Department shall have no obligation to compensate any unsuccessful Design-Build for its efforts in preparing a Price Proposal Package (Bid).

### **Technical & Price Proposal (Bid) Package Content Requirements**

As a minimum, the Bidder will submit a Proposal package consisting of two sealed envelopes. The Proposal Packages shall be submitted on the forms supplied by the Department or copy thereof and must include:

Envelope 1, the Price Proposal Package (Bid) containing

1. the completed Schedule of Items, and
2. two copies of the completed Agreement, Offer, & Award form

Envelop 2, the Technical Proposal Package containing

1. the Notice to Contractors,
2. the completed Acknowledgement of Bid Amendments form,
3. the Technical Proposal including
  - 3.1. the completed Form A - Technical Proposal Certification Form or
  - 3.2. a completed Form A - Technical Proposal Certification Form and Form B – Alternate Design Form and Alternative Design submittals and
4. the completed Contractor Information Sheet, and
5. any other Certifications or Bid Requirements listed in the Bid Book.

### **Price Proposal (Bid)**

The Bidder must submit the Price Proposal Package in a sealed envelope. The Price Proposal Package (Bid) consists of a completed Schedule of Items and two copies of a signed Contract, Agreement, Offer and Award.

### **Technical Proposal**

The Bidder must submit a Technical Proposal Package which consists of a completed Form A - Technical Proposal Certification Form or a completed Form A - Technical Proposal Certification Form and Form B – Alternate Design Form and Alternative Design submittals.

### **Alternative Designs (AD)**

The Department will consider AD's submitted by the Design-Builder in accordance with the process set forth in Section 2. Design-Builders shall identify and submit the AD Form (Form B - Alternative Design Form) and package with their Technical Proposal at the time and on the day stated in the Notice to Contractors. The Department will use the AD review process described in Section 2 to provide Design-Builders with the opportunity to propose changes to the Project Requirements that are equal or better in quality or effect as determined by the Department in its sole discretion.

### **Submission of Proposals and Package Labels**

If using any kind of Delivery Service, the Delivery envelope shall be capable of being sealed and large enough to contain two sealed envelopes: (1) the sealed Price Proposal Package (bid) envelope and (2) the Technical Proposal Package, such that the Delivery envelope can be opened without opening either the actual Proposal Package (bid) envelope or the Technical Proposal Package envelope and clearly marked as follows:

All Proposals shall be provided in double (two envelopes inside a single larger envelope) envelopes, for security and other reasons.

The Price Proposal Package *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open

Topsfield / WIN: 026321.00

Date of Bid Opening:

Name of Contractor with mailing address and telephone number

The Technical Proposal Package *Inner Envelope* shall have the following information provided on it:

Technical Proposal - Do Not Open  
Topsfield/WIN: 026321.00  
Towns: Topsfield  
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  
Topsfield/ WIN: 026321.00  
Towns: Topsfield  
Date of Bid Opening:  
Name of Contractor:

Additional information is available in the bidding instructions found on the third page of the bid book.

#### **Submittal of Alternative Designs (AD)**

The Department will not review or accept AD's prior to the Bid Opening. At the time of Bid opening of the price proposals the Design-Building team must submit the AD's form and include a package that shall include the following:

1. Description: A detailed description and schematic drawings of the configuration of the AD or other appropriate descriptive information (including, if appropriate, product details;
2. Usage: Where and how the AD would be used on the Project;
3. Deviations: References to requirements of the Contract documents that are inconsistent with the proposed AD, an explanation of the nature of the deviations from said requirements, and a request for Approval of such deviations;
4. Analysis: An analysis justifying use of the AD and why the deviations from the requirements of the contract documents should be allowed;
5. Impacts: Discussion of potential impacts on vehicular and pedestrian traffic, environmental impacts identified on appropriate environmental documents, safety and life-cycle Project impacts, and infrastructure costs (including impacts on the cost of repair and maintenance);
6. History: A detailed description of other projects where the AD has been used, the success of such usage, and names and telephone numbers of project owners that can confirm such statements; and
7. Risks: A description of added risks to the Department and other Persons associated with implementing the AD.

#### **Departments Review of Alternative Designs (AD)**

The Department will review the AD submitted. If an AD is summarily approved or not approved, the Department's comments will inform the Design-Builder that its technical concept appears to be generally acceptable or if is not acceptable.

If the Department needs more information to determine whether or not the AD will be approved or not approved, the Department may submit written questions to the Design-Builder and/or request a one-on-one meeting in order to better understand the details of the AD. The Department may conditionally approve an AD based on required revisions to a portion or portions of the AD.

The Department will make one of the following determinations with respect to a reviewed AD:

1. The AD is approved.
2. The AD is not approved.
3. The AD is not approved in its present form, but is approved subject to satisfaction, in the Department’s sole judgment, of specified conditions.
4. The submittal does not qualify as an AD, but may be included in the Technical Proposal without an AD (i.e., the concept complies with the Contract Documents requirements).
5. Decision on the AD is pending receipt of additional information and/or one-on-one meeting.

Approval of an AD will constitute a change in the specific requirements of the Contract Documents associated with the approved AD. Should the Design-Builder be unable to obtain required approvals for any AD incorporated into the Contract Documents, or if the concept otherwise proves to be infeasible, the Design-Builder will be required to conform to the original RFP requirements. Each Design-Builder, by submittal of its AD and Bid, acknowledges that the opportunity to submit AD’s was offered to all Design-Builders, and waives any right to object to the Department’s determinations regarding acceptability of AD’s.

**Procurement Schedule**

Though subject to change, the Department anticipates following the contracting schedule below. Proposers are cautioned that this schedule is subject to change and the Proposer should not rely upon it to determine, for example, when actual construction may commence.

<b>Milestone</b>	<b>Date</b>
MaineDOT Advertises Project for Questions and Comments	August 19, 2020
Deadline for Bidders to Submit Questions (RFI’s)	August 26 at 12:00 PM EDT
MaineDOT Issues Response to Questions via Addendum	September 2, 2020
Bid Opening of Request for Proposals	September 9, 2020
MaineDOT Issues Notice of Proposal Responsiveness to Apparent low Bidder	September 11, 2020
Design – Builder Submits Technical Design Package	September 18,2020
MaineDOT Reviews and Comments and Responds to Technical Design Package	September 25, 2020
MaineDOT Awards Contract	To be Determined
MaineDOT Releases plans for Construction	To be Determined
Design-Builder Begins Construction (approximately)	To be Determined
<b>Design-Builder Completes Construction</b>	November 25, 2020

If any dates are changed, the Department will notify the bidders in advance by a bid addendum (pre-bid) and a contract modification (post-bid). In the event that a time period provided the bid documents falls on a Holiday, Saturday, or Sunday, the party required to act within said time period shall be considered in compliance with said time period provided said party acts as required on the next Departmental business day thereafter.

The Apparent Low Bidder will be the Bidder that submits a responsive Technical Proposal and the lowest apparently responsive Bid, as determined by the Department. No determination of best value will be made by the Department.

Proposals will be opened and publicly read at the time and place specified in the Notice to Contractors or any applicable Bid Amendments. The Department will read only the names of the Bidders. No other information will be made available prior to evaluation and award notification. Unit and lump sum prices are available for inspection by the Bidders immediately after Award. All Proposals shall be sequestered until notification of award by the contracting agency after which time they become public record.

The public reading of a Proposal does not constitute a determination by the Department of whether the Proposal is responsive or of whether the Bidder is responsible, though the Department may refuse to read Proposals that are obviously non-responsive. Accordingly, the Department may reject a Proposal as non-responsive and/or determine a Bidder is not responsible or ineligible to Bid even if that Bidder's Proposal is read at Bid Opening.

### **3. TECHNICAL AND DESIGN REQUIREMENTS**

#### **Project Goals**

The Department's primary goals for the Project include the following:

1. To deliver a cost effective Project;
2. To design and construct a safe, durable, appropriately sized, and low maintenance Building, and
3. To minimize impacts to the MaineDOT employees working onsite, local residences, local communities, and emergency services during construction.

#### **Design Scope**

The Design-Build Price Proposal (Bid) shall include the cost of design, construction and other incidentals as part of the **Cold Storage Building in Topsfield, Maine** as per Special Provision Section 815 Buildings.

#### **Technical Design Package**

The Technical Design Package includes all Design Plans, Notes and Computations generated by the Design-Builder during preparation to build the Project.

## **Design**

The Apparent Low Bidder, when notified in writing, shall submit their Technical Design Package, by the time specified in the Procurement Schedule.

Design Plans, Notes and Computations generated by the Design-Builder during preparation shall become the property of the Department and be submitted to the Department with the Technical Design.

The plans, design and computations shall be sealed by a Maine Licensed Professional Engineer. The Design-Builder shall prepare computer generated design plans for the Department to review. The Plans, when applicable, shall be include:

- 1) Title sheet
- 2) Key Plan and Index
- 3) Quantity Estimates
- 4) Building floor plans, elevations and typical sections
- 5) Framing, roof and truss plans
- 6) Foundation plans and typical sections
- 7) General Layout and Geometry
- 8) General notes
- 9) Any additional plans, cross-sections, details, standard details, or drawings, the Design-Builder or Department feels is necessary to convey how the proposed design satisfies the Project requirements.

## **Design Notes and Computations**

Design notes and calculations, which shall be recorded on 8-1/2" x 11" computation sheets, appropriately titled, numbered, dated, indexed and signed by the designer and checker. Computer output forms and other oversized sheets shall be folded or legibly reduced for submittal to 8-1/2" x 11" size. The data shall be bound in a hard back folder for submittal to the Department along with an electronic copy on Adobe Acrobat format, and shall include the following data:

- 1) All field survey notes and computations
- 2) Primary and Secondary Survey Control used for Design and Construction
- 3) All Structural and Foundation Design and independent design check computations
- 4) Foundation report and geotechnical analysis and-or assumptions
- 5) Structural load data
- 6) Computation of quantities
- 7) Documentation of decisions reached resulting from meetings, telephone conversations, site visits or other.

## **Construction Schedule**

Provide the Schedule for answering remaining design comments and construction of the Project.

### **Contract Time**

All Work, excluding warranty work, required by the Contract must be complete by no later than the date specified in Special Provision, Section 107, Contract Time. Liquidated Damages will be assessed in accordance with Section 107 of the Standard Specifications for each Calendar Day that the Work is extended beyond the Completion Date.

If an earlier Completion Date is identified in the Proposal and accepted by the Department, then the earlier Completion Date shall become the baseline Completion Date and shall be incorporated into the Design-Build Contract Agreement and used to calculate Liquidated Damages.

### **Technical Design Documents**

All design documents included in this Project shall meet the requirements, Specifications and code requirements of MaineDOT, Municipal Codes and applicable Industry Standards.

### **Technical Design Submittals and Reviews**

The Technical Design Package shall be submitted to the MaineDOT within two weeks of the Notice of Proposal Responsiveness to the Apparent Low Bidder in accordance with the Procurement Schedule and the Department will review all design submittals and respond with comments in accordance with the Procurement Schedule. Upon completion of the day review period the Department may; 1) Notify the Design-Builder in writing that the Department considers all documentation is present and release the plan for construction with comments **or** 2) if the Department considers that all required documentation is **not** included, the Design-Builder will be asked to supply the necessary information with 7 days of notification, and upon submittal of the requested information, another 7 day review periods begins for the Department. If the Departments review the Technical Design Package and sends written comment(s) to the Design-Builder, the Design-Builder is then responsible for incorporating the comments into the design documents before the plans are released for construction.

### **Re-submittal Process**

As a result of the Technical Design Package review, the Department will notify the Design-Builder that a re-submittal is required. Each re-submittal shall address all comments from the prior review. In the event of a required re-submittal, the Department will then have an additional 7 days to review the re-submittal.

If the Department and the Design-Builder require more than the submittal and review periods scheduled in the Procurement Schedule, the Completion Date of the project will not be revised. The Design-Builder shall not be entitled to any additional compensation or time extensions due to a re-submittal request by the Department.

### **Release for Construction (RFC)**

Upon a review of all the plans and design documents, the Department will notify the Design-Builder that the review of the Technical Design Package has been complete, with or without comments, and if a re-submittal is not required, the final design may be released for Construction.

The Design-Builder is responsible for releasing the plans to the field personnel and is responsible to ensure that there is a tracking mechanism in place so that all parties, field and office, have the latest updated set of plans.

The Design-Builder shall submit a final set of design documents that is inclusive of early contract provisions, drawings, design and check computations and comments and shall supersede all previously submitted packages.

### **Design Changes**

The Department or the Design-Builder may initiate changes to the design after a design package has been released for construction. If such design changes are at the sole option of the Design-Builder and they are not scope changes, they shall not be cause for additional time or compensation.

Design changes to segments or plans that have been RFC or to the final plans shall be approved in writing by the designer responsible for the original design or by a Maine Licensed Professional Engineer of equal or greater experience than the original designer, if the original designer is no longer available. The changes shall be tracked and documented accordingly. The Department shall be given adequate time for a review of RFC plans to comment on these changes before any implementation of any Design Change(s). The review time required will coincide with the complexity of the Design Change(s).

All plans, special provisions and calculations prepared for design changes shall be sealed, signed and dated by a Maine Licensed Professional Engineer who possesses the requirements stated within this special provision.

The Department reserves the right to review and approve all design changes. Once plans have been Release for Construction, only those Design Changes that have been approved may be implemented into the construction of the building.

The Department reserves the right to request Design Changes to this project. All revisions and Design Changes requested after RFC, shall be documented through a Contract Modification as per Standard Specifications, Section 109-Changes.

#### 4. ADMINISTRATION

##### **Insurance**

This Project will require Owner's and Design-Builder's Protective Liability Insurance in accordance with the amounts specified in Subsection 110.3.5 of the Maine Department of Transportation Standard Specifications.

Insurance certificates of the General Contractor and a copy of the Professional Liability Insurance certificate of the Professional Engineer shall be submitted prior to Contract Execution.

##### **Administration and Coordination**

The Design-Builder shall, at a minimum, provide project administrative coordination during the design phase, prior to any construction activity and during construction. Such coordination shall include the coordination of design, all onsite and offsite construction disciplines and the Department.

##### **Project Administration – Status Reporting**

The Design-Builder shall, at a minimum, provide project administrative coordination during the design phase and prior to any construction activity. Such coordination shall include the coordination of design, construction disciplines and the Department. During the course of the project, the successful Proposer shall submit to the MaineDOT Project Manager a Bi-Weekly Project Status Report of the accomplishments from the preceding week. The Status Report shall be used to keep the Project Manager informed about the status of the Project and any related issues. Information will include:

- A written statement describing the work accomplished during the period and to date.
- An update to the Construction Schedule and potential issues and delays
- A time estimate of the effort to complete the specified services and task
- Any information pertaining all design revisions
- Contract modifications to date and any anticipated contract modifications
- The plan to remedy and address any non-conforming or unacceptable work
- Provide information related to any changes in key personnel.

##### **Geotechnical Design and Construction**

If the Design-Builder's Technical Proposal includes structural materials or elements for which there are no design, fabrication, and/or construction requirements found in construction industry and applicable standards, then the Design-Builder shall submit appropriate documentation approved by the proprietor, designer, etc. for the design, fabrication, and construction requirements to the Department.

### **Erosion and Sedimentation Control Requirement**

The Design-Builder shall provide continuous and effective soil erosion and water pollution control in compliance with Section 656 – Temporary Soil Erosion and Water Pollution Control of the Standard Specifications, and the latest version of the Supplemental Specification (Repair Spec). In addition, the Design-Builder shall comply with Special Provision 656.

## **5. UTILITIES**

### **General Design-Builder Responsibilities**

The Technical Design Package shall address the manner in which utilities will be maintained and/or temporarily or permanently relocated. The Design-Builder is required to coordinate all utility relocations required as part of the Project in accordance with the Maine Department of Transportation Standard Specifications, Maine Department of Transportation Utility Accommodation Policy (17-229 CMR Chapter 210), Title 23 MRSA § 154, and Title 23 CFR § 645.

### **Verification of the Location of Existing Utilities**

The Design-Builder bears full responsibility for verifying, at its own expense, the existence, exact location, and size of any utility to be relocated or otherwise impacted on either a temporary or permanent basis for the Project. If a surface inspection of the area shows the existence of, or gives the Design-Builder cause to suspect the existence of, any previously unidentified utilities, or the Design-Builder otherwise has cause to suspect that other previously unidentified utilities exist, then Design-Builder shall undertake all appropriate investigations by contacting Utility Owners and conducting field investigations at the expense of the utilities as necessary to verify the existence, location, and size of such utilities.

## **6. PROJECT COMPLETION AND WARRANTY**

### **Warranty**

The Design-Builder unconditionally warrants and guarantees that the project will be free from warranty defects for one year from the date of Physical Work Complete. If the Department discovers any warranty defects during the warranty period, the Design-Builder agrees to promptly perform all remedial work at no additional cost or liability to the Department.

The Design-Builder hereby assigns to the Department the right to enforce all manufacturer's warranties or guarantees on all materials, equipment or products purchased for the work that exceed the nature or duration of the warranty obligations assumed by the Contractor under this Contract.

## GENERAL NOTES

1. Any damage to the maintenance lot caused by the Contractor's equipment, personnel, or operation shall be repaired to the satisfaction of the Department. All work, equipment and materials required to make repairs shall be at the Contractor's expense.
2. All waste material not used on the project shall be disposed of in acceptable waste areas approved by the Department.
3. Granular borrow used to backfill muck excavation or in low wet areas to 1' above water level or old ground shall meet requirements for granular borrow underwater backfill.
4. Loam and Seeding and as well as any backing up of any new Pavement areas and any area disturbed during this particular project shall be the responsibility of the Contractor.
5. All work shall be done in accordance with the Maine Department of Transportation's Best Management Practices for Erosion Control & Sediment Control, February 2008. The Contractor Shall be responsible for the Erosion and Sediment Control.
6. "Undetermined Locations" shall be determined by the Department.
7. Contractor shall be responsible for portable toilets and drinking water for their crews
8. The contractor shall be responsible for the payment and installation for temporary electrical services or the use of a generator(s) required for conducting their work.

SPECIAL PROVISION  
SECTION 103  
AWARD AND CONTRACTING  
(Post-Bid, Pre-Award Qualifications)

Standard Specification Section 103.3 Post-Bid Qualification Delete the entire section and replace with the following:

After Bid Opening and as a condition for Award of the Contract, the lowest responsive bidder must either be prequalified for the Building category by the Maine Department of Transportation or the Department may require an Apparent Successful Bidder that is not prequalified to demonstrate to the Department's satisfaction that the bidder is responsible, meets the Contractor Requirements set forth in this contract, and qualified to perform the Work.

If such qualification is required, the Department will provide the Bidder with a written Notice of Post-Bid Qualifications requiring the Bidder to provide written documentation presenting evidence of qualifications.

Contractor Requirements

In order to be considered for the award of this contract, the Bidder and key employees that will be assigned to the Work in this Contract shall have successfully completed projects of similar size and scope and have sufficient experience in building construction. Said experience shall include, at a minimum, at least three (3) projects of equal or greater complexity than the work required by this Contract completed by the Bidder in the last five (5) years.

Areas of experience shall include, but are not limited to:

- Concrete Foundations
- Rough Carpentry and Wood Framing
- Steel Roofing
- Steel Siding

The Contractor shall maintain current licenses, authorizations, ratings and registrations for the duration of the contract.

The Bidder shall be able to comply with the Contract Requirements, be able to deliver according to the contract schedule, and have a history of satisfactory performance.

The Bidder must have a current, applicable Safety Plan on file with the Department or must submit, prior to Contract award, an acceptable, current Safety Plan or Project and Site Specific Safety Plan to the Department which identifies and addresses job hazards of the expected contract work and complies with all applicable federal, State, and local laws governing safety including all applicable laws and regulations of Occupational Safety and Health Administration (OSHA).

The Bidder may be required to provide any information requested in the “Contractor’s Prequalification Application” form adopted by the Department.

#### Post-bid Qualification Submittals

The Department will notify the Apparent Successful Bidder of the requirements for post-bid, pre-award qualifications and the Bidder shall provide all of the items within 7 days of the notice. The Contractor shall submit two copies or an electronic copy of all required submittals to the Department.

The Bidder may be required to submit evidence of compliance with all Contractor Requirements set forth in this Contract.

If the Contractor does not have a history of satisfactory performance performing similar Work under contracts with the Department that meets the Contractor Requirements regarding experience, the Bidder may be required to submit written documentation setting forth the experience of the Bidder and subcontractor(s) who will be performing the Work specified in the contract documents, including a description of similar construction projects completed in the last five years that highlight the Bidder’s and subcontractors’ related experience. Such information shall include:

1. the Company’s history and experience of work related specifically to the Scope of Work in this contract;
2. the name of the owner for whom the work was performed;
3. the name and telephone number of a contact person;
4. a description of the work performed by the Bidder or their subcontractor; and
5. the total construction cost of each project, and the value of work performed by the Bidder or their subcontractor.

The Bidder may be required to submit the relevant experience of the key personnel and supervisors who will be performing Work under this contract, their experience and number of years performing work related specifically to the Scope of Work in this contract.

The Bidder’s submittal may be required to include a statement describing the personnel and equipment available for the Work and demonstrating that the Bidder is able to deliver according to the contract schedule.

If the Bidder is to provide any information requested in the “Contractor’s Prequalification Application” form adopted by the Department, the Notice of Post-Bid Qualifications shall so state.

The Bidder may be required to provide its OSHA 300 Log and its Experience Modification Rate provided by applicable insurance carrier.

Upon receipt of the pre-award submittals, the Department will review the submissions and determine if the submitted evidence or information satisfies the Department requirement that the bidder is qualified to properly carry out the terms of the Contract.

The qualifications submitted will be checked for general conformance with the concept of the project and compliance with the requirements set out in the Contract Documents. This review does not modify the Contractor’s duty to comply with the Contract documents.

Bidders shall ensure that all information required herein is submitted. Provision of inaccurate information or failure to provide all completed and required information may result in the Bidder being determined to be “Not Qualified” or disqualified as non-responsive. Within 14 days, the Department will review the required submittals for completeness, conformity with Federal and State requirements, Contract provisions, applicable laws and regulations of Occupational Safety and Health Administration (OSHA), and Department policy and procedures. The Department reserves the right to communicate in writing with Bidders, if needed, to obtain additions to and/or clarification of information contained in the submittals received. The Bidder will have no additional opportunity to submit or clarify information. The Department will not provide an opportunity for the Bidder to meet to present evidence.

A Bidder may be determined to be Qualified in accordance with this Special Provision, and still may need to make minor adjustments to the one or more of the plans submitted in order to meet specifications and/or address Department comments. The determination of qualified does absolve the Contractor of the responsibility to submit plans which comply with applicable specifications.

Based on these submissions, the Department will make one of the following determinations:

1. Qualified - The Contractor has satisfied the post-bid, pre-award qualification requirements and demonstrated to the Department’s satisfaction that it is responsible, can meet the Contractor Requirements set forth in this contract, and is qualified to perform this type of work. The Contractor may still be required to make minor revisions to one or more of the plans submitted prior to starting on site work.

2. Not Qualified - Bidder is not qualified to properly carry out the terms of the Contract and/or the submission does not meet specifications and accepted standards and is not acceptable, as determined by the Department.

There is no Appeal process and the determination of "Not Qualified" is final. The Department will reject the bid as non-responsive, and the Award process will proceed without the unqualified Bidder.

The Department will notify the Bidder of its determination in writing. If a determination of "Not Qualified" is rendered, the notice will set forth reasons to the extent practical. Such reasons may include the following:

- A. Not meeting contract Contractor Requirements
- B. Insufficient experience
- C. No Safety Plan or Project and Site Specific Safety Plan or an unacceptable Safety Plan or Project and Site Specific Safety Plan
- D. Default(s) or termination(s) on past or current Contracts.
- E. Failure to pay or settle all bills for labor, Materials or services on past or current Contracts.
- F. Failure to provide Closeout Documentation on past or current Contracts.
- G. Failure to fulfill warranty obligations on past or current Contracts.
- H. Failure to comply with directives of the Department on past or current Contracts.
- I. "Below Standard" performance as determined from the Department's Contractor's Performance Rating process.
- J. Inability of the Contractor to obtain or retain performance or Payment Bonds meeting MDOT requirements.
- K. Failure to accept an Award of a Contract made by the Department to the Contractor.
- L. Making materially false, deceptive, or misleading Statements or omissions, whether or not under oath, regarding a claim on prior Contracts or on the Contractor's Prequalification Application or the Post-Bid Qualifications submittals.

- M. Failure to provide information requested by the Department pursuant to this Special Provision.
- N. Any of the reasons contained in Section 102.02 of the “Rules Regarding Debarment of Contractors”, Maine Department of Transportation Register 17-229, Chapter 102 (October 2, 1985).
- O. Debarment or suspension by any federal, State, or local governmental procurement agency or the Contractor’s Agreement to refrain from Bidding as part of the settlement with any such agencies.
- P. Other serious misconduct that the Department reasonably determines will substantially and adversely affect the cost, quality or timeliness of Work, or the safety of Workers or the public.

SPECIAL PROVISION  
SECTION 104  
GENERAL RIGHTS AND RESPONSIBILITIES  
(Wage Rates)

104.3.8A. Federal Wage Rates and Labor Laws Delete the entire section 104.3.8A.

104.3.8B State Wage Rates and Labor Laws The State Wage Rates enclosed apply to this work. Federal Wage Rates do not apply to this work.

SPECIAL PROVISION  
SECTION 105  
GENERAL SCOPE OF WORK  
(Safety Plan)

In order to be awarded a construction contract, the Bidder must have a current, applicable Safety Plan on file with the Department or must submit to the Department's Bureau of Maintenance & Operations, an acceptable, current Contractor's Safety Plan or Project and Site Specific Safety Plan to the Department which identifies and addresses job hazards of the expected contract work and complies with all applicable federal, State, and local laws governing safety including all applicable laws and regulations of Occupational Safety and Health Administration (OSHA).

The Bidder's Project and Site Specific Safety Plan shall address the specific activities or tasks that require protection and establish the procedures that are to be followed to minimize the hazard. Specific statements which describe both what action is to be taken and how it is to be performed are preferable. The plan shall address the following items which include, but are not limited to:

1. Personal Protective Equipment
2. Hazard Communication
3. Emergency Action Plan
4. Hand and Power Tool Safety
5. Lifting & Rigging
6. Material Handling
7. Scaffolding/Ladders/Aerial Lifts
8. Fall Prevention/Fall Protection
9. Excavation & Trenching
10. Electrical Safety
11. Control of Hazardous Energy - LOTO
12. COVID-19 Safety Plan

The Bidders may submit the Contractor's Safety Plan or the Project and Site Specific Safety Plan with the bid or the Apparent Low Bidder shall submit the Contractor's Safety Plan or the Project and Site Specific Safety Plan within 72 hours of bid opening or notification that the Apparent Low Bidder changed or the Department will reject the bid as non-responsive. The Contractor shall submit two copies or an electronic copy of the Safety Plan to the Department.

Within 14 days, the Department will review the Apparent Low Bidder's Safety Plan. The Department will review a Project and Site Specific Safety Plan to evaluate if the Bidder has a reasonable understanding of job hazards of the expected contract work, has determined preventive measures to overcome these hazards and understands that the work is to be conducted in compliance with this special provision, Contract requirements and all applicable Federal, State, and local laws governing safety including all applicable laws and

regulations of OSHA. The Department reserves the right to communicate in writing with Bidders, if needed, to obtain additions to and/or clarification of information contained in the submittals received. No review or comment by the Department, or any failure to review or comment, shall absolve the Contractor of its responsibility to develop and implement a Safety Plan in accordance with the Contract, or to shift any responsibility to the Department. The Bidder shall have 3 days to submit additions, changes and clarifications. The Bidder will have no additional opportunity to submit, modify or clarify information. The Department will not provide an opportunity for the Bidder to meet.

Based on these submissions, the Department will make one of the following determinations:

1. Qualified - The Contractor has satisfied the post-bid, pre-award Safety Plan requirements.
2. Not Qualified - Bidder is not qualified to properly carry out the terms of the Contract and/or the submission does not meet specifications and accepted standards and is not acceptable, as determined by the Department.

There is no Appeal process and the determination of "Not Qualified" is final. The Department will reject the bid as non-responsive, and the Award process will proceed without the unqualified Bidder.

Failure by the Contractor to perform the Work in compliance with their submitted Safety Plan, Federal and State requirements, Contract provisions, applicable laws and regulations of OSHA when required or to substantially meet other contractual requirements will be considered a violation and may result in the following actions:

All Incidents: The Contractor will immediately eliminate all unsafe conditions brought to the Contractor's attention by the Department or any other representative of the Department. 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.

1<sup>st</sup> Incident: If the Contractor has previously received a verbal warning for the same or similar unsafe conditions or does not take corrective action immediately upon receipt of verbal warning, the Department will issue a written warning.

2<sup>nd</sup> Incident: The Department may (A) give written Notice of Default to the Contractor and immediately terminate the Contract by written Notice of Termination, or (B) take prosecution of the Work away from the Contractor without violating the Contract. Such Contractor will be prohibited from submitting a Bid for the Work in the event that the Work is re-advertised. Further, the Department may refuse to accept any Bid from the Contractor on any Project for a period of two years from the date of such refusal. The Department may then take any action that the Department determines is in the best interest of the Department including re-advertising the Work.

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

The Contractor shall notify the Department 24 hours prior to any change in work schedule.

Work can be performed at any time except Sundays and Holidays and as provided in Special Provision, Section 107, and Contract Time.

Inspections by MaineDOT will be done at key points to be determined by the Department. The Contractor shall plan operations so that the Department will have sufficient advance notification of daily work schedules to provide the necessary inspection and testing. Sufficient notification will be considered 48 hours, unless otherwise agreed by the Department.

**SPECIAL PROVISION**  
**SECTION 107**  
**Time**  
**(Contract Time)**

The Contractor shall be allowed to commence work on the Contract provided that the Contract has been awarded, all required plans/submittals have been received and approved by the Department and a preconstruction meeting has been held

The specified Contract Completion Date is **November 25, 2020**. All Work must be Complete by the Contract Completion Date specified in the Contract, and any authorized extensions.

The Contractor shall not carry on construction operations on Sundays or Holidays as per Standard Specification Section 107.3.3.

Completion of Physical Work occurs when the Work is complete and has undergone a successful final inspection. Liquidated Damages will cease upon the physical completion of the Work. Completion occurs when the Contractor has finished all Work pursuant to the Contract, the Work is complete and has undergone a successful final inspection and delivered documentation is complete and accepted. Completion does not mean substantial Completion.

SPECIAL PROVISION  
SECTION 108 Payment Schedule

This Section contains general provisions related to payment including measurement of quantities, progress payment(s), retainage, the right to withhold payment, and other payment-related terms.

**108.1 PAYMENT**

108.1.1 Lump Sum Price.

Payment for all Work associated with this contract shall be paid as a Lump Sum Price as shown on the Design-Build Contract Agreement.

108.1.2 Scope of Payment.

Payments to the Design-builder shall be full compensation for the design, fabrication, materials, equipment, labor, construction and overall project management for performing all work under this contract in a complete and acceptable manner and for all risk, loss, damage, or expense of any kind arising from the nature or execution of the Work. The Contractor shall pay all taxes, charges, fees, and allowances. The Department may require that the Contractor submit backup documentation including copies of receipts, invoices, and itemized payments to Subcontractors.

The Department may withhold payments claimed by the Contractor on account of:

- A. Incomplete, Inaccurate or Incorrect Invoices,
- B. Defective Work or non-conforming Work,
- C. Damages for Non-conforming, Defective or Unauthorized Work or Equipment,
- D. Damage to a third party,
- E. Claims filed or reasonable evidence indicating probable filing of claims,
- F. Failure of the Contractor to make payments to Subcontractors or for Materials or labor,
- G. Regulatory non-compliance or enforcement,
- H. Failure to submit Documentation
- I. Failure to provide the Department the opportunity to inspect the Work
- J. Substantial evidence that the Project cannot be completed for the unpaid balance,
- K. Substantial evidence that the amount due the Department will exceed the unpaid balance

### 108.1.3 Payout Schedule.

The Department will pay ten percent (10%) of the value of the contract upon award of the contract. Subsequent Progress payments, exclusive of retainage and Final Payment, will occur upon submission of invoices by the Design-Builder. The value of the invoice shall concur with the value of the work perform, as determined by the Department.

No payment shall be made when, in the judgment of the Department, the Work is not proceeding in accordance with the provisions of the Contract or when the total value of the Work done since the last estimate amounts to less than \$5,000 dollars.

### 108.1.4 Submission of Invoices

The Department will make payments based upon approved complete and correct invoices for accepted Work invoiced. No such payment will be made if, in the judgment of the Department, the Work is not in accordance with the provisions of the Contract.

At a minimum, invoices shall include the following information:

1. Contractor name, address & Contract Number
2. Invoice Date & Number
3. Dates of Service
4. Description and Location of Service
5. Quantities at the Prices contained in the Contractor's Bid
6. Percent complete of each Item priced at the Unit cost for each Item at the Unit Prices contained in the Contractor's Bid
7. Extra Work agreed to by written Contract Modification
8. Total amount due

### **108.2 Retainage.**

The Department will pay one hundred percent (100%) of each approved Progress Payment until the Work is approximately fifty percent (50%) complete. Thereafter, the Department will deduct five percent (5%) of the amount of each Progress Payment as retainage.

The Department may hold, temporarily or permanently, retainage as needed to reflect amounts due to the Department under the Contract and to assure timely Completion of the Work in Conformity with the Contract. The Department may also disburse retainage to Subcontractors pursuant to 23 MRSA §52-A(2). For a related provision, see Subsection 104.5.6 – Subcontractors Claims for Payment

**108.3 Final Payment.**

The Department will make final payment to the Design-Builder upon final inspection and acceptance of all work related to the contract. The Department may require the Design-Builder to provide information necessary to substantiate quantities. Documents required of the Design-Builder by the Department for final acceptance of the Project. These documents are: Letter "All Bills Paid", Request for Final Payment, Certificate of Materials, Agreement with Final Quantities and as-built drawings stamped by the Design-Builder's Engineer. The Department reserves the right to add to this list of required closeout documentation.

The Acceptance by the Design-Builder of the final payment, as evidenced by cashing of the final payment check, constitutes a release to the Department from all claims and liability under the Contract. Upon Final Acceptance, the Design-Builder is released from further obligation, except for warranty obligations provided for in this Contract.

SPECIAL PROVISION  
SECTION 502  
STRUCTURAL CONCRETE  
(Cast-in-Place Concrete)

PART 1 – GENERAL

1.1 Summary

This work shall consist of furnishing and constructing all cast-in-place Portland Cement Concrete as shown on the contract drawings and as required to complete the work. This work includes all steel reinforcement, form work, anchor bolts, sleeves and any other accessories necessary to complete the work. All concrete mixes must be batched and designed in accordance with this specification and the approved design.

1.2 References

All work shall comply with the applicable provisions of the following codes:

- A. American Concrete Institute ACI-318-08 “Building Code Requirements for Structural Concrete and Commentary”
- B. American Concrete Institute ACI-301-10 “Specifications for Structural Concrete”.
- C. Concrete-Reinforcing Steel Institute CRSI Handbook, 10th Edition.
- D. ASTM C94 Standard Specification for Ready-Mixed Concrete.

1.3 Submittals

At least 30 days prior to the first placement, a concrete mix design shall be submitted by the contractor to the Department for approval. No concrete shall be placed on the project until the concrete mix design has been approved by the Department. The mix design submitted by the contractor to the Department shall include the following information:

- A. Description of individual coarse aggregate stockpiles, original source, bulk specific gravity, absorption and gradation. A combined coarse aggregate blended gradation shall be provided.
- B. Description of fine aggregate, original source, bulk specific gravity, absorption, colorimetric, gradation, and Fineness Modulus (F.M.).
- C. Description and amount of cement.
- D. Target water-cement ration.
- E. Target water content by volume.
- F. Target strength.
- G. Target air content, slump and concrete temperature
- H. Target concrete unit weight.
- I. Type and dosages of air entraining and chemical admixtures.

Approval by the Department will be contingent upon the ability of the mix design proportions to produce the concrete strength requirement and other factors that may affect durability.

The Contractor shall provide the Department with at least two copies of shop drawing for all reinforcing steel and other accessories to be cast-in-place. Shop drawings shall be submitted at least 30 days in advance of concrete placement and shall be reviewed by the Department prior to placement.

#### 1.4 Testing

Concrete acceptance testing will be performed by the Department. The Department will determine the acceptability of the concrete through a quality assurance program. Quality assurance tests will include compressive strength and air content. Concrete sampling for quality assurance tests will be taken at the discharge end of the pump line.

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 test average of two concrete cylinders will determine the compressive strength.

Testing for entrained air in concrete shall be in accordance with AASHTO T152.

Concrete not meeting the standards implied in these specifications or as indicated on the Plans shall be removed and replaced by the Contractor and no cost to the Department.

#### 1.5 Quality Assurance

**Manufacturer Qualifications:** A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment. Measuring and batching of materials shall be performed at a Department approved batching plant.

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 CRSI 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 Department. 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 Department at least 48 hours prior to the placement, when reinforcing steel will be ready for checking. Sufficient time must be allowed for the checking process and any needed repairs.

## PART 2 – PRODUCTS

### 2.1 Concrete

#### A. Materials

Materials shall meet the requirements specified in the following sections of Division 700 Materials of the “State of Maine, Department of Transportation, Standard Specifications March 2020 Edition.”

1. Portland Cement and Portland Pozzolan Cement	701.01
2. Water	701.02
3. Air Entraining Admixtures	701.03
4. Water Reducing Admixture	701.04
5. Water Reducing, High Range Admixture	701.0401
6. Set Retarding Admixtures	701.05
7. Curing Materials	701.06
8. Water Stops	701.07
9. Smoothed Surface Asphalt Roll Roofing (Formerly	701.08
10. Heavy Roofing Felt)	
11. Fly Ash	701.10
12. Calcium Nitrate Solution	701.11
13. Silica Fume	701.12
14. Ground Granulated Blast Furnace Slag	701.13
15. Fine Aggregate for Concrete	703.01
16. Course Aggregate for Concrete	703.02
17. Alkali Silica Reactive Aggregates	703.0201
18. Prefomed Expansion Joint Filler	705.01

#### B. Cement

Cement shall be Portland cement conforming to ASTM C-150 for type I, II or III as specified.

#### C. Aggregates

1. Concrete aggregate shall conform to ASTM Specification C-33. All aggregates shall be free from frozen materials and other impurities.
2. Fine aggregates shall be clean sand free from clay, loam and other deleterious substances.
3. Coarse aggregate shall be durable, clean, crushed stone or gravel, free from clay, loam and other deleterious substances.

#### D. Water

Water shall be clean and potable containing no deleterious impurities which may be harmful to concrete or accessories.

#### E. Admixtures

Prohibited admixture: Calcium chloride, thiocyanates or admixture containing more than 0.05% chloride ions are not permitted.

All admixtures products shall be listed on the MaineDOT Qualified Products List. (<https://www.maine.gov/mdot/research/products/>) Certification: Written conformance to the above mentioned requirements and the chloride ion content of the admixture will be required from the admixture manufacturer prior to mix design review by the Department.

### 2.2 Steel

Reinforcing steel shall conform to ASTM A-615 and be of an approved manufacturer. All bars shall be new, Grade 60 and shall be at the sizes shown on the drawings.

All reinforcing steel shall meet the requirements of Reinforcing Steel, Section 709.01 of the State of Maine, Department of Transportation, Standard Specifications.

Steel accessories shall be at the sizes and types as shown on the Drawings unless otherwise specified and shall include all spaces, chairs, ties and other devices for properly spacing, supporting and fastening reinforcement in place. Anchor bolts shall be F1554, Grade 36 or better and of the sizes and types shown on the Drawings.

### 2.3 Accessories

Non-shrink Grout shall be listed on the MaineDOT Qualified Products List (<https://www.maine.gov/mdot/research/products/>)

### 2.4 Joint Sealants

Joint filler shall be listed on the MaineDOT Qualified Products List

(<https://www.maine.gov/mdot/research/products/>)

PART 3 – EXECUTION

3.1 Concrete Proportioning

Concrete shall conform to the following requirements:

Min. Strength 28 Day- psi	Max. Size Coarse Agg.	% Air (1%)	Min-Max Slump	Min Chem. Fac.	Max W/C
4000	¾	5-7.5*	2-4**	611 #/CY	0.45

\*Target Air is 6% with-1% ; + 1.5% Range

\*\*Min-Max slump is before the addition of water reducing admixtures.

Coarse aggregate for concrete shall meet the requirements of Section 703.02 for Class “A” or “AA”.

3.2 Formwork

All construction form work shall be of sufficient strength and construction to safely withstand the loads imposed, conforming to ACI 347. Forms shall be suitably tied and/or bolted together to maintain the specified dimensions. All exposed corners shall have 3/4 inch chamfer strips unless otherwise specified. Forms shall be built to conform to the dimensions, location, contours and details shown on the Plans. The faces of forms against which the concrete is to be placed shall be dressed smooth and uniform and shall be free from winds, twists, buckles and other irregularities.

Materials – Forms shall be smooth, treated plywood or steel. Plywood forms shall be coated with form oil and steel forms shall be coated with water or other approved substances to facilitate removal. Only non-staining substances shall be used.

All foreign matter within the forms shall be removed before depositing concrete in them.

All forms shall be inspected and approved by the Department prior to placing any concrete within them.

Build into the forms all collars or sleeves required for piping and wiring, and any anchors and inserts as shown on the Drawings.

Forms shall be left in place until the concrete has developed 80 percent of the design strength, and proven by a break of two cylinders. The formwork may be removed 48 hours after the completion of the concrete placement with the approval of the Department and when the following conditions are met:

- A. Immediately after the forms are removed, defects in the concrete surface shall be repaired in accordance with section 502.13 of the “State of Maine, Department of Transportation, Standard Specifications March 2020 Edition” and the repaired area is thoroughly dampened with water. The surfaces of exposed concrete shall be cured for the remainder of the 7-day curing period by the application of a product listed on the Maine Department of Transportation Prequalified list of curing compounds. The curing compound shall be applied continuously by an approved pressure spraying or distributing equipment at a rate necessary to obtain an even, continuous membrane, meeting the manufacturer’s recommendation but at a rate of not less than 1 gal/200ft<sup>2</sup> of surface. Other methods of curing concrete may be used with the prior approval of the Department.
- B. Forms and false work, including blocks and bracing, shall not be removed without the consent of the Department. The Department’s consent shall not relieve the Contractor of responsibility for the safety of the work. In no case shall any portion of the wood forms be left in the concrete. As the forms are removed, all projection metal devices that have been used for holding the forms in place shall be removed in accordance with Section 502.10 and the holes shall be filled as required in Section 502.13 of the “State of Maine, Department of Transportation, Standard Specifications March 2020 Edition”

Forms shall be removed so as not to damage the concrete.

### 3.3 Placing Concrete

Placing of all concrete shall be done in accordance with Section 502.11 of the “State of Maine, Department of Transportation, Standard Specifications March 2020 Edition”

All concrete shall be placed before it has taken its initial set, in any case, as specified in Section 502.11. Concrete shall be placed in horizontal layers in such a manner as to avoid separation and segregation. A sufficient number of workers for the proper handling, tamping and operation of vibrators shall be provided to compact each layer before the succeeding layer is placed and to prevent the formation of cold joints between layers. Care shall be taken to prevent mortar from spattering on structural steel, reinforcing steel and forms. Any concrete or mortar that becomes dried on structural steel, reinforcing steel or forms shall be thoroughly cleaned off before the final covering with concrete. Following the placing of the concrete, all exposed surfaces shall be thoroughly a cleaned as required, with care not to injure any surfaces.

Concrete in any section of a structure shall be placed in approximately horizontal layers of such thickness that the entire surface shall be covered by a succeeding layer before the underlying layer has taken its initial set. Layers shall not exceed 18 inches in thickness and shall be compacted to become an integral part of the layer below. Should the placement be unavoidably delayed long enough to allow the underlying layer to take initial set or produce a so-called “cold joint”, the following steps shall be taken:

- A. An incomplete horizontal layer shall be bulk-headed off to produce a vertical joint

- B. Horizontal joints shall be treated as required in Section 502.11(f) of the “State of Maine, Department of Transportation, Standard Specifications March 2020 Edition”
- C. Portland Cement concreted with a high range, water reducing admixture shall not be placed when the concrete mix temperature is below 5° or above 85°.
- D. Fresh concrete, threatened with rain damage shall be protected by approved means. Sufficient material for covering the work expected to be done in one day shall be on hand at all times for emergency use. The covering shall be supported above the surface of the concrete.

Concrete mixed in transit mixers shall be placed within 90 minutes of addition of water at the plant. Delivery tickets shall state the time of water addition of water at the plant. Delivery tickets shall state the time of water addition or departure from the plant if this is within 10 minutes. If the concrete cannot be placed within the specified time limitations, the Department may require that all cement be added at the job site. No additional water shall be added without consulting the Department. Any additional water added to the concrete on the site is the Contractor’s sole responsibility and risk. The Contractor shall provide a Certificate of Compliance for each truckload of concrete to the Department at the time of the load placement. The Certificate of Compliance shall be a form acceptable to the Department and shall include the following:

- A. Contract Name & Number
- B. Facility/Building Name
- C. Manufacturing Plant (Batching Facility)
- D. Name of Contractor (Prime Contractor)
- E. Date
- F. Time Batched/Time Discharged
- G. Truck No.
- H. Quantity (Quantity Batched this Load)
- I. Type of concrete by Class and Producer Design Mix No.
- J. Cement Brand or Type, and Shipment Certification No.
- K. Temperature of Concrete at Discharge
- L. Target Weights per cubic yard and Actual Batched Weights for:
  - 1. Cement
  - 2. Course Concrete Aggregate
  - 3. Fine Concrete Aggregate
  - 4. Water (including free moisture in aggregates and water added at the project)
  - 5. Admixtures Brand and Quantity (fluid ounces/cubic yard)
- M. Air Entraining Admixture
- N. Water reducing admixtures
- O. Other admixtures
- P. Placement Location

Power vibrators shall be provided to thoroughly consolidate and compact the concrete. Vibrators shall not be used to push or move concrete laterally in forms. Excessive vibration will not be permitted. A minimum of two (2) power vibrators shall be on the site when pouring the concrete. Vibrators shall be an approved type, with a frequency of 5,000 to 10,000 cycles per minute and shall be visibly capable of properly consolidating the designed mixture. Sufficient vibrators shall be used to consolidate the incoming concrete within 5 minutes after placing.

A float finish for horizontal surfaces shall be achieved by placing an excess of concrete in the form and removing or striking off the excess with a template or screed, forcing the coarse aggregate below the surface. Creation of concave surfaces shall be avoided. After the concrete has been struck off, the surface shall be thoroughly floated to the finished grade with a suitable floating tool. Aluminum and steel floats are not allowed. Float finish, unless otherwise required, shall be given to all horizontal surfaces. The rate of placing concrete shall be limited to that which can be finished without undue delay and shall not be placed more than 10 ft ahead of strike-off. Neat cement paste, dry cement powder or the use of mortar for topping or plastering of concrete surfaces will not be permitted.

Lightweight, vibrating screeds shall be used on slab structures and shall have the following features:

- A. It shall be portable and easily moved, relocated, or adjusted by no more than four persons.
- B. The power unit shall be operable without disturbing the screeded concrete.
- C. It shall be self-propelled with controls that will allow a uniform rate of travel and by which the rate of travel can be increased, decreased or stopped.
- D. It shall have controlled, uniform, variable frequency vibration, end to end.
- E. It shall be fully adjustable for flats, crowns, or valleys.
- F. The screed length shall be adjustable to accommodate the available work area.

When a lightweight vibrating screed is utilized, the concrete shall be placed or cut to no more than ½ in above the finished grade in front of the front screed. The screed shall be operated such that at least 3 ft of concrete is in position in front of the screed.

The texturing of concrete surfaces shall be applied as approved by the Resident. The surface tolerance and texture shall be acceptable to the Resident, or the placement may be suspended until remedial action has been taken. The Resident may order the removal and replacement of material damaged by rainfall.

Immediately after screeding, floating and texturing, the surface of the concrete shall be tested for trueness, by the Contractor, with a 10 ft straightedge and all irregularities corrected at once in order to provide a final surface within the tolerance required. The surface shall be checked both transversely and longitudinally.

Any area that requires finishing to correct surface irregularities shall be retextured. After the concrete has cured the surface may be tested with a 10 ft straightedge or a lightweight profiler. The maximum deviation of surface in inches below 10 foot straightedge is 1/8inch.

### 3.4 Protection and Curing of Concrete

All concrete shall be placed /protected in accordance with Section 502.08 Cold Weather Concrete of the “State of Maine, Department of Transportation, Standard Specifications March 2020 Edition”

Fresh concrete shall be protected from rain, cold and excessive temperature. Concrete shall be placed at atmospheric temperatures between 40°F and 90°F unless authorized by the Department.

Concrete shall not be placed against frozen surfaces. All frost, ice, and snow shall be removed from all material that will be in contact with fresh concrete. Unless authorized by the Resident, the mixing and placing of concrete shall be discontinued when the atmospheric temperature is below 40°F in the shade and dropping and shall not be resumed until the atmospheric temperature is as high as 35°F in the shade and rising. If authorization is granted for the mixing and placing of concrete under atmospheric conditions different from those specified above, the water shall be heated to a temperature not exceeding 180°F. When either the aggregate or water is heated to above 120°F, they are to be combined first in the mixer before the cement is added. If the atmospheric temperature is below 25°F, the aggregate shall also be heated when directed by the Resident. Materials containing frost or lumps of frozen material shall not be used. Stockpiled aggregates may be heated by the use of dry heat or steam. Aggregates shall not be heated directly by gas or oil flame or on sheet metal over a fire. When aggregates are heated in bins, steam coil or water coil heating or other methods that will not be detrimental to the aggregates may be used. The heating apparatus shall be capable of heating the mass uniformly and preventing the occurrence of spots of overheated material. The temperature of the mixed concrete shall be between 55°F and 70°F when it is placed in the forms. Salt or other chemicals shall not be added to the concrete for any reason whatsoever, except by written permission of the Resident. Contractor shall be wholly responsible for the protection of concrete during cold weather operations and any concrete injured by frost action or overheating shall be removed and replaced at the Contractor's expense.

All concrete and its surfaces shall be kept above 50°F for the first four (4) days of the curing period and above 32°F for the remainder of the period. In the 24 hours following the end of the curing period, the temperature of the concrete shall be decreased on a gradual basis, not to exceed a total change of 40°F.

All concrete surfaces, if not protected by forms, shall be kept thoroughly wet either by sprinkling or by the use of wet burlap, cotton mats or other suitable fabric with clean fresh water for a curing period at least 7 days after placing of concrete or until the end of the curing period. Polyethylene sheets shall not be placed directly on the concrete, but may be placed over the fabric cover to prevent drying except as provided in 3.2 Formwork, Section F.

All slabs and wearing surfaces shall be water cured only and kept continuously wet for the entire approved curing period by covering with one of the following systems:

- A. 2 layers of wet burlap,
- B. 2 layers of wet cotton mats,
- C. 1 layer of wet burlap and either a polyethylene sheet or a polyethylene coated burlap blanket,
- D. 1 layer of wet cotton mats and either a polyethylene sheet or a polyethylene coated burlap blanket.

The first layer of either the burlap or the cotton mats shall be wet and shall be applied as soon as it is possible to do so without damaging the concrete surface. Polyethylene sheets shall not be placed directly on the concrete, but may be placed over the fabric cover to prevent drying.

### 3.5 Finishing

- A. Exposed Concrete
  - 1. After the removal of forms, remove all form ties to at least 1 inch below surfaces. Remove all loose and honeycombed concrete, fins and other surface irregularities.
  - 2. Concrete patching – After cleaning out all holes, honeycombs and other areas to be patched, moisten surface and apply non-shrink grout or a mixture of one part Portland Cement and 3 parts sand, taking care to match the concrete.
  - 3. All concrete which will be exposed to view, shall be hand rubbed using carborundum bricks, burlap or other approved method. Finished surfaces should present a smooth, even appearance of uniform color.
- B. Unexposed Concrete
  - 1. All unexposed concrete shall have tie holes, honeycombs and other holes filled with patching mortar as above. Fins and other irregularities shall be removed so as to present a uniform surface.
  - 2. Unexposed concrete will not require a rubbed finish after patching.
- C. Penetrations – All wall or floor penetrations by pipes, conduit and other inserts shall be sealed with non-shrink grout around entire penetration to provide a watertight finish.

SPECIAL PROVISION  
SECTION 503  
REINFORCING STEEL

Description This work shall consist of furnishing and placing of reinforcement in accordance with these specifications and in conformance with the Plans, Supplemental Specifications and Special Provisions.

Materials Materials shall meet the requirements of the following State of Maine Standard Specifications Sections of Division 700-Materials.

Reinforcing Steel	709.01
Welded Steel Wire Fabric	709.02

Schedule of Material When the Department does not furnish reinforcing steel schedules, the Contractor shall submit order lists, bending diagrams and bar layout drawings to the Resident for approval. The reinforcing steel shall not be ordered until these lists and drawings are approved. Approval shall not relieve the Contractor of full responsibility for the satisfactory completion of this item. When the Department allows the use of precast concrete deck panels, or any other significant changes that effect the quantity of reinforcing steel, the Contractor shall be responsible for revising the reinforcing steel schedule; the revised schedule shall be submitted to the Resident for approval.

Protection of Material Reinforcement shall be stored on skids or other supports a minimum of 12 in above the ground surface and protected at all times from damage and surface contamination. The storage supports shall be constructed of wood, or other material that will not damage the surface of the reinforcement or epoxy coating. Bundles of bars shall be stored on supports in a single layer. Each bundle shall be placed on the supports in a single layer. Each bundle shall be placed on the supports out of contact with adjacent bundles.

If it is expected that epoxy-coated bars will be required to be stored outdoors for a period in excess of three months, then they shall be protected from ultraviolet radiation.

Fabrication Bending of reinforcing bars and tolerances for bending of reinforcing bars shall be in conformance with the latest edition of “Manual of Standard Practice of the Concrete Reinforcing Steel Institute” and the “Detailing Manual of the American Concrete Institute”. Unless otherwise specifically authorized, bars shall be bent cold.

Placing and Fastening All steel reinforcement shall be accurately placed in the positions shown on the plans and shall be firmly held there during the placing and setting of the concrete. Immediately before placing concrete, steel reinforcement shall be free from all foreign material, which could decrease the bond between the steel and concrete. Such foreign material shall include, but not be limited to, dirt, loose mill scale, excessive rust, paint, oil, bitumen and dried concrete mortar.

Bars shall be fastened together at all intersections except where spacing is less than 1 ft. in either direction, in which case, fastening at alternate intersections of each bar with other bars will be permitted providing this will hold all the bars securely in position. This fastening may be tightly twisted wire. Welding on epoxy-coated reinforcing steel will not be permitted under any condition.

Proper distances from the forms shall be maintained by means of stays, blocks, ties, hangers or other approved means. Blocks used for this purpose shall be precast Portland cement mortar blocks of approved shape and dimensions. Chairs may be used for this purpose and, when used, must be plastic, plastic coated, epoxy coated or plastic tipped. Layers of bars may be separated by precast Portland cement mortar blocks or other approved devices. The use of pebbles, pieces of broken stone or brick, metal pipe or wooden blocks shall not be permitted. The placing of reinforcement as concrete placement progresses, without definite and secure means of holding the steel in its correct position, shall not be permitted except in the case of welded steel wire fabric or bar mats.

Epoxy-coated reinforcing bars supported on formwork shall rest on coated wire bar supports, or on bar supports mad of dielectric material or other acceptable materials. Wire bar supports shall be coated with dielectric material for a minimum distance of 2 from the point of contact with the reinforcing bars. Reinforcing bars used as support bars shall be epoxy-coated. In walls, spreader bars shall be epoxy-coated.

Tie wire for epoxy-coated reinforcing steel shall be soft annealed wire that has been nylon, epoxy or plastic coated.

Field bending or cutting of epoxy-coated reinforcing bars will not be allowed, unless otherwise indicated on the plans or permitted by the Resident. When field bending or cutting is allowed, all damaged coating areas shall be repaired in accordance with the patching requirements.

Bars in the foundation walls shall be placed so as to clear anchor bolts.

When specified on the contract plans, reinforcing steel shall be anchored into drilled holes.

The anchoring material shall be one of the products listed on the Maine Department of Transportation's list of Prequalified Type 3 Anchoring Materials. Installation shall be in accordance with the manufacturer's published recommendations.

At each anchor location, existing reinforcing will be located to avoid drilling through existing bars. Where interferences are found to exist, location adjustments will be determined by the Resident.

Minimum embedment lengths of reinforcing bars shall comply with the manufacturer’s published recommendations for the anchoring material selected. These embedment lengths shall be verified by the Resident before installation of the reinforcing bars. The reinforcing steel lengths indicated on the Plans may be reduced, at the Contractor’s option, to the determined minimum embedment lengths.

Reinforcement shall be inspected and approved by the Resident before any concrete is placed.

Splicing Reinforcing bars shall be spliced in accordance with the requirements of this section, and in the locations shown on the plans. No modifications of, or additions to, the splice arrangements shown on the plans shall be made without the Resident’s prior approval. Any additional splices authorized shall be staggered as much as possible. All splices shall be made in a manner that will ensure that not less than 75% of the minimum clear distance to other bars will be maintained, as compared to the cover and clear distance requirements for the unspliced bar.

Lapped splices shall be made by placing the bars in contact and wiring them together. Splice laps shall be made in accordance with the following table, unless otherwise noted on the plans.

Minimum Lap Splice Length (inches) <sup>1</sup>									
Bar Type	Bar Size								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
Plain	14	18	22	26	33	43	54	68	83
Epoxy Coated	21	27	33	39	50	64	80	103	124

<sup>1</sup> Lap Splice lengths are based on the following parameters: Minimum center to-center spacing between bars of 6 in; nominal yield strength of the reinforcing steel of 60 ksi; minimum 28 –day compression strength of concrete of 4350 psi. When any of the preceding parameters is altered, appropriate minimum lap slice lengths will be determined by the Resident. When lap splices are placed horizontally in an element where the concrete depth below the splice will be 12 in, or more, the indicated lap splice lengths shall be multiplied by a factor of 1.4.

Mechanical couplers may be used for splicing reinforcing bars, provided they are approved by the Resident and conform to the following requirements:

- a. Tension Couplers- Couplers shall be able to develop 1.25 times the theoretical yield strength of the spliced bar in tension. Bolted and wedge-lock type couplers will not be allowed.
- b. Compression Couplers- Coupler shall be capable of maintaining the splice bars in alignment prior to and during concrete placement.

For reinforcing bars designed to act in compression, the individual bar ends shall be within  $1\frac{1}{2}^\circ$  of being “square” to the final 12 in of the bar. Additionally, abutting bar ends shall be in contact, and the angle of the gap between abutting bar ends shall be  $3^\circ$ , or less.

- c. Mechanical Couplers Any mechanical couplers using a threaded splicer and dowel in combination, requiring a lapped splice with the reinforcing bars, shall have a minimum lap splice length as required by this Section. Welded splices may be made by the “Thermit” process or, with the approval of the Resident, by the shielded metal arc welding process or the self-shielded flux-core arc welding process. The latter two processes shall be used in strict conformation with the requirements of the latest edition of AWS D1.4 “Structural Welding Code – Welding Reinforcing Steel” and any applicable provisions of Section 504, Structural Steel. The Contractor shall submit complete details of their proposed method of making welded splices for the Resident’s approval.

Lapping Sections of welded steel wire fabric shall securely fasten to adjoining sections and overlap. All laps shall be in accordance with Wire Reinforcement Institute Manual of Standard Practice.

Bar mats shall be spliced as required for the individual bars.

Substitution Substitution of different size bars shall not be permitted except with the written authorization of the Resident.

SPECIAL PROVISION SECTION 656  
TEMPORARY SOIL EROSION AND WATER POLLUTION  
CONTROL State Supplied SEWPCP for New Construction Projects

Section 656 of the Standard Specifications is deleted and replaced by this Special Provision.

656.1 The following information and requirements shall constitute the Soil Erosion and Water Pollution Control Plan for this Project. The soil erosion and water pollution control measures associated with this work are as follows:

- a) All work shall be done in accordance with the latest revision of the Maine Department of Transportation Best Management Practices for Erosion and Sediment Control (a.k.a. Best Management Practices manual or BMP Manual). The "Table of Contents" of the latest version is dated "February 2008" (available at <http://www.maine.gov/mdot/env/envdocs.htm>)
- b) The on-site person responsible for implementation of this plan shall be the Contractor's Superintendent or other supervisory employee (the "Environmental Coordinator") with the authority to immediately remedy any deficient controls. The Environmental Coordinator shall provide the Resident with the numbers (telephone number, cellular phone and pager numbers, if applicable) where the Environmental Coordinator can be reached 24 hours a day.
- c) All earth materials shall be disposed of in accordance with all federal, state, and local laws and regulations. If the materials will be stockpiled on-site they shall be contained on-site to prevent sediments from entering any drainage system or from washing into a protected water body or resource.
- d) If the earth materials will be reused on-site, they shall be mulched at the end of each working day, and seeded in accordance with Section 618, unless the contract states otherwise. The materials shall be contained, as necessary, to prevent sediments from entering any drainage system or from washing into a protected water body or resource.
- e) All areas where soil is disturbed shall be permanently mulched on a daily basis and seeded on a weekly basis (if seeded by hand, it shall be done on a daily basis). All previously mulched areas shall be maintained and re-mulched on a daily basis if bare areas develop until an acceptable growth of grass has been obtained.
- f) Winter stabilization BMPs such as double mulching or Erosion Control Mix shall be applied in accordance with the MDOT BMP Manual between November 1 and April 15 or during frozen ground conditions.
- g) The Environmental Coordinator must inspect and maintain daily, all erosion and sediment controls for the duration of the project.

h) Any costs related to this plan shall be considered incidental to the contract.

656. 2 If the work includes the handling or storage of petroleum products or hazardous materials including the on-site fueling of equipment, the Contractor shall prepare and submit to the Resident Engineer for approval a Spill Prevention Control and Countermeasure Plan (SPCCP) plan. At a minimum, the SPCCP shall include:

- The name and emergency response numbers (telephone number, cellular phone and pager numbers, if applicable) of the Contractor's representative responsible for spill prevention;
- General description and location of (1) handling, transfer, storage, and containment facilities of such products or Materials ("activities and facilities") and (2) potential receptors of such products or Materials including oceans, lakes, ponds, rivers, streams, wetlands, and sand and gravel aquifers ("sensitive resources") including the distances between said activities and facilities and said sensitive resources;
- Description of preventative measures to be used to minimize the possibility of a spill including Equipment and/or Materials to be used to prevent discharges including absorbent Materials,
- A contingency response plan to be implemented if spill should occur including a list of emergency phone/pager numbers including the Contractor's representative, MDEP Spill Response, the Resident, and local police and fire authorities. For a related provision, see 105.2.2 - "Project Specific Emergency Planning".

**SPECIAL PROVISION**  
**SECTION 815**  
**Buildings**

Description The work shall consist of the furnishing and construction of a pre-engineered wood framed with steel siding and roofing Cold Storage Building at a Maine Department of Transportation Maintenance Camp in accordance with these contract documents located at:

35 South Road, Route 1, Topsfield, Maine 04270

The MaineDOT will accept a non pre-engineered building designed by an engineer as long as he or she is registered as a P.E. in Maine, are knowledgeable in BOCA and Maine building codes and they must design the building to the requirements and specifications set forth in this contract book.

Base Materials the Department will have a gravel pad in place prior to the Contractor beginning construction. It shall be compacted and graded with in 2” of final grade. The Contractor will be responsible for the final fine grading and compaction.

Construction The Department will provide the Contractor with horizontal and vertical control and conceptual slab layout. The Contractor shall provide the additional layout necessary to complete the Work.

All work shall meet the requirements of governmental agencies having jurisdiction and comply with applicable standards and codes. The Contractor shall submit two (2) copies of the cold storage building plans and specifications to Department prior to award.

The roof shall be (Dark Green) and siding shall be (Patina Green). If there are multiple greens to choose from then the color shall be selected by Department from the manufacturer’s standard colors.

If the surface upon which the concrete slab structure is to rest is disturbed, it shall be re-graded and re-compacted to the extent directed by the Resident.

Placing of gravel borrow used for bedding (If engineered for special bedding) for the footings shall meet the requirements of Standard Specification, Section 206, Structural Excavation.

Variations from Materials Specified Whenever and wherever items have been identified by describing a proprietary product, such identification is intended to be descriptive, but not restrictive, and is used to indicate the quality and characteristics of products that are satisfactory. Bids shall be considered as offering the item specified in the Invitation for Bid. The Department will consider all alternates submitted by the Contractor, but are not bound to accept any which, in its opinion, is not in the Department's best interest and are determined by the Department to be of equal value in all material respects to the proprietary items specified. The evaluation of and determination as to equality of the product offered shall be the responsibility of the Department and will be based on information furnished by the Contractor, as well as information reasonably available to the purchasing activity.

Quality and Standards Materials and manufactured products incorporated into the work shall be new unless otherwise specified, free from defect, and in conformity with the contract. When material is fabricated or treated with another material or where any combination of materials is assembled to form a finished product, any or all of which are covered by specifications, the Department may reject the finished product if any of the components do not comply with the specifications. The Department may reject materials not conforming to the Specifications at any time, and the Contractor shall remove them immediately from the project site unless otherwise instructed by the Department. The Contractor shall not store, or use rejected materials on any Department project.

If there is no applicable standard set forth in this contract for particular Work, then the Contractor shall perform that Work in accordance with industry standards prevailing at the time of bid. If the Department determines that Work is non-conforming, the Contractor shall remove, replace, or otherwise correct all unacceptable work as directed by the Department at the expense of the Contractor, without cost or liability to the Department.

Submittals The Contractor shall submit manufacturers' specifications, product data, installation instructions and two (2) copies of the engineered stamped plans for the cold storage building to Department prior to award. The Contractor shall not be relieved of responsibility for any deviation from the requirements of the specifications unless the Contractor has specifically informed the owner in writing of such deviation at the time of submission and the owner has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions. No portion of the work shall be commenced until the Department has approved the submittal.

Delivery, Storage, and Handling

- Store materials off the ground and protected from the weather.
- Deliver products in manufacturers' original containers, dry, undamaged, with seals and labels intact.

Installation

- Installation, handling and storage of all materials shall comply with manufacturer's instructions and recommendations.
- The Contractor shall make provisions to allow safe access to the work for the Department in order to inspect the work, facilitate ongoing inspection of the work and to measure the work for payment purposes.
- Complete installation to provide weather tight service.
- Completed installation for the roof and walls shall conform, to all applicable National, State and local codes

Contractor's Safety Program If a copy of the Contractor's Safety Plan is not on file with the Department, the Contractor must submit an acceptable Contractor's Safety Plan to the Department's Bureau of Maintenance & Operations Section prior to Contract award. If copy of the Contractor's Safety Plan is on file with the Department's Bureau of Maintenance & Operation's, the Contractor must confirm, in writing, that the plan on file is still applicable prior to Contract award. The Contractor shall designate which portions such submissions it considers confidential business information. If such program is revised during the Contract Time, the Contractor shall provide the updated program to the Department. The Contractor shall comply with its safety program and the Standard Specifications. The Contractor shall be responsible for all claims or damages arising from failure to so comply and indemnifies and holds harmless the Department from all claims and damages arising from such non-compliance.

The Contractor shall be responsible for the safety of all operations in connection with the Contract and shall take all necessary actions to ensure the safety of all persons who may be in, on or adjacent to the Site. The Contractor shall perform Work in a manner that is in compliance with the Contractor's Plan, an applicable OSHA requirement, and established safety practices.

Failure by the Contractor to comply with the Contractor's Plan or an applicable OSHA requirement or to follow all established safety practices pertaining to the work being performed, will result in the immediate suspension of Work on the entire project until all unsafe practices are corrected and comply with the applicable requirements, standard or practice.

Environmental Requirements and Waste Materials All waste materials shall be removed and disposed of in accordance with all federal, state, and local laws.

All materials removed from the site shall be the property of the Contractor. Sale of these materials on site, and removal by persons other than the Contractor or his personnel, shall be at the risk of the Contractor. Once the contract is signed, responsibility for the safety of the public within the confines of the project shall be the responsibility of the Contractor. The Contractor shall be responsible for any and all materials dropped from his trucks distant from the project.

The Contractor shall make his own arrangement for disposal of materials taken from the site, and there will be no burning of materials on or adjacent to the site.

Permits, Fees, and Notices The Department will attain all permits and other permissions that are necessary, appropriate and legally required to perform the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the Department, he shall assume full responsibility therefore and shall bear all cost attributable thereto.

Closeout Procedures The Contractor shall make final changeover of permanent locks and deliver keys to Department, and complete final cleaning requirements, including touchup painting, touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

Final Cleaning The Contractor shall clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program and comply with manufacturer's written instructions.

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
3. Remove tools, construction equipment, machinery, and surplus material from Project site.
4. Remove snow and ice to provide safe access to building.
5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
6. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
7. Sweep concrete floors broom clean in unoccupied spaces.
8. Remove labels that are not permanent.
9. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
10. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
11. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

12. Replace parts subject to unusual operating conditions.

General Requirements the Contractor/Designer shall incorporate the general requirements into their design and materials list.

1. Building shall be wood framed with steel roofing and siding. There shall be no obstructions within the floor area. (50'x60')
2. Concrete foundation (Alaskan Slab) to include a placed 8"x 8" concrete curb wall (no blocks) around the whole perimeter.
3. The concrete slab shall be constructed with re-steel or wire mesh.
4. The concrete slab will be sloped (1/4" per foot) 4-6 feet from the outside edge at all garage door openings so that water runs out of the building.
5. Walls heights to be 16' including the 8" concrete curb wall
6. All sill plate(s) shall be constructed with pressure treated lumber.
7. The gable ends shall be on the 50' wide ends
8. The roof shall have a 5:12 pitch or greater.
9. Roof and walls to be sheathed with (Advantech only)
10. Roof to include vapor barrier. The eaves/soffits shall have white vinyl soffit vents as needed and determined by the Engineer of the pre-engineered building.
11. (3) 14' x 14' overhead garage doors shall be a commercial grade with struts placed evenly on the 60' front side of the building. The color shall be white with one row of windows. The garage door opener shall be a commercial grade opener with remotes. 3" tracks, 3" long stem ball bearing rollers, Torsion springs will be helically wound with oil-tempered wire, Minimum insulation value of R15, Insulation type will be foamed in place CFC free Polyurethane core, minimum of 26 gauge exterior and interior steel skin sections, heavy duty adjustable top roller brackets Section joints will be tongue and groove.
12. The steel siding and roofing shall be attached by stainless steel screws.
13. The steel roofing shall be a minimum of a 27 gauge (Forest Green) exposed fastener roofing and siding shall be a minimum 27 gauge (Patina Green) exposed fastener siding.
14. Two personal entry doors (one located on each 50' gable ends) are to be 36"x80" fiberglass with PVC frames with no glass, including door closures, stainless steel hardware and with a Schlage FE595 Cam Keypad Camelot Satin Nickel 1-Cylinder Lighted Keypad or approved equivalent.
15. All Interior lighting is to be ceiling mounted LED Fixtures providing adequate lighting with switches on both ends by each entry doors. Lighting to be approved by the Department.
16. A minimum of two exterior LED wall packs lights with photo-eyes are to be provided on the exterior walls over the exterior entry doors, locations TBD and approved by the Department.
17. Interior outlets are to be installed every 8' along the interior walls except the interior front wall with the overhead doors, meeting all national and local Electrical codes.

18. A total of (3) outside outlets are to be provided on the front exterior of the building and (1) on each of the gable ends near the entry doors. The Department is to review the Contractor's plans for expectance and location of the # of outlets.
19. Contractor will be required to excavate, supply, install, backfill, and compact per national electrical code up to 150' of schedule 80, 2" conduit, with the appropriate wire size for the application, from the new building load center to the nearby maintenance building 12" x 12" termination box, designated on the site plan.
20. The interior walls shall be framed with a min of a 2"x6" studs. All interior walls to be shall be insulated with Roxwell insulation (or equivalent ) up 48" and sheathed with ½ plywood up 48" from the curb wall only.
21. The Contractor shall supply their own toilet, water and electricity.

Closeout Documentation The following documents shall be added to the required list of closeout documentation:

- Project Record Drawings
- Warranties
- Maintenance & Operations Manual

The Contractor shall prepare and submit Project Record Documents, operation and maintenance manuals, and similar final record information.

Warranty The Contractor unconditionally warrants and guarantees that the project will be free from Warranty Defects for one year from the date of Physical Work Complete.

If the Department discovers any Warranty Defects during the warranty period, the Contractor agrees to perform all remedial Work at no additional cost or liability to the Department within thirty days, unless a more immediate response is required for safety or convenience, as determined by the Department. Warranty Defects are conditions that result from Material, manufacture, or workmanship and that are not in conformity with the Contract or with industry standards applicable to the Work prevailing at the time of submission of the Bid. Warranty Defects do not include (A) normal wear and tear, and (B) conditions caused by occurrences clearly beyond the Contractor's control and not attributable to material, manufacture, or workmanship. Examples of such excepted occurrences might be fires, floods, abnormally poor weather for the site of work, accidents, improper use, improper maintenance, vandalism, or acts of God.

The Contractor shall furnish satisfactory evidence that the materials and equipment incorporated into the project comply with the specified requirements of the contract. Such evidence may include certifications, warranties and other data from the manufacturer(s).

For a related provision, see Section 107.9.3 – Notices / Final Inspection / Physical Work Completion and 106.9 Warranty Provisions.

The Contractor agrees that the warranty obligations provided by this Contract shall be reported as an outstanding obligation in the event of bankruptcy, dissolution, or the sale, merger, or cessation of operations of the Contractor.

Method of Measurement The Cold Pre-engineered Storage Building will be measured for payment as one lump sum, complete in place and accepted.

Basis of Payment The Cold Storage Building will be paid for at the contract lump sum price, complete and accepted which shall be full compensation for the work indicated on the plans and as called for in the contract, including re-grading gravel, concrete slab, labor, equipment and materials for building construction, engineering and other contract related incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
815.00	Building - Cold Storage Building	Lump Sum

**SPECIAL PROVISION**  
**SECTION 02724**  
**FOUNDATION DRAIN PIPE**

**PART 1 – GENERAL**

**1.1 Summary**

- A. Work included: Provide and install non-pressure pipe and fittings of the sizes and types and in the locations shown on the Drawings and as specified herein.

**1.2 Delivery, Storage and Handling**

- A. Provide all labor necessary to assist the Department to inspect pipe, fittings, gaskets and other materials.
- B. Carefully inspect all materials at the time of delivery and just prior to installation.
- C. Carefully inspect all pipe and fittings for:
  - 1. Defects and damage.
  - 2. Deviations beyond allowable tolerances for joint dimensions.
  - 3. Debris and foreign matter.
- D. Examine area and structures to receive piping for:
  - 1. Defects such as weak structural components that adversely affect the execution and quality of work.
  - 2. Deviations beyond allowable tolerance for pipe clearances.
- E. All materials and methods not meeting the requirements of the Contract Documents will be rejected.
- F. Immediately remove all rejected materials from the Project site.
- G. Start work only when conditions are correct to the satisfaction of the Department.

**PART 2 – PRODUCTS**

**2.1 Non-Perforated Pipe and Fittings**

- A. Size 4” dia. And 6” dia. Inclusive
  - 1. PVC Schedule 40
  - 2. ASTM D-2665
  - 3. Fittings and joints to be compatible with pipe.

**2.2 Perforated Pipe and Fittings**

- A. Size 4” dia. And 6” dia. Inclusive:
  - 1. MDOT, TYPE “B” meeting requirements of Section 605.
  - 2. Corrugated Polyethylene Drainage Tubing for underdrain. ASSHTO M-252.

3. Coiled pipe shall not be used.

### PART 3 – EXECUTION

#### 3.1 Inspection

- A. Examine areas to receive piping for the following:
  1. Obstructions that adversely affect the installation and quality of the work.
  2. Deviations beyond allowable tolerances for clearances.
- B. Examine pipe and fittings before installation to assure no defective materials are incorporated. No single piece of pipe shall be laid unless it is generally straight.
- C. Remove and replace all defective materials at no additional cost to the Department.
- D. Start work only when conditions are satisfactory.

#### 3.2 Installation

- A. Install all pipe and fittings to the lines and grades shown on the Drawings and/or as approved by the Department.
- B. Begin laying pipe at the downstream end.
- C. During installation, close open ends with temporary watertight plugs to prevent earth, water and other material from entering the pipe.
- D. Exact location of the drain termination shall be determined on site by the Resident.

**SPECIAL PROVISION**  
**SECTION 06100**  
**ROUGH CARPENTRY**

**PART 1 – GENERAL**

1.1 Summary

- A. This work consists of all labor, materials and equipment necessary to complete the work as shown on the Drawings and as specified herein.

1.2 References

- A. International Building Code, Latest Edition.

1.3 Workmanship

- A. Only experienced personnel shall be engaged in this work.

1.4 Delivery, Storage and Handling

- A. Deliver the materials to the job site and store in a safe area, out of the way of traffic, shored up off the ground surface and covered to protect from weather.

**PART 2 – PRODUCTS**

2.1 Dimension Lumber

- A. Dimension lumber shall be Eastern Spruce or other wood approved by the Department and shall comply with grading requirements of the Northeastern Lumber Manufacturers Association for Common, Number 2 or better, and shall bear the grade stamp.
- B. When specified on the Plans or in part 4, stress grade structural lumber shall be provided. Stress grade lumber shall bear appropriate stamp for the specified grade and species.
- C. Wood for pressure treating and special installation shall be southern yellow pine meeting the requirements of the Southern Pine Inspection Bureau (SPIB) for Number 2 or better.
- D. All lumber shall not exceed 19% moisture content.

2.2 Plywood

- A. All plywood shall be 4/5-ply minimum and shall comply with U.S. Product Standard PS-1 for softwood plywood and shall bear the specified grade and stamp of the American Plywood Association.
- B. Unless otherwise shown on the Drawings, plywood shall meet the following requirements:

<u>Use</u>	<u>Thickness</u>	<u>Grade</u>	<u>Glue</u>	<u>Span Rating</u>
Roof	5/8" T&G	OSB Structural 1	Exterior	40/20
Exterior Sheathing	5/8"	OSB Structural 1	Exterior	32/16
Interior Sheathing	5/8"	CDX	Exterior	32/16
Electrical Backboard	3/4"	BC	Exterior	N/A

- C. All OSB shall be coated oriented strand board (OSB) sheathing in lieu of exterior wall sheathing, "Advantech" by Huber Industries.

### 2.3 Accessories

- A. Nails shall be new, galvanized as appropriate, common nails of appropriate lengths and sizes to adequately join the wood. Use galvanized where exposed to weather or pressure treated lumber or where shown on the Drawings.
- B. Joist hangers, framing anchors shall be 18-gauge, galvanized steel such as manufactured by Kant Sag, Simpson, or approved equivalent.
- C. Special Nails shall be used where shown on the Drawings or as recommended by manufacturer.
- D. Glue shall be an all purpose subfloor and construction adhesive, suitable for interior and exterior use, as manufactured by DAP, GE, Ohio Sealants, of approved equivalents.

### 2.4 Pressure Treated Lumber (P.T.)

- A. Lumber or plywood in contact with ground or fresh water shall be treated in accordance with AWPA Standards C2 and LP-22 and shall be rated 0.60 retention.
- B. Lumber in direct contact with concrete, masonry, or steel, not in contact with soil or fresh water shall be treated in accordance with AWPA Standards C2 and LP-2 and shall be rated 0.40 retention.
- C. Pressure treatment shall be water borne chromate copper arsenate (ACQ).
- D. Wood shall be dried after treatment.

## PART 3 – EXECUTION

### 3.1 Preparation

- A. Carefully select individual lumber pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing.
- B. Cut out and discard defects which render a piece unable to serve its intended function.
- C. Lumber will be rejected by the Department if it is excessively warped, twisted, bowed, mildewed or molded, as well as if it is improperly installed.

### 3.2 Erection

- A. All framing work shall produce joints which are tight, true, and well nailed with members assembled in accordance with the Drawings and with pertinent codes and regulations.
- B. All framing and fastening shall equal or exceed HUD Minimum Property Standards, Manual of Accepted Practices and the requirements of the IBC.
- C. Do not shim any framing member.
- D. Install horizontal and sloped members with crown up.
- E. Do not notch, cut or bore members for pipes, ducts, conduits, or for any other reason, except as shown on the Drawings and as approved the Department.
- F. Bearing surfaces on which structural members rest shall provide a full, even support.
- G. Joists, rafters and similar members shall be fastened with at least two (2) galvanized steel hangers or anchors and nailed completely.
- H. Install solid block bridging at midpoint of joists or as shown on the Drawings.
- I. Provide all shims, blocking and bracing as shown on the Drawings and as approved by the Department to complete the work.
- J. In addition to normal framing operations, install wood blocking or backing required to support the work of other trades.

### 3.3 Plywood Sheathing

- A. Unless otherwise specified or approved by the Department, install plywood with the face grain perpendicular to framing and central joints over supports. Leave 1/16-inch gap where adjacent plywood panels meet.
- B. Stagger plywood joints so that all joints do not lie on the same support.

### 3.4 Nailing

- A. Use galvanized nails except as otherwise indicated. Make tight connections between members. Countersink nail heads on exposed carpentry work and fill holes.
- B. Install fasteners without splitting wood; pre-drill as required.
- C. All nailing shall comply with the IBS, Recommended Fastening Schedule (found in table 2304.9.1), unless special requirements are shown on the Drawings.

### 3.5 Concrete Bearing

- A. All wood which bears against concrete, earth, steel or masonry shall be pressure treated as specified on the Drawings or as approved by the Department.

**SPECIAL PROVISION**  
**SECTION 07467**  
**METAL SIDING/ROOFING**

**PART 1 – GENERAL**

**1.1 Summary**

- A. Provide preformed metal siding and roofing where shown on the Drawings, as specified herein and as needed for a complete and proper installation.
- B. Related Work: Documents affecting work of this Section include, but are not necessarily limited to, Section 06100 - Rough Carpentry and Section 06192- Laminated Lumber.

**1.2 Quality Assurance**

- A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

**1.3 Submittals**

- A. Product Date: Within 15 calendar days after the Contractor has received the Department's notice to Proceed, submit:
  - Materials list of items proposed to be provided under this Section
  - Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
  - Shop drawings in sufficient detail to show fabrication, installation, anchorage and interface of the work of this Section with the work of adjacent trades;
  - Sample of two (2) full panel widths by 6" length of finished exterior siding, interior liner and permanent trim pieces.
  - Sample of each fastener employed one each.
  - Manufacturer's recommended installation procedures which, when approved by the Department, will become the basis for accepting or rejecting actual installation procedures used on the work.

**PART 2 – PRODUCTS**

**2.1 Preformed Metal Siding and Roofing**

- A. Metal Roofing/siding shall be 27 gauge, Everlast II with a Forest Green for roofing and Patina Green color finish for siding, or equivalent.
- B. Panels shall be a maximum length possible to minimize end laps.

## 2.2 Accessory Items

- A. Provide subgirts, perimeter trim, closures and other required components as needed to comprise the complete preformed metal siding system, using the materials and gauges recommended by the manufacturer and approved by the Department, and providing finish on exposed surfaces precisely matching the finish on the other exposed surfaces.
- B. Provide fasteners, washers and sealants as recommended by the manufacturer.

## PART 3 - EXECUTION

### 3.1 Surface Conditions

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 Installation

- A. Install the work of this Section in strict accordance with the manufacturer's recommended installation procedures as approved by the Department.
- B. Set siding plumb, level and true to line, without warp or rack, to a tolerance of 1 in 600.
- C. Touch up mars, scratches, and cut edges to match original finish.

**SPECIAL PROVISION**  
**SECTION 08250**  
**DOORS, FRAMES AND HARDWARE**

**PART 1 – GENERAL**

**1.1 Summary**

- A. This work shall include all labor, materials and equipment necessary to complete the work as shown on the drawings and as specified herein.

**1.2 Submittals**

- A. Contractor shall submit two (2) copies of shop drawings to the Department 15 calendar days prior to installation. Only doors for which there are reviewed and approved shop drawings shall be incorporated into the work.

**1.3 Quality Assurance**

- A. Only experienced skilled workmen shall be engaged in this work.

**1.4 Delivery Storage and Handling**

- A. Deliver doors and all necessary equipment in manufacturer's unopened containers.
- B. Store material in a protected area to prevent damage.
- C. Protect doors and equipment during and after installation from splashing or the accumulation of paint, concrete, mortar, or other foreign material.

**PART 2 – PRODUCTS**

**2.1 Acceptable Manufacturers**

- A. Therma-Tru Smooth Star flush panel fiberglass door.
- B. Sargent Lock Co. 10 lines Series Bored Locks
- C. Approved equivalents.

**2.2 Fiberglass Doors and Frames**

- A. Fiberglass doors shall be insulated core doors, 1-3/4" thick, of the sizes and type as shown on the drawings and as specified herein.
- B. Frames shall be pre-assembled units made of Grade A pine.

- C. Doorstops, latches, doorknobs, hinges, fasteners, etc., for all doors installed shall be provided by the Contractor.

### 2.3 Door Hardware

- A. Door hardware shall be equivalent to Sargent.
- B. All hardware shall be lever-style handles with a dull chrome finish.
- C. Door closers shall be full rack and pinion type contained in a permanent mold aluminum body and equipped with a single valve installed on all doors.
- D. Hinges shall be full mortise type, 4"x4", concealed ball bearing, stainless steel, three (3) per door, equivalent to Hager Tri Con Hinges #BB800.
- E. Door stops for interior doors shall be as manufactured by H.B. Ives, wall mounted #65 door stop, aluminum finish.

### 2.4 Weather-stripping

- A. Acceptable Manufacturers:
  - 1. National Guard Products, Inc.
  - 2. Reese
  - 3. Approved equivalents.
- B. Head and jamb weather-stripping shall be nylon brush gasket, National Guard Products #C607, 1/2" X 1/4" or approved equivalent.
- C. Door bottom seal shall be equivalent to National Guard Products aluminum and vinyl seal, and surface mount nylon brush gasket #D698.

## PART 3 – EXECUTION

### 3.1 Doors and Frames

- A. Install units in compliance with the manufacturer's specifications and as approved by the Department.
- B. Frames must be rigid and present a neat appearance.
- C. Frames must be installed with not less than three wall anchors per jamb and an anchor to the floor at each jamb.
- D. The partition shall enter the frame so that the two work as a unit.
- E. Install all units plumb, level, straight and snug fitted.
- F. Take care not to damage door surface, Defects in surface finish such as hammer marks, scratches, and chips shall be repaired to the satisfaction of the Department.

### 3.2 Hardware

- A. Install hardware on all doors as specified.
- B. Install doorstops for all doors at heights recommended by the manufacturer.
- C. Provide necessary shims and block to properly install units.

### 3.3 Finish

- A. Paint all doors as shown in Finish Schedule of the Specifications, Section 09000.
- B. All colors and products are to be selected and approved by the Department.

### 3.4 Cleanup and Protections

- A. Clean all doors completely. Wash all windows with approved glass cleaner.
- B. Protect all door units, replacing any breakage or defective parts until accepted by the Department.

**SPECIAL PROVISION**  
**SECTION 07920**  
**SEALANTS AND CAULKING**

**PART 1 – GENERAL**

**1.1 Summary**

- A. Provide all labor, materials and equipment to complete sealing and caulking as shown on the drawings and as specified herein.

**1.2 Scope of Work**

- A. Sealing and caulking shall be performed on all exterior joints including but not limited to:
  - 1. Around door, frames and windows.
  - 2. Joints around wall, ceiling and penetrations such as electrical boxes, pipes, etc.
  - 3. Joints between dissimilar building materials such as concrete and wood, wood and metal, etc., where water might enter.
- B. Interior caulking of all wall, floor, and ceiling penetrations.
- C. Sealing of concrete joints is covered on the plans.

**1.3 References**

- A. All sealants and caulking shall comply with ASTM C920, Standard Specification for elastomeric joint sealants.

**PART 2 – PRODUCTS**

**2.1 Exterior Caulking**

- A. Exterior caulking between prefinished surfaces shall be a one component silicone joint sealant; “Spectrum 1” by Tremco Sealant Systems, Dow Corning “795 Silicone Building Sealant”, or approved equivalent.
- B. Exterior caulking for use on paintable surfaces shall be an acrylic latex joint sealant; “Tremco Acrylic Latex Caulk”; Bostik “Chem-Caulk 600”, or approved equivalents.

## 2.2 Interior Caulking

- A. Interior caulking for bedding electrical boxes, outlets, pipes or other wall penetrations and around interior doors, frames and windows shall be a non-hardening sealant; “Tremco Acoustical Sealant”, Bostik “Chem-Caulk 600”, or approved equivalents.
- B. Interior caulking per penetrations through fire wall or smoke barriers such as conduits, pipes and ducts shall be a one component fire resistant caulk or putty; 3M Fire Barrier Caulk “CP25” or Putty “303”, or approved equivalents.

## 2.3 Joint Filler

- A. Joint filler for backing caulking shall be non-absorbent precompressed foam sealant; “Will-Seal 150”, by Will-Seal Construction Foams; “York-Seal 100” by York Manufacturing, Inc., or approved equivalents.

## PART 3 – EXECUTION

### 3.1 Preparation

- A. All joints and spaces to be caulked shall be dry, clean and free from dust and loose materials.
- B. If necessary, mask or otherwise protect adjacent surfaces.

### 3.2 Installation

- A. All sealants and caulking shall be installed according to the manufacturer’s recommendations.
- B. Caulking shall be applied with suitable equipment such as with a caulking gun.
- C. Use foam backing for joints deeper than ½-inch. Pack into joint allowing at least ¼-inch for caulking.
- D. Caulking shall be applied so that surfaces are slightly concave, tight and smooth. Joints shall be air and water tight.
- E. Caulk or putty around fire and smoke wall penetrations shall be applied so as to provide a complete fire barrier sealing system.
- F. Remove excess caulking and clean adjacent surfaces with approved cleaners.

SPECIAL PROVISIONS  
ADDITIONS AND REVISIONS TO STANDARD SPECIFICATIONS

SPECIAL PROVISION SECTION 101  
CONTRACT INTERPRETATION

101.1 Abbreviations. Add the following:

D-B	Design-Builder
D-B Teams	Proposers
RFC	Release for Construction
RFP	Request for Proposals for the Project

101.2 Definitions Add the following:

Agreement. The document executed by the Department and the Design-Builder entitled “Design-Build Contract Agreement,” as well as all documents listed in said Design-Build Contract Agreement .

Apparent Low Bidder A Bidder that submits the lowest apparently responsive Bid. The Apparent Low Bidder may not be Awarded the Contract if a) the Bid is later found to be non-responsive in accordance with Section 102.11, b) the Bidder is found to be not responsible, c) the Bidder fails to comply with all applicable pre-Award Conditions, other pre-execution requirements of the Contract, or d) the Department chooses not to Award a Contract.

Apparent Successful Bidder The Bidder with the lowest responsive Bid as determined by the Department. A responsive responsible Bidder, usually the Apparent Low Bidder, that is Awarded the Contract. The Department may not execute the Contract with the Apparent Successful Bidder if a) the Apparent Successful Bidder fails to comply with all applicable pre-Award conditions or other pre-execution requirements of the Contract or b) if the Department chooses not to Award a Contract.

Bid The offer by a Bidder on forms prescribed by the Department to design and construct the Project in Conformity with all provisions of the Bid Documents for the price(s) set forth. Bid is also used synonymously with the term, “Price Proposal”.

Bidder An individual, firm, corporation, limited liability company, partnership, joint venture, sole proprietorship, or other entity that submits a Proposal. Upon Contract Execution, the successful Bidder becomes the Contractor.

Closeout Documentation. Documents required of the Design-Builder by the Department for final acceptance of the Project. These documents are: Letter “All Bills Paid”, Request for Final Payment, Certificate of Materials, Agreement with Final

Quantities on Contractor's letterhead, as-built drawings stamped by an Engineer. The Department reserves the right to add to this list of required closeout documentation.

Contract. The entire agreement between the Department and the Design-Builder, as evidenced by the Contract Documents. All documents affecting the respective rights and responsibilities of the Department and the Contractor. These documents include, but are not limited to, the Contract Agreement, Project specific proposal Bid Book, the RFP, the Notice to Contractors, Plans, the Department's Standard Specifications and Standard Details, Special Provisions, Bid Amendments, Contract Modifications, and all documents incorporated by reference.

Contract Completion Date. The required completion date of all Work pursuant to the Contract, except warranty work. The Contract Completion Date is usually on the Contract form.

Contract Execution. Execution of the Contract by the Commissioner or his/her authorized agent by signing the Agreement, which action (upon written notification to the Design-Builder) forms a contract as provided in Subsection 103.8 – Execution of Contract by Department.

Contractor. The legal entity that will be executing the Contract and that will be a single point of responsibility for all obligations under the Contract. The Contractor shall be independent with respect to the Department and shall not be an employee, agent, or representative of the Department. After the Department has executed the Contract by cosigning the Contract Agreement form provided in the Bid Documents, previously signed by the successful bidder, the Successful Bidder in a low Bid process becomes the Contractor. The Contractor will be the single point of responsibility for all Contract obligations to the Department. The Contractor shall be an independent Contractor with respect to the Department and shall not be an employee, agent, or representative of the Department. Alternatively, "Contractor," with a lower case "c," may mean a firm engaged in construction Work.

Design Documents. Design-Builder drawings, specifications, calculations, records, reports or other documents, including shop drawings and special process procedures, which may be used for design, manufacture fabrication, installation, testing, examination and certification of items.

Design-Builder. See the definition for Contractor.

Designer. The entity responsible for design and related work for the Project, either through subcontract to the Design-Builder or otherwise.

Engineer. Unless otherwise indicated in this Contract, a professional engineer licensed in the State of Maine who is an employee of the Design-Builder, or a Subcontractor, with the responsibility and authority to require that the Work be performed in conformity with the Contract Documents.

Invoice. The Design-Builder's request for progress payment, also called an Application for Progress Payment.

MaineDOT The Department of Transportation of the State of Maine, as established by 23 MRSA §4205 et seq. for the administration of Highway, Bridge, and other public Works; acting through the Commissioner and his/her duly authorized representatives.

Price Proposal The offer by a Bidder on forms prescribed by the Department to design and construct the Project in Conformity with all provisions of the Bid Documents for the price(s) set forth. Bid is also used synonymously with the term, "Bid."

Proposal. The offer by a Proposer to design and construct the Project and perform the Work submitted in response to the RFP. In order to be responsive, the Proposal must meet all requirements and must offer to perform the Work in accordance with the Contract, and the Proposer's Technical Proposal, for the price submitted in the Proposer's Price Proposal. The Proposal consists of two major components and related certifications, bonds, and documentation, to be submitted separately but simultaneously: the Technical Proposal and the Price Proposal.

Proposer. An individual, firm, corporation, limited liability company, partnership, joint venture, sole proprietorship or other entity that was prequalified by the Department and that intends to submit a Proposal for the Work. After execution of the Contract, the Proposer is known as the "Design-Builder". Proposer is also used synonymously with the term, "Bidder".

Request for Proposal (RFP). The document issued by the Department asking for proposals, such as when soliciting for an anticipated Design-Build Contract, and all other documents issued by the Department and identified as part of the RFP.

Technical Proposal. The part of a Proposal detailing, among other things, schedule, management, organization, design, and construction of the project.

SPECIAL PROVISION SECTION 102  
BIDDING

102.6 Bid Guaranty Delete the entire section 102.6.

102.11.1 Non-curable Bid Defects Revise this subsection by removing the words “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.” and replacing it with the following:

“The unit price and bid amount is not provided if (1) the item quantity is not one or lump sum or, (2) the lump sum contract price is not provided or, (3) the unit price, bid amount or lump sum price is illegible as determined by the Department.”

102.11.2 Curable Bid Defects Revise this section by adding the following:

“The Bidder only signs one of the Contract forms or the Bidder does not sign the Contract form but does sign the Schedule of Items.” and “If a submitted bid contains any additional conditions or alternate bidding language, the Bidder may cure the defect by removing all conditions and alternate language or the Department will reject the bid as non-responsive.”

SPECIAL PROVISION SECTION 103  
AWARD AND CONTRACTING

103.1.1 Unit Prices Govern Add the following at the end of the paragraph:

“If the item quantity is one and either a unit price or bid amount is not provided, the unit price or bid amount omitted shall be determined mathematically by the Department.”

103.5 Award Conditions Replace the first paragraph with the following:

The Apparent Successful Bidder must provide and/or perform all of the items listed in this Section 103.5 within 14 Days of Receipt of the Notice of Intent to Award. Unless indicated otherwise, all items must be Delivered to the Department’s Bureau of Maintenance & Operations.

103.5.4 Execution of Contract By Bidder Delete the entire section and replace with the following:

“The properly completed and signed Contract form provided with the Bid constitutes the Bidder’s offer. Once the Department has received the insurance, and any other pre-award items required, the Department will sign and execute the Contract. The point of Contract execution is when the Contractor receives written notice that the contract has been signed by the Department and executed.”

**SUPPLEMENTAL SPECIFICATIONS**  
**(Corrections, Additions, & Revisions to Standard Specifications – March 2020)**

SECTION 104  
GENERAL RIGHTS AND RESPONSIBILITIES

104.2.1 Furnishing of Right-of-Way Revise the last sentence in the first paragraph by removing “105.4.5 – Special Detours” and replacing it with “**105.4.5 – Maintenance of Existing Structures.**”.

SECTION 401  
HOT MIX ASPHALT PAVEMENT

401.19 Contractor Quality Control Amend this Section by adding the following to the end:  
“**Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all items covered by the QCP as identified in Special Provision 403.**”

SECTION 502  
STRUCTURAL CONCRETE

502.09 Forms and Falsework Amend this subsection by adding the subsection title “**502.10 Placing Concrete**” after section “D” Removal of Forms and False work” and after the paragraph beginning with “2. Forms and False work, including blocking...”. So that a new subsection starts and reads:

“**502.10 Placing Concrete**

A. **General Concrete shall not be placed until forms ....**”

502.1701 Quality Control, Method A and B Revise this Section so that the first paragraph and the first sentence of the second paragraph read:

“**502.17 Quality Control** The Contractor shall control the quality of the concrete through testing, inspection, and practices which shall be described in the QCP, sufficient to assure a product meeting the Contract requirements. The QCP shall meet the requirements of Section 106, Quality, and this specification. No work under this item shall proceed until the QCP is submitted to and approved by the Department. Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all cast-in-place items covered by the QCP, using the P value listed in Special Provision 502. If no P value is listed, a value of \$350, or bid value per cubic yard, whichever is less, shall be used.

**502.1701 Quality Control, Method A and B** The QCP shall address all elements that affect the quality of the structural concrete including, but not limited to, the following: “

SECTION 606  
GUARDRAIL

Amend this section by replacing it with the following:

606.01 Description This work shall consist of furnishing and installing guardrail components in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as established. Guardrail is designated as:

31" W-Beam Guardrail - Mid-Way Splice

Galvanized steel w-beam, 8" wood or composite offset blocks, galvanized steel posts

Thrie Beam

Galvanized steel thrie beam, 8" wood or composite offset blocks, galvanized steel posts

Median guardrail shall consist of two beams of the above types, mounted on single posts.

Bridge mounted guardrail shall consist of furnishing all labor, materials, and equipment necessary to install guardrail as shown on the plans. This work shall also include drilling for and installation of offset blocks if specified, and incidental hardware necessary for satisfactory completion of the work.

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing end post as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

606.02 Materials Materials shall meet the requirements specified in the following Sections of Division 700 - Materials:

Timber Preservative	708.05
Metal Beam Rail	710.04
Guardrail Posts	710.07
Guardrail Hardware	710.08

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be “U” channel steel, 8 ft long, 2 ½ lb/ft minimum and have 3/8-inch round holes, 1-inch center to center for a minimum distance of 2 ft from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared guardrail terminal end point and tangent point, both at the leading and trailing ends of each run of guardrail. The marker’s flexible posts shall be gray with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the guardrail terminal is not flared, markers will only be required at the terminal end point. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Department’s Qualified Products List of Delineators. The marker shall be gray, flexible, durable, and of a non-discoloring material to which 3-inch by 9-inch reflectors shall be applied, and capable of recovering from repeated impacts and meeting MASH 16 requirements. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail (“butterfly”-type) delineators shall be mounted on all “w”-beam guardrail. The delineators shall be mounted within the guardrail beam at guardrail posts. Delineators shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Reflectorized beam guardrail delineators shall be placed at approximately 62.5 ft intervals or every tenth post on tangents and at approximately 31.25 ft intervals or every fifth post on curves. Exact locations of the delineators shall be as directed by the Resident. On divided highways, the left-hand delineators shall be yellow, and the right-hand delineators shall be silver/white. On two directional highways, the right-hand side shall be silver/white, and no reflectorized delineator used on the left. All reflectors shall have reflective sheeting applied to only one side of the delineator facing the direction of traffic as shown in the Standard Details. Reflectorized sheeting for guardrail delineators shall meet the requirements of Section 719.01.

Single wood post shall be of cedar, white oak, or tamarack, well-seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed, and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department’s Qualified Products List and shall be MASH 16 tested and approved.

Flared and Tangent w-beam guardrail terminals and guardrail offset blocks shall be from the Department's Qualified Products List. Flared terminals shall be installed with a 4 ft offset as shown in the Manufacturer's installation instructions.

Anchorage assemblies used to anchor trailing ends, radius guardrail, or other ends not exposed to traffic shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report, Drawing SEW02a.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than ½ inch. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the linear foot from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans. When connected to radius rail, measurement will be to the end of the last tangent beam.

Guardrail terminal, reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be paid under force account unless otherwise indicated in the Bid Documents.

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per linear foot for the type specified, complete in place. Reflectorized beam guardrail (“butterfly”-type) delineators will not be paid for directly but will be considered incidental to guardrail items. Reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be paid for at the contract unit price each for the kind specified complete in place.

Guardrail terminals will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer's installation instructions. Pay limits for a flared terminal will be 37.5 feet. Pay limits for a tangent terminal will be 50 feet. Each guardrail terminal will be clearly marked with the Manufacturer's name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under 109.7.5 – Force Account. Type III Retroreflective Adhesive Sheeting shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 3 in wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail terminals shall also include a set of installation drawings supplied to the Resident.

Anchorage to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 150 ft or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per linear foot and will be full compensation for adjusting to grade. Payment shall also include adjusting guardrail terminals where required.

Modify guardrail will be paid for at the contract unit price per linear foot and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams; removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals where required.

Remove and Reset guardrail will be paid for at the contract unit price per linear foot and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals when required.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per foot and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or “w”-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.1301 31” W-Beam Guardrail - Mid-Way Splice – Single Faced	Linear Foot
606.1302 31” W-Beam Guardrail - Mid-Way Splice – Double Faced	Linear Foot
606.1303 31” W-Beam Guardrail - Mid-Way Splice, 15’ Radius and Less	Linear Foot
606.1304 31” W-Beam Guardrail - Mid-Way Splice, Over 15’ Radius	Linear Foot
606.1305 31” W-Beam Guardrail - Mid-Way Splice Flared Terminal	Each
606.1306 31” W-Beam Guardrail - Mid-Way Splice Tangent Terminal	Each
606.1307 Bridge Transition (Asymmetrical) – Type IA	Each
606.1721 Bridge Transition - Type I	Each
606.1722 Bridge Transition - Type II	Each
606.1731 Bridge Connection - Type I	Each
606.1732 Bridge Connection - Type II	Each
606.178 Guardrail Beam	Linear Foot
606.25 Terminal Connector	Each
606.257 Terminal Connector - Thrie Beam	Each
606.259 Anchorage Assembly	Each
606.265 Terminal End-Single Rail - Galvanized Steel	Each
606.266 Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275 Terminal End-Double Rail - Galvanized Steel	Each
606.276 Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.353 Reflectorized Flexible Guardrail Marker	Each
606.354 Remove and Reset Reflectorized Flexible Guardrail Marker	Each
606.356 Underdrain Delineator Post	Each
606.358 Guardrail, Modify	Linear Foot
606.362 Guardrail, Adjust	Linear
Foot	
606.365 Guardrail, Remove, Modify, and Reset	Linear Foot
606.366 Guardrail, Remove and Reset	Linear Foot

606.367	Replace Unusable Existing Guardrail Posts	Each
606.47	Single Wood Post	Each
606.48	Single Galvanized Steel Post	Each
606.50	Single Steel Pipe Post	Each
606.51	Multiple Mailbox Support	Each
606.568	Guardrail, Modify - Double Rail	Linear Foot
606.63	Thrie Beam Rail Beam	Linear Foot
606.64	Guardrail Thrie Beam - Double Rail	Linear Foot
606.65	Guardrail Thrie Beam - Single Rail	Linear Foot
606.66	Terminal End Thrie Beam	Each
606.70	Transition Section - Thrie Beam	Each
606.71	Guardrail Thrie Beam - 15 ft radius and less	Linear Foot
606.72	Guardrail Thrie Beam - over 15 ft radius	Linear Foot
606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	Linear
	Foot	
606.74	Guardrail - Single Rail Bridge Mounted	Linear Foot
606.753	Widen Shoulder for Low Volume Guardrail End	Each
606.754	Widen Shoulder for Flared Guardrail Terminal	Each
606.78	Low Volume Guardrail End	Each
606.80	Buried-in-Slope Guardrail End	Each

## SECTION 618 SEEDING

618.08 Mulching Revise this Section so that the third sentence reads: “Mulch for Seeding Method Number 1 shall only be cellulous fiber mulch Section 619.04 (b) or straw mulch Section 619.04 (a).”

## SECTION 626 FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING, AND SIGNALS

626.034 Concrete Foundations Revise this Section by changing ‘626.037’ to ‘**626.036**’ in the Second Paragraph which begins with “Foundations shall consist of cast-in-place...”.

Revise the 10<sup>th</sup> paragraph beginning with “Before placing concrete, the required elbows...” by removing “...in accordance with **Standard Specification 633.**”

## SECTION 645 HIGHWAY SIGNING

Section 645.023 Sign Support Structures. Under letter “c.”, revise the fifth paragraph beginning with “In addition to the required details...” by removing the words **”and foundation”** from the 5<sup>th</sup> sentence.

Section 645.08 Method of Measurement. Revise the second paragraph beginning with “Bridge-type, cantilever and...” by removing the words **”including the foundation”** .

Section 645.09 Basis of Payment. Revise the third paragraph beginning with “The accepted bridge-type, cantilever and...” by removing the word **”foundation”** from the second sentence. Add the following sentence to the end of the paragraph **“Conduits, Junction Boxes, and Foundations will be paid for under Section 626.”**

## SECTION 681 PRECAST AGGREGATE-FILLED, CONCRETE BLOCK GRAVITY WALL

681.08 Basis of Payment Amend this section by adding the Item Number **“681.10”** in front of the item “Precast Aggregate-Filled Concrete Block Gravity Wall” at the end of the section.

## SECTION 703 AGGREGATES

Add the following to the beginning of Section 703 - Aggregates

703.01 Fine Aggregate for Concrete Fine aggregate for concrete shall consist of natural sand or, when approved by the Resident, other inert materials with similar characteristics or combinations thereof, having strong, durable particles. Fine aggregate from different sources of supply shall not be mixed or stored in the same pile nor used alternately in the same class of construction or mix without permission of the Resident.

All fine aggregate shall be free from injurious amounts of organic impurities. Should the fine aggregate, when subjected to the colorimetric test for organic impurities, AASHTO T 21, produce a color darker than the reference standard color solution (laboratory designation Plate III), the fine aggregate shall be rejected.

Fine aggregate shall have a sand equivalent value of not less than 75 when tested in accordance with AASHTO T 176.

Fine aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

The fineness modulus shall not be less than 2.26 or more than 3.14. If this value is exceeded, the fine aggregate will be rejected unless suitable adjustments are made in proportions of coarse and fine aggregate. The fineness modulus of fine aggregate shall be determined by adding the cumulative percentages of material by weight retained on the following sieves: Nos. 4, 8, 16, 30, 50, 100 and dividing by 100.

Fine aggregate, from an individual source when tested for absorption as specified in AASHTO T 84, shall show an absorption of not more than 2.3 percent.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
$\frac{3}{8}$ inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10
No. 200	0-5.0

703.02 Coarse Aggregate for Concrete Coarse aggregate for concrete shall consist of crushed stone or gravel having hard, strong, durable pieces, free from adherent coatings and of which the composite blend retained on the  $\frac{3}{8}$  inch sieve shall contain no more than 15 percent, by weight of flat and elongated particles when performed in accordance with test method ASTM D 4791, Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate, using a dimensional ratio of 1:5.

The coarse aggregate from an individual source shall have an absorption no greater than 2.0 percent by weight determined in accordance with AASHTO T 85 modified for weight of sample.

The composite blend shall have a Micro-Deval value of 18.0 percent or less as determined by AASHTO T 327 or not exceed 40 percent loss as determined by AASHTO T 96.

Coarse aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

Coarse aggregate shall conform to the requirements of the following table for the size or sizes designated and shall be well graded between the limits specified.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves			
	A	AA	S	LATEX
Grading	A	AA	S	LATEX
Aggregate Size	1 inch	¾ inch	1½ inch	½ inch
2 inch			100	
1½ inch	100		95-100	
1 inch	95-100	100	-	
¾ inch	-	90-100	35-70	100
½ inch	25-60	-	-	90-100
⅜ inch	-	20-55	10-30	40-70
No. 4	0-10	0-10	0-5	0-15
No. 8	0-5	0-5	-	0-5
No. 16	-	-	-	-
No. 50	-	-	-	-
No. 200	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5

703.0201 Alkali Silica Reactive Aggregates. All coarse and fine aggregates proposed for use in concrete shall be tested for Alkali Silica Reactivity (ASR) potential under AASHTO T 303 (ASTM C 1260), Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction, prior to being accepted for use. Acceptance will be based on testing performed by the Department. Sampling will be performed by the Department from stockpiles located at the Contractor's/supplier's ready mixed concrete plants. Aggregate approvals will be performed on a 3-year cycle, unless the source or character of the aggregate in question has changed within 3 years from the last test date.

A list of pre-approved coarse aggregate and aggregate-cement/pozzolan blends is maintained by the Department and will determine the acceptability of concrete mix designs proposed for use.

As per AASHTO T 303 (ASTM C 1260): Use of a particular coarse or fine aggregate will be allowed with no restrictions when the mortar bars made with this aggregate expand less than or equal to 0.10 percent at 30 days from casting. Use of a particular coarse or fine aggregate will be classified as potentially reactive when the mortar bars made with this aggregate expand greater than 0.10 percent at 30 days from casting. Use of this aggregate will only be allowed with the use of cement-pozzolan blends and/or chemical admixtures that result in mortar bar expansion of less than 0.10 percent at 30 days from casting.

Acceptable pozzolans and chemical admixtures that may be used when an aggregate is classified as potentially reactive include the following:

- a. Class F Coal Fly Ash meeting the requirements of AASHTO M 295.

- b. Ground Granulated Blast Furnace Slag (Grade 100 or 120) meeting the requirements of AASHTO M 302.
- c. Densified Silica Fume meeting the requirements of AASHTO M 307.
- d. Lithium Hydroxide Monohydrate (LiOH-H<sub>2</sub>O).

Pozzolans or chemical admixtures required to offset the effects of potentially reactive aggregates will be incorporated into the concrete at no additional cost to the Department.

Aggregates classified as potentially reactive by the requirements of this specification may be used if certified test results from an accredited independent laboratory utilizing the current AASHTO T 303 (ASTM C 1260) Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction, indicating an acceptable alkali-aggregate combination, are submitted to the Department.

703.05 Aggregate for Sand Leveling Aggregate for sand leveling shall be sand of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The aggregate shall meet the grading requirements of the following table.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
¾ inch	85-100
No. 200	0-5.0

703.06 Aggregate for Base and Subbase The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval...” and replace with “The material shall have a minimum degradation value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T 113T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed), except that the test shall be performed on the reported degradation value will be the result of testing a single specimen from that portion of the sample that passes the ½ in sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected.

The material, minus any reclaimed asphalt pavement used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine. If AASHTO T 96 is used for acceptance of the material, the material shall be retested at intervals of 25%, 50% and 75% completion of the course.

Recycled Asphalt Pavement (RAP) shall not be used for or blended with aggregate base or subbase.

- a. Aggregate for base, Type A and B shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Type A	Type B
½ inch	45-70	35-75
¼ inch	30-55	25-60
No. 40	0-20	0-25
No. 200	0-6.0	0-6.0

At least 50 percent by weight of the material retained on the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

Type A aggregate for base shall only contain particles of rock that will pass the 2 inch square mesh sieve.

Type B aggregate for base shall only contain particles of rock that will pass the 4 inch square mesh sieve.

- b. Aggregate for base, Type C shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The material shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
	Type C
4 inches	100
3 inches	90-100
2 inches	75-100
1 inch	50-80
½ inch	30-60
No. 4	15-40
No. 200	0-6.0

At least 50 percent by weight of the material coarser than the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

- c. Aggregate for subbase shall be sand or gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Type D	Type E
½ in	35-80	
¼ inch	25-65	25-100
No. 40	0-30	0-50
No. 200	0-7.0	0-7.0

Type D aggregate for subbase gravel may contain up to 50 percent by weight Recycled Concrete Aggregate (RCA). When RCA is used, the portion of the resulting blend of gravel and RCA retained on a ½” square mesh sieve shall contain a total of no more than 5 percent by weight of other recycled materials such as brick, concrete masonry block, or asphalt pavement as determined by visual inspection.

RCA shall be substantially free of wood, metal, plaster, and gypsum board as defined in Note 9 in Section 7.4 of AASHTO M 319. RCA shall also be free of all substances that fall under the category of solid waste or hazardous materials.

Aggregate for subbase shall not contain particles of rock which will not pass the 6 inch square mesh sieve.